



**GREEN
CLIMATE
FUND**

Meeting of the Board
13 - 16 March 2023
Incheon, Republic of Korea
Provisional Agenda Item 11

GCF/B.35/02/Add.07/Rev.01

2 March 2023

Consideration of funding proposals – Addendum VII

Funding proposal package for FP205

Summary

This addendum contains the following six parts:

- a) A funding proposal summary titled “Infrastructure Climate Resilient Fund (ICRF)” submitted by the Africa Finance Corporation;
- b) No-objection letter issued by the national designated authorities or focal point(s);
- c) Environmental and Social report(s) disclosure;
- d) Independent Technical Advisory Panel’s assessment;
- e) Response from the accredited entity to the independent Technical Advisory Panel’s assessment; and
- f) Gender documentation of the funding proposal.

These documents are presented as submitted by the accredited entity and the national designated authority(ies) or focal point(s), respectively. Pursuant to the Comprehensive Information Disclosure Policy of the Fund, the funding proposal titled titled “Infrastructure Climate Resilient Fund (ICRF)” by the Africa Finance Corporation is being circulated on a limited distribution basis only to Board Members and Alternate Board Members to ensure confidentiality of certain proprietary, legally privileged or commercially sensitive information of the entity.

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Funding Proposal

Project/Program title: Infrastructure Climate Resilient Fund (ICRF)

Country(ies): 19 Benin, Cameroon, Chad, Cote d'Ivoire, Democratic Republic of Congo, Djibouti, Gabon, the Gambia, Ghana, Guinea, Kenya, Mali, Mauritania, Namibia, Nigeria, Rwanda, Sierra Leone, Togo, Zambia.

Accredited Entity: Africa Finance Corporation (AFC)

Date of first submission: [2022/05/06]

Date of current submission [2022/12/06]

Version number [V.009]



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Note to Accredited Entities on the use of the funding proposal template

- Accredited Entities should provide summary information in the proposal with cross-reference to annexes such as feasibility studies, gender action plan, term sheet, etc.
- Accredited Entities should ensure that annexes provided are consistent with the details provided in the funding proposal. Updates to the funding proposal and/or annexes must be reflected in all relevant documents.
- The total number of pages for the funding proposal (excluding annexes) **should not exceed 60**. Proposals exceeding the prescribed length will not be assessed within the usual service standard time.
- The recommended font is Arial, size 11.
- Under the GCF Information Disclosure Policy, project and program funding proposals will be disclosed on the GCF website, simultaneous with the submission to the Board, subject to the redaction of any information that may not be disclosed pursuant to the IDP. Accredited Entities are asked to fill out information on disclosure in section G.4.

Please submit the completed proposal to:

fundingproposal@gcfund.org

Please use the following name convention for the file name:

FP-AFC-Multi-AFRICA-2022/06/06

A. PROJECT/PROGRAM SUMMARY				
A.1. Project or program	Programme	A.2. Public or private sector	Private	
A.3. Request for Proposals (RFP)	<p>If the funding proposal is being submitted in response to a specific GCF Request for Proposals, indicate which RFP it is targeted for. Please note that there is a separate template for the Simplified Approval Process and REDD+.</p> <p style="text-align: right;"><u>Not applicable</u></p>			
A.4. Result area(s)	<p>Check the applicable GCF result area(s) that the overall proposed project/program targets below. For each checked result area(s), indicate the estimated percentage of GCF and Co-financers' contribution devoted to it. The total of the percentages when summed should be 100% for GCF and Co-financers' contribution, respectively.</p>			
		GCF contribution	Co-financers' contribution¹	
	Mitigation total	Enter number %	Enter number %	
	<input type="checkbox"/> Energy generation and access	Enter number %	Enter number %	
	<input type="checkbox"/> Low-emission transport	Enter number %	Enter number %	
	<input type="checkbox"/> Buildings, cities, industries and appliances	Enter number %	Enter number %	
	<input type="checkbox"/> Forestry and land use	Enter number %	Enter number %	
	Adaptation total	Enter number %	Enter number %	
	<input checked="" type="checkbox"/> Most vulnerable people and communities	10%	10%	
	<input type="checkbox"/> Health and well-being, and food and water security	Enter number %	Enter number %	
<input checked="" type="checkbox"/> Infrastructure and built environment	90%	90%		
<input type="checkbox"/> Ecosystems and ecosystem services	Enter number %	Enter number %		
A.5. Expected mitigation outcome	Not applicable	A.6. Expected adaptation outcome	<i>Total number of direct and indirect beneficiaries</i>	
(Core indicator 1: GHG emissions reduced, avoided or removed / sequestered)			<i>Number of direct beneficiaries</i> 50,365,031 (50% women)	<i>Number of indirect beneficiaries</i> 144,115,769 (50% women)
			<i>8.8% direct beneficiaries vis-à-vis total population</i>	<i>25.18% indirect beneficiaries vis-à-vis total population</i>
A.7. Total financing (GCF + co-finance²)	765.075 million USD	A.9. Project size	Large (Over USD 250 million)	
A.8. Total GCF funding requested	<p>253.755 million USD For multi-country proposals, please fill out annex 17.</p>			

A.10. Financial instrument(s) requested for the GCF funding	<p>Mark all that apply and provide total amounts. The sum of all total amounts should be consistent with A.8.</p> <p><input checked="" type="checkbox"/> Grant 13.755 million USD</p> <p><input type="checkbox"/> Loan <u>Enter</u> <input checked="" type="checkbox"/> Equity <u>240 million USD</u></p> <p><u>number</u> <input type="checkbox"/> Results-based payment <u>Enter number</u></p> <p><input type="checkbox"/> Guarantee <u>Enter number</u></p>		
A.11. Implementation period	<p>10 years</p>	A.12. Total lifespan	<p>20 years</p>
A.13. Expected date of AE internal approval	<p><i>This is the date that the Accredited Entity obtained/will obtain its own approval to implement the project/ program, if available.</i></p> <p>6/30/2023</p>	A.14. ESS category	<p><i>Refer to the AE's safeguard policy and <u>GCF ESS Standards</u> to assess your FP category.</i></p> <p>I-1</p>
A.15. Has this FP been submitted as a CN before?	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	A.16. Has Readiness or PPF support been used to prepare this FP?	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
A.17. Is this FP included in the entity work program?	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	A.18. Is this FP included in the country program?	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
A.19. Complementarity and coherence	<p><i>Does the project/program complement other climate finance funding (e.g., GEF, AF, CIF, etc.)? If yes, please elaborate in section B.1.</i></p> <p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>		

¹ Co-financer's contribution means the financial resources required, whether Public Finance or Private Finance, in addition to the GCF contribution (i.e., GCF financial resources requested by the Accredited Entity) to implement the project or program described in the funding proposal.

² Refer to the Policy of Co-financing of the GCF.

A.20. Executing Entity information

Executing Entity(ies) and its country of registration and ownership type.

Executing Entities:

1. **AFC Capital Partners (ACP)³**, a limited liability company incorporated on 8 July 2021 under the laws of the Republic of Mauritius having its registered offices at Ocorian Corporate Services Ltd, 6th Floor, Tower A, 1 CyberCity, Ebene, Mauritius. ACP is the 100% owned Asset Management Subsidiary of AFC. ACP was created to mobilize capital at scale from institutional investors, and offer them the opportunity to invest, alongside AFC, in low carbon and climate resilient infrastructure projects across Africa. ACP will be the fund manager of the Infrastructure Climate Resilient Fund (ICRF). ACP was granted on 8 July 2021 a Global Business License by the Financial Services Commission, Mauritius. ACP has applied for a Collective Investment Scheme License (CIS) manager license from the Financial Services Commission to be able to operate as a fund investment manager.

2. **Infrastructure Climate Resilient Fund (ICRF):** an investment vehicle to be (i) incorporated in the Republic of Mauritius (ICRF Mauritius) under the form of a limited partnership, without legal personality, pursuant to the Limited Partnerships Act 2011 of Mauritius and (ii) independently managed by ACP; The ICRF is established to climate proof the African infrastructure by integrating scientifically based climate resilient measures as articulated in this funding proposal in the planning, design and construction and operations of the infrastructure projects. ICRF financing for sub-projects will be in the form of equity or quasi-equity and debt; the ICRF would invest in project companies alongside AFC and other investment partners (such as banks, and other financial institutions), including by leveraging additional investments. Through the ICRF, ACP leverages the scale and breath of AFC's investment track record (via a co-investment approach) to offer institutional investors unique access to attractive, de-risked investment opportunities in climate resilient infrastructure with commercial returns.

3. The **"General Partner"** – an entity to be formed by the Accredited Entity, which is expected to be a limited liability company under Mauritius law. The General Partner will be owned, directly or

indirectly, by the Accredited Entity. The General Partner shall appoint ACP to perform the day-to-day management and operation of the Partnership (including portfolio management and risk management) pursuant to the Management Agreement.

4. **Africa Finance Corporation (AFC)**⁴ is a multilateral financial institution, based in Lagos – Nigeria, created by African sovereign states to provide pragmatic solutions to Africa’s infrastructure deficit and challenging operating environment. To date, AFC has disbursed over US\$ 10 billion to support transformative sustainable infrastructure projects in 35 African countries. AFC is a regional entity, accredited by GCF, with the core focus on innovative home-grown solutions to Africa’s development and climate change challenges as it relates to infrastructure. AFC is also an Executing Entity exercising certain rights and obligations in respect of the GCF funding in the implementation of the ICRF programme in a co-investment approach with ACP.

A.21. Executive summary (max. 750 words, approximately 1.5 pages)

Executive summary:

African key development sectors have already experienced widespread losses and damages attributable to anthropogenic climate change. Exposure of people, assets and infrastructure to climate hazards is increasing compounded by rapid urbanization, infrastructure deficit, and growing population in informal settlements. Although Africa has contributed among the least to greenhouse gas emissions, the region bears the greatest burden given its vulnerability, risks, and exposure profile⁵. In Africa, the level of exposure of critical infrastructures to climate change is dire as the continent records some of the most extreme climatic conditions. Climate extremes and trends present significantly varying adverse consequences on infrastructure assets. This poses huge implications for the quality, quantity, and accessibility of countries’ infrastructure and the services they intend to offer, thereby truncating economic growth and development.

Over the past 50 years (from 1970 to 2019), Africa recorded 1,695 disasters that caused the loss of 731 747 lives and US\$ 38.5 billion economic damages⁶. Over the same period, Africa accounted for 15% of weather-, climate- and water-related disasters, 35% of associated deaths (Figures 1.1 & 1.2 reflect the reported disruptive climate related events witnessed in Africa over the past decades).

A failure to adapt by not taking climate change into account in the design, construction, and maintenance of infrastructure assets will not only cause costs to owners and operators but will leave entire communities

³ AFC Capital partners <https://www.africafc.org/about-us/our-company/afc-capital-partners>

⁴ AFC <https://www.africafc.org/about-us/our-company/afc>

⁵ Sixth Assessment Report, Climate Change 2022: Impacts, Adaptation and Vulnerability, the Working Group II https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_FinalDraft_FullReport.pdf

⁶ WMO Atlas of Mortality and Economic Losses from Weather, Climate and Water Extremes (1970–2019) | https://library.wmo.int/doc_num.php?explnum_id=10989

exposed and vulnerable. Adaptation can deliver a strong return both by reducing costs from climate-related damage to infrastructure itself and by avoiding significant knock-on effects in wider society by disrupting the availability of infrastructure services to the general population.

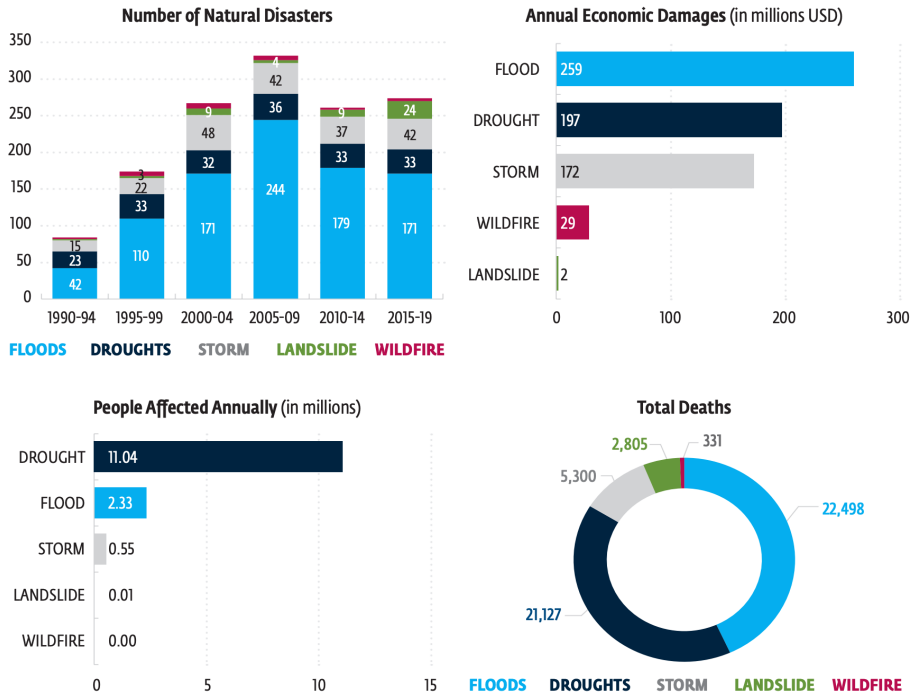


Figure 1.1: Africa: Impacts of climate related disasters, 1990-2019 | Source: IFC Report on adapting to natural disasters (2022) and Centre for Research on the Epidemiology of Disasters, Emergency Events (EM-DAT) Database.

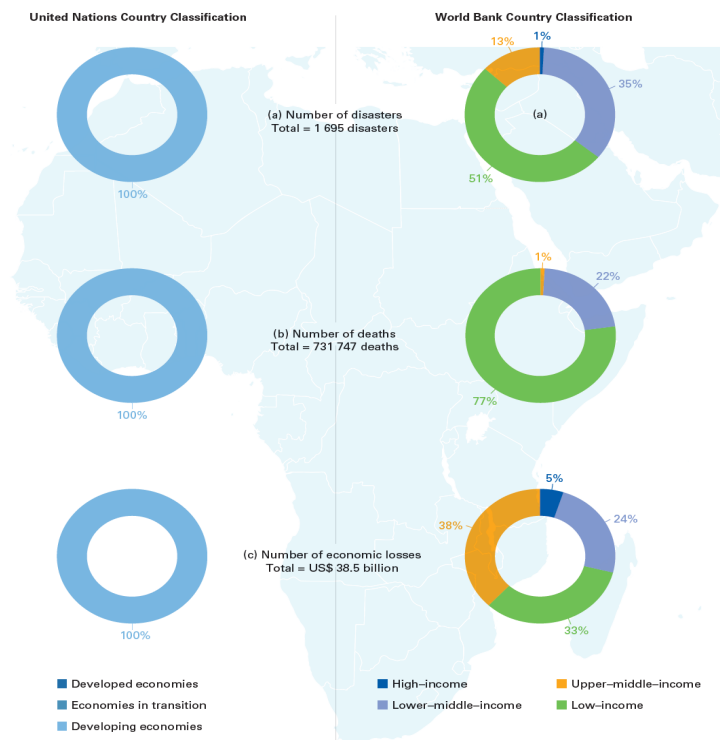


Figure 1.2. Distribution of (a) number of disasters, (b) number of deaths and (c) economic losses by United Nations country classification in Africa and the World Bank country classification in Africa | WMO Atlas of Mortality and Economic Losses from Weather, Climate and Water Extremes (1970–2019)

Infrastructure assets respond differently to climatic events, depending on their nature and type, their technical and engineering design and their vulnerability to the projected climate in a given location. Hence designing infrastructure assets without considering potential climatic risks that could arise in the future would be extremely risky and could result in a deficiency in provision of infrastructure services. Consequently, the vulnerability of an asset is also a factor of the technical specifications and structural elements of that asset components and their degree of exposure to the changing climatic hazards. *Climate-resilient infrastructure in that context refers to infrastructure built today with the technical specification and structural elements that will make them ready to cope with tomorrow's changing climate.* The term has also been applied to *infrastructures that support and contribute to climate resilience.* Depending on the asset, infrastructure is built for long-time horizons (20 to 100 years+), giving latitude to a very wide variation in potential climate outcomes. The long-lived nature of infrastructure assets means that decisions made today will lock in vulnerability if they ignore to take climate change into consideration.

Africa's annual infrastructure spending surpassed USD 100 billion for the first time in 2018. Recent estimated needs amount to \$130–170 billion a year. As most of the African infrastructure is yet to be built over the coming years and considering the large amount of financing that infrastructure investments require, making them resilient under future climates is critical to ensure that these investments achieved intended objective and lasting benefits, while avoiding being destroyed prematurely before they fully deliver on their investment return and societal benefits. Given the uncertainty about the future and the risk to invest too little or too much in resilience, adaptive management approaches can facilitate cost-effective climate resilience throughout the lifetime of an infrastructure asset. It is therefore critical to better understand the different characteristics for the successful design, planning, location, investment, construction, and maintenance of critical assets.

Making infrastructure assets climate resilient is 'a very robust solution' to avoid massive losses and catastrophic consequences.⁷ The proposed **Infrastructure Climate Resilient Fund (ICRF)** is set up to promote the development of climate resilient infrastructures and prevent significant climate-induced losses that could be associated to infrastructure damages in Africa. The programme seeks to build climate resilience upfront into the design and financing of infrastructure projects. ICRF's unique financing modality combines blended capital strategies with capability-building intertwined with policy interventions while incentivizing climate risk preparedness and transfer. ICRF will support the climate-resilient sustainable development of target countries, reaching **50,365,031 direct beneficiaries and 144,115,769 indirect beneficiaries and making infrastructure assets worth 2 billion USD more resilient to the effects of climate change.**

- **In relation to blended capital strategies**, the aim is to catalyze blended finance at scale towards evidence-based climate-resilient infrastructure in Africa. The transformative approach of the programme is the introduction of tailor-made capital structures that enable the incorporation of climatic risk data into the design and construction of infra-assets, arising out of the aforementioned capacity building preparedness. *As financing the cost of resilience and adaptation measures in infrastructure projects is typically non-remunerative, there is understandably an averseness among infrastructure project developers to incur these additional project costs attributable to building resilience. Hence, the success of the ICRF strategy relies on its ability to mobilize concessional capital to absorb the substantial increase in project costs on account of incorporating climate resilience.*
- **In relation to capacity building preparedness and policy interventions**, the programme will address the need to strengthen climate risk assessments to provide robust climate data and information to governments, engineers, project sponsors, and investors to enable them to make more informed decisions and adopt effective preventative and adaptive measures to reduce the risks and impacts of climate change and extreme weather events. In addition, the programme will strengthen the regulatory framework and incentivise the development of innovative climate risk parametric insurance (CRPI) products for the long-term viability of climate resilient infrastructure (CRI) investments in Africa.

ICRF will primarily target greenfield projects, and on selective basis, could invest in the resilience of existing infrastructure projects. Indicatively, at least 75% of the ICRF portfolio will be dedicated to new investments

in CRI assets (including greenfield, expansion and growth investments); and up to 25% may be invested in existing infrastructure assets to be made climate-resilient through climate adaptation solutions. New infrastructure and expansions will be prioritised, planned, designed, built, and operated in the light of climate change that may occur during their lifetimes. Existing infrastructure may need to be retrofitted or managed differently due to climate change - opportunities to climate-proof existing infrastructure will be examined on a case by case. The ICRF programme will be dedicated to the development and investment in new climate-resilient infrastructure asset classes (CRI Asset Classes) in the selected African States:

- 1) Climate-resilient Transport and Logistics (Ports, Roads, Bridges, Railways, Airports etc.)
- 2) Climate-resilient Energy Systems
- 3) Climate-resilient Economic zones
- 4) Climate-resilient Telecommunication and Digital Infrastructures

Programme Outcomes:

AFC will play a catalytic role in promoting the development of climate resilient infrastructure through its investment, expertise, and strong partnerships at the country and pan African levels. This multi country program is organized into three mutually reinforcing components: scaling blended finance through demonstrative effect of resilience measures and de-risking residual climate risk by incentivizing climate risk parametric insurance in infrastructure investments, improving climate risk assessments and strengthened regulatory framework. These outputs will lead to improved access of vulnerable people and communities to climate-resilient infrastructure services and infrastructure assets (all-weather roads, bridges, power supply, ports, telecommunication, digital) able to withstand climate hazards.

This proposal seeks USD 240M in Equity and USD 11M in Grant funding from the Green Climate Fund to deliver three (3) outcomes:

Outcome 1: Blended finance is mobilized at scale to accelerate CRI investments in the beneficiary African countries for infrastructure assets made resilient and able to withstand climate hazards and for improved access of vulnerable people to climate-resilient infrastructure services.

GCF will provide **equity investment into ICRF** to leverage private and institutional capital at the fund level and at the project level to accelerate investments into climate resilient infrastructure projects in Africa, enabled by the GCF's catalytic first-loss capital position (please refer to Figure 2 on ICRF Strategy).

Outcome 2: Improved climate risk assessments and adaptation solutions for CRI; improved capacity for scaling up CRI in Africa to support systematic integration of climate risks assessments into and prioritisation of resilience and adaptation measures for infrastructures financed by ICRF. In addition, capacity building activity will be provided to a large range of stakeholders engaged in infrastructure planning and financing in ICRF countries.

GCF will provide USD 8 M for technical assistance (TA) to create capacity and deploy climate risk assessment and adaptation solutions with climate innovations for CRI Asset Classes. Also, ICRF will identify and bridge gaps in the technical capacity and infrastructure for collecting, processing, and disseminating data on climate hazards and climate change, and its impact on infrastructure in the participating countries.

Outcome 3: Strengthened regulatory framework and innovative climate risk parametric insurance (CRPI) is mainstreamed for the long-term viability of CRI investments in Africa

GCF will further provide USD 3 million to support policy dialogue and incentives, including the full feasibility and the design of a new scheme to expand climate risk parametric insurance applications to the

⁷ World Bank Group, [Strengthening New Infrastructure Assets: A Cost-Benefit Analysis](https://documents1.worldbank.org/curated/en/962751560793977276/pdf/Strengthening-New-Infrastructure-Assets-A-Cost-Benefit-Analysis.pdf) <https://documents1.worldbank.org/curated/en/962751560793977276/pdf/Strengthening-New-Infrastructure-Assets-A-Cost-Benefit-Analysis.pdf>

infrastructure sector, exploring innovative approaches tailored for the African context. AFC will promote stakeholder engagement and public/private sector dialogue towards strengthening of the regulatory framework and mainstreaming of innovative climate risk parametric insurance (CRPI) for the long-term viability of CRI investments in Africa.

ICRF targeted sectors are transport, clean energy, economic zones and telecoms. The programme will reach 50,365,031 direct beneficiaries and 144,115,769 indirect beneficiaries. The programme will favorably affect women as the most vulnerable population groups to climate change and the largest segment of the populations in the targeted countries. Following conclusive due diligence based on their national process, the National Designated Authorities (NDA) of nineteen (19) African countries have issued a no-objection letter, confirming the programme truly reflects one of the key priorities of their countries, including their NDCs.

In international climate change diplomacy, Africa has always set adaptation as its top priority as the continent remains the most vulnerable to climate change. ICRF will therefore contribute to the efforts of the participating countries to transition towards low emission and climate-resilient development pathways, as expressed in their Nationally Determined Contributions (NDCs). ICRF will provide a substantial contribution to the achievement of the goals of the Paris Agreement. Resilient infrastructure will increase the ability to adapt to climate change making infrastructure financing consistent with the purpose of the Paris Agreement, namely in its article 2b “increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and related global goal on adaptation...”, as well as 2c “making finance flows consistent with a pathway towards climate resilient development”. In addition to the Paris Agreement, climate-resilient infrastructure financing can support efforts to achieve a number of the Sustainable Development Goals (6-9, 11, and 13) as well as the implementation of the Sendai Framework for Disaster Risk Reduction.

Figure 2: Infrastructure Climate Resilient Fund (ICRF) – Strategy and Fund Structure

Investment Strategy



Objective

The Fund will focus on investments in climate-resilient infrastructure assets which are planned, designed, built and operated in a way that anticipates, prepares for, and adapts to changing climate conditions. Resilient assets can withstand, respond, and recover rapidly from disruptions caused by climate change conditions.



Investment themes

- ICRF will focus climate resilient infrastructure investments in AFC traditional infrastructure core sectors including:
- i. Transport Infrastructure: Ports & Logistics, Road & Bridges, Airports, Railways.
 - ii. Renewable energy generation, transition and distribution.
 - iii. Economic Zones and Industrial Parks.
 - iv. Telecommunication and Digital Infrastructure.



Blended Finance

ICRF will blend commercial and concessional equity capital to deliver bankable climate resilient infrastructure projects. Concessional capital (Tier 1 Class) will be mobilized from the Green Climate Fund (GCF) to integrate climate resilience and de-risk the participation of commercial institutional investors (Tier 2 Class).

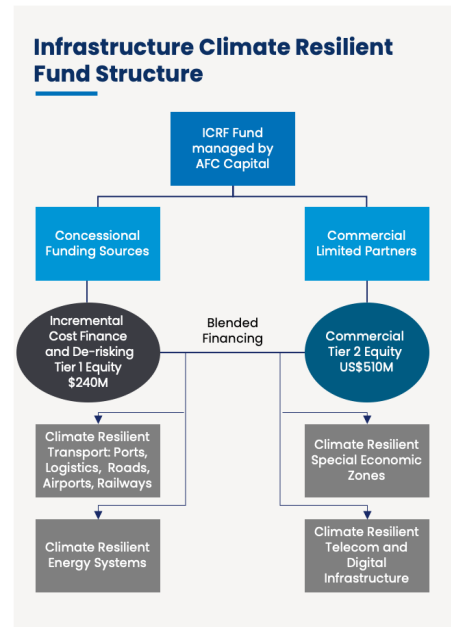


Innovative Capital Structure

This innovative capital structure will not only support the overall return objective of the Fund, but also de-risk the participation of institutional investors. The concessional equity tranche will be subordinated to the commercial equity tranche, and therefore provide a first loss risk protection to institutional investors such as pension funds, insurance companies, and sovereign wealth funds in Africa and globally.



Infrastructure Climate Resilient Fund Structure



Climate Resilient Infrastructure: Trade-off between Resilience Cost, Return and Bankability – GCF concessional equity is the enabler to balance the equation

Defining characteristic of climate-resilient infrastructure



It is planned, designed, built and operated in a way that anticipates, prepares for, and adapts to changing climate conditions.



It can also withstand, respond to, and recover rapidly from disruptions caused by these climate conditions



The physical impacts of climate change – such as increasing temperatures, shifting patterns of precipitation, increased intensity or recurrence of extreme weather events and rising sea levels – will affect all types of infrastructure



Infrastructure should be designed, built and operated in a way that anticipates, prepares for, and adapts to these changing climate conditions

Incremental costs and returns

- **Climate-resilient infrastructure** has the potential to improve the reliability of service provision, increase asset life and protect asset returns. However, to attract private sector investments and mobilize capital at scale for climate resilient infrastructure, the incremental costs of adaptation needs to outweigh the consequences of climate related damages or disruptions. GCF concessional equity is the enabler to balance the equation.
- **The ICRF fund will blend commercial and concessional equity capital** to enhance bankability. The concessional capital will be mobilized from the GCF to finance the resilience measures and de-risk the mobilization of institutional investors, while the commercial investors will provide equity required for the construction of the target infrastructure assets.
- **This innovative capital structure** will not only support the overall return objective of the Fund, but most importantly de-risk the participation of institutional investors and enhance the bankability of sub-projects given the additional capital expenditure (CAPEX) required for resilience. The concessional equity tranche financed by the GCF will be subordinated to the commercial equity tranche – hence offering a partial risk protection to institutional investors while supporting the bankability of the sub-project by absorbing the incremental cost.
- **The concessional capital invested by GCF** is set to absorb the incremental cost of integrating resilience and crowd in institutional investors, which will lead to the provision of climate resilient infrastructure services to beneficiary countries and their populations and communities.



B. PROJECT/PROGRAM INFORMATION

B.1. Climate context (max. 1000 words, approximately 2 pages)

Climate change problem: To date, the design of infrastructure typically assumes a future climate that is the same as today's climate. However, a changing climate and the resulting more extreme weather events mean those climate bands are becoming outdated, leaving infrastructure to operate outside of their tolerance levels. This presents direct threats to the assets as well as significant knock-on effects for population relying on the services they deliver. Infrastructure is expected to bear the brunt of anticipated climate change adaptation costs, typically estimated to be between 60 and 80 percent of total climate change adaptation spending globally, which could average \$150 billion to \$450 billion per year on infrastructure in 2050⁸. These risks underscore the need to address the adaptation of critical infrastructures taking into account their specific exposure, risks, and hazards.

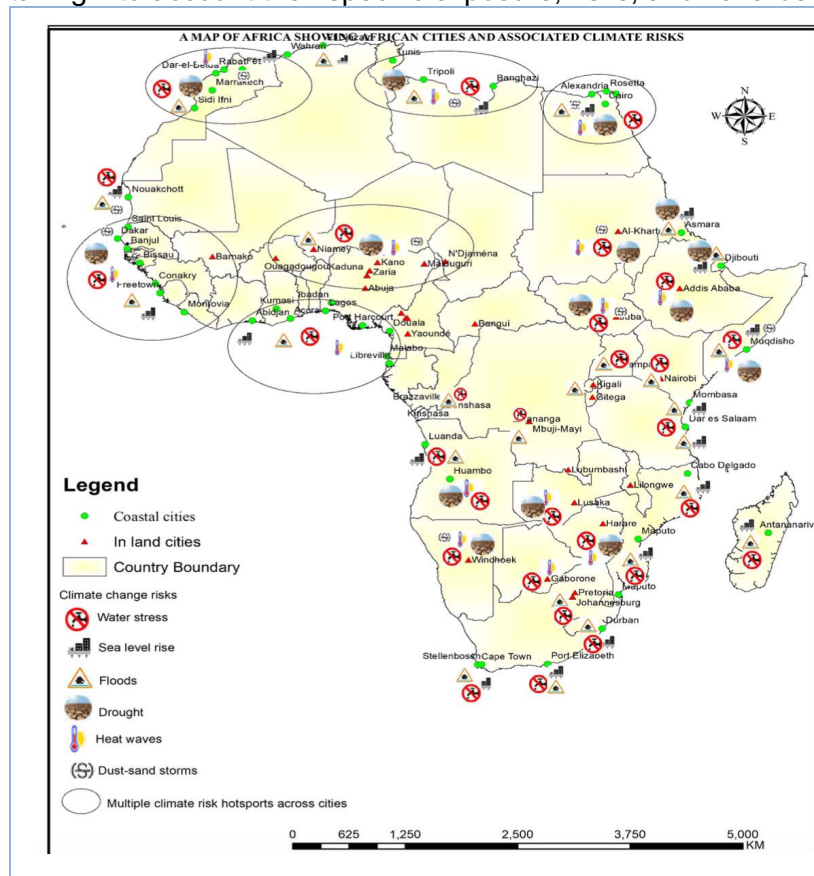


Figure B.1.1. Africa map of African cities and associated climate risk (Kareem et al., 2020)

Climate change and variability in Africa presents significant but varying adverse consequences on infrastructure assets. This poses huge implications on the quality, quantity, and accessibility of countries' infrastructure services, thereby truncating economic growth and development. Climate change impacts on African infrastructure amid pre-existing deficit, their low density and their poor conditions are detrimental to the continent's growth. Climate risks to infrastructure are both pervasive and diverse as each type of infrastructure system has specific elements vulnerable to specific climate hazards (Figure B.1.1)⁹. Hence, assets respond differently to projected climatic events by a certain order of magnitude increase in risk from a specific climate hazard while others may be much less affected¹⁰.

These climate-related risks can be directly assessed by the likelihood of the hazard, its severity, the level of exposure, and resilience of different infrastructure components to those hazards.

However, the biggest threats to assets differ significantly depending on the technical specifications of asset components and their degree of exposure to the changing climatic hazards. These specifications point out the need to better understand these different characteristics for the successful design, planning, location, investment, construction and maintenance of critical assets.

⁸Will infrastructure bend or break under climate stress?

<https://www.mckinsey.com/~media/mckinsey/business%20functions/sustainability/our%20insights/will%20infrastructure%20bend%20or%20break%20under%20climate%20stress/will-infrastructure-bend-or-break-under-climate-stress-case-study-old.pdf>

⁹ Buyana Kareem et al 2020 Environ. Res. Lett. 15 073002

¹⁰<https://www.mckinsey.com/~media/mckinsey/business%20functions/sustainability/our%20insights/will%20infrastructure%20bend%20or%20break%20under%20climate%20stress/will-infrastructure-bend-or-break-under-climate-stress-case-study-old.pdf>

Analysis of past climate data over Africa: Climatologically, more precipitation is recorded within the latitude bands of 20oN and 20oS for the period 1976-2005 as agreed in both gridded observation from the Climate Research Unit¹¹ archive (CRU) and ensemble of three regional climate models (RCM) from the Coordinated Regional Climate Downscaling Experiment¹² (CORDEX) Africa domain (Figure B.1.2. a & b). Relative to CRU, the RCM ensemble shows a good pattern correlation of 0.85, although with RMSE of 539 mm/year. Higher temperature values are observed and modelled around land areas, especially over the Saharan desert region. Although modelled minimum and maximum temperature have RMSE of 1.41oC and 2oC, respectively, there is a good agreement compared to precipitation.

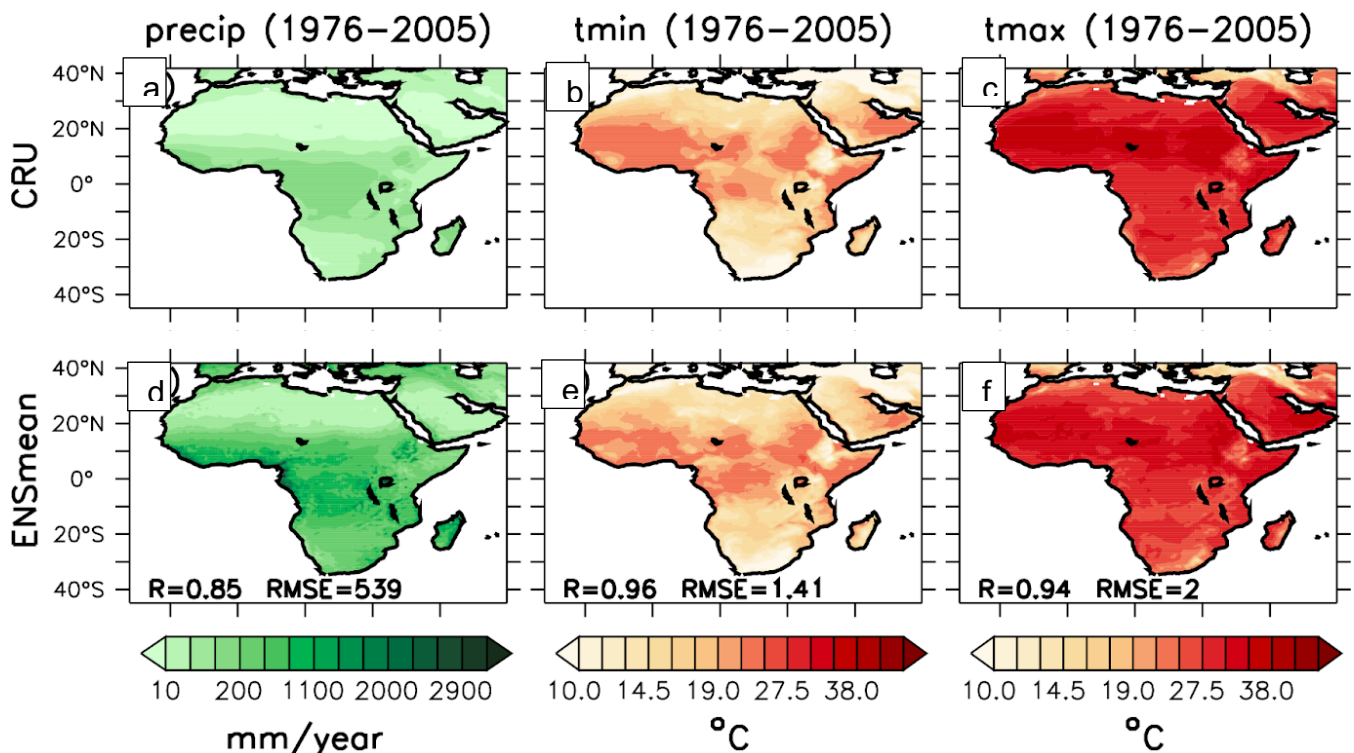


Figure B.1.2. Spatial distribution of mean annual total precipitation (first column), annual minimum temperature (second column) and annual maximum temperature (third column) from CRU (first row) and RCM ensemble mean (bottom row) for the period 1976-2005. R represents the pattern correlation relative to the observed data (CRU) whereas RMSE represents the root mean square error relative to CRU data.

According to the Intergovernmental Panel on Climate Change (IPCC) sixth assessment report¹³ (IPCC AR6), common regional characteristics exist in Africa. Some of such changes are that the mean temperatures and hot extremes have exceeded natural variability in all land regions relative to 1850-1900. Equally, the rate of surface temperature increases more rapidly compared to the global average. This increase is largely influenced by human-induced climate change drivers, such as anthropogenic emission and land surface modification. Furthermore, sea level has increased at a higher rate than global mean sea level around Africa over the last three decades. Sea level rise is reported to certainly continue around the continent thereby contributing to increases in the frequency and severity of coastal flooding in low-lying areas to coastal erosion and along most sandy coasts with adverse consequences for seaports and other critical infrastructures situated around the coastline.

¹¹ https://crudata.uea.ac.uk/cru/data/hrg/?_ga=2.98165404.204120138.1642344109-80085860.1642344109

¹² <https://cordex.org/>

¹³ IPCC AR6. Regional Fact Sheet – Africa. Working Group, I- The Physical Science Basis.

https://www.ipcc.ch/report/ar6/wg1/downloads/factsheets/IPCC_AR6_WGI_Regional_Fact_Sheet_Africa.pdf

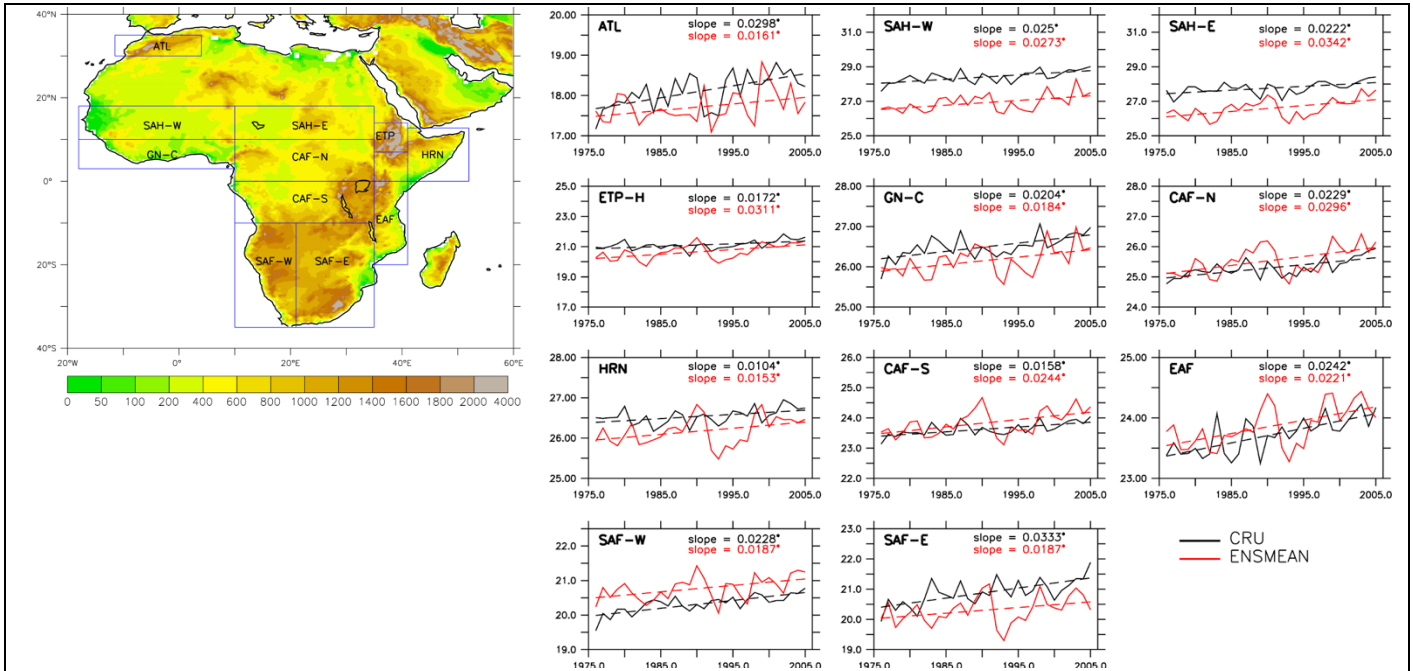
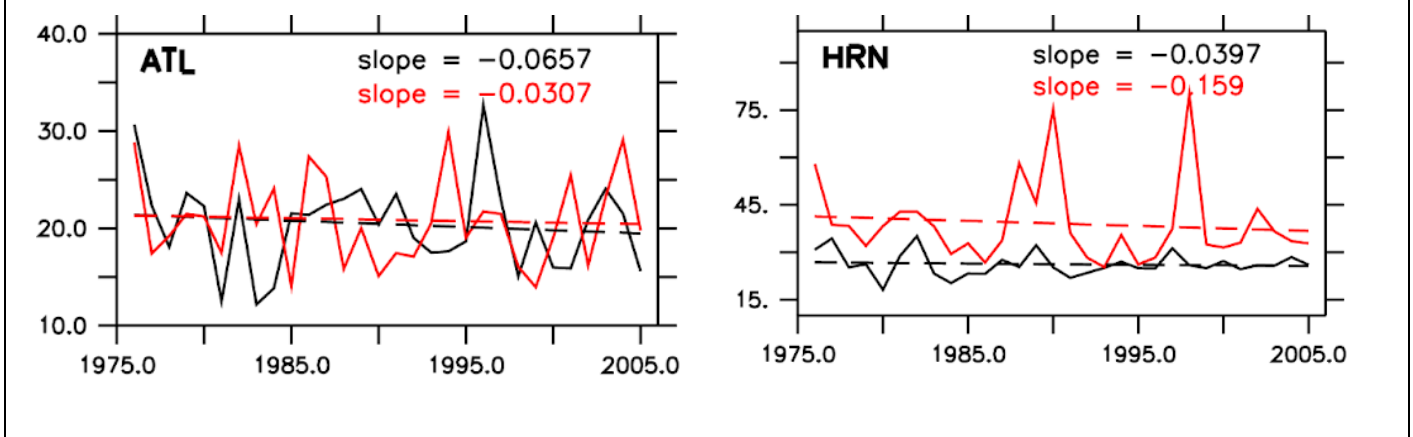


Figure B.1.3a. A map showing the elevation in meters and Africa sub-regions represented by blue boxes in the map (Dosio et al. 202114)

Figure B.1.3b. Time series of average annual mean temperature (oC) and temporal trend over each Africa sub-regions for the period 1976-2005. Black lines are observations from CRU (black) and red lines depict model ensemble. Asterisk (*) indicates that the trend is significant at 95% confidence interval.

Figure B.1.3. presents the elevation of Africa sub-regions and trends in temperature for the period 1976-2005 over the eleven sub-regions. Generally, all sub-regions show significant warming trends in observed and modelled mean surface temperature. Unlike precipitation, which exhibits a substantial spatial and temporal heterogeneity across subregions and between observation and model, where trends could be positive or negative depending on the subregion. Decreasing trends in precipitation were observed and modelled in some subregions including SAF-W, CAF-S, HRN, EAF, and ATL (Figure B.1.4). The decreasing trends are only significant in the observed precipitation in CAF-S and EAF subregions.



¹⁴ Dosio, A., Jury, M.W., Almazroui, M., Ashfaq, M., Diallo, I., Engelbrecht, F.A., Klutse, N.A., Lennard, C., Pinto, I., Sylla, M.B. and Tamoffo, A.T., 2021. Projected future daily characteristics of African precipitation based on global (CMIP5, CMIP6) and regional (CORDEX, CORDEX-CORE) climate models. *Climate Dynamics*, 57(11), pp.3135-3158.

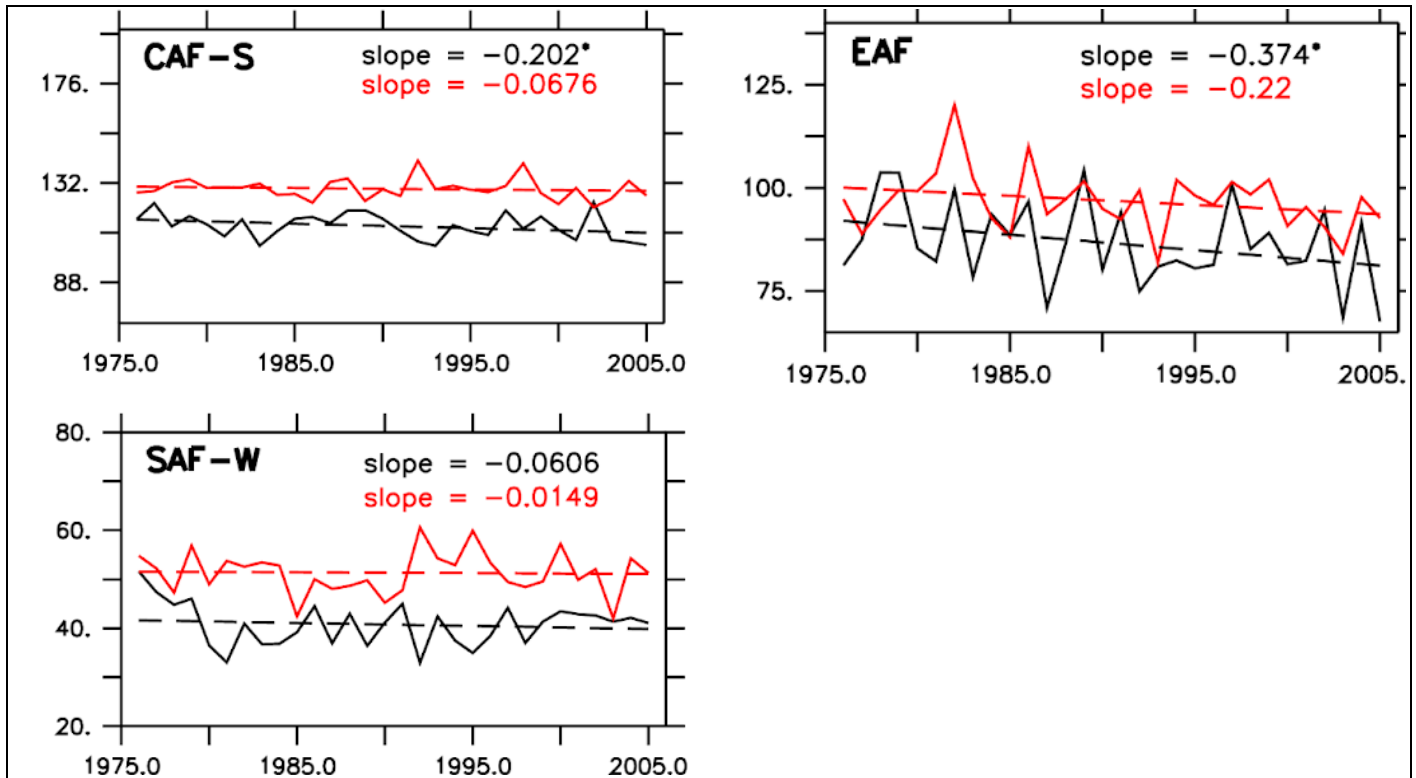


Figure B.1.4. Time series of annual mean monthly precipitation (mm/month) and temporal trend over each Africa sub-regions for the period 1976-2005. Black lines are observations from CRU (black) and red line depicts model ensemble. Asterisk (*) indicates that the trend is significant at 95% confidence interval.

Climate change projections and future climate over Africa: Models project precipitation and temperature in the future climate to change significantly in Africa¹⁵. According to the IPCC AR6, additional increases in global warming will cause changes in hot and cold temperature extremes and increase in mean maximum one day precipitation. Projected minimum and maximum temperature change is expected to reach 5oC in some land areas at 4oC global warming level (Figure B.1.5.). The percentage change in annual total precipitation ranges between -40% to 40%. Regions around central West Africa and East Africa are expected to experience increase in precipitation while the western edge of West Africa and larger area of South Africa are likely to record less annual total precipitation in the future. These signals are expected to intensify at 4oC global warming.

¹⁵<https://www.worldbank.org/content/dam/Worldbank/Feature%20Story/Africa/Conference%20Edition%20Enhancing%20Africas%20Infrastructure.pdf>

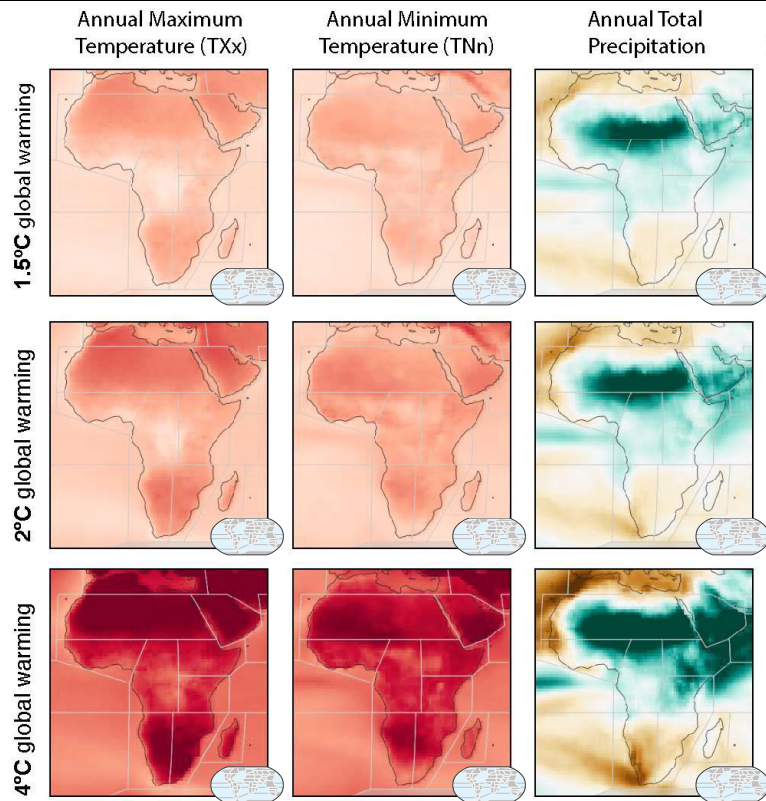
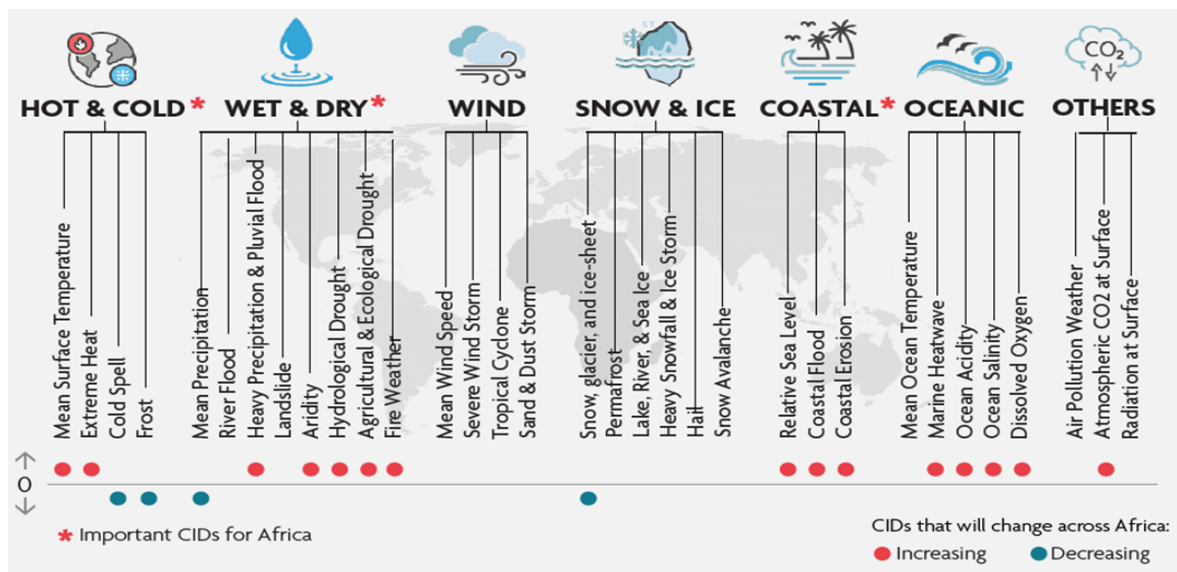


Figure B.1.5 Projected temperature and precipitation change at 1.5, 2, and 4°C global warming level. Climate models project that by 2050 multiple climatic impact-drivers (CIDs) will change across Africa (see Figure B.1.6)¹⁶. Temperatures and extreme heats will increase, and cold spells will decrease across the Continent. Frequency and intensity of heavy precipitation events are projected to increase in almost every region of Africa. Increase of the coastal CIDs, such as relative sea level, coastal flood and coastal erosion, will have devastating consequences for Africa. The CIDs' changes in magnitude, frequency, duration, seasonality, and spatial extent will threaten human health, food and water security, and socio-economic development.

Figure B.1.6. Climate impact drivers (CIDs) in Africa (Source UNESCO, 2022)



¹⁶ UNESCO, 2022, Mathematics for action: supporting science-based decision-making, <https://unesdoc.unesco.org/ark:/48223/pf0000380883.locale=en>

The uncertainty in future climate underscores the need for considering different climate scenarios, which has potential financial implications for adaptation and the pathways approach across the infrastructure system lifecycle¹⁷. Largely, the financial situation for adaptation depends on the climate change scenario considered. Higher impacts are expected under higher greenhouse gases (GHG) emission scenarios resulting in higher cost savings over the lifecycle of an infrastructure project. On the other hand, lesser impacts are likely to materialize under low-medium emission scenarios causing smaller savings, relative to the upfront adaptation cost. Though considerations of many potential future climates could complicate the assessment of climate risks, it remains critical to realize a robust outlook of those climates, which is crucial in planning climate-sensitive infrastructures to avoid over- or under-investments in climate resilience.

Impacts of climate change on infrastructure: Projected changes in climate parameters, such as temperature, precipitation, and flooding, will have significant effects on built and most critically, yet to be built, infrastructures throughout Africa. These effects will further have huge adverse implications on most African nations with already low quantity, quality and accessibility of infrastructure. Cities are expected to be most affected by climate change impacts because of the heavy reliance on extensive infrastructure networks for access to water, energy, and food. Nonetheless, the understanding of current and future climate impacts on infrastructure are still very limited in Africa, hence, limiting the integration of climate risks into infrastructure planning and investments. Table B.1.7 presents some examples of potential direct climate change impacts by sector. In addition to the direct physical and socio-economic impacts, climate change may have indirect impacts on infrastructures.

Table B.1.7 Expected frequency of adaptation interventions based on climate stressors on different ICRF infrastructure types.

S/N	Infrastructure type	Infrastructure expected life cycle	Climate stressors	Type of adaptation interventions
1.	Port	- 50–100 years	a. Sea level rise	- Major refurbishment - Reconstruction/major upgrade
			b. Heat stress	
			c. Water extreme	
			d. Water availability	
			e. Humidity	
			f. Wind	
			g. Storm	
2.	Road	- 20–30 years	a. Precipitation	- Maintenance - Resurface - Reconstruction/major upgrade
			b. Temperature	
			c. Humidity	
3.	Bridge	- 60–100 years	a. Precipitation	- Maintenance - Resurface concrete - Reconstruction/major upgrade
			b. Temperature	
			c. Humidity	
4.	Railways	- 50–100 years	a. Temperature	- Major refurbishment - Reconstruction/major upgrade
			b. Precipitation	
5.	Renewable Energy (Solar)	- 25-30 years	a. Temperature	- Replacement of solar panels
			b. Solar radiation	

Table B.1.7 presents the most common climate stressors, while in reality a larger set of climate stressors impact infrastructure.

¹⁷ What infrastructure pathways stands for: <https://infrastructure-pathways.org/overview/>

Extreme weather events in Africa powerfully illustrate how physical infrastructure and the provision of services that depends on them could be affected by the effects of climate change. In addition to extremes, trend changes will also have significant impacts on infrastructure. All ICRF countries had experienced climatic events in recent years that impacted severely their infrastructures. Photo B.1.8 presents selected events reported over the past five years (2017-2021) demonstrating likely effects of weather slow and extreme onset events on infrastructure.

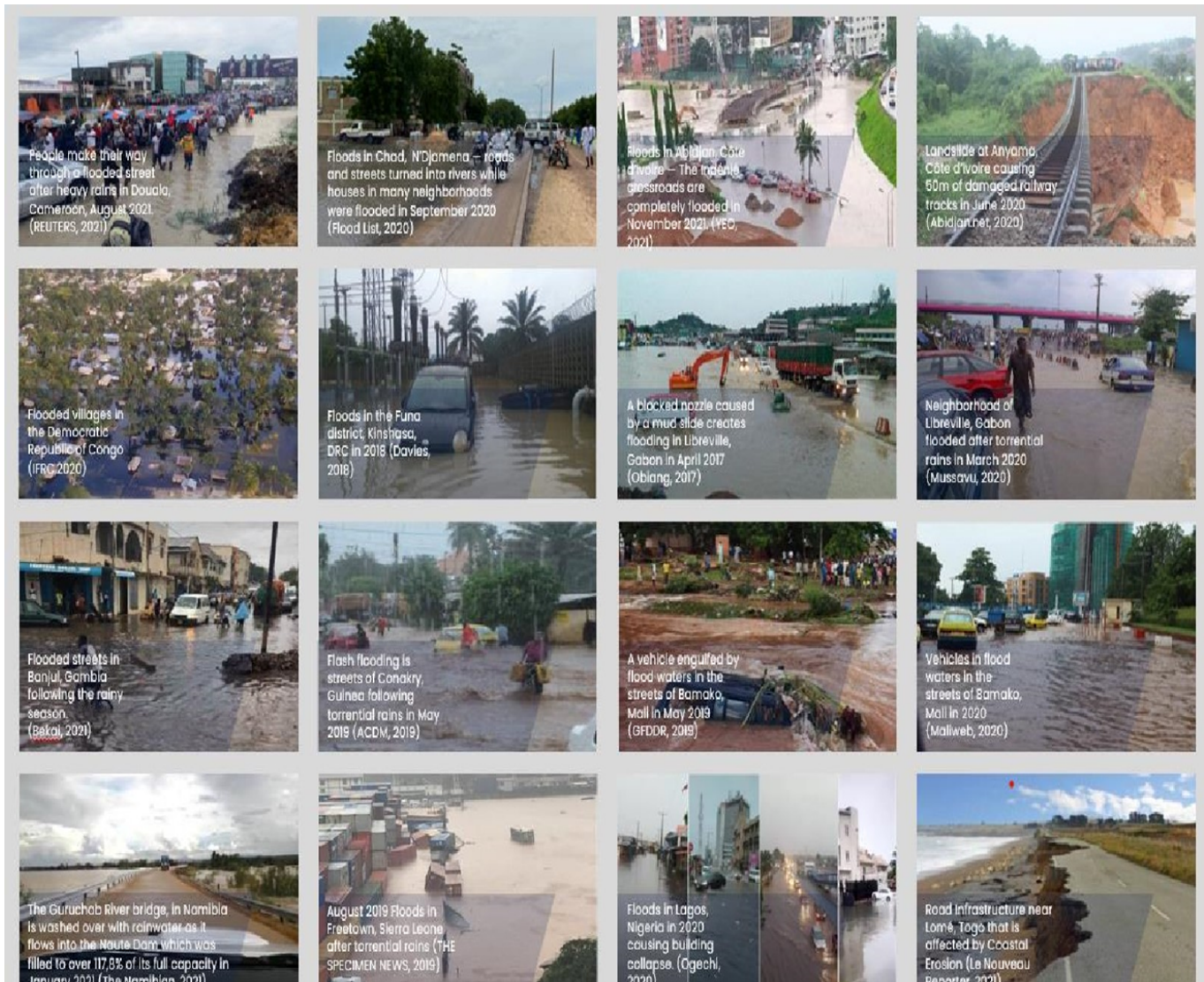


Photo B.1.8 Selection of reported climatic events affecting infrastructure in ICRF countries.

- Cameroon – flood, August 2021, showing people making their way through a flooded street after heavy rains in Douala. (REUTERS, 2021)
- Chad – flood, September 2020, presenting floods in N'Djamena — roads and streets turned into rivers while houses in many neighborhoods were flooded (FloodList, 2020)
- Côte d'Ivoire – flood, November 2021, showing floods in Abidjan — The Indénié crossroads are completely flooded. (YEO, 2021) and heavy rain triggered flooding and a landslide in Anyama, June 2020, showing Landslide at Anyama causing 50m of damaged railway tracks (Abidjan.net, 2020)
- The Democratic Republic of Congo – flood, 2020, showing flooded villages (IFRC, 2020) and flood, 2018, showing floods in the Funa district, Kinshasa (Davies, 2018)
- Gabon – mudslide and flood, April 2017, showing a blocked nozzle caused by a mudslide creates flooding in Libreville (Obiang, 2017), as well flood, March 2020, showing the neighborhood of Libreville flooded after torrential rains (Mussavu, 2020)

- Gambia – flood, 2021, showing flooded streets in Banjul following the rainy season (Bekai, 2021)
- Guinea – flood, May 2019, Flash flooding in streets of Conakry following torrential rains (ACDM, 2019)
- Mali – flood, May 2019, A vehicle engulfed by flood waters in the streets of Bamako (GFDDR, 2019), and flood, 2020, Vehicles in flood waters in the streets of Bamako (Maliweb, 2020)
- Namibia – flood over the bridge, January 2021, The Guruchab River bridge is washed over with rainwater as it flows into the Naute Dam which was filled to over 117,8% of its full capacity (The Namibian, 2021)
- Sierra Leone – flood in the port, August 2019, Floods in Freetown after torrential rains (THE SPECIMEN NEWS, 2019)
- Nigeria – flood, 2020, Floods in Lagos causing building collapse. (Ogechi, 2020)
- Togo – coastal erosion damaging the road, 2021, Road Infrastructure near Lomé that is affected by Coastal Erosion (Le Nouveau Reporter, 2021).

Most of these events are predicted to become the new normal under unabated climate change and can have devastated economic implications of these events as reported in the 3 cases highlighted below:

Côte d'Ivoire



2018 Abidjan floods and effects on infrastructure

In 2018 heavy rains were recorded in several parts of Cote d'Ivoire causing flooding in Abidjan, Aboisso, Grand Bassam, and Ayamé. *Several streets in western Abidjan, which houses one of Abidjan's industrial zones, were flooded, bringing the local industrial infrastructure to a standstill.* The access road to this strategic economic zone was engulfed by water, preventing the movement of vehicles¹⁸ To address flood risks in Abidjan and making urban infrastructure more resilient, a €48 million loan has been provided by the African Development Bank¹⁹.

Togo



2008 Amakpape National1 bridge destroyed by heavy rains

In 2008, devastating floods affected all the southern regions of the country, resulting in the destruction of eleven (11) bridges, including the Togblékopé, Lilikopé, and Amakpapé bridges located on the national road No. 1, which links the capital to the interior of the country and Burkina Faso. However, the cost of rebuilding the Amakpapé bridge was approximately 2.7 billion CFA francs.²⁰ Similarly, in 2016, it was the turn of the Bakocopé bridge located on the National Road N°1 which threatened to collapse following heavy flooding, thus disrupting traffic.

Namibia



2009 Namibia Floods and impacts on toll road

Namibia experiences frequent transport failures due to flooding. The 2009 floods caused the destruction of infrastructure and the decline of economic flows in Namibia. In 2009, damage to the transport and energy infrastructure amounted to US\$27.4 million and US\$1.1 million, respectively²¹. Another effect of climate change that threatens Namibia is drought, which is the most devastating risk to the country in terms of the total number of people affected and the total cost of damage. Indeed, previous droughts have cost the country about \$175 million per year and the impacts on the economic output of the affected areas are estimated at \$3.6 billion per year²².

The likelihood of increasing climate change potential effects on infrastructure assets in the Programme countries is high (See Annex 23a – Country level climate analysis including a detailed programme country climate profiles and vulnerability analysis for the ICRF CRI). This makes a strong case for earlier interventions for a systematic integration of climate risk assessment, integration, reduction and transfer in critical infrastructure planning, design, and financing. In the absence of proactive measures to make these infrastructures more resilient to climate change, private investors’ risk aversion to climate-related risks associated with infrastructure will increase to divert already scarce resources from infrastructure financing in Africa.

Maladaptation is one of the focus areas of the Sixth Assessment Report, Climate Change 2022. For urban areas, the report points out the establishment of inflexible infrastructure in cities and settlements that cannot be adjusted easily or affordably for increased heavy rainfall²³. Avoiding maladaptation is a significant consideration in ICRF design and for its implementation. Towards that end, a state-of-the-art ICRF Climate Assessment Methodology (See Annex 23 c) has been prepared to ensure a holistic assessment of the climate risks for the infrastructure, taking into account impacts on nearby vulnerable population and users, value chains and other dependent infrastructures. This methodology supports the systematic consideration of climate risks in ICRF investment decision making process, taking into account existing and future climate impacts. Three case studies testing the methodology (for road, port and solar plant) have been provided as supplement for Annex 2.

ICRF Climate Assessment Methodology (Annex 23c) & Operations Manual (Annex 21).

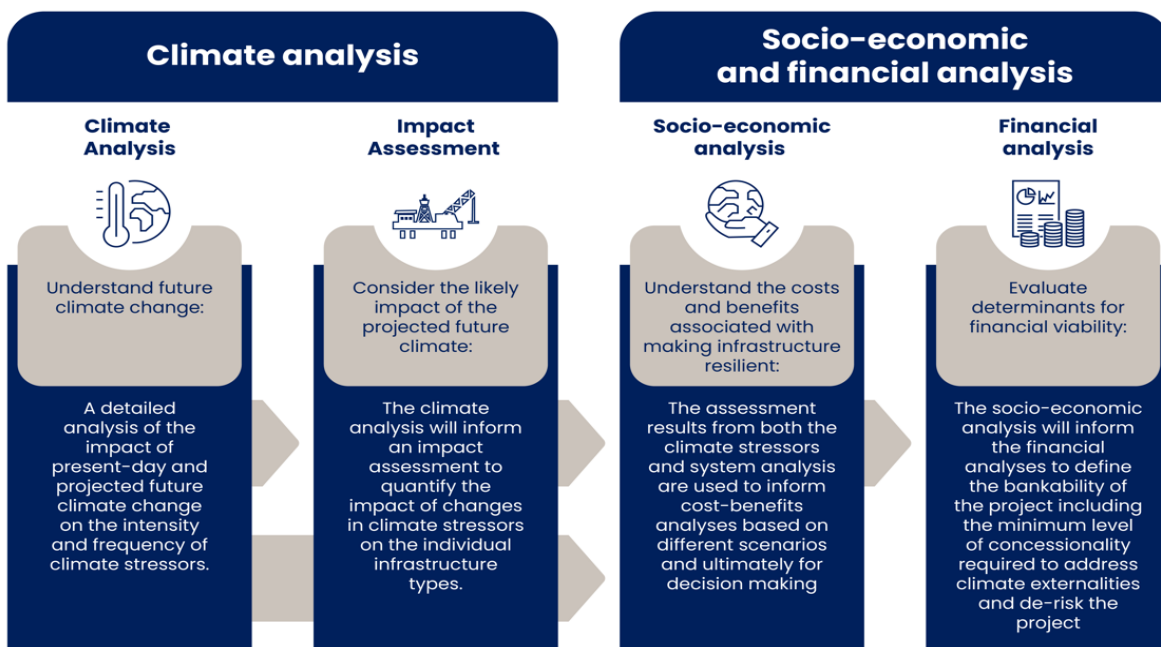
The ICRF Climate Assessment Methodology and Approach in Annex 23c is designed as a “tool” that would be used by AFC and ACP when assessing the climate impact potential for each sub-project under this programme. Every asset has its unique vulnerabilities to different climate hazards and extremes, making the degree of climate change impact on infrastructures site-specific. Assuming resilience is not built in the design of a given infrastructure, then, climate change could gradually disrupt this infrastructure to increase operation costs, worsen the funding gap, and eventually impact societies and economic growth. Due to the complexity of climate change impacts assessment on infrastructure, a system dynamic thinking has been prioritized for the ICRF programme to quantify the socioeconomic and cost implications of the climate hazards. It explores a science-based approach to integrating climate risk assessment and management in infrastructure financing and design. It establishes the scientific evidence and climate rationale for ICRF investments.

The ICRF Climate Assessment Methodology and Approach (Annex 23c) is built on the premises of the programmatic approach. It is underpinned by a detailed climate assessment based on CMIP6 models and

²³ Sixth Assessment Report, Climate Change 2022: Impacts, Adaptation and Vulnerability, the Working Group II https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_FinalDraft_FullReport.pdf

impact assessment that considers different types of infrastructure crucial to economic growth. The ICRF's methodology is comprised of a multitude of methods targeting different climate resilience, infrastructure-specific analysis components. The approach provides a decision tree for asset-specific resilience options for the ICRF's pipeline to customize climate risk assessments and vulnerability management based on hazard identification, system impact potential, site-specific project's vulnerabilities assessment and adaptation options decision-making. The approach identifies at least 4 critical steps that will enable AFC/ACP team to ensure ICRF investments are provided to sub projects with real need for building resilience:

1. The first step consists of a detailed climate analysis, considering understanding of past, present day and future climate in a given location and understanding of potential impacts on targeted infrastructure, based on the intensity and frequency of the most relevant climate stressors and drivers for the infrastructure site. (See annex 23a)
2. The second step consists of applying a system dynamic modeling using the outputs of the climate assessment to **quantify the impacts of changes in climate stressors on an infrastructure of interest**. The system dynamic analysis is useful as it can be customized to assess not only impact on the infrastructure but also on vulnerable population (city dwellers living in close proximity of the infrastructure and susceptible to be affected when it damaged and dependent users); wider system elements such as any dependent value chain or infrastructure). (See Annex 3ai, ii, iii)
3. Third, the assessment results from both the climate stressors and system modelling analysis are used to inform a suite of socio economic and financial analyses to provide information on the financial aspects based on different scenarios and ultimately for decision making. (See Annex 3bi, ii, iii)
4. Fourth, a pathway adaptation strategy of the programme will allow to prioritize well informed and cost-effective adaptation measures to be integrated as part of the infrastructure technical and engineering design options (both structural and soft measures). An adaptation pathways strategy considering uncertainties will be proposed to plan measures as climate change scenarios unfold. It will allow to build multiple options and flexibility into projects adaptation plans.



The Methodology includes safeguard for a system approach consideration for integrated infrastructure systems and nature-based solutions to ensure socioeconomic and financial sustainability of ICRF projects

Table B.1.8 Example of the climate change impact and consideration for potential climate adaptation measures in Cote d'Ivoire and Sierra Leone (See Annex 23d for all ICRF countries).

Region	Sector or Typology	Hazard	Risk/Impact	Adaptation activity
COTE D'IVOIRE				
San-Pedro	Port	Sea level rise increased storminess and storm surges: under RCP6.0, the sea level is expected to rise by 39 cm until 2080	Damage to port infrastructure and equipment and loss of port operability	<ul style="list-style-type: none"> – Increase of sea walls' height and strength and facilitation of ecosystem-based adaptation (e.g., mangroves) – Provision of breakwaters and shore revetments to protect the harbour from the force of waves – Use of tetra pods to dissipate the force of incoming waves
		Increased extreme rainfall: future wet periods are likely to become more extreme	Reduced navigability of rivers due to Increased magnitude and frequency of flooding and siltation	<ul style="list-style-type: none"> – Implementation of a navigation warning system
Abidjan	Road/Bridge	Increases in very hot days and heatwaves: temperature in Côte d'Ivoire is projected to rise by between 1.7 and 3.7 °C by 2080, compared to pre-industrial levels, with higher temperatures and more temperature extremes projected for the north of Côte d'Ivoire	<ul style="list-style-type: none"> – Deterioration of road surface integrity, e.g., through softening and traffic-related rutting (Asphalt has a strong heat-absorbing capacity that easily causes pavement high temperatures. – Temperature is a significant factor that affects the performance and service life of asphalt pavements. – The higher temperatures make the asphalt softer, thus the risk is high that heavy vehicles cause rutting due to the plastic deformation, which will decrease the pavement evenness and consequently affect traffic safety. – Thermal expansion of bridge joints, increased stresses in concrete bridge girders and accelerated material degradation in paved surfaces 	<ul style="list-style-type: none"> – Enhancement of design criteria to withstand extreme heat Introduction of cool pavement techniques (e.g., specifying use of porous materials) – Use of asphalt binders with high melting point – Use of modified asphalt binders – Use of innovation such as heat-collecting technologies – Use of expansion gaps and Asphalt Plug Joints (APJ) on bridge structures – Use of cooling (reflective) paints on structural members
		Sea level rise and storm surges: under RCP6.0, the sea level is expected to rise by 39 cm until 2080	Damage to bridges due to flooding, inundation of coastal areas and coastal erosion	<ul style="list-style-type: none"> – Raising road level – Construction of sea defense walls – Building and upgrading flood pumps and drainage systems

				<ul style="list-style-type: none"> - Construction of retention areas / lagoons for attenuation
		Increase in intense precipitation events	Damage to road infrastructure due to landslides and surface water flooding	<ul style="list-style-type: none"> - Use of improved natural drainage such as rain gardens, wetlands, and lagoons - Improvement of maintenance regime, emergency repair procedures - Construction of water retention areas/ Lagoons for flood risk mitigation
		Increased extreme rainfall: increase in the proportion of total annual rainfall that falls during heavy events	Reduced navigability of rivers due to Increased magnitude and frequency of flooding and siltation	<ul style="list-style-type: none"> - Implement a navigation warning system
		Changes in average precipitation: the projected annual change of the precipitation ranges from -23 to +18% by the 2090s	Negative impacts on the navigation of inland waterways as river flows are reduced	<ul style="list-style-type: none"> - Implement a navigation warning system
		Gusty Winds	Reduction of the efficiency of the mirror field	<ul style="list-style-type: none"> - Use of automatic systems to rotate solar panels out of the wind - Installing panels about 1 m above the ground to reduce abrasive effects
		Gusty Winds	Disruption in energy utilities Increase damage to electric transmission line	<ul style="list-style-type: none"> - Adoption of norms and standards that consider extreme events - Underground installation of electric transmission line
Abuja, Badagry Road	Road	Increases in very hot days and heatwaves: Nigeria's mean annual temperature ranges between 17°C to 37°C in the south to 12°C to 45°C in the north. For the country, temperature increases of 0.03°C per decade were observed between 1901–2016, with stronger increases occurring over the last 30 years of 0.19°C per decade. Nigeria are expected to increase by 2.9°C to as much as 5.7°C by end of the century	<ul style="list-style-type: none"> - Deterioration of road surface integrity, e.g., through softening and traffic-related rutting (Asphalt has a strong heat absorbing capacity that easily causes pavement high temperatures. - Temperature is a significant factor that affects the performance and service life of asphalt pavements. - The higher temperatures make the asphalt softer, thus the risk is high that heavy vehicles cause rutting due to the plastic deformation, which will decrease the pavement evenness 	<ul style="list-style-type: none"> - Enhancement of design criteria to withstand extreme heat - Introduction of cool pavement techniques (e.g., specifying the use of porous materials) - Use of asphalt binders with a high melting point - Use of modified asphalt binders - Use of innovation such as heat-collecting technologies - Use of expansion gaps and Asphalt Plug Joints (APJ) on bridge structures - Use of cooling (reflective) paints on structural members

			and consequently affect traffic safety. – Accelerated material degradation in paved surfaces	
SIERRA LEONE				
Lungi	Airport	Increases in very hot days and heatwaves	Deterioration of runway surface integrity, e.g., through softening of pavement surface and aircraft- related rutting	– Enhancement of design criteria – Use of modified asphalt pavement – Use of rigid pavement
		Increase in intense precipitation events	Surcharging of airport drainage systems leading to flooding Flooding damage Erosion of slopes Saturated and weakened pavement foundations	– Design and installation of drainage system for collection and disposal of runoff – Provision for adequate subsurface drainage – Expand and improve existing drainage system capacity
Baomahun	Renewable Energy / Solar	Hailstorms	Tube collectors can be damaged	– Adoption of modern flat plate collectors incorporated with reinforced glass are not easily damaged by hailstones
		Extreme Temperatures/ Heat waves: mean annual temperature has increased by 0.8°C since 1960, an average rate of 0.18°C per decade. temperature is projected to increase by 1.0 to 2.6°C by the 2060s, and 1.5 to 4.6°C by the 2090s.	Efficiency of PV modules drops by about 0.5 % for every 1 °C increase in temperature. Long-term exposure to heat will cause the panel to age more rapidly, while some materials may not be able to withstand short peaks of very high temperatures	– Use of photovoltaic modules that perform better in warmer environments – Adoption of thin-film technologies which are far better than crystalline silicon in such environments – Adoption of passively cooling techniques through natural air flows – Use of forced air and liquid coolants to actively cool PV modules
		Gusty Winds	Reduction of the efficiency of the mirror field	– Use of automatic systems to rotate solar panels out of the wind Installing panels about 1 m above the ground to reduce abrasive effects
		– Decreasing precipitation and drought: – Annual Precipitation Anomaly (mm)-24.1 to +29.2 (-0.5 mm)	Damage to buildings and infrastructure, environmental degradation, risks to human health, and considerable economic losses.	– Deployment of water-saving and re-use systems to balance water consumption across the region – Advocating for a mandatory water saving and re-use systems for corporate and public facilities

Country-level climate analysis is performed for infrastructure specific site in every country - integral to ICRF sub-projects assessment process and eligibility criteria for ICRF investment. The ICRF country-level climate analysis (Annex 23a) provides detailed assessment of the spatio-temporal distribution of precipitation, temperature and other relevant climatic drivers in current climate. It computes present-day climate trend and the projected changes in future climates under two scenarios (two shared socio-economic pathways - SSP2-45 and SSP5-85, corresponding to two representative concentration pathways - RCP4.5 and RCP8.5) for each of the ICRF host countries and for the infrastructure sites. Climate vulnerability analysis for ICRF countries by sector at regional level (**Annex 23b**) including detailed information on regional specific climate hazards, risks / impacts and initial consideration of adaptation measures for

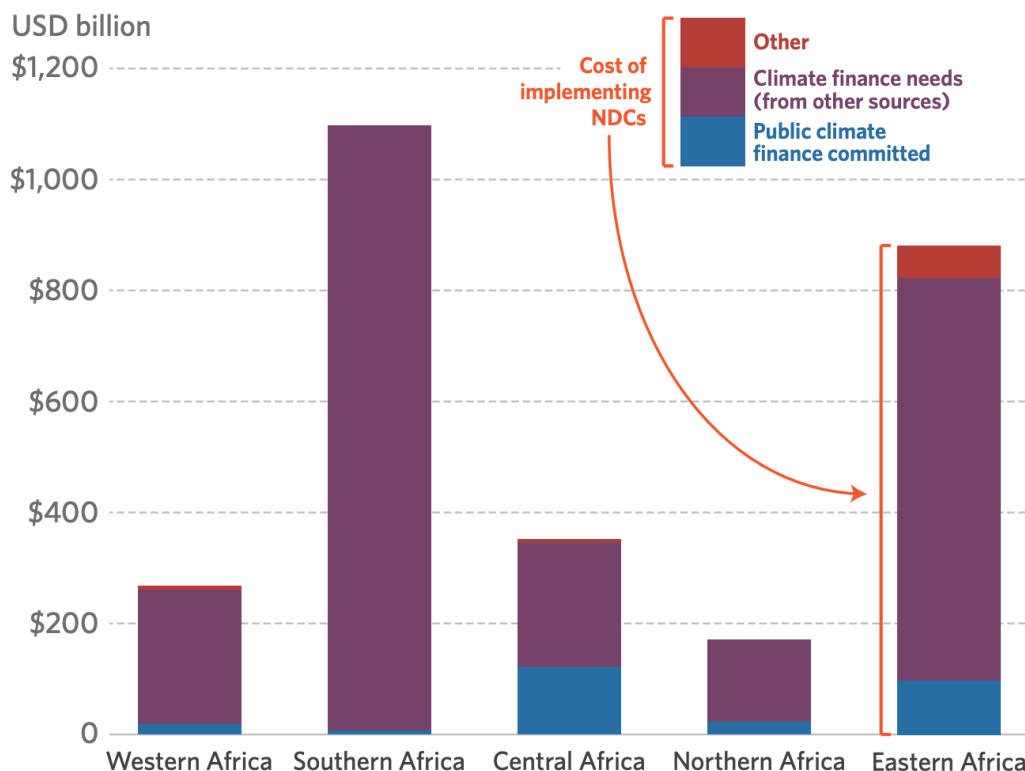
infrastructure sectors and assets will also inform climate risks assessment as part of the ICRF due diligence process.

Status of climate adaptation financing flow in Africa (Source CPI: 2022)²⁴

Current levels of climate finance in Africa fall far short of needs. The total cost of implementing NDCs in Africa is estimated at USD 2.8 trillion over 2020- 2030. Africa's climate finance needs between 2020 and 2030 requires, on average, USD 250 to 280 billion each year (see Figure B1.9). In 2020, total climate finance flows into Africa from domestic and international sources amounted to only USD 30 billion, about 12% of the amount needed. The financing gap is undoubtedly significant. With the continent's total GDP of USD 2.4 trillion (World Bank 2021), An equivalent to 10% of Africa's current annual GDP are required for climate finance, above and beyond current flows every year for the next 10 years. The estimated USD 250 billion plus, defined as climate finance needs' is the gap and must largely come from international public sources and domestic and international private actors (CPI, 2022).

Implementing Africa's climate response will cost around USD 277 billion annually between 2020-2030 (CPI, 2022) based on each country's NDCs. African Governments have committed USD 26.4 billion of domestic public resources annually, about 10% of the total cost. However, given debt levels and other development priorities, compounding from concurrent crises, African countries may not be able to provide as much domestic public climate finance as initially estimated. In fact, 23 African countries are either in debt distress or at high risk of debt distress (IMF, 2022).

Figure B1.9: Estimated climate finance needs in Africa by region



Mitigation accounts for the largest share of reported needs in 2020-2030, at 66% of total climate finance needs. **Adaptation accounted for only 24% of total climate finance reported needs, despite Africa being highly vulnerable to climate change. Figures on access to climate finance also show lower**

²⁴ <https://www.climatepolicyinitiative.org/wp-content/uploads/2022/09/Landscape-of-Climate-Finance-in-Africa.pdf>

volumes for adaptation. This reflects countries' challenge in assessing and costing climate risks and costs associated to adaptation measures while calling for a better balance between mitigation and adaptation finance. In addition, adaptation finance has not attracted private capital flows (see Figure B1.10).

Figure B1.10: Private and public climate finance flows vs. total cost by climate use (USD billion)

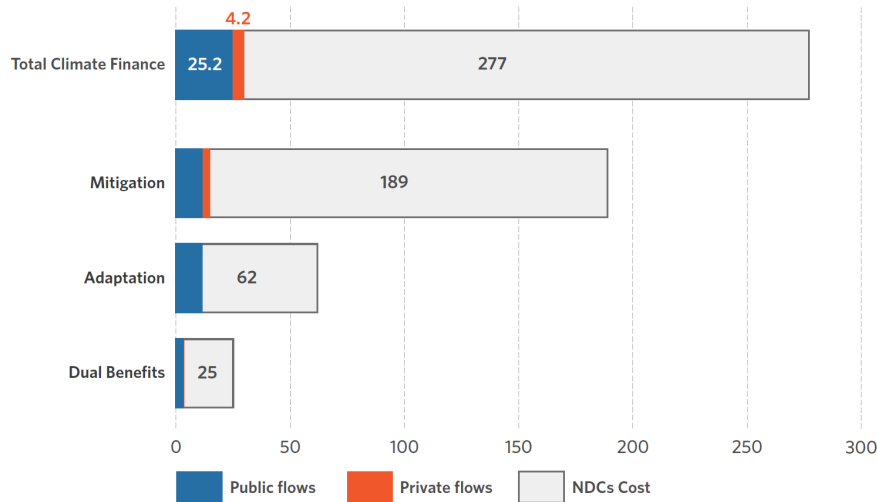


Figure B1.11: Climate finance needs by subregions, thematic area, and sectors (2020-2030, USD billion)

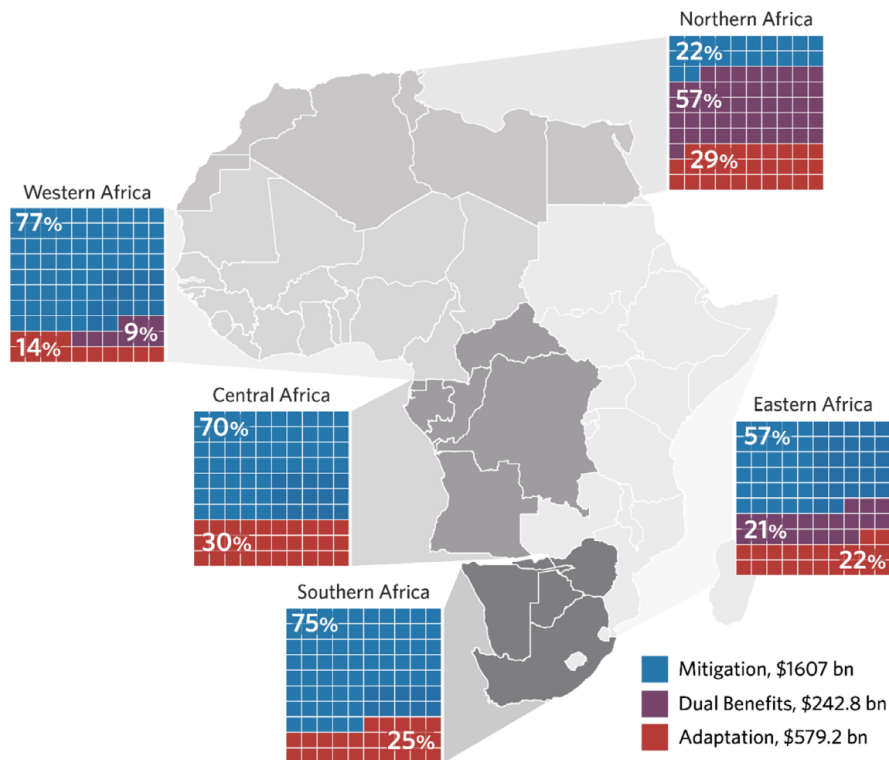
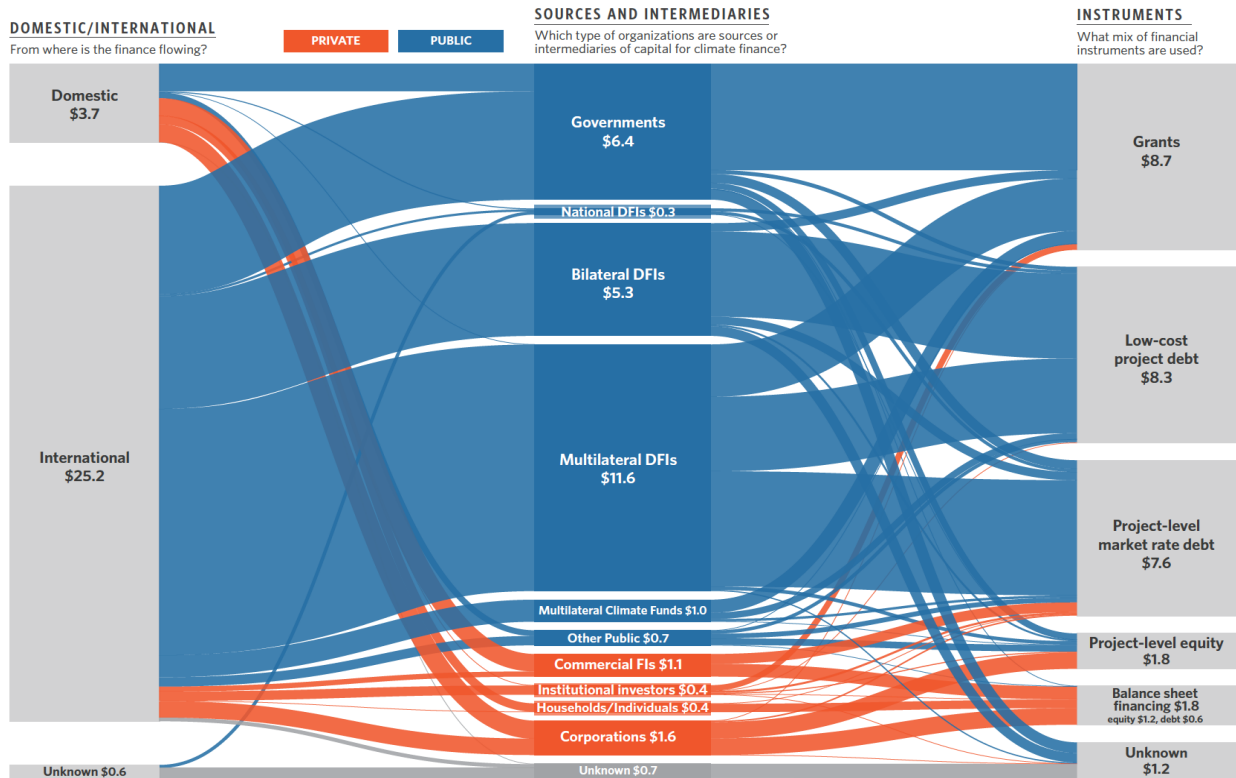


Figure B1.12: Climate finance flows in Africa, 2019/2020 (USD billion), still largely dominated by public flows DFIs and Governments.



Low level of private sector climate finance in Africa

Though typically overlooked in NDC conversations, the private sector has significant potential to meet Africa’s climate finance needs including significant adaptation needs. The private sector needs to increase its contribution towards climate finance in Africa as public funding alone is not sufficient to meet the continent’s climate action requirements. The private sector contributed only 14% (USD 4.2 billion) of total climate finance in Africa, much lower than in other regions like South Asia (37%), East Asia and Pacific (39%), and Latin America & Caribbean (49%) (CPI, 2021a), (see Figure below: B1.13 and B1.14).

Figure B1.13: Private and public climate finance flows vs. total cost by climate use (USD billion)

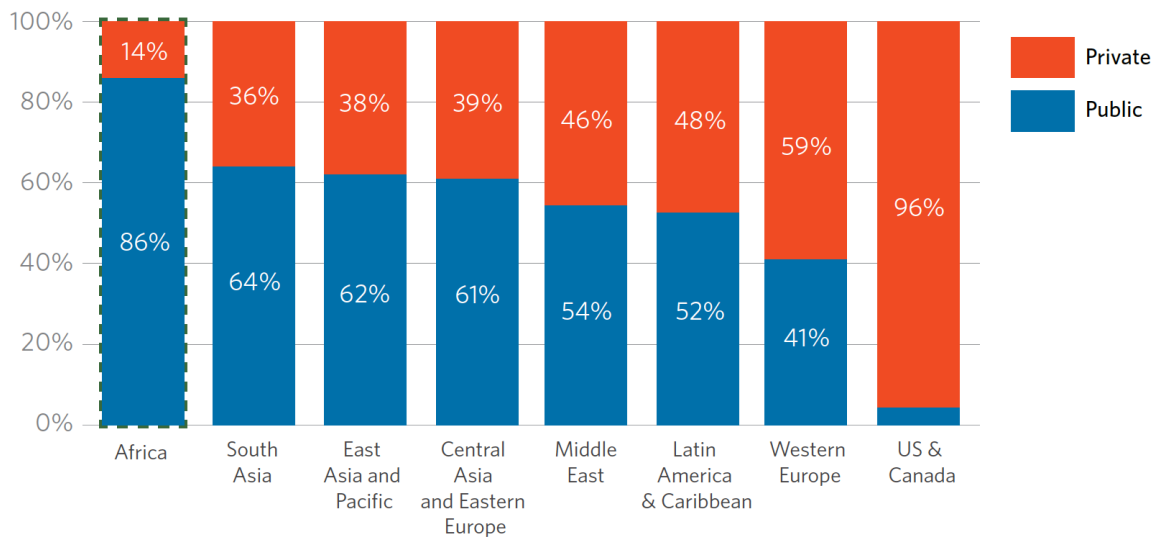
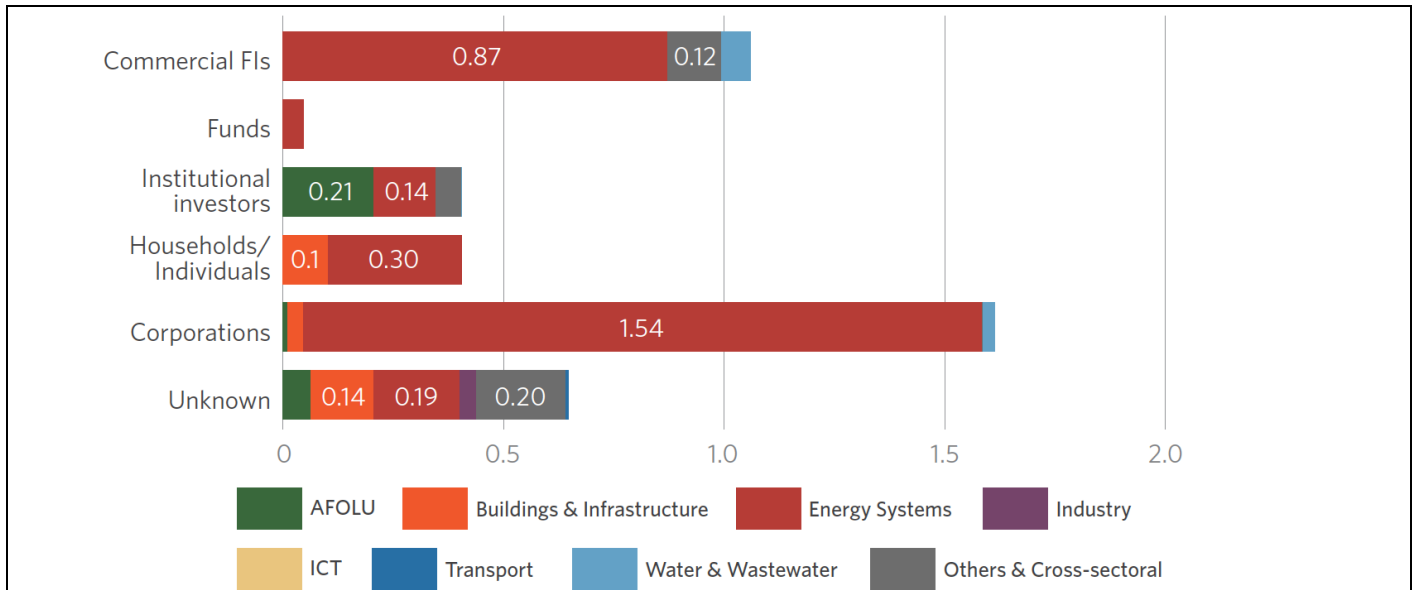


Figure B1.14: Private climate finance by providers (2019/2020 average, USD billion)



Infrastructure investments prospects in Africa: As part of a large effort to expand and upgrade its infrastructure system, Africa has planned substantial investments in infrastructure over the next decades. For road infrastructures only, capital investment for combined both regional initiatives and country-level masterplans averages about \$4.6 billion per annum, for a total of \$78 billion through 2030. In addition to the capital investment, funding for maintenance is needed to prevent the accelerated deterioration of the infrastructure. In addition, all climate models unanimously show that weather extremes will put considerable pressure on Africa's infrastructure. The damage and accelerated aging caused by climate change will require increased maintenance and more frequent rehabilitation. While climate change is projected to take a heavy toll on the African infrastructure system, securing strong adaptation and resilience outcomes are critical priorities to boosting responses to the impacts that are already heavily felt in the continent. These priorities are reflected in African countries' nationally determined contributions (NDCs) and other adaptation planning and priorities programming documents. All African NDCs submitted so far incorporate adaptation priorities. The nineteen (19) individual African countries highlighted the need to build climate-resilient infrastructure systems in their NDCs' adaptation priorities.

Barriers: Although there are numerous adaptation options that are relevant for all infrastructure sectors, some barriers impeding efforts to improve infrastructure resilience to climate change, especially in Africa, include: (i) increased exposure to climate change risk in Africa^{25,26}, (ii) inadequate capacity to assess risks, vulnerability, and impacts, and to integrate into investment strategy, (iii) absence of mobilization of capital to fund adaptation, and (iv) absence of construction codes, standards, and metrics for climate risks integration in infrastructure design and financing. Therefore, the imperative to address these barriers to ensure that current and future infrastructure are safeguarded from climate risks including socioeconomic and environmental impact. Otherwise, failure to adapt to climate change by considering climate risks in the design, construction, and maintenance of infrastructure assets will run the risks to become stranded and unable to recover their investment cost, leading to a huge cost implication for owners and operators and increase the exposure and vulnerability of people.

ICRF' contributions and alignment with national and regional priorities: ICRF is a first attempt to demonstrate that financing adaptation and resilience of infrastructures can deliver a strong return both by reducing costs from climate-related damage to the infrastructure itself and by avoiding pronounced

25 Climate Change Is an Increasing Threat to Africa <https://unfccc.int/news/climate-change-is-an-increasing-threat-to-africa>

26 IPCC Sixth Assessment Report 'Climate Change 2022: Impacts, Adaptation and Vulnerability' https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_FinalDraft_FullReport.pdf

cumulative effects on the wider society. This programme will also support national and regional infrastructure master plans that are made resilient to climate impacts. This effort will complement existing initiatives, including the recent Africa Climate Resilient Investment Facility (AFRI-RES) set up by the African Development Bank (AfDB) in collaboration with the African Union Commission, the United Nations Economic Commission for Africa (UNECA) and the World Bank including through the Global Facility for Disaster Reduction and Recovery (GFDRR) to incorporate climate change into infrastructure asset management and develop the region's capacity to integrate climate change considerations into the planning and design of long-lived investments. Climate-resilient investment would reduce the impact of these climate hazards on the physical infrastructures.

B.2 (a). Theory of change narrative and diagram (max. 1500 words, approximately 3 pages plus diagram)

Theory of change (ToC): This programme is designed to offer tailored financial products (concessional first loss equity), technical assistance funding to mainstream climate risk assessment in infrastructure investments and incentivise the development of innovative parametric climate risk insurance solutions to climate-resilient infrastructure while reducing the impact of climate hazards on the physical infrastructures in the selected African States. The AFC is committed to addressing these risks and improving infrastructure resilience to climate change in Africa by attracting private sector investments with a particular interest in institutional investors. This proposal seeks to establish the Infrastructure Climate Resilient Fund (ICRF), the first effort to mobilize private capital in climate resilient infrastructure (CRI) in Africa. In addition to AFC' investment at the fund level, ICRF will also co-finance with AFC at the project level. ICRF will ensure systematic integration of climate risks in infrastructure planning, design, location, construction, financing, and operation. The programme will provide technical support to assess the potential future climate impact on any infrastructure at the project level.

On best effort, AFC will work with other partners to pilot and create market for a parametric insurance scheme as a complementary instrument for climate resilient infrastructure in Africa. Climate risk insurance will shift the paradigm for investments in the targeted countries based on the integration of science-based data, metrics and standards, as well as adequate legal frameworks. Also, the introduction of new construction codes for climate resilience infrastructure assets will have a transformational impact in establishing CRI as a new distinctive asset class.

The transformative approach of the programme is the introduction of tailor-made capital structures that allow private investors to incorporate climatic risk data into the design and construction of the new and existing climate-resilient infrastructure Asset Classes (CRI Asset Classes) of the programme. The overarching objective of the Infrastructure Climate Resilient Fund (ICRF or "the Fund") is to support Africa climate resilient and sustainable development path by catalyzing blended finance at scale towards evidence-based, climate-resilient infrastructure in Africa and ensuring that people in Africa will have access to these climate-resilient, reliable, and durable infrastructure assets. Investments in climate-proof infrastructure support the sustainable development of the Continent by ensuring that the people of Africa will have access to climate-resilient, reliable, and affordable infrastructure assets. Considering that financing the cost of resilience and adaptation measures in infrastructure projects bear typically no to minimum profit, ICRF seeks to mobilize concessional capital to absorb the substantial increase in project costs on account of incorporating climate resilience. GCF' concessional finance is perfectly suitable to finance project these additional costs attributable to building resilience in the targeted sectors : (1) Climate-resilient Transport and Logistics, (2) Climate-resilient Energy Systems, (3) Climate-resilient Economic zones, and (4) Climate-resilient Telecommunication and Digital Infrastructures.

Since infrastructure benefits the public, principally the ultimate beneficiaries of the ICRF are the governments of the targeted countries and users of the resilient infrastructures, the sub-project sponsors and investors and those that employed in project sites. The positive investment environment to resilient infrastructure will ensure sustainable development. Immediate beneficiaries are the national or sub-national (as relevant) authorities controlling infrastructure procurement and project development. These

stakeholders will also benefit from improved conditions and enabling environment that can attract long-term and stable green investments. The positive Climate and SDG impacts will link to and directly support host country Nationally Determined Contributions (NDCs) and Sustainable Development Goals (SDGs), amplifying impact beyond the projects' close location. Other direct beneficiaries include the project developers (primarily private sector entities, thus encouraging and empowering local developers) in terms of finance and technical support to advance sustainable, green infrastructure projects.

This project will have a significant climate change adaptation impact, both directly through the provision of concessional pilot climate-resilient infrastructure and indirectly and structurally through the mainstreaming of climate change adaptation into ICRF. This project will contribute to SDG goals 6-9, 11, and 13. And by promoting climate-resilient infrastructure, the ICRF will play a key role in strengthening economic development through ICRF infrastructure investments, increased productivity of climate-resilient assets and job creation, contributing to the development of national economies. Social sustainability will be achieved by increased safety through resilient infrastructure assets, access to education by offering resilient road network, and deploying telecommunication and digital infrastructure network, as well as increased energy security. As environmental considerations are at the core of ICRF approach, the programme will set a clear economic case for promoting environmental principles in infrastructure investment, promote quality and safety. The Environmental and social management system for ICRF is presented in Annex 6.

Anchor funding from the GCF will unlock, private investors (pension funds, insurance companies, family offices, private banks, philanthropies, and other institutional investors) which are willing to invest in resilient projects including in infrastructure but do not have access to attractive investment vehicles to invest at both the national and regional levels.

A key factor affecting private investors' decision to invest in climate-resilient infrastructure is bankability that require acceptable risk exposure, future cash flow to make it attractive. One key barrier that may constrain or hamper the bankability of climate resilient infrastructure is the risk adjusted returned. Climate resilient infrastructure investments present the profile of higher risks projects for lower return due to the need to invest in incremental cost. Yet, many of the benefits of investing in infrastructure may be hard to monetize, particularly for protective infrastructure such as flood defences. In addition, many investors do not have allocation for this type of resilient infrastructure investment as these are not yet considered as an asset class. However, growing examples in other markets (not Africa) show how blended finance and other instruments and mechanisms are being implemented to translate the potential benefits of climate-resilient infrastructure into adequate revenue streams with an optimal risk-sharing allocation in combination with efficient resource use to ensure bankability for suitable projects. Learning from these models, ICRF is designed to overcome financial, technical, and regulatory barriers to investing in infrastructure. (See section D.4 on detailed *barrier analysis*).

Goal statement / Impact: Paradigm shift

The ICRF is built on the premise that **IF** blended capital is mobilized at scale to de-risk and accelerate investments in climate resilient infrastructure (CRI), and climate risk assessments and regulatory frameworks for CRI are strengthened and mainstreamed **THEN** Africa will be on a climate resilient and sustainable development pathway **BECAUSE** vital infrastructure will be more resilient to climate hazards, and vulnerable people and communities will have improved access to these infrastructures for livelihoods and other social services. ICRF design structure encompasses three outcomes:

Outcome 1 – Blended finance is mobilized at scale to accelerate CRI investments in the beneficiary African countries for infrastructure programme assets made resilient and able to withstand climate hazards and for improved access of vulnerable people and communities to climate-resilient infrastructure services (all-weather roads, bridges, power supply, ports and logistics, special economic zones, telecommunication, and digital infrastructure services).

By providing anchor financing in the form of junior equity, the GCF contribution will allow ICRF to mobilize private capital at the fund level. The target size of the ICRF capital is up to USD 750 million, including USD 240 million of concessional financing from the GCF, to be channeled by AFC through AFC Capital Partners (ACP). The ICRF has the mandate to only invest in CRI projects and programmes, including to a limited extent (25% maximum) to improving the quality of existing and building new roads, bridges, airports, railways, telecommunications, clean energy, ports, and logistics that exhibit vulnerability and risk to at least one main climatic driver. ICRF will contribute to climate resilience and sustainable development reaching 50,365,031 direct beneficiaries and 144,115,769 indirect beneficiaries and making infrastructure assets 2 billion USD worth more resilient to climate change.

The core pillar of the ICRF will be to de-risk investments towards an emerging recognition of the needs for CRI Asset Classes while ensuring alignment with Paris Agreement. De-risking of investments will be achieved through a proper blended capital structure, designed to de-risk investors, and enhance bankability by covering the incremental cost of climate-resilient measures with GCF's patient first loss equity capital. The ICRF will mobilize private capital at scale to accelerate investments in resilient infrastructure in the African targeted countries.

The ICRF mission will be supported by the managing partner AFC Capital Partners in collaboration with designated climate technical firms for CRI investments, backed by the AFC's strong track record to co-invest / co-develop transformative infrastructure projects.

Outcome 2 – Improved climate risk assessments and adaptation solutions for CRI; improved capacity for scaling up CRI in Africa for infrastructure assets made resilient and able to withstand climate hazards, enabling improved access of vulnerable people and communities to climate-resilient infrastructure services.

The programme will help to overcome the technical barriers by using the GCF Technical Assistance funding (TA) to create an enabling environment and scale up investments in CRI in Africa. The TA will address challenge of accessing and processing reliable data, strengthening climate risk assessments, knowledge, and capacity in countries around climate change to increase preparedness and risk management led by AFC in collaboration with ACP. This component of the programme will also support prioritisation and selection of optimal adaptation solutions for ICRF investments in CRI avoiding risk of maladaptation and ensuring state-of-the-art climate assessment and decision-making tools for CRI investments. The programme will achieve increasing longevity of infrastructure assets as compared to the sector average baseline achieved through resilience measures to the climate change physical risks.

Outcome 3 – Strengthened regulatory framework and innovative climate risk parametric insurance (CRPI) is mainstreamed for the long-term viability of CRI investments in Africa

Outcome 3 will address regulatory barriers to ensure the programme's paradigm shift affect in the beneficiaries' countries and across Africa as a whole. The programme will help to adopt new climate-resilient infrastructure asset classes, favorable investment policies and fiscal incentives on a country and regional level based on the regulatory gaps and the country priorities. Improving regulatory framework is a crucial milestone for attracting investments from the private sector in resilient infrastructure in the programme countries. In addition, AFC will support design and development of innovative products of CRPI tailored for Africa to transfer residual climate change risks and seek donors to sponsor CRPI for ICRF and other investments in critical infrastructure assets. This intervention will enable the development and implementation of tailored insurance products for physical climate risk for infrastructure in Africa. Such initiative will be supported by a USD 1 million GCF grant to AFC, which will contribute to designing tailored products for climate risk parametric insurance (CRPI) in Africa.

ICRF investments support national climate priorities, in particular countries' choices to prioritise Public-Private-Partnership for infrastructure financing considering their restricted fiscal space. ICRF addresses both climate related and typical risks and barriers to infrastructure financing, with the later remaining valid for resilient infrastructure financing.

Outcome 1 addresses Barrier 1 - financial: limited capital flows to infrastructure investments in Africa due to investors' perception of a high-risk (risk allocation and financial instruments mismatch, low return on investment (ROI) of climate-proof assets due to incremental cost, limited benefit from climate risk insurance, low appetite from private sector).

Outcomes 2 and 3 will be achieved through activities for enabling environment to ensure sustainability and scalability of the ICRF in the programme countries and potentially expanding knowledge sharing at a regional and global scale, which will help to overcome barriers 2 and 3:

Barrier 2 - technical: absence of site-specific infrastructure climate assessment methodology (lack of data, methodology and technical skills for infrastructure; absence of standards and metrics on climate-resilient infrastructure; no technical assistance for projects design and implementation).

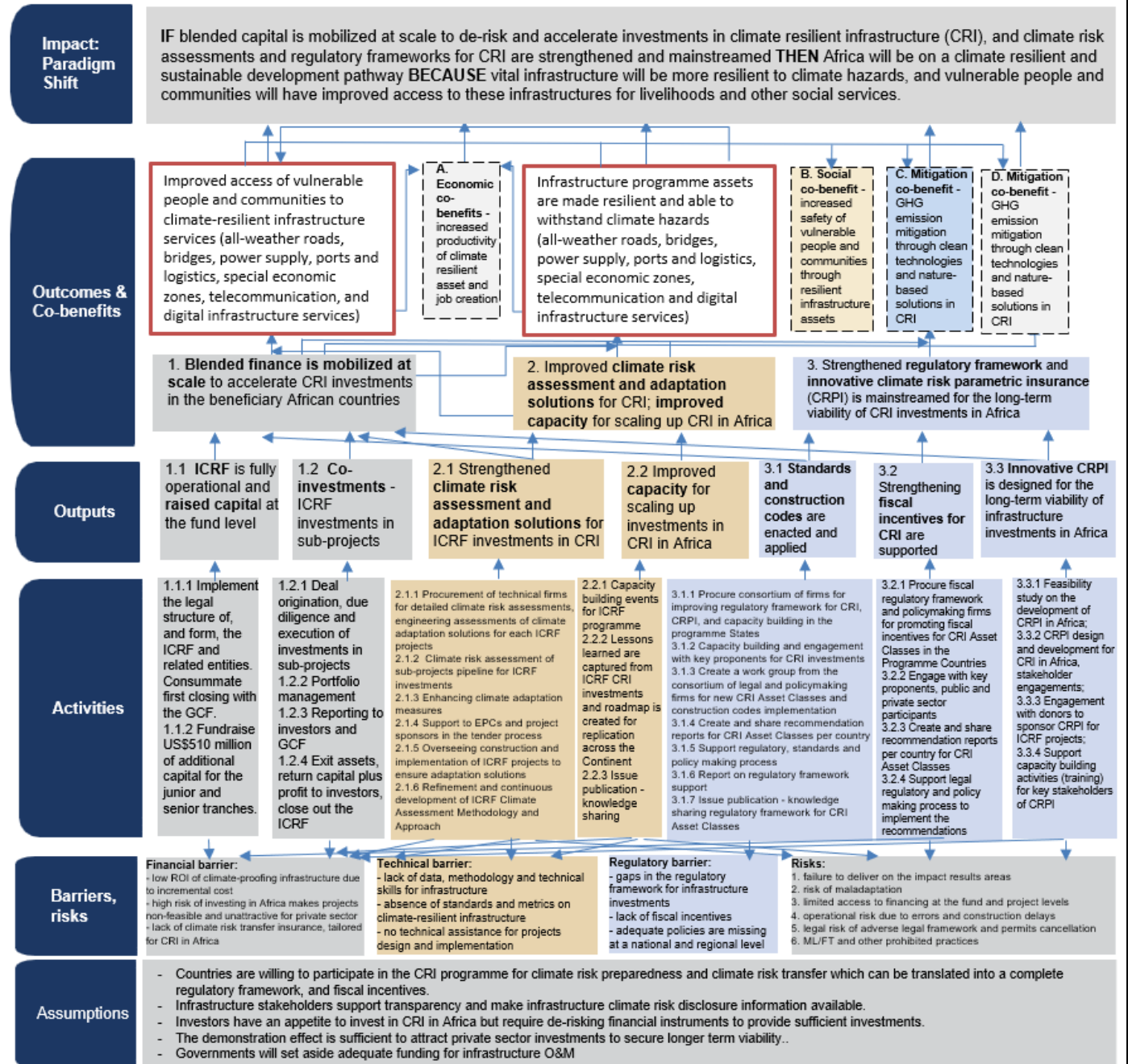
Barrier 3 - regulatory: acceleration required for adaptation investments through regulatory incentives (gaps in the regulatory framework for infrastructure investments; lack of fiscal incentives; adequate policies are missing at a national and regional level). Outcome 2 will be achieved through interventions for strengthening the regulatory framework for CRI in the region and overcoming the barriers.

The ICRF programme has a country specific approach in addressing risks and barriers for infrastructure development. The risks and barriers analysis (see the Table B.2a.1) is developed in support of the programme activities and is an integral part of the ICRF Country Climate Assessments and Investment Decision Making Process (Annex 23b). A country centered approach has been incorporated in the feasibility study - physical climate risk assessment with country specific climate change hazards, across infrastructure assets (Annex 2), creating country-specific risks and barriers overview proactively for infrastructure investments allows meeting country's needs and priorities and streamlining projects eligibility for ICRF investments.

Outcomes 2 and 3 will be implemented with the grant support of USD 11 million from GCF. AFC will procure and engage designated climate analytics and technical engineering firms, as well as legal / policymaking firms for the delivery of technical assistance services on a competitive basis in accordance with the AFC's procurement policy.

ICRF programme will have a demonstrative effect of the investment case and long-term viability of integrating climate resilience in infrastructure projects. Therefore, the Fund will seek exit from the projects as GCF de-risking at the fund level will no longer be required. The investors would be more comfortable deploying capital in Africa at scale for this new climate resilient infrastructure asset class as a proof of the successful completion of the programme.

Theory of change diagram:



Assumptions

ICRF is designed based on the assumptions that:

- Countries are willing to participate in the CRI programme for climate risk preparedness and climate risk transfer which can be translated into a complete regulatory framework, and fiscal incentives. All NOLs will be secured before the Board review.
- Ability and willingness of the governments to provide data / support for parametric insurance.
- Infrastructure stakeholders support transparency and make infrastructure climate risk disclosure information available.
- Investors have an appetite to invest in CRI in Africa but require de-risking financial instruments to provide sufficient investments.
- The demonstration effect is sufficient to attract private sector investments to secure longer term viability. Governments will set aside adequate funding for infrastructure O&M.

If any co-benefits have been identified in section B.2(a), fill in the Co-benefit table below to map each co-benefit to the corresponding category as defined in the FP guidance note.

Co-benefit number	Co-benefit					
	Environmental	Social	Economic	Gender	Adaptation	Mitigation
ICRF infrastructure investment, increased productivity of climate resilient assets and job creation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increased safety of vulnerable people and communities through resilient infrastructure assets	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
GHG emission reduction through clean technologies and nature-based solutions in CRI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Nature-based solutions integrated as part of resilience measures	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

B.3. Project/program description (max. 2500 words, approximately 5 pages)

Project/program description

The programme's main objective is to increase climate resilience in African infrastructure and enhance the livelihoods of the population by offering reliable, safe and affordable climate-resilient infrastructure assets. The programme will deliver its objectives through systematic integration of climate risk management into design and valuation of infrastructure in nineteen (19) countries in the sub-Saharan area. The programme seeks to achieve this goal by raising US\$ 750 million that will enable the financing of portfolio companies, projects, and platforms across four target sectors: (1) Climate-resilient Transport and Logistics (Ports, Roads, Bridges, Railways, Airports etc.), 2) Climate-resilient Energy Systems, 3) Climate-resilient Economic zones, 4) Climate-resilient Telecommunication and Digital Infrastructures.

B3.1 Programme Outcomes, Outputs and Activities

To address the averseness of private investors to finance the incremental cost associated with adaptation measures required to make infrastructure resilient due to their low or no return potential, the ICRF will be structured as a blended finance vehicle with a junior and senior tranche (see Figure B3.1). Infrastructure investment has the potential to generate long-term benefits to society in terms of inclusive economic growth

and improvements to safety and wellbeing. Such investment could contribute immensely to key policy priorities, such as making societies more resilient, addressing disparities across regions and cities, and promoting sustainable development. ICRF also seeks to enable these countries to adopt a climate resilient pathways for infrastructure development by promoting, upgrading, and mainstreaming climate risk management measures in infrastructure while delivering helping 50 million direct beneficiaries and 144 million indirect beneficiaries of the programme countries to adapt to the adverse impact of climate change (Annex 22 includes detailed breakdown of the indicative beneficiaries – populations with improved access to year-round to climate-resilient all-weather roads, bridges, power supply, ports, telecommunication, digital infrastructure services, and other programme infrastructure assets).

To achieve the expected objectives, the programme is divided into three mutually reinforcing and interlinked components that contribute to the following three outcomes:

- **Outcome 1 - Blended finance is mobilized at scale to accelerate CRI investments in the beneficiary African countries** for infrastructure assets made resilient and able to withstand climate hazards and for improved access of vulnerable people and communities to climate-resilient infrastructure services from all-weather roads, bridges, power supply, ports and logistics, special economic zones, telecommunication, and digital infrastructure services);
- **Outcome 2 - Improved climate risk assessment and adaptation solutions for CRI; improved capacity for scaling up CRI in Africa** for infrastructure programme assets made resilient and able to withstand climate hazards and for improved access of vulnerable people and communities to climate-resilient infrastructure services;
- **Outcome 3 - Strengthened regulatory framework and innovative climate risk parametric insurance (CRPI)** is mainstreamed for the long-term viability of CRI investments in Africa.

Outcome 1 - Blended finance is mobilized at scale to accelerate CRI investments in the beneficiary African countries for infrastructure assets made resilient and able to withstand climate hazards and for improved access of vulnerable people and communities to climate-resilient infrastructure services.

Equity investment into ICRF: the objective is to leverage private and institutional capital at the fund level for further investments into climate resilient infrastructure projects and programs in Africa. The key output of the programme is long-term investment of equity capital in CRI Asset Classes (1. Climate-resilient Transport and Logistics, 2. Climate-resilient Energy Systems, 3. Climate-resilient Economic zones, and 4. Climate-resilient Telecommunication and Digital Infrastructures) with strong climate impact and innovation potential. These sectors correspond to GCF result areas for adaptation – increased resilience²⁷:

- **ARA1 - Most vulnerable people and communities**
- **ARA 3 - Infrastructure and built environment.**

Output 1.1 - ICRF is fully operational and raised capital at the fund level

1.1.1: Implement the legal structure of, and form, the ICRF and related entities. Consummate first closing with the GCF.

1.1.1.1: Procure international and local legal services to prepare underlying documentation – ACP, in collaboration with AFC, will launch an RFP process. It is expected that the international counsel will be the primary outside counsel for structuring the ICRF and preparing the related documentation.

1.1.1.2: Implement legal structure for the ICRF and related entities – See Section B.4 of this Funding Proposal for a description of the contemplated legal structure for the ICRF subject to legal and tax due diligence;

²⁷ <https://www.greenclimate.fund/sites/default/files/document/gcf-b29-12.pdf>

1.1.1.3: Finalize the Term Sheet, draft formation documents and related Agreements for ICRF entities – See Section B.4 of this Funding Proposal for a description of the contemplated legal structure for the ICRF subject to legal and tax due diligence;

1.1.1.4: Consummate Initial Closing of the ICRF with GCF as anchor investor – at the initial closing of the ICRF, the GCF (via AFC as described in Section B.4 below) will subscribe for the Junior Interests (as described below) in an amount equal to US\$240 million pursuant to the terms of a Subscription Agreement to be entered into between the ICRF and AFC (acting on the behalf of the GCF). Also at the initial closing, the Accredited Entity or one or more of its affiliates will also subscribe for the Senior Interests (as described below) in an amount equal to US\$50 million pursuant to the terms of a Subscription Agreement to be entered into between the ICRF and AFC (see Implementation Agreements).

1.1.2: Fundraise US\$510 million of additional capital for the Junior Interest and Senior Interest.

1.1.2.1: Prepare and adjust fundraising and marketing materials; ACP has extensive fundraising experience and may engage one or more third party consultants to assist in the fundraise.

1.1.2.2: Draft Private Placement Memorandum and other fundraising and marketing materials. Continue to market the ICRF to other investors. The Private Placement Memorandum (PPM) and other fundraising and marketing materials will be prepared by ACP with the assistance of external qualified international and local counsels; the selected external counsels with review the PPM and other fundraising and marketing materials from a legal perspective (disclaimer, disclosure requirements, risks factors, etc.)

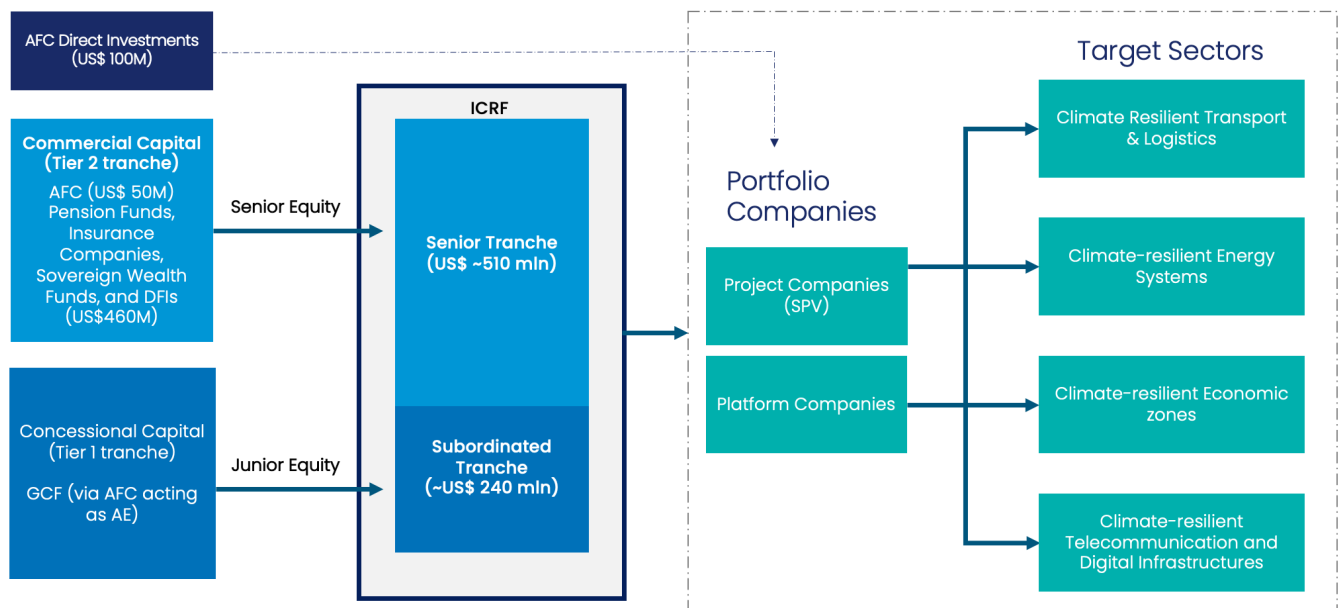
1.1.2.3: Negotiate with potential investors and close on additional commitments to the ICRF – It is expected that the ICRF would hold several closings over the course of up to 24 months after the initial closing with GCF and AFC.

Capital Structure of ICRF: The capital of the ICRF will be appropriately divided into two tranches so as to attract multiple investor classes.

“**Tier 1 Interest**” or “**Junior Interest**” will hold a junior equity position in the structure of the ICRF, which will absorb a higher portion of risk throughout the ICRF, acting as the principal enabler to attract commercial capital into the structure – by providing a ‘first loss’ buffer to the ICRF; Tier 1 Interests are proposed to be issued to AFC (in the name and on behalf of the GCF) against its commitment to ICRF.

“**Tier 2 Interest**” or “**Senior Interest**” will rank in a senior equity position; Investors in the Tier 2 Interest will benefit from first loss capital protection provided by Investors in the Tier 1 Interest. The Tier 2 Interest shall target investors with appetite for commercial risk adjusted returns, which would not have participated in the Fund without capital protection offered by GCF. Tier 2 Interest will be issued to AFC and other investors against capital commitments to the ICRF.

Figure B3.1: Capital structure: Infrastructure Climate Resilient Fund (ICRF)



Note: i) the SPV or Platform companies are the selected sub-projects in line with the eligibility criteria. There are no sub-funds involved. ii) AFC, on behalf of GCF, will invest 240M in Tier 1 class units.

Alignment of Interest:

- GCF investment is required to provide junior equity for the Tier 1 capital tranche to support the mobilization of commercial capital in the senior equity tranche (Tier 2 tranche). ‘Commercial Capital’ is defined as any sources of capital that mandate to invest on a commercial basis, including pension funds, insurance companies, sovereign wealth funds, DFIs or Foundations. Any additional concessional funds raised from other investors will be invested in Tier 1 junior equity tranche.
- There is a strong alignment between AFC and GCF in this innovative fund structure. AFC is taking a double risk exposure as ICRF is a co-investment fund: i) AFC will directly invest in each sub-projects (this portion of AFC parallel investment does not benefit from GCF first loss), and ii) in addition, AFC will invest in the senior equity tranche of the ICRF Fund as a limited partner. GCF has unique additionality as the anchor investor in Tier 1 junior equity tranche, which is crucial to mobilize funding at scale for climate-resilient infrastructure investments in Africa.

Output 1.2: Co-investments - ICRF investments in sub-projects

1.2.1: Deal origination, due diligence and execution of investments in sub-projects

- **The ICRF’s investments in sub-projects will be selected and managed by ACP** in cooperation with AFC as follow:
 - It is expected that AFC and ACP will enter into one or several support services agreement(s) (the “**Support Services Agreement(s)**”). Under the Support Services Agreement(s), AFC will provide to ACP (i) administrative and technical services as well as (i) investment operations services, including support in investment sourcing, processing, and portfolio management services. This ensures access to AFC’s sector and country expertise and its specialists in environmental, social and governance matters.

- It is also expected that AFC and the ICRF (represented by the General Partner) will enter into a co-investment agreement (the “**Co-Investment Agreement**”) which will define the allocation of investment opportunities between AFC and the ICRF, thereby ensuring access to AFC’s pipeline that meets the investment criteria of ICRF. Under the Co-Investment Agreement, the ICRF will have the option (not the obligation) to co-invest alongside AFC. The decision of the ICRF to investment in an opportunity would be made independently by the Investment Committee of the ICRF.
- **Deal Screening:** ACP will test the characteristics of originated projects against the investment strategy and restrictions of ICRF and the eligibility criteria according to the ICRF Country Climate Assessments and Investment Decision Making Process (see Annex 21 Operations Manual and Climate Risk Mapping Annex 2b) as agreed with GCF and perform preliminary assessment of the attractiveness of the investment opportunity. Climate risk assessments and environmental and social considerations are an integral part of this process.
- **Project Development** is core to ICRF investment thesis: ACP will work closely with AFC in the development phase of the sub-projects to integrate climate resilience measures in the design, development, construction, and operation of the infrastructure investments considered by the ICRF. The lack of bankable projects and limited financing are key bottlenecks to infrastructure development on the continent. Project development is a source of project pipeline for ICRF and creates a unique opportunity to develop well-built climate-resilient infrastructure across Africa. Climate resilience measures are integrated in the project design and development phase with specific construction guidelines to mitigate potential climate risks.
- **Deal Appraisal:** Each of AFC and ACP will apply its investment appraisal, due diligence and approval procedures in appraising potential Fund Investments, and only those sub-projects qualified under both the AFC’s and ACP internal criteria will be eligible for investment under the framework. The ACP investment process is designed with four core objectives in mind.

These are: (i) to leverage AFC’s investment expertise- as the premier sustainable infrastructure solutions provider, market knowledge and understanding of climate and development impact investing without duplicating AFC’s resources, and investment and portfolio operations/ supervision process; (ii) to maintain independence of investment decision-making on behalf of the ACP-managed fund, the ICRF; (iii) to ensure that investments are structured and negotiated in a way that meets the requirements of the ICRF and the GCF; and (iv) to make the processing of investments as streamlined and efficient as possible for all parties involved. ACP investment teams will work closely with AFC colleagues to identify, appraise, structure, and negotiate transactions and actively manage the resulting portfolios for the ICRF. ACP will operate from AFC headquarter in Lagos (Nigeria). In partnership with AFC under the Support Services Agreement(s) and the Co-Investment Agreement mentioned above, **the ACP team will be responsible for deal origination, due diligence and execution, and operational management and exit of ICRF portfolio companies.** The ACP Teams consist of staff with complementary and specific skills and experience required, which includes the following: sourcing expertise, deal execution experience, climate expertise, fund mobilization expertise, operational asset management experience, proven buy-and build track record in infrastructure sector, exit know-how, industry knowledge and environmental and social expertise.

As mentioned above, the ACP team in cooperation with AFC will conduct comprehensive due diligence of prospective investments. The due diligence evaluation typically consists of multiple in-person meetings, teleconferences, and written questionnaires with members of the potential investment’s management. A financial model is typically built using management’s projections and key assumptions are subjected to sensitivity analysis (See 3 examples in Annex 3b integrating effects of climate risks). Assuming the ACP team wishes to proceed, the ICRF will typically enter into a non-binding term sheet with the target company/project that outlines the key terms on which the ICRF would be willing to make an investment. Throughout the initial evaluation process, the

ACP team is in frequent communication with AFC co-investment team and the Investment Committee to gauge overall interest in the opportunity and discuss the opportunities and risks associated with the potential investment.

After a term sheet is executed, the ACP team in cooperation with AFC will conduct a full due diligence review of the opportunity, including by engaging third-party advisors as appropriate, including legal, tax, accounting and regulatory, as needed. The AFC and the ACP teams will also conduct due diligence on ESG risks and opportunities in accordance with applicable AFC's ESG policies. Depending on the circumstances, technical consultants may be engaged for additional expertise.

- The ACP team will prepare an investment memo for formal presentation and review by the Investment Committee, which summarizes the investment opportunity and key deal terms. The Investment Committee will then make a formal determination whether or not to proceed with the transaction. Once the Investment Committee has determined to proceed with the transaction, any material changes relating to the transaction will need to be further approved by the Investment Committee.

Following approval of the Investment Committee, the ACP team, with the assistance of external counsels, will prepare and negotiate final investment agreements.

1.2.2: Portfolio management

- √ As from the investment, AFC and the ACP team will be involved with the growth and development of the portfolio companies. Most often, this is accomplished through one or more seats on a company's board of directors or similar governing body. In situations where AFC and the ICRF holds a minority interest, the team will negotiate appropriate contractual rights and minority protections. The AFC/ACP teams will also perform regular review of the performance of the investments.

1.2.3: Reporting to investors and GCF

- √ Definitive reporting requirements will be specified in the ICRF documentation. It is expected that investors would receive unaudited financial information on a frequency to be agreed, audited year-end financial statements, and a narrative update on each portfolio company on a frequency to be agreed.
- √ Once received, any such document would be remitted to the GCF by AFC in its role as the Accredited Entity.

1.2.4: Exit assets, return capital plus profit to investors, close out the ICRF

- √ AFC, by virtue of having completed many transactions and full exits over the last 15 years, maintains privileged relationships with a number of the leading advisors that operate in Africa. The ICRF is expected to be able to leverage these relationships along with AFC's other contacts to consider the full range of exit options even prior to formally mandating advisors. AFC's network allows AFC to assess the depth of strategic investor interest for key assets and also to follow the evolution of key equity capital markets both in Africa and internationally. As part of the portfolio review process, the Investment Committee will review the proposed exit strategies, timing and exit projections on a quarterly basis. Discussions of proposed exit options will become more detailed in the 12-18 months before the proposed exit timing, and key decisions about when to launch an exit, the appointment of advisors etc. will be approved by the Investment Committee.
- √ It is expected that the significant majority of exit transactions will consist of a sale for cash proceeds which are distributed by the ICRF to its investors (including AFC on behalf of the GCF), subject to reserves for expenses and contingent liabilities.

√ Once all investments have been disposed, the ICRF would be liquidated.

Outcome 2 - Improved climate risk assessment and adaptation solutions for CRI and improved capacity for scaling up CRI in Africa for infrastructure programme assets made resilient and able to withstand climate hazards and for improved access of vulnerable people and communities to climate-resilient infrastructure services (all-weather roads, bridges, power supply, ports and logistics, special economic zones, telecommunication, and digital infrastructure services).

AFC will use GCF Technical Assistance funding (TA), in collaboration with ACP to strengthen climate risk assessments and adaptation solutions for ICRF investments in CRI Asset Classes. The TA will be also used for creating enabling environment for scaling up CRI in Africa caused by the lack of reliable data, knowledge, and capacity in countries around climate change in order to increase preparedness and risk management. The ICRF programme will identify and bridge gaps in the technical capacity and infrastructure for collecting, processing, and disseminating data on climate hazards and climate change, and its impact on infrastructure in the participating countries. The programme will respond to such gaps by sharing knowledge captured from ICRF investments in CRI Asset Classes and provide a roadmap for CRI investments on the Continent through public accessible sources and trainings for public and private sector participants.

Output 2.1 - Strengthened climate risk assessment and adaptation solutions for ICRF investments in CRI

- 2.1.1 Procurement of technical firms for detailed climate risk assessments, engineering assessments of climate adaptation solutions for each ICRF projects
- 2.1.2 Climate risk assessment of sub-projects pipeline for ICRF investments
- 2.1.3 Enhancing climate adaptation measures in ICRF's investments with the integration of climate resilience options
- 2.1.4 Support to EPCs and project sponsors in the tender process of specialized firms/consultants to support the implementation of adaptation measures to enhance the climate resilience of the sub-projects
- 2.1.5 Overseeing construction and implementation of ICRF projects to ensure adaptation solutions are deployed and implemented (EPC Management of the adaptation elements)
- 2.1.6 Refinement and continuous development of ICRF Climate Assessment Methodology and Approach

Output 2.2 - Improved capacity for scaling up CRI in Africa

- 2.2.1 Capacity building events for ICRF programme
Trainings will include capacity building activities on detailed climate risk assessment, adaptation solutions for CRI Asset Classes proponents, and building capacity and greater technical knowledge for national authorities and Union groups representing infrastructure users on climate change disaster risk prevention and management in subproject location (for vulnerable people safety and climate resilience).
- 2.2.2 Lessons learned are captured from ICRF CRI investments and roadmap is created for replication across the Continent
- 2.2.3 Issue publication - knowledge sharing about de-risking methodologies for CRI Asset Classes based on ICRF programme.

Outcome 3 - Strengthened regulatory framework and innovative climate risk parametric insurance (CRPI) is mainstreamed for the long-term viability of CRI investments in Africa

The success of the programme in terms of its paradigm shift potential will partially depend on the programme's ability to contribute to favorable policy frameworks in targeted sectors and creating new climate-resilient infrastructure asset classes (CRI Asset Classes):

- 1) Climate-resilient Transport and Logistics
- 2) Climate-resilient Energy Systems

- 3) Climate-resilient Economic zones
- 4) Climate-resilient Telecommunication and Digital Infrastructures.

To this end, a specific TA amount is set-aside to support ICRF's efforts in policy dialogue and regulatory framework development.

The programme will promote stakeholder engagement and public/private sector dialogue that enable development of markets that ICRF portfolio companies operate in. The eligible expenditures include but are not limited to creating or contributing to working groups, financing roundtables and workshop discussions for stakeholder engagement, producing policy papers or regulatory frameworks.

The ICRF programme will also advocate to achieve policy change. The eligible expenditure under this activity includes but are not limited to analysis of strengths and weaknesses of existing policies, holding policy advocacy campaigns, producing policy papers and/or white papers for suggested changes to regulatory frameworks for CRI Asset Classes.

Output 3.1 - Standards and construction codes are enacted and applied

- 3.1.1 Procure consortium of legal, policymaking, and climate expert firms for improving regulatory framework for CRI, CRPI, and capacity building in the programme countries
- 3.1.2 Capacity building and engagement with key proponents, public and private sector participants, civil societies to identify the regulatory gaps for CRI investments
- 3.1.3 Create a work group from the consortium of legal and policymaking firms for new CRI Asset Classes and construction codes implementation
- 3.1.4 Create and share recommendation reports for improving regulatory framework for CRI Asset Classes per country
- 3.1.5 Support regulatory, standards and policy making process for CRI Asset Classes to implement the recommendations according to each country needs
- 3.1.6 Report on regulatory framework support for CRI Asset Classes
- 3.1.7 Issue publication - knowledge sharing about lessons learned and recommendations on strengthening regulatory framework for CRI Asset Classes in the programme countries

Output 3.2 - Strengthening fiscal incentives for CRI are supported with the objective to mobilize private investments in CRI through reduced or waived tax and customs duties, tax holidays, subsidies etc. as per the country priorities and needs:

- 3.2.1 Procure fiscal regulatory framework and policymaking firms for promoting fiscal incentives for CRI Asset Classes in the programme countries
- 3.2.2 Capacity building and engagement with key proponents, public and private sector participants, civil societies
- 3.2.3 Create and share recommendation reports for improving fiscal policy for CRI Asset Classes
- 3.2.4 Support legal regulatory and policy making process to implement the recommendations on fiscal policy according to each Country needs

Output 3.3 - Innovative CRPI is designed for the long-term viability of infrastructure investments in Africa

- 3.3.1 Feasibility study on the development of CRPI in Africa;
- 3.3.2 CRPI design and development for CRI in Africa, stakeholder engagements;
- 3.3.3 Engagement with donors to sponsor CRPI for ICRF projects and others
- 3.3.4 Support capacity building activities (training) for key stakeholders of CRPI

Parametric climate risk insurance for infrastructure is relatively new in Africa. On the other hand, large global insurers are already offering well developed PCRI products in developed markets - therefore there is an opportunity to replicate, develop and apply these parametric risk insurance products in Africa.

With support of GCF technical assistance funding (US\$ 1 Million), AFC will support the design and development of parametric climate risk insurance products for the infrastructure sector in Africa. AFC will undertake i) a feasibility study on the development of parametric climate risk insurance products for climate resilient infrastructure, ii) stakeholder engagements with key industry players including insurance companies, private sector actors, government agencies in target countries, investors, industry groups such as the Insurance Development Forum and the Coalition for Climate Resilient Investments (CCRI), and iii) support capacity building activities (training) for key stakeholders in target countries and organize events to raise awareness on climate-risk parametric insurance (CRPI), and iv) engage other donors to mobilize funding on best effort basis to implement innovative and transformational parametric risk insurance solutions as part of the ICRF programme, and provide a strong demonstration effect with paradigm shift potential.

Stakeholder Engagement: As a member of the Coalition for Climate Resilient Investment, and a member of the Insurance Development Forum (IDF), AFC has engaged several industry players who have expressed a strong commitment in building a market for climate resilient infrastructure. The IDF is a public/private partnership led by the insurance industry and supported by international organizations. The IDF was first announced at the United Nations Conference of the Parties (COP21) Paris Climate summit in 2015 and was officially launched by leaders of the United Nations, the World Bank and the insurance industry in 2016. The IDF is on a mission to optimise and extend the use of insurance and its related risk management capabilities to build greater resilience and protection for people, communities, businesses, and public institutions that are vulnerable to disasters and their associated economic shocks.

Efforts to improve climate resilience and address the protection gap have historically been primarily driven by a handful of private/public stakeholders. Given the scale, scope and complexity of the resilience and protection gap challenge, a coordinated and collaborative approach bringing together the insurance industry and all relevant stakeholders, both public and private, is critical to meeting the needs of climate-vulnerable people. Addressing the low level of insurance penetration in developing countries has become more urgent considering the growing risks related to climate change in Africa, the most vulnerable continent to climate change. Building the capacity of key stakeholders in target countries in Africa is essential.

Climate Resilient Infrastructure: The Role of Insurance in Climate Risk Management

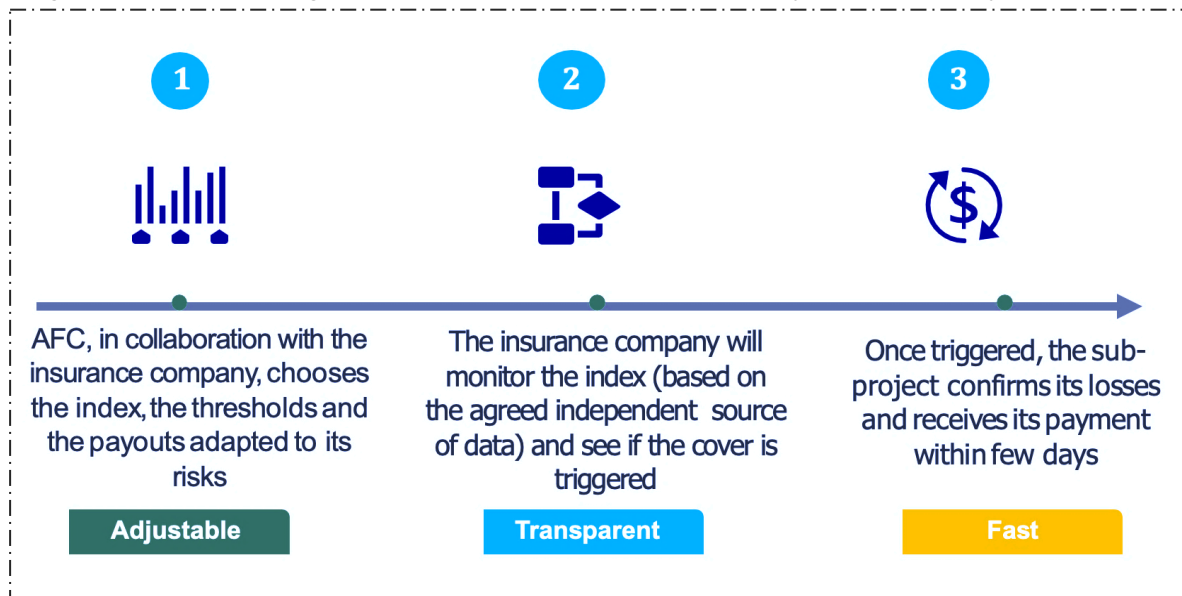
The defining characteristic of climate-resilient infrastructure is that it is planned, designed, built, and operated in a way that anticipates, prepares for, and adapts to changing climate conditions. It can also withstand, respond to, and recover rapidly from disruptions caused by these climate conditions. Climate-resilient infrastructure reduces, but may not fully eliminate, the risk of climate-related disruptions. According to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, Adaptation does not prevent all losses and damages, even with effective adaptation and before reaching soft and hard limits. With increasing global warming, losses and damages increase and become increasingly difficult to avoid, while strongly concentrated among the poorest vulnerable populations. Climate risks are evolving and cannot be forecasted with full precision, there are residual risks which adaptation may not fully address.

Need for Insurance: The use of insurance as a risk transfer mechanism can be instrumental to protect infrastructure assets against future risks due to climate change. The ICRF programme aims to support the design and implementation of a parametric climate risk insurance cover as a risk transfer mechanism to climate-proof and further enhance the resilience of infrastructure investments. The long-term objective is to present demonstration and showcase smart uses of insurance-related schemes for climate risk-prone infrastructure assets in Africa that would progressively stimulate the creation of effective climate risk insurance markets and set the foundation for a systemic market transformation as owners and operators of infrastructure assets continue to face multiple challenges posed by climate change.

Parametric Climate Risk Insurance: The term parametric insurance describes a type of insurance contract that insures a policyholder against the occurrence of a specific climate related events (e.g., excessive rainfall, drought, cyclone intensity, flood height, wind speed) by paying a set amount based on the magnitude of the event as agreed in the insurance policy. The payouts would support the sub-projects by

i) compensating financial losses due to disruptions caused by the specific climate events such as severe disruptions from extreme weather events (e.g., damages arising from hurricanes, typhoons, coastal flooding, sea level rise, heat waves, heavy precipitations) and/or disruptions resulting from chronic rise in temperature; and ii) support recovery measures and resilience response.

Figure B.3.3: Advantages of Parametric Insurance: Certainty, Transparency, and Speed



B3.2 Guiding principles on climate resilience integration in ICRF investment process

During project development and preparation, ICRF will work with relevant national government and the project sponsors to integrate climate resilience into the Public-Private Partnership (PPP) project framework.

- **Project Identification Phase:** Infrastructure needs to be resilient to climate impacts and to help build the resilience of the communities it services. The project identification phase is the critical point in which the public partner can prioritise projects that build resilience through infrastructure. The public partner gains an understanding of the key climate hazards relevant to the project by conducting a high-level climate risk screening.
- **Project Appraisal Phase:** During the project appraisal phase the public partner integrates principles around decision-making under uncertainty. In this phase, practitioners will assess the key climate hazards, exposure, and vulnerabilities of infrastructure assets and systems. Resilience options to mitigate and adapt to the climate risks, including Nature-based Solutions, will be identified and appraised to assess their robustness under different future climate scenarios. The preferred resilience option can either be indicated by the public partner in the tender documents or left to the private partner to propose their preferred solution. The vital input from the project appraisal would provide the key inputs to structuring a climate resilient bankable PPP.
- **Tender and Award Phase:** A competent private party consortium with climate resilience as a core competency is selected. Market sounding and dialogue processes are considered at this stage to allow for the public and prospective private partners to discuss and refine the Request for Proposal (RFP) and documents to ensure the balance in risk allocation. Climate risk allocation must ensure that risks and uncertainties are explicitly stated and that there is a clear boundary for extreme climate events to constitute force majeure.
- **Contract Management Phase:** Contract management plays a key role in monitoring the achievement of performance requirements and situations of high climate risk. Proactive engagement by the parties can

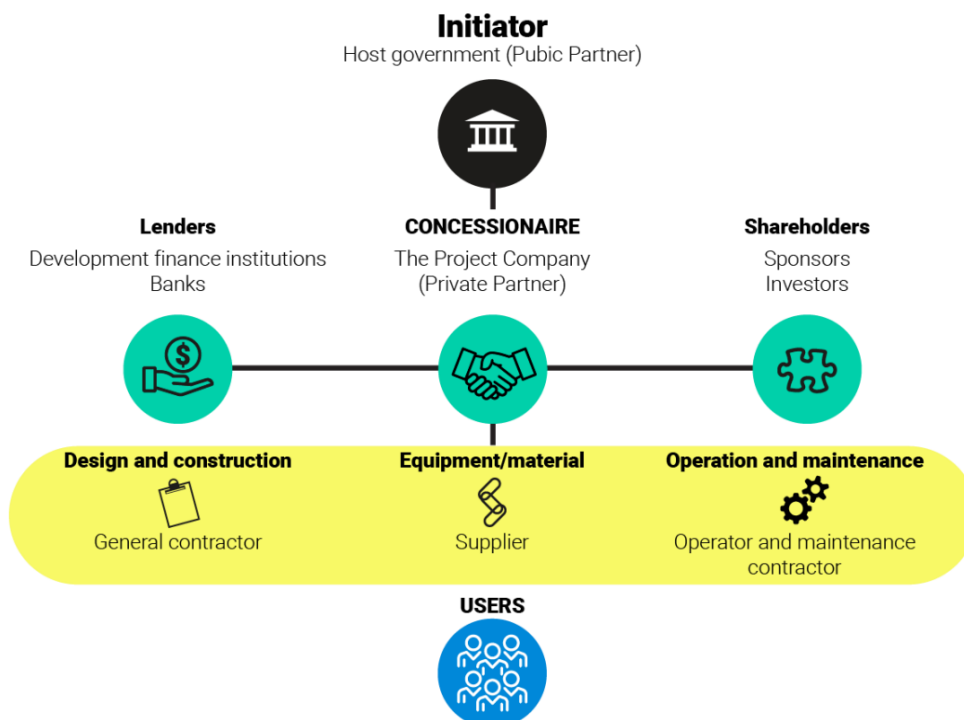
help to deal with changes and ensure that best practices in climate resilience are incorporated in operations and maintenance. Monitoring and reporting will be used to inform future projects and optimize resilience benefits.

Figure B.3.4 Resilience intervention points within the PPP project framework



Traditional infrastructure providers, such as governments and state-owned utility service providers, are under financial pressure as the demand for public infrastructure exceeds available public finance. Budgets are strained and will likely remain constrained. Governments are increasingly looking to private investment to address and bring efficiencies to this shortfall of public finance. PPPs and private financing offer a strong incentive mechanism for optimizing capital and operational investments, reinforced by the lenders' oversight. PPPs allow for incentives from lenders, project owners and the government to be aligned around efficiency. The use of the PPP model will integrate best practices of climate resilience into infrastructure investment, design, operations, and maintenance. This includes embedding climate resilience into PPP contracts through resilient design and Key Performance Indicators (KPIs), as well as setting higher resilience benchmarks into O&M standards and leveraging data to monitor resilience options and maximize benefits of current and future projects. Building resilience will be key to make PPPs bankable and allow them to tap into a growing market of climate finance.

Figure B3.5: Typical PPP structure

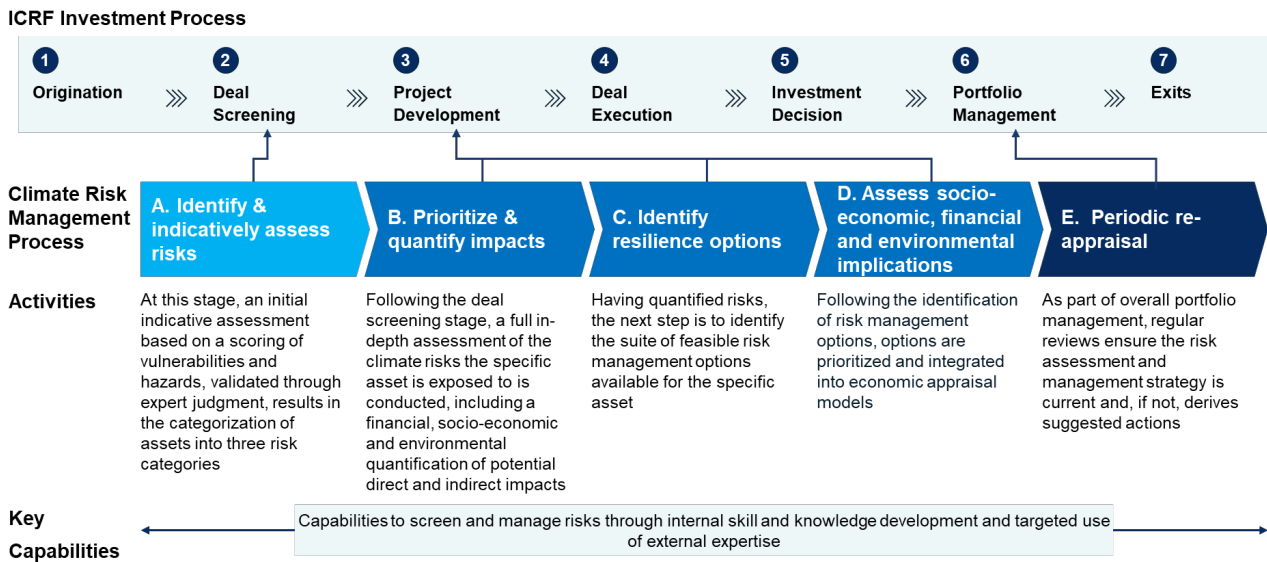


Integrating Climate Risk Management within the ICRF Investment Process

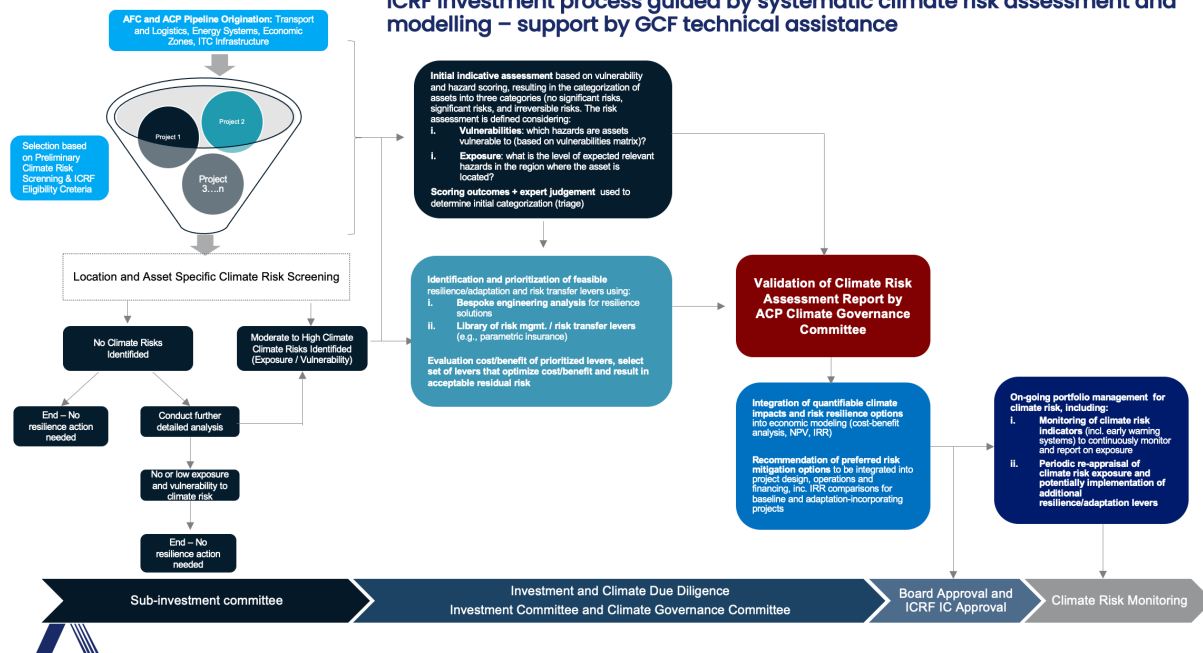
Climate resilience is embedded in ICRF investment process. ACP has established a tailored co-investment approach to leverage the solid investment track record of its parent, Africa Finance Corporation. ACP takes an efficient, disciplined, and proactive approach to all aspects of the investment process, with a focus on efficient deal execution, high-quality due diligence, expert deal structuring, climate resilience integration, balanced risk-adjusted return, rigorous portfolio management and exit management.

The climate risk management process of ICRF is designed to fully integrate key stages of the ICRF investment cycle. This process will help ensure that current and future climate risks are properly recognised and addressed, including the identification and integration of potential adaptation response measures to reduce and manage physical impacts of climate change. The outlined process provides a detailed assessment of climate risks and resilience/adaptation options, including quantification of their costs and benefits at the level of the asset owner and broader societal and system impacts.

Figure B3.6a: The ICRF climate risk management process across the investment cycle



ICRF investment process guided by systematic climate risk assessment and modelling – support by GCF technical assistance



Integrating climate resilience into the Project lifecycle

The Figure B3.6b below shows how climate resilience is integrated in the project life cycle (see the Operations Manual Annex 21 for more details).

LIFE-CYCLE STAGE	DEVELOPERS AIMS	PROCESS/ ANALYSIS	CLIMATE RESILIENCE ANALYSIS							
			1	2	3	4	5	6	7	
			SA	EE	VA	RA	IAO	AAO	IAAP	
STRATEGY	Establish preliminary scope & business strategy	Business model development								
		Pre-feasibility study								
PLAN	Establish development options & execution strategy	Conceptual design								
		Site selection								
		Contract planning								
		Technology Selection								
		Cost estimating & financial / economic modeling								
		Feasibility study								
DECISION	Finalize scope & execution plan	ESIA scoping & baseline								
		Front end engineering design (FEED)								
		Cost estimating & financial / economic modeling								
PROCEDUR	Detail & construct asset	Full ESIA & ESAP								
		Detailed engineering								
DECOMMIS	Operate, maintain & improve asset	Engineering, Procurement & Construction Management								
		Asset management								
		Operations & maintenance								
	Decommission & manage liabilities	Decommissioning plan								

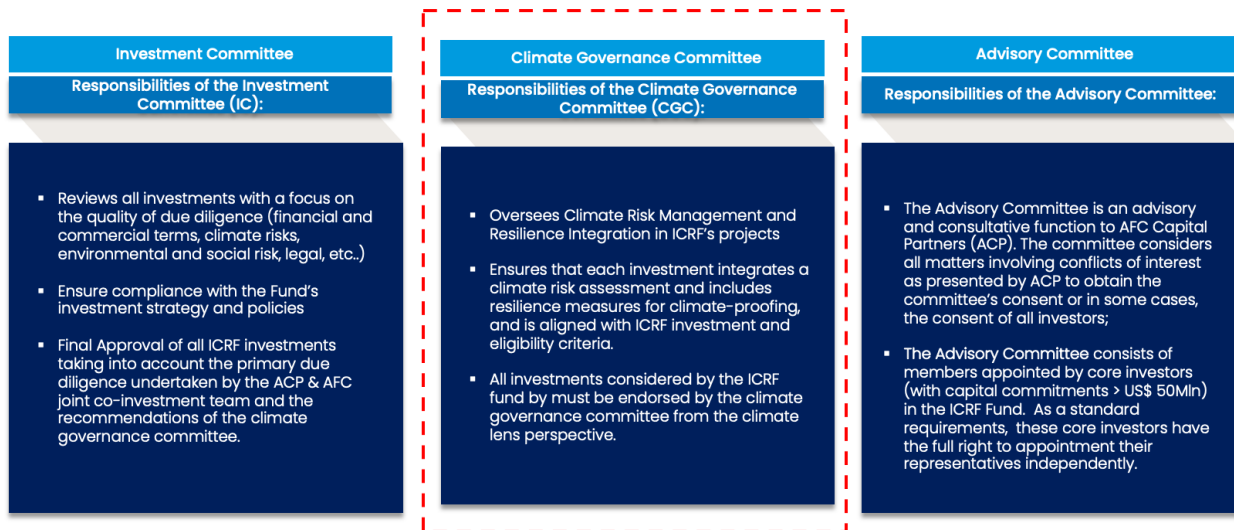
Key climate resilience analysis across the project life cycle.

1. SA Sensitivity analysis
2. EE Evaluation of Exposure
3. VA Vulnerability Analysis
4. RA Risk Assessment (Climate Risk Impact Assessment)
5. IAO Identification of adaptation options
6. AAO Appraisal of adaptation options
7. IAAP Integration of adaptation action plan into the project

B3.3 ICRF Climate Governance Framework

The ICRF has a robust governance framework aligned with best international standards. Figure B3.6c reflects the three committees that constitute the direct governance body of the fund.

Figure B3.6c ICRF Governance – Committees formulation



Roles and Responsibilities

i) **The ICRF's Climate Governance Committee (CGC)**

The CGC operating under AFC Capital Partners (ACP), will oversee the application of ACP's Framework for integrating climate resilience in each transaction, and ensure that each investment integrates a climate risk assessment and includes resilience measures for climate-proofing, and is aligned with ICRF investment and eligibility criteria. All investments considered by the ICRF fund must be endorsed by the climate governance committee from the climate lens perspective. The CGC will consist of various members with prior climate investment-related experiences.

ii) **Investment Committee**

- Reviews all investments with a focus on the quality of due diligence (financial and commercial terms, climate risks, adaptation and resilience measures, environmental and social risk, legal, etc.)
- Ensure compliance with the Fund's investment strategy and policies
- Final Approval of all ICRF investments considering the primary due diligence undertaken by the ACP & AFC joint co-investment team and the recommendations of the climate governance committee.

The members of the committee include various members with prior climate investment-related experiences to effectively fully their role as describe below.

iii) **Advisory Committee**

- The Advisory Committee is an advisory and consultative function to AFC Capital Partners (ACP). The committee considers all matters involving conflicts of interest as presented by ACP to obtain the committee's consent or in some cases, the consent of all investors.
- The Advisory Committee I expected to consist of members of core investors in the ICRF Fund.

iv) Operational level - ICRF Climate Risk Manager(s)

At the operational level, ICRF will have a Climate Risk Manager / Officer(s) with deep climate risk management expertise and experience, who will be responsible for leading, overseeing and managing the climate risk assessment and management process across the project life cycle (Figure B3.6b) and will be part of the climate governance committee (see the Operations Manual Annex 21 for more details).

In addition, thanks to GCF technical assistance, AFC (in collaboration with ACP) will establish a roster of qualified technical firms through an efficient and competitive procurement process. AFC will contract industry-leading firms (with expertise in climate risk assessments) to carry out technical climate and engineering studies with significant experienced in assessing physical climate risks. AFC believes the combination of a roster of technical climate and engineering firms assembled to conduct the technical studies for each project to complement the internal capacity to deliver high-quality climate risk assessments and provide guidance on the design and implementation, and on-going refinement, of specific elements of ICRF climate risk management, and overall ensure that ICRF will continue to define best-in-class for climate-resilient investment vehicles. The climate risk manager will oversee the engagement and work of external consultants and climate analytics firms.

B3.4 ICRF Climate Risk and Impact Assessment Methodology: Guiding Principles

ACP would engage a roster of technical consulting firms to undertake location specific climate risk assessments for each project.

ICRF investments integrate climate change risks into decision-making (ex-ante) and directly address identified risks, vulnerabilities, or effects while avoiding inadvertent increases in vulnerability of systems or social groups and avoiding placing assets or systems in harm's way. Each investment should:

- reduce risk, exposure, or sensitivity to climate change.
- increase climate resilience.
- build problem-solving capacity to develop responses to identified risks, vulnerabilities, or effects; or
- address effects directly linked to climate change.

ACP will follow best practices combining: i) MDB Adaptation Finance Methodology and Guidance²⁸, the principles of Physical Climate Risk Assessment Methodology (PCRAM) of the Coalition for Climate Resilient Investment (CCRI)²⁹, the guiding principles of Climate Resilient Bonds Framework³⁰, and the Climate Resilient Investment Officer Handbook of the Global Centre for Adaptation³¹, as well as the EU taxonomy³², taking into consideration the African context.

Context of vulnerability to climate variability and change: for each sub-projects, the context of climate vulnerability must be set out clearly using a robust evidence base. This could take a variety of forms, including use of material from existing analyses and reports or original climate vulnerability analysis conducted as part of the preparation of a project.

Examples of good practice in conducting original analysis include using records from trusted sources showing infrastructure ecosystems or communities that are particularly vulnerable to climate change and recent climate trends, including any departures from historic means. These may be combined with climate change projections drawn from a wide range of climate change models, with high and low GHG emission scenarios, to explore the full range of projected outcomes and uncertainties. Climate projection uncertainties should be presented transparently and interpreted carefully. The timescale of the projected

²⁸ https://www.eib.org/attachments/documents/mdb_idfc_adaptation_common_principles_en.pdf

²⁹ <https://resilientinvestment.org> | <https://resilientinvestment.org/pcram/>

³⁰ <https://www.climatebonds.net/files/page/files/climate-resilience-principles-climate-bonds-initiative-20190917-.pdf>

³¹ <https://gca.org/wp-content/uploads/2021/08/GCA-Handbook-V2.0-13-September-2021-2.pdf>

³² https://ec.europa.eu/info/sites/default/files/business_economy_euro/banking_and_finance/documents/200309-sustainable-finance-teg-final-report-taxonomy-annexes_en.pdf (page 30)

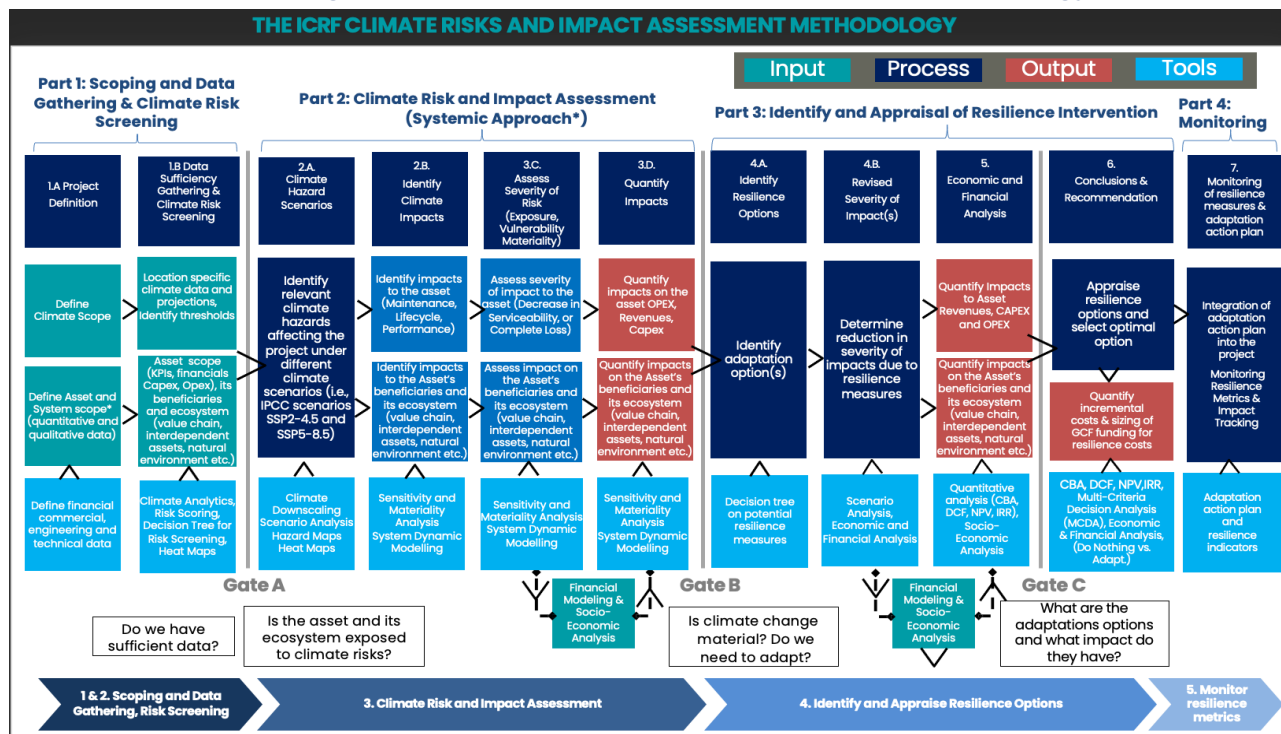
climate change effects should match the intended lifespan of the assets, systems, or institutions being financed through the project (e.g., time horizon of 2030, 2050, 2080, 2100).

Statement of purpose or intent: How the project will address the context- and location-specific climate change vulnerabilities as set out in existing analyses, reports, or the project’s climate vulnerability assessment should be stated. This is important for distinguishing between a development project contributing to climate change adaptation and a standard “good development” project. The methodology is flexible regarding exactly where and how the statement of intent or purpose is documented. It is also important to record and track the rationale for each climate resilient project or resilience components of a project linked to the context of climate vulnerability established above, this could be described in the final technical document, board document, internal memo, or other associated project document.

The ICRF methodology aimed at assessing the baseline resilience level of an asset in a system approach and to propose adaptation measures for its improvement. The methodology consists of 4 building blocks (see figure B.3.7 below):

- ⇒ **Part 1: Scoping and Data Gathering & Climate Risk Screening**
- ⇒ **Part 2: Climate Risk and Impact Assessment**
- ⇒ **Part 3: Identify and Appraisal of Resilience Intervention (including Economic and Financial Analysis)**
- ⇒ **Part 4: Monitoring ICRF Resilience Metrics & Impact Tracking**

Figure B3.7 ICRF Climate Risk Assessment Methodology



**Note: the climate risk and impact assessment follow a systemic approach which considers the physical infrastructure asset, the beneficiaries it serves (population and communities, businesses including SMEs), and the asset’s ecosystem including the supply chains (both in terms inputs needed for its operations and outputs / infrastructures services provided), the interdependent infrastructure assets which are part of its system, and the natural environment in which it operates.*

Part 1: Scoping and Data Gathering & Climate Risk Screening (location specific)

The aim of this climate risk screening is to develop a climate risk profile, which identifies the key climate risks facing an asset (resilience of the project), the community and beneficiaries it serves (resilience through the project), and its ecosystem (supply chains, interdependent infrastructures, natural environment etc..). The output of this screening is a climate risk profile which identifies the key hazards facing a project and how those hazards interact with the infrastructure vulnerabilities to determine the risk profile associated with that specific hazard. A scoping exercise determines the range of climate risk that the asset and its system is exposed to, with their evolving probabilities over time under different climate scenarios.

This involves collecting location specific climate data on historic climate and projected climate change, relevant to the identified climate hazards, engineering data, and financial performance data, including:

- Identify thresholds – Understand any climatic thresholds critical to successful delivery of the infrastructure services and/or financial objectives. Any climatic factors or thresholds included in the basis of design, asset management objectives or standards used in asset design should also be identified.
- Understand performance of the asset – or similar assets under historic climate. Data to analyze include:
 - Historic records of climate stressors such as temperature, rainfall and wind patterns as well as sea level, in the locality of the project.
 - Records of extreme events, such as floods, droughts, or heatwaves, and how the asset was impacted (e.g., loss of service, down time, repair or early replacement)
- Understand how climate is projected to change – data to collect includes climate projection data relevant to the hazards, time periods and climate scenarios
- Scope risk associated to the infrastructure asset ecosystem (supply chains, interdependent infrastructures, natural environment etc. Highlight key interdependencies that could lead to cascading failures
- Review of the asset life cycle and design life and provide this data to climate science workstream.
- Identify and confirm relevant infrastructure asset management KPIs (e.g., downtime or availability requirements production targets, safety, environmental, CAPEX, OPEX, etc.) and ensure that the necessary linkages between asset performance and design are quantifiable.
- Identify climate thresholds used in design of critical components and in the operations and maintenance plan (e.g., schedule/unscheduled downtime, response to extreme events).

AFC and ACP have significant networks to originate infrastructure projects across the target countries. Screening projects for climate risks is a crucial component of ACP investment decision making process for the ICRF. It will serve as an entry point to enable ACP to integrate resilience early on, by identifying risks so adaptation measures can be taken to make the project more resilient to these risks. This work is typically undertaken by a climate data analytics provider and an engineering firm working in collaboration with AFC, ACP, and the project developer.

Part 2: Climate Risk and Impact Assessment

The aim of this climate risk assessment is to build on the findings of the high-level climate risk screening, developed during the Project Identification Phase, to assess the risks qualitatively or quantitatively, depending on the methodology. The key steps of the assessment are:

- Analyse hazards to which the project, its beneficiaries, and ecosystem are exposed to
- Analyse the projects and beneficiaries' vulnerability
- Analyse the project's potential negative impacts on its surroundings or the project beneficiaries
- Apply different climate scenarios to assess future climate risks (i.e., IPCC scenarios)
- Summarise the climate risk assessment findings for the project

With the support of the GCF technical assistance, AFC in collaboration with ACP will procure the service of specialized climate and engineering firms to undertake the climate risk assessment. The external climate experts work closely with AFC's sector specialists and ACP climate team. The climate risk assessment is finally reviewed and validated by the climate governance committee of ICRF, and the results of the climate analysis are fully integrated in the investment process and decision making of the ICRF. As part of the climate risk assessment, the procured climate analytics and engineering firms will undertake the following:

Analyse the project's vulnerability

This step will assess the project's vulnerability to the hazards. This includes identifying the project and beneficiaries' susceptibility to damage if exposed to the hazards, and the ability of the system or its features to resist impacts, cope with losses, or recover following impacts. We can do this by assessing the project bringing forward the impacts and root causes identified.

Assessment of materiality

The materiality of an asset's exposure to physical climate risks (and its climate resilience) includes a quantification of the vulnerability of the asset to specific climate risks in terms of physical damages and associated repair costs, reduction in its availability or usability, and potential increase in its operating and maintenance costs. This is done through an adjustment to the asset cashflow forecast. The exercise is meant to identify materiality thresholds based on a combination of engineering, environmental, legal, commercial, and financial parameters. This is best summarized by testing the ability of the asset and its manager to meet their ongoing obligations to their various stakeholders in the face of chronic and acute climate risks. Stakeholders include beneficiaries and users of the infrastructure, regulators and public sector entities which may have granted the right to build and operate the asset with certain conditions, local communities, which may both benefit from and be affected by the project. The materiality and severity impact assessment will determine whether one or several physical climate risks are material to the asset.

Quantify Impacts on KPIs

This analysis will identify and prioritize key risks, and for prioritized risks, it will quantify the scale of financial and non-financial impacts. These will be differentiated by impacts felt directly by the asset owner (e.g., structural damage leading to downtime of the asset and thus reduced cash flow as well expenses for repairs) and those felt by the broader beneficiaries of the asset (e.g., reduced service supply to local communities). It will reflect the full range of potential direct physical impacts on the assets themselves, the Asset ecosystem (value chain, other interconnected assets), the affected populations (beneficiaries).

Interdependencies and systemic approach

Compared to the vulnerability analysis, risk assessment more readily facilitates identification of longer 'cause-effect' chains linking climate hazards to the performance of the project across several dimensions (technical, environmental, social and financial etc.) and allows for the interactions between factors to be considered. This is in line with a 'systems thinking' approach. Hence, a risk assessment may well identify issues which have not been picked up in the vulnerability analyses.

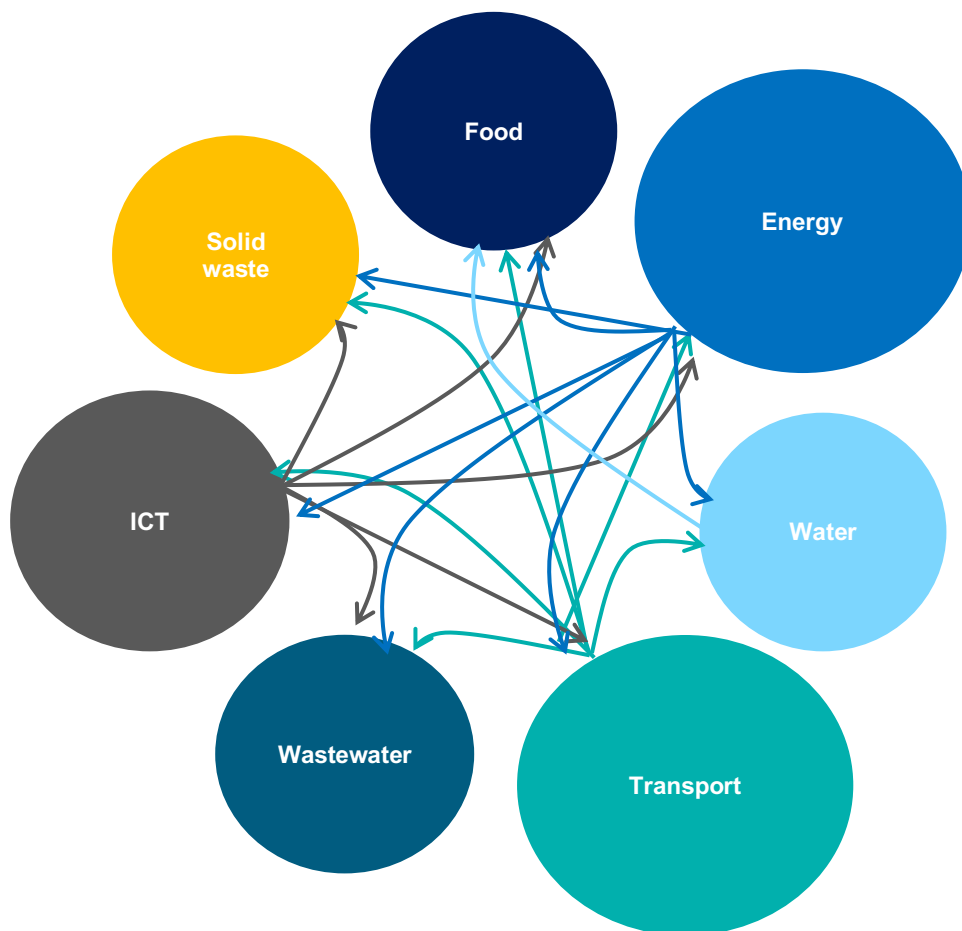
ICRF projects assessment will also integrate a system approach which is a fundamental requirement for sustainable infrastructure investments, leveraging AFC's experience and track record in infrastructure investments. This approach will examine the system interdependency of the targeted infrastructure project looking at 'system of system' interactions with connected infrastructure in its networks. Such an approach suggests extending the climate risk assessment into a cross-sector interdependencies or the entire value chain. These boundaries and interdependencies are important for scoping risk and benefits assessments, and ensuring the asset or activity being invested in is fit-for-purpose and does no harm to the system of which it is part. This will ensure that the target investments improve the ability of assets and systems to persist, adapt and/or transform in the face of climate-related stresses and shocks in a timely, efficient, and fair manner that reduces risk, avoids maladaptation, unlocks climate resilient development, and creates and maximize benefits and potential environmental and climate outcomes.

When selecting adaptation measures for the new build project, it is important to consider how the measures might affect the whole system and its vulnerability. High level, broadly qualitative, risk assessments can be undertaken in the early phases of the asset lifecycle, with more detailed quantitative assessments conducted at later stages.

Infrastructure assets such as Transport, Energy, Information Communication Technology (ICT), will often have interdependence. These sectors rely heavily on each other to deliver their services, creating interdependencies. Although the infrastructure of each sector was independently designed and built, they have become increasingly interconnected. As a result, when one part of this system of systems stops working, it has knock-on effects on others. In the context of climate change, these infrastructure interdependencies are an additional vulnerability. They amplify existing climate risks and emphasize the need to consider resilience as being a cross-sector, system-scale issue.

As an example, the Transport sector interdependencies are far-reaching across sectors. As shown in Figure 6.3b, the Transport infrastructure is highly connected to all other infrastructure sectors, primarily because it provides a direct supply link. For low-income countries in Africa, the road network is the primary mode of transport for goods, services and communities. Road disruption may therefore create major choke points in passenger and freight traffic, with knock-on effects on an already vulnerable area, affecting farmers (transport links for agriculture value chains), SMEs, communities, blocking road access to healthcare facilities, accidents (road safety), trade corridors, all of which leading to significant negative impacts on the economy and society.

Figure B3.8: Sectoral interdependencies and their relationships (Transport, Energy and ICT which are part of ICRF sectors have significant interdependencies)



Source: Africa Finance Corporation

Part 3: Identify and Appraisal of Resilience Measures

Identification of resilience of options for the asset and quantify potential impact.

Once one or more physical climate risks have been determined to be material, a series of resilience options are identified. These options will offer incremental investments to improve the design of the asset (such as improved materials, location, protective barriers or maintenance features) or can relate to changes in operations (such as increased maintenance or planned shutdowns) to reduce its vulnerability. Each option should be quantified, with its range of economic, environmental, and social benefits identified. In addition, the impact of these resilience measures on the asset should be assessed.

Economic and financial analysis: Appraisal of resilience options – technical, economic and financial analysis: The climate risk assessment analyzed quantitatively or qualitatively the key climate risks to the project, considering future scenarios. The resilience options appraisal stage seeks to conceive solutions to strengthen the project's resilience.

This step will identify the economic feasibility of the project without any resilience options, and the net benefits of alternative resilience options for the project. To do so, estimate the net present value (NPV) and IRR of the project with no resilience measures based on the physical impacts of climate change on the project, as identified in the climate risk assessment. Use a relevant time horizon, typically the full performance life of the asset, and a discount rate according to national or international standards. The key steps of the economic analysis are:

- Estimate the net present value of the project with no resilience measures.
- For each resilience option identified, identify and value incremental costs and benefits of alternative project designs that incorporate different resilience options.
- Identify and evaluate any net benefits (refer back to the co-benefits identified) that are additional to the direct resilience benefits. This is particularly relevant for NbS, as these will often have knock-on benefits outside of the direct resilience benefits, they offer to the project.
- Convert the cost and benefit flows into present values using the discount rate chosen according to national or international standards.
- Compare the estimated incremental costs of project design with the resilience option and the benefits of integrating that resilience option.
- Conduct a sensitivity analysis to account for uncertainties.
- Undertake a cost benefit analysis (CBA) to appraise the resilience options
- Rank the NPV and IRR of the alternative resilience options.

GCF concessional funding: AFC/ACP will appraise the resilience options using a combination of methods above and estimate incremental cost. For each sub-project the climate risk assessment and incremental cost of resilience measures shall be documented. At the sub-project level, the portion of GCF funding as part of the overall sub-project cost shall be determined on a case-by-case basis, based on the climate risk assessment, and the capital required to de-risk investors and finance the cost of selected climate resilience measures to address the climate risks facing the infrastructure asset (resilience of the project) and the population it serves (resilience through the project).

Illustrative application of Part 1-3 decision process for climate risk assessment and identification of resilience measures

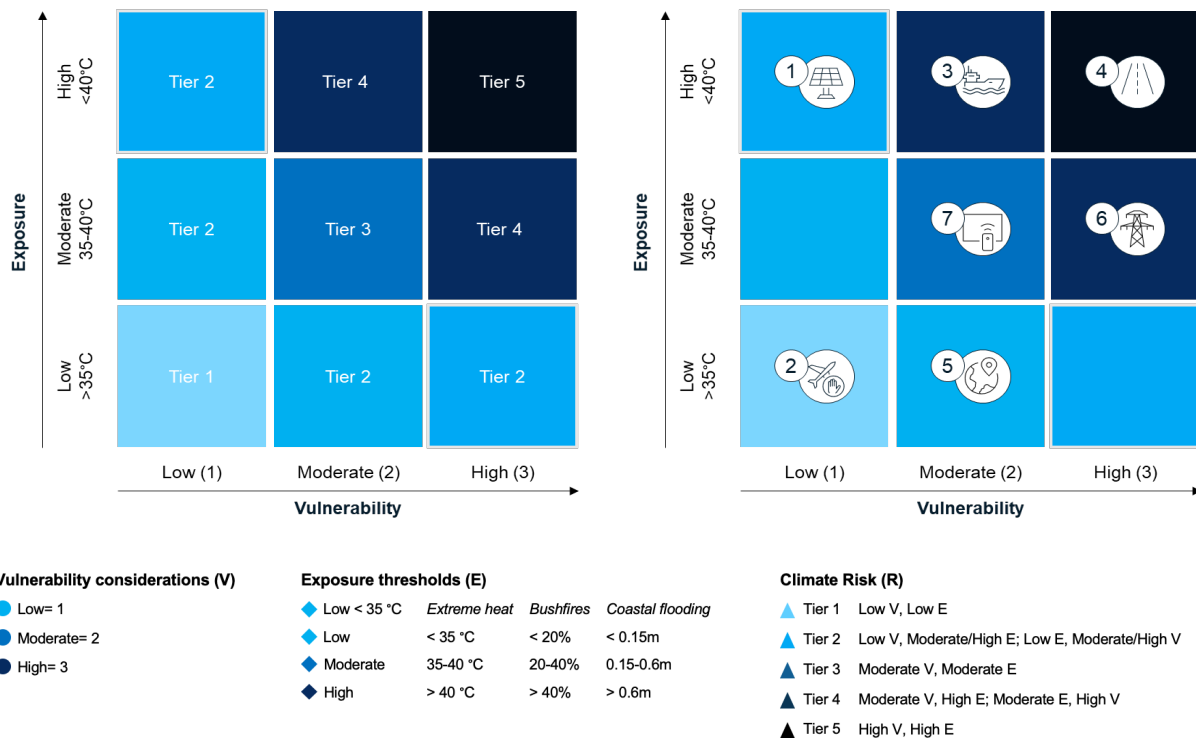
Expected exposure will be derived to classify assets into the following three categories based on an array of risk severity thresholds for physical risks:

- i **Low exposure**, indicating assets are in areas hardly exposed to relevant climate hazards,
- ii **Moderate exposure**, indicating assets are in areas more frequently exposed to relevant climate hazards; and,

iii **High exposure**, indicating assets are in areas extremely exposed to climate hazards.

The combined assessment of the level of vulnerability and the expected exposure to a hazard will allow ICRF to derive an indicative level of climate risk for different assets.³³ Scores for hazards and vulnerabilities will then be grouped into five tiers, where Tier 1 to Tier 4 investments require further analysis before proceeding to deal execution stage and where Tier 5 investments are deprioritized due to combined high vulnerability and exposure:

- 1) *Tier 1*: Indicating a combination of low risks emerging from vulnerability and exposure to climate hazards;
- 2) *Tier 2*: Indicating a combination of low exposure to climate hazards but medium of high vulnerability, or low vulnerability but medium or high exposure to climate hazards;
- 3) *Tier 3*: Indicating moderate risks emerging from vulnerability and exposure to climate hazards;
- 4) *Tier 4*: Indicating a combination of moderate and high risks emerging from vulnerability and exposure to climate hazards;
- 5) *Tier 5*: Indicating a combination of high risks emerging from vulnerability and exposure to climate hazards.



Part 4: Monitoring ICRF Resilience Metrics & Impact Tracking

Following the integration of climate risk management levers at the project development stage and eventual deal closure, the focus regarding climate risks moves to ongoing review and management of climate risks and management options for assets in the ICRF portfolio, as part of ICRF overall portfolio management process. Periodic re-appraisals will allow us to recognize and manage risks emerging from changes in regional climate pathways. Additionally, re-appraisals serve as trigger points to upgrade the resilience of assets, e.g., if new technology is available that can effectively contribute to reducing climate risks.

³³ Climate risk 'R' is a function of exposure 'E' and vulnerability. $R=f(V, E)$ or alternatively $R = V \cdot E$. Vulnerability and Exposure are non-weighted items and the order in which 'V' and 'E' are included in a risk function does not alter climate risks.

Periodic re-appraisals are an important part of the overall risk management process and serve to determine the extent to which risks are optimally managed under current and expected future conditions. Re-appraisals may involve screening selected assets and updating the risk profiles triggering re-assessments of quantifiable climate risks and re-assessments of potential mitigation options available. Re-appraisals may determine the need to 'harden' assets as new information uncovers increased risks, or new technologies broaden the suite of mitigation options, and/or the need to expand insurance coverage to account for higher risks.

Illustrative resilience indicators (see OM Annex 21 for more details on the indicators for each sector)

Sectors	Breakdown	Climate Resilience Indicators
Infrastructure Assets		value of physical assets made more resilient to the effects of climate change [value of assets in USD]
		Reduced expected financial losses due to climate-change related damages to physical infrastructure assets [amount of reduced expected financial damages in USD]
		Reduced repair/maintenance costs because of climate event induced damages to physical infrastructure assets [amount in USD]
	Climate-resilient Transport and Logistics	Reduced number of infrastructure asset outages due to climate related events (e.g., road blockages, power outage, port disruption, etc.) [number of outages due to climate related events]
	Climate-resilient Energy Systems	Reduced duration or downtime of infrastructure asset outages due to climate related events (e.g., road blockages, power outage, port disruption etc.) [cumulative number of days]
	Climate-resilient Economic Zones	Reduced expected financial losses due to climate-change related damages to the physical infrastructure asset, its beneficiaries and ecosystem including supply chains, interdependent infrastructure assets [amount of reduced expected financial damages in USD]
	Climate-resilient Telecommunication and Digital Infrastructures	Beneficiaries (male/female) of improved climate resilience of infrastructure assets [# of individuals]
		Reductions in mortality following acute climate events (e.g., flooding, heatwaves, and other climate resilient events)

B3.5 Indicative Incremental Cost Analysis – ICRF Fund

The GCF US\$ 240MIn catalytic first loss equity investment will support the mobilization of funding scale including US\$1.25 billion leverage financing at project level, US\$ 460 million from various institutional investors at the fund-level, and US\$ 150 million from AFC, leading to a total target of US\$ 2 billion investments in climate resilient infrastructure assets. **The GCF's funding will be used primarily to fund the incremental costs for adaptation and resilience and de-risk investors, which represents about 11.4% of the total funding required at project level.**

Breakdown of the total financing required for the sub-project		USD Million	% of Total Financing	
1	GCF provides concessional equity for the incremental costs of resilience and adaptation measures and catalytic capital to derisk the participation of institutional investors in (USD / %)	240	11.4%	Climate proofing and ensuring Paris-alignment of global infrastructure investment will require premium of 9–27%. The premium is calibrated on case-by-case basis and informed by the cost benefit analysis of the resilience or adaptation measures. Source: Handbook for Climate-Resilient Infrastructure Officers (CRIOs) developed by the Global Center on Adaptation (GCA) the High-Level Steering Group including all the Multilateral Development Banks: ADB, AIIB, ADB, EBRD, EIB, IADB, and the World Bank Group: https://gca.org/wp-content/uploads/2021/08/GCA-Handbook-V2.0-13-September-2021-2.pdf GCF share of the total cost of sub-projects is relatively small (11.4%) as a proportion of total costs – reflecting significant mobilization potential – high efficiency and mobilization.
2	AFC equity investment in the ICRF Fund	50	} 2% + = 7% 5%	AFC interest in the Tier 2 tranche of the Fund
3	AFC direct equity investment at sub-project level	100		AFC investment directly in the sub-projects. AFC interest is strongly aligned with GCF at the subproject level
4	Other investors in the ICRF fund	460	22%	Mobilisation of Institutional Investors (Pension Funds, Insurance Companies, Sovereign Wealth Funds)
5	Additional leveraged financing at sub-project level (debt)	1,150	60%	Debt financiers at sub-project level
6	Targeted value of the infrastructure made resilient (CRI)	2,000	100%	At least US\$ 2.0 billion of infrastructure assets made resilient to climate change

Making infrastructure assets climate resilient requires incremental costs. That said, there is no universal incremental cost benchmark. The calculation of incremental cost is asset specific and location specific and depends on the climate risk assessments and resilience measures that are fit-for-purpose for each infrastructure assets depending on the sector and asset type. Infrastructure assets respond differently to climatic events, depending on their nature and type, their technical and engineering design and their vulnerability to the projected climate in a given location. Hence calibrating the cost of resilience measures is done on a case-by-case basis based on the technical specifications and structural elements of that asset components and their degree of exposure to the changing climatic hazards.

Climate proofing and ensuring Paris-alignment of global infrastructure investment will require premium of 9-27%. The incremental cost is calibrated on case-by-case basis and informed by the climate risk assessment and cost benefit analysis of the resilience or adaptation measures. Source: Handbook for Climate-Resilient Infrastructure Officers (CRIOs) developed by the Global Center on Adaptation (GCA) the High-Level Steering Group including all the Multilateral Development Banks: ADB, AIIB, ADB, EBRD, EIB, IADB, and the World Bank Group³⁴.

Some studies provide a wide range of incremental costs varying from three (3) to twenty-three (23) point percent resulting from small frequency and magnitude of climate change hazard impact and depending on the asset, its location and selected resilient interventions. For example, the World Bank conducted an extensive study on the Program for Infrastructure Development in Africa (PIDA) focusing on road and bridge infrastructure investments which will occur by 2030 (many have projected construction completion dates in 2030), and the total construction cost without adaptation is estimated at \$12.8 billion. Excluding climate outliers (the top and bottom 5%), construction costs with adaptation ranges between \$13.3 and \$15.7 billion (representing an increment cost of 3% to 23%³⁵). The report also provides a framework for assessing climate related risks to road investments in Africa. A key finding is that, in the period from the present to

³⁴ <https://gca.org/wp-content/uploads/2021/08/GCA-Handbook-V2.0-13-September-2021-2.pdf>

³⁵ Enhancing the Climate Resilience of Africa's Infrastructure | see page 19-20 of the report <https://documents1.worldbank.org/curated/en/270671478809724744/pdf/110137-WP-PUBLIC-ECRAI-Transport-CLEAN-WEB.pdf>

2050, climate change could cause direct damages of tens of billions of dollars in damages to roads, which will require additional maintenance to preserve basic serviceability; preliminary estimation of damage to bridges suggests costs may be even higher (in the order of \$30 billion, mean estimate). Apart from increasing maintenance costs, climate changes will cause the disruption of road links, interrupting the flow of goods and people, all of which has a substantial economic cost.

AFC collaborated on a similar analysis with the University of Oxford's Programme for Sustainable Infrastructure Systems to assess the potential climate related damages on 121 African ports in (41 countries). Physical port asset damages and revenue losses equally large (both around 130 million USD per year) at present. In future, revenue losses will start to dominate, under high expected trade scenarios

- **Physical asset damages:** 400 – 550 million USD per year depending on RCP scenario (translating to US\$ 11.2 – 14 billion in damages by 2050)
- **Revenue losses:** 390 – 1230 million USD per year depending on RCP + trade scenario (translating to US\$ 10.9billion to US\$34.4billion by 2050)

B3.6 Eligibility Criteria for ICRF Investments

Table A1 below define criterion that will enable systematic integration of climate risks assessment in project screening and Table A2 defines the eligibility criteria for investment.

Table A1 – Making climate risks assessment integral to technical screening criteria for climate resilient and adaptation activities - Technical screening criteria

Criterion	Description
Target Sectors	<ol style="list-style-type: none"> 1. Climate-resilient Transport and Logistics 2. Climate-resilient Energy Systems, 3. Climate-resilient Economic zones, and 4. Climate-resilient Telecommunication and Digital Infrastructures.
A1: Reducing material physical climate risks	Infrastructure assets with resilience measures that reduce all material physical climate risks to that activity to the extent possible and on a best effort basis.
A1.1	Infrastructure assets with integrated physical and non-physical resilience measures aimed at reducing – to the extent possible and on a best effort basis – all material physical climate risks to that activity which have been identified through a risk assessment.
A1.2	The above-mentioned assessment has the following characteristics: <ol style="list-style-type: none"> 6) considers both current weather variability and future climate change, including uncertainty. 7) is based on robust analysis of available climate data and projections across a range of future scenarios. 8) is consistent with the expected lifetime of the activity.
A2: Supporting system adaptation*	The infrastructure asset and its adaptation measures do not adversely affect the adaptation efforts of other people, nature, and assets.
A2.1*	The infrastructure asset and its adaptation measures do not materially increase the risks of an adverse climate impact on other people, nature and assets, or hamper adaptation elsewhere. Consideration should be given to viable 'green' or 'nature-based-solutions' in combination to 'grey' measures to address adaptation.
A2.3	The infrastructure asset and its adaptation measures are consistent with sectoral, regional, and/or national adaptation efforts.

A3: Monitoring adaptation results	The reduction of physical climate risks can be measured.
A3.1	Adaptation results can be monitored and measured against defined indicators. Recognizing that risk evolves over time, updated assessments of physical climate risks should be undertaken at the appropriate frequency where possible.

***Note:** Meet the criteria for Do No Significant Harm to other environmental objectives, people, nature or assets, and comply with the required environmental and social safeguards. A robust Environmental and Social Management System has been developed for the ICRF.

In line with Table A1, Each investment should:

- reduce risk, exposure, vulnerability, or sensitivity to climate change
- increase climate resilience
- build problem-solving capacity to develop responses to identified risks, vulnerabilities, or effects
- address effects directly linked to climate change.
- Assess the climate impact on people, nature, and other interdependent assets in the ecosystem to the extent possible.
- explore low carbon options to the extent possible including Nature Based Solutions (NBS)
- meet the criteria for Do No Significant Harm to other environmental objectives, people, nature, or assets, and comply with the required environmental and social safeguards

Grey, green and blue infrastructure can be defined more precisely as follows:

- **Grey infrastructure** – Grey infrastructures are built up, engineered and physical structures, often made of concrete or other long-lasting materials. These include roads, railways, canals, energy, ports, dikes, embankments, sea walls, centers, and breakwaters for riverine and coastal flood protection, piped drainage systems for storm water management (such as storm sewers or concrete detention basins), and air conditioning or cooling centers to cope with extreme heat.
- **Green infrastructures** – Green infrastructure is principally characterized by well-functioning biophysical systems, primarily related to green spaces, that support biodiversity, natural ecological processes and to which some management and restoration may apply. They are represented by healthy oyster reefs, coastal salt marshes, mangroves, coral reefs, sea grasses, sand beaches and dunes in the coast environment and mainly by forests, parks, street trees, and grasslands inland.
- **Blue infrastructure** – Blue infrastructure can also be characterized by well-functioning biophysical systems, but primarily related to water. This includes water bodies, including ponds, wetlands, rivers, lakes, and streams, as well as estuaries, seas, and oceans.

Table A2 Eligible Sectors for Investments – Climate Resilience / Adaptation

Climate Accounting: The ICRF will invest in the development and construction of climate resilient infrastructure in target sectors as reflected in the table below. In terms of climate accounting, only the incremental cost of adaptation measures will be counted as “Adaptation Finance”. GCF concessional funding will only be used to de-risk investors at fund-level and contribute to financing the incremental cost of adaptation measures as part of the overall project costs.

Target Sector	Examples of eligible investments	Eligibility
Climate resilient Transport and Logistics	<i>Roads and Bridges, and associated infrastructure with integrated investments in adaptation measures to ensure resilience to climatic changes impacts</i>	<p><i>Alignment with Criteria in Table A1</i> <i>A detailed location specific Climate Risk Assessment must be undertaken.</i></p> <p>Each investment should:</p> <ul style="list-style-type: none"> - reduce risk, exposure, vulnerability, or sensitivity to climate change - increase climate resilience

		<ul style="list-style-type: none"> - build problem-solving capacity to develop responses to identified risks, vulnerabilities, or effects - address effects directly linked to climate change. - Assess climate impact on people, nature and other assets in the ecosystem to the extent possible. - explore low carbon options to the extent possible including Nature Based Solutions (NBS) - meet the criteria for Do No Significant Harm to other environmental objectives, people, nature or assets, and comply with the required environmental and social safeguards
	<p><i>Ports and logistics, and associated infrastructure with integrated investments in adaptation measures to ensure resilience to climatic changes impacts</i></p>	<p><i>Alignment with Criteria in Table A1 A detailed location specific Climate Risk Assessment must be undertaken</i></p> <p><u>Each investment should:</u></p> <ul style="list-style-type: none"> - reduce risk, exposure, vulnerability or sensitivity to climate change - increase climate resilience - build problem-solving capacity to develop responses to identified risks, vulnerabilities, or effects - address effects directly linked to climate change. - Assess climate impact on people, nature, and other assets in the ecosystem to the extent possible. - explore low carbon options to the extent possible including Nature Based Solutions (NBS) - meet the criteria for Do No Significant Harm to other environmental objectives, people, nature, or assets, and comply with the required environmental and social safeguards
<p>Climate resilient Transport and Logistics</p>	<p><i>Railway and associated infrastructure with integrated investments in adaptation measures to ensure resilience to climatic changes impacts</i></p>	<p><i>Alignment with Criteria in Table A1 A detailed location specific Climate Risk Assessment must be undertaken</i></p> <p><u>Each investment should:</u></p> <ul style="list-style-type: none"> - reduce risk, exposure, vulnerability, or sensitivity to climate change - increase climate resilience - build problem-solving capacity to develop responses to identified risks, vulnerabilities, or effects - address effects directly linked to climate change. - Assess climate impact on people, nature and other assets in the ecosystem to the extent possible. - explore low carbon options to the extent possible including Nature Based Solutions (NBS)

	<p><i>Airport Investment in Airport Terminals / Investment in upgrading existing/new airport facilities and equipment with integrated investments in adaptation measures to ensure resilience to climatic changes impacts</i></p>	<ul style="list-style-type: none"> - meet the criteria for Do No Significant Harm to other environmental objectives, people, nature or assets, and comply with the required environmental and social safeguards <p><i>Alignment with Criteria in Table A1</i> <i>A detailed location specific Climate Risk Assessment must be undertaken</i></p> <p><u>Each investment should:</u></p> <ul style="list-style-type: none"> - reduce risk, exposure, vulnerability, or sensitivity to climate change - increase climate resilience - build problem-solving capacity to develop responses to identified risks, vulnerabilities, or effects - address effects directly linked to climate change. - Assess climate impact on people, nature and other assets in the ecosystem to the extent possible. - explore low carbon options to the extent possible including Nature Based Solutions (NBS) - meet the criteria for Do No Significant Harm to other environmental objectives, people, nature or assets, and comply with the required environmental and social safeguards
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Target Sectors	Examples of eligible investments	Eligibility
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<p>Resilient Energy Systems</p>	<p><i>Investment in resilient clean energy systems with integrated investments in adaptation measures for enhanced resilience in clean energy generation, transmission, and distribution to reduce the impacts of climate change</i></p> <p><i>Investments may include, but not limited to, underground cabling which allows adaption of electricity transmission and distribution systems to climate change, resilient transmission lines or upgrades for grid resilience, clean energy generation, increasing the height of poles supporting power lines, installing conductors with hotter operating limits using High Temperature Low Sag Conductors (HTLS).</i></p>	<p><i>Alignment with Criteria in Table A1</i> <i>A detailed location specific Climate Risk Assessment must be undertaken</i></p> <p><u>Each investment should:</u></p> <ul style="list-style-type: none"> - reduce risk, exposure, vulnerability or sensitivity to climate change - increase climate resilience - build problem-solving capacity to develop responses to identified risks, vulnerabilities, or effects - address effects directly linked to climate change. - Assess climate impact on people, nature and other assets in the ecosystem to the extent possible. - explore low carbon options to the extent possible including Nature Based Solutions (NBS) - meet the criteria for Do No Significant Harm to other environmental objectives, people, nature, or assets, and comply with the required environmental and social safeguards
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Target Sectors	Examples of eligible investments	Eligibility
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<p>Resilient Economic Zones</p>	<p><i>Investment in resilient special economic zones including but not limited to climate resilient agro-parks, resilient industrial parks, socio economic infrastructure in urban and coastal areas, economic and technology-development zones, high-tech zones, science and technology parks, free ports, enterprise zones, trade or export zones with integrated investments to reduce the impacts of climate change</i></p>	<p><i>Alignment with Criteria in Table A1</i> <i>A detailed location specific Climate Risk Assessment must be undertaken</i></p> <p><u>Each investment should:</u></p> <ul style="list-style-type: none"> - reduce risk, exposure, vulnerability or sensitivity to climate change - increase climate resilience - build problem-solving capacity to develop responses to identified risks, vulnerabilities, or effects - address effects directly linked to climate change. - Assess climate impact on people, nature, and other assets in the ecosystem to the extent possible. - explore low carbon options to the extent possible including Nature Based Solutions (NBS) - meet the criteria for Do No Significant Harm to other environmental objectives, people, nature, or assets, and comply with the required environmental and social safeguards
Target Sectors	Examples of eligible investments	Eligibility
<p>Resilient Telecom and digital infrastructure</p>	<p><i>Telecom towers Data centers Fiber optics Digital infrastructure (internet, Connectivity, satellite, mobile services and payments, climate technologies etc.) with integrated investments in adaptation measures to ensure resilience to climatic changes impacts measures to ensure resilience to climatic changes impacts.</i></p>	<p><i>Alignment with Criteria in Table A1</i> <i>A detailed location specific Climate Risk Assessment must be undertaken</i></p> <p><u>Each investment should:</u></p> <ul style="list-style-type: none"> - reduce risk, exposure, vulnerability, or sensitivity to climate change - increase climate resilience - build problem-solving capacity to develop responses to identified risks, vulnerabilities, or effects - address effects directly linked to climate change. - Assess climate impact on people, nature, and other assets in the ecosystem to the extent possible. - explore and prioritize low carbon options to the extent possible including Nature Based Solutions (NBS) - meet the criteria for Do No Significant Harm to other environmental objectives, people, nature, or assets, and comply with the required environmental and social safeguards

Indicative Sector Breakdown

- Climate resilient Transport and Logistics (~40-50%)
- Climate resilient energy systems (~25-30%)
- Climate Resilient Economic Zone (~25-30%)
- Climate Resilient Telecommunication and Digital Infrastructure (~5-10%).

Eligible beneficiaries for technical assistance and activities under Component 2 and 3

The AE will procure consulting specialized firms with experience in climate risk assessments, CRPI, Policy and Regulatory issue on CRI to undertake the activities under component 2 and 3. These activities and services are expected to enhance the quality of sub-projects by integrating climate resilience, and creating a solid enabling and regulatory environment to mainstream climate risk and resilience in the design, development, construction and operations of infrastructure assets in the built environment in the target countries. Therefore, the beneficiaries are the sub-projects, all stakeholders involved in the execution of sub-projects in target countries that have provided NOLs, project developers, private sector actors, investors, lenders, insurers, government ministries and agencies, NGOs and Civil Society, regulatory agencies, the AE, and EE, etc. ICRF will not invest in countries that have not provided NOLs.

B.4. Implementation arrangements (max. 1500 words, approximately 3 pages plus diagrams)

B.4.1 Executive Summary - Implementation arrangements

AFC will be responsible for the overall oversight of the framework implementation and will report to the GCF per the terms of the Accreditation Master Agreement (AMA) and the Funded Activity Agreement (FAA). For managing the GCF resources, a GCF Account will be set-up within AFC to administer the GCF funds as follow:

1. AFC (in the name and on behalf of the GCF) will subscribe as the investor of record for the Junior Interests (as described below) in an amount equal to US\$240 million pursuant to the terms of a Subscription Agreement (as defined below) to be entered into between the ICRF and AFC (the "Capital Commitment"); the Capital Commitment will be also documented in the LPA; Under the Capital Commitment, AFC will agree, during a 10 year period as from the first closing of the ICRF (the "Commitment Period") to make capital contributions in US Dollars to the ICRF on each payment date determined in the LPA to permit the ICRF to (i) make investments in the project companies in accordance with the investment policy of the ICRF, to pay the ICRF's obligations, expenses and other liabilities and to fund operating reserves and (ii) to pay Management Fees, in each case in an amount equal to its pro rata share of the aggregate capital contributions to be made by all investors in the ICRF. At the end of Commitment Period, AFC will be released from any further obligation with respect to its undrawn Capital Commitments. The ICRF is targeting a total fund raise of US\$ 750 million, therefore GCF will not be the sole investor in any portfolio company.
2. With the any amount of cash actually contributed by AFC and other investors to the ICRF, the ICRF, in its capacity as an Executing Entity, will make investments in the relevant projects (each a "Fund Investment"); A Fund Investment may include, without limitation, investments in assets, in securities such as common or preferred stock, or in any other securities or instruments, including debt, as a means to achieve the overall objective of the Fund. The Fund Investments may involve a variety of transactions, including construction equity, growth equity, project development, expansion financings, leveraged and unleveraged acquisitions, etc.
3. The Fund Investments will be selected, invested and managed by ACP:
 - a. in accordance with the AMA and the FAA through the Subsidiary Agreements (as defined below); and
 - b. in cooperation with AFC, under the terms of the Support Services Agreement(s) and the Co-Investment Agreement as described above under Outcome 1;
4. At the Fund Investment level (sub-project level):

- key responsibilities and agreements defining the project’s parameters include implementation agreements with the government, project capacity and elements such as the required climate risk assessment and environmental & social impact studies summarizing obligations to the developer. Typically, project SPV’s in which ICRF directly or indirectly (through an SPV) holds shares will be domiciled in the AFC member countries in which the projects are based, with or without the use of interposed entities, as applicable.
- Revenues for the project are generated through a concession agreement or an off-taker Agreement, which for renewable energy, transport infrastructure, and other core infrastructure projects is typically arranged within a Power Purchase Agreement or a Concession Agreement. Next to the rates and payment structure, risk allocation is arranged for items such as resource risk, interconnection/grid availability, and political and natural force majeure. Normally both the Off-taker and the Independent Power Producer (IPP) have to provide certain performance obligations.
- The construction works are arranged through an Equipment Supply Agreement (ESA) and a Balance of Plant (BoP) agreement, usually combined into an Engineering, Procurement & Construction (EPC) Contract. The number of EPC contractors used differs per sector and construction works are done under the EPC contractors. The EPC Contract contains scope of work, price and payment schedules including advance payment guarantees. Other key elements include the risk allocation on certain construction risks (e.g., geotechnical risk, physical climate risks and adverse weather conditions), performance bonds, warranty periods, liquidated damages and limitation of liability. ACP and AFC’s specialist sector team will closely supervise the construction activities and engage independent engineering consultants as required.
- The Operations & Maintenance (O&M) Contract deals with the activities for maintaining the project at a certain performance level. The performance or availability level that the O&M contractor guarantees is one of the critical components next to the scope of work, price and limitation of liability. Insurance policies (conventional project finance insurance and climate risk insurance where applicable to mitigate against financial losses in the event of operational disruptions caused by unforeseen climate hazards) and Land Lease Agreements also form part of the suite to key documents. The independent engineer is broadly required to: i) review of the drawings and documents; ii) determine the project facilities completion schedule; iii) review, inspection and monitoring of construction works including the climate resilience measures; iv) conducting tests on completion of construction and issuing completion certificate; v) review, inspection and monitoring of O&M as well as the climate resilience metrics; vi) determining, as required under the agreement, the costs of any works or services and/or their reasonableness; vii) determining, as required under the agreement, the period or any extension thereof, for performing any duty or obligation; viii) assisting the parties in resolution of disputes; and undertaking all other duties and functions in accordance with the concession agreement.
- The Financing and Shareholders’ Agreements are a set of legal documents that deal with the terms and conditions of the debt and equity finance, sponsor support, cash waterfall and security.
- Financing for infrastructure projects can take a number of forms but are typically either financed through an owner’s balance sheet by way of corporate finance or on a limited or non-recourse basis through project finance. A key difference between the two approaches lies in how financing is structured. Both project and corporate finance often include a debt component (to leverage or preserve the owners’ equity, among other reasons) alongside the equity owned by the shareholders. In project finance, the project company borrows against the cash flow generated by the project alone (additionally secured by available assets and guarantees), while corporate finance leverages the companies’ balance sheet, not the cash flows. In the case of

pure project development, AFC usually finances the new project with Equity or equity like instruments such as subordinated debt etc. which is critical to catalyze the leverage debt financing required for each project.

- A key point in project finance is that the cash flows from the project alone must be sufficient to service the debt e.g., to repay the debt without corporate guarantees. The magnitude of the cash flow that is deemed sufficient depends on the risk profile of the project. The process of structuring debt, equity, quasi equity is complex, time consuming and often costly. In addition, the covenants imposed by lenders put a degree of inflexibility into the financing structure, which makes it difficult for the project company to withstand variances from forecasts in the early years. The use of equity from the ICRF and AFC is designed to remove this complexity time lag and rigidity, and thereby increase the probability of a project reaching successful operations.

5. **For the Grant components (Outcome 2 & Outcome 3):** Except for Output 2.1 where both AFC and ACP will be co-executing entities, AFC will be the executing entity for all other activities under Outcome 2 and Outcome 3. AFC will implement the activities in partnership with ACP (fund management and procurement will follow relevant policies and rules of AFC, guided by the FAA to be signed between AFC and the GCF. AFC will hold and manage the grant resources and make a direct payment to consultants/service providers. All procurement of services undertaken by ACP will be approved by AFC. AFC and ACP will sign a technical assistance agreement (TA Agreement) in this regard for the implementation of Outcome 2 & Outcome 3.

B4.2 Governance Structure of the ICRF

AFC is the sole shareholder of ACP. In its role of AE and sole shareholder of ACP, AFC will oversee the program implementation and will ensure that all the GCF policies (including but not limited to anti-corruption and AML/CFT policy, ESS policies as the ESMF) are passed down to ACP, the Fund level and portfolio company-level. Furthermore, as the Accredited Entity it will require ACP and the ICRF to support the fulfillment of AFC's rights and obligation under the AMA and FAA including its reporting obligations towards the GCF. AFC will ensure that any Subsidiary Agreement it enters into with ACP or the ICRF or any fund agreement between the ICRF and its investors will reflect the relevant provisions under the FAA and/or AMA and will take appropriate action and/or exercise remedies available to it under the Fund documentation to avoid or remedy a (pending) breach of the applicable provisions under the AMA and/or FAA to protect the interests of GCF.

In addition, it will dedicate full-time team members to monitor EE's compliance with FAA and AMA obligations, including compliance to the GCF's policies, to analyze quarterly and annual performance reports, to disburse GCF proceeds for the Funded Activity. It will assess achievement of program, targeted outcomes, and results as per log-frame / the Integrated Results Management Framework (IRMF), while commissioning independent interim and final evaluation reports as per GCF's requirements. The GCF will enter into Funded Activity Agreement (FAA) with the AFC, which will detail key implementation arrangements, commercial terms, and legal obligations, including obligation of AE to pass down GCF policies to ACP and the ICRF. These key terms will be summarized in the Term Sheet.

The AE on behalf of GCF shall channel funds to ICRF. AFC will enter into Subscription Agreement with ICRF in respect of GCF equity investment and its own commitment in ICRF. The Subscription Agreement and the other fund documentation (including the limited partnership agreement) will detail terms of investment, in line with the AMA and the FAA signed between GCF and AFC.

B4.3 Legal and Capital Structure of the ICRF

It is envisaged that the ICRF will be a newly formed Mauritius law limited partnership without legal personality (LP/GP structure), and its general partner will be the General Partner, a newly formed limited liability company wholly controlled by AFC (via ACP) as the Accredited Entity. The General Partner will delegate investment decision-making authority to ACP pursuant to the Management Agreement.

The capital of the ICRF will be appropriately divided into two tranches so as to attract multiple investor classes.

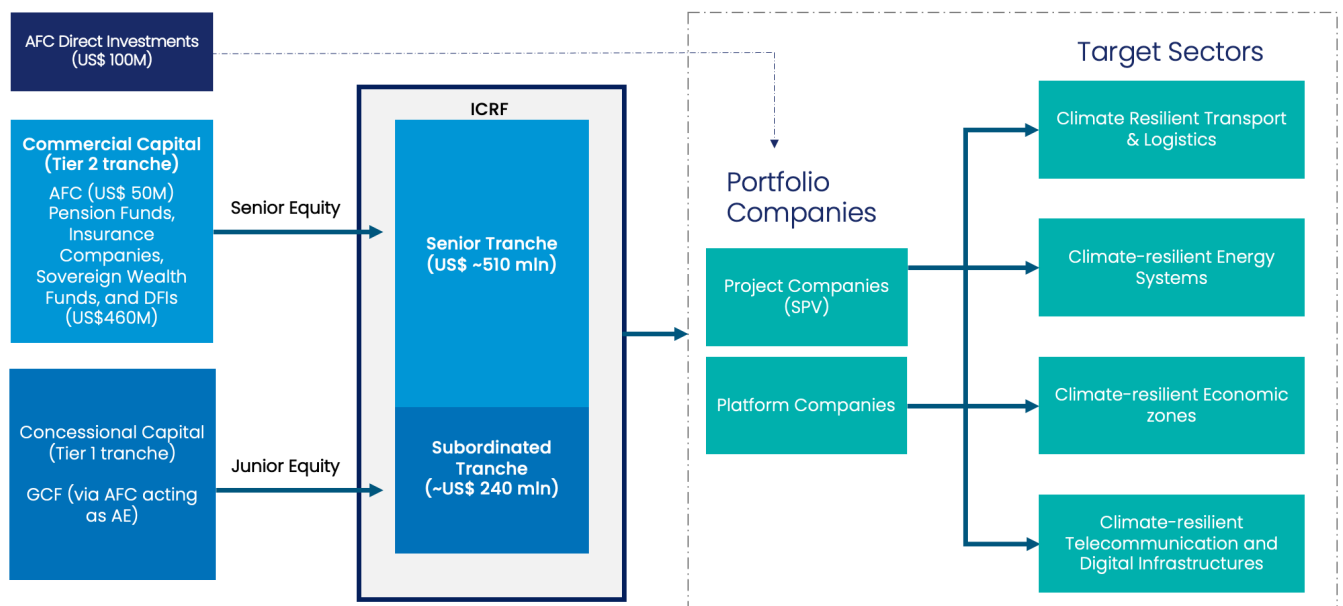
“**Tier 1 Interest**” or “**Junior Interest**” will hold a junior equity position in the structure of the ICRF, which will absorb a higher portion of risk throughout the ICRF, acting as the principal enabler to attract commercial capital into the structure – by providing a ‘first loss’ buffer to the ICRF;

“**Tier 2 Interest**” or “**Senior Interest**” will rank in a senior equity position; Investors in the Tier 2 Interest will benefit from first loss capital protection provided by Investors in the Tier 1 Interest. The Tier 2 Interest shall target investors with appetite for commercial risk adjusted returns, which would not have participated in the Fund without capital protection offered by GCF.

AFC acting as the EE will invest GCF’s fund commitment in the Tier 1 Interest of the ICRF by absorbing higher risk in the underlying ICRF fund performance and thereby providing the required capital protection to de-risk and mobilize commercial investors (including AFC’s commitment into the Fund from its own balance sheet resources) under the Tier 2 Interest. It is expected that GCF (via AFC) will be the sole investor in the Tier 1 Interests at first close.

AFC (for its own account) intends to invest an amount equal to USD [50m] in the Tier 2 Interest.

Figure B4.3: Capital structure: Infrastructure Climate Resilient Fund (ICRF)



Note: i) the SPV or Platform companies are the selected sub-projects in line with the eligibility criteria. There are no sub-funds involved. ii) AFC, on behalf of GCF, will invest 240M in Tier 1 class units.

B4.4 Implementation Legal Agreements

Subscription Agreement: AFC, acting in the name and on behalf of GCF, will subscribe for the Tier 1 Interests pursuant to the terms of a Subscription Agreement to be entered into between the ICRF and AFC (the “**Subscription Agreement**”). The Subscription Agreement will set forth the capital commitment of the GCF to the ICRF.

Limited Partnership Agreement: AFC will also be a party, together with the General Partner (on its own behalf) and each additional limited partner in the ICRF, to the Limited Partnership Agreement (the “**LPA**”)

of the ICRF, which will set forth the rights and obligations of AFC and any other investors as a limited partner.

It is expected that the Subscription Agreement, the LPA and the Side Letter will be governed by Mauritius law and any disputes in relation thereto will be resolved through arbitration by LCIA or ICC Arbitration rules to be held in London, United Kingdom, although the final structure will be determined in consultation with outside counsel.

Management Agreement: ACP and the general partner of the ICRF will enter into a management agreement pursuant to which the ICRF and the general partner will engage ACP to serve as manager for the ICRF. In its capacity as manager for the ICRF, ACP shall be responsible for performing the following duties: (i) structuring, arranging, and negotiating proposed investments for the ICRF, including: reviewing, and analyzing investment opportunities; negotiating the terms of investments, preparing documentation for investments, and arranging for the closing of investments; (ii) monitoring, advising, assisting, reviewing or otherwise participating in the management or control of portfolio companies, including taking all actions necessary or convenient to enforce, amend, compromise, or modify any agreement, contract, or other instrument relating to an investment of the ICRF and (iii) exercising any rights of the ICRF to hold, control, participate in, consult regarding, or review the management and businesses of the portfolio companies, including providing individuals to serve as directors, officers, advisory committee members, or in a similar capacity for Portfolio Companies, exercising voting, consent, or approval rights in relation to shares and other securities of Portfolio Companies (the “**Management Agreement**”). It is expected that the Management Agreement will be governed by e English law and any disputes in relation thereto will be subject to ICC or LCIA arbitration in London.

Side Letter AFC, ICRF and the General Partner: Accredited Entity is proposing to enter into a Side Letter (represented by the general partner as executing entity) and the General Partner. Neither the Private Placement Memorandum, the Subscription Agreement nor the LPA will be a Subsidiary Agreement. Instead, AFC, as the Accredited Entity is proposing to enter into a Side Letter with the ICRF (represented by the general partner as executing entity) and the General Partner (in its own capacity, as executing entity) with respect to implementation of the Funded Activity in order to pass down the relevant obligations under the AMA and the FAA to such entities. The AMA and FAA would be attached to the Side Letter. The Accredited Entity is also proposing that the Management Agreement include provisions pursuant to which ACP acknowledges that the General Partner has contractually agreed in the Side Letter to ensure the ICRF’s compliance with the FAA and the AMA, (ii) confirms that it has been made aware of and has considered such terms and (iii) shall to comply with the applicable obligations contemplated thereby in any proposed investment decision and portfolio management; the Side Letter, AMA and FAA would be attached to the management Agreement. The Side Letter and the Management Agreement are intended to be a “Subsidiary Agreement” under the FAA.

B4.5 EXECUTING ENTITIES

The Outputs and Activities of the ICRF will be implemented by the Executing Entities as follows:

<u>Outputs</u>	<u>Activities</u>	<u>Responsible Executing Entity (ies)</u>
Outcome 1 - Blended finance is mobilized at scale to accelerate CRI investments in the beneficiary African countries for infrastructure programme assets made resilient and able to withstand climate hazards and for improved access of vulnerable people and communities to climate-resilient infrastructure services (all-weather roads, bridges, power supply, ports and logistics, special economic zones, telecommunication, and digital infrastructure services)		
Output 1.1 - ICRF is fully operational and raised capital at the fund level	1.1.1 Implement the legal structure of, and form, the ICRF and related entities. Consummate first closing with the GCF.	AFC will establish the ICRF fund and related entities for implementation. AFC, on behalf

		<p>of GCF, will invest US\$ 240Million in Tier 1 interests.</p> <p>The General Partner is also an EE for Output 1.2. The General Partner is an entity to be formed by the Accredited Entity, which is expected to be a limited liability company under Mauritius law. The General Partner will be owned, directly or indirectly, by the Accredited Entity. The General Partner shall appoint ACP to perform the day-to-day management and operation of the Partnership (including portfolio management and risk management) pursuant to the Management Agreement.</p> <p>ACP is the Manager of the ICRF.</p>
	1.1.2: Fundraise US\$510 million of additional capital for the junior and senior tranches.	ACP
Output 1.2: Co-investments - ICRF investments in sub-projects	1.2.1: Deal origination, due diligence and execution of investments in sub-projects	ACP, and the General Partner
	1.2.2: Portfolio management	ACP, and the General Partner
	1.2.3 Reporting to investors and GCF	ACP and the General Partner are responsible for investors reporting. AFC will report to GCF in its capacity as AE.
	1.2.4: Exit assets, return capital plus profit to investors, close out the ICRF	ACP and the General Partner
<p>Outcome 2 - Improved climate risk assessments and adaptation solutions for CRI; improved capacity for scaling up CRI in Africa for infrastructure programme assets made resilient and able to withstand climate hazards and for improved access of vulnerable people and communities to climate-resilient infrastructure services (all-weather roads, bridges, power supply, ports and logistics, special economic zones, telecommunication, and digital infrastructure services)</p> <p>AFC and ACP will sign a technical assistance agreement based on which: ACP will procure all the services required in compliance with AFC procurement standards. All procurements will be approved by AFC. AFC will be responsible for the financial management of GCF grant funding and payments to the selected consulting firms / consultants.</p>		
Output 2.1 - Strengthened climate risk assessment and	2.1.1 Procurement of technical firms for detailed climate risk	AFC and ACP

adaptation solutions for ICRF investments in CRI	assessments, engineering assessments of climate adaptation solutions for each ICRF projects	
	2.1.2 Climate risk assessment of sub-projects pipeline for ICRF investments	AFC and ACP
	2.1.3 Enhancing climate adaptation measures in ICRF's investments with the integration of climate resilience options	AFC and ACP
	2.1.4 Support to EPCs and project sponsors in the tender process of specialized firms/consultants to support the implementation of adaptation measures to enhance the climate resilience of the sub-projects	AFC and ACP
	2.1.5 Overseeing construction and implementation of ICRF projects to ensure adaptation solutions are deployed and implemented (EPC Management of the adaptation elements)	AFC and ACP
	2.1.6 Refinement and continuous development of ICRF Climate Assessment Methodology and Approach	AFC and ACP
2.2 Output - Improved capacity for scaling up CRI in Africa	2.2.1 Capacity building event for ICRF programme incl. detailed climate risk assessment, adaptation solutions for CRI Asset Classes and technical knowledge for vulnerable people safety and resilience	AFC (in collaboration with ACP)
	2.2.2 Lessons learned are captured from ICRF CRI investments and roadmap is created for replication across the Continent	AFC (in collaboration with ACP)
	2.2.3 Issue publication - knowledge sharing about de-risking methodologies for CRI Asset Classes based on ICRF programme	AFC (in collaboration with ACP)

<p>Outcome 3 - Strengthened regulatory framework and innovative climate risk parametric insurance (CRPI) is mainstreamed for the long-term viability of CRI investments in Africa</p> <p>AFC and ACP will sign a technical assistance agreement based on which: ACP will procure all the services required in compliance with AFC procurement standards. All procurements will be approved by AFC. AFC will be responsible for the financial management of GCF grant funding and payments to the selected consulting firms / consultants.</p>		
Output 3.1 - Standards and construction codes are enacted and applied	3.1.1 Procure consortium of legal, policymaking, and climate expert firms for improving regulatory framework for CRI, CRPI, and capacity building in the programme States	AFC (in collaboration with ACP)
	3.1.2 Capacity building and engagement with key proponents, public and private sector participants, civil societies to identify the regulatory gaps for investments in CRI Asset Classes	AFC (in collaboration with ACP)
	3.1.3 Create a work group from the consortium of legal and policymaking firms for new CRI Asset Classes and construction codes implementation	AFC (in collaboration with ACP)
	3.1.4 Create and share recommendation reports for improving regulatory framework for CRI Asset Classes per country	AFC (in collaboration with ACP)
	3.1.5 Support regulatory, standards and policy making process for CRI Asset Classes to implement the recommendations according to each country needs	AFC (in collaboration with ACP)
	3.1.6 Report on regulatory framework support for CRI Asset Classes	AFC (in collaboration with ACP)
	3.1.7 Issue publication - knowledge sharing about lessons learned and recommendations on strengthening regulatory framework for CRI Asset Classes in the programme countries	AFC (in collaboration with ACP)
Output 3.2 - Strengthening fiscal incentives for CRI are supported	3.2.1 Procure fiscal regulatory framework and policymaking firms for promoting fiscal	AFC (in collaboration with ACP)

	incentives for CRI Asset Classes in the programme countries 3.2.2 Capacity building and engagement with key proponents, public and private sector participants, civil societies	
	3.2.3 Create and share recommendation reports for improving fiscal policy for CRI Asset Classes	AFC (in collaboration with ACP)
	3.2.4 Support legal regulatory and policy making process to implement the recommendations on fiscal policy according to each Country needs	AFC (in collaboration with ACP)
Output 3.3 - Innovative CRPI is designed for the long-term viability of infrastructure investments in Africa	3.3.1 Feasibility study on the development of CRPI in Africa;	AFC (in collaboration with ACP)
	3.3.2 CRI design and development for CRI in Africa, stakeholder engagements;	AFC (in collaboration with ACP)
	3.3.3 Engagement with donors to sponsor CRPI for ICRF projects and others	AFC (in collaboration with ACP)
	3.3.4 Support capacity building activities (training) for key stakeholders of CRPI	AFC (in collaboration with ACP)

*Note: *AFC (in collaboration with ACP)" means that AFC is the EE that makes the final decision and there is a collaboration with ACP.*

Relationship between AFC and ACP: ACP will enter into support services agreements with AFC and the ICRF will enter into a co-investment agreement with AFC (**meaning that for each ICRF Investment will have an AFC Direct Investment- aligning the AE and EE interest completely**). Under the support services agreements, AFC provides investment sourcing services, as well as support in investment processing and portfolio management. This ensures access to AFC's sector and country expertise and its specialists in environmental, social and governance matters. The co-investment agreement will define the allocation of investment opportunities and the co-investment process between AFC and the ICRF, thereby ensuring access to AFC's pipeline on a pre-agreed basis.

4.6 Flow of Funds

The GCF shall provide equity investment to ICRF, that will in turn invest into high-impact potential projects across CRI Asset Classes in Africa. The GCF funds will be channeled by the AE as follows:

Fund Flows for investments

1. The GCF and AFC will contractually agree that the GCF will commit an USD 240M millions amount of funding with the single and stated purpose of AFC investing those funds on behalf of the GCF in a first loss equity tranche of the ICRF, on the terms agreed in the FAA and the term sheet. The GCF funds for the purpose of the ICRF will be kept on a separate account without being commingled with any other funds.

2. GCF (represented by the AFC) will make a capital commitment of USD 240M millions to the ICRF and subscribe to limited partnership interest via a subscription agreement.
3. Once potential portfolio investments have been identified by the ACP (Investment Manager), the ACP will issue a drawdown notice to AFC (acting on behalf of GCF).
4. Upon the receipt of a drawdown notice, AFC will remit the funds to the ICRF from its fiduciary GCF account, which in turn will utilize the funds received to make the portfolio investments.

Technical Assistance (TA)

The GCF will commit USD 11 millions of grant funding for Component 2 & 3. AFC will enter into a TA Services agreement with the ACP. The funds will be used according to the pre-agreed procurement and budget plans as per AFC’s procurement standards and in line with GCF requirements.

Figure 4.6.1: Flow of Funds

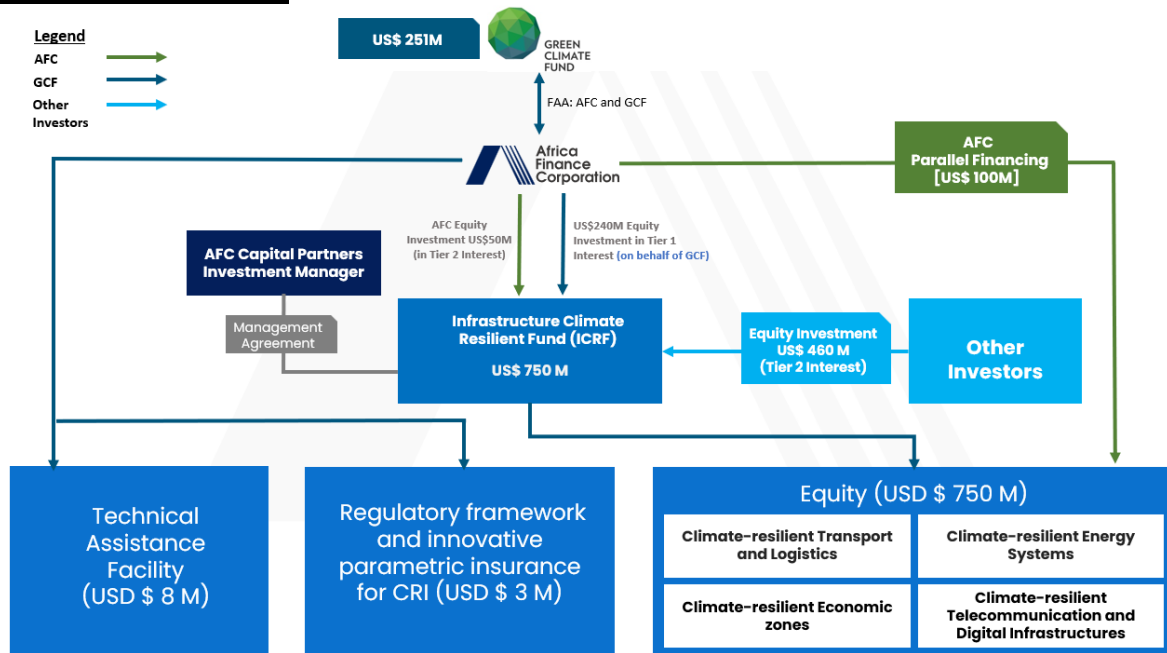
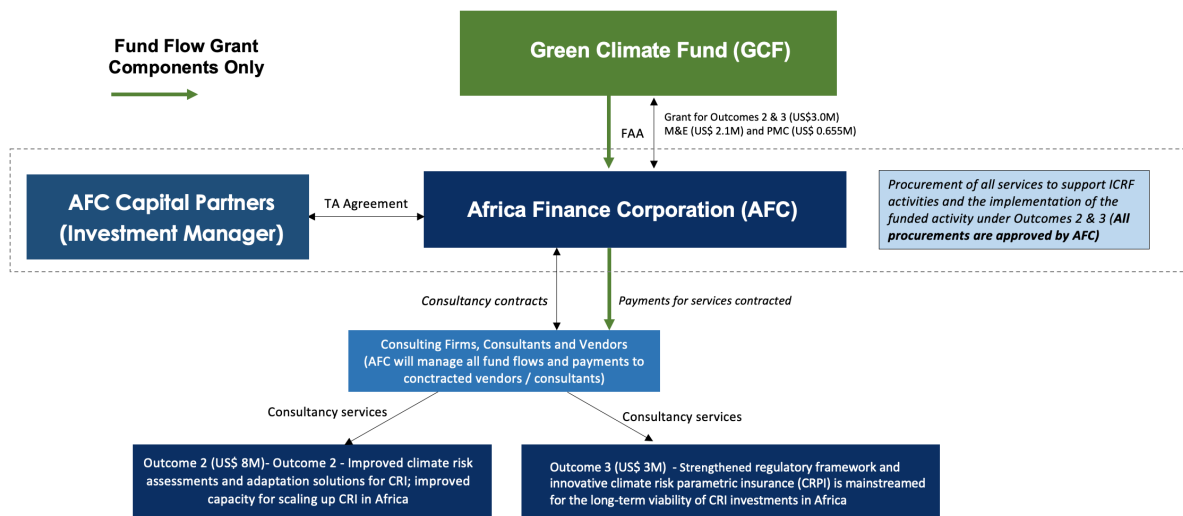


Figure 4.6.2: Flow of Funds GCF Grants



Note: GCF will transfer the grant funds to AFC for the implementation of Outcome 2 & 3, M&E and PMC as per the FAA. AFC will hold and manage the grant resources and make a direct payment to consultants or service providers.

4.7 Governance of the ICRF

It is envisaged that the Fund will be registered in a Mauritius, a leading Private Equity jurisdiction in Africa, set up and ultimately managed by the ACP. The final legal structure of the Fund is subject to final due diligence and agreement with the investors in the ICRF. The Fund will be built upon different layers of risk tranches bearing different risk/return profiles, as described in greater detail in the Term Sheet. The ICRF may take the legal form of a partnership. To this effect, ACP will register a Limited Partnership without legal personality in Mauritius (LP/GP structure) which will include a subsidiary of ACP as the General Partner, and investors (AFC and other third-party investors) as the Limited Partners. With respect to governance structure, only ACP (through the General Partner) may participate in the management of the LP. The Investors (as Limited Partners) will be prohibited from partaking in the management of the LP and shall not have the power to bind the LP. The indicative governance of the Fund is described below:

Advisory Committee (AC): The ICRF will have an AC, which is composed of Limited Partners (LPs). The Advisory Committee will be comprised of members from investors selected by ACP in its discretion. The Advisory Committee shall have the power to: inter alia (i) review, assess and approve or disapprove conflicts of interest and (ii) consent to waivers of the investment policy agreed with the investors.

The General Partner: The General Partner will be responsible for the management of the assets of the Fund, for the day-to-day management of the affairs of the Fund as well as for the administration and marketing functions related to the Fund, including investigating, analysing, structuring, and negotiating potential investments, monitoring the performance of portfolio companies and advising the Fund on disposition opportunities. The General Partner holds the decision-making power and has the exclusive authority with regard to any decision not specifically delegated or attributed to another entity or service provider and supervises the Investment Advisor(s) and any other service providers in the performance of their duties.

ACP: The General Partner shall appoint ACP to perform the day-to-day management and operation of the LP (including portfolio management and risk management) pursuant to a Management Agreement to be entered into between the General Partner and ACP. At the level of ACP, the following governance structure is being implemented:

- **Board of Directors:** ACP's Board of Directors is comprised of senior manager of AFC and independent directors. The Board is chaired by the AFC CEO and is responsible for oversight of ACP's operations, finances and conflicts management.
- **Audit Committee:** The independent members of the Board will form the Audit Committee, which assists the Board in fulfilling its oversight responsibilities for the integrity of ACP's and the ICRF financial statements, the independent auditor's qualifications and the performance of the independent auditor.
- **Conflict Management Committee:** ACP will establish a best-practice procedure for handling actual or potential conflicts of interest between AFC and the ICRF. The independent members of the ACP Board form the Conflicts Committee, which reviews how conflicts of interest are managed, including steps taken to mitigate such conflicts. The committee will provide regular updates to the Board of Directors.
- **Investment Committee:** Although ACP will leverage AFC services for investment sourcing, the ICRF will be managed by dedicated ACP teams and the decision to participate in any investment opportunity will be made independently by the Investment Committee of ACP. The IC will have fiduciary duty to the investors. The Investment Committees will include selected members of the Board of Directors of ACP, the Executive Management Committee of ACP, and any external independent members appointed by ACP.

In addition, the following governance structure or policies will be set up:

- **Risk Committee:** Prior to any final IC meeting, the Risk Committee is required to confirm approval of the deal including sign off on legal, financial, technical, ESG, climate and other diligence items. If actions are required pre-signing or post-completion, then the deal team prepares a Corrective Action Plan, completion of which becomes a condition for final IC approval. Approvals and Corrective Action Plans are recorded prior to final IC by the deal team.
- **Internal Compliance Committees:** ACP will establish policies, procedures, and governance structures to identify and manage investment management and operational risks. Any such policy will be based on AFC's existing applicable policies. It prioritizes adherence to the highest standards of corporate governance, compliance and ESG policies and strict enforcement of those policies. These policies cover issues from anti-bribery and anti-corruption, prevention of sexual harassment at the workplace, anti-money laundering, insider trading and conflict of interests. ACP will also adopt certain codes for whistle-blowers and fair pay and equal opportunities for employees etc. In this regard, the Investment Manager has formed various committees to ensure monitoring and due and proper implementation of the said policies.
- **Corporate Compliances:** All fund related compliances will be outsourced to a law firm. For the Fund, Investment Manager and Portfolio companies, corporate secretarial compliances will be outsourced to a Company Secretary (CS) firm. These will be overseen by ACP's Compliance and Finance function.
- **Investment Approval/Divestment Process:** The Investment Manager will apply a three-tier approach to investment and divestment approval. The investment team together with the respective risk and internal compliance committees perform due diligence of investments or assessment of exits, that is put forward for Investment Committee approval. ICRF only invests in projects that meet eligibility criteria of the GCF.
- **Internal Compliance Process (Anti-Money Laundering and Anti-Corruption Policy):** ACP takes into consideration the potential risks of money laundering and corruption in local projects by developing robust anti-money laundering and anti-corruption policies and assessing potential risks already in investment due-diligence stage. The monitoring of risks is ensured by the respective policies as follows:
 - **Anti-Money Laundering:** ACP will have anti-money laundering policy, which will be designed as per local legislation and industry best practices. Any such policy will be based on AFC's existing AML policy. The policy gives importance to identification of investors and identification through scrutiny in order to check which investor poses money laundering risk. Transactions which are suspicious in nature (the source of which is unclear or involving large cash investments) shall be considered as part of the anti-money laundering policy.
 - **Anti-Corruption Policy:** This policy, to be based on AFC anti-corruption policy, will be applicable to ACP and all personnel employed by it or acting for or on behalf of ACP wherever they are located such as any advisors /representatives hired by the ACP. The policy also provides for the development of anti-corruption and sanctions, diligence procedures, where such procedures are "gate-checking" requirements for potential transactions and include restricted party screening, anti-corruption checklists, and mechanisms for heightened compliance review. IDD/ Business Integrity checks are undertaken by independent agencies, which reports are submitted to the Head of Operations along with the relevant Deal Captains for review.

4.8 Track record of AE and EE: AFC was established in 2007 to be the catalyst for private sector-led infrastructure investment across Africa. Today, AFC has established itself as a preeminent investment grade-rated multilateral financial institution in Africa. AFC's approach combines specialist industry expertise with a focus on financial and technical advisory, project structuring, project development and risk capital to address Africa's infrastructure development needs and drive sustainable economic growth. AFC invests in high-quality infrastructure assets that provide essential services in the core infrastructure sectors of power,

natural resources, heavy industry, transport, and telecommunications. To date, the Corporation has invested over USD 10 billion in projects in 35 countries across Africa. AFC is committed to investing in projects that will provide substantial, measurable benefit to a region or sector in the long term and will be the template for future infrastructure investment and development. However, the Corporation also considers the short-term social, economic, and environmental impacts. Where possible, the projects will utilize local resources and suppliers, with jobs being created during both construction and operational phases. In recent years, AFC has been radically rethinking its approach in response to the ever-growing needs of Africa's infrastructure and climate transition.

AFC is now one of the leading infrastructure investors in renewable energy on the African continent. In terms of AFC's track record, its renewable energy platform (Lekela) and portfolio include 1.4 GW of operating capacity in renewable power with a clear plan to grow this to 3GW in the next few years. AFC also led several award-winning renewable energy projects in Africa such as the 26MW Cabeolica wind farm project -providing over 20% of the energy needs of Cape Verde, the 60MW wind power investment in Djibouti – the country's first renewable energy plant, 44MW Hydro Power project in Cote D'Ivoire (Singrobo) and 420MW Nachtigal hydropower plant in Cameroon.

The Corporation has invested \$1.3B in the Transport & Logistics such as ports and roads which are increasingly vulnerable to the impacts of climate risks such as flooding, sea level rise, precipitation, high temperatures, etc... As a response, AFC's strategy is to integrate climate resilience as part of its programme on the Infrastructure Climate Resilient Fund. AFC's pipeline projects are often characterized by a clear analysis of the occurrence of various climate threats and the potential impacts. The Takoradi port in Ghana, where AFC holds 35% shareholding, is typical as AFC invested in several ports on the continent (i.e., New Owendo International Port, San Pedro Port in Ivory Coast, Arise Mauritania, etc..). AFC partnered with Takoradi port to expand its capacity to approximately ten times. The extension included measures to make it more resilient to climate stressors such as sea-level rise, storm surge, temperature, among others. In the road sector, AFC also played a key role in the development of the Henri Konan Bédié Bridge which is a US\$365 million public private partnership (PPP) project in Abidjan, Côte d'Ivoire and consists of a 6.4km highway and 1.9km bridge connecting Abidjan's residential Riviera district directly with the commercial district of Marcory.

Rather than simply providing funding for individual projects, AFC now seeks to take a wholesale approach to infrastructure investments by investing in every step of the value chain through financing ecosystems that help integrate economies and communities and transform lives. This ecosystem-investment approach enables AFC to increase project competitiveness and further alleviate high social, economic, and environmental risks that governments face when they lack the necessary local capacity.

Moreover, this approach also supports governments to overcome their capacity gaps. As one of the highest-rated institutions in Africa – A3/P2 rating from Moody's – AFC can deliver on ambitious projects, manage investments, and pursue the highest levels of corporate governance, transparency and sustainable development. In becoming a member of the Corporation and hence bestowing on the Corporation preferred creditor status, member countries can de-risk development projects and access capital at a cost they would be unable to attain. Looking forward, AFC aims to build an agile organization with USD 10 billion in assets under management by 2023 to address the urgent and important mandate of developing and financing climate-resilient infrastructure, natural resources, and industrial assets to catalyze sustainable, inclusive economic growth of the African continent for enhanced productivity. AFC has sought to address the wider infrastructure divide by originating, structuring, and executing projects in Africa (Figure B.4.8).

Africa Finance Corporation at Glance – Member Countries and Investment Footprint

35
Investment countries

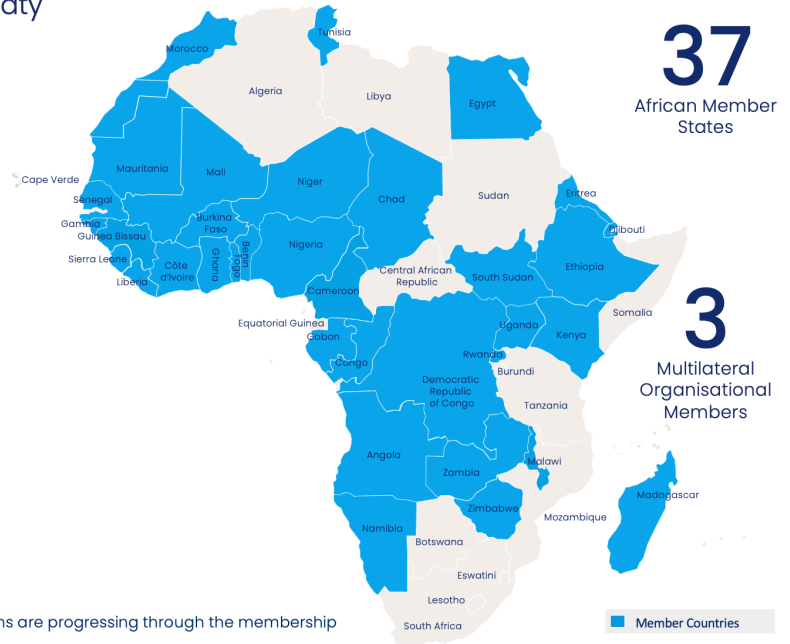
>US\$10bn
Cumulative disbursement

International Institution Established by Treaty

AFC is an international multilateral institution established by treaty between independent sovereign states.

Member Countries

- Angola
- Benin
- Burkina Faso
- Cameroon
- Cape Verde
- Chad
- Congo Brazzaville
- Côte d'Ivoire
- DR Congo
- Djibouti
- Egypt
- Eritrea
- Gabon
- Ghana
- Guinea Bissau
- Guinea
- Conakry
- Kenya
- Liberia
- Madagascar
- Malawi
- Mali
- Mauritania
- Mauritius
- Morocco
- Namibia
- Niger
- **Nigeria***
- Rwanda
- Senegal
- Sierra Leone
- South Sudan
- The Gambia
- Tunisia
- Togo
- Uganda
- Zambia
- Zimbabwe



Various prospective new member countries and multilateral organisations are progressing through the membership process. AFC has preferred creditor status in member countries.

*Host Country

Figure B.2.2. A map showing the AFC's African member states and investments

AFC Capital Partners (ACP): EE track record.

AFC Capital Partners (ACP) is the wholly owned asset management subsidiary of Africa Finance Corporation (AFC) – a leading infrastructure solutions provider on the continent. The ACP's inaugural leadership team has deep experience in both investments and climate change in developing countries and Africa and a track record with more than US\$2 billion in climate investments. ACP aims to provide institutional investors with a unique access to attractive and de-risked investment opportunities in low carbon and climate resilient infrastructure across the African continent. ACP will leverage the scale and breath of AFC's investment track record to offer co-investment opportunities in infrastructure projects with commercial returns.

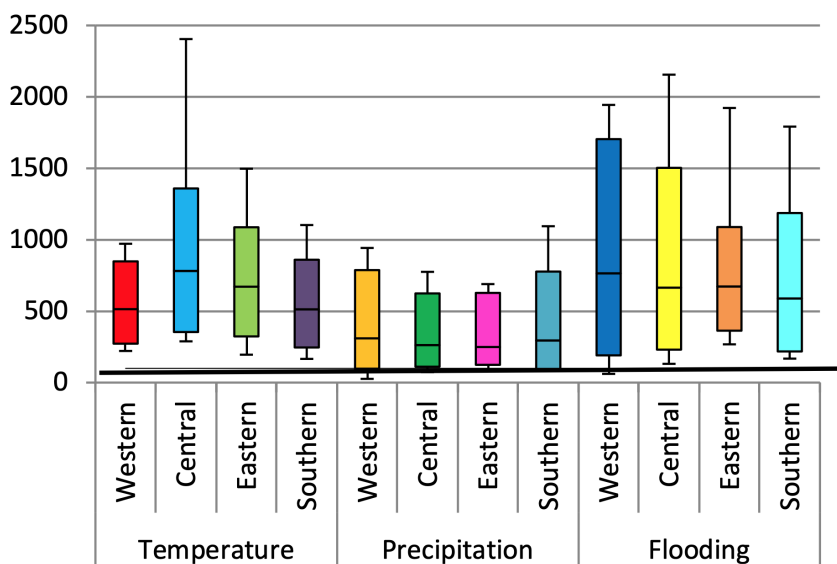
B.5. Justification for GCF funding request (max. 1000 words, approximately 2 pages)

Explain why the project/program requires GCF funding to address mitigation or adaptation measures, i.e. Why is the project/program not currently being financed by public and/or private sector? Which market failure is being addressed with GCF funding? Are there any other domestic or international sources of financing?

The associated costs of climate impacts on infrastructures can be assessed based on two approaches; a reactive "no adaptation" approach which analyses a changing future climate on a given infrastructure design standards, and; a proactive "adaptation" approach which reduces future risks and damages by changing

design standards at upgrades or reconstruction (WBG³⁶). Such cost can be provided for maintenance and new construction/reconstruction. Published engineering research and material studies have attempted to understand the relationship between climate stressors and response. Estimated reactive response costs associated with each climate stressor are significant for transportation infrastructure, including roads and bridges across selected regions in Africa³⁷. Figure C.2.1 presents the regional costs of conducting maintenance on a road network damaged by climate-induced events (WBG). The maintenance intends to restore roads to their pre-climate change condition, considering the periodic rehabilitation costs in the baseline (i.e., historical climate costs). Flooding is one of the most prominent climate stressors that causes a relatively higher cost increase relative to baseline costs across the region. These increases are high in the Central and Western regions due to stressors associated with temperature leading to higher costs in Central and Eastern Africa relative to other regions. The direct role of precipitation, a precursor of flooding, results in lower costs than other stressors.

Figure C.2.1. Net reactive response costs to climate change impact by historical optimal maintenance cost (i.e., no climate change = 100) for the period 2015-2050. The vertical axis is normalized (at 100) to the historic (no-climate-change) costs³⁸.



Furthermore, it has been reported that the impact of climate change on infrastructure, specifically on roads, varies between the five different regions in Africa (Chinowsky et al., 2011³⁹; Figure C.2.2). This inference was drawn from selected countries to compare all the regions quantitatively. The “worst-case” climate scenario is among the considered scenarios in the analysis because policymakers often desire to know the maximum impact of climate change on socio-economic activities to develop appropriate contingency plans against the greatest threat posed by climate change. In northern Africa, where about 70% of the road networks are paved, much of

the predicted climatic change is evident in the rise in temperatures which has a greater potential effect on paved roads than precipitation. The impact on the cost of new construction and/or maintenance under a no adaptation situation is estimated at USD 488.4 million compared to USD 61.7 million where appropriate adaptation measures are applied. The cost ratio of adaptation to no adaptation is USD137.1 to USD 468 million in the western region. About 85% of the region’s road inventory is unpaved. Some parts of the region, including the Sahel, are expected to experience increased temperatures and precipitation. This makes the region’s inventory more vulnerable to increasing precipitation. The impact on cost is estimated at USD 203.4 and USD 605.2 million for adaptation and no adaptation, respectively, for the East-Central Africa region. Like the western region, the east has a high percentage of unpaved roads, which is more susceptible to increasing precipitation. In the south-central region, where the road inventory consists of about 88% unpaved roads, the cost for applying adequate adaptation (no adaptation) measures is USD 159.3 (USD

³⁶<https://www.worldbank.org/content/dam/Worldbank/Feature%20Story/Africa/Conference%20Edition%20Enhancing%20Africa%20Infrastructure.pdf>

³⁷<https://www.worldbank.org/content/dam/Worldbank/Feature%20Story/Africa/Conference%20Edition%20Enhancing%20Africa%20Infrastructure.pdf>

³⁸ Bars that are higher than the 100 line represent costs of climate change relative to the optimal costs of maintenance for current climate; bars below the line indicate potential savings. Box indicates the range of costs over the 25th to the 75th percentile of climate change scenarios; line in box represents the mean value; and whiskers extending from box refer to the 5th and 95th percentile of costs over climate change scenarios

³⁹ <https://www.econstor.eu/bitstream/10419/54176/1/657452203.pdf>

Regional Areas
Adapt/No Adapt Cost in Million\$USD



298.5) million. The cost of adaptation (no adaptation) is estimated at USD 102.4 (USD 434.2) million for the southern region.

Figure C.2.2. Regional estimates of adapt/no adapt cost in Million \$USD on road infrastructure⁴⁰ (Source: Chinowsky et al. 2011)

Considering all the above, it is evidential that:

- The scarcity of domestic public resources of fiscally constrained African nations does not allow African countries to meet the need for traditional infrastructure financing, consequently abstracting the capacity to finance climate-resilient infrastructures.
- The high upfront cost of these investments modifies the risk-adjusted return of these assets reduce the appetite for this type of investment, and finally.
- The need for GCF investment in the ICRF capital structure as anchor investor (given the theme of the fund and mandate to finance resilience), to finance non remunerative incremental cost of resilient measures and de-risk overall investment to attract private sector.

The rationale above justifies the need for GCF resources to make ICRF a viable solution to market barriers and deliver on impacts that are core to the GCF investment thesis.

With Africa being the most vulnerable continent to climate change, mainstreaming climate change is a key requirement for the long-term viability of its infrastructure. Financing Nationally Determined Contributions (NDC) of African economies would require significant investments estimated at US\$ 2.3 trillion (which includes US\$ 291 billion for adaptation) over the next decade. Yet, there are limited capital investments to infrastructure systems' climate resilience. The ICRF will mobilize public and private sector finance to bridge this gap by removing current market barriers that limit a greater flow of capital in low carbon and climate-resilient projects in Africa.

Removing market barriers: Several barriers may constrain or hamper the bankability of infrastructure projects in general, which are also relevant for new projects that will need to be climate proofed. These include, among other things, high real and perceived risks associated with these investments, weaknesses in the enabling environment, poor project preparation and/or market sounding. Creating a supportive enabling environment will be critical to driving more climate-resilient infrastructure investment.

A particular challenge for funding climate-resilient infrastructure is that many of the benefits may be hard to monetize, particularly for protective infrastructure such as flood defenses. An optimal risk-sharing allocation and concessional funding are crucial to ensuring bankability for suitable projects. This determination is typically undertaken at the outset of the project, during the project conceptualization and design phase. The resilience agenda brings a new dimension to this - given the need to consider how the allocation of climate-related risks will affect actors' incentives to manage these risks.

⁴⁰ <https://www.econstor.eu/bitstream/10419/54176/1/657452203.pdf>

Within that context, public finance providers can use various tools to allocate risks effectively and bridge the bankability gap for climate-resilient infrastructure. These tools include:

- **Project preparation support**, in the form of technical and financial assistance to project owners or concessionaires. This is particularly important given the potential additional complexity of considering climate resilience in infrastructure development.
- **Blended finance** can be used to support investment in climate-resilient infrastructure. In this context, GCF can play an instrumental role to mobilize institutional capital at scale by improving the risk-return profile of innovative investment vehicles and helping un-bankable projects become economically viable. For instance, blended finance can use credit enhancement instruments such as first loss concessional equity and insurance can de-risks physical and commercial risks.
- **Expanded safeguards that integrate resilience aspects** are likely to play a key role in this regard by providing a standard for financing by private/commercial financial actors. A particular area of interest relates to the potential of insurance that could be developed for climate-resilient infrastructure.
- **Insuring new and existing infrastructure against future risks due to climate change** could be a factor in reducing financing costs through risk mutualization. Premiums, or availability, of such insurance would need to reflect climate resilience as a potential avenue to internalize resilience into the project finance while reducing actual financing costs. However, this depends on the availability and commercial viability of such products

ICRF will address financial market barriers to unlock capital at scale

Table C.2.3. ICRF instruments to overcome financial market barriers

Instruments	Potential role	ICRF Approach
Project climate risk assessment, adaptation solutions and technical assistance for the projects development	Support the development of bankable infrastructure projects	up to 20% of the ICRF will be invested to support early equity investments in project development. AFC has a dedicated project development team with a solid track record. In addition, AFC capital partners will seek to mobilize technical assistance funding from various sources, including the Green Climate Fund, to provide technical support to sponsors in integrating climate risks in project design and construction. Technical assistance will also support the elaboration of standardized codes for climate-resilient infrastructure.
Co-investment vehicles	Pool public and private capital at scale to finance climate-resilient infrastructure	ICRF is designed to mobilize funding at scale to co-invest alongside AFC in low carbon and climate-resilient infrastructure. ICRF funding strategy is to blend concessional capital (public and philanthropic) with commercial capital from institutional investors to deliver market-rate returns and enhance the bankability of climate-resilient projects.

Equity subordination	Reduce risk for private investors, as the public sector takes on the Highest risk tranches	The mobilization of concessional capital for ICRF junior equity tranche will support i) the overall return objective of the Fund and ii) de-risk institutional capital as the concessional investors will be subordinated to commercial investors – hence offering a first loss shield
Climate Insurance	Improve the credit rating of investment projects by reducing physical climate change risk and commercial risks	With the support of GCF, ICRF will develop climate risk insurance products to mitigate residual climate risks.

Africa needs to reduce its massive infrastructure deficit to realize its full development potential, achieve structural transformation and market integration. The main constrain is the continent's limited domestic revenue base calling for the need to tap into non-domestic revenue. In addition to the 93 billion annual deficit with the need for additional billions to make these infrastructures climate-resilient and ensure they have a low carbon footprint. This programme will address current challenges by supporting the enhancement of Africa's legal and regulatory framework for investment in climate-resilient infrastructure, promoting the highest standards, providing necessary concessional finance, and reducing efficiency gaps prevailing in existing infrastructure spending.

Private Sector, principally financial institutions, have demonstrated an increased appetite for infrastructure investments in Africa, both as debt and equity, influenced by the growing prevalence of the project finance structure. Private equity infrastructure funds have also been growing in participation and relevance in this space. The growth is attributable to the rising opportunities in physical assets induced by the strengthening of institutions to protect private sector investment. The DFI community, including the AFC, plays an important facilitation role by becoming more and more involved in projects at the early stage of development. This ensures that by the time a project comes to the market, it has a bankable set of project documents, appropriate environmental and social considerations have been accounted for. The regulatory framework is in place to undertake such transactions. However, the need for additional resources to address the resilience of current and future infrastructure modifies the risk profile of the investment and creditworthiness of the asset owner, reducing attractiveness for the private sector. GCF involvement is necessary to de-risk this type of investment and lock in other strategic investors, including institutional investors.

Climate change has destroyed various physical assets or disrupted the service delivery of infrastructures, thus creating an obstacle to achieving the necessary economic and development goals. Thus, there is a threat of a decline in the overall asset value. In addition, the occurrence of climate hazards may also increase infrastructure maintenance costs, shorten asset life, and increase their rate of depreciation. Albeit availability of private capital globally for climate adaptation and mitigation, current allocations from institutional investors into infrastructure are low—approximately 1 per cent of total asset allocations. Moreover, there is a shortage of other private capital for climate-resilient infrastructure in developing countries, especially in Africa. Infrastructure finances require high amounts of finance at the project construction phase, in addition to the need to invest in project development and additional resources needed to make infrastructure climate resilient. Those high costs of capital will often render infrastructure projects financially unfeasible.

Concessional resources are needed from the GCF to reduce risks sufficiently to blend other public and private sources of capital and accelerate deployment of investments in climate-resilient and more sustainable infrastructures. In addition, GCF concessional finance is needed to support risks assessment and management, capacity building and improvement to countries' enabling environments, necessary conditions to reduce the risk across the infrastructure project lifecycle.

B.6. Exit strategy (max. 500 words, approximately 1 page)

The ICRF programme is designed to remove market barriers and mainstream climate resilience as “THE NEW STANDARD” in the design, development, construction, and operation of targeted infrastructure assets in the built environment. ICRF is the first of its kind climate resilient infrastructure fund on the African Continent. The ICRF programme will remove several barriers that would typically constrain or hamper the bankability of climate resilient infrastructure projects. These include, among other things, high real and perceived risks associated with these investments, weaknesses in the enabling environment, weak capacity in terms climate risk assessment, limited or inexistent climate risk insurance for infrastructure, poor project preparation, lack of standards in building climate resilient infrastructure. The programme will create a supportive enabling environment which will be critical to driving more climate-resilient infrastructure investments at scale. ICRF will create a sustainable path to blending public and private capital to unlock investments at scale in climate resilient infrastructure projects. Specifically, ICRF will use concessional sources to increase bankability and cover the incremental CAPEX that is relevant to the climate-resilience upgrade of an asset and technology transfer cost including value chain creating and legal cost, best in class operational management integrating resilience options throughout the life cycle of the targeted infrastructure assets.

In this manner, ICRF ensures that commercial investors can meet their investment hurdle rates. The benefits and risks of the ICRF investments will be captured through monitoring and evaluation process during the projects’ life cycle. The benefits will include savings in operations and maintenance (O&M), additions to the longevity of the assets, preventing of the value decline, offsetting losses by innovative insurance. The projects data and knowledge will be catalogued and shared with public, private sector, and civil societies to raise awareness about climate risk, to advocate for mitigating risks at the design stage, and use of climate risk insurance for long-term assets.

Components 2 & 3 have [10] years life span which is deemed sufficient to deliver its agenda of developing climate change standards and metrics for climate-resilient infrastructure in Africa and support of resilient infrastructure regulatory framework including construction codes system, and climate data and standards implementation for parametric climate risk insurance. By the end of the programme, standards, models, and data will be made available for programme countries. ACP’s network of investors, climate think tanks and centers of excellence, and even the GCF Climate Network (C-NET) through community of practices indicated high interest in supporting the development and/or adoption of standards, metrics, and tools for climate data for climate-resilient infrastructure development in Africa. Component 3 implementation plan includes activities to ensure knowledge transfer and TA to the programme governments for using the climate change risk data collection and analysis model. As a recent member of Coalition for Climate Resilient Investment, ACP will take the opportunity to share the outcomes on a global scale.

The desired outcome of the programme is to establish climate resilient infrastructure as a distinctive CRI Asset Classes. With GCF’s de-risking ICRF aspires to deliver a proof of concept that will provide comfort to conventional investors to scale up exploring blended structures or on commercial basis if possible. The desired outcome will be positively reinforced by the creation of enabling environment driven by an informed policy making, knowledge creation and sharing and climate data infrastructure.

Exit: The ICRF fund will exit its portfolio investments in sub-projects through strategic trade sales to strategic investors or initial public offerings on capital markets. The proceeds from the investment exits will be reflowed to GCF and other investors in accordance with the term sheet. After a successful implementation of the programme, it is expected that GCF de-risking at fund level will no longer be required as the ICRF would have demonstrated the investment case and long-term viability of integrating climate resilience in infrastructure projects, but also these investors would be more comfortable deploying capital in Africa at scale for this new climate resilient infrastructure asset class.



C. FINANCING INFORMATION

C.1. Total financing

(a) Requested GCF funding (i + ii + iii + iv + v + vi + vii)	Total amount	Currency
	253.755 million	million USD (\$)

GCF financial instrument	Amount	Tenor	Grace period	Pricing
(i) Senior loans	<u>Enter amount</u>	<u>Enter years</u>	<u>Enter years</u>	<u>Enter %</u>
(ii) Subordinated loans	<u>Enter amount</u>	<u>Enter years</u>	<u>Enter years</u>	<u>Enter %</u>
(iii) Equity	240 million			<u>Enter %</u>
(iv) Guarantees	<u>Enter amount</u>	<u>Enter years</u>		
(v) Reimbursable grants	<u>Enter amount</u>			
(vi) Grants	13.755 million			
(vii) Results-based payments	<u>Enter amount</u>			

(b) Co-financing information	Total amount	Currency
	511.32	million USD (\$)

Name of institution	Financial instrument	Amount	Currency	Tenor & grace	Pricing	Seniority
AFC	<u>Equity</u>	<u>50*</u>	<u>million USD (\$)</u>	<u>Enter years</u> <u>Enter years</u>	<u>N/A</u>	<u>senior</u>
Pension funds, insurance companies, sovereign wealth funds, DFIs and Foundations	<u>Equity</u>	<u>460</u>	<u>million USD (\$)</u>	<u>Enter years</u> <u>Enter years</u>		<u>senior</u>
AFC	<u>In kind</u>	<u>1.32 **</u>	<u>million USD (\$)</u>	<u>Enter years</u> <u>Enter years</u>	<u>Enter%</u>	<u>Options</u>
Click here to enter text.	<u>Options</u>	<u>Enter amount</u>	<u>Options</u>	<u>Enter years</u> <u>Enter years</u>	<u>Enter%</u>	<u>Options</u>

(c) Total financing (c) = (a)+(b)	Amount	Currency
	<u>765.075</u>	million USD (\$)

(d) Other financing arrangements and contributions (max. 250 words,

* In addition to the contribution of AFC in the form of equity investment in the ICRF Fund, AFC will also aim to provide additional direct parallel investments in sub-projects amounting to US\$100 million.
 ** AFC will also provide US\$ 1.32 M (in-kind contribution) for the programme management cost.
 Please explain if any of the financing parties including the AE would benefit from any type of guarantee (e.g., sovereign guarantee, MIGA guarantee).



approximately 0.5 page) *Please also explain other contributions such as in-kind contributions including tax exemptions and contributions of assets.
Please also include parallel financing associated with this project or program (refer to the co-financing policy).*

C.2. Financing by component

Please provide an estimate of the total cost per component and output as outlined in section B.3. above and disaggregate by source of financing. More than one co-financing institution can fund a single component or output. Provide the summarized cost estimates in the table below and the detailed budget plan as annex 4.

Component	Output	Indicative cost million USD (\$)	GCF financing		Co-financing		
			Amount million USD (\$)	Financial Instrument	Amount million USD (\$)	Financial Instrument	Name of Institutions
Component 1: Blended finance is mobilized at scale to accelerate CRI investments in the beneficiary African countries	1.1 ICRF is fully operational and raised capital at the fund level	<u>750</u>	<u>240</u>	<u>Equity</u>	<u>50</u>	<u>Equity</u>	<u>AFC</u>
	1.2 Co-investments - ICRF investments in sub-projects				<u>460</u>	<u>Equity</u>	<u>Pension funds, insurance companies, sovereign wealth funds, DFIs and Foundations</u>
Component 2 Improved climate risk assessments and adaptation solutions for CRI; improved capacity for scaling up CRI in Africa	2.1 2.1 Strengthened climate risk assessment and adaptation solutions for ICRF investments in CRI 2.2 Improved capacity for scaling up investments in CRI in Africa	<u>8</u>	<u>8</u>	<u>Grants</u>	=	<u>Choose an item.</u>	<u>Click here to enter text.</u>
Component 3: Strengthened regulatory framework and innovative climate risk	3.1 Standards and construction codes are enacted and applied 3.2 Strengthening	<u>3</u>	<u>3</u>	<u>Grants</u>	=	<u>Choose an item.</u>	<u>Click here to enter text.</u>



C

parametric insurance (CRPI) is mainstreamed for the long-term viability of CRI investments in Africa	fiscal incentives for CRI are supported 3.3 Innovative CRPI is designed for the long-term viability of infrastructure investments in Africa						
Monitoring & evaluation costs	Design and implementation cost for M&E and Independent data collection for evaluative data and information	<u>2.1</u>	<u>2.1</u>	<u>Grants</u>	=		
Project Management Costs	Gender mainstreaming, compliance, audit, supervision	<u>1.975</u>	<u>0.655</u>	<u>Grants</u>	<u>1.32</u>	<u>In Kind</u>	<u>AFC</u>
Indicative total cost (USD)**		<u>765.075</u>	<u>253.755</u>		<u>511.32</u>		

This table should match the one presented in the term sheet and be consistent with information presented in other annexes including the detailed budget plan and implementation timetable. In case of a multi-country/region program, specify indicative requested GCF funding amount for each country in annex 17, if available.

C.3 Capacity building and technology development/transfer (max. 250 words, approximately 0.5 page)

C.3.1 Does GCF funding finance capacity building activities?

Yes No

C.3.2. Does GCF funding finance technology development/transfer?

Yes No

If the project/program is expected to support capacity building and technology development/transfer, please provide a brief description of these activities and quantify the total requested GCF funding amount for these activities, to the extent possible.

The capacity building funding by GCF finance are planned and implemented via the technical assistance (TA). Please see further details in the Outcome 2 & 3 – TA information of the FP.

D. EXPECTED PERFORMANCE AGAINST INVESTMENT CRITERIA

This section refers to the performance of the project/program against the investment criteria as set out in the GCF's Initial Investment Framework.

D.1. Impact potential (max. 500 words, approximately 1 page)

Potential of the project/program to contribute to the achievement of the Fund's objectives and result areas.

The aim and the purpose of the proposed Infrastructure Climate Resilient Fund (ICRF) is to increase climate resilience and adaptive capacity of critical built infrastructures in African countries to current and future climatic events such as rising temperatures, changing rainfall patterns and rising sea levels as well as to potential increases in extreme weather events, such as storms, floods, extreme heat etc.

By providing concessional finance, ICRF will primarily cover the adaptation and resilience costs necessary to catalyze financing for interventions to adapt infrastructure to climate change in four targeted sectors and create market for: Climate Resilient Transport and Logistics; Climate Resilient Energy systems; Climate Resilient Economic Zones and Climate Resilient Telecommunication and Digital assets.

By promoting successful adaptation approaches to improve the long-term resilience of infrastructure, ICRF aims to provide a substantial contribution towards increased resilience for Infrastructure and built environment (GCF-ARA 3) and Most vulnerable people and communities (GCF-ARA 1) in [19] African countries of which [11] are among the least developed countries (LDCs). The total value of infrastructure assets expected to be protected against climatic events is about USD 2 billion. The programme is also expected to benefit about 50,365,031 direct beneficiaries, and 144,115,769 indirect beneficiaries respectively representing 8.8% and 25.18% vis-à-vis the total population of ICRF countries. Targeted beneficiaries are these infrastructures' users from Africa that are expected to be protected from infrastructure damages from climate change, related service disruption associated with potential adverse economic impacts. It is expected that at least 50% of both direct and indirect resilient beneficiaries are women.

ICRF investment decision-making is based on mandatory climate risks screening and assessments including through consideration of local and infrastructure specific climate stressors and prioritization of resilience and adaptation measures for projects / programmes. By systematically mainstreaming climate change adaptation into infrastructure planning, implementation, and maintenance, this project will ensure adaptation and long-term sustainability are built-in from the start as a core consideration of infrastructure finance. Such good practice will contribute to avoiding the lock-in of long-lived climate-vulnerable infrastructure to a significant degree.

Investing in the resilience of infrastructure (in the targeted African countries with GCF NOLs) is the core investment thesis of the ICRF. This way, ICRF will contribute to bridge the Africa infrastructure gap in a climate resilient way, which is a critical condition to ensure long-term connectivity amongst people, access to and from rural areas, as well as access to markets, energy and trade. By doing so, the programme supports vulnerable people' livelihoods through enhanced access to a reliable, safe, and affordable infrastructure base.

D.2. Paradigm shift potential (max. 500 words, approximately 1 page)

Baseline: Climate change presents significant implications for infrastructure. Current design standards for infrastructure building are based on outdated, historic climate data; and today; infrastructure financing does not account for future climate risks. As infrastructure assets have long operational lifetimes they are sensitive not only to the existing climate at the time of their construction, but also to climate variations over the decades of their use. For example, a substantial proportion of infrastructure built in the next five years, will still be in use in the middle of the century. In the face of climate change, planning, financing, operation, maintenance, and management of infrastructure need to be revised. Existing infrastructure stock comprised of bridges, roads, power stations and other energy infrastructures, as well as economic zones - most of them constructed in coastal zones in Africa - is already vulnerable to today's extreme weather. Climate change will increase these vulnerabilities, affecting supply, access to resources, operations among others. To increase the resilience of both new and existing infrastructure, countries must be prepared to plan ahead and manage the impacts of climate change.

ICRF's paradigm shift potential: The paradigm shift lies in the programme's holistic approach to building resilience to climate change by integrating strategies focused on climate adaptation, climate analytics, risk preparedness, and risk transfer in the context of infrastructure investment and finance. ICRF aspires to introduce a new product to the market that can be monetized and upscaled: climate resilient infrastructure as an asset class. The integration of the specific elements described in the programme's design and implementation will create the conditions necessary to sustain impacts beyond project end and build potential for the scaling up of activities based on the premise that following GCF's intervention a successful proof of concept will provide comfort to the private and public sector to take up subsequent phases on a pure commercial basis.

ICRF will contribute to promote **Systemic Resilience through:**

- **Improving government prioritization of national resilience infrastructure and developing a metric for systemic resilience:** Through utilization of existing network of early warning systems infrastructure, delivery of enhanced capacity-building to create building codes, meteorological agencies, and technicians, ICRF aims to deliver actionable outcomes that can be used from the countries in their future investment design and master planning. As such, the programme contributes to the development of more effective NAPs, NDCs, national strategic plans and country programming.
- **Infrastructure Asset Design & Structuring:** ICRF develops a framework for the integration of physical climate risks in investment technical and economic appraisal. Engineers typically look at historical climate patterns to inform their asset designs. Often design is based on minimum regulatory requirements in the project location. Currently there is no incentive for engineers, contractors, or investors to exceed these regulatory requirements due to limited or no knowledge of the potential climate change risks impact.
ICRF 1) develops a framework to quantify the economic, social and financial benefits of incremental investments in resilience and 2) uses GCF's catalytic financing as a substantial and critical incentive for the financial markets and services to embed resilience upfront.
- **Financial Innovation and mobilizing funding at scale:** the ICRF fund will blend commercial and concessional equity capital to mobilize institutional investors at scale for climate resilient infrastructure. The concessional capital from the GCF will support the resilience measures and de-risk the mobilization of institutional investors, while the commercial investors will provide equity required for the construction of the target infrastructure assets. This innovative capital structure of the ICRF will not only support the bankability of climate resilient infrastructure projects and the overall return objective of the Fund, but also de-risk the participation of institutional investors. The concessional equity tranche financed by GCF will be subordinated to the commercial equity tranche – hence providing a partial risk protection to institutional investors. The ICRF will primarily seek to raise capital from institutional investors such as pension funds, sovereign wealth funds (SWFs), and insurance companies as they hold the necessary long-term resources to scale up climate investments from “billions to trillions” at a

global level. Institutional investors collectively have about USD 101 trillion in assets-under-management (AUM) globally (2020 estimates- See Table D2.1 below). In Africa alone, this figure would amount to overall 1.8 trillion assets under management (AUM) in 2020. However, only a negligible portion of institutional capital is channeled into infrastructure and climate investments in Africa due to the following barriers which are addressed by the ICRF programme:

- i. High-risk perception and limited availability of risk-adjusted returns for climate investments in developing countries – mitigated by GCF de-risking in the blended finance structure
- ii. Lack of investment access and vehicles – ICRF is a unique investment vehicle for climate resilient infrastructure, and
- iii. Lack of credible institutional asset managers with solid track record in delivering returns to investors, mitigated by the investment track record of Africa Finance Corporation.

Table D2.1: AUM per types of institutional investor globally

Type of investor	2017	2020
Pension funds	47.0	57
Insurance companies	30.4	35
Sovereign wealth funds	7.2	9
Total	84.6	101

Source: PwC (2014): *Asset Management 2020: A Brave New World*, and author's calculations

ICRF has a strong focus on de-risking and mobilizing African institutional investors for climate resilient infrastructure, as well as a targeted outreach to global investors

Within Africa, the assets-under-management of domestic institutional investors is experiencing continuous rise and these types of investors are likely to provide the necessary long-term capital required for climate resilient infrastructure – unlike the banking sector that offers relatively shorter tenor financing due to their Assets-Liability mismatch.

Table D2.2: AUM per types of institutional investor in Africa

Type of investor	2017	2020
Pension funds	676	1100
Insurance companies	329	445
Sovereign wealth funds	243	300
Total	1248	1845

Source: PwC and AfDB, *Mobilizing Institutional Investors for African Infrastructure (2020)*

African pension funds have been expanding in several countries across the continent, offering a viable option for long-term financing opportunities. PwC (2015) estimates that pension funds' assets-under-management in 12 African markets will rise to about USD 1.1 trillion by 2020, from USD 676 billion in 2017. Based on asset size as a percentage of GDP, the top three pension funds on the continent are in South Africa (87.1%), Namibia (76.6%) and Botswana (47.3%). South Africa holds over USD 207 billion in assets – but strong growth is coming from other parts of the continent. In Nigeria, where regulatory changes were implemented in 2006, pension funds have managed to accumulate over USD 30 billion in assets. Collectively African Pensions funds, sovereign wealth funds manage over USD 1.8trillion, but a very limited amount is invested in infrastructure. There is a significant market potential for climate resilient infrastructure – and the Infrastructure Climate Resilient Fund is the first of its kind, aiming to unlock this

market with GCF de-risking. AFC had preliminary engagements with institutional investors and received positive feedback on the ICRF investment proposition. The GCF's commitment and de-risking will be instrumental to mobilize funding at scale from institutional investors.

- **Climate Risk Insurance:** AFC will integrate parametric insurance as part of ICRF on best effort basis, aligned with ICRF's stated objective to become a successful investment vehicle providing capital to climate-resilient infrastructure development in Africa. This parametric insurance activities proposed under Output 3.3 could play several roles: 1) providing a demonstration effect supporting the use of parametric insurance to enable climate-resilient infrastructure, and 2) convening and engaging key stakeholders and market participants for a more structural / long-term market transformation and support the development of a favorable regulatory and policy framework for climate resilient infrastructure which would support scaling the adoption of climate insurance in the African infrastructure market. The use of parametric insurance solutions will address bankability issues linked to asset climatic risk exposure.
- **Knowledge sharing:** ICRF advocates for the delivery of climate risk databases to be available as an open-source public good in support of the region's sustainable economic and social development as an overarching goal of the programme.

D.3. Sustainable development (max. 500 words, approximately 1 page)

Describe the wider benefits and priorities of the project/program in relation to the Sustainable Development Goals

Climate resilient Infrastructure development sits at the center of all development pathways and is closely linked to economic growth, environmental outcomes, and well-being of populations, as such investing in climate resilient infrastructure is presented as a lifeline for sustainable development. ICRF aspires to meet African participating countries' both climate and development objectives by promoting sustainable investing in infrastructure networks that are resilient to today's climate and prepared for the future changing climate. ICRF will promote sustainability based on rigorous due diligence, capital discipline, stakeholders engagement, gender mainstreaming and social inclusion, local employment safeguards, with a view to also safeguarding affordability of the assets. ICRF principally contributes in participating countries to the direct realization of Sustainable Development Goal 9 especially its target 9.1 focusing on developing resilience of infrastructure and 9.4 calling for upgrading of existing infrastructure.

- *Target 9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all*
- *Target 9.4 By 2030, upgrade infrastructure [...] to make them sustainable, with all countries taking action in accordance with their respective capabilities.*

By providing concessional finance to ICRF, the GCF will contribute to target 9.A inviting to : *Facilitate sustainable and resilient infrastructure development in developing countries through enhanced financial, technological and technical support to African countries, least developed countries, landlocked developing countries and small island developing States.* In addition, ICRF is consistent with and provide contribution to following SDGs:

- *SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all*
- *SDG 8 : Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all*
- *SGD 10 : Reduce inequality within and among countries*
- *SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable*
- *SDG 13: Take urgent action to combat climate change and its impacts*
- *SDG 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.*

ICRF presents a real potential to contribute to sustainable development with impacts on all the dimensions of sustainability as co-benefits to the core adaptation results expected from its implementation: Economic, Environment and Social including consideration for gender equality, health, safety and wellbeing.

Economic co-benefits: Proven a central factor in the productivity of firms, the wellbeing of local population, and thus the resilience of entire economies, resilient infrastructures are a key enabler of economic development. ICRF will provide a substantial contribution to the economic development and sustainable growth in participating countries. Economic growth is highly dependent on the quality, quantity, and accessibility of a country's infrastructure and related services. As such inadequate infrastructure is an obstacle to achieving poverty reduction and sustainable development goals. By promoting climate-resilient infrastructure, ICRF provides clarity on long-term climate-resilient development strategies to avoid the lock-in of risky fragile infrastructure and stranded assets, and a sustainable path to avoiding significant economic losses in the face of climate hazards. The Programme will also promote business development and create jobs in the countries of implementation and deliver constructive impact on multi-dimensional aspects of society. At least 572,364 new direct jobs are expected from the implementation of the ICRF in the beneficiary countries with additional 786,585 indirect jobs (conservative estimates)

Environmental co-benefits: ICRF aims to generate substantial environmental returns. To achieve this; ICRF will evaluate all transactions with respect to the environmental and social impacts that might result from the implementation of individual sub-projects. Project level environmental assessments and associated action plans will be transparently reported to GCF for all category B and C projects. Effective implementation of action plan with necessary safeguards will create a blueprint for the market wider adoption as positive evidence of environmentally friendly practices are becoming clearer. In order to ensure all projects, generate substantial environmental performance, project sponsors will be encouraged to incorporate environmental and biodiversity objectives in line with the Paris Agreement, the Convention on Biological Diversity (CBD) and other national environmental requirements. For example, all sub-projects shall integrate application of environmental factors in infrastructure construction, improving the sustainability and management of key ecosystems and vital natural infrastructure, mitigating greenhouse gas emissions and ensure biodiversity and ecosystem services preservation, consistent with the ICRF Environmental and Social Framework with accompanying specific Biodiversity Framework. These two frameworks will promote consistency throughout the investment process with regards to taking environmental considerations into account including through engagement with portfolio companies and lead sponsors throughout the investment process: during due diligence, at the onset of the post-investment phase and as part of asset management and monitoring. The programme targets to integrate resilience measures through nature-based solutions in at least three (3) subprojects.

Social co-benefits: Infrastructure disruptions frequently cause or exacerbate many types of social impacts in particular those related to health, safety and wellbeing. In addition to the ensuing losses that are often substantial and disproportionately large, when an infrastructure breakdown it can cause injuries, loss of properties and even result in human fatality. ICRF will increase safety by deploying climate resilient infrastructure assets, like robust bridges, all-weather roads, elevated ports that will be able to withstand climate change disasters and prevent losses protecting local populations. ICRF interventions will enable to prevent events collapse of infrastructure and the avoidance of disruptions for the local population. These will in turn result in improving people safety and wellbeing and raising the quality of life of the populations of the targeted countries and regions.

Gender and Social Inclusion: Promotion of gender equality: ICRF will be implemented in a gender responsive manner. The preparation of an in-depth and comprehensive gender assessment and associated action plan was part of the Programme design to ensure the delivery of each investment can gender and social inclusion returns as co-benefits. ICRF implementation will effectively support reduction of gender inequality through the invested portfolio. ICRF will tackle gender inequalities by increasing women's access to labor, decision making process and climate resilient infrastructure services. ICRF -to the extent possible- will customize its gender action plans to the local context of each project and systematically advocate and raise awareness around women's empowerment at different levels of engagement. ICRF gender action plan encourages the inclusion of women through all activities and will ensure that women are benefitting in each

investment project. The gender analysis is part of the standard due diligence process for each sub-project. The Programme implementation will monitor the implementation of the Gender Action Plan, reporting on gender-disaggregated data and assessing how they performed against the appropriate indicators to measure enhanced access for women to climate resilient infrastructure services.

D.4. Needs of recipient (max. 500 words, approximately 1 page)

ICRF targets [19] African countries of which [11] LDCs under this Programme are all highly vulnerable to climate change and exhibit a high deficit on infrastructure and related services. The infrastructure deficit of the target countries is massive within a context of increasing limited fiscal space. Hence, African countries deal with humongous needs to build new climate resilient infrastructure while climate proofing existing ones. ICRF responds to the needs of its beneficiaries countries and their population on several fronts: the need to build the resilience of infrastructure; the need to mobilize the necessary capital, the need to strengthen institution and capacity for systematic integration of climate risks assessments in infrastructure planning, financing and management etc.

Need to reduce vulnerability by integrating risks assessment and management, promoting long lasting infrastructures and services: Resilient *infrastructures* result into resilient infrastructure *services*, which in turn lead to resilient infrastructures' *users*.

ICRF will address the need to integrate site-specific infrastructure climate risks assessment methodology and address barriers related to lack of data, methodology and technical skills for infrastructure; absence of standards and metrics on climate-resilient infrastructure; no technical assistance for projects design and implementation.

Need to provide appropriate financing and addressing the absence of alternative sources of finance: **At the center of the challenge to** unlocking Africa's climate resilient infrastructure, is the need to overcome the mismatch between investor expectations and the actual risk/return profile of climate resilient infrastructure programmes and projects. In this mismatch, many useful projects are regarded as simply not attractive, either as short-term returns are too low, or the risks are too high and resilience measures not easily quantified and costed. ICRF will address this need by providing concessional equity to cover the additional cost of adaptation measures and thus improving the risk profiles of these investment with the view to de-risk them and attract long term investors. By providing equity, ICRF further contribute to address the recurrent issue related to limited fiscal space and debt burden of many African countries that needs to finance resilience infrastructures among multiple other priorities.

Need to build strong institutions and enabling factors, including fiscal incentives and other regulatory incentives. ICRF will address the need to build capacity and Improve access to climate information and enhance technical and institutional capacity for financing climate resilient infrastructure. ICRF will further address the need to update the existing codes and practices incorporating state-of-the-art technology options and provisions to address climate change. Through analytics based on the latest scientific climate knowledge, existing climate thresholds would be revised and incorporated in the infrastructure development standards, codes, and practices. As climate change impacts on infrastructure vary across different locations across the ICRF participating countries, the revisions should integrate design parameters considering projected climate change, particularly frequency and intensity of extreme events precise to each infrastructure location. Finally, ICRF will facilitate an environment to mainstream climate change concerns in planning and approval processes for infrastructure development.

D.5. Country ownership (max. 500 words, approximately 1 page)

Please describe how the beneficiary country takes ownership of and implements the funded project/program.

Country ownership is pivotal to the ICRF design and implementation. Considering the innovative approach undertaken by ICRF to make infrastructure climate resilient, engagement with a wide range of stakeholders is central to the sustainability and success plan of ICRF and in line with AFC investment strategy. Over the 15 past years, AFC has built strong relationships with its members states and their national stakeholders. AFC due diligence process always provides due consideration to engagement at national level as illustrated by the establishment of an investors and countries relations division within AFC. Hence, the AFC/ACP commit to ensure the design and implementation of ICRF follows an open, inclusive, and comprehensive process. In their testimony, the National Designated Authority (NDA) of the beneficiaries' countries acknowledge the ICRF approach is a first of its kind when it comes to ensure regular consultations and engagement with NDAs and providing them with the opportunity to lead the engagement with key national stakeholders relevant for the ICRF while ensuring that AFC has each country within its pipeline/prospective pipeline.

ICRF responds to pan-African, regional, and national priorities. It is consistent with the Africa 2063 vision, the African Union Program of Infrastructure Development (PIDA) and is consistent with Nationally Determined Contribution (NDC) thematic areas, themes and priorities identified by the participating countries as part of the NDC adaptation components. ICRF provides urgently needed concessional financing and technical assistance to make African countries' infrastructure master plan resilient to climate change. Most African countries have enshrined the need for infrastructural development in the laws and national documents. Two illustrative examples from Kenya and Ghana. Kenya plans to mobilize funds from local (10%) and external (90%) sources to upscale roads to systematically reduce flooding risks and promote appropriate designs and building materials to enhance the resilience of roads to climate risk. Ghana has developed a climate resilient infrastructure roadmap, well aligned with the ICRF programme, in recognition of the increasing risks posed by a changing climate to the country's infrastructure and development prospect⁴¹.

AFC engaged collaboratively with all participating countries during the origination and development phase of this funding proposal. AFC engages with NDA and wider stakeholders of the target countries to enable them to understand the structure of the ICRF programme, the choice of the financial instruments, confirm with them how the programme aligns with their NDCs, their national development plans, policies, strategies, and programmes. The 19 countries that have delivered their non-objection letters (NOLs) have duly followed their respective no-objection procedures as established by the country. Most of the countries have established and documented their respective NOL issuance procedures, and the delivery of the NOL is the achievement of a constructive engagement and collaboration with the countries, setting a foundation for effective implementation of the ICRF programme which has been designed to support the countries' national efforts to embed climate resilient at the core of infrastructure financing. AFC's infrastructure projects are largely designed as Public-Private Partnerships, which enables a strong country ownership and engagement with governments across the project life cycle. In the context of the ICRF, AFC will work with relevant national government and the project sponsors to integrate climate resilience into the Public-Private Partnership (PPP) project framework (as described in section B3.2).

The ICRF has developed a comprehensive country engagement strategy that goes well beyond the issuing of non-objection letters from targeted NDAs. ICRF has launched a stakeholders' engagement consultation process as part of the PPF implementation that is targeting a wide spectrum of stakeholders in each country from both private and public sector. More than 500 institutions have been targeted and received the project summary, the presentation of ICRF, the recording of the consultations as well as the script of the Q&A resulting from the stakeholders engagement (please see stakeholder consultation report as part of the FP package). The stakeholder consultations were aimed at creating awareness about the Programme, providing

⁴¹ <https://content.unops.org/publications/Ghana-roadmap-web.pdf>

an opportunity for the various actors to provide their views, clarifying the roles of key stakeholders in its development and implementation, and ensuring that Programme concepts demonstrate country-ownership and support from stakeholders and host communities, amongst other objectives were identified from various categories of actors including; relevant national ministries, regulatory agencies, relevant research institutions, Non-governmental Organisations (NGOs), Civil Society Organisations (CSOs), meteorological agencies, indigenous peoples' organisations, accredited GCF Observers, etc.

These efforts complemented regular collaboration with GCF national designated authorities and UNFCCC focal points using various channels including online meetings, meetings in the margin of international for a.

Virtual engagements as part of the programme development: AFC and ACP have conducted 4 virtual conferences with the targeted countries to present the ICRF and integrate their feedback into the design of the programme. The discussions focused on the ICRF concept note and the understanding of how ICRF will deploy concessional finance into each respective beneficiary countries. AFC Capital Partners (ACP) in these discussions delved into AFC pipeline spanning across ICRF core sectors: climate Resilient transport, port and logistics, roads and bridges airports, railways; climate resilient energy systems; climate resilient economic zones, and telecommunication infrastructure.

Meetings in the margin of COP 26, COP 27 and within the wider climate network: AFC took opportunity of participating in COP 26 and COP 27 to engage NDA, UNFCCC focal points and other national relevant delegation members to provide information and updates on the programme development. These interactions were extremely progressive and confirm the relevance of the programme and its full alignment with countries priorities. ACP met with other key stakeholders within the climate network, including high-level officials from several governments. These meetings enabled ACP to explain and establish its relationship with its Parent Company, Africa Finance Corporation (AFC) which has invested US\$10 billion in 35 African countries and has 33 African member states where it has special immunities and privileges. ACP team presented its strategy to leverage the strong relationships between AFC and its member states in order to enhance the quality of built infrastructure on the continent through the systematic integration of climate resilience.

In-country visits and missions: AFC engaged in several country missions (i.e., Ghana, Namibia, Cote d'Ivoire, Gabon, Sierra Leone, Senegal (on-going NOL process), etc..) to meet various stakeholders among which NDAs and other several national stakeholders such as government ministries involved in target sectors such as transport, energy, industry, ITC, as well as Ministries of economy and finance, and Ministry of Environment, and the NDA/NOL national committee members.

Engagement of NDA in the national wider consultations NDAs of target countries distributed online surveys to gather inputs form key relevant stakeholders involved in the financing of infrastructure in their countries to collect the views of the wider national stakeholders on the priorities of ICRF. These engagements have resulted in the better understanding of the views of a variety of stakeholders as far priorities of infrastructure resilience in their context.

As of November 2022, ICRF received 19 NOLs from [Benin, Cameroon, Chad, Cote d'Ivoire, Democratic Republic of Congo, Djibouti, Gabon, the Gambia, Ghana, Guinea, Kenya, Mali, Mauritania, Namibia, Nigeria, Rwanda, Sierra Leone, Togo, Zambia]. AFC is in advanced discussions with several other countries, including (without limitation): South Africa, Egypt, Senegal, Tanzania, Uganda. These countries, amongst others, all expressed significant interest in the ICRF but are still working to complete their internal sign-off processes. Nevertheless, we expect to receive NOLs from most, if not all, of these countries before the publication deadline. Additional countries may be added to the programme after initial Board approval, provided they submit an NOL, compliant with the GCF's no objection procedures, and such addition is approved by the GCF Board.

D.6. Efficiency and effectiveness (max` . 500 words, approximately 1 page)

The ICRF programme will promote climate resilient infrastructure investments in targeted African countries through adopting de-risking mechanisms and integration of data-driven climate risk analysis into investment decisions, regulations, and technical assistance (TA) for infrastructure projects. The programme will increase institutional and market capacity, regulatory framework through TA for CRI planning and implementation. GCF concessional financing allows to tackle existing barriers including the lack and high cost of private and other public capital, regulatory standards, policies and tools for building climate resilient infrastructure.

- Transitional requirements for CRI through standards and policies, TA for public and private sector and, innovative climate insurance products for CRI will be supported by the GCF grant and create a paradigm shift effect. The Cost-Benefit Analysis (CBA) analysis shows that without GCF concessionality, the program implementation IRR is below market rates, and as a result cannot attract commercial investors to invest in climate resilient infrastructure (CRI) in the program countries due to the high upfront incremental costs (see Annex 3 demonstration cases with IRR change due to GCF concessional funding covering incremental cost). GCF intervention in sub-projects equity helps to cover the incremental costs for de-risking CRI investments, which makes the projects climate-resilient, and bankable for mobilizing private sector capital. ICRF investments in CRI will seek the application of best technologies and practices to maximize sub-project results, increase efficiency and financial sustainability. This will serve as a proof of concept that can easily be replicated and upscaled by the private sector.
- Incremental cost for CRI will be covered by GCF concessional junior Equity and will deliver the following intended benefits:
 - a) higher quality of the desired infrastructure result (less costly operation and maintenance (O&M), less revenue disruptions due to the ability to withstand disastrous climate-related weather events etc.),
 - b) better sustainability (assets longevity and avoidance of stranded assets risk),
 - c) additional socio-economic benefits (increased safety for vulnerable people and communities, increased productivity).

By incorporating upfront incremental cost, the sub-projects will avoid financial losses from infrastructure disruptions causing revenues losses, higher O&M, and additional capital expenditures in the future as reflected in the demonstration cases.

- **Mobilization at the sub-project level by GCF** : ICRF equity and mezzanine investments will unlock financing at scale targeting ~1:2.6 – 1:3 leverage ratio at the sub-project level, equivalent to \$US 1.155 – 1.485 billion additional debt financing, bringing the total pipeline value up to US\$2.0 bln. This will lead to an average mobilization ratio at the sub-project level by GCF to 5.2x: $(\$US1.155 + \$US1.485)/2 = \$US 1.32 \text{ bln average mobilization at the sub-project level} \rightarrow \$US 1.32 \text{ bln} / US 254.1 \text{ mln total GCF funding} = \sim 5.2x$.
- **Total mobilization ratio at the ICRF fund and sub-project levels is envisaged as ~7.2x** to be achieved by catalytic junior equity by the GCF, a very strong mobilization ratio for a private sector adaptation programme: $(US\$ 510\text{mln on the Fund level} + 1.32 \text{ bln on the sub-project level}) / US\$ 254.1\text{mln total GCF funding} = 7.2x$.

ICRF's use of proceeds will ensure maximum cost efficiency based on the practices and policies of the executing entities. All contracts will be awarded in competitive bidding procedures covered by AFC procurement procedures to ensure they remain consistent with market prices, independent of the cost estimates provided in this funding proposal.

E. LOGICAL FRAMEWORK

*This section refers to the project/program's logical framework in accordance with the **GCF's Integrated Results Management Framework** to which the project/program contributes as a whole, including in respect of any co-financing.*

E.1. Project/Program Focus

Please indicate whether this proposal is for a mitigation or adaptation project/program. For cross-cutting proposals, select both.

- Reduced emissions (mitigation)
 Increased resilience (adaptation)

E.2. GCF Impact level: Paradigm shift potential (max 600 words, approximately 1-2 pages)

This section of the logical framework is meant to help a project/program monitor and assess how it contributes to the paradigm shift described in section D.2 above by applying three assessment dimensions - scale, replicability, and sustainability. Accordingly, for each assessment dimension (see the definition per assessment in the accompanying guidance note), describe the current state (baseline) and the potential scenario (target) and rate the current state (baseline) by using the three-point-scale rating (low, medium, and high) provided in the guidance note. Also describe how the project/program will contribute to that shift/transformation under respective assessment dimensions (scale, replicability and sustainability). In doing so, please refer to section B.2(a) (theory of change).

Assessment Dimension	Current state (baseline)		Potential target scenario (Description)	How the project/program will contribute (Description)
	Description	Rating		
Scale	Climate change poses significant risks on infrastructure in Africa, increasing climate change disaster events adversely affecting the most vulnerable population and communities. Due to lack of integration of data-driven climate risk analyses into investment decisions, regulations, technical	<u>Low</u>	Paradigm shift will be achieved by integrating data-driven climate risk tools for investment decisions, regulations, technical assistance and de-risking financial mechanisms including innovative climate insurance product for investing in climate resilient infrastructure assets in Africa. This will allow to move away from infrastructure assets built with minimum cost to climate-proofed infrastructure assets with direct physical and socio-economic impacts using innovative climate parametric insurance product. Private capital will	<i>Describe key applicable outputs and or resulting outcomes relevant to increasing (scaling up) quantifiable results within and beyond the scope of the intervention.</i> The program target is to invest in 20-40 infrastructure assets and the value made resilient to climate hazards reducing climate disaster events for the most vulnerable population and communities with 50,365,031 direct and 144,115,769 indirect beneficiaries reached. This will serve as a proof of concept that can easily

	assistance, and de-risking financial mechanism there is no capacity of making infrastructure assets climate proof at sale in Africa.		be catalyzed into climate-resilient infrastructure in Africa by integration of a state-of-the-art climate assessment tools into infrastructure planning, implementation, and maintenance with decreased O&M cost, increased longevity, and climate change losses risk transferred.	be replicated and upscaled by the private sector. Also, the program will develop knowledge, standards, metrics, and data collection tools for climate-resilient infrastructure analytics to be shared with public, private sectors and civil societies. Climate data analytics will give access to parametric climate risk insurance tailored solutions. GCF concessional funding will mobilize private capital with [6-7X] times. .
Replicability	There is limited appetite from investors to finance the incremental cost for climate proofing. This is exacerbated by the lack of data and capacity and enabling environment. The program countries do not have access to tailored climate data analytics and de-risked financial mechanisms for climate-proofed infrastructure, therefore replication is not yet possible.	<u>Low</u>	Solutions for systematic de-risking climate-proofed infrastructure in program countries will be captured for replicating across the continent and internationally. De-risking mechanisms and lessons learned from ICRF program will support making climate-proofed infrastructure investments sustainable even without concessional financing.	<i>Describe key applicable outputs and resulting outcomes that will be replicated to other sectors, markets, geographical regions, or countries</i> The program climate assessment tools with climate data analytics and standards for infrastructure design and parametric insurance will have demonstrative affect for replicability for other developers and investors of infrastructure assets in Africa and even internationally. Introduced innovative climate resilient parametric insurance can be replicated in other sectors with vulnerable assets to climate change risk.
Sustainability	AFC and ACP received indicative interest of the programme potential	<u>Low</u>	Successful ICRF infrastructure investments, a more favorable regulatory framework, and knowledge sharing will attract commercial	<i>Describe key applicable outputs and resulting outcomes that will be sustained beyond the project/program period.</i>

	<p>to scaling up CRI investments in Africa through de-risking financial mechanisms, which creates foundation for future support of climate-resilient infrastructure in Africa; and demonstration of systematic resilience measures embedded in infrastructure investments supported by standards and policies are not in place to scale up investments in Africa.</p>		<p>finance for climate-proofed infrastructure development using climate data analysis and climate resilient parametric insurance . The infrastructure assets and the value will be made resilient to climate hazards with sustainable financial result due to robust projects assessment tools used for ICRF investments. Population will have access to safe infrastructure with increased potential of the economic development of the region.</p>	<p>It is expected that after deploying ICRF investments, GCF de-risking financing will not be required at the fund level due as investors being more comfortable deploying capital in Africa at scale. The program creates favorable investment climate for infrastructure development in Africa due to capacity building, standards and data analytics transfer for resilient infrastructure development. The projects results will be shared with the private and public sector to demonstrate benefits on a long-term basis and making climate parametric insurance and the climate assessment for decision making and climate resilient design a common practice in the industry.</p>
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E.3. GCF Outcome level: Reduced emissions and increased resilience (IRMF core indicators 1-4, quantitative indicators)

Select appropriate IRMF core and supplementary indicators to monitor project/program progress. More than one IRMF (core and or supplementary) indicators may be selected as applicable for each GCF results area and project/program outcome (as defined in the table in section B.2(b)). If IRMF indicators are unable to measure any given project/program outcomes, project/program-specific indicators should be developed under section E.5 (project/program specific indicators).

GCF Result Area	IRMF Indicator	Means of Verification (MoV)	Baseline	Target		Assumptions / Note
				Mid-term	Final ⁴²	
<p><u>ARA3 Infrastructure and built environment</u></p>	<p><u>Core 3: Value of physical assets made more resilient to the effects of climate</u></p>	<p><i>Sources of information and methods used to collect and report data /information to</i></p>	<p><i>The starting point or current value of the indicators</i></p>	<p><i>The estimated value of the indicator at</i></p>	<p><i>The estimated value of the indicator at</i></p>	<p><i>Externalities and factors outside project management's control that may impact the outcomes</i></p>

⁴² The final target means the target at the end of project/program implementation period. However, for core indicator 1 (GHG emission reduction), please also provide the target value at the end of the total lifespan period which is defined as the maximum number of years over which the impacts of the investment are expected to be effective.

	<u>change and/or more able to reduce GHG emissions</u>	<i>measure progress against targets</i> Ex-ante and ex-post analyses (conducted by an independent verification company)	<i>before the implementation of the project</i> Value of assets: 0 Number of CRI Asset Classes made more resilient: 0 1	<i>the mid-point of the implementation</i> 132 million USD targeted CRI assets value 1 from 15 // 6.7% sub-projects	<i>the completion of the implementation</i> 2.0bln USD targeted CRI assets value 15 / 100% sub-projects	<i>Data sources and methodologies applied for estimating baseline and targets</i> The value estimation is a subject to change and suggested based on the assumption of 15 sub-projects. Size and number of projects will depend on eligibility criteria, ICRF participation % and project assessment. Insurance companies are not disrupted by external risks and support the programme for CRPI No delays in implementation If there are no market disruptions for ICRF capital raising on the fund and project level, investors' appetite is high for de-risked CRI investments, and there are no delays in the implementation, ICRF will raise 750 million USD on the fund level by Yr 5 and invest in the targeted CRI pipeline with targeted CRI asset value estimated as

						<p>2.0bln USD total. Co-investors are willing to invest on the project level.</p> <p>132 million USD is an average weighted value estimation for the first subproject implemented by Yr 5 and will be adjusted as per actual value (2 bln USD / 15).</p> <p>The defining characteristic of climate-resilient infrastructure is that it is planned, designed, built and operated in a way that anticipates, prepares for, and adapts to changing climate conditions. It can also withstand, respond to, and recover rapidly from disruptions caused by these climate conditions. Ensuring climate resilience is a continual process throughout the life of the asset. Efforts to achieve climate resilience can be mutually reinforcing with efforts to increase resilience to natural hazards. Climate-resilient infrastructure reduces,</p>
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						but may not fully eliminate, the risk of climate-related disruptions. The extent to which climate change translates into risks for infrastructure depends upon the interaction of changing climate hazards with exposure (the location of assets) and vulnerability (“the propensity or predisposition to be adversely affected”) OECD policy brief page 4
<u>ARA3 Infrastructure and built environment</u>	<u>Supplementary 3.1: Change in expected losses of economic assets due to the impact of extreme climate-related disasters in the geographic area of the GCF intervention</u>	Independent verification of cost-benefit analysis of incremental cost compared to climate impact on subprojects Quality assessed by AE and EE	0	USD 11,880,001	USD 178,200,015	Incremental costs are required at the level of 9-27% to make infrastructure resilient, and incremental costs will not exceed expected losses from climate change impact on subprojects. Therefore, this indicator refers to minimum incremental cost - 9% +USD1 as avoided losses of subproject assets. Expected losses of economic assets due to the impact of extreme climate-related disasters of the subprojects can be estimated in USD, and exceeds 9% of incremental costs required.

						<p>The following assumptions apply: The value estimation is a subject to change and suggested based on the assumption of 15 sub-projects. Size and number of projects will depend on eligibility criteria, ICRF participation % and project assessment.</p> <p>No delays in implementation</p> <p>If there are no market disruptions for ICRF capital raising on the fund and project level, investors' appetite is high for de-risked CRI investments, and there are no delays in the implementation, ICRF will raise 750 million USD on the fund level by Yr 5 and invest in the targeted CRI pipeline with targeted CRI asset value estimated as 2.0bl USD total; Co-investors are willing to invest on the project level.</p> <p>132 million USD is an average weighted value estimation for the first sub-project implemented by Yr 5 and will be adjusted as per actual value (2 bln USD / 15).</p>
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<p><u>ARA1 Most vulnerable people and communities</u></p>	<p><u>Core 2: Direct and indirect beneficiaries reached</u></p>	<p>Statistical data on the population of the country/region, Project Documents, Project Impact Assessment Document</p>	<p>0</p>	<p>3,357,669 – 1/15th from targeted direct beneficiaries, of which per country Benin 32,564 Cameroon 15,350 Chad 42,267 Djibouti 714 DRC 632,891 Gabon 9,248 Gambia 246 Ghana 7,513 Guinea 91 Ivory Coast 303,084 Kenya 96,175 Mali 52,035 Mauritania 9,780 Namibia 18,284 Nigeria 1,803,077 Rwanda 60,783 Sierra Leone 172,521 Togo 1,462 Zambia 99,583</p> <p>and 9,607,918 - 1/15th from total targeted indirect beneficiaries, of which per country Benin 111,167 Cameroon 129,477 Chad 264,021 Djibouti 59,751 DRC 1,621,374 Gabon 58,653 Gambia 2,137</p>	<p>50,365,031 / 100% of targeted direct beneficiaries, of which per country: Benin 488,454 Cameroon 230,254 Chad 634,011 Djibouti 10,707 DRC 9,493,360 Gabon 138,727 Gambia 3,692 Ghana 112,701 Guinea 1,358 Ivory Coast 4,546,257 Kenya 1,442,618 Mali 780,528 Mauritania 146,707 Namibia 274,258 Nigeria 27,046,158 Rwanda 911,745 Sierra Leone 2,587,813 Togo 21,936 Zambia 1,493,747</p> <p>144,115,769 / 100% targeted indirect beneficiaries, of which per country Benin 1,667,509 Cameroon 1,942,154</p>	<p>Adaptation outcome: 1) direct beneficiaries - immediately affected by ICRF investments, participants in the various programme activities, temporary and permanent employees; 2) indirect beneficiaries – people impacted in the long term by the production and/or other changes stimulated through ICRF investments.</p> <p>Data can be provided by project entities, CSOs and municipalities. Statistical population data is available.</p> <p>There are no major unfavorable externalities and market disruptions for the programme implementation</p> <p>One project becomes operational by Yr 10 reaching to 1/15th of the targeted beneficiaries on an average weighted basis, and the number is a subject to change applicable to each specific project</p>
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				<p>Ghana 62,148 Guinea 232,101 Ivory Coast 474,914 Kenya 343,480 Mali 379,614 Mauritania 83,235 Namibia 154,292 Nigeria 4,361,047 Rwanda 332,184 Sierra Leone 355,216 Togo 17,258 Zambia 565,648</p> <p>of which 1,678,834 direct beneficiaries 50% women, per country Benin 16,282 Cameroon 7,675 Chad 21,134 Djibouti 357 DRC 316,445 Gabon 4,624 Gambia 123 Ghana 3,757 Guinea 45 Ivory Coast 151,542 Kenya 48,087 Mali 26,018 Mauritania 4,890 Namibia 9,142 Nigeria 901,539 Rwanda 30,392 Sierra Leone 86,260</p>	<p>Chad 3,960,310 Djibouti 896,264 DRC 24,320,611 Gabon 879,799 Gambia 32,049 Ghana 932,215 Guinea 3,481,519 Ivory Coast 7,123,717 Kenya 5,152,207 Mali 5,694,215 Mauritania 1,248,530 Namibia 2,314,384 Nigeria 65,415,703 Rwanda 4,982,754 Sierra Leone 5,328,233 Togo 258,870 Zambia 8,484,726</p> <p>of which 25,182,515 direct beneficiaries 50% women, per country Benin 244,227 Cameroon 115,127 Chad 317,006 Djibouti 5,354 DRC 4,746,680</p>	
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				<p>Togo 731 Zambia 49,792</p> <p>and 4,803,859 indirect beneficiaries 50%women, per country Benin 55,584 Cameroon 64,738 Chad 132,010 Djibouti 29,875 DRC 810,687 Gabon 29,327 Gambia 1,068 Ghana 31,074 Guinea 116,051 Ivory Coast 237,457 Kenya 171,740 Mali 189,807 Mauritania 41,618 Namibia 77,146 Nigeria 2,180,523 Rwanda 166,092 Sierra Leon 177,608 Togo 8,629 Zambia 282,824</p>	<p>Gabon 69,363 Gambia 1,846 Ghana 56,351 Guinea 679 Ivory Coast 2,273,129 Kenya 721,309 Mali 390,264 Mauritania 73,354 Namibia 137,129 Nigeria 13,523,079 Rwanda 455,873 Sierra Leone 1,293,907 Togo 10,968 Zambia 746,874</p> <p>and 72,057,884 indirect beneficiaries 50% women, per country Benin 833,755 Cameroon 971,077 Chad 1,980,155 Djibouti 448,132 DRC 12,160,306 Gabon 439,900 Gambia 16,025 Ghana 466,108 Guinea 1,740,760</p>	
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					Ivory Coast 3,561,858 Kenya 2,576,104 Mali 2,847,108 Mauritania 624,265 Namibia 1,157,192 Nigeria 32,707,851 Rwanda 2,491,377 Sierra Leone 2,664,117 Togo 129,435 Zambia 4,242,363	
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E.4. GCF Outcome level: Enabling environment (IRMF core indicators 5-8 as applicable)

Relevant IRMF core (enabling environment) indicators to monitor and elaborate the baseline context and project/program's targeted outcome against the respective indicators. Rate the current state (baseline) vis-à-vis the target scenario and select the geographical scope of the outcome to be assessed. Describe how the project/program will contribute towards the target scenario. Refer to a case example in the accompanying guidance to complete this section.

Core Indicator	Baseline context (description)	Rating for current state (baseline)	Target scenario (description)	How the project will contribute	Coverage
<u>Core Indicator 5: Degree to which GCF investments contribute to strengthening institutional and regulatory frameworks for low emission climate-resilient development pathways in a country-driven manner</u>	Climate Resilient Infrastructure (CRI) Asset Classes in construction codes and standards do not exist in the programme countries, which would allow to systematize adaptation measures for infrastructure assets by engineers and investors.	<u>low</u>	CRI Asset Classes in the construction codes and standards are endorsed by the programme countries and ensures paradigm shift for greener alternatives for infrastructure assets beyond the programme. Such change will require construction, investment, asset	Component 3 is dedicated to endorse CRI Asset Classes in the construction codes and standards by the programme countries and it will support institutional development. Project outputs will include	<u>Multi-countries</u>

			management, and financial organizations having permanent institutional capacity in place for the effective development, procurement, oversight and management of green infrastructure.	development and implementation of a capacity development strategy, and the development and implementation of a comprehensive performance and monitoring systems beyond the programme implementation.	
<u>Core Indicator 6: Degree to which GCF investments contribute to technology deployment, dissemination, development or transfer and innovation</u>	As stated in the programme package a robust climate risk assessment methodology for adaptation measures for infrastructure is missing to guide investments and avoid maladaptation. Existing projects are dominated by conventional design focused on minimizing cost with virtually no green alternatives.	<u>low</u>	Application of a science backed climate risk assessment methodology is made systematic for the programme and beyond investments in infrastructure to ensure its sustainability through resilience solutions implemented during early design, construction and O&M stages.	The programme will introduce a robust state-of-the-art Climate risk assessment methodology science backed with dynamic modeling, pathway and system approach, and prevention of maladaptation integrated. Due to ongoing evolution of the climate science, this methodology will have revisions aligned with IPCC cycles to ensure its robustness for investments in the CRI Asset Classes (roads, ports, bridges, airports, utilities etc.)	<u>Multi-countries</u>
<u>Core indicator 7: Degree to which GCF Investments contribute to market development/transformation at the sectoral, local, or national level</u>	Climate resilient parametric insurance (CRPI) products are not available in Africa. Hence safety of infrastructure assets cannot be guaranteed	<u>low</u>	Use of CRPI is made systematic for infrastructure investments to enable the direct beneficiaries swiftly recover from climate risk	AFC in close collaboration with the Coalition for climate resilient investments (CCRI) and global insurance companies will support access and	<u>Multi-countries</u>

	<p>through climate change adaptation design fully due to complex nature and uncertainties of the climate change scenarios.</p>		<p>consequences, which cannot be entirely prevented by resilience solutions in infrastructure design. For this market is created and CRPI products are made accessible and affordable.</p>	<p>affordability of CRPI products to tackle climate risk which cannot be entirely mitigated by resilience measures in design and O&M. Further engagement with the programme countries authorities will allow to endorse systematic use of the CRPI in the interest of the beneficiaries including the most vulnerable people and communities to ensure their access to safe CRI assets and its services.</p>	
<p><u>Core indicator 8: Degree to which GCF investments contribute to effective knowledge generation and learning processes, and use of good practices, methodologies and standards</u></p>	<p>Due to lack of a robust climate risk assessment methodology for infrastructure in Africa, there is no sufficient information for knowledge sharing and raising awareness about the tools and vulnerability management for CRI assets in Africa.</p>	<p><u>low</u></p>	<p>Private and public sector players have access to global knowledge stock sharing about climate risk assessment methodology and tools and CRPI in Africa to become a stimulus for mobilizing blended finance for CRI in the Continent. National authorities and Union groups representing infrastructure users in sub-project country have capacity for climate change disaster risk prevention and management in subproject location (for</p>	<p>The programme's knowledge management strategy will capture lessons learned from the Climate Risk Assessment Methodology, its tools, and CRPI applied in the ICRF investments <i>to be shared publicly. ICRF will target to submit publications to COP on a voluntary basis for the global stock take.</i> Knowledge and technical skills will be built for national authorities and Union groups representing infrastructure users in</p>	<p><u>Multi-countries</u></p>

			vulnerable people safety and resilience).	sub-project country for climate change disaster risk prevention and management in subproject location (for vulnerable people safety and resilience).	
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Project/program-specific performance indicators (outcomes and outputs) that are not covered in sections above (E.1-E.4).

Project/program results (outcomes/ outputs)	Project/program specific Indicator	Means of Verification (MoV)	Baseline	Target		Assumptions / Note
				Mid-term	Final	
		<i>Sources of information and methods used to collect and report data/information to measure progress against targets</i>	<i>The starting point or current value of the indicators before the implementation of the project</i>	<i>The estimated value of the indicator at the mid-point of the implementation</i>	<i>The estimated value of the indicator at the completion of the implementation</i>	<i>Externalities and factors outside project management's control that may impact on the Component</i> <i>Data sources and methodologies applied for estimating baseline and targets</i>
Output 1.1 ICRF is fully operational	<i>Fund legal structure is established. Amount (USD) of capital commitments released by investors</i>	<i>Legal structure is complete as per FAA verified by legal documents review; Audited accounts</i>	0	<i>100%; 637 million USD</i>	<i>100%; 750 million USD</i>	If there are no market disruptions for ICRF capital raising on the fund and project level, investors' appetite is high for de-risked CRI investments, and there are no delays in the implementation, ICRF will raise 750 million USD on the fund level by Yr 5

						(indicated amount refers to disbursement plan by Yr 10) and invest in the targeted CRI pipeline with targeted CRI asset value estimated as 2.0bln USD total (see the budget estimate the capital flowing into the CRI investments)
<i>Output 2.1 Strengthened climate risk assessment and adaptation solutions for ICRF investments in CRI</i>	<i>Climate risk assessment Methodology reviews according to the IPCC cycle</i>	<i>ICRF Climate risk assessment methodology's reviews completed based on baseline research</i>	<i>0</i>	<i>1; 1</i>	<i>1; 3</i>	<i>Periodic review of the climate risk assessment Methodology for ICRF based on latest climate available information aligned with IPCC cycles AR6, AR7 and AR8</i>
<i>Output 2.2 Improved capacity for scaling up investments in CRI in Africa</i>	<i>Number of representatives from national authorities and Union groups representing infrastructure users trained for improved capacity and greater technical knowledge on climate change disaster risk prevention and management in subproject location (for vulnerable people safety and climate resilience).</i>	<i>Training reports including registration, participants knowledge evaluations, and summary as part of monitoring report package</i>	<i>0</i>	<i>5</i>	<i>75</i>	<i>Training will be held for minimum 2 national authority representative and Union groups representing infrastructure users for each subproject, assuming 15 subprojects for the programme total. Number of subprojects will be adjusted as per actual investments incurred based on eligibility criteria, size, and other factors.</i>
<i>Output 3.1</i>		<i>Baseline research; Survey/questionnaire</i>	<i>0</i>	<i>0%; 0%</i>	<i>100%; 100%</i>	<i>The programme Countries have law- and policy making pace to</i>

Standards and construction codes are enacted and applied	<i>Proportion of construction codes adopted; Proportion of recommendation reports for strengthening regulatory framework endorsed</i>					<i>allow endorsement of the recommendations during the implementation. Such recommendations are in the interest and need of the programme Countries.</i>
Output 3.2 Strengthening fiscal incentives for CRI are supported	Proportion of recommendation reports endorsed for CRI fiscal incentives	Baseline research; Survey/questionnaire	0	0%	100%	<i>The programme Countries have law- and policy making pace to allow endorsement of fiscal incentives (tax holidays, tax and customs duty waivers or reduction etc.) during the implementation. Such fiscal incentives are in interest and need of the programme Countries.</i>
Output 3.3 Innovative CRPI is designed for the long-term viability of infrastructure investments in Africa	<i>Number of feasibility studies complete for design and development of CRPI tailored for CRI in Africa; Number of CRI projects with climate risk parametric insurance in Africa</i>	<i>Feasibility study and Insurance policy/contract; feasibility study for projects completed – documents review</i>	0	1;1	1;15	<p>There are no major adverse externalities and market disruptions for insurance companies to adopt tailored CRPI products for CRI in Africa.</p> <p>Data is available for developing accessible CRPI for CRI in Africa.</p> <p>There are no market disruptions for ICRF capital raising on the fund and project level for ICRF investments. 1 project by year 5 and 15 projects by year 10.</p>

						Donors are willing to sponsor CRPI for ICRF projects for CRPI market creation.
Project/program co-benefit indicators						
Increased productivity of climate resilient assets	Number of infrastructure assets with increased lifespan, reduced cost of O&M, reduced outages and downtime triggered by climate related event achieved through resilience measures in ICRF investments	Ex-ante and ex-post analyses	0	1	15	Increased productivity of the CRI assets means - increased longevity, - reduced repair/maintenance costs because of climate event induced damages to physical infrastructure assets, - reduced number of infrastructure asset outages due to climate related events (e.g., road blockages, power outage, port disruption, etc.), - reduced duration or downtime of infrastructure asset outages due to climate related events (e.g., road blockages, power outage, port disruption etc.). of the underlying assets of ICRF investments as compared to the average sector baseline depending on the asset type, location vulnerabilities, and climate change scenario applied - the change demonstrated by the programme through a

						<p>robust state-of-the-art climate risk assessment for proper resilience measures in the programme assets design.</p> <p>Such information should be included in the list of the deliverables from the CRI design documentation. The number of projects can be changed due to eligibility criteria and results of project assessment.</p>
Jobs created	Number of direct and indirect jobs created through ICRF investments	Statistical data in sub-project location, project impact assessment documentation	0	<p>38,158 / 1/15th direct jobs, of which</p> <p>Benin 24,133</p> <p>Cameroon - 36200</p> <p>Chad 3,000</p> <p>Djibouti 47</p> <p>DRC - 0</p> <p>Gabon 2,353</p> <p>Gambia -</p> <p>Ghana 200</p> <p>Guinea -</p> <p>Ivory Coast 3,433</p> <p>Kenya -</p> <p>Mali 34</p> <p>Mauritania 83</p> <p>Namibia -</p> <p>Nigeria 3,533</p> <p>Rwanda 113</p>	<p>572,367 / 100% direct jobs, of which</p> <p>Benin 36200</p> <p>0</p> <p>Cameroon - 45000</p> <p>Chad 45000</p> <p>Djibouti 700</p> <p>DRC -</p> <p>Gabon 35300</p> <p>Gambia -</p> <p>Ghana 3000</p> <p>Guinea -</p> <p>Ivory Coast 51500</p> <p>Kenya -</p> <p>Mali 514</p> <p>Mauritania 1250</p> <p>Namibia -</p> <p>Nigeria 53000</p>	<p>Statistical data on employment is published in subproject location. Estimation of beneficiaries disaggregation by gender is average weighted assuming 50% women, and will be adjusted as per actual project type.</p> <p>Gender plan can be implemented successfully without adverse externalities.</p> <p>Employment data by Yr 5 is estimated on an average weighted basis for 1/15th projects from total employment beneficiaries plan and will</p>

				<p>Sierra Leone 160 Togo 1,067 Zambia -</p> <p>and 52,439 indirect jobs, of which per country Benin 12,067 Cameroon 13 Chad 2,613 Djibouti 20 DRC 147 Gabon 1,200 Gambia 61 Ghana 467 Guinea 21 Ivory Coast 1,200 Kenya 200 Mali 14 Mauritania 1,267 Namibia 87 Nigeria 31,898 Rwanda 271 Sierra Leone 127 Togo 533 Zambia 233</p> <p>of which 19,079 direct</p>	<p>Rwanda 1700 Sierra Leone 2400 Togo 16000 Zambia -</p> <p>and 786,585 indirect jobs, of which per country Benin 181,000 Cameroon 200 Chad 39,200 Djibouti 300 DRC 2,200 Gabon 18,000 Gambia 913 Ghana 7,000 Guinea 319 Ivory Coast 18,000 Kenya 3,000 Mali 215 Mauritania 19,000 Namibia 1,300 Nigeria 478,477 Rwanda 4,061 Sierra Leone 1,900 Togo 8,000 Zambia 3,500</p>	<p>change as per actual project.</p>
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				jobs for women per country Benin 12,067 Cameroon - Chad 1,500 Djibouti 23 DRC - Gabon 1,177 Gambia - Ghana 100 Guinea - Ivory Coast 1,717 Kenya - Mali 17 Mauritania 42 Namibia - Nigeria 1,767 Rwanda 57 Sierra Leone 80 Togo 533 Zambia -	of which 286,182 direct jobs for women per country Benin 181,000 Cameroon - Chad 22,500 Djibouti 350 DRC - Gabon 17,650 Gambia - Ghana 1,500 Guinea - Ivory Coast 25,750 Kenya - Mali 257 Mauritania 625 Namibia - Nigeria 26,500 Rwanda 850 Sierra Leone 1,200 Togo 8,000 Zambia -	
				of which 26,220 indirect jobs for women, per country Benin 6,033 Cameroon 7 Chad 1,307 Djibouti 10 DRC 73	of which 393,293 indirect jobs for women, per country Benin 90,500	

				Gabon 600 Gambia 30 Ghana 233 Guinea 11 Ivory Coast 600 Kenya 100 Mali 7 Mauritania 633 Namibia 43 Nigeria 15,949 Rwanda 135 Sierra Leone 63 Togo 267 Zambia 117	Cameroon 100 Chad 19,600 Djibouti 150 DRC 1,100 Gabon 9,000 Gambia 457 Ghana 3,500 Guinea 160 Ivory Coast 9,000 Kenya 1,500 Mali 108 Mauritania 9,500 Namibia 650 Nigeria 239,239 Rwanda 2,031 Sierra Leone 950 Togo 4,000 Zambia 1,750	
Increased safety through resilient infrastructure assets	Number of accidents from disaster weather events prevented due to resilience measures integrated in ICRF sub-projects	Ex-ante and ex-post analyses by a third-party	0	0	10	This indicator refers to accidents avoided from extreme weather events during sub-project useful life due to resilience measures in the sub-project assets. Due to uncertainty of future disaster weather events, the estimation suggest at least 2/3 of sub-projects preventing infrastructure damage and impact on vulnerable people and communities.

<p>GHG emission mitigation</p>	<p>GHG emissions reduced, avoided in million tCO2</p>	<p>Ex-ante and ex-post Analyses; independent verification / assurance of the GHG emission mitigation</p>	<p>0</p>	<p>0</p>	<p>9.7 million tCO2</p>	<p>Current estimation is based on mitigation from 500MW solar PV power plant in Nigeria as the biggest subproject from total 864MW solar PV power plants ICRF pipeline (see Annex 16). The GHG emission mitigation uses ACM0002: Grid-connected electricity generation from renewable sources --- Version 17.0 .</p> <p>The programme has potential to achieve GHG emission mitigation through clean technology and practices, and nature-based solutions in all CRI asset classes:</p> <ul style="list-style-type: none"> - energy (use of renewables etc.) - transport & logistic (mangrove forests along coastlines, rain gardens, green roofs, constructed wetlands, energy efficient technologies, use of clean transport, green value chain etc.) - economic zones (energy efficient buildings, renewable energy, green roofs, constructed wetlands etc.) - IT & telecom (renewable energy etc.). GHG
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						emission mitigation. Methodology for accounting GHG emission mitigation will be chosen for each alternative source .
Nature-based solutions integrated as part of resilience measures	Number of ICRF subprojects with nature-based solutions integrated as part of resilience measures	Independent verification / assurance of number of projects with natural based solutions as resilience measures in ICRF subprojects	0	0	3	It is assumed that at least 3 subprojects (20% of total 15 estimated ICRF subprojects) will have nature-based solutions integrated as part of the 'resilience measures' and may include: <ul style="list-style-type: none"> - reduced damage and flooding risk due to increased afforestation or restoration of natural vegetation as flood control (greening and tree planting) to increase the absorption capacity of soils across the watershed, lessening runoff and decreasing flood flows which can damage infrastructure assets [number of trees planted as flood control resilience measures / and reduced damage as a result], - increased afforestation to create green spaces along rivers to reduce riverine flooding risk and safeguard exposed roads and rails, airports, economic zones, other vulnerable infrastructure

						<p>assets in the surroundings,</p> <ul style="list-style-type: none"> - restoration of coral reefs to buffer shorelines against waves, storms, and floods, helping to prevent loss of life and erosion, - reinforced natural buffer (forest or mangrove) to reduce storm surge which can impact coastal transport assets, including roads, rail, airport structures, ports.
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E.6. Project/program activities and deliverables

Activities	Description	Sub-activities	Deliverables
<p>1.1.1 Implement the legal structure of, and form, the ICRF and related entities. Consummate first closing with the GCF.</p>	<p>AFC and ACP work with legal service providers for ICRF structure and registration GCF executes binding subscription agreement and disburses USD 240M</p>	<p>1.1.1.1 Procure international and local legal services for underlying documentation – ACP. Launching an RFP process with AFC 1.1.1.2 Implement legal structure for the ICRF and related entities 1.1.1.3 Finalize the Term Sheet, draft formation documents and related Agreements for ICRF entities 1.1.1.4 Consummate Initial Closing of the ICRF with GCF as anchor investor – the GCF enters a capital commitment to the ICRF of US\$240 million at the initial closing of the ICRF. Also at the initial closing, the Accredited Entity or one or more of its affiliates will make a capital commitment to the ICRF in an amount equal to US\$[50] million.</p>	<p>Legal report; Formation documents; Initial closing</p>

<p>1.1.2: Fundraise US\$510 million of additional capital for the junior and senior tranches.</p>	<p>Capital raising materials (teaser, IM, Fund evaluation report) with presentations, team track record, pipeline Meeting with pension funds, insurance companies, other FIs, philanthropies and foundations to raise capital at the Fund level. Some networking has already been done on the PPF level Negotiate T&C; conduct KYC; Sign commitments</p>	<p>1.1.2.1 Prepare and adjust fundraising and marketing materials; ACP has extensive fundraising experience, and may engage one or more third party consultants to assist in the fundraise 1.1.2.2 Draft Private Placement Memorandum and other fundraising and marketing materials. Continue to market the ICRF to other investors. The Private Placement Memorandum and other fundraising and marketing materials will be prepared by ACP; the selected external counsel with review the PPM from a legal perspective (disclaimer, disclosure requirements, risks factors, etc.) 1.1.2.3 Negotiate with potential investors and close on additional commitments to the ICRF – It is expected that the ICRF would hold several closings over the course of up to 24 months after the initial closing with GCF</p>	<p>Contract with fundraising advisor Marketing Plan and List of Priority Investors Teaser, Investment (PP) Memorandum, other fundraising and marketing materials Letter of interest and other communication Binding commitments</p>
<p>1.2.1 Deal origination, due diligence and execution of investments in sub-projects</p>	<p>Preliminary climate assessment of infrastructure investment opportunities for ICRF pipeline - - AFC/ ACP Origination & Deal Screening Stage; Deal screening; Project development; Due diligence and evaluation T&C negotiation; Financial closure</p>	<p>1.2.1.1 Selection of projects by ACP in cooperation with AFC 1.2.1.2 Entering into a support services agreement and a co-investment agreement with AFC by ACP and the ICRF 1.2.1.3 Project climate pre-screening and assessment: test the characteristics of originated projects against the investment strategy and restrictions of ICRF and the eligibility criteria by ACP 1.2.1.4 Project development, credit evaluation, due diligence and approval procedures in appraising potential Fund Investments</p>	<p>Support services agreement AFC – ACP - ICRF Co-investment agreement AFC – ACP - ICRF Project pre-screening, assessment documentation Project development documentation Due diligence for subprojects Teaser, Investment memorandum, and other capital raising materials for subprojects Sub-project package for investment committee Decisions of investment committee Subproject investment agreements ICRF pipeline overview</p>

		<p>1.2.1.5 Execution of a project term-sheet Investment package preparation by ACP and approval by the investment committee</p> <p>1.2.1.6 Drafting, negotiation and execution of the final investment agreements.</p>	
1.2.2 Portfolio management	Climate and disaster risk screening and Integrating Resilience in Project Development - Scientific background of projects climate problem, solutions and incremental cost estimation	<p>1.2.2.1 Managing investment disbursements according to investment agreements</p> <p>1.2.2.2 Reporting on investment disbursement into sub-projects</p> <p>1.2.2.3 Subprojects data collection, analysis, and reporting</p> <p>1.2.2.4 Representative role in a subproject's board of directors or similar governing body.</p> <p>1.2.2.5 Tracking development, construction, and operations of the portfolio companies; decision making for ensuring sub-projects sustainability and climate resilience.</p> <p>1.2.2.6 Review of subprojects reports and compliance with investment T&C.</p> <p>1.2.2.7 Portfolio valuation and adjusting ICRF strategy</p>	<p>Pipeline annual overview</p> <p>Pipeline financing progress report</p> <p>Subprojects reports according to investment agreement (annual audit, management report, operating reporting etc.)</p> <p>Board of directors or similar governing body meeting decisions</p>
1.2.3 Reporting to investors and GCF	Portfolio reporting function	<p>1.2.3.1 Defining and refining reporting on ICRF activities to shareholders and other stakeholders (unaudited financial information, audited fiscal-year financial statements, and a management report).</p> <p>1.2.3.2 Interim ICRF reports to shareholders and other stakeholder</p> <p>1.2.3.3 Annual audit, and other external verification of ICRF reporting data</p>	<p>Interim and annual reports to shareholders</p> <p>Annual audit</p> <p>Annual shareholders' meeting documentation</p>

		<p>1.2.3.4 Remittance of reporting data and documentation to the GCF by AFC.</p> <p>1.2.3.5 Holding annual meetings with shareholders on ICRF results and dividends distribution</p>	
1.2.4 Exit assets, return capital plus profit to investors, close out the ICRF	Initial evaluation of pipeline opportunities, structuring	<p>1.2.4.1 AFC and ACP engages with existing and potential investment network for exit opportunities.</p> <p>1.2.4.2 Investment committee assesses the proposed exit strategies, timing and exit projections on a quarterly basis.</p> <p>1.2.4.3 Discussions of proposed exit options, approval by the investment committee.</p> <p>1.2.4.4 Repayment of capital with profit to investors by exiting sub-projects</p> <p>1.2.4.5 Liquidate the ICRF</p>	<p>Marketing materials for subprojects sale</p> <p>Investment committee decisions on subproject exit</p> <p>Reporting on repayments to investors</p> <p>ICRF liquidation documentation</p>
2.1.1 Procurement of technical firms for detailed climate risk assessments, CRPI recommendations, engineering assessments of climate adaptation solutions for each ICRF projects	Open tender for technical firms on climate risk assessment, adaption solutions, CRPI recommendations, engineering assessments of climate adaptation solutions for each ICRF projects	<p>2.1.1.1 Identify potential pool of expert firms and publish RFP for the open tender according to AFC in line with GCF procurement policy</p> <p>2.1.1.2 Hold extensive consultation with AFC on technical firms evaluation</p> <p>2.1.1.3 Select and nominate experts firms.</p>	RFP, documented evaluation, contracts with the technical firms
2.1.2 Climate risk assessment of sub-projects pipeline for ICRF investments	Projects are undergoing climate risk assessments and eligibility criteria screening according to the adopted and refined technical framework	<p>2.1.2.1 Preliminary climate risk assessment based on the Climate risk assessment Methodology and Approach</p> <p>2.1.2.2 Screening of subprojects for ICRF investments eligibility criteria compliance</p> <p>2.1.2.3 Recommendations and estimation of adaptation solutions for subproject</p> <p>2.1.2.4 Preliminary economic and</p>	<p>Project assessment documentation</p> <p>System-dynamic model results</p> <p>Preliminary economic and financial analysis</p> <p>Communication with insurance companies for CRPI quotation</p> <p>Project package and recommendation by experts for investment committee about project adoption for development and resilience measures integration</p>

		<p>financial analysis of subprojects, conduct cost-benefit analysis of integrating upfront incremental costs 2.1.2.5 Identification of residual climate risk for CRPI application and engaging with insurance companies 2.1.2.6 Preparation of project package and recommendations for ICRF investment committee project selection for development and investment</p>	
<p>2.1.3 Enhancing climate adaptation measures in ICRF's investments with the integration of climate resilience options</p>	<p>AFC project manager coordinates project team from the technical firms for feasibility studies, economic and financial analysis, CRPI T&C recommendations</p>	<p>2.1.2.1 Climate risk assessment for ICRF projects 2.1.2.2 Adaptation solutions for CRI Asset Classes 2.1.2.3 Feasibility studies – technical, financial, legal 2.1.2.4 Project design with adaptation solution, modeling, running cost benefit analysis for incremental cost vs. projected losses 2.1.2.5 Support of project documentation and capital raising activities for incremental cost justification 2.1.2.6 Support of sub-project documentation for investment committee review at every stage of the sub-project</p>	<p>Project documentation incl. System dynamic model results Financial model Design documentation</p>
<p>2.1.4 Support of EPC and project sponsors in the tender process of specialized firms/consultants to support the implementation of adaptation measures to enhance the climate resilience of the sub-projects</p>	<p>Ensure adaptation solutions are integrated in design of ICRF projects</p>	<p>2.1.4.1 Technical firms contribute to RFP for EPCs for ICRF projects 2.1.4.2 Evaluation of EPC proposals 2.1.4.3 Nominating EPC for sub-project based on technical capacity for resilience measure implementation and cost-benefit analysis 2.1.4.4 Overseeing and reporting on EPC design development for integration of adaptation and environmental solutions</p>	<p>EPCs response to RFP Procurement documentation Reporting on overseeing EPC design for integration of adaptation and environmental solutions</p>

<p>2.1.5 Overseeing construction and implementation of ICRF projects to ensure adaptation solutions deployed (EPC Management of the adaptation elements)</p>	<p>Technical firms are responsible for overseeing construction and completion phases acceptance</p>	<p>2.1.5.1 Ensure EPC contracts include construction works acceptance by technical firms 2.1.5.2 Conduct construction works review and acceptance 2.1.5.3 Lessons learned captured</p>	<p>EPC documentation</p>
<p>2.1.6 Refinement of the ICRF Climate Assessment Methodology and Approach</p>	<p>Technical firms will be asked to refine the ICRF Climate Assessment Methodology and Approach as new models and tools evolve to ensure rigorous assessment and ensure socioeconomic and financial sustainability of ICRF projects.</p>	<p>2.1.6.1 Review of the climate risk assessment methodology in line with IPCC cycles AR6, AR7 and AR8 2.1.6.2 Support publication of the amended Methodology and engage with stakeholders for its implementation.</p>	<p>Updated ICRF Climate Risk Assessment Methodology and Approach</p>
<p>2.2.1 Capacity building event for ICRF programme incl. detailed climate risk assessment, adaptation solutions for CRI Asset Classes and technical knowledge for vulnerable people safety and resilience</p>	<p>Knowledge dissemination and capacity building activities on climate risk assessment, adaptation solutions, increase of vulnerable people security and resilience</p>	<p>2.2.1.1 Schedule and prepare capacity building activities for CRI proponents in NOL countries for scaling up investment in resilient infrastructure, and for national authorities and Union groups representing infrastructure users on climate change disaster risk prevention and management in subproject location (for vulnerable people safety and climate resilience) 2.2.1.2 Prepare training materials and evaluation surveys to assess the training results 2.2.1.3 Procure logistics arrangements 2.2.1.4. Hold trainings with evaluation survey for trainings results assessment 2.2.1.5 Conduct trainings and workshops for AFC and ICRF designated teams; 2.2.1.6 Publish training materials.</p>	<p>Training and workshop materials Training and workshop evaluation survey Detailed invitation and registration list of participants</p>
<p>2.2.2 Lessons learned are captured from ICRF CRI investments and roadmap is created for replication across the Continent</p>	<p>Report on the results of the of the ICRF climate risk assessment and adaptation options, lessons learned</p>	<p>2.2.2.1 Design a process of capturing lessons learned at each project / program phase for knowledge sharing;</p>	<p>Report on Lessons learned on climate risk assessment and integrating resilience measures</p>

	and recommendations for replication of the programme	2.2.2.2 Catalogue process and data on climate risk assessments and adaptation solutions 2.2.2.3 Report on ICRF CRI investments for replication	Roadmap for promoting resilience measures in CRI in Africa
2.2.3 Issue publication - knowledge sharing about de-risking methodologies for CRI Asset Classes based on ICRF programme	Knowledge dissemination and capacity building activities	2.2.3.1 Issue publication on de-risking methodologies for ICRF programme for scaling up private investment in CRI in Africa. 2.2.3.2 Publish a designated webpage for knowledge sharing and feedback 2.2.3.3 Publications are made available and voluntary submission to COP for the global stock take on Yrs 5, 10, 15, 20.	Publication on de-risking methodologies for ICRF programme Designated webpage
3.1.1 Procure consortium of legal, policymaking, and climate expert firms for improving regulatory framework for CRI, CRPI, and capacity building in the programme States	Open tender for legal and policymaking firms consortium for CRI Asset Classes, and capacity building in the programme States	3.1.1.1 Identify potential pool of expert firms and publish RFP for the open tender according to AFC in line with GCF procurement policy 3.1.1.2 Hold extensive consultation with AFC on technical firms evaluation 3.1.1.3 Select and nominate experts firms.	RFP Evaluation documentation Contracts with the expert firms
3.1.2 Capacity building and engagement with key proponents, public and private sector participants, civil societies to identify the regulatory gaps for investments in CRI Asset Classes	Hold consultations and trainings with CRI Asset Classes proponents to identify the regulatory gaps for investments in CRI Asset Classes for recommendations report	3.1.2.1 Identify stakeholders groups to hold consultations on gaps and opportunities for CRI Asset Classes regulatory framework improvement per country; 3.1.2.2 Hold consultations with the objective of strengthening regulatory framework for CRI Asset Classes; 3.1.2.3 Further explore opportunities for strengthening regulatory framework for CRI Asset Classes based on best practices; 3.1.2.4 Reporting results of the engagements.	Consultations and meetings plan per country Reports on the outcomes Training and workshop materials Training and workshop evaluation survey Invitation and Registration of participants
3.1.3 Create a work group from the consortium of legal and policymaking	Create and operationalize working group from the 3.1.1 consortium of	3.1.3.1 Working group created from the 3.1.1 consortium of firms;	Working group work plan Report on the working group activities

<p>firms for new CRI Asset Classes and construction codes implementation</p>	<p>firms to promote and legalize CRI Asset Classes</p>	<p>3.1.3.2 Recommendation report for CRI Asset Classes issued for integration in a regulatory framework, construction codes, and policies of the programme countries; 3.1.3.3 Collaborate with NDAs and country office in support of recommendation report implementation</p>	
<p>3.1.4 Create and share recommendation reports for improving regulatory framework for CRI Asset Classes per country</p>	<p>Based on 3.1.2 consultations and 3.1.3 working group achievements issue a recommendation report to promote and scale up investments in CRI Asset Classes with risk transfer through adaptation solutions integrated in a regulatory framework and policies</p>	<p>3.1.4.1 Issue recommendations report for improving regulatory framework for CRI Asset Classes for programme countries; 3.1.4.2 Hold consultations with the key proponents on the document draft; 3.1.4.3 Finalize recommendation report for the programme countries.</p>	<p>Recommendation report drafts Comments to the Recommendation report drafts Final recommendation reports</p>
<p>3.1.5 Support regulatory, standards and policy making process for CRI Asset Classes to implement the recommendations according to each country needs</p>	<p>Procure experts for regulatory framework for recommendation report for CRI per country; oversee and conclude the report</p>	<p>3.1.5.1 Collaborate with NDAs and country offices in support of the regulatory framework improvement according to the recommendation report for CRI Asset Classes</p>	<p>Engagement plan Report on engagement activities</p>
<p>3.1.6 Report on regulatory framework support for CRI Asset Classes</p>	<p>Ensure sustainability of the programme through knowledge captured and further roadmap in support of CRI Asset Classes on the Continent</p>	<p>3.1.6.1 Hold consultations with NDAs, country offices and other key proponents on the Output 3.1 of the programme; 3.1.6.2 Capture knowledge from Output 3.1 issue a road map for replication across the Continent.</p>	<p>Report on lessons learned and further roadmap</p>
<p>3.1.7 Issue publication - knowledge sharing about lessons learned and recommendations on strengthening regulatory framework for CRI Asset Classes in the programme countries</p>	<p>Knowledge dissemination on the Output 3.1 - achievements and lessons learned for public sector and civil societies</p>	<p>3.1.7.1 Identify targeted stakeholders for knowledge sharing within and beyond the programme countries; 3.1.7.2 Hold workshops for lessons learned and further road map for CRI investments scale up in Africa.</p>	<p>Publication on lessons learned and recommendations for strengthening regulatory framework Workshops materials</p>
<p>3.2.1 Procure fiscal regulatory framework and policymaking firms for promoting fiscal incentives for CRI Asset Classes in the programme countries</p>	<p>Open tender for fiscal framework and policymaking firms to strengthening regulatory framework for CRI Asset Classes in the programme countries</p>	<p>3.2.1.1 Identify potential pool of expert firms and publish RFP for the open tender according to AFC in line with GCF procurement policy 3.2.1.2 Hold extensive consultation</p>	<p>RFP Evaluation documentation Contracts with the expert firms</p>

		with AFC on technical firms evaluation 3.2.1.3 Select and nominate experts firms.	
3.2.2 Capacity building and engagement with key proponents, public and private sector participants, civil societies for improving fiscal incentives (reduced tax, tax holidays, customs duty reduction or waiver, subsidies etc. as per the country priorities and needs) for investments in CRI	Meetings with CRI Asset Classes proponents to identify gaps and opportunities in fiscal framework for each country for CRI Asset Classes investments, holding trainings on baseline assessment and recommendations	3.2.2.1 Conduct baseline assessment 3.2.2.2 Map opportunities for engagement per country 3.2.2.3 Identifying policy gaps and economic barriers 3.2.2.4 Explore regulatory changes to facilitate increased investment in CRI Asset Classes as per the country needs 3.2.2.5 Hold consultations and trainings with key proponents to support strengthening regulatory framework on CRI	Consultations and meetings plan per country Reports on engagement activities Training and workshop materials Training and workshop evaluation survey Invitation and Registration of participants
3.2.3 Create and share recommendation reports for improving fiscal policy for CRI Asset Classes	Procure experts for fiscal policy recommendation report for CRI per country; oversee and conclude the report	3.2.3.1 Summarize result of the consultations. 3.2.3.2 Baseline assessment and recommendation report for strengthening fiscal policies for catalyzing investments in CRI Asset Classes per Country	Recommendation report per programme country
3.2.4 Support legal regulatory and policy making process to implement the recommendations on fiscal policy according to each Country needs	Promote actions according to the recommendation reports per programme Country	3.2.4.1 Collaborate with NDAs and country offices in support of the fiscal policy recommendation report for CRI Asset Classes	Plan of consultations and engagements Report on promoting fiscal incentives activities
3.3.1 Feasibility study on the development of CRPI in Africa;	Engage top tier consulting firms in feasibility study for CRPI products development for infrastructure in Africa, baseline market study	3.3.1.1 Procure feasibility study on the baseline market study for CRPI development for infrastructure in Africa 3.3.1.2 Hold series of consultation for market and product development of CRPI	Procurement documentation Feasibility study Report on consultation activities
3.3.2 CRPI design and development for CRI in Africa, stakeholder engagement;	Design and develop CRPI based on the ICRF pipeline climate change residual risk; Engagements with key industry players to contribute to CRPI design and development, including insurance	3.3.2.1 Identify the pool of stakeholders including insurance companies, private sector actors, government agencies in target countries, investors, industry groups such as the Insurance Development	List of stakeholders for CRPI products development in Africa Requests for ICRF sub-projects and other CRI CRPI needs to insurance companies

	<p>companies, private sector actors, government agencies in target countries, investors, industry groups such as the Insurance Development Forum and the Coalition for Climate Resilient Investments (CCRI);</p>	<p>Forum and the Coalition for Climate Resilient Investments (CCRI) for CRPI for infrastructure in Africa 3.3.2.2 Organize series of consultations to identify challenges, opportunities, and gaps for CRPI design and development 3.3.2.3 Share with insurance companies needs for ICRF pipeline residual risk coverage to suggest CRPI solutions 3.3.2.4 Review draft of CRPI products suggested by insurance companies and hold series of consultations for product concept refinement to ensure economy and efficiency 3.3.2.5 Engage stakeholders in review of CRPI products development 3.3.2.6 Register all recommendations implemented</p>	<p>Report on CRPI products development consultations with insurance companies and market proponents Register of implemented recommendations</p>
<p>3.3.3 Engagement with donors to sponsor CRPI for ICRF projects;</p>	<p>Engage other donors to mobilize funding on the best effort basis to implement innovative and transformational parametric risk insurance solutions as part of the ICRF programme, and provide a strong demonstration effect with paradigm shift potential</p>	<p>3.3.3.1 Conduct cost-benefit analysis of CRPI for each ICRF sub-project, identify residual climate change risk to be covered by CRPI. 3.3.3.2 Liaise with potential donors to sponsor CRPI for ICRF subprojects; 3.3.3.3 Negotiate CRPI T&C with insurance companies; 3.3.3.4 Sign CRPI policy for ICRF subprojects and review policies as climate change scenarios unfold for additional residual risks</p>	<p>Plan and report on activities for CRPI sponsor engagements CRPI policies / contracts for ICRF sub-projects</p>
<p>3.3.4 Support capacity building activities (training) for key stakeholders of CRPI</p>	<p>Raising awareness and capacity building about benefits of CRPI products</p>	<p>3.3.4.1 Identify proponents of CRI in Africa 3.3.4.2 Organize training and workshops to raise awareness on climate-risk parametric insurance (CRPI)</p>	<p>Training and workshop materials Training and workshop evaluation survey Invitation and Registration of participants</p>

		<p>3.3.4.3 Conduct survey on effectiveness of trainings and feedback on CRPI market creation</p> <p>3.3.4.4 Create list of contacts of interested parties for CRPI in Africa and share information on CRPI progress</p> <p>3.3.4.5 Publish information on capacity building activities for CRPI market creation in Africa.</p>	
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E.7. Monitoring, reporting and evaluation arrangements (max. 500 words, approximately 1 page)

- ICRF programme-level monitoring, reporting, and evaluation will be conducted by ACP in compliance with the GCF Monitoring and Accountability Framework, the GCF Evaluation Policy, and the AFC internal evaluation policies and in accordance with the arrangements and policies agreed in Annex 11: Monitoring and Evaluation (M&E) Plan. The ICRF Program Manager will be appointed by ACP, who will be in charge of programme implementation plan, monitoring, reporting, and evaluation. The ICRF Program Manager will develop annual and quarterly work plans to ensure the efficient and optimal implementation of the programme, working in coordination with ACP Senior Management Team.
- In case of encountering any delays or non-systematic events, ICRF Program Manager will inform ACP Senior Management Team, programme countries NDAs, and the appropriate GCF division about its effect and remedial plan within 90 calendar days. Primary responsibility of the ICRF Program Manager will be to implement M&E Plan through coordination of stakeholders to ensure that appropriate support, interventions, and corrective measures can be undertaken. The ICRF Program Manager will oversee that all programme staff maintain a high level of transparency, responsibility, and accountability throughout the programme's monitoring, reporting, and evaluation of the programme's results.
- ACP will support the ICRF Program Manager by holding quarterly meetings and providing feedback on M&E plan implementation and annual reports. ACP have internal regulations and policies including those based on EMSF, Gender Action plan for M&E for programme implementation and compliance. ACP and ICRF have annual external audit reports of financial reporting according to IFRS, which will be included in the annual M&E report package. ICRF Program Manager will coordinate with the NDAs for any additional recommendations to the M&E, implementation quality assurance, troubleshooting support, and oversight guidance, as needed. The programme's target communities, beneficiaries, and participants, as well as key the stakeholders such as the NDA will be involved as much as possible in the M&E on the ICRF programme level.
- The programme M&E reports will be prepared by ACP for AFC review before submission to GCF for each year of the programme lifespan: five years for Outcomes 2 and 3 and twenty years for Outcome 1. The methodologies of M&E vary for each programme output and will be standardized according to the best practices for quantification including principles of conservativeness to avoid double counting or over-estimating. The ICRF Program Manager, ACP Senior Management Team, and the NDAs, as appropriate, will provide objective input to the annual APR report for GCF. The ICRF Program Manager will ensure compliance of the APR with the M&E plan in the Annex 11 and meeting the reporting deadlines.

F. RISK ASSESSMENT AND MANAGEMENT		
F.1. Risk factors and mitigations measures (max. 3 pages)		
<i>Category of risks</i>		
Selected Risk Factor 1 Failure to deliver on the ICRF impact potential		
Category	Probability	Impact
<u>Technical and operational</u>	<u>Low</u>	<u>Medium</u>
Description		
Due to climate change uncertainties, there is a risk of lower results associated to ICRF impact potential, e.g., providing access to resilient infrastructure and protect the most vulnerable groups, lower technical and financial performance of the assets, and decline of its value. This might delay replication and decrease investors' confidence.		
Mitigation Measure(s)		
<ul style="list-style-type: none"> • Robust ICRF Climate Assessment Methodology, technical and climate change risk due diligence will ensure thorough projects development to ensure socioeconomic and financial success of ICRF investments. Parametric climate risk insurance, adaptation pathways approach, and science-based assessment will provide a holistic approach to risks and opportunities, allowing to ensure targeted impact. • Ongoing M&E of the projects will focus on identifying red flags and providing remedial solutions including technical expertise. • Physical climate risks are mitigated by incorporating climate change data into project design and risk transfer through innovative parametric insurance products. • Financial sustainability of the ICRF pipeline is ensured by ongoing projects assessment supported by climate science, tailored investment criteria, and portfolio management framework. • Representation at the investees' board will allow ICRF to identify risks at an early stage and provide remedial solutions. 		
Selected Risk Factor 2 Limited access to financing at the fund and project levels		
Category	Probability	Impact
<u>Technical and operational</u>	<u>Medium</u>	<u>Medium</u>
Description		
Delays in raising capital at the fund and project level and not meeting Fund commitments due to complex negotiations or low appetite from the private sector		
Mitigation Measure(s)		
<ul style="list-style-type: none"> • Concessional funding from GCF and parametric insurance scheme will unlock private capital for ICRF projects. ICRF financing of the full project cycle (from development to operations) allows to optimize transactional cost and negotiation process. • Unique nature of the Fund ensured soft commitments from a confidential list of investors even at the early stage. • AFC team with solid track record in infrastructure financing provides access to even greater network of investors on a regional and sectoral levels. • Liquidity risks will be mitigated by five years cash flow planning and ongoing liquidity test 		
Selected Risk Factor 3 Risk of maladaptation		
Category	Probability	Impact
<u>Technical and operational</u>	<u>Low</u>	<u>Medium</u>
Description		

Due to unprecedented climate change, there is a risk of the programme attempts leading to increased risk of adverse climate-related outcomes, increased vulnerability to climate change, or diminished welfare ⁴³		
Mitigation Measure(s)		
Due to climate change uncertainties, the adaptation measures will follow an adaptation 'pathways' approach scheduling adaptation in the future in addition to short term and no regret actions. This decision-making approach will allow ICRF to prioritize science-based adaptation measures at the project design stage and to plan potential adaptation options as climate change scenarios unfold. Broad stakeholders engagement through communication and consultation will allow to prioritize and verify adaptation plan.		
Selected Risk Factor 4 Operational risk due to errors and construction delays		
Category	Probability	Impact
<u>Technical and operational</u>	<u>Medium</u>	<u>Medium</u>
Description		
Risks of financial losses due to operations errors, omissions, and construction delays (as a result of human, adequate processes and policies factors)		
Mitigation Measure(s)		
Operationalizing of ICRF will start from putting adequate policies and procedures in place supported by ongoing trainings and compliance review. Both will allow to minimize the risk by segregation of duties and control processes. Robust risk management governance and policies will be implemented in line with AFC governance while highly experienced Chief Officer will be appointed. Effective project execution plan and monitoring will ensure management of execution timelines.		
Selected Risk Factor 5 Legal risk of adverse legal framework and permits cancellation		
Category	Probability	Impact
<u>Legal</u>	<u>Low</u>	<u>Medium</u>
Description		
Risk of changing regulatory framework with adverse effect on the programme or permits cancellation		
Mitigation Measure(s)		
The programme is supported on the country level through engagement with NDAs. The programme has stakeholders' engagement plan to obtain ICRF investments support on the local, national and regional level. Engagement with authorities and NGOs including policy making and capacity building will alleviate the risk.		
Selected Risk Factor 6 ML/FT and other prohibited practices		
Category	Probability	Impact
<u>ML/FT</u>	<u>Low</u>	<u>Medium</u>
Description		
Risk of ICRF counterparties being involved in activities that violate GCF's Policy on Prohibited Practices		
Mitigation Measure(s)		
ACP and ICRF will have zero tolerance to ML/FT and prohibited practices in line with GCF's Policy on Prohibited Practices. Both will have mandatory comprehensive KYC requirements and extensive pre-investment due diligence of the investee company and its key personnel. All GCF compliance requirements are factored in the programme documentation.		
Selected Risk Factor 7 Capital Risk		
	Probability	Impact

⁴³ Emerging issues of environmental concerns UNEP, 2019:
https://wedocs.unep.org/bitstream/handle/20.500.11822/27545/Frontiers1819_ch5.pdf

Other	Medium	High
Description		
<p>The ICRF is an infrastructure equity fund which will invest in climate resilient infrastructure projects. These projects are subject to various projects risks which may result in capital losses for investors in the fund. GCF is taking a high risk by providing a junior equity position in the ICRF fund to catalyze the participation of institutional investors in climate resilient infrastructure projects in the selected African countries. Therefore, the capital commitment of GCF has a high-risk profile may not be returned in full in case of underperformance in the portfolio companies.</p>		
Mitigation Measure(s)		
<p>AFC has developed a solid track record as a pre-eminent infrastructure solutions provider in Africa with unrivalled experience in identifying, developing, executing, and delivering transformational infrastructure projects on the continent. To date, the Corporation has deployed over US\$ 10billion in high quality infrastructure in over 35 African countries. ACP, the Asset Management subsidiary of AFC, will co-invest ICRF funds alongside AFC. ACP will leverage the scale and breath of AFC's investment track record and provide institutional investors. AFC has the second highest credit rating in the African financial sector (A3 by Moody's) and has been profitable since inception 15 years ago. This reflects the robustness of its investment appraisal process, risk management and proactive portfolio management. The ICRF fund will co-investment with AFC in eligible projects, therefore, will apply the same rigor in its investment process to mitigate potential risks.</p>		

G. GCF POLICIES AND STANDARDS

G.1. Environmental and social risk assessment (max. 750 words, approximately 1.5 pages)

The Executing Entity has adopted a comprehensive Environmental and Social Management Framework (ESMF) for the Infrastructure Climate Resilient Fund. The ESMF has been designed in compliance with the AE's ESMF and IFC Performance Standards and GCF Environmental and Social Policy. The Executing Entity and Accredited Entity has prepared Resettlement Policy Framework and Indigenous Peoples Planning Framework, and Biodiversity Management Framework in line with GCF ESS requirements, as well as updated its information disclosure requirement to match requirements of GCF for Category I-1 programmes. Please refer to Annex 6 for details.

The ESMF is presented under Annex 6 of this Funding Proposal and developed to ensure that the projects to be financed by the Programme will be designed and implemented in a sustainable manner. It also ensures that GCF ESS policies are passed down from Accredited Entity (AFC) to ICRF (Fund level) and to the projects financed by the ICRF (Investee level). The ESMF consists of following key parts: the ESMF and specific frameworks to address as appropriate : Resettlement, Indigenous People Rights, Biodiversity, Stakeholders consultations, gender and social inclusion.

The main objective ICRF ESMF is to identify potential environmental and social governance risks prior to investment disbursement and to institutionalize the monitoring mechanisms at an Investee level to supervise ESG performance during the term of the ICRF's investment. As per ESMF document, the following procedures are incorporated in ICRF's investment process to ensure that ESS risks are assessed and mitigated:

ESG Integration in Investment Process

Screening of project eligibility to ICRF's ESG Policy	The projects in the ICRF pipeline will be screened for "eligibility" to the AE and EE Policies. In particular, project activities will be screened against ICRF exclusion list to ensure that no activities under this list is financed. During this stage, the Executing Entity's team shall assess proposed investment activates to determine the environmental and social impacts and classify project environmental and social governance risk as per "high", "medium" and "low" risk categories. The resulting category for a project (s) to be financed by the ICRF shall further inform the level of E&S due diligence to be implemented in the subsequent stage below.
Conduct environmental and social due diligence of projects that passed initial screening stage	During ESS due diligence stage, the Executing Entity's team shall assess potential E&S risks of proposed project prior to the ICRF's investment. ICRF shall identify appropriate mitigation measures (if any required) in Environmental and Social Action Plan (ESAP); by also specifying Investee companies' responsibilities and timeline for implementing preventive, mitigation and compensation measures in ESAP.
Incorporating Investee company's obligation to comply with the AE and EE Environmental and Social guidelines and policies	The ESAP developed during the due-diligence stage will be part of shareholder agreement between ICRF and the respective investee company, therefore the investee will be legally required to implement ESAP.

The ICRF programme will invest in category I1, I2 and I3 projects. Therefore, the stakeholder engagement plan (SEP) Framework in Annex 6 also reflects an importance of fully and effectively engaging with indigenous peoples affected in the design, development and implementation of the strategies and activities

to be financed by the programme, while respecting their rights. The Executing Entity will disclose on its website appropriate E&S information for each sub-project under the programme as per GCF Information Disclosure Policy.

In case, where projects to be financed under the programme will involve land acquisition-the projects will be guided by the Resettlement Policy Framework which has been developed as per GCF ESS Policy Requirement and is included in Annex 6. This will ensure compliance to national laws and international best practices. The Executing Entity will report on an annual basis on ESG performance of the fund and its portfolio companies to investors, including GCF. For additional details on environmental and social management framework, please refer to Annex 6.

A Stakeholder Engagement Plan (SEP) will be developed for each project, to ensure transparency and meaningful consultation with the project-affected and interested parties. Stakeholder engagement and consultations will be conducted throughout the project cycle. This will include discussions of project design and impacts as well as multi-stakeholder discussions on these issues during the preparation phase. The SEP, along with other E&S instruments, will be subject to public consultation and disclosure per requirements of the AE and GCF and will be treated as a living document to be regularly updated as needed during project implementation.

SEAH Considerations

In compliance with the GCF Board decision B.BM-2021/18 adopted in September 2021, the ICRF ESMS incorporates the risk assessment and management on sexual exploitation, sexual abuse and sexual harassment (SEAH) as part of the E&S due diligence for the proposed programme and sub-programme and/or projects, namely as part of:

PS 1: Assessment and Management of Environmental and Social Risks and Impacts

As part of the social risks, issues of sexual exploitation and abuse (SEA)/sexual harassment (SH) may arise in the context of infrastructure projects in all the sectors targeted by the ICRF Fund that involve major civil works. Gender-based violence: women routinely experience sexual harassment and intimate partner violence in target countries, and the risk of gender-based violence may increase during the realization of infrastructure projects in target sectors. This risk will be assessed and mitigated through implementing mitigation and response approaches and the adoption of internal prevention and response mechanisms in compliance with the AE and GCF policies and practices. SEAH considerations will be an integral part of the ES screening and risk categories, due diligence, assessment, and management plan.

At project level, in case where substantial risks have been identified, the project sponsors would typically prepare, adopt, and implement a stand-alone Gender-Based Violence Action Plan (GBV Action Plan), to assess, manage, and monitor the risks of gender-based violence (GBV) and sexual exploitation, abuse and harassment (SEAH). The Grievances Redress Mechanism (GRM) will also address any complaint related to the sexual abuses, sexual exploitation, and sexual harassment issues in ensuring labour and working conditions effectiveness and safeguarding against Sexual Exploitation and Abuse and Sexual Harassment (SEAH). These interventions are expected to efficiently complement the gender action plan, empowering local women and men and aim to create a safe environment at the project site and in communities.

PS 2: Labour and Working Conditions - The PS 2 seeks to protect the fundamental human rights of workers. It is applicable to the direct project workers, project contract and subcontract workers as well as project supply-chain workers. The compliance requirement will include provision of clear information and documentation regarding the workers' rights, wages, and conditions of employment amongst others. The PS 2 in the contexts of ICRF will also seek to strengthen the Grievances Redress Mechanism (GRM) to address any complaint related to the sexual abuses and sexual exploitation, and sexual harassment issues in ensuring labour and working conditions effectiveness. Sexual exploitation, sexual abuse (SA), sexual harassment (SH) including sexual exploitation of children are included in the list of "Designated Categories of Offences".

PS 4: Community Health, Safety and Security - The PS 4 addresses the health, safety and security risks and impacts on project affected communities and the corresponding responsibility of clients to avoid or minimize such risks and impacts with particular attention to people who because of their particular circumstances, may be vulnerable. In this regard, the requirement amongst others is for the project sponsor to establish guidelines to safeguard against Sexual Abuse, Sexual Harassment, and Sexual Exploitation, formulate measures to address infrastructure and equipment design and safety, hazardous materials management and safety, Ecosystem services as well as emergency preparedness and response amongst others.

G.2. Gender assessment and action plan (max. 500 words, approximately 1 page)

Summary of the gender assessment and project/program-level gender action plan that is aligned with the objectives of GCF's Gender Policy.

The Infrastructure Climate Resilient Fund will mainstream gender considerations in its investment process with the aim to enhance female economic participation in the target sectors and create income-generating opportunities for women in project countries. Proposed interventions under the Gender Action Plan will promote: (i) advancing equality between men and women through climate change mitigation and adaptation actions, and (ii) minimizing gender-related risks in climate change actions. Employment opportunities created by climate resilient infrastructure projects often benefit men more than women, resulting in a significant employment gap in the target sectors, namely climate resilient transport and logistics, climate resilient energy systems, climate resilient economic zones, telecommunication and digital infrastructure. Under the ICRF approach, issues related to female employment and access to climate resilient infrastructure services will be effectively embedded across the implementation of sub-projects. At project level, the EE will implement a gender-sensitive approach including baseline surveys, indicators and methodologies for continuous project monitoring and impact assessments, collect and present sex-disaggregated statistics to measure enhanced access for women to climate resilient infrastructure services, an ensure consultations process engage both men and woman actors.

The initial programme level gender assessment outlined several issues faced by women outlined below. **These issues will be tackled in a sustainable manner, raising awareness, improving gender policies, building capacities and generating knowledge on the program's differentiated impact on men and women.** The AE undertook an initial gender assessment of the ICRF programme and elaborated a gender action plan.

- i. **Female employment and skill gaps in the target sectors:** the main barriers to women's participation in the target sector include social norms that confine women to unpaid household and care work, occupational gender segregation, limited capacities and skills, as well as discriminatory work environments. This gap will be addressed through skills building and, outreach efforts, as well as the promotion of equal opportunities practices in the implementation of sub-projects.
- ii. **Female employment in the areas of implementation of target projects:** Women, if employed, are more exposed to lower-paid, lower-quality employment in the informal sector. Under the ICRF approach, the socio-economic needs of the local communities will be assessed, and actions empowering women prioritized. Those may include the promotion of activities targeting skill-building. Special attention will be paid to the promotion of local women-run businesses along the project development cycle, from procurement to project implementation.
- iii. **Gender-based violence:** women routinely experience sexual harassment and intimate partner violence in target countries, and the risk of gender-based violence may increase during the realization of infrastructure projects in target sectors. This risk will be mitigated through implementing mitigation and response approaches and the adoption of internal prevention and response mechanisms in compliance with the AE policies and practices. These interventions are expected to efficiently complement actions empowering local women and men and aim to create a safe environment at the project site and in communities.
- iv. **Women access to climate resilience infrastructure services in target sectors :** among project countries with lower electrification rates and under-developed grids, women suffer from time-poverty and

increased health-issues, as they bear the responsibility of food preparation, as well as fuel and water collection. Climate hazards disrupt and damage transmission lines limiting access to electricity among poor households, including female-headed households (FHH). Improving access to climate resilient energy services may reduce the time and labor burden of women, generate health and education benefits, increase female labor participation and incomes. Similarly, climate stressors such as flooding, sea level rise, high temperatures, strong winds, increased precipitations can damage economic zones, transportation links such as ports, roads, and ports, leading severe economic losses that may significantly higher adverse impact on communities and vulnerable populations, particularly on women. For these reasons, the EE will (i) pay attention to women and men's differentiated needs in the design of climate resilient infrastructure projects, (ii) conduct inclusive stakeholders' consultations to ensure women's voice is heard and included in decision-making processes, (iii) undertake outreach and capacity-building initiatives to increase women's knowledge about climate resilience in target sectors, and (iv) and promote equal access to climate resilient infrastructure services.

The ICRF will follow a systematic approach and provide cross-support to projects interventions with a focus on data collection, policy engagement, project level actions and capacity-building activities. At the project and program level, the following approach will be followed:

1. Data collection and initial assessments:

- Build upon existing country gender diagnostics and action plans;
- Document the baseline situation and identify gaps through collection of sex-disaggregated data;
- Conduct stakeholders' consultations involving female participants, to understand men and women differentiated needs; and
- Include an analysis of the differentiated impact of the ICRF project on men and women in initial assessments, through the involvement of gender and sector experts (Environmental and Social Impact Assessment, Resettlement Action Plans etc.).

2. Identifying and implementing relevant actions:

- Identify and implement relevant interventions to narrow gaps in terms of employment and climate resilient infrastructure access, based on the initial diagnosis and inclusive stakeholders' consultations; and
- Promote female employment including capacity building and programs for women to gain hands-on experience in the target sectors
- Implementation of prevention measures to mitigate gender violence or sexual harassment in the implementation of the sub-projects

3. M&E and Knowledge management:

- Monitor results throughout the project cycle to assess impact on men and women and allow for real-time adjustments;
- Expand the knowledge base by documenting lessons learnt from prior projects, knowledge production and exchange.

4. Strengthening female participation and voice during Stakeholders Consultations:

- Organize stakeholders' consultations throughout the project cycle. Ensure effective participation of women while conducting consultations to gain knowledge about their specific concerns during project preparation, and to monitor impacts and allow for real-time correction during implementation;
- Use local dialects and involve female facilitators/local women leaders, as well as women representatives from the utility company whenever possible,
- Organize women-only discussion groups if appropriate; organize consultations and focus groups at a convenient time for women; and create partnerships with women's groups and nongovernmental organizations (NGOs) to assist in the process and ensure the projects' sustainability.

The full gender assessment and project-level gender action plan is provided in annex 8.

G.3. Financial management and procurement (max. 500 words, approximately 1 page)

Project/program's financial management including the financial monitoring systems, financial accounting, auditing, and disbursement structure and methods. Refer to section B.4 on implementation arrangements, as necessary.

- Due Diligence: ACP will be responsible for establishing KYC, due diligence process including anti-money laundering and other evaluations of sponsors according to each respective institution's internal policy requirements at ICRF. ACP will be responsible for the financial management of all funds of the ICRF program. The eventual application of the funds to each of the projects, will be based on the guidelines of its investments team and the implementation of the financial operations team.
- Disbursement: All disbursements will be consistent with a pre-agreed mechanism to be set out in the financing agreements. These will be subject to the fulfillment of all conditions precedent as agreed by the ACP and ICRF risk management team and financial operations team.
- Supervision and Portfolio Management: ACP will onboard a dedicated portfolio management team for ICRF, both of whom are primarily responsible for the monitoring and supervision of portfolio projects. There are a set of stipulated quarterly, semiannual, and annual reporting requirements, part of which also require site visits on a case-by-case basis. ACP and AFC will ensure each of the projects is compliant with all the monitoring and reporting requirements as stipulated in the AMA and to be agreed in the Funding Agreement. AFC will ensure that all the reporting requirements to GCF are fulfilled.
- Procurement: The procurement of Goods and Services for Funded Activities, whether by the Accredited Entity (AFC), the implementing agency (ACP), or by a third party, shall be done in accordance with AFC's procurement rules, policies, and procedures which is consistent with international procurement standards. The procurement manual outlines the processes and procedures for each procurement method, as well as their applicable thresholds. The manual addresses i) the procurement of goods and services for general use, ii) the procurement of specialized services that support investment operations and project development activities, the management and oversight of procurement through a data bank of suppliers, contractors, consultants and standards of conduct. ACP has access to AFC Vendor Data Base which is constantly updated. AFC currently shortlists preregistered vendors based on their core Product or Service, relative to the Corporation's individual business requirements. Potential vendors/consultants are required to register on the AFC vendor Management System. All new entrants and existing vendors must comply with the following standards: Anti-Bribery/Anti-Corruption and Anti-money Laundering. Thereafter, ACP will undertake a systematic pre-qualification to assess the suitability of the firm, for inclusion in AFC's database of consultants and service providers.
- Audit: The framework will be subject to AFC's and ACP' audit policies and will be audited by external auditors on an annual basis. AFC's and ACP' internal audit team monitor transaction activities relating to disbursements of funds for each investment as well as repayments following best international standards.

G.4. Disclosure of funding proposal

Indicate below whether or not the funding proposal includes confidential information.

- No confidential information: The accredited entity confirms that the funding proposal, including its annexes, may be disclosed in full by the GCF, as no information is being provided in confidence.
- With confidential information: The accredited entity declares that the funding proposal, including its annexes, may not be disclosed in full by the GCF, as certain information is being provided in confidence.

Accordingly, the accredited entity is providing to the Secretariat the following two copies of the funding proposal, including all annexes:

- full copy for internal use of the GCF in which the confidential portions are marked accordingly, together with an explanatory note regarding the said portions and the corresponding reason for confidentiality under the accredited entity's disclosure policy, and
- redacted copy for disclosure on the GCF website.

The funding proposal can only be processed upon receipt of the two copies above, if containing confidential information.

H. ANNEXES

H.1. Mandatory annexes

- Annex 1 NDA no-objection letter(s) **(template provided)**
- Annex 2 Feasibility study - and a market study, if applicable
- Annex 3 Economic and/or financial analyses in spreadsheet format
- Annex 4 Detailed budget plan **(template provided)**
- Annex 5 Implementation timetable including key project/program milestones **(template provided)**
- Annex 6 E&S document corresponding to the E&S category (A, B or C; or I1, I2 or I3):
(ESS disclosure form provided)
 - Environmental and Social Impact Assessment (ESIA) or
 - Environmental and Social Management Plan (ESMP) or
 - Environmental and Social Management System (ESMS)
 - Others (please specify – e.g., Resettlement Action Plan, Resettlement Policy Framework, Indigenous People’s Plan, Land Acquisition Plan, etc.)
- Annex 7 Summary of consultations and stakeholder engagement plan
- Annex 8 Gender assessment and project/program-level action plan **(template provided)**
- Annex 9 Legal due diligence (regulation, taxation and insurance)
- Annex 10 Procurement plan **(template provided)**
- Annex 11 Monitoring and evaluation plan **(template provided)**
- Annex 12 AE fee request **(template provided)**
- Annex 13 Co-financing commitment letter, if applicable **(template provided)**
- Annex 14 Term sheet including a detailed disbursement schedule and, if applicable, repayment schedule

H.2. Other annexes as applicable

- Annex 15 Evidence of internal approval **(template provided)**
- Annex 16 Map(s) indicating the location of proposed interventions
- Annex 17 Multi-country project/program information **(template provided)**
- Annex 18 Appraisal, due diligence or evaluation report for proposals based on up-scaling or replicating a pilot project
- Annex 19 Procedures for controlling procurement by third parties or executing entities undertaking projects financed by the entity
- Annex 20 First level AML/CFT (KYC) assessment
- Annex 21 Operations manual (Operations and maintenance)
- Annex 22 Assessment of GHG emission reductions and their monitoring and reporting (for mitigation and cross cutting-projects)⁴⁴
- Annex X Other references

* Please note that a funding proposal will be considered complete only upon receipt of all the applicable supporting documents.

⁴⁴ Annex 22 is mandatory for mitigation and cross-cutting projects.



To: The Green Climate Fund ("GCF")

Date: 07/07/2022

Re: Funding proposal for the GCF by the Africa Finance Corporation regarding the Infrastructure Climate Resilient Fund (ICRF)

Dear Madam, Sir,

We refer to the programme titled *Infrastructure Climate Resilient Fund (ICRF)* in Benin as included in the funding proposal submitted by the Africa Finance Corporation to us on 25 January 2022.

The undersigned is the duly authorized representative of Mr. Martin Pépin Aïna, the National Designated Authority of Benin.

Pursuant to GCF decision B.08/10, the content of which we acknowledge to have reviewed, we hereby communicate our no-objection to the programme as included in the funding proposal.

By communicating our no-objection, it is implied that:

- (a) The government of Benin has no-objection to the programme as included in the funding proposal;
- (b) The programme as included in the funding proposal is in conformity with the national priorities, strategies and plans of Benin;
- (c) In accordance with the GCF's environmental and social safeguards, the programme as included in the funding proposal is in conformity with relevant national laws and regulations.

We also confirm that our national process for ascertaining no-objection to the programme as included in the funding proposal has been duly followed.

We also confirm that our no-objection applies to all projects or activities to be implemented within the scope of the programme

We acknowledge that this letter will be made publicly available on the GCF website.

Kind regards,

Mr. Martin Pépin Aïna

Director General, Division of Climate Change
Ministry of Living Environment and Sustainable Development
National Designated Authority
Benin



REPUBLIQUE DU CAMEROUN
PAIX-TRAVAIL-PATRIE

MINISTRE DE L'ENVIRONNEMENT,
DE LA PROTECTION DE LA NATURE ET DU
DEVELOPPEMENT DURABLE



REPUBLIC OF CAMEROUN
PEACE-WORK-FATHERLAND

MINISTRY OF ENVIRONMENT,
PROTECTION OF NATURE AND
SUSTAINABLE DEVELOPMENT

Secrétariat Général

Secretariat General

N° _____/NS/MINDED/CAB/SG

Yaoundé, 28 june 2022

To: The Green Climate Fund ("GCF")

Re: Funding proposal for the GCF by the Africa Finance Corporation regarding the Infrastructure Climate Resilient Fund (ICRF)

Dear Madam, Sir,

We refer to the programme titled *the Infrastructure Climate Resilient Fund (ICRF)* in Cameroon as included in the funding proposal submitted by the Africa Finance Corporation to us on 12 October 2021.

The undersigned is the duly authorized representative of Mr. Paul Tchawa, the National Designated Authority of Cameroon.

Pursuant to GCF decision B.08/10, the content of which we acknowledge to have reviewed, we hereby communicate our no-objection to the programme as included in the funding proposal.

By communicating our no-objection, it is implied that:

- (a) The government of Cameroon has no-objection to the programme as included in the funding proposal;
- (b) The programme as included in the funding proposal is in conformity with the national priorities, strategies and plans of Cameroon;
- (c) In accordance with the GCF's environmental and social safeguards, the programme as included in the funding proposal is in conformity with relevant national laws and regulations.

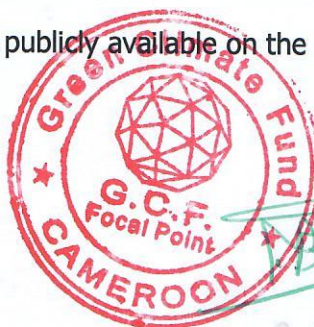
We also confirm that our national process for ascertaining no-objection to the programme as included in the funding proposal has been duly followed.

We also confirm that our no-objection applies to all projects or activities to be implemented within the scope of the programme

We acknowledge that this letter will be made publicly available on the GCF website.

Kind regards,

Pr Paul Tchawa
The National Designated Authority of Cameroon
Mr. Paul Tchawa
Cameroon



Paul Tchawa
Prof. Paul TCHAWA

REPUBLIQUE DU TCHAD

CONSEIL MILITAIRE DE TRANSITION

PRESIDENCE DU CONSEIL

PRIMATURE

MINISTRE DE L'ENVIRONNEMENT,
DE LA PECHE ET DU DEVELOPPEMENT DURABLE

DIRECTION GENERALE DU MINISTERE

AUTORITE NATIONALE DESIGNEE

N° 005 /CMT/PC/PMT/MEPDD/DGM/AND/21

UNITE - TRAVAIL - PROGRES



To: The Green Climate Fund ("GCF")

N'djamena, 10/4/2021

Re: Funding proposal for the GCF by Africa Finance Corporation regarding Infrastructure Climate Resilient Fund (ICRF)

Dear Madam, Sir,

We refer to the programme titled **Infrastructure Climate Resilient Fund (ICRF)** in Chad as included in the funding proposal submitted by Africa Finance Corporation to us on 09/20/2021 "**Infrastructure Climate Resilient Fund (ICRF)**".

The undersigned is the duly authorized representative of Mr. Ibrahim Charfadine Abdelkerim, the National Designated Authority/focal point of Chad.

Pursuant to GCF decision B.08/10, the content of which we acknowledge to have reviewed, we hereby communicate our no-objection to the programme as included in the funding proposal.

By communicating our no-objection, it is implied that:

- (a) The government of Chad has no-objection to the programme as included in the funding proposal;
- (b) The programme as included in the funding proposal is in conformity with the national priorities, strategies and plans of Chad;
- (c) In accordance with the GCF's environmental and social safeguards, the programme as included in the funding proposal is in conformity with relevant national laws and regulations.

We also confirm that our national process for ascertaining no-objection to the programme as included in the funding proposal has been duly followed.

We also confirm that our no-objection applies to all projects or activities to be implemented within the scope of the programme

We acknowledge that this letter will be made publicly available on the GCF website.

Kind regards,

Name: Ibrahim Charfadine Abdelkerim

Title: National Designated Authority of Chad

**MINISTÈRE DE L'ENVIRONNEMENT
ET DU DÉVELOPPEMENT DURABLE**

AUTORITÉ NATIONALE DÉSIGNÉE

000005 N° MINEDD/CAB/AND/pf

RÉPUBLIQUE DE CÔTE D'IVOIRE
Union – Discipline – Travail



To: The Green Climate Fund (“GCF”)

Abidjan, 17 December 2021

**Re: Funding proposal for the GCF by Africa Finance Corporation (AFC) regarding
“Infrastructure Climate Resilient Fund (ICRF)”.**

Dear Madam, Sir,

We refer to the programme titled “*Infrastructure Climate Resilient Fund (ICRF)*” in Côte d'Ivoire as included in the funding proposal submitted by **Africa Finance Corporation (AFC)** to us on 13 December 2021.

The undersigned is the duly authorized representative of Marcel YAO, the National Designated Authority of Côte d'Ivoire.

Pursuant to GCF decision B.08/10, the content of which we acknowledge to have reviewed, we hereby communicate our no-objection to the programme as included in the funding proposal.

By communicating our no-objection, it is implied that:

- (a) The government of Côte d'Ivoire has no-objection to the programme as included in the funding proposal;
- (b) The programme as included in the funding proposal is in conformity with the national priorities, strategies and plans of Côte d'Ivoire;
- (c) In accordance with the GCF's environmental and social safeguards, the programme as included in the funding proposal is in conformity with relevant national laws and regulations.

We also confirm that our national process for ascertaining no-objection to the programme as included in the funding proposal has been duly followed.

We also confirm that our no-objection applies to all projects or activities to be implemented within the scope of the programme.

We acknowledge that this letter will be made publicly available on the GCF website.

Kind regards,

Name: Marcel YAO

Technical Advisor to the Minister in charge of International Cooperation and Resource Mobilization
National Designated Authority of Côte d'Ivoire





N° 210

Djibouti, le

09 AUG 2022

رقم
جيبوتي في

Re: Funding proposal for the GCF by the Africa Finance Corporation regarding the Infrastructure Climate Resilient Fund (ICRF)

Dear Madam, Sir,

We refer to the programme titled *the Infrastructure Climate Resilient Fund (ICRF)* in Djibouti as included in the funding proposal submitted by the Africa Finance Corporation to us on 20 June 2022.

The undersigned is the duly authorized representative of Mr. Dini Abdallah Omar, the National Designated Authority of Djibouti.

Pursuant to GCF decision B.08/10, the content of which we acknowledge to have reviewed, we hereby communicate our no-objection to the programme as included in the funding proposal.

By communicating our no-objection, it is implied that:

- The government of Djibouti has no-objection to the programme as included in the funding proposal;
- The programme as included in the funding proposal is in conformity with the national priorities, strategies and plans of Djibouti;
- In accordance with the GCF's environmental and social safeguards, the programme as included in the funding proposal is in conformity with relevant national laws and regulations.

We also confirm that our national process for ascertaining no-objection to the programme as included in the funding proposal has been duly followed.

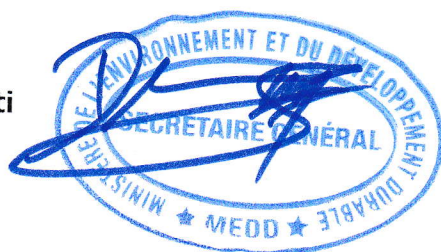
We also confirm that our no-objection applies to all projects or activities to be implemented within the scope of the programme

We acknowledge that this letter will be made publicly available on the GCF website.

Kind regards,

Dini Abdallah Omar

GCF Focal Point-Djibouti





To: The Green Climate Fund ("GCF")

Kinshasa, 2 June 2022

Re: Funding proposal for the GCF by Africa Finance Corporations regarding Infrastructures Climate Resilient Funds (ICRF).

Dear Madam, Sir,

We refer to the programme titled *Infrastructures Climate Resilient Funds (ICRF)* in The Democratic Republic of Congo as included in the funding proposal submitted by Africa Finance Corporations to us on 2 June 2022.

The undersigned is the duly authorized representative of Hans Andre Lohayo Djamba, the National Designated Authority of The Democratic Republic of Congo.

Pursuant to GCF decision B.08/10, the content of which we acknowledge to have reviewed, we hereby communicate our no-objection to the programme as included in the funding proposal.

By communicating our no-objection, it is implied that:

- (a) The government of the Democratic Republic of Congo has no-objection to the program as included in the funding proposal.
- (b) The program as included in the funding proposal is in conformity with the national priorities, strategies and plans of the Democratic Republic of Congo.
- (c) In accordance with the GCF's environmental and social safeguards, the program as included in the funding proposal is in conformity with relevant national laws and regulations.

We also confirm that our national process for ascertaining no-objection to the programme as included in the funding proposal has been duly followed.

We also confirm that our no-objection applies to all projects or activities to be implemented within the scope of the programme

We acknowledge that this letter will be made publicly available on the GCF website.

Kind regards,

Dr. Hans André Lohayo Djamba
DRC Coordinator CDM and GCF
National Coordination of GCF&CDM
The Democratic Republic of Congo

N° 00202 /PR/CNCT/CS/SP.

Libreville, le 21 JUIN 2022

The Special Advisor,
Permanent Secretary of the National Climate Council
To
The Green Climate Fund (“GCF”)
-Republic of Korea, Songdo-

Object: Funding proposal for the GCF by African Finance Corporation (AFC) regarding Infrastructure Climate Resilient Fund (ICRF)

Dear Madam, Sir,

We refer to the programme titled Infrastructure Climate Resilient Fund (ICRF) in Gabon as included in the funding proposal submitted by African Finance Corporation (AFC) to us on 20 June 2022.

The undersigned is the duly authorized representative of Mr. Tanguy GAHOUMA-BEKALE, the National Designated Authority of Gabon.

Pursuant to GCF decision B.08/10, the content of which we acknowledge to have reviewed, we hereby communicate our no-objection to the programme as included in the funding proposal.

By communicating our no-objection, it is implied that:

- (a) The government of Gabon has no-objection to the programme as included in the funding proposal;
- (b) The programme as included in the funding proposal is in conformity with the national priorities, strategies and plans of Gabon;
- (c) In accordance with the GCF’s environmental and social safeguards, the programme as included in the funding proposal is in conformity with relevant national laws and regulations.

We also confirm that our national process for ascertaining no-objection to the programme as included in the funding proposal has been duly followed.

We also confirm that our no-objection applies to all projects or activities to be implemented within the scope of the programme.

We acknowledge that this letter will be made publicly available on the GCF website.

Yours Sincerely,



Tanguy GAHOUMA-BEKALE



REPUBLIC OF THE GAMBIA
 MINISTRY OF FINANCE AND ECONOMIC AFFAIRS
 THE QUADRANGLE, BANJUL, THE GAMBIA.

ADM173/222/01(2)

June 20th 2022

The Executive Director
 The Green Climate Fund (GCF)
 Incheon, South Korea

Re: Funding proposal for the GCF by Africa Finance Corporation (AFC) regarding the Infrastructure Climate Resilience Fund (ICRF)

Dear Sir,

We refer to the programme titled **Infrastructure Climate Resilience Fund (ICRF)** in The Gambia as included in the funding proposal submitted by **Africa Finance Corporation (AFC)** to us on 29 November 2021.

The undersigned is the duly authorized representative of Mr Bai Madi Ceesay, the National Designated Authority of The Gambia.

Pursuant to GCF decision B.08/10, the content of which we acknowledge to have reviewed, we hereby communicate our no-objection to the programme as included in the funding proposal.

By communicating our no-objection, it is implied that:

- (a) The government of The Gambia has no-objection to the programme as included in the funding proposal;
- (b) The programme as included in the funding proposal is in conformity with the national priorities, strategies and plans of The Gambia;
- (c) In accordance with the GCF's environmental and social safeguards, the programme as included in the funding proposal is in conformity with relevant national laws and regulations.

We also confirm that our national process for ascertaining no-objection to the programme as included in the funding proposal has been duly followed.

We also confirm that our no-objection applies to all projects or activities to be implemented within the scope of the programme

We acknowledge that this letter will be made publicly available on the GCF website.

Kind regards,

Bai Madi Ceesay
 NDA, The Gambia



MINISTRY
OF
FINANCE

P.O.Box MB 40, Ministries, Accra Page 143

Digital Address : GA-144-2024

Kindly quote this number and date on all correspondence

My Ref. No. : MOF/ESRD/NREC/GCF/08/22

Your Ref. No. _____

19
AUGUST, 2022

Dear Mr. Yannick Glemarec

**RE: FUNDING PROPOSAL FOR THE GCF BY AFRICA FINANCE CORPORATION
REGARDING THE INFRASTRUCTURE CLIMATE RESILIENT FUND**

We refer to the "Infrastructure Climate Resilient Fund (ICRF)" Funding Proposal submitted by the Africa Finance Corporation (ACF) to the National Designated Authority (NDA), Ghana, on 8th September, 2021 seeking No-objection Letter from the NDA.

2. The undersigned is the duly authorized representative of the Ministry of Finance, the National Designated Authority/Focal Point of the Republic of Ghana.

3. Pursuant to GCF decision B.08/10, the content of which we acknowledge to have reviewed, we hereby communicate our no-objection to the programme as included in the funding proposal.

4. By communicating our no-objection, it is implied that:

- a. The Government of the Republic of Ghana has no-objection to the programme as included in the Funding Proposal;
- b. The Infrastructure Climate Resilient Fund as included in the funding proposal is in conformity with the national priorities, strategies and plans of Ghana; and
- c. In accordance with the GCF's environmental and social safeguards, the programme as included in the funding proposal is in conformity with relevant national laws and regulations.

5. We confirm that our national process for ascertaining no-objection to the programme as included in the funding proposal has been duly followed.

6. We also confirm that our no-objection applies to all projects or activities to be implemented within the scope of the programme.

7. This No-objection replaces the earlier letter which was issued by the National Designated Authority on 13th July 2022.

8. We acknowledge that this letter will be made publicly available on the GCF website.

**DR. ALHASSAN IDDRISU
DIRECTOR, ESRD/NDA, MOF
FOR: MINISTER**

**THE EXECUTIVE DIRECTOR
GREEN CLIMATE FUND ("GCF")
G-TOWER, 24-4 SONGDO-DONG,
YEONSU-GU INCHEON CITY,
REPUBLIC OF KOREA.**

Cc: The Hon. Minister, MOF
The Hon. Minister of State, MoF
The Hon. Deputy Ministers, MOF
The Chief Director, MoF
The CEO, AFC

Tel: +233 (0) 302 747 197
Email : info@mofep.gov.gh
Website : www.mofep.gov.gh



SECRETARIAT EXECUTIF DE L'AUTORITE
NATIONALE DESIGNEE DU FONDS VERT
POUR LE CLIMAT

095
Réf...../MEDD/CAB/SE-AND-FVC/2022

Conakry, le 24 JUN 2022

Le Secrétaire Exécutif
A

To: The Green Climate Fund ("GCF")

[place]

Re: Funding proposal for the GCF by the Africa Finance Corporation regarding the Infrastructure Climate Resilient Fund (ICRF)

Dear Madam, Sir,

We refer to the programme titled *the Infrastructure Climate Resilient Fund (ICRF)* in Guinea as included in the funding proposal submitted by the Africa Finance Corporation to us on 21 November 2021.

The undersigned is the duly authorized representative of Mr. Pierre LAMAH, the National Designated Authority of Guinea.

Pursuant to GCF decision B.08/10, the content of which we acknowledge to have reviewed, we hereby communicate our no-objection to the programme as included in the funding proposal.

By communicating our no-objection, it is implied that:

- (a) The government of Guinea has no-objection to the programme as included in the funding proposal;
- (b) The programme as included in the funding proposal is in conformity with the national priorities, strategies and plans of Guinea;
- (c) In accordance with the GCF's environmental and social safeguards, the programme as included in the funding proposal is in conformity with relevant national laws and regulations.

We also confirm that our national process for ascertaining no-objection to the programme as included in the funding proposal has been duly followed.

We also confirm that our no-objection applies to all projects or activities to be implemented within the scope of the programme

We acknowledge that this letter will be made publicly available on the GCF website.

Kind regards,

Mr. Pierre LAMAH
National Designated Authority
Guinea



REPUBLIC OF KENYA

THE NATIONAL TREASURY AND PLANNING

Telegraphic Address: 22921
FAX NO. 310833
Telephone: 2252299

THE NATIONAL TREASURY
P O BOX 30007 – 00100
NAIROBI

When Replying Please Quote

Ref: TNT/CONF/36/021/C/(101)

Date: June 28, 2022

Mr. Yannick Glemarec
Executive Director
Green Climate Fund
G-Tower, 24-4 Songdo-dong
Yeonsu-gu
Incheon City, Republic of Korea

Dear

ED,

Re: Funding proposal for the GCF by the Africa Finance Corporation regarding Infrastructure Climate Resilient Fund

We refer to the programme titled "*Infrastructure Climate Resilient Fund*" in Kenya as included in the funding proposal submitted by the Africa Finance Corporation to us on May 9th, 2020.

The undersigned is the duly authorized representative of the National Treasury, the National Designated Authority of Kenya.

Pursuant to GCF decision B.08/10, the content of which we acknowledge to have reviewed, we hereby communicate our no-objection to the project as included in the funding proposal.

By communicating our no-objection, it is implied that:

- (a) The Government of Kenya has no-objection to the programme as included in the funding proposal;
- (b) The programme as included in the funding proposal is in conformity with the national priorities, strategies and plans of Kenya;

- (c) In accordance with the GCF's environmental and social safeguards, the programme as included in the funding proposal is in conformity with relevant national laws and regulations.

We also confirm that our national process for ascertaining no-objection to the programme as included in the funding proposal has been duly followed. Further, we confirm that our no-objection applies to all projects or activities to be implemented within the scope of the programme.

We acknowledge that this letter will be made publicly available on the GCF website.

Yours

Sincerely,

Julius M. Muia
JULIUS M. MUIA, PhD, CBS
PRINCIPAL SECRETARY/NATIONAL TREASURY

Copy to: **Hon. (Amb.) Ukur Yatani Kanacho, EGH**
Cabinet Secretary
The National Treasury and Planning
NAIROBI

Ms. Ayaan Zeinab Adam
Senior Director & Chief Executive Officer AFC Capital Partners
African Finance Corporation (AFC)
LAGOS, NIGERIA

Agence de l'Environnement et du
Développement Durable
(AEDD)

Bamako, 27th June 2022

*The Director General of the Environment and
Sustainable Development Agency*

To

Mr. Yannick Glemarec
Executive Director of Green Climate Fund Secretariat
G-Tower, 24-4 Songodo dong Yeonsu gu
Incheon City Republic of Korea



N° 003400 MEADD-AEDD.

Re: Funding Proposal by Africa Finance Corporation regarding Infrastructure Climate Resilient Fund (ICRF)

Dear Sir,

We refer to the programme titled "*Infrastructure Climate Resilient Fund (ICRF)*" in Multi Country including Mali as included in the funding proposal submitted by Africa Finance Corporation to us on 1 October 2021.

The undersigned is the duly authorized representative of Environment and Sustainable Development Agency, the National Designated Authority of Mali.

Pursuant to GCF decision B.08/10, the content of which we acknowledge to have reviewed, we hereby communicate our no-objection to the programme as included in the funding proposal.

By communicating our no-objection, it is implied that:

- The government of Mali has no-objection to the programme as included in the funding proposal;
- The programme as included in the funding proposal is in conformity with the national priorities, strategies and plans of Mali;
- In accordance with the GCF's environmental and social safeguards, the programme as included in the funding proposal is in conformity with relevant national laws and regulations.

We also confirm that our national process for ascertaining no-objection to the programme as included in the funding proposal has been duly followed.

We also confirm that our no-objection applies to all projects or activities to be implemented within the scope of the programme.

We acknowledge that this letter will be made publicly available on the GCF website.

Kind regards,

The Director general,

Docteur Aliassane BA
Chevalier de l'Ordre national

République Islamique de Mauritanie
Honneur - Fraternité – Justice



الجمهورية الإسلامية الموريتانية
شرف - إخاء - عدل

**Ministère de l'Environnement et du
Développement Durable**

وزارة البيئة والتنمية المستدامة

Direction Climat et Economie Verte

مديرية المناخ والإقتصاد الأخضر

N° : 039/22

أنواكشو/26/08/2022, Nouakchott

Le Directeur المدير

To: The Green Climate Fund, DEPUTY EXECUTIVE DIRECTOR, G24- 4 SANGDO DONG YEONSU GU - INCHEON CITY, REPUBLIC OF COREA

Object : Funding proposal for the GCF by the Africa Finance Corporation regarding the Infrastructure Climate Resilient Fund (ICRF)

Dear Madam, Sir,

We refer to the programme titled *the Infrastructure Climate Resilient Fund (ICRF)* in Mauritania as included in the funding proposal submitted by the Africa Finance Corporation to us on 21 March 2022.

The undersigned is the duly authorized representative of Mr. Sidi Mohammed El Wavi , the National Designated Authority of Mauritania.

Pursuant to GCF decision B.08/10, the content of which we acknowledge to have reviewed, we hereby communicate our no-objection to the programme as included in the funding proposal.

By communicating our no-objection, it is implied that:

- The government of Mauritania has no-objection to the programme as included in the funding proposal;
- The programme as included in the funding proposal is in conformity with the national priorities, strategies and plans of Mauritania;
- In accordance with the GCF's environmental and social safeguards, the programme as included in the funding proposal is in conformity with relevant national laws and regulations.

We also confirm that our national process for ascertaining no-objection to the programme as included in the funding proposal has been duly followed.

We also confirm that our no-objection applies to all projects or activities to be implemented within the scope of the programme

We acknowledge that this letter will be made publicly available on the GCF website.

Kind regards,

Sidi Mohamed EL WAVI

PF/AND – Mauritania



Copy : MEDD



REPUBLIC OF NAMIBIA

MINISTRY OF ENVIRONMENT, FORESTRY AND TOURISM

Tel. No. 061 – 2842111
 Fax. No. 061 - 229936
 E-mail: Petrus. muteyauli@mef.t.gov.na
 Enquiries: Mr. P. Muteyauli

Cnr of Dr. Kenneth David Kaunda Street
 & Robert Mugabe Avenue
 Private Bag 13306
 Windhoek

To: The Executive Director
 The Green Climate Fund ("GCF")

1 June 2022

Re: Funding proposal for the GCF by Africa Finance Corporation (AFC) regarding Infrastructure Climate Resilient Fund (ICRF), Africa - multi-country program to mobilize blended finance at scale for climate-resilient infrastructure

Dear Madam, Sir,

We refer to the project titled Infrastructure Climate Resilient Fund (ICRF), Africa - multi-country program to mobilize blended finance at scale for climate-resilient infrastructure in Namibia as included in the funding proposal submitted by Africa Finance Corporation (AFC) to us on April 2022.

The undersigned is the duly authorized representative of Ministry of Environment, Forestry and Tourism, the National Designated Authority of Namibia.

Pursuant to GCF decision B.08/10, the content of which we acknowledge to have reviewed, we hereby communicate our no-objection to the project as included in the funding proposal.

By communicating our no-objection, it is implied that:

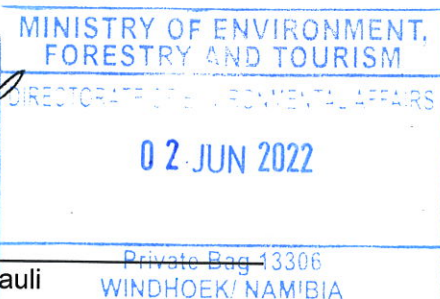
- (a) The government of Namibia has no-objection to the project as included in the funding proposal;
- (b) The project as included in the funding proposal is in conformity with the national priorities, strategies and plans of Namibia;
- (c) In accordance with the GCF's environmental and social safeguards, the project as included in the funding proposal is in conformity with relevant national laws and regulations.

We also confirm that our national process for ascertaining no-objection to the project as included in the funding proposal has been duly followed.

We also confirm that our no-objection applies to all projects or activities to be implemented within the scope of the programme

We acknowledge that this letter will be made publicly available on the GCF website.

Kind regards,



Petrus Muteyauli
 Deputy Director: Multilateral Environmental Agreements
 Ministry of Environment, Forestry and Tourism



FEDERAL MINISTRY OF ENVIRONMENT

HEADQUARTERS, MABUSHI, ABUJA.

FMENV/DCC/GCF/037/7

Abuja, July 28, 2022

Ref: No.....

Date.....

The Green Climate Fund ("GCF")
Songdo International Business District,
175, Art Centre-daero,
Yeonsu-gu Incheon 406-840
Republic of Korea.

Dear Madam, Sir,

RE: FUNDING PROPOSAL FOR THE GCF BY THE AFRICA FINANCE CORPORATION REGARDING THE INFRASTRUCTURE CLIMATE RESILIENT FUND(ICRF)

We refer to the programme titled the Infrastructure Climate Resilient Fund in Nigeria as included in the funding proposal submitted by the Africa Finance Corporation to us on 10 September, 2021.

The undersigned is the duly authorized representative of the National Designation Authority/ Focal point of the Federal Republic of Nigeria.

Pursuant to GCF decision B.08/10, the content of which we acknowledge to have reviewed, we hereby communicate our no-objection to the programme as included in the funding proposal.

By communicating our no-objection, it is implied that:

- (a) The government of Nigeria has no-objection to the programme as included in the funding proposal;
- (b) The programme as included in the funding proposal is in conformity with the national priorities, strategies and plans of Nigeria;
- (c) In accordance with the GCF's environmental and social safeguards, the programme as included in the funding proposal is in conformity with relevant national laws and regulations.

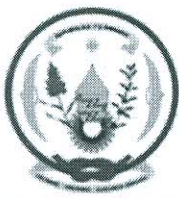
We confirm that our national process for ascertaining no-objection to the programme as included in the funding proposal has been duly followed.

We also confirm that our no-objection applies to all projects or activities to be implemented within the scope of the programme

We acknowledge that this letter will be made publicly available on the GCF website.

Kind regards,

Iniobong Abiola-Awe Ph.D
NDA/Director, Department of Climate Change
Federal Ministry of Environment
Nigeria



**RWANDA ENVIRONMENT
MANAGEMENT AUTHORITY
(REMA)**



Republic of Rwanda

Kigali, on 09 AUG 2022
N° 2024/NDA/2022

**Executive Director
Green Climate Fund ("GCF")
Incheon-South Korea**

Re: Funding proposal for the GCF by the Africa Finance Corporation regarding the Infrastructure Climate Resilient Fund (ICRF)

Dear Sir,

We refer to the programme titled *the Infrastructure Climate Resilient Fund (ICRF)* in Rwanda as included in the funding proposal submitted by the Africa Finance Corporation to us on 21 March 2022.

The undersigned is the duly authorized representative of Rwanda Environment Management Authority, the National Designated Authority of Rwanda.

Pursuant to GCF decision B.08/10, the content of which we acknowledge to have reviewed, we hereby communicate our no-objection to the programme as included in the funding proposal.

By communicating our no-objection, it is implied that:

- (a) The Government of Rwanda has no-objection to the programme as included in the funding proposal;
- (b) The programme as included in the funding proposal is in conformity with the national priorities, strategies and plans of Rwanda;
- (c) In accordance with the GCF's environmental and social safeguards, the programme as included in the funding proposal is in conformity with relevant national laws and regulations.

We also confirm that our national process for ascertaining no-objection to the programme as included in the funding proposal has been duly followed.

We also confirm that our no-objection applies to all projects or activities to be implemented within the scope of the programme

We acknowledge that this letter will be made publicly available on the GCF website.

Kind regards,

**Juliet KABERA
Director General**



Cc:

- Permanent Secretary/MoE-KIGALI/RWANDA
- Vice President – Business Development/AFC Capital Partners/LAGOS-NIGERIA



GOVERNMENT OF SIERRA LEONE
Environment Protection Agency
Ministry of the Environment
92 Dundas Street, Freetown



Ref: EPA-SL/GCF/NDA/AFC/FP/12/21

6th June 2022

To: The Green Climate Fund (“GCF”)

Dear Sir/Madam

Re: Funding proposal for the GCF by Africa Finance Corporation (AFC) regarding Infrastructure Climate Resilient Fund (ICRF).

We refer to the programme titled Infrastructure Climate Resilient Fund (ICRF) in Africa (including Sierra Leone as included in the funding proposal submitted by Africa Finance Corporation (AFC) to us on 12th October 2021.

The undersigned is the duly authorized representative of Dr. Bondi Gevao, Executive Chairman of the Environment Protection Agency, Sierra Leone, the National Designated Authority/focal point of Sierra Leone.

Pursuant to GCF decision B.08/10, the content of which we acknowledge to have reviewed, we hereby communicate our no-objection to the project as included in the funding proposal.

By communicating our no-objection, it is implied that:

- (a) The government of Sierra Leone has no-objection to the programme as included in the funding proposal;
- (b) The programme as included in the funding proposal is in conformity with the national priorities, strategies and plans of Sierra Leone
- (c) In accordance with the GCF’s environmental and social safeguards, the project as included in the funding proposal is in conformity with relevant national laws and regulations.

We also confirm that our national process for ascertaining no-objection to the programme as included in the funding proposal has been duly followed.

We also confirm that our no-objection applies to all projects or activities to be implemented within the scope of the programme

We acknowledge that this letter will be made publicly available on the GCF website.

Yours sincerely,

.....
Dr. Bondi Gevao
National Designated Authority
Executive Chairman, EPA-SL

MINISTRE DE L'ENVIRONNEMENT
ET DES RESSOURCES FORESTIERES

SECRETARIAT GENERAL

DIRECTION DE L'ENVIRONNEMENT

Point Focal National du Fonds Vert pour le Climat



REPUBLIQUE TOGOLAISE

Travail - Liberté - Patrie

To: The Green Climate Fund ("GCF")

Référence n° 0.01/PF/FVC -
Page : 1/1

Lome, Togo, 22 June 2022

Re: Funding proposal for the GCF by the Africa Finance Corporation regarding the Infrastructure Climate Resilient Fund (ICRF)

Dear Madam, Sir,

We refer to the programme titled *the Infrastructure Climate Resilient Fund (ICRF)* in Togo as included in the funding proposal submitted by the Africa Finance Corporation to us on 12 October 2021.

The undersigned is the duly authorized representative of AGRIGNAN Esso Sam Abdou Rassidou, the National Designated Authority of Togo.

Pursuant to GCF decision B.08/10, the content of which we acknowledge to have reviewed, we hereby communicate our no-objection to the programme as included in the funding proposal.

By communicating our no-objection, it is implied that:

- (a) The government of Togo has no-objection to the programme as included in the funding proposal;
- (b) The programme as included in the funding proposal is in conformity with the national priorities, strategies and plans of Togo;
- (c) In accordance with the GCF's environmental and social safeguards, the programme as included in the funding proposal is in conformity with relevant national laws and regulations.

We also confirm that our national process for ascertaining no-objection to the programme as included in the funding proposal has been duly followed.

We also confirm that our no-objection applies to all projects or activities to be implemented within the scope of the programme

We acknowledge that this letter will be made publicly available on the GCF website.

Kind regards,



Mr. Esso-Sam Abdou Rassidou AGRIGNAN
GCF Focal Point
Togo

All communication should be addressed to the
Permanent Secretary
Telephone: (260 211) 252395
(260 211) 252394
(260 211) 252391



REPUBLIC OF ZAMBIA

In reply please quote:

No.

MINISTRY OF GREEN ECONOMY AND ENVIRONMENT

OFFICE OF THE PERMANENT SECRETARY
CORNER OF JOHN MBITA & NATIONALIST ROADS
P.O. BOX 30147
LUSAKA, ZAMBIA

To: The Green Climate Fund ("GCF")

Lusaka, 28 September 2022

Re: Funding proposal for the GCF by the Africa Finance Corporation regarding the Infrastructure Climate Resilient Fund (ICRF)

Dear Madam, Sir,

We refer to the programme titled *the Infrastructure Climate Resilient Fund (ICRF)* in Zambia as included in the funding proposal submitted by the Africa Finance Corporation to us on 21 October 2021.

The undersigned is the duly authorized representative of Francis Mpampi, the National Designated Authority of Zambia.

Pursuant to GCF decision B.08/10, the content of which we acknowledge to have reviewed, we hereby communicate our no-objection to the programme as included in the funding proposal.

By communicating our no-objection, it is implied that:

- (a) The government of Zambia has no-objection to the programme as included in the funding proposal;
- (b) The programme as included in the funding proposal is in conformity with the national priorities, strategies and plans of Zambia;
- (c) In accordance with the GCF's environmental and social safeguards, the programme as included in the funding proposal is in conformity with relevant national laws and regulations.

We also confirm that our national process for ascertaining no-objection to the programme as included in the funding proposal has been duly followed.

We also confirm that our no-objection applies to all projects or activities to be implemented within the scope of the programme

We acknowledge that this letter will be made publicly available on the GCF website.

Kind regards,

Francis Mpampi
National Coordinator – National Designated Authority
Ministry of Green Economy and Environment
Zambia

Environmental and social safeguards report form pursuant to para. 17 of the IDP

Basic project or programme information	
Project or programme title	Infrastructure Climate Resilient Fund (ICRF)
Existence of subproject(s) to be identified after GCF Board approval	Yes
Sector (public or private)	Private
Accredited entity	Africa Finance Corporation (AFC)
Environmental and social safeguards (ESS) category	Category I-1
Location – specific location(s) of project or target country or location(s) of programme	Benin*, Cameroon, Chad, Cote d'Ivoire, Djibouti*, Democratic Republic of Congo, Gabon, the Gambia, Ghana*, Guinea, Kenya*, Mali, Mauritania*, Namibia, Nigeria, Rwanda*, Sierra Leone, Togo, and Zambia*.
Environmental and Social Impact Assessment (ESIA) (if applicable)	
Date of disclosure on accredited entity's website	N/A
Language(s) of disclosure	N/A
Explanation on language	N/A
Link to disclosure	N/A
Other link(s)	N/A
Remarks	N/A
Environmental and Social Management Plan (ESMP) (if applicable)	
Date of disclosure on accredited entity's website	N/A
Language(s) of disclosure	N/A
Explanation on language	N/A
Link to disclosure	N/A
Other link(s)	N/A
Remarks	N/A
Environmental and Social Management (ESMS) (if applicable)	
Date of disclosure on accredited entity's website	Tuesday, May 3, 2022
Language(s) of disclosure	English and French
Explanation on language	English and French are the official languages, which are widely spoken in the countries targeted by the Programme.
Link to disclosure	<p>English: https://s3.eu-central-1.amazonaws.com/afc-assets/afc/ACP-ICRF-ES-Framework-16-May-2022-English-clean-VF.pdf</p> <p>French: https://s3.eu-central-1.amazonaws.com/afc-assets/afc/ACP-ICRF-ES-Framework- Fr.pdf</p>

Other link(s)	https://www.africafc.org/our-impact/our-publications
Remarks	An ESMS consistent with the requirements for a Category I-1 programme is contained in the “Environmental and Social Management System”.*
Any other relevant ESS reports, e.g. Resettlement Action Plan (RAP), Resettlement Policy Framework (RPF), Indigenous Peoples Plan (IPP), IPP Framework (if applicable)	
Description of report/disclosure on accredited entity’s website	Tuesday, May 3, 2022
Language(s) of disclosure	English and French
Explanation on language	English and French are the official languages which are widely spoken in the countries targeted by the Programme.
Link to disclosure	The ICRF Resettlement Framework, Indigenous Peoples Framework and Biodiversity Framework are annexed to the ESMS.
Other link(s)	N/A
Remarks	Resettlement Framework, Indigenous Peoples Framework and Biodiversity Framework have been developed to help track progress and demonstrate the impact of the ICRF supported project. The frameworks are underpinned by the IFC Performance Standards, and World Bank ESS framework, and consistent with the GCF’s revised Environmental and Social Policy (2021).
Disclosure in locations convenient to affected peoples (stakeholders)	
Date	Friday, May 6, 2022
Place	Africa Finance Corporation Head Office: 3a Osborne Road, Ikoyi, Lagos, Nigeria All National Designated Authorities in target countries have been informed and provided the link to the disclosure.
Date of Board meeting in which the FP is intended to be considered	
Date of accredited entity’s Board meeting	TBD*
Date of GCF’s Board meeting	Monday, March 13, 2023*

Note: This form was prepared by the accredited entity stated above.

*Subsequent to the disclosure of this form to the Board and active observers on 10 June 2022, the following updates have been made: The accredited entity has secured additional no-objection letters from Benin, Djibouti, Ghana, Kenya, Mauritania, Rwanda, and Zambia. Moreover, the Secretariat has confirmed that the ESMS is consistent with the requirements for a Category I-1 programme. The accredited entity has updated the ESMS by incorporating due diligence on sexual exploitation, sexual abuse, and sexual harassment (SEAH), and clarifying the procedures and requirements for managing environmental and social risks and impacts pursuant to the ESS standards and the GCF Revised Environmental and Social Policy. The accredited entity has also updated the Indigenous Peoples Planning Framework to further align with the GCF Indigenous Peoples Policy. Lastly, the date of the AE Board meeting has been adjusted, and the date of GCF Board meeting in which the funding proposal is to be considered has been updated to B.35 date.

Independent Technical Advisory Panel's assessment of FP205

Proposal name:	Infrastructure Climate Resilient Fund (ICRF)
Accredited entity:	Africa Finance Corporation (AFC)
Project/Programme size:	Large

I. Assessment of the independent Technical Advisory Panel

1.1 Impact potential *Scale: High*

1. **Project description.** The funding proposal is for an adaptation programme that seeks to support the following 19 African countries, as identified in the proposal's no-objection letter (NOL), by providing resilient priority infrastructure assets and services: Benin, Cameroon, Chad, Côte d'Ivoire, Democratic Republic of the Congo, Djibouti, Gabon, the Gambia, Ghana, Guinea, Kenya, Mali, Mauritania, Namibia, Nigeria, Rwanda, Sierra Leone, Togo and Zambia. The project will establish a new fund called the Infrastructure Climate Resilient Fund (ICRF), which will invest in what the accredited entity (AE) calls "Climate-resilient Transport and Logistics (Ports, Roads, Bridges, Railways, Airports)" (~40–50 per cent of the portfolio); "Climate-resilient Energy Systems" (~25–30 per cent); "Climate Resilient Economic zones" (~25–30 per cent), and "Climate resilient Telecommunication and Digital Infrastructures" (~5–10 per cent). The funding request from GCF is USD 254.091 million of a required USD 766.0186 million; USD 240.0 million will be invested as junior equity into ICRF, and USD 14.091 million will be used as grant finance split between developing a climate risk insurance feasibility study (USD 1.0 million), and the rest for project preparatory assistance, monitoring and evaluation, and project management costs.

2. The ICRF programme will be dedicated to the development of and investment in new climate-resilient infrastructure asset classes (CRI asset classes) in selected African states; 75 per cent will be dedicated to new investments in CRI assets (including greenfield, expansion and growth investments), and up to 25 per cent of the ICRF portfolio can be invested in existing infrastructure assets to be made climate resilient through climate adaptation solutions. As a junior equity position, the GCF equity de-risks ICRF by taking as much as the first 30 per cent of any loss incurred by the ICRF during investment. The funding proposal targets 50,365,031 direct beneficiaries (8.8 per cent of the total population, of which 50 per cent are women), and 144,115,769 indirect beneficiaries (25.18 per cent of total population, of which 50 per cent are women) of the selected NOL countries. Subprojects will be implemented over a period of 10 years with a total programme lifespan of 20 years, after which ICRF will cease involvement in the projects, as GCF de-risking at the fund level will no longer be required. ICRF will be managed by Africa Finance Corporation (AFC) Capital Partners (ACP), a 100 per cent subsidiary of AFC; the ACP team will be responsible for deal origination, due diligence and execution, and operational management and exit of ICRF portfolio companies.

3. As per the funding proposal, African nations are currently suffering major losses and damages due to the impacts of climate change, variability and extreme events. The exposure of people, assets and infrastructure to climate hazards is increasing and is compounded by rapid urbanization, infrastructure deficit, and growing populations in informal settlements; thus, there is a need to increase the resilience of infrastructure assets/services and vulnerable people and communities. However, the biggest threats to assets differ significantly depending on the

technical specifications of asset components and their degree of exposure to the changing climatic hazards. These varying specifications highlight the need to better understand these different characteristics for the successful design, planning, location, construction and maintenance of critical assets, including investing in them.

4. As per the funding proposal, Africa's spending on infrastructure is expected to increase, given a current infrastructure pipeline worth USD 2.3 trillion over the period 2020–2028, where over half of the pipeline of USD 1.3 trillion is in the “study or development” phase. The proposal presents GCF with a timely opportunity to be part of this early-stage development where the proposed ICRF can demonstrate how to de-risk the projects.

5. **Context of climate vulnerability – historical climate.** Based on the feasibility study, climatologically, more precipitation has been recorded within the latitude bands of 20 °N and 20 °S for 1976–2005 as agreed in both gridded observation datasets from the Climate Research Unit¹ archive and an ensemble of three regional climate models (RCMs) from the Africa domain of the Coordinated Regional Climate Downscaling Experiment (CORDEX).^{2,3} Relative to the Climate Research Unit, the RCM ensemble shows a good pattern correlation of 0.85, although with a root mean square error of 539 mm/year. Higher temperature values are observed and modelled around land areas, especially over the Saharan desert region. Although modelled minimum and maximum temperature have a root mean square error of 1.41 °C and 2 °C, respectively, there is good agreement compared to precipitation. Generally, all subregions show significant warming trends in observed and modelled mean surface temperature. Unlike precipitation, which exhibits a substantial spatial and temporal heterogeneity across subregions and between observation and model, where trends could be positive or negative depending on the subregion. Decreasing trends in precipitation were observed and modelled in some subregions, including South Africa – West (SAF-W), Central Africa – South (CAF-S), Horn of Africa (HRN), and East Africa (EAF). The decreasing trends are only significant in the observed precipitation in CAF-S and EAF subregions.

6. According to the Intergovernmental Panel on Climate Change Sixth Assessment Report (AR6),⁴ common regional characteristics exist in Africa. Some changes are that the mean temperatures and hot extremes have exceeded natural variability in all land regions relative to 1850–1900. Equally, the rate of surface temperature increase has been more rapid on the continent compared to the global average. This increase is largely influenced by human-induced climate-change drivers, such as anthropogenic emission and land-surface modification. Furthermore, sea level around Africa has increased at a higher rate than global mean sea level over the last three decades. Sea-level rise is projected to continue around the continent, thereby contributing to increases in the frequency and severity of coastal flooding in low-lying areas, and to coastal erosion along most sandy coasts, with adverse consequences for seaports and other critical infrastructures situated around the coastline.

7. **Climate change projections.** Models project precipitation and temperature in the future climate to change significantly in Africa.⁵ According to AR6, additional increases in global warming will cause changes in hot and cold temperature extremes and an increase in mean maximum one-day precipitation. Projected minimum and maximum temperature change is expected to reach 5 °C in some land areas at 4 °C global warming level. The percentage change in annual total precipitation ranges between –40 per cent and 40 per cent. Regions around central

¹ https://crudata.uea.ac.uk/cru/data/hrg/?_ga=2.98165404.204120138.1642344109-80085860.1642344109

² <https://cordex.org/>

³ See funding proposal, figure B.1.2. a & b.

⁴ AR6, Regional fact sheet – Africa. Working Group I – The Physical Science Basis. Available at https://www.ipcc.ch/report/ar6/wg1/downloads/factsheets/IPCC_AR6_WGI_Regional_Fact_Sheet_Africa.pdf

⁵ World Bank. 2015. *Enhancing the Climate Resilience of Africa's Infrastructure: The Power and Water Sectors*. World Bank: Washington. Available at <https://www.worldbank.org/content/dam/Worldbank/Featureper cent20Story/Africa/Conferenceper cent20Editionper cent20Enhancingper cent20Africasper cent20Infrastructure.pdf>

West Africa and East Africa are expected to experience an increase in precipitation, while the western edge of West Africa and a larger area of South Africa are likely to record less annual total precipitation in the future. These signals are expected to intensify at 4 °C global warming.

8. **Goal statement/Impact: paradigm shift and Theory of Change.** The ICRF is built on the premise that IF blended capital is mobilized at scale to de-risk and accelerate investments in CRI, and climate risk assessments and regulatory frameworks for CRI are strengthened and mainstreamed THEN Africa will be on a climate resilient and sustainable development pathway BECAUSE vital infrastructure will be more resilient to climate hazards, and vulnerable people and communities will have improved access to these infrastructures for livelihoods and other social services. ICRF design structure encompasses three outcomes:

- (i) Outcome 1 – Blended finance is mobilized at scale to accelerate CRI investments in the beneficiary African countries for infrastructure programme assets made resilient and able to withstand climate hazards and for improved access of vulnerable people and communities to climate-resilient infrastructure services (all-weather roads, bridges, power supply, ports and logistics, special economic zones, telecommunication, and digital infrastructure services). Outcome 1 will address the following financial barriers on limited capital flows to infrastructure investments in Africa due to investors’ perception of high risk (i.e. risk allocation and financial instruments mismatch, low return on investment of climate-proof assets due to incremental cost, limited benefit from climate risk insurance, low appetite from the private sector).
- (ii) Outcome 2 – Improved climate risk assessments and adaptation solutions for CRI; improved capacity for scaling up CRI in Africa for infrastructure programme assets made resilient and able to withstand climate hazards and for improved access of vulnerable people and communities to climate-resilient infrastructure services. This component will help to overcome the technical barriers by using the GCF technical assistance funding to create an enabling environment and scale up investments in CRI in Africa. The technical assistance will address the lack of reliable data, knowledge and capacity in countries on climate change to increase preparedness and risk management, led by AFC in collaboration with ACP. This component of the programme will also help to strengthen climate risk assessments and adaptation solutions for ICRF investments in CRI asset classes, avoiding the risk of maladaptation and ensuring state-of-the-art climate assessment and decision-making tools for CRI investments. The programme will target increasing the longevity of infrastructure assets as compared to the sector average baseline achieved through resilience measures to the climate change physical risks.
- (iii) Outcome 3 – A strengthened regulatory framework and innovative climate risk parametric insurance (CRPI) is mainstreamed for the long-term viability of CRI investments in Africa. Outcome 3 will address regulatory barriers to ensure the programme’s paradigm shift effect in the programme countries and the region. This component will help to adopt new climate-resilient infrastructure asset classes, with favourable investment policies and fiscal incentives on country and regionals level based on regulatory gaps and country priorities. Improving the regulatory framework is a crucial milestone for attracting investments from the private sector in resilient infrastructure in the programme countries. A feasibility study on parametric insurance will be conducted.

1.1.1 Adaptation impact

9. **Triple resilience dividends** As per the funding proposal, ICRF, if established and able to invest according to its mandate, will aim to deliver robust critical infrastructures in the identified sectors of transportation, energy, ecozones and telecommunications; infrastructure

projects that will deliver triple resilience dividends for the relevant country. The first dividend is the avoidance of loss of life from disasters, minimization of disruptions, and promotion of effective recovery. The second dividend is the unlocking of economic potential by investing in resilient infrastructure. The third is the shared positive co-benefits of increased resilience of interlinked communities, ecosystems, infrastructures and investments along the business value chains.

10. For private sector stakeholders, ICRF, if established and managed effectively, could lead to the proper mainstreaming of climate adaptation in private sector investments; an important aspect of unlocking private sector investment in climate finance and investments. The inclusion of climate measures in the development of infrastructure projects will lead to the operationalization of climate risk management in commercial investments. It will lead to an increased awareness in the private sector of how the physical impacts of climate change will affect private investments' revenues, costs, operations, assets and corporate valuations, thus leading to the integration of climate in the decision-making process. ICRF, like any other fund, will enable the private sector to diversify its investments in dedicated CRI asset classes; investments that will purposefully seek to transition towards a more climate resilient type of development of infrastructures that are climate sensitive and where climate-related risks are managed through the integration of climate-proofing measures, and via climate risk insurance to cover any residual risk.

11. From the perspective of the financial or capital market sector, ICRF will lead to the creation of a new asset class: CRI assets. If ICRF is successful in delivering the establishment and operation of a true climate-resilient asset class (climate proofing (Type 1), and development projects with components or resilience contributions (Type 2a)), then it is possible that the experience of the ICRF will enable the following:

- (i) The emergence of a new financial mechanism linking the delivery of climate finance for adaptation commitments to developing countries and its replication for similar climate-resilient investments (projects that only exist because of the need to address a climate vulnerability issue (Type 2b)).
- (ii) Reforms on fiscal incentives for investments in climate-resilient infrastructures by beneficiary governments; these could be in the form of tax holidays, faster regulatory clearances (customs, local government, agency), climate-focused domestic resource mobilization initiatives;
- (iii) Lessons learned from operationalizing climate measures to manage climate-related risks could be used as best practice among financial institutions and corporations in compliance with the mandatory recommendations under the Task Force on Climate Financial Related Disclosures.

1.1.2 Risks to adaptation

12. **Weak baseline assessments.** When this funding proposal was first submitted for consideration prior to the thirty-fourth meeting of the Board (B.34), the independent Technical Advisory Panel (iTAP) raised the following issues in relation to the proposal's weak country and sectoral baseline assessments:

13. The proposal had not conducted an in-depth assessment of the four (4) identified target sectors (i.e. Transport and Logistics (Ports, Roads, Bridges, Railways, Airports); Energy Systems, Economic zones; and Telecommunication and Digital Infrastructures). In addition, the funding proposal and its annexes (e.g. annex 2) had not properly assessed the target countries' domestic and regional markets on finance, capital markets, insurance and climate finance markets. Moreover, the funding proposal had not clearly presented how climate change, variability, and extreme events had impacted each country included in the proposal and its key sectoral infrastructures; no evidence-based reports were presented showing the extent of losses and

damages in terms of monetary cost, lives affected, property, infrastructure, businesses, livelihoods, climate-related budget expenditures, or as a percentage of gross domestic product, or even from a portfolio management perspective of infrastructure assets held by the major financial institutions in the region or in each country, including AFC. The funding proposal had also not provided a clear context on vulnerability covering each country's vulnerable people and communities, and the critical ecosystems that were dependent on these target infrastructures; it did not show what their unique sectoral barriers, issues and challenges were, nor how the proposed climate-resilient infrastructures would address them.

- (i) Evidence-based reports of climate-impacting infrastructure assets were lacking. Various annexes and sections mentioned the impact of climate hazards on infrastructure assets, e.g. heatwaves, intense rainfall, and how these impact roads and construction activities. The country climate analysis, however, failed to establish at which climate thresholds these infrastructures begin to be adversely impacted. For example, in one of its examples on economic zones, the funding proposal stated that industrial parks were particularly vulnerable due to increasing temperatures, heatwaves, droughts, excessive or reduced rainfall, flooding, and so on; however, no sector assessment had been performed to show how climate parameters had impacted economic zones.⁶
- (ii) The annexes to the funding proposal (e.g. annex 3a, an assessment of the selected examples of climate-related events and their effects on infrastructures in ICRF countries) gave brief overviews per country of the supposed losses and damages due to climate change extreme events, which were based on literature reviews; no government data on actual losses and damages were provided or cited. For example, for Benin, the report only said that “damage and losses caused by the 2019 floods in the transport infrastructure sector are estimated at 193,000,000 FCFA (299,054 US dollars). Among whom [sic] were 92 km of roads and 06 structures (Bridge, collapse scuppers). The most affected departments are Borgou, Alibori, Atacora and Donga”.
- (iii) As to the baseline information providing the context on the vulnerability of the people, ecosystem resources, investments, or just how climate had impacted the sectors of the economy and people of the countries in question, similarly, little information or assessment was provided. Based on the same annex, annex 3, “The socio-economic impact of the country’s key infrastructure” report was also quite limited. On Gabon, for example, the assessment on climate was given in just two sentences (i.e. “However, with the extent of climate hazards on the African coast, the vulnerability of Libreville, as well as that of cities on the lower coast such as Port-Gentil, or Mayumba, is indisputable. The effects of these climatic hazards will also be observed on the port infrastructures, thus impacting the economy of the country and more particularly the populations of this region”).

14. With the resubmission of the funding proposal for B.35, the AE has made good efforts to address these issues. The wealth of information generated for the 19 countries has been provided in different parts of the proposal and relevant annexes (i.e. (i) Climate baseline showing how current and the future climate change will seriously exacerbate negative impacts on these NOL countries;⁷ (ii) Climate risks assessment baseline;⁸ (iii) Sector and infrastructure⁹). The i TAP observes that annex 23a now has information on observed and anticipated trends in key climate parameters for all 19 NOL countries, as well as a section for each country on “Climate change impacts on infrastructure type” and “Adaptation solutions” for each combination of major climate change hazard and infrastructure type. The quality of these sections varies between countries, but taken altogether, they provide a strong sense of the

⁶ See funding proposal, annex 2a “ICRF FS”.

⁷ See annex 23a “Country climate analysis of 19 ICRF NOL countries”.

⁸ See annex 2b “Africa Infrastructure Climate Risk Mapping for all 19 ICRF NOL countries”.

⁹ See annex 23b, summary table.

potential for investment in specific technical solutions as part of building or retrofitting infrastructure to be durable and resilient to these hazards. Annex 23b summarizes the same information for each country. Annex 2b “Africa Infrastructure Climate Risk Mapping”, is an impressively detailed resource, providing continent-wide maps of existing assets of eight types – airports; roads; seaports; wireless infrastructure, including radio masts and towers; wind power plants; solar power plants; electricity towers, poles, lines, substations and transformers; and economic zones – and including 33 investment projects currently in AFC’s pipeline. The report analyses physical climate risk by hazard, and maps these hazard risks by asset type onto the assets’ locations, wherever data is available. It also provides summary information and maps per country on exposure to the main relevant climate-change-intensified hazards.

15. In the first submission of the funding proposal for B.34, the i TAP raised the issue of a weak baseline analysis of the climate-related finance gap on infrastructure. As above, in general, the assessment lacked the depth needed to establish the amount of climate finance needed nominally, and/or as a percentage of the total cost of infrastructure, to help build climate-resilient infrastructure. The climate-financing gap, even from the viewpoint of an infrastructure asset manager (e.g. AFC) was not mentioned. Namibia, citing its updated nationally determined contribution (NDC), identified its financing gap for mitigation, but the adaptation financing gap was not mentioned. Missing too was the approach or methodology by which to estimate the climate financing gap for adaptation. The funding proposal write-up had defined the incremental cost of climate adaptation. The estimate of incremental costs needed to make infrastructure climate resilient was based on the World Bank’s estimate.

Making infrastructure assets climate-resilient requires incremental cost in the range of three (3) to seven (7) point percent resulting from frequency and magnitude of climate change hazard impact and depending on the asset, its location, and chosen resilient interventions. This represents an average of five (5) point percent consistent with the World Bank Group cost-benefit analysis and works undertaken previously by the Global Commission on the new economy and climate estimating the incremental cost of financing infrastructure consistent with low emission and climate-resilient pathways below 10 per cent of the initial investment cost.¹⁰

Whether this estimated range of incremental cost from the World Bank (which lacks the reference to the World Bank source) and Global Commission,¹¹ was based on a global cost or is specific to the African Region, was not clear.

16. With the resubmission of the funding proposal for B.35, the AE addresses this issue, and has provided the climate finance flows for infrastructure within the funding proposal.¹² These listed sections provide additional information on current finance flows for adaptation. The financial statement provides a useful table in annex 1 listing baseline investment in resilient infrastructure in NOL countries, using a variety of financial instruments (the same as used in Summary Table 7 in annex 3a). In annex 3a, a typology of financing types used in the energy, telecoms and transport sectors is provided and an analysis of needs, gaps and barriers is provided for these sectors. Current infrastructure investment trends and needs, and overall adaptation financing gaps, are briefly discussed for each of the 19 countries.

17. **Issue on coherence and consistency of Theory of Change (ToC) and funding proposal project design.** In the first submission of the funding proposal for B.34, the

¹⁰ See Funding proposal Annex 3A, page 46

¹¹ Bhattacharya *et al.*, 2016; Global Commission on the Economy and Climate, 2014, *The Sustainable Infrastructure Imperative: Financing for Better Growth and Development*. Global Commission on the Economy and Climate. Available at: http://newclimateeconomy.report/2016/wp-content/uploads/sites/4/2016/08/NCE_2016_Exec_summary.pdf (accessed 7 February 2023).

¹² See funding proposal: section B.1 “Climate context”; section 3.9 “Status of climate adaptation financing flows in the Feasibility study”; annex 2a and baseline data in annex 1 in the feasibility study; annex 3a, section V - see “Overview of instruments and financing mechanisms used in Africa in key sectors of the ICRF” and summary Table 7 “Baseline of Climate Finance in Infrastructure investments in ICRF countries”.

independent TAP raised the issue of non-coherence and consistency of the ToC and the funding proposal project design. The independent TAP was of the view that the proposed ICRF funding proposal needed to be revised.

- (i) The original ToC¹³ stated that Africa will be on a climate resilient and sustainable development pathway because vital infrastructures will be made climate resilient, and vulnerable people and communities will have improved access to the climate-resilient infrastructures which would presumably enhance their livelihoods and the social services available to them.
- (ii) However, one of the following paragraphs further expounded on the purpose of ICRF, but this time, the term ‘vulnerable’ was not used to describe the people/communities supposed to benefit from the CRI. “The overarching objective of the Infrastructure Climate Resilient Fund (ICRF or ‘the Fund’) is to support Africa climate resilient and sustainable development path by catalyzing blended finance at scale towards evidence-based, climate-resilient infrastructure in Africa and ensuring that people in Africa will have access to these climate-resilient, reliable, and durable infrastructure assets.”¹⁴
- (iii) The independent TAP pointed out that the ToC mentioned that (i) vital infrastructure will be more resilient to climate hazards; and (ii) vulnerable people and communities will have improved access to these infrastructures for livelihoods and other social services. Yet, the Outcome 1 interventions only related to increasing the resilience of infrastructure rather than increasing the resilience of vulnerable people and communities. The independent TAP requested the AE to clarify whether the vulnerability of people and communities was addressed in their methodologies and the funding proposal, and if so, how this vulnerability was addressed.
- (iv) The AE responded that reference to vulnerable people and communities in Africa was: lost due to several reiterations. It will be inserted back as initially intended. ... the narrative was lost and will be corrected. Outcome 1: Blended finance at scale and innovative climate risk insurance products are deployed for climate-resilient infrastructure (CRI); and vulnerable people and communities are made more resilient due to access to safe and climate-proof infrastructure assets (all-weather roads, bridges, power supply, ports, telecommunication, digital infrastructure, and others) and its services. Key (core) program success indicator is beneficiaries (47.8 mil direct and 132.4 mil indirect) made more resilient due to access to safe and climate-proof infrastructure assets in 17 African States with 10 LDCs, which are the most affected by the climate changes risks. Most of the targeted infrastructures covered by this program are located in African urban areas. Targeted vulnerable populations are the segment of poor populations living in slums or informal settlements near built infrastructure. When infrastructure is damaged or disrupted, they are the one that suffers the most, not only from restricted access to services but also from collateral physical damages that could result from the catastrophes.¹⁵
- (v) While the independent TAP appreciated the response, it felt that more than a ‘quick fix’ by inserting the correct words into the ToC was required. The issue resulted from a design flaw of the funding proposal, which focused only on ICRF, and the infrastructure,

¹³ The ToC as per the funding proposal submitted for B.34 is as follows: “The ICRF is built on the premise that **IF** blended capital and de-risking financial mechanisms with innovative climate risk insurance are deployed at scale and climate risk assessments and regulatory frameworks for investments in CRI asset classes are strengthened, **THEN** Africa will be on a climate resilient and sustainable development path **BECAUSE** vital infrastructure will be more resilient to climate hazards and vulnerable people and communities will have improved access to these infrastructures for livelihoods and other social services”.

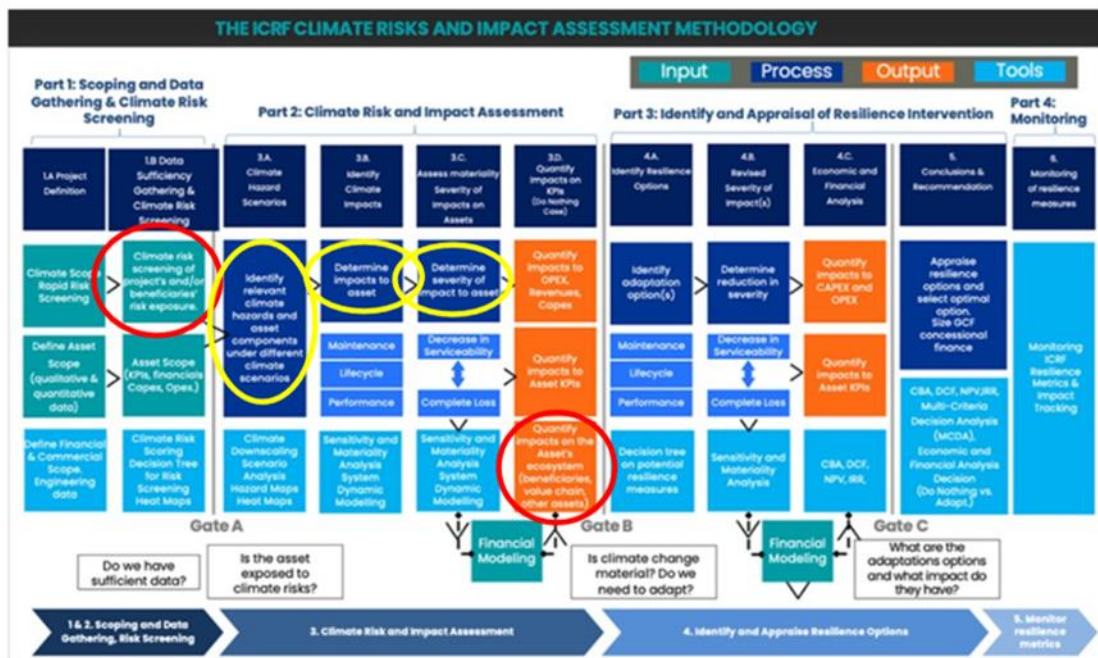
¹⁴ See the AE’s response on the independent TAP’s first batch of questions, dated 19 August 2022

¹⁵ See the AE’s response to question 1 on the independent TAP’s first batch of questions, dated 19 August 2022.

and the reference to people was also missing in other parts of the project design contained in the proposal.

- (vi) A case in point was the ICRF’s climate resilient impact assessment methodology (CRIAM). In a nutshell, CRIAM was ICRF’s guide on how to screen and identify climate risks, assess the context of vulnerabilities, and recommend the necessary adaptation measures based on these processes. As presented in figure 1 below, there was a “climate risk screening of projects and/or

Figure 1: ICRF climate risks and impact assessment methodology



- (vii) beneficiaries’ risk exposure” under part 1. But under part 2, the climate risk impact assessments simply focused then on the ‘asset’ for substeps 3a, 3b and 3c. Then under substep 3d, a quantification of impacts on the ‘asset ecosystem’ (which then included the beneficiaries, value chains, and other assets) appeared. If the terms ‘asset’ and ‘asset ecosystem’ were interchangeable, and people, communities, ecosystems, livelihoods, and hard infrastructure components were grouped in one such assessment, defining the context of vulnerability was too broad and would most likely be biased towards the physical asset at the expense of people, natural ecosystems and livelihoods. There was no granularity in the assessment of the localized and unique context of vulnerabilities of other subsets of the ‘asset-ecosystem’. Any adaptation recommendation would most likely be infrastructure asset-centric, and this did not clearly address the ToC component on “vulnerable people and communities”. The CRIAM methodology did not clearly elaborate how the vulnerability of people, as well as critical ecosystems, livelihoods and investments along the business value chains, were assessed, as highlighted in the examples (e.g. annex 2 “Feasibility Study”, narratives), computations (annex 3A “Illustrative Case_ICRF_SEA”). The methodology needed to be improved further to reflect what the funding proposal and annexes had presented. Not doing this would lead to weak climate risk assessments and poor identification or formulation of appropriate adaptation or resilience measures. The proposal’s single focus was on infrastructure and not vulnerable people and communities. When asked why mitigation, ecosystem and ecosystem services were not included in the ICRF programme when the targeted infrastructure projects would most likely impact ecosystems as well as ecosystem services, the AE responded as follows:

The ICRF is designed as a fund to support investment in climate resilience of all the infrastructure it will finance. The aim and purpose of the ICRF are to de-risk and scale up investments in resilient infrastructure as all infrastructure types have a recognized vulnerability from a climate perspective. Taking resilience into account is crucial considering the lifespan of the infrastructure AFC invests in today. GCF and AFC have agreed on a set of eligibility criteria including an exclusion list to guide the selection of the sub-projects in which ICRF may consider investing. Climate risk screening to define the climate risk profile, as well as climate risk assessments informed by present-day and future climates are a central part of the eligibility criteria. GCF concessional funding will primarily cover incremental costs for adaptation measures to make infrastructure assets resilient. It will also support to a lesser extent the de-risking of investment portfolios to attract private sector investment in ICRF and thereby in climate change in line with Article 2(c) of the Paris Agreement. The success of the program will be measured by beneficiaries, number, and value of assets made resilient to climate change. During the origination and structuring phase (both at the concept note and funding proposal development stages), AFC worked in close collaboration with the GCF secretariat to identify the most relevant result areas and indicators based on the program's objectives. With the goal of making infrastructure resilient to climate change, ICRF is a 100 per cent adaptation program. None of the GCF mitigation result areas will apply to ICRF. ICRF investment in energy and economic zones are all meant to build climate-resilient infrastructures, with the GCF proceeds (8 to 11 per cent of the total project costs) prioritized for incremental cost and de-risking to attract additional private sector capital. Therefore, mitigation and ecosystem are neither included in the ICRF program nor their indicators.

(viii) While the funding proposal was mainly focused on the ICRF, its adaptation results areas also included the most vulnerable peoples and communities, as well as infrastructure and built environment. Vulnerable people and communities were not consistently focused on. Resulting in limited or general screening on infrastructure assets alone, neglecting the emphasis in the project objective and ToC on improving vulnerable people and communities' access to the climate-resilient infrastructure, as discussed in paragraphs 16 to 20 of the previous iTAP assessment was one major difference between the independent TAP and ICRF approaches that needed to be addressed. As mentioned in paragraph 21 of the previous assessment the examples and narratives in the funding proposal showed how climate risk and vulnerability assessment included the whole range of people/communities, ecosystems, livelihoods, and built infrastructure which was quite promising; but the AE responses did not reflect its technical capacities on how to process potential climate-related investments in a manner which assessed their contribution to reducing communities' vulnerability, or their potential ecological and mitigation co-benefits.

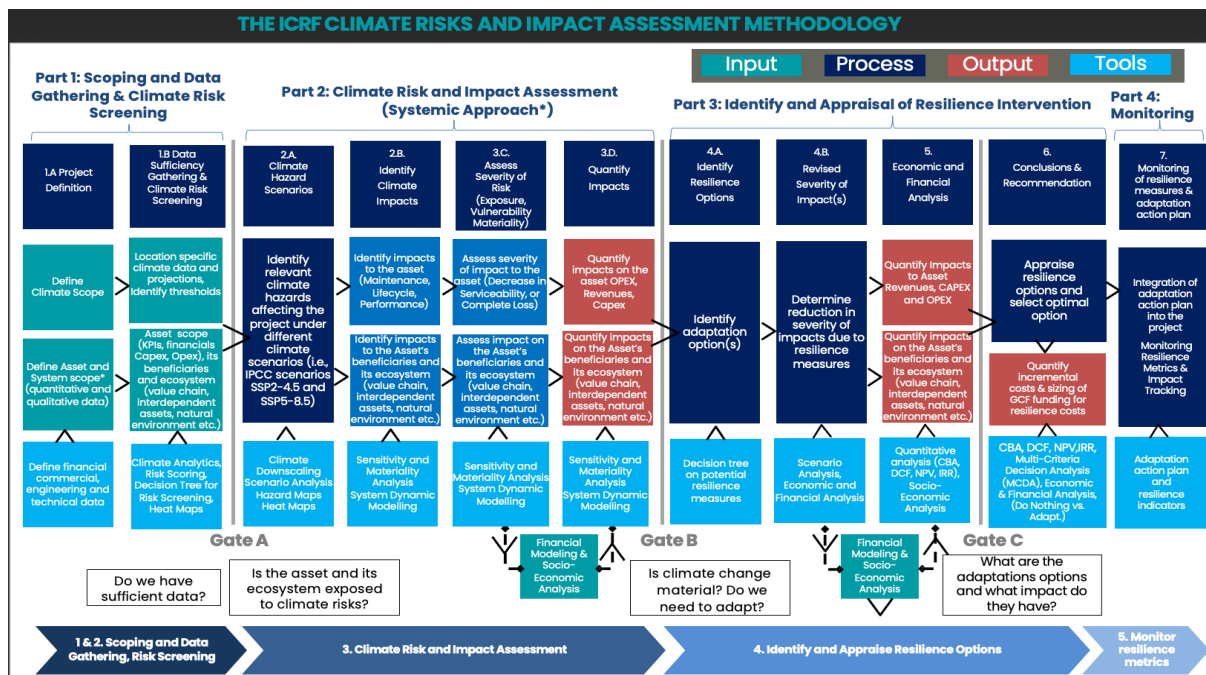
18. With the resubmission of the funding proposal for B.35, the AE addresses these issues. The AE has revised the ToC (see para. 8 above). It has also amended the operations manual where the methodology has been further detailed following a system approach, including impacts on vulnerable people, as well as critical ecosystems, business value chains and other interdependent built infrastructure. These two chapters of the operations manual clearly address the independent TAP's recommendation.¹⁶ The updated methodology is also reflected in the funding proposal, section B3.4: ICRF Climate Risk and Impact Assessment Methodology: Guiding Principles. Furthermore, this has been reflected in annex 23c, Climate Assessment Methodology, section 3.3.2: Vulnerability assessment for people and communities at the infrastructure sites. The climate risk impact methodology is now set out in much more detail, with the operations manual (also summarized in the funding proposal, section B3.4, and

¹⁶ See Chapters 6 and 7 of the operations manual, annex 21.



highlighted in annex 23c) outlining the Climate Risk and Impact Assessment Methodology, the principles through which climate resilience is integrated into the investment process, and the steps involved in deal screening – assessing the level of asset vulnerability to different hazards, and the expected current and future levels of exposure, with detailed hazard mapping for the planned location of the infrastructure, in order to derive an indicative level of climate risk for different assets, with processes for dealing with the different levels. A very brief assessment is provided in section 3.3.2 of how some climate hazards impact negatively on wider communities beyond users of the infrastructure. The vulnerability assessment and how this is incorporated into the risk assessment may need to be clarified some more.

19. A revised figure 6.3a: ICRF Climate Risk Assessment Methodology is presented below for comparison with the original ICRF Climate Risk Assessment Methodology (see figure 1 above).



20. **Weak technical and operational capacity on climate.** In the first submission of the funding proposal for B.34, the independent TAP assessed that the AFC and ICRF Team had weak institutional and operational experience on climate. The independent TAP sought clarification on the technical competency of the AE in climate issues, considering that AFC (i.e. AFC senior officers who will be assigned to APC) would be guiding APC in managing the ICRF. Reviewing the responses of the AE to the first batch of written questions from the independent TAP, familiarity with climate finance accounting was mentioned. Thus, the independent TAP followed through on this assessment by requesting that the AE demonstrate experience on (i) how climate finance accounting was performed in its AFC portfolio; and (ii) how climate change impacted AFC’s portfolio in terms of losses and damages of its assets, revenues and costs.

21. The following AE verbal responses were provided during a question-and-answer call: “In the context of mitigation, we don’t call that climate finance. For us we call that power projects, whether we’re doing renewables, we look at it as energy projects.... For us, money that goes to Africa is predominantly climate oriented”.¹⁷ Another AFC representative added that as a multilateral financial institution, AFC followed best practice and more specifically, the

¹⁷ Refer to the recording of the AE-independent TAP meeting, 14.03 to 15.05 minutes. Recordings available upon request from the independent TAP Secretariat.

multilateral development bank (MDB) finance reporting guidelines¹⁸. As to the request for demonstration of, or documentation on, how climate had specifically impacted AFC's portfolio through the years, AFC had still to provide credible evidence-based data; considering that AFC's portfolio on transport and logistics, economic zones and telecommunications were also claimed to be the most impacted type of infrastructure, the independent TAP hoped that it would have been very feasible and easy to show this using AFC's own portfolio, but no data or figures were provided to show this.

22. Thus, in response to the question of climate finance accounting, whether AFC had been mainstreaming climate finance accounting or not, its answer was ambivalent but must be read as a 'no'. AFC could have easily cited those of its energy projects that had involved 95 per cent mitigation finance, and that adaptation finance could have been made up to 5 per cent of the total project cost, and that this was reflected in the *Joint Report on Multilateral Development Banks' Climate Finance*,¹⁹ or another similar report, but it did not. The point of the question was to assess its basic level of working knowledge of climate finance accounting; an issue that is extremely important, as ICRF would be tasked with accounting for the climate-related finance and investments it would make. If approved, GCF would be investing in climate funds through the ICRF and the independent TAP needed to understand if ICRF was capable of differentiating climate finance from business-as-usual (BAU)-related costs and investments at the very least. Similarly, ICRF should be capable of accounting for climate-related finance costs for project components, for example, for a transmission line that both supports renewable energy (RE) and thermal power plants. To provide another example, in building an economic zone, would ICRF, under the guidance of AFC/APC, account for the purchase of real estate property, or an entire building as climate finance? AFC had mentioned that it was familiar with the MDB approach to climate finance, but it had not demonstrated how it has mainstreamed this in its operations. With AFC guiding APC in managing ICRF, the independent TAP found this to be a risk. The AE must ensure that proper skills, experience and technical capacities are available at the climate governance committee, investment committee and board levels to ensure that the climate-related goals, objectives and strategic interventions of GCF were ensured and safeguarded.

23. With the resubmission of the funding proposal for B35, the AE addresses this issue. Upon the recommendation of the independent TAP, the AE used case studies to illustrate its technical and operational capacities in processing climate investments; the AE provided three illustrative case studies with financial models as part of the resubmitted funding proposal package highlighting that the same principles will be applied during the implementation. The AE also revised its operations manual (annex 21) to provide some illustrations on climate risk screening and resilience measures in sections 7.2 and 7.5. In terms of climate finance accounting, the AE clarified that the ICRF will invest in the development and construction of climate-resilient infrastructure, and will only count as adaptation finance the incremental cost of adaptation measures in the ICRF infra projects. The AE also emphasized that GCF concessional funding will only be used to de-risk investors at fund level and contribute to financing the cost of adaptation measures.

24. One of the major changes that the resubmission of this funding proposal for B.35 has achieved is the formulation of a more comprehensive and innovative template on how to assess and monitor climate adaptation projects as presented in annex 3. The AE demonstrated how climate investment assessments can and should include climate-related positive and negative externalities showing differences between results under BAU, Representative Concentration Pathways (RCP) 4.5 and RCP 8.5 scenarios; how these climate factors impact the infra project's revenues, cost of operations, financial viability in the long run. (See annex 3 and the

¹⁸ See the AE's response on the independent TAP's first batch of questions, dated 19 August 2022

¹⁹ Grouping of multilateral development banks. 2020. *Joint Report on Multilateral Development Banks' Climate Finance*. Available at: https://www.miga.org/sites/default/files/2021-08/2020-Joint-MDB-report-on-climate-finance_Report_final-web.pdf (accessed 7 February 2023).

presentation material used by the AE when responding to the independent TAP on 25 January 2023.) Suffice it to say that this financial template has essentially raised the benchmark for climate investments and may very well be the current best practice that could be replicated by similar aspiring project proponents seeking GCF funding resources.

25. **Weak climate-resilience indicators.** In the first submission of the funding proposal for B.34, the independent TAP assessed that it included weak climate-resilience indicators. As presented in annex 2b “ICRF Impact”, the tracking indicators were not climate-related, not clearly climate-linked or not clearly stated. Specifically, for airports, indicators that were not climate related included: number and percentage change of people residing in areas affected by noise, total amount of cargo tonnage, total number of passengers annually, broken down by passengers on international and domestic flights, and broken down by origin-and-destination and transfer passengers, including transit passengers). The indicators on insurance that were not clearly elaborated included: reduction in insurance premiums; current/expected impact on communities and local economies, including positive and negative impacts where and if relevant; downtime of telecom network infrastructure; and improved range and quality of warning systems. There was a need to explicitly state which climate-related risks or parameters led to a reduction in insurance premiums, or downtime of telecoms. While the following metrics were unclearly stated: “total number or length of sewerage and drainage networks at risk from flooding”. An appropriately specific indicator would be that the intervention led to reduced risk of flooding, instead of a dangling indicator. Another was “Widespread access to telecom infrastructure” – how did this relate to climate? These indicators which inadequately focused on climate change again point to the limited technical capacity on climate of the ICRF team.

26. With the resubmission of the funding proposal for B.35, the AE addresses this issue. The AE has revised its operations manual to include climate-resilience indicators. As per the operations manual, it states that in defining these indicators, the AE relied on a number of resources, in particular GCF's integrated results framework and draft results handbook, as well as similar indicator sets from a number of multilateral development banks, various industry and sector experts engaged by AFC, and proposed metrics for comparable purposes (e.g. from the climate-resilient bond initiative).²⁰ The independent TAP observes that the AE has done well in this area (i.e. the inclusion of section 7.7, which has a set of generic indicators for Infrastructure assets, People & communities, and natural ecosystems). For infrastructure assets (90 per cent of the GCF investment) this includes the number and value of resilient assets, and reductions in repair costs, outages, downtimes and financial losses. For people and communities (10 per cent), this includes the number of beneficiaries, and mortality. There are areas for improvement too especially in the indicators for natural ecosystems, which just has “number of projects with nature-based solutions integrated” with examples of vegetation absorbing floodwaters or buffering storm surges.

1.1.3 Mitigation co-benefits

27. The funding proposal only considers mitigation to be a co-benefit, thus there are no mitigation impacts. It clearly indicates that “climate change is an emergency that demands rapid and far-reaching action to cut the global carbon footprint and build resilience to more extreme weather patterns”; however, it only considers reduction in greenhouse gas (GHG) emissions to be a co-benefit and the cost of carbon reduced from these projects as an externality the value of which is useful in estimating the values of these externalities.

28. As per the proposal, GHG emissions are assessed and monitored under environmental safeguards where GHGs are considered as environmental risks (i.e. pollution). However, the GHG emissions monitored are those attributable both directly and indirectly from purchased

²⁰ Please see the operations manual, annex 21, chapter 7.7: Climate Resilience Indicators.

electricity exceeding 100,000 tons annually.²¹ The framework document, however, does not qualify if these GHGs include methane (CH₄), nitrous oxide (N₂O), perfluorocarbons (PFCs), hydrofluorocarbons (HFCs), sulphur hexafluoride (SF₆) and nitrogen trifluoride (NF₃). It also does not mention which methodology will be used to assess, monitor, and report the GHGs as part of the disclosure of the ICRF investments.

29. The independent TAP acknowledges that the funding proposal is an adaptation project. However, the risk of GHG emissions increases over the lifespan of an infrastructure project once the project is fully operational, especially in the case of road and transport projects. At the moment, the NOL countries may be contributing minimal GHG emissions compared to the global average but the transport sector, for example, is already a major source of GHG emissions as well in these NOL countries. Thus, the independent TAP recommends that an assessment should form part of the project risks to be mitigated so as to (i) prevent a carbon lock up or stranded assets in the future; (ii) align the infrastructure projects with the Paris Agreement objectives of the NOL countries, thus enabling them to meet their NDCs; and (iii) attract potential investors that seek projects that are aligned to the Paris Agreement, thus increasing the attractiveness of ICRF.

30. By doing so, this assessment of GHG emissions will also promote transparency and enable potential strategic partners to address the risk of such emissions. The independent TAP also sees this as an opportunity for GCF, the countries and the private sector to enable the NOL countries to achieve their Paris Agreement commitments; and the AE to optimize the potential for mitigation; and, via this programme, allow the NOL countries to contribute to achieving their NDC mitigation commitments under the Paris Agreement no matter how small their GHG emissions are.

31. Overall, based on the above, the impact potential is mainly high depending on how the above-mentioned issues are addressed.

1.2 Paradigm shift potential

Scale: High

32. As per the funding proposal, if the ICRF mandate is implemented correctly, the ICRF will support a structural paradigm shift in the African infrastructure space through the systematic integration of climate change adaptation into infrastructure planning, implementation and maintenance to strengthen resilience to climate change. However, building climate-resilient infrastructures is not new; other regions and countries globally have responded through autonomous adaptation measures and may call it a 'build back better' scheme. For countries that have mainstreamed climate in their policies, plans, strategies, and budgets and expenditures, the reference to climate-resilient infrastructure state-owned assets may already exist, as countries have begun climate-proofing their critical infrastructure based on available resources; climate-proofing measures can involve a combination of engineering, bio-engineering, non-engineering or management measures to manage the most critical risks in their priority infrastructures.

33. In the case of Africa, "where most of the infrastructure is yet to be built",²² the timely entry of ICRF to introduce the development of climate-resilient infrastructure does offer a good opportunity to leapfrog and introduce a paradigm shift. In the first submission of the funding proposal for B.34, the independent TAP found it hard to determine that degree of paradigm shift that this project would bring, given that an evidence-based report was not included in the funding proposal to describe the baselines of each of these infrastructures. However, as discussed above, with the addition of new baseline assessments as part of the resubmitted

²¹ See the environment and social management systems embedded in the funding proposal, annex 6 "Form ESS disclosure report final".

²² Funding proposal, annex 2, executive summary, paragraph 2.

documents for B.35 (e.g. annexes 2b and 23b), much greater clarity is provided on the potential paradigm shift.

34. Within the framework of the climate finance and investments, the independent TAP finds that the proposed creation of a dedicated funding mechanism for climate resilience and adaptation, such as ICRF, can lead to a paradigm shift on how climate-dedicated investments or finance can be safely categorized as climate resilience or adaptation investments, separate and distinct from the BAU finance resources (e.g. official development assistance (ODA) funds or generic green bonds). There is the potential for ICRF to squarely address the issues of BAU investments being relabelled as social/green/sustainable or general ODA simply being labelled as adaptation. The ICRF will provide clarity on the definition of a climate-resilient asset class, as differentiated from ODA, from green/social/sustainable bonds, and from socially responsible or impact investments. If successfully managed and implemented, ICRF could be the first vehicle of its kind to completely redefine the way climate adaptation investments will be funded and implemented. As mentioned under section 1.1 above, ICRF has the potential to become the model financial mechanism facilitating the delivery of private sector climate finance for adaptation commitments among developing countries, in relation to resilient infrastructure. The innovative financial model formulated under ICRF will also enable the much needed transformation of BAU investment assessments into a more climate oriented one; the financial model adopted demystifies how investments should take into account the impacts of climate. The ability to replicate ICRF's approach by leveraging other funding for NOL countries' NDC needs is promising.

35. Within the framework of climate risk management, the initiatives to conduct a feasibility study on the introduction of first parametric insurance for infrastructure may enable the first step towards a paradigm shift on climate infrastructure risk management as per the funding proposal. If done correctly, the programme will introduce an innovative risk management tool for managing the risk of climate extreme events in the infrastructure sector. While there is a parametric insurance scheme for the agriculture market by the Africa Risk Corporation, there is no parametric insurance for infrastructure on the African continent. The ICRF is important from that perspective, and it can be assumed that infrastructure offers the next opportunity to diversify and expand the use of parametric climate risk insurance in Africa.

36. In the first submission for B.34, the AE stated that the:

insurance component of the ICRF program will be a pioneering pilot in the private sector dedicated to climate-resilient infrastructure in the targeted African countries. Therefore, we are not crowding out the other industry players, but rather i) providing a demonstration effect supporting the use of parametric insurance to enable climate-resilient infrastructure development through the pilots, and ii) convening and engaging key stakeholders and market participants to support the development climate insurance in the African infrastructure market.

If correctly instituted, the ICRF parametric insurance may eventually cause a paradigm shift in the finance industry as this will de-risk the climate-sensitive components of the targeted infrastructures. As per the funding proposal, "Climate risk insurance will shift the paradigm for investments in the targeted countries based on the integration of science-based data, metrics and standards, as well as adequate legal frameworks. Also, the introduction of new construction codes for climate resilience infrastructure assets will have a transformational impact in establishing CRI as a new distinctive asset class".²³

37. However, under the resubmission for B.35, the insurance component has been scaled down to conducting a feasibility study. The AE has stated that:

After extensive consultation with GCF, the AE decided that the insurance activities under the programme will only consist of US\$ 1 million in technical assistance to undertake a

²³ See the funding proposal submitted for B.34, section B.2.

feasibility study that will support the development of potential parametric climate risk insurance products (fit-for-purpose for African infrastructure) in collaboration with insurance companies and various stakeholders. Therefore, the insurance premium finance is no longer included as part of the GCF funding under the proposed programme. That said, the AE is planning to partner with other donors (on a best effort basis) to mobilize funding to support the implementation of parametric climate risk insurance after the study and design phase.²⁴

Nonetheless, the enabling initiative on climate risk insurance will still contribute to the derisking of investment in infrastructure projects.

1.2.1 Risk to paradigm shift

38. The success of ICRF as a game changer will greatly depend on:
- (i) how judiciously it screens potential subprojects for true climate-resilience components using methodologies and evidence-based data that not only focus on assets, but also on the vulnerable people, communities, critical ecosystems, climate-sensitive livelihoods and investments along the business value chains;
 - (ii) how prudently it will account for the climate-related finance for each project;
 - (iii) how it will mitigate the GHG emissions that may arise, including from the development and operations of these ICRF infrastructure assets.
39. Overall, based on the above, and the additional information and demonstration of technical capacities of the AE on climate investment assessment, the paradigm shift potential can be assessed as high.

1.3 Sustainable development potential

Scale: High

40. **Sustainable Development Goals (SDG).**²⁵ The funding proposal cuts across several SDGs because of the climate co-benefits from resilient infrastructure investment. These are as follows:

- (i) SDG 1 (No poverty): ICRF will build resilient infrastructure that improves quality of life, creates economic opportunity and strengthens the resilience of vulnerable communities and their livelihoods to climate shocks, thereby helping to reduce poverty. Such infrastructure projects reduce the costs of rebuilding after a climate shock, leaving more money for other necessities, such as food, water, accommodation and education;
- (ii) SDG 7 (Affordable and clean energy) & 3 (Good health and well-being): ICRF clean energy projects contribute to positive health co-benefits;
- (iii) SDG 8 (Decent work and economic growth) & 5 (Gender equality): ICRF will support job creation in project development, construction and operation (estimated at 90,000 jobs). This will facilitate wider economic benefits in the project supply chain and induced employment opportunities;

²⁴ Taken from the document entitled "Addressing iTAP remarks in V9".

²⁴ See B.34 funding proposal, annex 2b "ICRF Impact tracking document".

- (iv) SDG 9 (Industry, innovation and infrastructure): ICRF projects will provide a direct contribution to sustainable, resilient, and inclusive infrastructures – thereby recognizing the centrality of investing in resilient infrastructure and innovation as crucial drivers of economic growth and development. The implementation of this project will have positive economic, social and environmental benefits;
- (v) SDG 11 (Sustainable cities and communities): ICRF will contribute to climate-resilient cities and communities through adaptation measures for resilience; and
- (vi) SDG 13 (Climate action): ICRF is all about catalysing investments in climate-resilient infrastructure and de-risking the mobilization of climate finance at scale through an innovative blended finance structure. The ICRF will support the NDCs of target countries in its core sectors.

41. **Economic development.** Infrastructure development sits at the heart of all development pathways and is closely linked to economic growth, environmental outcomes, and well-being. It is well known as one of the most promising means of generating economic growth and development because of its constructive impact on multidimensional aspects of society. By promoting climate-resilient infrastructure, ICRF provides clarity on long-term climate-resilient development strategies to avoid the lock-in of risky fragile infrastructure and stranded assets.²⁶

42. **Social, gender-sensitive development, and environment.** By promoting climate-resilient infrastructure, ICRF will play a key role in strengthening social sustainability by helping to generate jobs, facilitating access to employment opportunities and contributing to the development of national economies. ICRF will avoid negative impacts on the health, safety, livelihoods, and well-being of workers; and protect the interests of displaced individuals and communities, as well as vulnerable and underprivileged groups, including women and indigenous peoples (IPs). The benefits of the infrastructure to be promoted by ICRF will be that it will be inclusive and accessible to everyone, particularly underserved groups, such as women and children, the elderly and people with disabilities.²⁷

43. The funding proposal has also prepared an indigenous peoples management framework (IPMF) to complement the environmental and social management framework on IPs' issues. The IPMF sets out the principles, rules, guidelines and procedures for properly identifying and assessing the potential positive and negative impacts of the programme's activities on IPs. It identifies a set of standards, frameworks and guidelines whose requirements related to managing impacts on IPs will be met by the programme. The IPMF further recommends impact mitigation and avoidance mechanisms, along with institutional capacities, monitoring arrangements and approximate costs.²⁸

44. A gender and social inclusion assessment and action plan has been prepared. It is noteworthy that the gender action plan seeks 40 to 50 per cent representation of women in senior positions in ICRF and ACP (i.e. at board and committee levels).²⁹

45. Environmental considerations are a core component of ICRF which recognizes a clear economic case for promoting environmental principles in infrastructure investment. In addition, ICRF will support low-carbon investments, hence contributing to reducing CO₂ emissions. ICRF only submitted a one-and-a-half-page document entitled "Environmental and social safeguards

²⁶ See B.34 funding proposal, annex 2b "ICRF Impact tracking document".

²⁷ See B.34 funding proposal, annex 2b "ICRF impact tracking document".

²⁸ See B.34 funding proposal, annex 6 "ICRF Indigenous Peoples Management Framework".

²⁹ See B.34 funding proposal, annex 8 "ICRF Gender and Social Inclusion Assessment and Action Plan".

report form pursuant to para. 17 of the IDP”.³⁰ The form has a link to an environmental and social management system document and the document is complete. In the first submissions for B.34, the independent TAP raised the issue that the process for assessment and mitigation of GHG emissions needs to be clear and must ensure that ICRF subproject investments have a robust process by which to monitor, report and verify emissions during the life of the project.

1.3.1 Risk to sustainable development

46. In the first submission of the funding proposal for B.34, the independent TAP was faced with the issue of the limited screening process of ICRF which could potentially have led to, for example, an unintended negative impact on critical ecosystems. This one-track focus on infrastructure assets could miss the potential risk of accelerating deforestation in critical watershed hotspots due to new road clearing, industrial park creation, or carving high-voltage transmission lines through the forests; forests which vulnerable forest-based communities may rely on for their livelihood.

47. With the resubmission of the funding proposal for B.35, the AE addresses these issues (see the discussion under para 18 above, and revised annex 6a).

48. Overall, based on the above, the sustainable development potential is high depending on how the ICRF will handle the GHG assessment, and risk screening for each project.

1.4 Needs of the recipient

Scale: High

49. Infrastructures, which ICRF intends to deliver, are in general always needed by African countries. In the first submission of the funding proposal for B.34, the independent TAP raised the question whether or not these needs were the priority needs of the NOL countries.

(i) **Needs of the country.** AFC stated upon receipt of the funding proposal for B.34 that its portfolio, which mirrors the ICRF target portfolio, had the implicit approval of the NOL countries, as the same NOL countries are shareholders in the AFC. While this may be arguably true, this assertion was weakened by the absence of a specific statement of concurrence from the NOL countries indicating that these needs matched their priority needs. Thus, given the absence of a baseline assessment on the impact of climate on each country, and of documentary evidence that the NOL countries do needed this infrastructure, whether these were indeed the priority needs of the NOL countries could not be ascertained at that stage.

(ii) **Needs of the vulnerable people and communities.** Similarly, infrastructures to be delivered by ICRF, depending on where these will be built, may be, directly or indirectly, needed by the countries’ vulnerable people and communities. An example would be a rural community which lacked a bridge connecting it to schools and markets, where loss of life sometimes occurred when community members attempt to cross rivers swollen by heavy rains intensified by climate change. It could be that there could be positive co-benefits from an infrastructure investment, or negative impacts, or even maladaptation that unintentionally worsens communities’ situations. As to the extent to which these infrastructures would be needed, or the extent to which they would be able to address the vulnerabilities of the people and communities involved, would depend on each of their local and specific contexts. Given then the weak baseline assessments on each of the countries, it could not be ascertained then if and how these infrastructures would enhance the resilience of the people and communities.

(iii) **Needs of the private sector investors.** There is always a need for an investment vehicle like ICRF to meet investors’ needs for investment capital safety, liquidity and

³⁰ See B.34 funding proposal, annex 6 “Form ESS disclosure report final”.

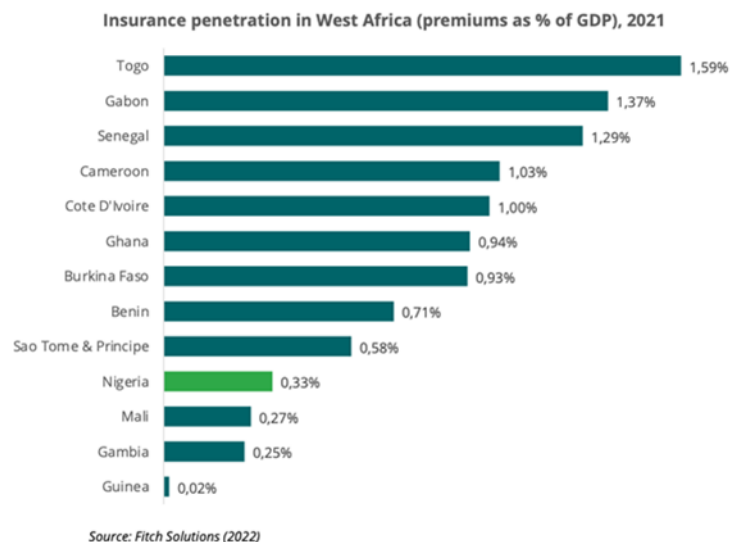
yield or returns. From this perspective, ICRF is clearly needed and important to the private sector investors in the infrastructure space as led by AFC. As discussed in the first submission of the funding proposal under section 1.2 (i.e. paras 10 and 11), ICRF benefits private sector investors looking to invest in new climate-resilient asset classes, based on this funding proposal submission. The combined package of grant financing for project preparation, climate risk insurance, and tier 1 investment with first loss buffer for the tier 2 investors seemed like a good deal for private sector investors.

- (iv) **Need for climate risk insurance by infra stakeholders.** In the first submission for B.34, the independent TAP raised the issue of CRPI. While CRPI was always a welcome risk management tool, especially for the residual risks of the proposed infrastructure projects, the independent TAP asked whether the CRPI was the type of insurance needed in the target region where the NOL countries were located; in the absence of an in-depth market assessment of the insurance sector, the answer was unknown as were the needs of the NOL countries. When asked by the independent TAP to give a quick overview as to the penetration rate of insurance in the target countries, the AE responded as follows:

Insurance penetration is very low in Africa, with an observed downtrend over the recent past years. In 2020, Africa’s average insurance penetration was around 2per cent (from a 2.78per cent rate in 2019), while the global average penetration rate was 7.40per cent and 9.4per cent in OECD countries. As an illustration, see Figure 2 on insurance penetration in 13 countries (10 of which are among the countries targeted by ICRF) – Deloitte Africa Insurance Outlook (2022); penetration rates ranged from as low as 0.02per cent to a high of 1.59per cent.³¹

- (v) This response gave the independent TAP a glimpse of the insurance market in the target countries and confirmed then that there was more to evaluate. Due to the lack of an in-depth assessment of the insurance sector, it remained to be seen if the CRPI was indeed the solution needed. This was difficult to ascertain without knowing and understanding which climate risk management solutions were currently available and planned by regional or international insurers or reinsurers. Based on the AE’s responses, Africa Risk Capacity (parametric cyclone insurance), Swire RE, and the World Bank have experience in this area and could share potential lessons or best practices.

Figure 2: Insurance penetration in West Africa



1.4.1 Risk in relation to needs of the recipients

50. The key question on the B.34 submission was if the needs presented in the funding proposal were indeed the priority infrastructure needs of each of the NOL countries. The AE had

³¹ Deloitte. 2022. Africa Insurance Outlook 2022. Available at: <https://www2.deloitte.com/content/dam/Deloitte/za/Documents/financial-services/za-Africa-Insurance-Outlook-2022-publication.pdf> (accessed 7 February 2023).

not clearly demonstrated in the funding proposal how the targeted infrastructure sector interventions had been selected. Nor was it clear in the baseline assessment how the ICRF portfolio would align with each of the NOL country's needs and NDC commitments.

51. With the resubmission of the funding proposal for B.35, the AE addresses these issues. (See paras 13, 15, 33, 35 above on related discussions, and submitted documents (i.e. annexes 2 and 23).)

52. Overall, based on the above, the needs of the recipients are assessed as high.

1.5 Country ownership

Scale: High

53. The funding proposal indicates that the NOL countries are somewhat aligned with the four target infrastructure portfolios of the ICRF.³²

54. **Close collaboration between AFC and the NOL countries.** In the case of AFC, the targeted NOL countries are shareholders in AFC. Thus, it can be said that the NOL countries are aligned with the AFC target portfolios by virtue of their ownership of AFC, and their participation as NOL countries under the ICRF. Whatever AFC does for an NOL country, there is always a close collaboration between the two within the existing AFC structure. Paraphrasing the AE, in terms of the design of the ICRF, AFC examined its own expertise and the needs of the NOL countries; thus both are systemically integrated into the fund's design. AFC further added that all their projects are public-private partnerships in nature.

55. As per the B.34 funding proposal, AFC had engaged with the NOL countries in the design of the ICRF and of the ICRF target portfolio:

The NDAs of these NOL countries have been consulted by the ACP team during the COP 26 where the AFC and AFC Capital Partners met with 11 NDAs at COP 26 in Glasgow, Scotland. The team met representatives from Côte d'Ivoire, Gabon, Nigeria, Sierra Leone, Mali, Zimbabwe, Namibia, Gambia, Angola, Tanzania, Kenya and DRC. The interactions with the NDAs were extremely progressive and we have been able to secure 12 NOLs from the following countries at several follow-up meetings with the NDAs and national stakeholders: Benin, Cameroon, Chad, Côte d'Ivoire, DRC, Gabon, Gambia, Ghana, Guinea, Kenya, Mali, Nigeria, Sierra Leone, Togo and Namibia. Furthermore, AFC and ACP have conducted 4 virtual conferences with the target countries to present the ICRF and integrate their feedback into the design of the programme. As part of the process to secure the non-objection letters, AFC and ACP have conducted in-country visits to meet NDAs, engaged with several national stakeholders such as government ministries involved in target sectors such as transport, energy, industry, ITC, as well as Ministries of economy and finance, and Ministry of Environment, and the NDA/NOL national committee members. The NDAs of the 12 countries also distributed online surveys to gather inputs from [sic] key relevant stakeholders involved in the financing of infrastructure in their countries as well as the views of the wider national stakeholders on the priorities of ICRF. These engagements have resulted in securing the NOLs from 12 countries that have expressed strong support for the ICRF programme and the alignment with their respective Nationally Determined Contributions (NDCs) and National Adaptation plans.

56. **A strong AE partner.** AFC is a multilateral financial institution, based in Lagos, Nigeria, created by African sovereign states to provide pragmatic solutions to Africa's infrastructure deficit and challenging operating environment. To date, AFC has disbursed over USD 10 billion to support transformative sustainable infrastructure projects in 35 African countries. AFC is a regional entity, accredited by GCF, with the core focus on innovative homegrown solutions to

³² See funding proposal, annex 2A, 'ICRF Feasibility Study_v.5'.

Africa's development and climate-change challenges as these relate to infrastructure. AFC is also an executing entity exercising certain rights and obligations in respect of GCF funding for the implementation of the ICRF programme in a co-investment approach with ACP.³³

57. ACP is a limited liability company incorporated on 8 July 2021 under the laws of Mauritius. It is the asset management subsidiary of AFC and is 100 per cent owned by its parent company. ACP was created to mobilize capital at scale from institutional investors, and offer them the opportunity to invest, alongside AFC, in low-carbon and climate resilient infrastructure projects across Africa. ACP will be the fund manager of the ICRF. ACP was granted a global business licence by the Financial Services Commission, Mauritius, on 8 July 2021. ACP has applied for a collective investment scheme manager licence from the Financial Services Commission to be able to operate as a fund investment manager.

58. **Capacity of the accredited entity and the executing entity to deliver.** AFC is a strong partner in infrastructure development. As per a Senior Director at AFC and Chief Executive Officer of APC (100 per cent-owned subsidiary of AFC) during the AE-independent TAP question-and-answer call, AFC provides critical infrastructure in the African continent; does project development, project construction, financing; is known as a premiere infrastructure developer in Africa; covers infrastructure on power, transport, natural resources (transitional metal), and all types of support for developing and climate proofing these projects; has been doing this for the last 15 years; has deployed over USD 10 billion in high-quality infrastructure projects in 35 African countries; and has membership of 39 African countries that also provide equity to AFC. In terms of mitigation, AFC has initiated projects on its own by developing the largest RE projects in Africa, totalling around 1.4 GW of green energy. This also includes transmission financing of green assets – mainly wind farms. AFC has also worked with small island developing States, such as Djibouti and Cape Verde, in collaboration with other strategic investors such as Climate Investor One, which it has outsourced to AFC the development of a wind farm, in a project that is also financed by GCF.

59. A strong awareness, understanding and sense of commitment can be seen from the APC team. The Chief Executive Officer of APC also stated that climate change has affected natural ecosystems and more so the built infrastructure. It is envisioned under this USD 750 million ICRF facility, that such infrastructure will be built under a better standard to withstand the impacts of climate change. The fund will be focused on the sectors that are hardest hit by the impacts of climate (i.e. transport and logistics (roads, ports, railways, airports, power systems, special economic zones, telecommunications and digital infrastructure)). Infrastructure assets are increasingly threatened by climate stressors such as high temperatures, intense rainfall events, droughts, floods and rising sea levels. ICRF will be the response to these problems given that AFC has observed these climate stressors first hand.³⁴

1.5.1 Risk to country ownership

60. In the previous submission of the funding proposal for B.34, the independent TAP raised the issue of weak country ownership. The AE was not able to provide documentary evidence that each NOL country's investment needs and plans were truly aligned with the ICRF portfolio strategy. Securing NOLs did not equate to strong country ownership. It only signified a starting point and did not exclude the need to have closer collaboration with the NOL countries' relevant stakeholders – to enable them to understand the purpose of the project, how it aligned with their NDCs/intended nationally determined contributions, their national development plans, policies, strategies, programmes, and hopefully have a strong input into and sense of ownership of the proposed projects beforehand.

³³ See B35 funding proposal, section A.

³⁴ Refer to the recording of the AE-independent TAP interview, beginning at 11:22. Recordings available upon request from the independent TAP Secretariat.

61. With the resubmission of the funding proposal for B.35, ICRF satisfactorily addresses this issue.

(i) The AE states that:

AFC strongly engaged with the NOL countries' relevant stakeholders – who have expressed tremendous support for the ICRF programme and confirmed that it aligns with their NDCs/intended nationally determined contributions, their national development plans, policies, strategies, and programmes. ALL countries have delivered their NOLs following their respective no-objection procedures including extensive consultations with relevant government ministries and authorities as established by the NDA and national stakeholders. Also, we elaborated on the Public Private Partnership approach of AFC as we work hand in hand with countries and governments authorities in developing and financing infrastructure.

(See section B3.2: Guiding principles on climate resilience integration in ICRF investment process.)

(ii) AFC further reiterates that each country has its own distinctive procedures and requirements established as part of the implementation of the GCF Readiness and Preparatory Support grants. However, as these requirements vary per NOL country, not all countries requested AFC to secure the support letters. In various cases, AFC has been requested to supply the concept note and the funding proposal, or to make a presentation to a multi-stakeholder committee and respond to questions, or (in the case of Côte d'Ivoire) to meet the national designated authority (NDA) in person to present the project, or to provide information on national counterparts and collaborating partners in countries to enable the NDA office to undertake its due diligence, or to present to representatives of designated non-governmental organizations and civil society organizations in few countries, or to secure support letters by a line ministry or relevant government authority for issuance of the NOL (e.g. Ghana and Rwanda letters of support).³⁵

62. Overall, based on the above, the country ownership is assessed as high.

1.6 Efficiency and effectiveness

Scale: High

63. **Leveraging GCF capital to de-risk investments.** The GCF's USD 240.0 million funding will be used primarily to fund the incremental costs of adaptation and resilience and de-risk investors, with this amount representing about 11.4 per cent of the total funding required at the project level. The USD 240.0 million will be matched by USD 510 million coming from AFC (USD 50 million), and other institutional investors (e.g. pension, sovereign wealth funds, insurance companies) (USD 460.0 million).

64. Through the GCF catalytic first-loss capital position, the ICRF investment objective is to leverage private and institutional capital at the fund level and at the project level to accelerate investments into climate-resilient infrastructure projects in Africa. ICRF's approach in de-risking investments is detailed in the operations manual (annex 21 of the funding proposal). Among the three key features of the ICRF operations manual is the revised climate risk and impact assessment methodology (see paras 17 and 18 above), the innovative climate investment model (see paras 23 and 33 above), and the technical assistance component for the conduct of a feasibility study on climate insurance, and other policy dialogue and frameworks development in the ICRF targeted sectors.

³⁵ See AFC responses to the independent TAP question on AFC ICRF dated 16 January 2023.

65. With regard to the current financial problems (e.g. currency depreciation versus the USD, inflation) arising from the ongoing conflict in Eastern Europe and the impacts of Covid lockdowns, the independent TAP also sought some elaboration on how AFC or the ICRF will be managing such risks when applicable. From the perspective of AFC, it has a strong dollar balance and foreign exchange risk management is one of its core areas of expertise; essentially, AFC is very capable of managing potential foreign exchange risks in the investments using appropriate risk management strategies.³⁶

66. **Mobilization at the subproject level by GCF.** ICRF equity and mezzanine investments will unlock financing at scale, targeting ~1:2.6 – 1:3 leverage ratio at the subproject level, equivalent to USD 1.155 – 1.485 billion additional debt financing, bringing the total pipeline value up to USD 2.0 billion. This will lead to an average mobilization ratio at the subproject level by GCF of 5.2x: $(USD\ 1.155 + USD\ 1.485) / 2 = USD\ 1.32$ billion average mobilization at the subproject level) → $USD\ 1.32$ billion / $USD\ 254.1$ million total GCF funding = ~5.2x.

67. Total mobilization ratio at the ICRF fund and subproject levels is envisaged as ~7.2x to be achieved by catalytic junior equity by GCF – a very strong mobilization ratio for a private sector adaptation programme: $(USD\ 510$ million on the fund level + $USD\ 1.32$ billion on the subproject level) / $USD\ 254.1$ million total GCF funding = 7.2x.

68. Incremental cost of the CRI will be covered by the GCF concessional junior equity (with a 3 per cent internal rate of return) thus allowing private sector capital to hit target hurdle rates of 12.5 per cent. Incremental cost for CRI projects may appear to be high at first glance compared to standard infrastructure investment projects (the demonstration cases suggest 5.2–14.9 per cent for RCP 4.5 and 14.8–23.7 per cent for RCP 8.5 scenarios to the Capex without resilience measures); the higher costs will deliver the following intended benefits: (i) higher quality of the desired infrastructure result (less costly operation and maintenance); (ii) less revenue disruptions due to the ability to withstand disastrous climate-related weather events, etc.; (iii) better sustainability (assets longevity and avoidance of stranded assets risk); (iv) additional socioeconomic benefits (increased safety for vulnerable people and communities, increased productivity).

69. If done right, the integrated approach of providing technical assistance for project preparation (e.g. climate risk, vulnerability and adaptation options assessment), doing a feasibility study on a climate risk parametric insurance in support of managing residual climate-related risk, standards and policies, and GCF concessional equity (with 30 per cent first-loss protection for investors) can effectively de-risk the investments among institutional private sector investors (pension funds, insurance companies, sovereign wealth funds, development financial institutions and foundations), and enhance the development of climate resilient infrastructure projects.

70. **Cost-effectiveness and cost-efficiency**

71. The ICRF will be invested in a total of 15 projects, at an average of USD 32.72 million per project. Expected internal rate of return is 13.5 per cent for a period of 10 years. GCF cost of funds is at 3 per cent (for Tier 1) while Tier 2 investors' (AFC, other investors) hurdle rates are at 12.5 per cent. GCF investment of USD 240 million will be matched by USD 510 million, for a leverage factor of 2.125x. Of the USD 510 million, AFC will contribute USD 50.0 million. Equity multiple, the value of the equity that investment holdings for 10 years will have generated in ICRF is estimated at 3.55x.

a. Risk to efficiency and effectiveness

72. In the previous submission of the funding proposal for B.34, the independent TAP raised the issue of the weak baseline assessments and technical capacities of the ICRF team in

³⁶ See video recording of call between the AE and the independent TAP on 25 January 2023.

processing climate investment projects which may put at risk the overall efficiency and effectiveness of the funding proposal.

73. With the resubmission of the funding proposal for B35, the AE addresses these issues.

74. As to the technical capacities, the AE has more than adequately demonstrated its technical capacity in performing assessments of climate investment projects. The AE provided three illustrative case studies with financial models as part of the funding proposal package where the same principles will be applied during the project preparation, assessment and implementation. The model showcases how to demonstrate the impacts of climate in the infrastructure investments (i.e. on the assets, cost of operations, and revenue stream under five scenarios, specifically BAU with no adaptation, and with and without adaptation under the RCP 4.5 and 8.5 scenarios). Data for the models included information from the socioeconomic analysis as well as a review of energy and infrastructure models from actual projects. In each case, the models demonstrated that investment in climate-resilient infrastructure generated a higher return over the long term than BAU infrastructure investment. The operations manual (annex 21) also provides some illustrations on climate risk screening and resilience measures in sections 7.2 and 7.5. The AE submitted an innovative model on the financial and economic assessment of the ICRF's targeted infrastructure projects.

75. The impact assessment was made by evaluating projects' equity IRR for cases with and without climate adaptation under different climate impact assumptions. (Externalities were not included in the financial modelling impacts.)

76. In terms of climate accounting, the ICRF will invest in the development and construction of climate resilient infrastructure. Only the incremental cost of adaptation measures will be counted as 'adaptation finance' for climate accounting. GCF concessional funding will only be used to de-risk investors at fund level and contribute to financing the cost of adaptation measures.

77. Overall, based on the above, the efficiency and effectiveness is assessed to be high.

II. Overall remarks from the independent Technical Advisory Panel

78. In the first submission for B.34, the independent TAP recommended the AE to undertake the following actions to further strengthen the funding proposal:

79. Update the funding proposal³⁷ and relevant annexes to include the following:

(i) Baseline assessments of the following items:

i. The priority sectors of the NOL countries, showing how current and the future climate change will seriously exacerbate negative impacts on these NOL countries and their priority sectors especially in the areas of infrastructure, as well as people/communities, critical ecosystems, business value chains, and other built infrastructures that are interdependent on these identified priority infrastructures. Studies should describe and provide evidence of (a) the specific context of vulnerability of each of the NOL countries; (b) a clear statement of intent that these are the infrastructures of each of the NOL countries that they want to prioritize and address; and (c) most recent data and information on losses and damages as well as budget expenditures, or donor funds spent in recent years.³⁸

³⁷ Refer to comments on paragraph 16.

³⁸ Refer to comments on paragraph 12 under section 1.1.2, 'Risks to adaptation' above; to be part of annex 2 FS.

- ii. The capital and financial market sector, describing the available financial and capital market products/services (e.g. loans, equity, funds), investors, private and public asset managers that operate in the infrastructure space in the target African region where the NOL countries are situated. The study should show how climate change has impacted their lending or investment portfolio over a period of time in terms of return, yield, revenues, operational costs, liquidity, and what industry barriers, issues, challenges and opportunities these actors identify.³⁹
- iii. The insurance companies (public and private, insurers, reinsurers) and their available insurance products and services (e.g. parametric, indemnity, catastrophe bonds) catering to the target infrastructure sector. The study should show how climate change has impacted the insurance business and what current issues, barriers, challenges and opportunities the industry is facing. The study should also show the roles or potential roles of the national hydrometeorological agencies, insurance commission and other regulatory agencies, in the formulation of the parametric insurance product.⁴⁰
- (ii) A revised ICRF climate risk impact assessment methodology, and other similar screening and assessment processes, to reflect the assessment of impacts on vulnerable people, as well as critical ecosystems, investments/micro-, small- and medium-sized enterprise business value chains and other interdependent built infrastructure.⁴¹
- (iii) The AE should provide additional theoretical or mock case studies to demonstrate its knowledge, experience and capability to undertake climate change related investment processing activities. These should specifically use as case studies the infrastructure types that AFC has identified as priority infrastructures in transport and logistics (e.g. roads, rail); clean energy (e.g. transmission and distribution lines catering to both RE and thermal power); ICT and telecommunications; and economic zones. These mock case studies should be made part of the funding proposal annexes and should include demonstrations of the following:
- i. climate finance accounting know-how;⁴²
 - ii. climate investment assessment that includes climate-related positive and negative externalities⁴³ showing differences between results under the BAU, RCP 4.5 and RCP 8.5 scenarios;
 - iii. how to assess the GHG emission baselines and projections, and suggested mitigation measures;⁴⁴ and
 - iv. the use of the revised ICRF Climate Risk Impact Assessment methodology to reflect the assessment of impacts on vulnerable people, as well as critical ecosystems,

³⁹ Refer to comments on paragraph 14 under section 1.1.2, 'Risks to adaptation' above.

⁴⁰ Refer to comments on paragraph 48 (iv and v) under section 1.6, 'Needs of the recipient'.

⁴¹ Refer to comments on paragraph 16 (vi and vii) on the CRIAM.

⁴² Refer to the comments on paragraphs 19-21 under section 1.1.2: "Risks to adaptation" above. The AE must be guided by the MDB climate finance reporting principles which will cover potential Type 1, 2a, 2b projects as cited by the AE in its responses to the AE-independent TAP questionnaires and meeting, and as mentioned in annex 14 "ICRF Draft Term Sheet".

⁴³ See B.34 funding proposal, annex 3A "KTMR project financial analysis example" where 'health cost of accidents' is used as one of the externalities on transport projects; traffic road safety externalities are not clearly climate linked.

⁴⁴ Refer to comments on paragraphs 26- 29 and 44.

- investments/micro-, small- and medium-sized enterprise business value chains and other interdependent built infrastructure.⁴⁵
- (iv) The AE shall prepare a set of climate change-related taxonomies for ICRF stakeholders to ensure clarity and consistency of terminologies used within the ICRF project, thus, avoiding the risk of multiple meanings being used for the same terms within the project that will create confusion.⁴⁶
 - (v) The AE should prepare a complete set of climate change-related indicators for each of the targeted sectors, covering infrastructure, people/communities, ecosystem resources and investments/livelihoods.⁴⁷
 - (vi) The AE should prepare a set of resilience indicators for the identified target sectoral infrastructure (arising from the high-level framework and generic methodology) that will enable a reviewer to assess a specific set of climate change-related indicators at the project level.⁴⁸
 - (vii) The AE should identify the scope of work, terms of reference and professional background of climate-change experts⁴⁹ who will form part of the following:
 - i. the Climate Governance Committee;
 - ii. the ICRF investment and advisory committee, audit committee (i.e. for climate finance accounting) and board of directors; and
 - iii. AFC Capital Partners.

80. In response to the independent TAP recommendations above, the AE, in its funding proposal resubmission for B.35, has adequately addressed the above-mentioned issues.⁵⁰

81. **Lessons learned.** It is also worth noting that the post-discussion on non-endorsed funding proposals between the AE and the independent TAP during the meeting in Incheon last October 2022, also facilitated a much better clarification of how the AE needs to address the issues raised in the non-endorsed funding proposals.

82. Based on the assessment above, this funding proposal is fully endorsed by the independent TAP with one recommendation:

The independent TAP, acknowledging that this is an adaptation programme, recommends that an assessment of the GHG emissions of its subprojects during the whole 20-year lifespan of the GCF programme (not just during the construction and development stages) also be conducted. This assessment will promote transparency and address the risk of increase in GHG emissions arising from infrastructure projects such as roads and ports once fully operational. The assessment should form part of the project risks to be mitigated so as to (i) prevent a carbon lock-up or stranded assets in the future, (ii) align the infrastructure projects with the Paris Agreement objectives of the NOL countries, thus enabling NOL countries to meet their NDCs; and (iii) attract potential investors that seek projects that are aligned to the Paris Agreement, thus increasing the attractiveness of the ICRF.

⁴⁵ See footnote 38 on CRIAM.

⁴⁶ Refer to the comments on paragraphs 16 (vi and vii), 19, 20, 24 and 27.

⁴⁷ Refer to the comments on paragraphs 16 (vi and vii), 21 and 24.

⁴⁸ Refer to the comments on paragraph 24 and footnote 37.

⁴⁹ Refer to the comments on paragraph 21.

⁵⁰ See document entitled "Addressing iTAP remarks V.9 FP" where the AE responds to the assessment findings.

Reply to the Independent Technical Advisory Panel Assessment Findings

Proposal name: Infrastructure Climate Resilient Fund (ICRF)

Accredited entity: Africa Finance Corporation (AFC)

Impact potential

AFC is committed to mobilizing blended finance at a scale and accelerating investments in high-impact climate-resilient infrastructure projects to reduce the risks associated with projected climate change impacts. This program will bring significant adaptation impact potential to direct and indirect beneficiaries on the African continent. The ICRF is targeting 50,365,061 direct beneficiaries and 144,115,769 indirect beneficiaries. We appreciate and concur with the ITAP assessment which ranks the impact potential High.

Paradigm shift potential

The program will champion and mainstream a novel approach to integrating physical climate risks in the development of climate-resilient infrastructure assets which are planned, designed, built and operated in a way that anticipates, prepares for, and adapts to changing climate conditions. Resilient assets can withstand, respond, and recover rapidly from disruptions caused by climate change conditions. By enabling the mobilization of blended capital at scale, ICRF will on one hand invest in the resilience measures needed for long-lasting infrastructures to withstand current and future climate risks, but on the second hand, to de-risk and enhance the bankability of investments in climate resilient infrastructure. GCF concessionality will be crucial to enable the financing of adaptation measures, and to mobilize capital at scale for climate resilient infrastructure through the participation of institutional investors such as pension funds, insurance companies, and sovereign wealth funds in Africa and globally.

The AE appreciates and concurs with ITAPs assessment of ICRF’s paradigm shift potential.

Sustainable development potential

We are in agreement with the ITAPs assessment regarding the sustainable development potential.

ICRF presents a real potential to contribute to sustainable development with impacts on all the dimensions of sustainability as co-benefits to the core adaptation results expected from its implementation: Economic, Environment and Social including consideration for gender equality, health, safety and wellbeing. AFC is committed to developing projects that will contribute to the following SDGs: 7,8,10,11,13 and 16.

Needs of the recipient

AFC agrees with ITAP’s assessment regarding the needs of the recipient. The origination and development of ICRF have been informed by an in-depth analysis and understanding of the needs of the participating countries. The baseline assessments on the impact of climate on each country have been reinforced by the demonstrated evidence of the critical need for resilient infrastructure on the

continent. ICRF responds to the needs of its beneficiaries' countries and their population on several fronts: the need to build the resilience of infrastructure; the need to mobilize the necessary capital, the need to strengthen institutions and capacity for systematic integration of climate risks assessments in infrastructure planning, financing and their management etc.

Country ownership

Country ownership is pivotal to the ICRF design and implementation. We agree with the ITAP assessment on country ownership as we believe that the NOL countries are very much aligned with the target sectors of the ICRF. AFC engaged collaboratively with all participating countries during the origination and development phase of this funding proposal. AFC engages with NDA and wider stakeholders of the target countries to enable them to understand the structure of the ICRF program, the choice of the financial instruments, confirm with them how the program aligns with their NDCs, their national development plans, policies, strategies, and programs.

Efficiency and effectiveness

We are in agreement with the ITAP assessment of efficiency and effectiveness. AFC has demonstrated technical capacity in performing assessments of climate investment projects by providing robust case studies with financial models incorporating effects on climate change under different climate scenarios. We will ensure that the GCF financing is effectively deployed across the various target sectors of the ICRF.

Overall remarks from the independent Technical Advisory Panel:



MAKING AFRICAN INFRASTRUCTURE RESILIENT TO CLIMATE CHANGE

ACP ICRF

GENDER & SOCIAL INCLUSION
ASSESSMENT AND ACTION PLAN



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I. EXECUTIVE SUMMARY

Current and future infrastructures in Africa face risks associated with climate change which is often not a key consideration in infrastructure planning, design, financing, commissioning, and construction. Climate-resilient infrastructure would help provide the quantity, quality, and accessibility to infrastructure and the associated services to connect people and enhance the quality of life.

The Africa Finance Corporation (AFC) wholly-own Capital Partners is establishing the Infrastructure Climate Resilient Fund (ICRF) to offer tailored financial products (concessional equity and parametric insurance) to finance climate-resilient infrastructure and reduce the impact of climate hazards on the physical infrastructures in the selected African nations. The ICRF will be supported by targeted technical assistance and policy interventions to ensure a long-term and systematic approach towards infrastructure financing in Africa. This analysis is prepared to assess potential Gender and Social inclusion Risks that might be associated to the implementation of the ICRF in the targeted countries, with the view to propose an action plan to ensure a gender-responsive implementation of the ICRF.

The proposal targets 19 countries in Africa and is structured around three (3) components.

- Component 1 – Financial instruments to reduce market failure and attract investment in Climate Resilience;
- Component 2 – Strengthening capacity, systems, and networks to improve understanding of current and future risks; and
- Component 3 – Policy interventions to support investments in Climate Resilient Infrastructure.

This Gender and Social Inclusion Assessment and Action plan has been developed using a participatory approach to complement intensive documentation review to understand the national and regional considerations that affects gender considerations in infrastructure in Africa in general and takes into consideration the potential for additional risks associated to climate change and specific gender considerations.

This report is structured in seven (7) parts

1. General presentation of the ICRF
2. Connection between climate-resilient infrastructure and Gender considerations
3. Analysis of gender and socioeconomic indicators at country-level
4. Gender disparities to infrastructural access and services, resulting from the survey in ICRF countries
5. Considerations of other social inclusion dimensions in infrastructure
6. Considerations of gender and social inclusion entry points in the program implementation
7. Gender and Social Inclusion Action Plan



II. ACP INFRASTRUCTURE CLIMATE RESILIENT FUND (ICRF)

2.1 Investment Objective

The principal objective of the ICRF is to deploy capital to support the development and financing of climate-resilient infrastructure projects in Africa and to achieve medium to long-term returns for investors. The fund will focus on investments in high-quality sustainable infrastructure (i.e., roads, ports, bridges, rail, telecommunication, clean energy, and logistics projects) with the objective of making these assets more resilient to the impacts of climate change while being in accordance with the Paris agreement.

2.2 Investment Themes

ICRF will focus on infrastructure core sectors including:

- i. Climate-resilient Transport and Logistics including ports, roads, bridges, airports, etc.
- ii. Climate-resilient Energy Systems¹
- iii. Climate-resilient Economic zones
- iv. Climate-resilient Telecommunication and Digital Infrastructures

2.3 Investment Strategy

ICRF will invest in greenfield and brownfield infrastructure, acquisition, and growth equity financing combined with concessional capital from international and multilateral sources like the Green Climate Fund (GCF) that have committed significant pools of capital to climate resilience financing for emerging market countries, including Africa. The Fund will co-invest alongside AFC in opportunities that fit its climate mandate and investment criteria, hence benefitting from AFC's strong track record through this co-investment approach. CP will analyse investment-specific climate risks along with related resilience and adaptation considerations to incorporate ICRF investment decision-making processes.

ICRF will hold a significant or majority interest in the Project's Companies in which it invests and will seek to exit its investments after approximately seven to ten years of the respective Project Company's lifecycle. ICRF will invest up to 20% of its committed capital in project development. ICRF will target projects that exhibit the following characteristics:

¹ The Fund will not invest into fossil fuel-based energy solutions, and this covenant will be included in the exclusion list

- i.** Ability to generate sustainable positive cash flows and offer returns commensurate with the risk associated with the investment.
- ii.** Strong sponsors with deep pockets, solid experience, and track record, as well as technical expertise in the relevant sector and region.
- iii.** Credible, experienced, and independent EPC and O&M contractors.
- iv.** Offer a strategic competitive advantage: Projects with manageable or predictable market dynamics, as well as proven and stable or growing demand from credible off-takers or a broad and deep marketplace.
- v.** Demonstrate alignment with Paris Agreement Goals (commitment for emissions reduction and alignment of financial flows to low emissions and climate resilience) as well as a commitment to best practice ESG standards.
- vi.** Projects that have all relevant permits/licenses/concessions and authorizations or have a clear and realistic plan to secure all relevant permits and authorizations in a timely manner.
- vii.** Sound and transparent governance.
- viii.** Predominantly exhibit equity characteristics.



III. CONNECTION BETWEEN CLIMATE-RESILIENT INFRASTRUCTURE AND GENDER CONSIDERATIONS

The impact of climate change on infrastructure is experienced across the globe. However, in Africa, the level of exposure of critical infrastructure to climate change is dire as the continent records some of the most extreme climatic conditions. Unfortunately, several existing and upcoming infrastructures are not built with climate resilience features.

In addition, there is a strong relationship between climate change and environment-based livelihoods, which relates to gender. Climate change also affects the allocation of tasks, resources, and time in various ways for men and women, especially in Africa. For example, climate change increases the labor burdens connected to the provision of food, water, and energy at the household level and caring for children and other vulnerable people. Women mainly undertake these tasks, thus limiting their time for other economic and social activities. In addition to others borne out of the sociocultural context, fragile environmental setting, and women's dependence on less sophisticated technology, these factors make women especially vulnerable to climate change. When infrastructure alleviates these burdens, women usually remain at risk of extra labor time when such infrastructure endures climate hazards that impact its performance.

There is a strong relationship between the climate, the resilient-climate infrastructure and gender considerations.

Climate change affects the allocation of tasks, resources, and time in various ways for men and women, especially in Africa;

For example, it increases the labor burdens connected to the provision of food, water, and energy which affects households and leads to fretting for children and other vulnerable people. Women mainly undertake these tasks, thus limiting their time for other economic and social activities. In addition to others borne out of the sociocultural context, fragile environmental setting, and women's dependence on less sophisticated technology, these factors make women especially vulnerable to climate change. When infrastructure alleviates these burdens, women usually remain at risk of extra labor time when such infrastructure endures climate hazards that impact its performance.

The impact of climate change on infrastructure is experienced across the globe. However, in Africa, the level of exposure of critical infrastructure to climate change is dire as the continent records some of the most extreme climatic conditions. Unfortunately, several existing and upcoming infrastructures are not built with climate resilience features.

Climate change disproportionately impacts people across the board. Generally, marginalized population groups, including women, suffer more of the negative impact of climate change. It is noteworthy that women and girls are "14 times more likely than men to die during a disaster", as "natural disasters exacerbate previously existing patterns of discrimination that render females more vulnerable to their fatal impact." A World Bank report, *Shockwaves*, notes that women are most vulnerable during disasters. This increases their hardships during floods and their risk of contracting waterborne diseases.

Furthermore, the disproportion in household activities translates to a disproportion in income-generating labor hours. As a result, women are more likely to experience loss of housing and lack

access to services and relief. In addition, the female population is at far greater risk of physical and sexual violence during and after disasters.

Women are more vulnerable than men to job losses in times of crisis. Women only account for 39 percent of global employment and about 54 percent of overall job losses during the COVID-19 pandemic². As workplaces closed, the earnings of many self-employed and hourly wage female workers decreased. The risk of job losses for women due to COVID-19 is higher than for men partly because the pandemic affected sectors where female employment is high³. Women's loss of income often has long-lasting effects and compounds the vulnerability of children as well. Women's loss of income often has long-lasting effects and compounds the vulnerability of children as well.

The social and cultural norms in the program countries impose several constraints on women. The division of labor in the households is gendered. This responsibility on women limits them from engaging in income-generating activities or pursuing further education. In a context where energy and transport infrastructure are heavily impacted by climate change, women would require even more time to provide these infrastructural services using conservative means that are less efficient and time-consuming.

Women lack access to knowledge and climate information generated by climate information and early warning systems (CIEWS) relevant for preparedness, adaptation, risk reduction, and transfer (part of the climate market-related risks through climate-resilient insurance scheme). This is partly due to women's low access to media and telecommunication infrastructure through which climate information is conveyed. In areas where such communication infrastructure exists, women still have the least access compared to men, and such infrastructure is also exposed to various climate stressors.

Although most countries today have a national gender policy or strategy, gender is often considered an after-thought, and gender policies are usually limited in their application. Patriarchy and lack of political will, religious roadblocks, coupled with scarce resources impede the effective implementation of the gender-responsive legal and regulatory framework. Through communication and advocacy actions by civil society organisations, various project programs succeeded in implementing activities that consider gender equality and equity. This program will draw lessons from the success of the past to sail through the social, political, religious, and cultural obstacles to ensure that women have full access to resilient infrastructure and infrastructural services.

To ensure that the program reduces the gender disparities in the implementation area, the output in establishing new infrastructure or strengthening existing ones to be more resilient to climate change should translate to fewer burdens and more economic and social access for women.

2 MADGAVKAR, A., O. WHITE, M. KRISHNAN, D. MAHAJAN, AND X. AZCUE. 2020. "COVID-19 AND GENDER EQUALITY." MCKINSEY GLOBAL INSTITUTE. [HTTPS://WWW.MCKINSEY.COM/FEATURED-INSIGHTS/FUTURE-OF-WORK/COVID-19-AND-GENDER-EQUALITY-COUNTERING-THE-REGRESSIVE-EFFECTS](https://www.mckinsey.com/featured-insights/future-of-work/covid-19-and-gender-equality-countering-the-regressive-effects).

3 ABAY, K. A., K. TAFERE, AND A. WOLDEMICHAEL. 2020. "WINNERS AND LOSERS FROM COVID-19: GLOBAL EVIDENCE FROM GOOGLE SEARCH." POLICY RESEARCH WORKING PAPER 9268, WORLD BANK, WASHINGTON, DC.

The 2020 Human Development data (see **Error! Reference source not found.**) shows that the gender inequality index in the program countries is among the lowest globally. However, gender disproportion is observed in critical sectors such as employment, politics, and education. This stresses the need to ensure a conscious gender plan in the program activities in response to gender disparity.

Table 1: Gender Inequality Index

HDI rank	Country	Gender Inequality Index		Maternal mortality ratio	Adolescent birth rate	Share of seats in Parliament	Population with at least some secondary education		Labour force participation rate	
		Value	Rank	(Deaths per 100,000 births)	(Births per 1,000 women ages 15–19)	(% Held by women)	(% ages 25 and older)		(% ages 15 and older)	
							Female	Male	Female	Male
		2019	2019	2017	2015–2020	2019	2015–2019	2015–2019	2019	2019
119	Gabon	0,525	128	252	96,2	17,9	66,2	50,6	43,5	61,8
130	Namibia	0,440	106	195	63,6	37,0	56,1	63,3	56,1	63,3
138	Ghana	0,538	135	308	66,6	13,1	55,7	71,6	63,6	71,9
143	Kenya	0,518	126	342	75,1	23,3	29,8	37,3	72,1	77,3
146	Zambia	0,539	137	213	120,1	18,0	38,5 ^h	54,1 ^h	70,4	79,1
153	Cameroon	0,560	141	529	105,8	29,3	32,7	41,3	71,1	81,1
157	Mauritania	0,634	151	766	71,0	20,3	12,7	25,0	28,9	63,1
158	Benin	0,612	148	397	86,1	7,2	18,3	33,9	68,8	73
160	Rwanda	0,402	92	248	39,1	55,7	10,9	15,8	83,9	83,4
161	Nigeria	..	..	917	107,3	4,1	..	..	47,9	57,9
162	Côte d'Ivoire	0,638	153	617	117,6	13,3	17,9	34,4	48,2	65,5
166	Djibouti	..	.	248	18,8	26,2	..	..	50,7	68,8
167	Togo	0,573	145	396	89,1	16,5	27,6	54,4	76,3	78,9

172	The Gambia	0,612	148	597	78,2	10,3	31,5	44,4	51,2	68,0
175	Congo (the Democratic Republic of the)	0,617	150	473	124,2	12,0	36,7	65,8	60,7	66,3
178	Guinea	..	..	576	135,3	22,8	..	..	62,7	60,2
182	Sierra Leone	0,644	155	1 120	112,8	12,3	20,1	33,0	57,3	58,5
184	Mali	0,671	158	562	169,1	9,5	7,3	16,4	61,2	80,6
187	Chad	0,710	160	1 140	161,1	14,9	1,7	10,5	63,9	77,5
Human development groups										
	Very high human development	0,173	—	14	17,2	28,3	86,5	88,6	52,3	69,1
	High human development	0,340	—	62	33,6	24,5	69,8	75,1	54,2	75,4
	Medium human development	0,501	—	161	34,6	20,4	30,1	46,3	28,3	77,1
	Low human development	0,592	—	572	102,8	22,2	17,2	30,1	57,7	72,3

Source: Human Development Report, 2020 (UNDP)

The ranking of the gender inequality in the program countries shown in the first column of Table 1 highlights the level of gender disproportion. It is thus vital that this program purposefully designed gender-centered activities and actions, which will contribute to bridging the gender gap in the program intervention areas.

IV. IN-DEPTH ANALYSIS OF GENDER AND SOCIOECONOMIC INDICATORS AT COUNTRY-LEVEL

4.1 Benin

Demographics and human development

With an area of 114,736km² and an estimated population in 2020 of 12,220,528 people of whom 50.75%⁴ are females, Benin is a west African country bordered by Togo (West), Burkina Faso and Niger (North) Nigeria (East) and the Atlantic Ocean (South). The country's population age structure is very young: 77.84% of the population is under 35 years of age and 46% under 15 years of age⁵. The population growth rate is high (3.5%) and the pace of urbanization rapid (11.9% per year). The majority of Benin's population is rural (55.4%)⁶ and cotton is the main export product contributing 13% to GDP.

Benin has adopted a national gender policy and action plan to combat gender-based violence and also several laws protecting and promoting the rights of women and girls, but women's status has barely improved, according to national statistics. In 2019, the Africa Gender Equality Index shows a generally high level of gender inequality with a score of 0.433 indicating a gender gap of almost 57%. Despite this overall score, scores in the social and economic areas are close to parity (0.776 and 0.728 respectively) but low in the areas of representation and empowerment. (0.145)⁷. Benin's HDI value for 2019 is 0.545, which puts the country in the low human development category, positioning it at 158 out of 189 countries and territories and a Gender Inequality Index (GII) value of 0.612, ranking it 148 out of 162 countries in the 2019 index

Education

Education is highly important in Benin and central government is redoubling its efforts to make education for all a reality in this sector in Benin⁸. It was observed that, in Benin, 59.4% of women have no level of education, 24.9% of women have had primary education, 14.2% secondary education and only 1.5% have completed higher education. Considerable efforts have been made nationally to ensure enrolment for all in primary education and in the first cycle of secondary education where the 1st cycle gender parity index score was 0.84 in 2019⁹. In higher education, the parity index score for students was 0.39 in 2019. The gender inequalities observed in secondary, technical, vocational and higher education have impacted negatively on women's participation in employment and, as a result, on their incomes.

Employment

⁴ The World Population Prospects 2020

⁵ INSD 2016 Key Socio-Demographic and Economic Indicators (RGPH-4, 2013)

⁶ ibid

⁷ African Development Bank (2020). Gender Fact Sheet for Benin

⁸ African Development Bank (2021), Gender country profile

⁹ INSD Benin, ERI-ESI 2018

Women in Benin are more vulnerable (91.1%) in the employment area than men (71.9%)¹⁰. The employee rate in the non-agricultural sector is 34.3% for men compared to only 9.7% for women. In 2019, 69.3% of the female population was participating in the labour market compared to 73.3% of the male population¹¹. Despite this fairly high female labour force participation rate, this rate has a strong gender bias and women's work usually involves poorly paid jobs.

Health

It was noted from the recent Demographic and health survey (2017-2018) in Benin that antenatal health care coverage for women was higher in urban than in rural areas (90% compared to 79 %). The contraceptive prevalence rate was 11% for women with no level of education, 15% for those at primary education level and 24% for those at the higher education level. The use of contraceptive methods is higher in urban (34.2%) than in rural (30.9%) areas. The fertility rate was less than 5 children per woman over the 2007 – 2017 period. Access to health establishments is more difficult in rural areas than in urban areas because of distances, inaccessibility and lack of appropriate facilities¹².

Energy, transport, and telecommunications

The production and reproductive roles assigned to women expose them to the negative impacts of climate change. It is important to factor into the climate change impact adaptation and mitigation measures, the different needs of women and men to provide an appropriate and sustainable response to the impacts of climate change. In the energy sector, this fact generated an unequal access to energy source. In terms of access to employment and entrepreneurship in this sector, men dominate, which sustains gender inequalities despite the existence of a legal and institutional framework for gender mainstreaming.

Women are the most concerned regarding energy for cooking, unlike men who are more interested in other uses (lighting, comfort, ICT, productive energy, etc.). Energy used for cooking and preserving food in Benin is dominated by biomass, which has negative effects on people's health – exposure to respiratory diseases (as a result of air pollution in houses due to cooking with traditional biomass). According to ERI-ESI 2018, 63.4% of households use charcoal compared to 22% for gas and 12.2% for wood. There are different combinations of energy types for cooking: wood and charcoal (23.5%) and charcoal-gas (23.5%). The butane gas access rate is very low (6.9 kg/yr./household) and the proportion of households using improved stoves is also very low (17.64%).

Energy demand is growing rapidly, with a national electrification rate that is still low, but has increased from 13.10% in 1996 to 33.18% in 2015 with an average annual increase of 7.7%. In urban areas, the rate rose from 28.78% in 1996 to 61.19% in 2015, while in rural areas it rose from 0,64 % à 8,15 %. The demand for electrical energy has increased by 10.4% annually, from 105 MW in 2006 to 192 MW in 2014. In terms of coverage, few localities in the country are electrified. The national development plan (NDP 2018-2025) indicates that in 2015, 1,654 localities were electrified out of the 3755 localities in Benin, a coverage rate of 45%.

However, Benin has a relatively large hydroelectric potential capacity of at least 400 MW, for the main sites identified and evaluated in the NDP (2018-2025) namely Adjarala 147 MW on the Mono River, Kétou

¹⁰ African Development Bank (2021), Gender country profile

¹¹ EMICoV (2015) Benin Integrated Modular Survey on Household Living Conditions

¹²Demographic and Health Survey V (2017-2018)

Dogo 108 MW, Vossa 79.2 MW, Bethel 42.4 MW, Bétérou 30 MW and Olougbé 29.4 MW on the Ouémé River. In the context of climate change, where previsions indicate a probable increase or decrease in renewable water resources, the hydroelectric production could be affected.

Since 2015, successive governments in Benin have, in general, implemented a policy of seasonal repairs to rural feeder roads, first for the transportation of cash crops (male-dominated) and second, for other agricultural products¹³. In 2016, 45% of the national road network was considered to be in poor condition whereas the road is the most frequently used means of transport (93% of people and 73% of goods)¹⁴. The current government has crafted an ambitious program for strengthening the country's transport infrastructure to open up access to national and regional markets. Its objectives include the opening up of production basins, reduction of transport costs to increase economic growth and reduce poverty¹⁵.

Concerning ICT, data showed that 51.1% of Benin's women have a mobile telephone compared to 79.5% of men but only 26.9% of them use it for financial transactions¹⁶. In the country's 2018-2025 National Development Plan, there is an 'entrepreneurship promotion program for women involved in growth sectors and for young men and women in certain sectors of the digital economy and green economy.' However, it does not contain any specific measures to encourage women, in particular, those living in semi-urban and rural areas, to invest in this sector. The sector's inclusive development should entail specific measures to take this aspect into account.

Sociocultural

Patriarchy is the most widespread form of social organisation in almost all of Benin's ethnic groups. The continuation of cultural practices that are degrading to women appears to be linked to the banalisation of gender-based violence by this system. The need for women to obtain authorisation from men (father and/or spouse) for important decisions in their lives prevent their full empowerment. Despite the Code of Persons and Family which states that monogamous marriage is the only type of marriage recognised, polygamy remains very widespread. According to Benin-V Demographic and Health Survey, about two out of five women aged between 15 and 49 years old and in a relationship (38%) said they were living in a polygamous union and about one out of five men (22%) said they were polygamous.

Policy and Legal framework

Various legal and regulatory texts have been promulgated to promote and protect women's rights and gender equality among whom:

- The United Nations Charter adopted in 1945 enshrined the principle of gender equality
- The Universal Declaration of Human Rights which enshrines the legal recognition of rights 10 December 1948
- The Convention on the Elimination of All Forms of Discrimination against Women (Optional Protocol, Articles 2 and 16)- 3 September 1981
- The Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment- 26 June 1987
- The Convention on the Rights of the Child -2 September 1990

¹³ African Development Bank (2021), Gender country profile

¹⁴ Republic of Benin, Ministry of Infrastructure and Transport, Statistical Yearbook 2013- 2016

¹⁵ African Development Bank (2021), Gender country profile

¹⁶ African Development Bank (2021), Gender country profile

- The Convention on the Elimination of All Forms of Discrimination against Women
- The Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women

Benin has also ratified almost all the international instruments promoting women and gender. Despite a legal framework that is increasingly favourable to gender equality in Benin, effective ownership and application of these texts by the different actors remain a challenge because of habits and resistance from socio-cultural models.

On the policy front, several guidance documents have been prepared for women's promotion and gender, including the National Gender Promotion Policy, the National Policy for the Promotion of Women in Agriculture and the National Action Plan to combat Gender-Based violence.

Gender based violence

Statistics show that 76% of violence against women aged between 15 and 49 years of age is physical, 44% sexual, 86% verbal or psychological and 7.3% concerns genital mutilation¹⁷. Benin has established a legal and institutional framework to end violence against women throughout the country. 84 social advancement center at 3 Integrated Center for GBV Survivors are available to support and care for GBV victims¹⁸. In order to achieve an effective change in mentalities and behavior, the law must be further strengthened in this area and efforts must be made to raise awareness among the population.

Access to Finances

The financial inclusion index has generally improved in the West African Economic and Monetary Union (UEMOA), standing at 0.520 in 2020 against 0.501 in 2019, on a scale of 0 to 1, according to the annual report devoted to the subject by the Central Bank of West African States (BCEAO). This index stood at 0.647 in 2020 in Benin, against only 0.170 in 2010 and puts Benin ahead of all other countries in the sub-region. Account ownership in Benin increased overall, from 38 percent in 2017 to 49 percent in 2021. According the Global Findex report financial inclusion (2021), the growth in account ownership since 2011 has not benefited all groups equally. There has been some progress, though women, the poor, and the less educated, remain less likely than men, the rich, and the educated to have an account. This gender gap in Sub-Saharan African country like Benin is evaluated to an average of 12 or 13 percent. The spread of mobile money accounts has created new opportunities to better serve women, poor people, and other groups who traditionally have been excluded from the formal financial system. Though there are some early signs that mobile money accounts may be helping to close the gender gap, in country like Benin there is a statistically significant gender gap for account ownership overall, including both financial institution and mobile money accounts.¹⁹

Poverty

Monetary poverty has slightly declined from 40.1% in 2015 to 38.5% in 2019 (INSD, Note on Poverty 2019). In 2018, it was noted that men's average monthly income was one and a half times higher (CFAF 31,495) than women's (CFAF 18,203) and that they spent more time than women on remunerated activities resulting in higher hourly incomes²⁰. Monetary poverty is highest in rural areas (44.2%). It was also noted

¹⁷ Demographic and Health Survey V (2017-2018)

¹⁸ African Development Bank (2021), Gender country profile

¹⁹ World Bank, the Global 2021 Findex Database

²⁰ INSD, Synthesis report on the Integrated Regional Survey on Employment and the Informal Sector (ERI-ESI), 2018, p. 44

that there had been an improvement in the living conditions of poor households, reflected in a 13-point drop in monetary poverty between 2015 (29.41%) and 2019 (26.1). Although the improvement in monetary poverty is more pronounced in urban areas, rural households also experienced an improvement in their living conditions in 2019. The place of residence, gender, level of education of the household head are the determining factors on the level of household poverty²¹. Therefore, poverty affects rural households (44.2%) more than urban households (31.4%) with large country-wide disparities. In 2015, monetary poverty affected almost as many male-headed households (40%) as female-headed households (39.7%). On the other hand, the incidence of non-monetary poverty is higher in female-headed households (36.3%) than in those headed by men (28%). The incidence of monetary poverty in 2015 in households where the head had no education was 17 points higher than in those where the household head had completed secondary education and 30 points higher than those whose heads had completed higher education. The trend is even more pronounced in terms of non-monetary poverty where the differences are between 22 and 27 points higher between household heads with no education and those with secondary or higher levels of education.

Unequal Participation in decision taking

Benin has a very low level of women's participation in political affairs. From 1991 to date, women's presence in elective bodies (legislative and municipal) has never exceeded 10% (5th legislature 2007). Following the most recent legislative elections (April 2019) only 6% of the National Assembly members were women. At the latest municipal elections in May 2020, despite the signing of an Equality Charter on Politics by all the political parties only 4.3% of women were elected as councilors and there were only 4 women mayors out of 77 elected mayors²². As regards executive power, women's participation in government was low (varying from 9% to 24%) between 1996 and 2019, according to data from the Government's General Secretariat. The latest government, formed in April 2021, has 5 women out of 23 ministers, i.e. 18%. However, it was observed that, since 2011, women have occupied an increasing number of key positions in successive governments, namely: Ministry of Economy and Finance, Ministries of the Civil Service and Labour, Trade and Industry, and the digital economy. This is a major development since, historically, they were mainly responsible for the social sectors such as education, social affairs and health.

According to the 2021 annual report on gender statistics in public administration in Benin published by the Ministry of the Civil Service and Administrative Reform, the proportion of women in positions of responsibility in public administration is still low. Out of a total of 1,658 positions of responsibility in the administration, barely 154 are held by women, a percentage of 9.3%²³. The majority of these women occupy positions related to Statutory Jobs, 130 (84%). However, 98% of the women who hold positions of responsibility have a university degree of at least BAC+3. Also, in the energy sector, only 10% of positions of responsibility are held by women.

²¹ INSD, 2020. Note on Poverty in Benin, page 8

²² African Development Bank (2021), Gender country profile

²³ UNDP. Republic of Benin: progress to be made for the equitable representation of women in decision-making positions in Benin. Online Available: <https://www.undp.org/fr/benin/actualites/des-progres-faire-pour-la-representation-equitable-des-femmes-aux-postes-de-prise-de-decision-au-benin>

4.2 Cameroon

Demographics and human development

According to world development indicator's database, Cameroon's population is estimated above 26 million of inhabitant which 49.98% percent is women. This current population is expected to increase to 50 million by 2050 and then 89.62 million by 2099²⁴. Despite negative net migration, Cameroon's population growth rate is 2.59%, adding over 600,000 people to the population every year. Cameroon has a young population with a median age of 18.7 years and 41.25% of the population being between zero to 14 years old. Cameroon's Human Development Index value for 2019 is 0.563— which put the country in the medium human development category—positioning it at 153 out of 189 countries and territories. Between 1990 and 2019, Cameroon's life expectancy at birth increased by 5.9 years, mean years of schooling increased by 2.8 years and expected years of schooling increased by 4.1 years.

In Cameroon, 29.3 percent of parliamentary seats are held by women, and 32.7 percent of adult women have reached at least a secondary level of education compared to 41.3 percent of their male counterparts. For every 100,000 live births, 529.0 women die from pregnancy related causes; and the adolescent birth rate is 105.8 births per 1,000 women of ages 15-19.

Education

The disparity between women and men in education has declined in general, but the gender gap is wider in the higher levels of education. According to the World Bank data, the primary net enrolment was 97% for boys and 88.7% for girls (2017); primary completion rate was 68.5% for boys and 62.3% for girls (2019). There is a gender gap in literacy rate (adult men 82.6%, adult women 71.5%: data in 2018). The National Gender Policy Document explains the reasons for the gender gaps: some families do not value girls' education as women's roles and jobs would not create much income; poor families might prioritize boys' education to girls' (the primary education is free of charge since 1999, but the cost of clothes and learning materials still incur); parents allocate domestic and agricultural work to girls; some girls do not go to school due to early marriage and pregnancy; some families are reluctant to send girls to school fearing violence at school or on the way between home and school; and the toilets for girls are not appropriate at school.

The enrolment rate increased after making the primary education free of charge. However, according to the World Bank's Country Assistance Strategy, quality of education is still low as the number of teachers is insufficient compared to the number of pupils and adequate learning materials are not available²⁵. The government took several measures to improve the situation such as construction of classrooms to reduce the number of pupils per class, increase of salary of teachers to motivate them, increase the number of new teachers, and distribution of basic teaching materials to schools.

The National Gender Policy Document explains that in the vocational training schools, men accounted for 55% and women were 45%, and the drop-out rate was 11% for men and 14% for women (in 2009). Women are concentrated in the traditional female skills such as homemaking, dressmaking and secretary.

24 2015 COUNTRY REPORT OF GENDER PROFILE, JICA, [HTTPS://OPENJICAREPORT.JICA.GO.JP/PDF/1000026850.PDF](https://openjicareport.jica.go.jp/pdf/1000026850.pdf)

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Employment

According to the Human development report 2020, female participation in the labour market is 71.1 percent compared to 81.1 for men in Cameroon. According to the National Gender Policy Document, people in formal employment are 53% of the population of Cameroon, and it is 61% for men and 45% for women. The public institutions aim to make women's share at least 30%. The higher are the positions, the smaller is the women's share. Women account for 44% of the lowest job rank (category D: non-skilled or assistant jobs) in the public institutions, but only 17% in the highest rank (category A2: directors). In the private sector, 1.6% of male workers and 0.7% of female workers are in managerial positions. It is estimated that women account for 55% of workers in the informal sector. According to the World Bank data, Cameroon's estimated annual Gross National Income per capita was 3,341 dollars for men and 2,266 dollars for women (about 68% of men) in 2014. Regarding child labour, 8.6% of children (8.0% of boys and 9.1% of girls) between six to 14 years old are working. The percentage of children in labour is 12.6% in the rural areas and 2.4% in the cities.

Health

The latest World Bank data shows that, maternal mortality ratio slightly declined from 564 in 2014 to 529 in 2017. The proportion of pregnant women receiving prenatal care increased from 82.8% in 2014 to 87% in 2018, and delivery attended by skilled health workers increased from 63% to 64% during the same period. The reasons for the high maternal mortality ratio include late decisions of the patients to seek medical care; late arrival of the patients to the health facilities; the low quality of first diagnosis at the health facilities; and physical damage to young pregnant women and young mothers (National Gender Policy Document). The national average of contraceptive prevalence rate in 2018 was 19.3%. It is reported that the higher are the women's educational attainment or income level, the higher is the contraceptive prevalence rate, and that women with lower educational attainment or income level tend to be reluctant to negotiate with the husband or partner for the use of contraceptives.

Child health improved during the period between 2012 and 2020 as the infant mortality rate reduced from 64 to 48.3, under-five mortality rate reduced from 101.3 to 72.2.

Energy, transport, and telecommunications

According to the National gender policy document 2011-2020, there is a great need of resilient infrastructure in Cameroon. The rural areas generally lack good roads or have none at all. Motorcars and cycles are obsolete, inadequate or even nonexistent in some areas with high transportation costs. The flow of agricultural produce from rural to urban areas is thus hampered and women are unable to market their produce. They are compelled to carry their crops over long distances or cram them onto vehicles in poor conditions endangering their lives. In so doing, they record heavy post-harvest losses and the country's food security is undermined.

World bank data (2019) showed that 63.4% of the population have access to electricity. Despite the efforts made, there is disparity between residential areas: in rural areas, only 24% of households have electricity, against 93% in urban areas.

In the Information and Communication Technology (ICT) sector, It can be noted that in urban areas, women have taken ownership of ICTs through such social programs as Operation 100 000 women by

2012 (National Gender Policy Document 2011-2020). The establishment of multipurpose community e-centers and media centers across the country helps to reduce the digital divide.

Sociocultural

According to the "National Gender Policy Document 2011-2020" by the Ministry of Women's Empowerment and Family (Ministère de la Promotion de la Femme et de la Famille: MINPROFF), while gender situations in Cameroon vary by regions, ethnic groups or religions, there is a persistent value of gender division of labour in which men take the productive and public roles and women take reproductive and domestic roles. Traditionally, women's life is mainly in the domestic sphere and they are not present much in the public sphere. According to the data in 2018, women headed 26% of the households in the country. Women marry early: about 50% of women get married for the first time by the age of 17 or 18. Bearing children is considered as the most important role of women, and it leads to the high fertility rate: it was 4.5 in 2019 (World Bank data).

The National Gender Policy Document explains that the perceptions about the roles, attitudes and behaviors of men and women in Cameroon have evolved with the change of the times. At the same time, it points out differences between women in the cities and those in the rural areas, and between those with high educational attainment and only with basic education. Women in the rural areas and those with only basic education tend to keep traditional values. Women and men are on more equal terms in the cities than in rural areas, but the perception of gender division of labour, in which a man is the main breadwinner and the woman takes domestic responsibilities, exists like in the rural areas. Women's labour force participation rate is high and they contribute to household income. However, women's work tends to be undervalued as it is perceived as supplementing the income of the husband, regardless of the actual content of the task or income.

Policy and Legal framework

The National Population Policy Declaration in 2002 aims at universal primary education, improvement of literacy of men and women, and reduction of gender disparities in all areas in the economic and social development. The Poverty Reduction Strategy Paper (PRSP) in 2003 is engaged in the promotion of gender equality. The DSCE (employment strategy document) in 2009 also commits to the promotion of gender equality in all areas. The National Gender Policy Document 2011-2020 was developed based on the country's long-term development plan called "Cameroon's long-term vision by 2035". The Vision declares that its principles are unity in the diversity, as well as equal rights and equal participation of women and men in development.

There is an Inter-ministerial Committee of gender at the central level of the country, which is headed by the Prime Minister. The Committee is responsible for overall coordination and supervision of implementation of the National Gender Policy. It holds an annual meeting. Under this Committee, there is a Technical Committee which is headed by MINPROFF. It is responsible for the implementation of the National Gender Policy. In collaboration with the gender focal points of the ministries, civil organizations and development organizations, the Technical Committee has discussions with the stakeholders in the quarterly meetings, assists the ministries to secure budget, and carry out monitoring and evaluation of the implementation of the National Gender Policy. The gender focal points are responsible for gender mainstreaming of each ministry's policies and project. Cameroon adopted several international legal instruments in order to enable women to fully enjoy their rights. Among the relevant ones we have:

- The Declaration on the Protection of Women and Children in Emergency and Armed Conflict adopted

in December 1974, which outlaws all forms of repression and cruel and inhuman treatment of women and children, including imprisonment, torture, shootings, mass arrests, collective punishments;

- The Declaration on the Elimination of Violence against Women of 20 December 1993, which commits countries or State Parties to take all suitable measures to eliminate violence against women;
- ILO Convention No. 3 adopted in 1919 and ratified by Cameroon on 25 May 1970 on maternity protection; - ILO Convention No. 89 on Night Work of Women, revised on 9 June 1948;
- The Convention on the Political Rights of Women adopted by the UN General Assembly on 7 July 1954, which guarantees women the right to vote and to be eligible in all elections without discrimination;
- The 1957 Convention on Nationality of Married Women, which grants the latter the power to take her husband's nationality without losing her own;
- The Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), adopted on 18 December 1979 and its Additional Protocol of 6 October 1999. The Convention obliges States to promote women in all domains: political, legal, economic, social and cultural development;
- Resolution 1325 of the UN Security Council which provides an opportunity for women to participate in the preservation of peace and conflict resolution. This Resolution was supplemented by Resolution 1820 of 19 June 2008 which recognizes rape as a crime against humanity, whose perpetrators are prosecuted at the International Criminal Court.

Gender based violence

Since the adoption in 2011 of the national gender policy (2011-2020), the Cameroon's government has focused on promoting a fair and equal society between men and women with a view of ensuring sustainable development. Moreover, the National Strategy to Combat Gender-Based Violence (2017-2020) aims at contributing to the reduction by half, the prevalence of various forms of gender-based violence by 2020. Overall, gender-based violence, whether physical, sexual or emotional, is still frequently observed in Cameroon, despite the drop observed over the period 2004-2018²⁶. They affect women much more than men, and are more witnessed in the Centre region (excluding Yaounde). Specifically, physical violence against pregnant women remains a concern, especially in urban areas and in the Centre (without Yaounde), East and South regions²⁷. According to the 2018 Cameroon's Demographic and Health Survey, 13% of women were victims of sexual violence at any moment of their life, and 5% in the past 12 months before the survey and the current or former spouse/partner is the main perpetrators of this violence among both women and men. The percentage of girls who get married early stood at 12% in 2018. There still efforts to be made to promote gender norms and educate young people, women and men on GBV and Harmful Cultural Practices (HCPs), notably through community-based programs aimed at preventing and fighting against these practices.

Access to Finances

According to data collected by world bank Doing Business report 2018²⁸, starting a business for men in Cameroon requires 5 procedures, takes 15 days, and costs 32 percent of income per capita. For

²⁶ Gender based violence in Cameroon, magnitude and challenges, August 2020, <https://ins-cameroun.cm/statistique/english-gender-based-violence-in-cameroon-magnitude-and-challenges/>

²⁷ Ibid

²⁸ <http://www.doingbusiness.org/data/exploreeconomies/cameroon>

women, it requires 6 procedures, takes 16 days, and costs 32.4 percent of income per capita. Registering property in the country requires 5 procedures, takes 86 days and costs 18.8 percent of the property value. For women, there is an extra requirement to provide a marriage certificate to obtain a national identification card, according to the decree N° 2007/254 of September 4, 2007. This increases the bureaucracy that married women face in fulfilling financial institution Know Your Customer (KYC) requirements in comparison to men and single women. The World Bank Global Financial Inclusion Database (2017)²⁹ and FinMark Trust's Finscope Survey from 2017³⁰ indicate that 20.7% of the adult population have an account at a formal and financial institution. These data have also shown that 37% of the female population are excluded from financial services compared to 34% for male.

Poverty

The country's general poverty rate is estimated at 39%. Poverty has a strong regional dimension concentrated in the Far North, North, Adamaoua and East regions. Cameroon's northern regions are situated in the Sahelian band, where communities are the most deprived as a result of years of successive natural disasters and below average agricultural harvests with little means to resist the continuous cycle of shocks and stresses. Cameroon has a Gender Inequality Index value of 0.560, ranking it 141 out of 162 countries in the 2019 index. Indeed, women spend on average 8.2 hours more per week than men on unpaid domestic work. As these tasks require a significant investment of time each day, they are particularly affected by the lack of access to income-generating activities. This unpaid workload for women, combined with the fact that they have extremely limited access to and control over household resources, partly explains why women are more affected by poverty. As a result, nearly 83.2% of these women cannot access credit for any purpose.

Unequal Participation in decision taking

It is generally observed that when women contribute to household income that they often participate in decision-making as regards to its management. The empowerment and participation in decision making of women in union remained considerable in recent decades, and there is reportedly more consensus between spouses on the management of household resources and on decisions regarding women's health care³¹. According to the 2018 DHS result's, women in Cameroon are less autonomous as regards to the use of the money they earn (54% in 2018 compared to 2011 where it stood at 68%). The use of this money is increasingly consensual between spouses. The percentage of those who jointly decide with their husband/partner on how to use the money they earn increased by 13 points in 2018 compared to 2011 (25%). Moreover, the proportion of 15-49 year olds who own and use a bank account increases with the level of education. This proportion rises from 1 percent among women with no education to 43 percent among those with higher education. For men, the proportion increases from 2% to 54%³².

²⁹ 2018 World Bank, the Little Data Book on Financial Inclusion

³⁰ <http://finmark.org.za/finscope-consumer-survey-cameroon-2017-pocket-guide/>

³¹ Ibid

³² Republic of Cameroon, (2018). Demographic and Health Survey. <https://dhsprogram.com/pubs/pdf/FR360/FR360.pdf>

In fact, the installation or extension of the electrical network in the country will allow access to rural areas favorable to the development of basic infrastructure including education and health. This will increase access to financial services for the entire population, especially those living in rural areas.

At the local and community level, traditional gender ideologies assume that if women are disempowered (through lack of capacity and capability), they will not challenge male dominance. As at the administrative and political levels, women's participation in household decision-making is very low. Also, women living in urban areas are more likely to participate in household decision making than women in rural areas because of the mobilization of certain actors in the fight against gender inequality. Nevertheless, several key and strategic positions are held by women in the telecommunications sector. These are the posts of: Minister of Posts and Telecommunications of Cameroon; Managing Director of CAMTEL (Cameroonian Telecommunications Company) and Orange's Zone Director and Spokesperson for the Middle East and Africa zone.

4.3 Chad

Demographics and human development

According to the World Development indicators data, in 2020 Chad's population was estimated at 16.42 million inhabitants, of which 50.1 percent were women; 76.5 percent live in rural areas, and 46.5 percent are youth under 15 years of age. However, there are still significant gender disparities: it ranked 160th out of 162 on the Gender Inequality Index in 2019. Chad is also affected by internal and external population displacements driven primarily by insecurity in the region. The country hosts 450,000 refugees, of whom 55.5 percent are female, and 24.3 percent are of school-age (WFP, Chad country strategic plan 2019-2023).

Education

According to data from the 2019-2020 School Statistical Yearbook of the Ministry of National Education and Civic Promotion (MENPC), many provinces of the Sahel Belt have the lowest girls' education rates in Chad. These include Borkou (18.8 per cent), Ennedi Ouest (24.6 per cent), Ennedi Est (46.6 per cent), Bahr-El-Ghazal (30.2 per cent), Hadjer-Lamis (32.7 per cent), Batha (34 per cent) and Wadi-Fira (40 per cent).

The highest enrollment rates for girls are recorded in the provinces of the city of N'Djamena (131.6 per cent), Logone Occidental (126.1 per cent), Mandoul (118.4 per cent), Mayo-Kebbi Ouest (114.7 per cent), Moyen-Chari (112.2 per cent), Logone Oriental (104.8 per cent), Tandjilé (99.1 per cent) and Tibesti (75.8 per cent). According to the School Statistical Yearbook, the rate above 100 per cent means that, in theory, the system has the capacity to accommodate, under current conditions, all six-year-old students in the primary 1st level.

Thus, according to the 2019-2020 Statistical Yearbook, out of 100 girls enrolled in primary school, barely 37 will finish the cycle. In 15 provinces, the primary school completion rate for girls varies between eight and 24 per cent, which is a particularly worrying situation. Only the provinces of the city of N'Djamena (92.1 per cent), Mayo-Kebbi Ouest (77.3 per cent) and Logone Occidental (51.3 per cent) stand out.

Employment

According to the World Bank, Female participation in Chad labour market is 63.9 percent compared to 77.5 for men. Women have restricted access to productive assets, credit, land ownership, and the opportunity to rent land. Land inheritance customs often discriminate against women, and men decide to use harvested crops and income. Only 22.3 percent of women take part in decision-making about income-generating activities, 22.6 percent have access to credit, and 26 percent have a bank account. Unemployment is higher among women – 24.7 percent compared to 18.7 percent for men – and among people with a university diploma or higher qualification. The female labour force participation rate is 65 percent, remaining largely stable even during the economic crisis, while the male rate steadily decreased from 80.5 percent in 2002 to 77.4 percent in 2016.

Health

According to the results of the Human Development report the maternal mortality is estimated at 1140 maternal deaths per 100,000 live births in 2019 and only 24% of births were attended by health personnel whose 58.6% in urban areas and 15.9% in rural areas. Life expectancy at birth in Chad in 2019 was 55.7 years for women and 52.8 years for men and. Women are found to be at risk lower mortality than men with a difference of 1.8 years in favor of women (INSEED, 2014b:77).The prevalence rate of HIV/AIDS in the general population aged 15-49 rose from 3.3% in 2005 (national seroprevalence survey of 2005) to 3.4% in 2010 (survey of measurement of seroprevalence in the female population attending sentinel sites UNFPA) and 1.1% in 2020 (World development Indicators,2020).

Energy, transport, and telecommunications

The Food Security and Structural Vulnerability Survey Report in Chad (EVST 2009) report demonstrated that wood is still the primary fuel source for cooking for over 90 percent of households. This proportion is slightly higher in rural areas (93 percent) than 75 percent for urban areas. In rural areas, the burden of ensuring the household supply of wood for energy falls on the shoulders of women and girls. Natural resource degradation increases the distance women have to walk to find wood and, thus, their time on this chore. In addition, using wood for cooking exposes women to risks of injury and respiratory and other health problems (République de Tchad, Document de Politique Nationale Genre de Tchad).

Chad has a road network of approximately 40,000 km. Due to its size, the density road traffic is low and highly variable depending on the region. It varies from 6.4 km per thousand km squares in the Saharan zone to more than 40 km in the Sudanian zone. During the season rainy weather, part of the road network becomes impassable, which increases the cost of transport and further isolates certain regions.

In Chad, only 1.3% of Chadian women are in science, innovation and technology, according to a survey by Internet Society Chad (2017)

Sociocultural

The division of household responsibility is still highly gender-biased: women are expected to take care of children and domestic chores (including those needed to ensure their family's water supply). Furthermore, in terms of access to land and property, customary practices are still rife and male-oriented. These realities mean that women have fewer opportunities to participate in income-generating activities. For instance, while they participate in agricultural activities and often farm plots (owned by their families), their yield is usually subsistence rather than commercial. This situation is evident in rural areas where women constitute up to 40 percent of the country's population. This leaves a large portion of the population underserved and underrepresented. (

Policy and Legal framework

The Ministry of Social Affairs, National Solidarity, and Family oversee the implementation of gender policies at the national level. The main policies in this area are:

- Constitution of 1996, revised in 2005: recognises gender equality
- 1996 Labour Code
- National Population Policy and the 1995 Policy for the Integration of Women in Development
- Law n° 38/PR/98 recognises that men and women should be granted equal employment opportunities.
- Law N°16/PR/2006 promotes the education of girls
- National Gender Policy (PNG) 2007

The national development plan for 2017–2021 emphasises social protection, gender-based violence prevention, economic empowerment and livelihood, capacity strengthening, and formulating a national gender strategy (WFP, Chad country strategic plan).

The 2007 National Gender Policy outlines the Government's strategy to ensure that gender inequality and violence will be eradicated by 2030. Women are included in decision-making processes and natural resource management. The strategic orientations of this policy are:

- systematically integrate the gender dimension at all levels: planning, budgeting, implementation, monitoring, and evaluation of development strategies, policies, and programs;
- develop a communication strategy for changing mentalities and behaviours;
- promote equal and equitable access to essential social services and decision-making spheres.

Gender based violence

Gender-based violence and sexual violence are pervasive and are aggravated by conflict and displacement. According to the UN Women Global database on violence against women the lifetime physical and/or sexual intimate partner violence is estimated at 29% (DHS-MICS 2014-2015), the child marriage proportion stood at 67% and the female genital mutilation is estimated at 38%. In Chad, a large number of women and men support the practice of female genital mutilation³³. Three out of ten women aged 15 to 49 are still convinced that female genital mutilation is a requirement of their religion. This proportion decreases with the level of education of the woman, i.e. 36% for women with no education compared to 18% for women with a higher level of education. At the same time, almost 3 out of 10 women (29%) believe that the practice of female genital mutilation should be maintained. This proportion is almost ten times higher among women with no education (39%) than among women who have reached the highest level of education (4%).

Access to Finances

Chad has implemented three national strategies to promote access and usage of formal finance by the poor and women specifically in remote areas. These are the SNMF (Stratégie Nationale de la Microfinance) in 2009, the PAFIT (Program d'Appui à la Finance Inclusive au Tchad) for the period 2010-2014, and the PADLFIT (Program National d'Appui au Développement Local et à la Finance Inclusive au Tchad) for the period 2017-2021. However, the financial system in Chad remains one of the least inclusive in the region. The Global Findex report indicates that only 22% of Chadians had access to formal financial services in 2017 and 15% of women aged of 15 and over have a financial account. According to the world Bank, only 11 percent and 5 percent of women over 15, have an account mobile banking and a bank account, compared to 20 percent and 13 percent of men, respectively in 2021³⁴.

Poverty

In Chad women do not have access to the same work opportunities as men, or when they do, are more likely to work part-time. As a result, women are less productive and earn less than men. All this leads to substantial gender gaps in earnings and productivity, which decreases women's bargaining power and voice and their ability to negotiate their productive work. Twenty-three percent of Chad's households are headed by women

³³World Bank (2020), Chad: The Economic Benefits of a Post COVID 19 Gender Equitable Society

³⁴World Bank, (2021) Investing in rural income growth, human capital, and resilience to support sustainable poverty reduction. Online available: <https://documents1.worldbank.org/curated/en/623761633424786706/pdf/Chad-Poverty-Assessment-Investing-in-Rural-Income-Growth-Human-Capital-and-Resilience-to-Support-Sustainable-Poverty-Reduction.pdf>

and 54% of these live on less than US \$1 a day. Most women lack access to fertile land and live off minor food-processing activities, the sale of firewood, and informal sector jobs. Land and housing in urban areas require rent payments, which women usually cannot afford. (Landlinks, USAID)

Unequal Participation in decision taking

In Chad, the lack of a legal framework establishing parity or quotas makes it difficult for women to gain access to political office. Most political parties agree on the need to involve women in politics, but it is rare to find women in decision-making positions such as the President or Secretary General of a party. With some exceptions, women are generally present to garner support for political parties during political rallies. In some cases, they are in charge of social affairs or the mobilization of members. It should be noted that women are more active in civil society organizations. The Association of Women Lawyers of Chad in cooperation with the Female caucus of the National Assembly of Chad, have undertaken initiatives to improve the representation of women in politics.³⁵

According to the National gender policy (2011), in Chadian communities, the perception of male and female roles is basis of the unequal participation in decision making. Men take on roles of decision-makers in public affairs, as for women, they are rather involved in the establishment and strengthening of social relations (baptisms, weddings, funerals, visits to parents and patients).

³⁵ <https://tsep.africa.ufl.edu/gender-quotas-and-representation/chad/>

4.4 Côte d'Ivoire

Demographics and human development

Côte d'Ivoire has an estimated population of 25.8 million in 2019,² 51.7% being male and 48.3% female, and therefore a sex ratio of 107 men per 100 women. 75.5% of the population live in forest areas and 49.7% in rural areas. In terms of electricity, 4,500 localities were electrified in 2017 compared to 2,800 in 2011, representing a growth rate of 57%. Concerning access to water, 80.7% of households are connected to drinking water.³ The population is also relatively young, with 36.2% between 15 and 34. In 2016, the fertility rate remained high with an average of 4.6 children per woman, with differences between rural (6.0 children) and urban (3.4 children) areas.

Côte d'Ivoire remains classified as a low human development country with a ranking of 162th out of 189 countries in the world; poverty is declining sharply, from 46.3% in 2015 to 39.4% in 2020^{36,37}. Life expectancy in the country is, on average, around 54.1 years and higher for women (55.7 years) than for men (52.7 years).¹⁰ Maternal mortality rate is 614 per 100,000 live births, while the birth rate for adolescent girls (15-19 years) is estimated at 132.7 per 1,000 live births over 2015- 2020.

Education

Although the government effort, the country strategy document (CSP 2018-2020), combined with the review country portfolio performance 2018 (AfDB, September 2018), highlight that significant disparities remain between men and women in terms of access to education, almost one woman for two (51%) and just over one for three men (36%) have no level of education and regardless of the level reached. Men are also more educated than women: 33% of men have at least completed primary education, compared to 21% of women. Concerning enrolment rate, girls represent 49.3% in preschool, 44.8% in primary, 38.4% in secondary, and 29% in higher education. The average length of schooling in 2019 was 4.2 years for women compared to 6.2 years for men.

According to World Bank, in Cote d'Ivoire, the illiteracy rate for people over 15 years of age is 56.1%. The proportion of women concerned is 63% and that of men 49%. Only women hold 13.3 percent of parliamentary seats.

Employment

According to the World Bank, women's participation in labour is 48.2 percent compared to 65.5 for men in 2019. Women, who have long been victims of the country's conflicts, find it especially challenging to re-launch their economic activities. This gives rise to the need to give greater power to local institutions while at the same time building their managerial capacity to launch viable projects and to speed up the access of people at the local level to quality services. Côte d'Ivoire's diverse regions bring important assets.

Health

According to the health systems assessment for Côte d'Ivoire report (May 2020), communicable, maternal, neonatal, and nutritional diseases are the leading causes of disability and death in Côte d'Ivoire, representing 63 percent of the disease burden, down from 72 percent in 1990. Côte d'Ivoire's rising urbanization and the

36 UNDP 2019. HUMAN DEVELOPMENT REPORTS. https://hdr.undp.org/en/content/latest-human-development-index-ranking?utm_source=en&utm_medium=gSR&utm_content=us_undp_paidsearch_brand_english&utm_campaign=central&c_src=central&c_src2=gSR&gclid=CJWKAJW0A-SBHBKEIWAPLJU0L0PPSAK7DPL_AZQAJEFVYVW0NLEVS DAJGT1FN7ESJ1SJLEFB-YW1TXOCGWQQAVD_BWE

37 <https://www.banquemondiale.org/fr/country/cotedivoire/overview#1>

introduction of unhealthy lifestyles has also led to a rise in the burden of noncommunicable diseases, resulting in a dual burden of disease taxing an already fragile health system. Neonatal disorders, HIV/AIDS, and lower respiratory infections are the top three causes of death according to the IHME disease burden data from 2017, and neonatal disorders, malaria, and HIV/AIDS were the top three causes of disability-adjusted life years (DALYs) in 2017. Even though the disease burden has been transitioning toward more noncommunicable diseases, the majority of the drivers of the disease burden remain to be communicable disease-related conditions, such as neonatal disorders, HIV, lower respiratory infections, and malaria. HIV, TB, and malaria continue to constitute a significant burden of disease, combined constituting over 24 percent of annual deaths. While life expectancy has been increasing, it still remains the lowest in West Africa, at 55 years. Similarly, infant and under-five mortality rates have been declining, but remain high at almost 100/1,000 for under-five mortality. It is significantly below average for life expectancy, and above average for maternal mortality and infant mortality, compared to other Lower-middle-income countries and West African countries.

Energy, transport and telecommunications

Côte d'Ivoire has four primary sources of energy: hydroelectricity, oil; natural gas; and biomass. Provision of primary energy in Côte d'Ivoire amounted to 11.6 million tons of oil equivalent (ToE), of which biomass (58%), crude oil (29%), natural gas (12%), and hydroelectricity (1%). Côte d'Ivoire has 6 hydro units ("plants") with a total installed capacity of 604 MW and 4 thermal power plants with an installed capacity of 1,320 MW, for a total of 1,924 MW of installed capacity. In 2015, Côte d'Ivoire produced 8,607.9 GWh of electricity, of which 872.3 GWh were exported, representing 10% of total production. Available data indicate that 77% of the Ivorian population lives in electrified areas (2014). However, only an estimated 25% of households have effective access to electricity. Connection costs are high, one of the main obstacles to improving access. The biomass subsector is the principal source of energy consumed, amounting to 70% of total energy consumption in the country. Households have recourse to traditional stoves for cooking which are not energy efficient. Access to energy for productive uses remains limited.

According to Oxford 2019 and 2020 reports Business Group, the road network is made up of 86,400 km of roads including 244 km of motorways, 6,543 km of interurban roads and 4,314 km of urban roads. Several projects extension of motorways and rehabilitation are underway to ensure better quality of roads and facilitate the transport of goods with neighboring countries. In terms of Port Infrastructure, the Autonomous Port of Abidjan (PAA) is one of the leaders regional, in particular ranked 2nd West African transshipment port behind that of Lomé. Since 2012, 1.7 billion Euros have been invested in the development port. The overall traffic of the port of Abidjan was up 7% in 2019, from 24,177,261 tonnes in 2018 to 25,738,345 tonnes in 2019. The imports represent 66% of the total traffic of 2019, i.e. 16,991,505 tons and exports 34% i.e. 8,746,840 tons. A second container terminal (TC2), of 1,100 linear meters (length of platforms) and 18 meters draft (depth), is currently under construction to increase the capacity of transshipment and overall traffic volume. The port of San Pedro is the 2nd port of the country, located not far from the border with Liberia. He is the first world cocoa exporting port in 2018 (more than 800,000 tonnes of cocoa exported) and diversifies its activities with the export of other materials raw materials such as rubber, cotton or oil of palm.

Policy and Legal framework

In The international level, Côte d'Ivoire has ratified most international conventions, including

- The Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) in 1995 has also participated in all the major meetings leading up to the Beijing conference. I
- the resolution 1325 on women, peace, and security in Africa.
- the Solemn Declaration of African Heads of State and Government on Gender Equality in Africa was adopted in July 2004.13
- the country has committed to implement the recommendations of international and African conferences, including those of Mexico City (1975), Copenhagen (1980), Nairobi (1985), Cairo (International Conference on Population and Development, ICPD, 1994), Beijing+5 (2000), the African Women's Decade Program 2010-

2020 and the Sustainable Development Goals (SDGs), the voluntary report of which was made in July 2019 at UN Headquarters in New York.

At the national level, the formal framework for gender equality is established by the Constitution of 8 the of November 2016, which enshrines the principles of gender parity in the labor market and equal opportunities in employment and elected assemblies in articles 36 and 37.14 Under this new Constitution, the country has embarked on a process of implementing specific measures to promote gender equality in access to elected office.

This process took the form of the adoption by Parliament on 02 August 2019 of a law requiring political parties to present a quota of at least 30% women on the lists of candidates for single-member and multi-member elections. The National Policy on Equal Opportunities, Equity, and Gender was updated in 2018 but has not yet been adopted. A national strategy for the empowerment of women is being finalized. It should be noted that the National Development Plan addresses the gender issue with a dedicated budget. In the process of domesticating the country's international gender commitments, the Ivorian legal system has been enriched by new laws that are more favorable to gender issues, in particular, the Marriage Act, which maintains the abolition of the notion of the head of family and forces spouses to jointly manage their household, the Compulsory School Act for all children (girls and boys) from 6 to 16 years of age.

Gender based violence

According to the Ivorian Ministry of women, children and family, 5,405 cases of GBV were declared in 2020 including 822 rapes, 152 sexual assaults excluding female genital mutilation, 13 female genital mutilation, 1,286 physical assaults, 96 marriages forced, 2,119 denials of resources, opportunities or services and 917 psychological or emotional abuse. Of these declared cases, 81.98% of the victims are women and 46.79% of sexual violence is exercised against children.

Access to Finances

The Government of Ivory Coast adopted, in February 2020, a National Financial Education Program (PNEF). This program is centered around building the skills of low-income populations, in order to prepare them to access financial services and use them wisely. According to the financial inclusion insights (2018), women have markedly lower rates of access and use of financial services. They are 50% more likely to have never used a formal financial institution and 2.5 times more likely to use an informal non-bank financial institution than men.

Poverty

The National Development Plan 2016-2020 in its strategic diagnosis indicates that in Côte d'Ivoire, poverty affects both women (47.4% of them are poor) and men (45.5% of men are poor) even if the latter contributes slightly more to this poverty (50.6 of the poor are men) and especially in Abidjan where 53.1% of the poor are men. Individuals living in extended families are more likely to be poor because the poverty rate for this type of household is 52.6%. Poverty affects both households headed by a man (46.4%) and by a woman (45.9%) even if in Abidjan the households headed by women are much poorer (28.4%) than those headed by a man (21.1%). Data from the National Institute of Statistics shows that the average income of women in Côte d'Ivoire is 59% lower than that of men.

Unequal Participation in decision taking

In Côte d'Ivoire, only 12% of parliamentary seats are held by women, following the March 2021 legislative elections. Elsewhere, the female activity rate is 48.3% against 66% for men. Several initiatives are taken by the Ivorian government and partners for the establishment of gender-sensitive socio-economic infrastructure and the participation of women in grassroots decision-making bodies and the establishment of lines of credit dedicated to entrepreneurship. within the framework of the Initiative to promote access to finance for women in Africa (AFAWA).

In households, Ivorian women report that decisions within the household are made by the husband alone, whether it be in the purchase of food or the choice of economic activity and other important tasks. As a result, women's decision-making in community and sub-regional settings is also weak. Indeed, women are in the minority in regional and city councils with 3.2% and 4.6% of positions respectively (Ministry of Planning and Development, 2019). According to the 2016 report based on the Gender Issues and Key Indicators in relation to the sectors of intervention of the French development agency (AFD), rural women face difficulties in selling their product in neighboring towns and villages due to the poor state of transport infrastructure while very few women participate in decision-making processes related to the construction of transport infrastructure.

4.5 Djibouti

Demographics and human development

The Republic of Djibouti's population was estimated to 988,000 inhabitants in 2020, of whom 47.5% were women³⁸. The total fertility index dropped from 4.5 in 2000 to 2.6 in 2020 with an estimated population growth rate of 1.4%³⁹. The population is highly urbanised and very young. Djibouti City is home to 75% of the total population making Djibouti the second most densely urbanised country in Africa after Libya. 32% of the total population is under 15 years of age (48.45% of whom are girls) and 67.27% under 35 years old (47.38% of whom are women), while 8.97% is aged 55 years old and older (45.21% of whom are women). The median age is about 20 years old⁴⁰. Therefore, there is a high dependency ratio with 51% of households containing eight people.

The country is characterized by a high scale of internal migration and immigration as a result of climatic changes resulting in recurrent flooding and droughts. This causes the nomadic or semi-nomadic population, living off pastoralism, to move to cities in order to settle. Immigrants from bordering countries also leave their countries for economic, political or insecurity reasons due to conflicts or wars to settle in Djibouti or are passing through before travelling on to other countries. As a result, net migration in the country dropped from 1.9 in 2015 to 1.2 in 2020⁴¹.

According to the UNDP report the Human Development Index (HDI) score for Djibouti in 2019 was 0.524, which also placed the country in the low human development category and ranked it 166th out of 189 countries and territories. Life expectancy at birth was 62.6 years for men and 64 for women. Between 1995 and 2019, Djibouti's HDI increased from 0.351 to 0.524, an increase of 49.3%. The average length of schooling increased by 1.2 years and the expected length of schooling increased by 3.7 years. Over the same period, gross national income (GNI) per capita increased by about 87.6%. Despite this progress, Djibouti's HDI score in 2019 remained below the average of the Sub-Saharan region countries at 0.547 and also below the average of the Arab States at 0.705. In 2017, women-headed households represented 18.8%, 21.1% of which were in urban areas and 18.0% in rural areas (Human Development Report 2020).

Education

In recent years, the Djibouti's national education is seeing the number of students in general and technical education growing but the proportion of girls is stagnating, if not declining, which could perpetuate women's impoverishment⁴². Though the literacy rate has raised slowly from 43.7 % in 2011 to 48.2% in 2017 there is a noticeable decline in primary education gender parity index (from 0.98 in 2009 to 0.86 in 2017). This drop is due to the slowly rising enrolment (net enrolment rate (NER) from 65.7% in 2011 to 68.7% in 2017) and retention (GER from 68.8% in 2011 to 78.9% in 2017) rates. The impact of awareness-raising on girls, of gender-sensitive infrastructure and school canteens is more tangible on the retention of rural girls (GER from 21.9% in 2011 to 58.7% in 2017), but this has not sufficiently affected girls' dropout rates. The failure to achieve parity in primary education has a side effect on the

³⁸ African Development Bank, Africa Information Highway Portal

³⁹ Ibid

⁴⁰ African Development Bank, Africa Information Highway Portal

⁴¹ AFDB (2020), Country gender profile-Djibouti

⁴² Ibid

achievement of parity in the middle (0.82), secondary (0.83), technical (0.72) and higher (0.61) levels of education.

Employment

The steadily growing number of young people entering the labor market toughens competition in a context where the resources and assets of women/ girls are unevenly distributed from the start. This situation is reflected in the male unemployment rate which dropped three times faster (from 54.6% to 38.7%) than the rate for women (from 68.6% to 63.4%), between 2002 and 2017. The public administration recruited twice as many men from 2009 to 2017. The major capital-intensive infrastructure projects and other initiatives that create jobs or promote technical training seem to have concerned women less. The formal private sector employs 33% of women, mostly in trading and household services. Fewer than 15% of businesses employ women in senior managerial positions. In the informal sector, 74.3% of jobs are filled by women. The female employment rate/total population remains at 15.6%, despite a labour market participation rate of 30%.

According to Djibouti's Chamber of Commerce, there are 175 women CEOs for 1140 businesses (15.35%) registered in the directory⁴³. According to the AfDB country gender profile 2020, e-commerce, tourism and handicrafts are growth sectors in which women are encouraged to participate. But many obstacles are impeding the development of entrepreneurial activities: social standards and family obligations, cumbersome administrative procedures, failure to connect with the networks (international trade fairs, markets, regional and international business networks). Other constraints include (i) access to credit which affects young people of both genders and women established in the formal and informal sectors, and (ii) access to transport making it impossible for women to travel physically to markets to sell their products. This issue is being resolved as a result of large-scale infrastructure projects implemented or ongoing. The latter creates new jobs for nationals, e.g. 25,000 jobs during the construction of the electrified railway, 250,000 jobs planned for the new industrial free trade zone, 150 to 200 direct and indirect jobs for the construction of the new solar power plant.⁴⁴

Health

Djibouti's health outcomes have improved in recent years. For example, between 1990 and 2019, Djibouti's life expectancy at birth increased by 10.4 years according to the human development report in 2020. But some underlying challenges remain and have been exacerbated by recent pandemic situation. According to the world development Indicators, between 2000 and 2017, the maternal mortality rate (MMR) dropped by 259 points from 507 to 248/100,000 live births but remains very high (regional average: 78/100,000). Stunting in children is a major concern, at 20.9 % in 2019 (down from 29.7 % in 2013), with no difference in incidence between girls and boys⁴⁵. The lack of access to basic water, sanitation, and hygiene (WASH) services is another concern⁴⁶. Only 47 % of the rural population has access to basic drinking water (versus 83 % in urban areas), and only 19 % has access to safely managed sanitation (versus 41 % in urban areas)⁴⁷. Only 23 of pregnant women receive four or more antenatal care visits, and only 54 % receive any form of postnatal care. Reducing

⁴³ AFDB (2020), Country gender profile-Djibouti

⁴⁴ Ibid

⁴⁵ World Bank (2021), Djibouti country partnership framework for the period 2022 -2026

⁴⁶ Ibid

⁴⁷Ibid

gender gaps is critical. WASH access is low in health centers and schools (68 % of schools have access to basic drinking water, 62 % to basic sanitation, and 58 % to basic hygiene facilities).

Energy, transport, and telecommunications

In the energy sector, data from the Djibouti Household Survey (EDAM 4-IS) shows that, in 2017, 57% of households had access to electricity. Depending on the gender of the household head, the difference between households headed by women (54%) and those headed by men (58%) seems relatively small but inequality in access to energy affecting women increases whenever it is combined with area of residence and socioeconomic status. The high cost of electricity automatically deprives poor rural households headed by women of this source of energy. As a result, over 8 out of 10 households (86%) use solid fuel (wood and charcoal) for cooking – an exclusively female task – compared to 6.5% in urban households 60% of households use electricity as their main source of lighting, with wide disparities between urban (70%) and rural (6%) households in 2017. Fewer women headed households have access to it (58% compared to 61% for men). 5% of urban households have no access to lighting compared to 27% of rural households. On the other hand, 25% of urban households and 49% of rural households use alternative sources of lighting including the use of solar panels (4% in urban areas and 10% in rural areas). The remaining households have no other option than to use harmful sources of energy (wood, petroleum lamps and candles), practices that have negative environmental impacts.

In terms of transport infrastructure, although there are no available data on the impacts of new ports and roads projects on women and men in terms of jobs and/or business opportunities, it is obvious that they provide fresh impetus to trade relations with the countries of the Arabian Peninsula and they are designed to strengthen the national economic integration. EDAM4-IS data provide an overview of the means of transport used by households to access basic social services. Almost half of households (44%) access them on foot. One-third of households (33%) cover 5 to 10 kilometers to reach them. Under a third (30%) cover over 10 kilometers. To do so, only 17% of households use public transport. It is worth noting that, for the whole population, only 3.4% have at least one means of transport, only 1% of whom are women (Afdb 2020, country gender profile).

As a landing site for eight major submarine fiber optic cables, Djibouti has a unique opportunity to transform its economy to support more innovative and sustainable growth. According to the World Bank, only 1 % of the population used fixed internet in 2020, and the digital gap remains large. Among the richest 20 % of the population, 89 % of households own at least one mobile phone, compared to 41 % among the bottom 20 %⁴⁸. The cost of prepaid mobile broadband for low consumption of data represents over 12 % of per capita gross national income. As a result, Djibouti ranks 158th of 175 countries in the ICT Development Index published by the International Telecommunications Union⁴⁹. Household inequalities to the detriment of those headed by women were identified in the area's internet access (20% compared to 25% for those headed by men), mobile phones (67% to 78%), and at least one NICT item (68% compared to 79%). Similarly, women headed rural and urban households do not have the same opportunities for internet access (2% compared to 25%), mobile phones (20% compared to 80%) and at least one NICT device (22% compared to 80%)⁵⁰. Despite the 'No woman without a mobile phone' campaign in 2014 in rural areas, the digital divide is still marked by gender and area of residence-related inequalities.

⁴⁸ World Bank (2021), Djibouti country partnership framework for the period 2022 -2026

⁴⁹ Ibid

⁵⁰ Enquête Djiboutienne Auprès des Ménages / Indicateurs Sociaux (EDAM4-IS 2017)

sociocultural

Men play a predominant role in traditional Djiboutian society which is patrilineal, patrilocal and virilocal. Men provide household resources by breeding cattle and camelids, which requires large transhumance areas, they give orders and take decisions within the household and are community leaders, if necessary. Women, on the other hand, tend to the sheep, goats, perform domestic chores and care for the children. They await the return of the men to the settlements or migrate to the towns. Many discriminations against women exist and have their source in the Family Code for example, a guardian's consent is required for women to validate the marriage (Art. 7), the regulation granting male heirs twice the share of a female heir (Art.115 to 118, 120, 130, 142 and 158).

Legal framework

Djibouti's Constitution of 1992 enshrines the principle of non-discrimination based in particular on gender (Art.1), by guaranteeing the equality of all before the law. Djibouti has ratified most of the international treaties on human rights and gender equality (GE). Unlike other Arab countries, it unreservedly ratified the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) (1998). However, it expressed reservations regarding abortion in the case of rape and incest (art.4, Par.2.c) in the Protocol to the African Charter on Human and People's Rights on the Rights of Women in Africa (2005). The country has not ratified Convention 189 concerning decent work for domestic workers nor the 1999 CEDAW Optional Protocol. On the other hand, it subscribed to the post-2015 Global Agendas on gender equality.

The Djibouti Vision 2035 retains the National Gender Policy (PNG 2011-2021) as the policy framework for gender. The PNG aims to 'contribute to the achievement of gender equity and equality in favour of girls and boys, men and women in all areas of economic and social life.' Its two overall objectives are the establishment of a favorable environment for achieving gender equity and equality and the effective mainstreaming of gender in all sectors – focusing on gender-sensitive budgeting.

Gender based violence

In Djibouti, the most common forms of GBV include domestic violence, female genital mutilation (FGM)/cutting and, to a lesser extent, rape. Although government action has FGM, the practice remains widespread in Djibouti with a prevalence rate among women aged 15 to 49 of 78.4%⁵¹.

Access to Finance

Women represent 70% of microcredit recipients in Djibouti, however, access to financial services is a common concern of entrepreneurs in the formal and informal sectors. From 2010 to 2015, the number of women benefiting from the services of microfinance institutions (MFI) increased 15-fold (from 800 to 12,500) and the amount awarded nine-fold (DJF 57 million to DJF 500 million)⁵². Available documentation suggests that women use credits to purchase food and then to finance their income-generating activities. On the other hand, their main reproaches to MFIs are their low penetration and rate and harsh credit-granting conditions: limited amount, short-term and without any grace period, in solidarity groups

⁵¹ UN Women (2020), Review of health, justice and police, and social essential services for women and girls' survivors of violence in the Arab states

⁵² AFDB (2020), Country gender profile-Djibouti

and ineligibility of the agricultural, fisheries and handicraft sectors. The country also has a low banking rate (20% in 2018)⁵³.

Poverty

According to the 2019 Poverty Assessment, using data from the 2017 Household Survey, 17 % of the population lived in extreme poverty, with less than US\$1.90 per day (in 2011 purchasing power parity terms). Disaggregated data by sex showed that, from 2013 to 2017, a six-point reduction was observed for women (from 18.2% to 12.3%) and a three-point reduction for men (from 17.1% to 14.1%). In rural areas, the increase in the extreme poverty rate in households headed by men is 5 points (from 73.1% to 78.5%) while the rate for women-headed households is two points (from 76.4% to 78.4%).

Unequal Participation in decision taking

In Djibouti, the overall women's representation rate in the decision-making spheres was 15%⁵⁴ over the 2006-2011 period compared to 26% in 2012-2019⁵⁵ representing an 11-percentage point increase with small differences for elected and appointed positions. For the National Assembly, the 2018 Law establishing a minimum quota of 25% women for eligible positions following the legislative elections produced tangible results. Women have filled 26% of the seats since February 2018 compared to a rate of 11% during the last parliament (2013). In the Administration from 2011 to 2018 the representation of women officials rose from 20% to 32%. On the other hand, the proportion of women at Director level remained at 27%, though their number increased (46/169)⁵⁶.

Inequalities are present at all levels and in all sectors. Since 2013, with eleven (11) municipal councillors and nine (9) regional councillors, women represent 9% of regional councils and 10.67% of elected municipal officials. Indeed, in the Republic of Djibouti, women are absent from the negotiation tables at all levels, whether local, communal, regional institutional, or national; or sometimes their numbers when they are present are much lower than those of men. As in all essential sectors such as infrastructure, women face several obstacles to accessing positions of responsibility that give them access to decision-making. Efforts to integrate women into the energy and transport sector through infrastructure rehabilitation or installation projects are empowering women affected by energy and transport decisions.

The report of the study on the evolution of the situation of women in Djibouti 2000 TO 2018 mentions that women are increasingly independent, and that they are solicited to settle conflicts within their neighborhoods, localities, communities and even within couples⁵⁷. They are increasingly involved in the development of their regions and their country. However, their access to strategic positions and key sectors remains very limited compared to men.

⁵³ AFDB, African Economic Outlook 2018

⁵⁴ MPFPF, National Gender Policy 2011-2021, 2011

⁵⁵ MFF, Evolution of Women's Status, 2017; Gender Profile in the Public Administration, 2018; Djibouti City Council 2019

⁵⁶AFDB (2020), Country gender profile-Djibouti

⁵⁷ Republic of Djibouti, (2018). Study on the evolution of the situation of women in Djibouti 2000 to 2018 <https://famille.gouv.dj/uploads/publications/113b43e1476ef467385dd83c71f5d766.pdf>.

4.6 Democratic Republic of Congo (DRC)

Demographics and human development

The Democratic Republic of Congo's (DRC) population is estimated at around 80 million people, the biggest and fourth most populated African country. Women represent 52% of the people, and 33% of the female population is under 15 years old. The DRC has a population growth rate of 3.2%, an HDI ranking of 175 out of 189 (in 2019), and a Gender Inequality Index valued at 0.875. A Social Institution and Gender Index (SIGI) Value of 0.4276 denotes high gender inequality reflecting a discriminatory family code, inequality in physical integrity, limited access to resources and assets, and lack of freedom as a citizen. The Gender Development Index for the DRC is 0.833, placing women's human development at about 83% of that of men. (Green Mini-Grid Program, AfDB 2019).

Education

The DRC's constitution stipulates free obligatory education and the eradication of illiteracy in Articles 43 and 44. However, the country faces a gender gap in education due to early marriage and pregnancy, which leads to a 44% of school age children start primary education later than the official age of six. The gender gap in education is especially pronounced in secondary education. The reasons for girls not going to school include early marriage, forced marriage, and adolescent pregnancy. The double shift faced by many girls in rural areas whereby they have to perform household tasks such as searching for water and firewood further adds an increased burden. Especially since such household tasks are sometimes performed in the dark due to limited lighting at home and in public spaces –putting girls at risk of harassment and attack. Sexual harassment from teachers and early marriage are further burdens because schools bar pregnant students from attending classes, and most girls in such situations end up dropping out of school.

Employment

Women's labour force participation stands at 50%; however, women face more challenges than men. Women have less access to skilled jobs than men (8% in paid employment against 12% of men), and they tend to be marginalised in the labour market outside the agricultural sector. In 2014, women's unemployment rate was 6.7% compared to 9.4% for men, and only 45.3% of the population aged between 15 and 24 years is economically active. Among 15–24 years old, the female-male unemployment ratio is 104.8% - young women are more affected by unemployment than young men. Women's labour is mainly concentrated in subsistence agriculture (70%) and small business in the informal sector (60%), and they participate in economic activities as much as men. Only 2.8% of salaried workers are women. The rural population accounts for 70% of the country's total population, 60% of whom work in the agriculture sector – the majority at the subsistence level (70%).

The World Bank's recent report on women's economic empowerment in the DRC shows that significant gender gaps in the labor market undermine the country's efforts to achieve inclusive economic growth. Indeed, the proportion of women in the active population represents about 62%, while only 6.4% of them are in paid employment, compared to 23.9% of their male counterparts. Moreover, improving the level of education and skills of girls and women through the availability of basic infrastructure will improve their access to capital, their physical security and their autonomy.

Health

In 2019, the maternal mortality rate was 473 per 100 000 live births. Around 20% of women die for reasons related to childbirth, this can be attributed to: lack of access to medical treatment; poor health facilities; lack of lighting in existing health facilities; early marriage; and high birth rates. On average, women give birth to their first child at the age of 19.9 years; of women aged 20-24 years, 25% were younger than 18 years old when they had their first

child. Abortion is only legal in cases where the mother's mental or physical health is in danger. The contraceptive prevalence rate is 23.1%, and the total fertility rate per woman is 5.8 children.

Energy, transport, and telecommunications

Limited access to resources and assets increases women's energy poverty – and women as both consumers and suppliers of energy remain invisible in the sector. Women's energy access rates tend to be lower than men's due to disproportionate access and consumption levels. The country's 9% electrification rate is one of the lowest globally. Urban electrification is at 27%, while rural areas remain at less than 1%.

Infrastructure is one of the priorities of the Government of the Democratic Republic of Congo. Considerable efforts are being made for the rehabilitation and modernization of the country's basic infrastructure in order to consolidate the country's economic integration. The DRC has several assets in the infrastructure sector including:

- 238,935 km of roads;
- 5,033 km of railway lines;
- 500 landing strips, 270 airfields, including 101 open to public traffic, 164 private airfields and 5 international airports;
- 25 with paved runways;
- 16,238 km of waterways;
- 2,513 linear km of bridges (1,965 bridges);
- 89 hydroelectric plants and other renewable resources.

In term of ICT infrastructure, the Hootsuite and We Are Social's Digital 2020 Report, reveal that the DRC had an internet penetration rate of 19% for a population of 88.18 million people. That is 16.35 million Internet users.

Sociocultural

In DRC, women's access to resources and assets are restricted by gender norms– for example, assets obtained within marriage are registered under the husband's name and regarded as assets of the husband, his parents, and brothers. Legally, the husband administers the marital property, and women and men do not have equal ownership rights to immovable property. Women can inherit according to the law, but they cannot own a house due to prevailing social norms. Women are not legally recognised as heads of households, and there is no prohibition on discrimination based on marital status in access to credit. Women, especially those who are married, thus have minimal access to land, and even though women make up the majority of the agricultural labour force – the best land is still in the hands of men. Women also lack access to new technology – thereby relegating them to subsistence agriculture. Due to gender norms, women hand over their incomes from agriculture to their husbands and cannot make productive investments for productive assets, such as improved inputs, technologies, seeds, and fertilisers, which keeps their productivity low. The gender role many girls and women face in rural areas where they have to perform household tasks such as searching for water and firewood further adds an increased burden. These household tasks are sometimes performed in the dark due to limited lighting at home and in public spaces – putting girls at risk of harassment and attack.

Legal framework

The key gender-related policies and the other sub-regional and international legal instruments on gender and human rights in the country are:

- National Gender Policy (2017-2021),
- SADC Memorandum of Understanding on Gender and Development;

- Convention on the Elimination of All Forms of Discrimination Against Women;
- Maputo Protocol (The Protocol to the African Charter on Human and People's Rights on the Rights of Women in Africa);
- UN Convention on the Rights of the Child;
- Universal Declaration of Human Rights;
- UN Security Council Resolution on Women, Peace, and Security (UNSCR1325).

Gender based violence

Over the past 20 years, the DRC has experienced multiple crises, including wars and intercommunity conflicts. In addition to the ancestral practices from which women and minors suffered, the war situation has accentuated violence against women. In fact, GBV and serious violations against children's rights also remain major issues. In just nine months (January to September 2021), 74,275 cases of GBV were reported, 94 percent of which were women and girls, an increase of 73 percent compared to the same period in 2020⁵⁸. Children are particularly vulnerable because, during the conflict period in 2021, 1,540 children were victims of physical and sexual violence. In the DRC, the fight against GBV appears to be difficult, as some provinces face limited access to funding to combat GBV, which undermines the implementation of strategies that have been adopted to combat these forms of violence. However, several NGOs and agencies have been set up throughout the country to fight against GBV and to provide care for victims of such violence. These include the following: the Strategic Studies and Planning Unit for the Promotion of Women, the Family and Child Protection (CEPFE); the National Fund for the Advancement of Women and Child Protection (FONAFEN); the National Center for Documentation and Information on the Family (CENADIF); the National Agency for the Fight against Violence against Women, Youth and Girls (AVIFEM); the Regional Center for Research and Documentation on Gender, Women and Peacebuilding in the Great Lakes.

Access to Finances

In the DRC, the "informal" sector is the main source of subsistence for the population, especially women, since "formal" employment is dominated by men, particularly in the public sector. According to the 2016 report by the French Development Agency, 97% of women in South Kivu work in the informal sector, compared to 85% of men. Women work in precarious conditions with meager wages. Indeed, 2.4% of women have regular salaries, compared to 18.4% of men⁵⁹.

Poverty

Heavily impacted by the war, the DRC remains a country greatly affected by poverty, particularly in rural areas. According to 2012 data from the World Bank, more than 77.2% of the population live below the poverty line, with 40% living on less than \$1 a day⁶⁰. According to World Bank estimates in 2019, 73% of its population, or 60 million

⁵⁸ OCHA, (2021). Democratic Republic of the Congo: overview of humanitarian needs. https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/hno_2022_drc_20211224vf.pdf

⁵⁹ AFD, (2016). Gender Profile Democratic Republic of Congo. <https://plateforme-elsa.org/wp-content/uploads/2014/02/Profil-Genre-RDC.pdf>

⁶⁰ The world Bank. Ratio of poor population living on less than \$1.90 per day (2011 PPP) (% of population). Online available: <https://donnees.banquemondiale.org/theme/pauvrete?locations=CD>

people, lived on less than \$1.90 a day in 2018 (the level set as the international poverty line). Thus, nearly one in six people in extreme poverty in sub-Saharan Africa live in the DRC.⁶¹

Unequal Participation in decision taking

According to the Human Development Report 2020, In Congo (Democratic Republic of the), 12.0 percent of parliamentary seats are held by women. The issue of women's political participation is complex given the obstacles involved. In provincial elections, 10.6% of the positions were filled by women in 2018 compared to 6.8% in 2016. In senatorial elections in 2018, the proportion of women elected was 19% compared to 4.6% in 2006. In the Government, there are 18% of women in 2018 with the Ministry of Gender transformed into a Ministry of State. Despite the positive dynamics observed in terms of the election of women in these different institutions, their representation remains at least five times below that of men.

In the DRC, women's participation in management and decision-making at the local level depends on the village or region of the country. Within CSOs, women were an integral part of civil society but sometimes remain frustrated in their work because the leadership was entirely made up of men who did not understand or take into consideration women's actions. Many women participate in the country's economic development activities and processes. Despite the fact that the participation rate of women in the labor force is about 96.5% of the participation rate of men, they hold fewer positions in decision-making bodies appointed in the transportation, energy, telecommunications and heavy industry sectors.

⁶¹ The World Bank, (2019) <https://www.banquemonde.org/fr/country/drc/overview>

4.7 Gabon

Demographics and human development

Gabon is a small Central African country with a low population density and a youthful population, with an area of 270,000 km² and an estimated population of 2.2 million⁶². At 8 inhabitants per km², it is one of the least dense countries in the world. More than 40 percent of Gabonese are under the age of 15, and with an urban fertility rate of 4 children per woman and a rural rate of 6, the population is growing. Though the youthful population can be an asset for the country's development, the benefits will materialize only if the economy can absorb them productively.

Education

In Gabon, Law No. 21/2011 of 14 February 2012, on General Orientation of Education, Training, and Research stipulates, in its article 2, that Education and Training are mandatory in Gabon. Access is guaranteed to any young person, Gabonese or foreigner residing in Gabon, aged 3 to 16. Significant efforts have been made in education regarding access, particularly at the primary level with a rate of net schooling, which increased from 88.3% in 2013 to 92% in 2015^{63,64}. But the completion rate in primary seems to have decreased, from 62.08% in 2007 to 41% in 2015. Literacy among young people in 15 to 24 has also made remarkable progress reaching a rate of 88.4% in 2012, including 92.4% for women and 84.4% for men.

According to the latest Demographic and Health Survey (EDS) of 2012, the net enrolment rate is 95.5% among boys and 97.2% among girls, translating to a gender ratio of around 98.3 boys for 100 girls in the primary. Gender disparities remain practically non-existent in terms of access to primary education. However, Gabon is among the African countries with a high level of schooling: 95.5% for boys and 97.2% for girls (UNDP, 2021). The explanatory reasons for non-attendance at school, perceptible through the net enrolment rates, are probably: the poverty of the parents, a lack of sectorization, unwanted pregnancies, and School failure.

According to the 2017 Gabonese Survey on Poverty Evaluation and Monitoring, 24.1 percent of women aged 15 years and older had no education at all and 21 percent of those who have some education did not go beyond primary, compared with, respectively, 19.7 and 15 percent of men. About 19 percent of women are unemployed, compared to 11 percent of men. Also, around 62 percent of employed women work in low profile jobs, such as household worker or self-accountant, compared to 46 percent of working men. Around 50 percent of women aged 15–49 agreed that a husband has the right to beat his wife for some reasons. The rate reaches 59 percent among women with primary education or lower and 63 percent among those in the lowest welfare quintile, compared to 40 percent and less among women with secondary education and those in the richest quintile.

Employment

Women are very vulnerable in the labor market job. First of all, 39.1% work for their own account, mainly in informal agricultural and trade jobs or in unpaid jobs, compared to 27.6% for men. Then, unemployed women are about twice that of men, and it is among them, discouraged unemployed is more observed. As a result, they are less present on the market work with an activity rate estimated at 34.5%, i.e., more than 15 points difference with that of men, which amounts to 49.6% According to ILO data, in 2019, women's labor force participation in Gabon

⁶² World Development Indicators, 2019

⁶³ UNESCO (2019) <https://fr.unesco.org/fieldoffice/libreville/acces-educational-system-gabon>

⁶⁴ The world Bank (2015). Gabon's unemployment Conundrum: Why Economic Growth is not Leading to More Jobs. Gabon's Unemployment Conundrum: Why Economic Growth is not Leading to More Jobs (worldbank.org)

stood at 45%, as opposed to 64% for men, with even lower employment in industry, at 2.72% for women against 14.1% for men. Unemployment was 28% for women compared to 14.1% for men..

Women's vulnerability in the labor market is mainly the consequence of the differences observed in secondary and higher education levels. So that the girl/boy ratio is close to 1 at the primary level, the significant differences in education to the disadvantaged women are observed in the upper secondary and higher levels with respectively 21% against 16%, and 8% versus 6%. 23% of young girls who have stopped going to school say it is because of early pregnancy and marriage (23%), and 42% answer that it is due to the financial incapacity of the parents. Due to the above, as in most African countries, women receive less income than men.

Health

Gabon's health sector is plagued by malaria, premature birth, acute respiratory infections, HIV and diarrheal diseases, which are the leading causes of death among children under the age of five. The country has seen an increase in the prevalence of noncommunicable diseases, in particular cardiovascular diseases, diabetes, renal failure and cancers. Gabon bears a double burden of communicable and noncommunicable disease, each with high mortality rates. Through a 2008 health financing reform, Gabon instituted a system of mandatory health insurance and established a national mandatory health insurance and social security fund; currently this fund covers 60% of the population⁶⁵.

Energy, transport and telecommunications

According to the World development indicators, 90.6% of the Gabon population has access to electricity. This proportion is 98.2 in the urban area and 24.1 in the rural. Gabon is one of the top five oil producers in sub-Saharan Africa and one of the leading countries in its oil exploration and production, however the country has been facing declining output for more than a decade. The economy and energy sector remain highly dependent upon the country's oil production, with oil revenues accounting for 45% of total government revenue and crude export accounting for nearly 74% of total export revenue in 2019.⁵⁸ Gabon's electricity supply is through seven hydroelectric facilities. A heavy fuel station was commissioned in 2000 to meet the increasing demands of Libreville, however new studies are underway to find more economical and efficient power generation facilities.⁵⁹ Still, the World Bank estimates that only 60% of Gabon's population has access to electricity. According to the US Energy Information Administration (EIA), nearly 50% of energy consumption is from biomass and waste (wood, crop residues, manure, and charcoal), the rural population's primary method of meeting household cooking and heating needs. Amidst rising electricity demand among both residential and industrial consumers and frequent electricity shortages, Gabon is currently working to expand the electricity supply and meet increasing demand, primarily by building hydropower plants and extending transmission lines. However, expansion of hydropower does not erase concerns regarding electricity reliability, as key business hubs in the country have previously experienced blackouts during periods of low rainfall.

The recent progress in the coverage of telecommunication services, concentrated around large cities Libreville, Port-Gentil and Franceville and resource sites This created a "digital divide" between the urban population and the remote rural areas, where it is typically not economically viable for telecommunications operators to deploy and maintain telecommunications infrastructure: around 15 percent of the population still had no access to mobile telecommunications networks as of October 2017⁶⁶. Such a "digital divide" requires public intervention to bring ICT services (e.g. mobile banking, e-learning, e-health, etc.) to these underserved areas as the economic and social benefits could massively compensate for the lack of physical infrastructures. The 2016 Global Information Technology Report shows that Gabon has yet to reap the benefits of emerging technologies and to

⁶⁵ Sango, N.A. and Yaya, S. (2019). Wealth Status, Health Insurance, and Maternal Health Care Utilization in Africa: Evidence from Gabon. *BioMed Research International*. Research Article. DOI: <https://doi.org/10.1155/2020/4036830>

⁶⁶ ANPI-Gabon. (2017). www.anpigabon.ga.

capitalize on the opportunities presented by the digital technologies. The country ranks 125th out of 139 countries in the Networked Readiness Index (NRI), trailing behind its structural and aspirational peers.

Socio cultural

In September 2021, Gabon adopted new laws designed to reduce the risk of violence against women and prohibit discrimination in the economy, in particular by amending legislation to promote women's financial inclusion and access to more employment. Revisions to the country's 1972 Civil Code allow women to be the official head of household, choose where they live, and own and manage property in the same way as men. They can also open a bank account independently of their husbands and apply to a broader range of jobs. Married women should no longer be legally bound to the duty of wifely obedience. Amendments to the Criminal Code protect women from discrimination based on gender in accessing credit.

Policy and legal Framework

The Gabon's National Strategy for Equality, Equity and Gender (SNEEG); adopted by the government in 2010. The development of the strategy was supported by UNDP and UNFPA. The SNEEG is articulated around six fundamental axes constituting challenges for equity and equality between men and women from a development perspective. These axes are:

- The adherence of all actors to the vision and objectives of gender equality and equity;
- Empowerment through improved productivity in the main sectors in which women are found, for an increase in their income;
- Improving access to production support services;
- Improving access to social services;
- The promotion of equitable participation in the management of power, respect for rights and the suppression of violence;
- The redefinition of the new role of the ministry in charge of gender mainstreaming with regard to strategy issues. »

Gabon also has several legal instruments among whom:

- the Convention on the Elimination of All Forms of Discrimination against Women in 1982 of the CEDAW
- the Protocol on the Rights of Women in Africa of the African Charter of Human Rights of Man and Peoples in 2011.
- • The Gabonese constitution guarantees "freedom of conscience, thought, opinion, expression, communication, free practice of religion, (...) to all, subject to respect for public order" (article 1). Article 2 states "the equality of all citizens before the law, without distinction of origin, race, sex, opinion or religion".

Gender based violence

The official statistics on gender-based violence available in Gabon comes from the DHS-2012. The data showed that just over half of women (52%) in Gabon said they had been subjected to acts of physical violence since the age of 15 at some point in their life and 22% in the 12 months preceding the survey. In 45% of cases, the perpetrator of the acts of physical violence is the current husband or partner. About one in five women (21%) have been victims of sexual violence during her life and 8% during the 12 months preceding the survey. Slightly more than

one in ten women (11%) said they had suffered acts of physical violence during pregnancy. Among women aged 15-49, who had suffered physically or only 43% sought help.

Access to Finances

In terms of financial services, Gabon gives all persons – male or female – equal legal right to access bank loans. Nevertheless, certain discriminatory practices persist in preventing women from equally accessing credit. Some banks require wives to obtain permission from their husbands before opening an account, and the law itself requires that husbands be notified.⁶⁷ According to the latest data from the World Bank, 54% of women had a bank account at a financial institution in 2017 compared to 64% of men. Mobile money is helping women to accelerate their access to the formal financial system.

Poverty

In Gabon, poverty is more prevalent among women. According to the world Bank systematic country diagnostic report (2020), the poverty rate for women-headed households is 36 percent, compared to 32 percent for men-headed households. This is due to a higher incidence of poverty among urban women-headed households (33.7 percent) than urban male-headed households (27.6 percent). In both areas, widows are poorer than widowers by about 10 pp. Women-headed households have less adult members, less education and work less in qualified jobs and productive sectors than men headed-households. The gender gaps are particularly important among poor households.

Unequal Participation in decision taking

The Gabonese political landscape is marked by the presence of women in certain key positions (such as the presidency of the Senate, or the Prime minister's office and previously the Libreville' City hall) but the latter remain largely under-represented among the elected representatives of the Republic within the government. Indeed, at the national level, in the two chambers which make up the parliament, less than 20% of the seats of elected officials are occupied by women and at the local level, only 13% of town halls are controlled by female mayors. While current legislation provides for quotas for women for elections and for the highest positions, these are not respected in the absence of implementing decrees.

Globally, at least 50% of women have access to administrative, political and community decision-making positions. As a result of the country's efforts to implement its gender policy, at least 80% of women and girls have benefited from adequate protection of their human rights and have increased access to legal services. In fact, the economic power of women and girls throughout the country has increased by at least 30%.⁶⁸

⁶⁷ Civil Code, article 257

⁶⁸ Republic of Gabon, (2015). Decennial plan for the empowerment of gabonese women 2015-2021. <https://gabon.unfpa.org/sites/default/files/pub-pdf/Brochure%20Auto%20femme%20Gab%20-%20FINALISATION.pdf>

4.8 Gambia

Demographics and human development

The population of The Gambia is estimated at 2,416,664 million, with an annual growth rate of 2.94% between 2015 and 2020 and an average household size of 8.3. About 37 percent of the population lives in rural areas, and women constitute 51 percent⁶⁹. One in five households is headed by a female, mainly because of the migration of males to urban areas and overseas. Women's poverty is closely linked to their high illiteracy level (73 percent), the absence of economic opportunities, inadequate access to economic resources, including credit, land ownership, skills, and support services. About 67 percent of the population is aged below 25 years (2009 National Youth Policy). The factors that make women vulnerable, such as poverty, power relations, lack of economic power, low level of education, and lack of or limited technical knowledge, are also vital issues affecting youths.

In 2018, Gambia's value on the Human Development Index was 0.466, positioning it at 174 out of 189 countries and territories. Gambia had a GII value of 0.620 and thus ranked 150th out of 162 countries in the 2018 index. In the Gambia, 10.3 percent of parliamentary seats are held by women.

Education

Gambian young women lag the young men with an illiteracy rate of around 30 percent. According to the Human Development Report 2019, 30.7 percent of adult women have reached at least a secondary level of education compared to 43.6 percent of their male counterparts.

Education in The Gambia is less inclusive as children with disabilities have limited access to education due to social norms and structural limitations. At the community and family levels, social norms and values set limits on the education of boys and girls. Already from secondary school onward, girls' education is compromised in large part because of the higher value placed on marriage over education and career development. In 2017, the upper secondary completion rate disaggregated by sex and age is in favour of men (31%) with a gap of 3%. Moreover, in 2019, women teachers represent only 21% of the staff in secondary education⁷⁰. In recent years, efforts have been made to promote gender equality, education for all, and reduce gender disparities in schooling. The proportion of Gambian women with access to paid employment is very low compared to their male counterparts.

Employment

Women make up 78 percent of the economically active population who work in agriculture compared to 57 percent of men. The majority of women farmers are unskilled agrarian wage earners and are responsible for about 40 percent of the total agricultural production in the country. Female participation in the labour market is 51.7 percent compared to 67.7 for men (Human Development Report, 2019). Even though there are more women in agricultural production than men, and they make a massive contribution, it does not award them the improved social status they desire. Most engage in the production of non-cash crops for subsistence and thus operate at low levels of productivity owing to limited control and ownership of productive resources such as land, inputs, credit and technology, and markets. While women are active in horticultural production, which generates relatively good revenues, this income is often invested in sustaining the household. Their limited capacity and skills to embark on viable agro-based and entrepreneurial activities, lack of ownership and control over resources such as land and modern agricultural equipment, coupled with the triple roles of women, impede all efforts for rural

⁶⁹ Gambia, the. The World Bank. <https://data.worldbank.org/country/gambia-the>

⁷⁰ UNESCO, Institute for Statistics as reported by World Bank data.

women to graduate into the mainstream livelihood economy (FAO, National gender profile of agriculture and rural livelihoods – The Gambia).

The proportion of Gambian women with access to paid employment is very low compared to their male counterparts. Moreover, up to 74%⁷¹ of them work in the informal sector or in sectors and jobs that require unskilled labor. Despite the fact that women's economic empowerment was often mentioned as a priority during consultations with civil society, the lack of women in decision-making positions is an obstacle to the implementation of decisions taken in favor of women's empowerment. Involving more women and youth in all stages of the life cycle of resilient infrastructure would be an excellent way to involve them in local, regional and national decision-making.

Health

In Gambia, for every 100,000 live births, 706.0 women die from pregnancy related causes; and the adolescent birth rate is 78.2 births per 1,000 women of ages 15. Mortality is slightly lower among women (2.72 deaths per 1,000 population) than among men (3.13 deaths per 1,000 population). Among both women and men, mortality rates generally increase with increasing age. Rates are lowest among those age 15-19 and highest among those age 40-44 and 45-49. Mortality rates are higher for men than for women in all age groups until age 40 (Gambia Demographic and Health Survey 2019-2020). The rate of mortality associated with pregnancy and childbearing in The Gambia is 0.43 maternal deaths per 1,000 woman-years of exposure.

Energy, transport and telecommunications

In 2018, 76 percent of the urban population had access to electricity, whereas only 35.4 percent of the rural population had such access. This means that rural households rely on other energy sources, such as fuelwood. Rural women still spend a significant amount of time gathering fodder.

The Gambia Demographic and Health Survey 2019-2020 results showed that, among all women and men age 15-49, 62% and 73% have used the internet in the last 12 months, respectively. Of those who have accessed the internet in the past 12 months, a greater percentage of men (65%) than women (60%) use the internet on a daily basis. The Strategy for Youth and Women Development & Empowerment Through ICTs 2021-2024 revealed that there is limited sex-disaggregated official data and geographic coverage of most ICT indicators but consultations showed that there are gender gaps observable in ICT access, skills and leadership. A number of the barriers to gender digital equality generally relate to the state of availability of infrastructure, financial constraints, the ICT ability and aptitude of the women, the interest and perceived relevance of ICTs, issues of safety and security and the socio-cultural and institutional contexts. The strategic actions for addressing some of these findings relate to measures for addressing affordability, education on digital skills and online safety measures. The Gambia has produced a National Science, Technology and Innovation Policy (NSTIP) under the theme "Harnessing Science, Technology and Innovation for A More Vibrant and Sustainable Socio-economic Growth and Development" through the Ministry of Higher Education, Research, Science and Technology. It is a strong indication of the country's intention of ensuring that STI drives the national development.

Sociocultural

The Gambia Demographic and Health Survey 2019-2020 highlighted some key sociocultural facts: 85% of currently married women age 15-49 who receive cash earnings for their employment mainly decide how their earnings are used. The ownership of both a house and land among women and men is higher in rural areas than in urban areas. Concerning women's participation in decision making, only 27% of currently married women age 15-49 make decisions regarding their own health care, major household purchases, and visits to their family and relatives

⁷¹ Ibid

either alone or jointly with their partner. A greater percentage of women (55%) than men (40%) agree that a husband is justified in hitting or beating his wife under one or more specified circumstances. More women (63%) than men (60%) believe that a woman is justified in refusing to have sexual intercourse with her husband if she knows he has sex with other women.

The Gambian National Agricultural Investment Plan (GNAIP), the Gambia Sustainable Land Management Investment Framework 2016-2020 (GAMSIF), and the National Rice Development Strategy (NRDS) all acknowledged that "feminization" of poverty is underway, exemplified by higher levels of poverty among female-headed households. It is estimated that such households represent 18 percent of those in rural areas; 63 percent of them fall below the poverty line, compared to 48 percent of male-headed households.

Legal and Policy framework

The Government has taken concrete policy decisions and actions related to gender and women in the past two decades. To better manage the affairs of women and gender, the Government established the Women's Bureau and NWC in 1980, established the Ministry of Women's Affairs in 1996, and created the Federation of Gambian Women in 2010. The Government also ratified several international conventions and developed and implemented many national policies to address gender issues. It endorsed the CEDAW in 1992. The country developed its first national policy on women, the 1999–2009 National Women's Policy (NPAGW). The 2010–2020 Gender and Women Empowerment Policy (GWEP) is implemented with the Gender Mainstreaming and Women Empowerment Strategic Plan (2010–2015). The GWEP was developed through a consultative process informed by consultations at national, provincial, and district levels spearheaded by the National Women's Bureau. Furthermore, to put gender equality and women empowerment on a sound legal footing, the Government enacted the Sexual Offences Act 2013, Domestic Violence Act of 2013, and Women's Amendment Act 2012. These laws have domesticated international best practices instruments such as the CEDAW (FAO, National Gender Profile).

Gender based violence

Sexual and gender-based violence is a deeply rooted evil in Gambian society and is fueled by a culture of silence. Indeed, approximately one in three women (33%) experiences sexual or physical violence in her lifetime, which is similar to the global prevalence rate. Girls in particular are the most vulnerable groups, as the forms of violence experienced by them are in the form of rape and other forms of sexual abuse, early marriages. To curb this phenomenon, which undermines the lives of women and children and other vulnerable groups, the government has passed laws against sexual and gender-based violence. However, there is a form of impunity due to the silence, stigmatization and fear of both the victims and those around them.

According to the Gambia Demographic Health Survey 2019-2020, it is noted that 46% of women aged 15-49 have experienced physical violence, while 9% of the same age group have experienced sexual violence. In The Gambia, domestic violence is one of the forms of violence suffered by women and is an important public health issue that transcends geographic and cultural barriers. Between 2019-2020, 39% of married women experienced domestic violence, either physical, sexual, or emotional, from their partners⁷².

On the legal front, measures have been taken to combat these forms of violence. These include the Sexual Offences Act 2013, the Domestic Violence Act 2013, the women's Act 2010, the Trafficking in Persons Act 2007, the Children Act 2005, etc. Women are not represented in the management and decision-making bodies of most of the country's higher education and research institutions⁷³.

⁷² Republic of Gambia, (2020). Demographic and Health Survey 2019-2020. <https://dhsprogram.com/pubs/pdf/FR369/FR369.pdf>

⁷³ Republic of the Gambia, (2018). Stem & Gender Advancement (saga); the Gambia country report. <https://www.moherst.gov.gm/sites/default/files/2021-12/Gambia-SAGA%20Country%20Report-DRAFT02.pdf>

Access to Finances

For all countries, financial inclusion is seen as a key indicator of development and citizen well-being. Its effective implementation is even more crucial for women, who remain largely excluded from financial services due to poverty, gender inequality, and low literacy rates. By 2021, 49% of the total population, or more than 1.2 million people, will be living below the poverty line. Implementing the financial inclusion strategy is therefore a crucial tool to serve the disadvantaged, most of whom are unbanked, especially since about 37% of the Gambian population lives in rural areas.

As of 2019, the country's first National Financial Inclusion Strategy (NFIS) has been formulated by the Central Bank of The Gambia (CBG) with technical support from UN Capital Development Fund (UNCDF). The strategy received financial support from the Alliance for Financial Inclusion (AFI) and the European Union⁷⁴. However, according to Finscope's 2019 report, financial inclusion in The Gambia has remained very low, with 69% of the adult population lacking access to formal or informal financial services. Banking products and services are used by about 5% of the population; 14% access other formal non-bank services and 12% use informal financial services⁷⁵. According to the final report of the PoWER survey on Assessing Women's Economic Empowerment in The Gambia, women and youth have limited access to formal banks. The majority of the surveyed population relies primarily on informal channels to access financial services. Indeed, the average rate of account ownership among women aged 26-55 is 15% compared to 51% among men in this age group. Women living in rural areas are the most disadvantaged by this financial inclusion program where only 9% have access to financial services compared to 20% for women living in urban areas⁷⁶. To access financial services and develop their economic activities, this disadvantaged population uses informal channels such as savings groups, cooperative associations, etc. However, steps have been taken by the Gambian government to provide financial access to the population with a target of reaching 70 percent of adults by 2025.

Poverty

The Gambia is a country that relies heavily on agriculture, yet the country is subject to extreme weather events that make the population very vulnerable. The agriculture sector employs about 46% of the working population and is the main source of food for the majority of Gambians, especially in rural areas. However, the climate, EBOLA, and COVID-19 crises are continually affecting the availability and price of food, leaving more and more families hungry. The long periods of drought in 2017, caused agricultural production to drop by 26% at the same time, fluctuating market prices have adversely affected vulnerable households, who spend the majority of their income on food⁷⁷. As a result, populations that depend primarily on agriculture are the most affected by hunger.

In 2015, the incidence of extreme poverty in The Gambia, as measured by the international poverty line of US\$1.9 per day (2011 PPP), was 10.3 percent, and 2.5 percent of the population lived below the poverty line. Poverty rates were higher in rural areas, where the population represented more than 41% of the total population

⁷⁴UN Capital Development Fund. Online Available: <https://mm4p.uncdf.org/article/7460/launching-gambias-nfis>. [Accessed: 23-06-2022]

⁷⁵ Republic of the Gambia, (2019). Finscope's: Consumer Survey Highlight. https://finmark.org.za/system/documents/files/000/000/147/original/FinScope-Gambia_Pocket-guide-28-11-2019_Final.pdf?1594135120

⁷⁶ Republic of the Gambia, (Juin 2019). PoWER assessment of Women's Economic Empowerment in The Gambia. <https://www.uncdf.org/Download/AdminFileWithFilename?id=9423&cultureId=127&filename=091019-wee-thegambia-powerpdf>

⁷⁷ UN World Food Program, Gambia. Online Available: <https://www.wfpusa.org/countries/gambia/>

in 2015. In rural areas, the poverty rate was 70 percent compared with 41 percent in other urban areas and 17 percent in the capital city of Banjul⁷⁸.

Unfortunately, women and minor children are the most affected by poverty. Indeed, 8.2% of Gambian women aged 15 and over live below the international poverty line compared to 7.6% of men. In 2021, unemployment will affect more than 12.4% of women, while men are less affected by unemployment with a rate of 8.9%. However, several organizations are working in The Gambia to help the population, including social justice, gender equality, and poverty eradication.

Unequal Participation in decision taking

In The Gambia, women have experienced limited access to participation and representation in the country's national governance. They have always been poorly represented in positions of power and decision making in the country. However, the country adopted the Women's Law in 2010, which provides for the adoption of temporary special measures by any body, agency, public institution, authority or private enterprise to accelerate "de facto" equality between men and women. In fact, a 50% quota for women at all decision-making levels in government as well as in private institutions. As early as 2012, the African Center for Democracy and Human Rights Studies (ACDHRS) implemented a project to promote gender equality through the participation and representation of women in national governance. Women make up more than half of the population of The Gambia, yet they represent only 9% of parliamentarians in 2021⁷⁹.

Women's access to certain decision-making positions is limited in all sectors and areas of infrastructure in The Gambia. According to a study on the analysis of the energy and gender situation in ECOWAS member states, some decision-making positions are implicitly inaccessible to women, even when they have the necessary qualifications⁸⁰. This is because most people believe that women's roles as wives and mothers may interfere with their ability to perform work and hold key positions within structures, institutions and businesses. Sometimes these positions require long working hours or long trips to the field.

⁷⁸ Republic of the Gambia, (2019). Poverty & Equity Brief; Africa Western & Central. https://databank.worldbank.org/data/download/poverty/987B9C90-CB9F-4D93-AE8C-750588BF00QA/AM2021/Global_POVEQ_GMB.pdf

⁷⁹ The World Bank, (2021). Proportion of seats held by women in national parliaments (%) – the Gambia, The. Online Available. <https://data.worldbank.org/indicator/SG.GEN.PARL.ZS?locations=GM>

⁸⁰ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE), (2015). Situation Analysis of Energy and Gender Issues in ECOWAS Member States. Efficiency.

4.9 Ghana

Demographics and human development

Located on the coast of the Gulf of Guinea, Ghana's landscape consists mainly of plains and lowlands covered by tropical rainforests in the west and Lake Volta in the east. With a total population of over 31 million by 2021, Ghana has an annual population growth rate of 2.10%. In addition, the urban population represents more than 58% of the total population with an annual growth rate of 3.2% in 2021. Ghana's population is very young with over 60% of the population under the age of 30. However, the ratio of the inactive population to the active population is very low compared to the average for sub-Saharan Africa. Indeed, the proportion of the population of working age in Ghana in 2021 is only 67%, whereas in Sub-Saharan Africa this rate is about 82% (World Bank, 2021). On the other hand, Ghana's HDI is higher than the average human development index for sub-Saharan Africa. With a score of 0.611 in 2019, the country is ranked 138 out of 189 countries⁸¹. Ghana is among the lower middle-income countries with a population, which is heavily dependent on cocoa and coffee export revenues, ranking among the top 2 cocoa exporters in the world. In addition, the mining sector, dominated by gold mining, remains one of Ghana's economic lungs, ranking as the top gold-producing country in Africa since 2019, accounting for about 95%⁸² of the country's mining revenues. In 2020, gold mining contributed about US\$1.3 billion to the country's gross domestic product (GDP). In addition, the industry sector is very important to the country's economy as it contributes 28.3% to the GDP and provides employment to over 21% of Ghana's population.

Education

Ghana has made impressive strides in economic growth, poverty reduction, and educational improvement. Indeed, in recent years, the country has adopted approaches to make quality education accessible to more children. According to the World Bank's 2019 data, Ghana's elementary school enrollment rate (% net) was 86.16% and slightly lower in 2021 with 82.4%⁸³. However, the country's education indicators reflect a gender gap and disparities between rural and urban areas and between the southern and northern regions of Ghana. First in 2018, the adult literacy rate was 79.04%, with 78.3% for males and 65.3% for females. Between the ages of 15 and 19, 85% of women and 90% of men are literate, compared to 47% of women and 76% of men between the ages of 45 and 49. At all levels, the literacy rate for boys is systematically higher than for girls. However, Ghana is doing well in terms of access to education for girls compared to other sub-Saharan African countries. In Ghana, the gross enrollment rate of women in primary education is 106% in 2018. For this indicator, the country is in the 72nd percentile compared to all countries, meaning that 72% of countries have a lower gross

⁸¹ UNDP, (2020). Human Development Report 2020. <https://hdr.undp.org/sites/default/files/Country-Profiles/GHA.pdf>

⁸² International Trade Administration, (2022). Ghana – Mining Industry Equipment. Online Available: <https://www.trade.gov/country-commercial-guides/ghana-mining-industry-equipment#:~:text=Ghana%20is%20Africa's%20largest%20gold,of%20the%20country's%20mineral%20revenue>. accessed on [26/07/2022]

⁸³ UNESCO Institute for statistics, (2022). BROWSE BY COUNTRY Ghana. <http://uis.unesco.org/en/country/gh?theme=education-and-literacy>

enrollment rate than Ghana⁸⁴. In addition, Ghana scored 1 on UNESCO's Gender Parity Index (GPI) for primary and secondary education levels in 2020⁸⁵. On the other hand, per pupil expenditure (PPE) in primary education as a percentage of GDP per capita is 8 percent, which is lower than the median PPE in primary education for lower-middle income countries, which is 13 percent. Overall, Ghana's spending on education has accounted for about 25% of its annual budget over the past decade.

Employment

Although Ghana's female enrollment rate is higher than that of some Sub-Saharan African countries, and also has enormous economic potential, the country has large gender disparities in economic participation and income. First, the female labor force (% of total labor force) in Ghana was 46.71% in 2021 (World Bank, 2021). According to 2019 International Labor Organization (ILO) estimate data, only 65% of working age women were employed in Ghana, compared to 73% of men. The low participation rate of women in the labor market is rooted in societal norms and also prevalent cultural factors that view women as complementary to men whose role was limited to the Home.

The average "working poor" poverty rate for all employed women in Ghana was estimated at 67.1 percent, compared to 63.7 percent for men. For non-agricultural employment, the rates for women and men were 54.8 percent and 49.3 percent,

Health

With five levels of providers, Ghana's health system includes health posts, the first level of primary care in rural areas; health centers and clinics; district hospitals; regional hospitals; and tertiary hospitals. On average, Ghana spends about 6 percent of its GDP on health infrastructure. . Ghana has long placed special emphasis on the country's health sector. In 2019, this sector received more than \$202,230,000 USD, which represents 8.2% of Ghana's gross domestic product, an increase of 1.1% over the 2018 budget. Ghana has one government agency: the Ghana Health Service (GHS) established in 1996 as part of Ghana's health sector reform. Despite the efficiency of the country's health service, Ghana's health system is still not comparable to that of developed nations (ranked 135 out of 191 for overall health system performance by the WHO). This means that private medical insurance is essential for expatriates to have access to better quality private facilities and/or treatment by air.

A 2019 study found that 81.4% of the population had access to primary health care in Ghana, while 61.4% had access to secondary level care and 14.3% to tertiary care. This while the number of specialists per capita remains low. Despite these relatively high accessibility rates, about 30% of the population has to travel long distances to access primary facilities or consult a specialist. The gender situation with regard to access to health care remains uncritical⁸⁶. However, according to a study conducted in 2021, the majority of women aged 15 to 19 (59%) encountered at least one barrier to

⁸⁴ FHI360, (2018). National Education Profile 2018 Update. https://www.epdc.org/sites/default/files/documents/EPDC_NEP_2018_Ghana.pdf

⁸⁵ World Bank, (2022). Female to male secondary enrollment ratio (%) – Ghana. Online Available: <https://donnees.banquemondiale.org/indicateur/SE.ENR.SECO.FM.ZS?locations=GH>

⁸⁶ eidu, AA., Darteh, E.K.M., Agbaglo, E. *et al.* Barriers to accessing healthcare among women in Ghana: a multilevel modelling. *BMC Public Health* **20**, 1916 (2020). <https://doi.org/10.1186/s12889-020-10017-8>

accessing health care, compared to the other age groups in the study. In terms of marital status, 61.6% of widowed women reported facing at least one barrier to accessing care.

Energy, transport, and telecommunications

Thanks to these hydroelectric dams and solar and thermal power plants, Ghana has one of the highest electrification rates in Sub-Saharan Africa (84%)⁸⁷. However, access to energy sources remains low. Ghana's energy mix has historically been dominated by hydro (1,365 MW or 29%) and thermal power (3,300 MW or 67.9%) with a total installed capacity of 4,700 MW considered reliable.

With a population of 31.7 million, spread over a geographically heterogeneous territory, Ghana has long focused on the construction and expansion of its transport infrastructure (roads, railroads, airport and port) to facilitate better mobility of goods and people but also to serve the remote rural areas. Ghana's transport infrastructure plays a major role in the country's economic growth, especially since the country has made significant investments in this sector. Road transport remains the predominant mode of transport throughout the country, with an estimated market share of over 95% of passenger traffic and 90% of freight traffic⁸⁸. The rail network is less developed due to years of underfunding and lack of maintenance. However, the rail sector is becoming increasingly important due to key investments made between 2015 and 2016 in the rehabilitation and modernization of western and suburban rail lines⁸⁹. The western rail line dedicated to manganese transport offers its services as does the eastern line, which focuses on passenger traffic between Accra-Nsawam and Accra-Tema.

The air and maritime transport sectors remain the country's key sectors in terms of the quality and safety of passenger and freight transport and their contribution to the country's economy. With its two major ports (Tema port focused on imports and Takoradi port focused on exports) and two international airports, Ghana's transport sector has contributed significantly to the country's economic growth over the past decades. Thus, the contribution of the transport and storage sector to the economy in 2017 is estimated at about 5.3 billion dollars or 12.8% of Ghana's GDP⁹⁰. Nevertheless, the sector is male-dominated and inequalities exist in access between rural and urban areas.

With an advanced infrastructure platform, especially compared to other low-income countries in Africa, Ghana has adopted institutional reforms in all key infrastructure sectors of the country. The ICT sector is no exception. Indeed, the country has created an organization to promote the ICT sector, namely the National Communications Authority (NCA)⁹¹. The ICT sector plays a key role in the overall

⁸⁷ The electricity sector in Ghana. <https://www.tresor.economie.gouv.fr/Articles/2018/08/22/le-secteur-de-l-electricite-au-ghana-en-2018>

⁸⁸ Republic of Ghana, (2020). National transport policy <https://www.bcp.gov.gh/acc/registry/docs/NATIONAL%20TRANSPORT%20POLICY.pdf>

⁸⁹ Africa Community Access Partnership, (2017). Scaling up Gender Mainstreaming in Rural Transport: Analysis of Policies, Practices, Impacts and Monitoring Processes. <https://assets.publishing.service.gov.uk/media/5ac47f3240f0b60a4be86d44/AmoakoSakyi-IFRTD-2017-ScalingUpGMAAnalysisPoliciesPractiesImpactsMonitoringProcesses-GhanaCS-AfCAP-RAF2044J-171208-redacted.pdf>

⁹⁰ OXFORD BUSINESS GROUP. Ghana's renewed commitment to transport infrastructure provides opportunity for the private sector. Online available: <https://oxfordbusinessgroup.com/overview/opportunities-private-engagement-abound-government-renews-its-commitment-infrastructure-investment> . [Acceded on 07/09/22]

⁹¹ Republic of Ghana, (2008). Annual Report. https://www.researchictafrica.net/countries/ghana/NCA_Annual_Report_2008.pdf

economic growth of the country and according to the International Trade Administration's analysis of Information and Communication Technology (ICT), the ICT sector in Ghana is valued in the first half of 2022 at about \$1 billion⁹².

Sociocultural

Transportation in Ghana is by road, rail, air and water. Ghana's transport and communication networks are dominated by road transport and concentrated mostly in the south. The country seeks to improve the mobility of goods and passengers throughout the country by reducing travel time and vehicle operating costs.

Policy and Legal framework

In Ghana, the 1992 constitution provides for a multiparty republic with a president as head of state and a vice president. There is a broad-based Council of State with deliberative and advisory functions and a unicameral Parliament, whose members are directly elected for a four-year term. The country's political system is hybrid. Indeed, since colonial times, chieftaincy and traditional political authorities have tended to operate in parallel with the central government. Over the years, this tendency has persisted and even expanded, and the institution of chieftaincy has become increasingly divorced from the exercise of real political power at all levels of government, while its role is now largely ceremonial. At the same time, Ghana operates a legal system based on English common law. The constitution; statutes enacted by Parliament; ordinances, rules and regulations made by any person or authority vested with power under the constitution; existing law; and the common law are the laws that make up the legal system of Ghana. Ghana experienced political and economic stability during the period of the COVID-19 pandemic, yet the country was affected by the pandemic.

Ghana has passed laws and established policy guidelines to encourage foreign investment in the country. These include the Ghana Investment Promotion Centre (GIPC) Act 2013 (Act 865)⁹³; the Free Trade Zone Act 1995 (Act 504)⁹⁴. These laws promote economic development and regulate the activities of investors throughout the country. In addition, the GIPC Act regulates both public and private enterprises in all sectors of the economy with a focus on infrastructure. Better yet, industries are governed by sectoral legislation. The country's political and legal system also emphasizes non-discrimination of rights and obligations under the Investment Act. To strengthen the investment framework in the country and protect foreign investment in the country, the Ghanaian government relies on the application of the framework of bilateral or multilateral investment protection agreements.

In April 2017, the Board of Directors approved the Ghana Infrastructure Investment Fund's Investment Policy Statement marking the country's openness to both achieving the Sustainable Development Goals and also addressing climate change through investments in resilient infrastructure⁹⁵.

Gender based violence

⁹² International Trade Administration, (2022). Ghana – Country Commercial Guide. <https://www.trade.gov/country-commercial-guides/ghana-information-and-communications-technology-ict>

⁹³ Republic of Ghana, (2013). Ghana Investment Promotion centre ACT, 2013. <https://www.gis.gov.gh/PDFs/GIPC%20Act%202013.pdf>

⁹⁴ Republic of Ghana, (1995). The five hundred and fourth act of the parliament of the republic of Ghana entitled the free zone act, 1995. <http://images.mofcom.gov.gh/accessory/201212/1354895042040.pdf>

⁹⁵ Republic of Ghana,(2017). Ghana Infrastructure Investment Fund Investment Policy Statement. https://mofep.gov.gh/sites/default/files/reports/economic/GIIF%20Investment%20Policy%20Statement_April62_017.pdf

Ghana has strong policies and laws and is also a signatory to international and regional human rights frameworks that aim to prevent and respond to SGBV and protect the vulnerable. In Ghana, forms of violence against women and vulnerable persons include: social violence, physical violence, psychological violence, economic violence. In addition to these forms of violence, women and girl minors are also exposed to sexual violence. In fact, one in three women in Ghana is likely to be a victim of gender-based violence, although it is more prevalent in rural areas of the country. As of August 2020, 31.9% of Ghanaian women have experienced at least one form of domestic violence - physical, economic, psychological, social or sexual.

For several years, key civil society and women's rights organizations have been struggling to pass laws that not only protect women from all these forms of violence, but also punish the perpetrators. Indeed, in 2007 the government of Ghana enacted the Domestic Violence Act (Act 732). This law was followed by the formulation of the National Policy and Plan of Action (NPPOA) developed by the former Ministry of Women and Children's Affairs in 2008. Thus, the Ministry of Gender, Children and Social Welfare continues to lead the implementation of this policy. Since then, Ghana has slightly improved the framework for women to access labor opportunities on par with men. Selon le rapport 2020 du Forum économique mondial sur l'écart entre les sexes (GGG), le Ghana se place à la 107e place (sur 153 pays). Already in 2019, the Human Development Report (HDR) ranks Ghana 142nd (out of 189 countries), with an HDI of 0.59616 while at the same time, the HDR's Gender Inequality Index (GII), ranks Ghana 133rd globally, with a GI of 0.541⁹⁶. Despite some progress in the fight against gender-based violence, civil society associations and NGOs still record cases of violence. However, the government has now directed gender actions towards the promotion of women through investment in resilience infrastructure. It is a matter of bringing men and women together around the issue of climate change by involving them at all stages of the infrastructure life cycle. To this end, the Ministry of Energy has allocated a budget for gender mainstreaming activities, although addressing the specific energy needs of women and children in the implementation of sectoral programs and projects remains a challenge⁹⁷.

Access to Finances

Ghana has a low level of retail financial inclusion and access to finance for businesses remains a major challenge. The main problems facing Ghana's financial sector are low account ownership and usage, predominance of cash, limited access points for transactions Ghana's small and medium enterprises (SMEs) are functioning well and remain a fundamental part of the country's economic fabric as they play a crucial role in contributing to GDP growth by reducing unemployment and promoting innovation and social welfare. However, these SMEs are severely limited in their access to capital to increase their production. Likewise, women and women-led enterprises have difficulty accessing finance. Ghana has a low level of retail financial inclusion and access to finance for businesses remains a major challenge. The main problems facing Ghana's financial sector are low account ownership and usage, predominance of cash, limited access points for transactions Ghana's small and medium enterprises (SMEs) are functioning well and remain a fundamental part of the countries economic fabric as they play a crucial role in contributing to GDP growth by reducing unemployment and promoting innovation and social welfare. However, these SMEs are severely limited in their access to capital to increase their production.

Likewise, women and women-led enterprises have difficulty accessing finance. In 2015, only 57% of women had access to formal financial services compared to 62% of men. Ghana's financial inclusion remains largely unfinished. While more than 73% of adults lived on incomes above the poverty line, Ghana's population still had a low utilization of financial services. However, access to financial services in Ghana is still higher than average levels in Sub-Saharan Africa over the same period. In 2015, 58 percent of the population had access to a bank account in Ghana compared to 43 percent on average in sub-Saharan Africa and 39 percent had access to a mobile banking account compared to 21 percent on average on the continent.

⁹⁶ World Economic Forum, (2020). Global Gender Gap Report 2020. [WEF GGGR 2020.pdf \(weforum.org\)](https://www.weforum.org/reports/global-gender-gap-report-2020)

⁹⁷ Adshead, D., Thacker, S., Fuldauer, L.I., Gall, S.S., Chow, N., Pant, R., Russell, T., Bajpai, A., Morgan, G., Bhikhoo, N., Boroto, D., Palmer, R., Cançado, D., Jain, N., Klöttschen, V., Lawal, H., Dery, P., Twum, E., Mohammed, G., Hall, J.W., and Agbesi, L. 2022. Ghana: Roadmap for resilient infrastructure in a changing climate. Ministry of Environment, Science, Technology & Innovation, Accra, Ghana.

Poverty

Ghana has long achieved significant economic growth and poverty reduction. With an economy based largely on the agricultural sector including coffee and cocoa exports, many Ghanaian families are farmers and work tirelessly to improve their crop yields and provide for their families. In 2018, the country was one of the ten fastest-growing countries in the world, and by 2021 it will be the second largest economy in West Africa. This economic growth based on significant investment in the renewable energy sector, transportation and industrial infrastructure has enabled the country to make considerable progress in reducing poverty over the past 10 years. However, important inequalities remain, especially between the South and the North, as well as gender inequalities.

Unequal Participation in decision taking

Ghana has adopted affirmative action measures reserving 40% of seats in decision-making bodies for women, even though women make up nearly 50% of the country's population. In the national parliament, women represent only 13.8% of parliamentarians. In rural areas, estimates are still low. Very few women participate in decision-making in Ghana. Of 275 seats in the lower and single houses after the 2020 parliamentary renewals, only 40 seats are held by women, representing 14.5% of women.

Ghanaian women are increasingly able to strive for rewarding positions in the industry, but they are underrepresented in the sector, especially in key or strategic positions. Through the development of the Gender and Social Inclusion Policy approved in February 2020 for the energy sector, women are encouraged to participate in the various activities in this sector. Indeed, this policy commits to having a workforce composed of 24.4% to 40% women by 2035. Currently only 11% of women hold management positions in companies in the sector, while the objective of this policy is to reach 40% of women in management positions by 2035.⁹⁸

⁹⁸ Millennium Challenge Corporation, (2020). Working Towards Gender Inclusiveness in Ghana's Energy Sector. Online Available: <https://www.mcc.gov/blog/entry/blog-062220-towards-gender-inclusiveness-ghana-energy-sector>

4.10 Guinea

Demographics and human development

The Guinea population is estimated to be 10 523 261 inhabitants according to the Third General Population and Housing Census (RGPH3) of 2014. According to World development indicators, it should be above 13 million in 2019. Made up of a majority of women (52%), its demography is characterized by a high rate of growth (2.9), and more than three-quarters of the population is under 35 (77.4%). Furthermore, over a third of the population is aged 15-35 (34.5%). According to the EHCVM (2018-2019) survey, 79% of Guinean households are men, and 21% are women. From the point of view of natural resources, Guinea has more than half of the reserves of bauxite (2/3 before the recent discoveries of large deposits in South East Asia), large deposits of iron (9 billion tonnes), nickel, copper, gold, diamond, and titanium. What makes Guinean soil and subsoil a "geological scandal.

Despite these natural resources and although having experienced a slight increase in its HDI, which is dropped from 0.341 in 2011 to 0.457 in 2015 and 0.477 in 2019 — which put the country in the low human development category— positioning it at 178 out of 189 countries and territories, (Human Development Report, 2020). At birth, the life expectancy is estimated to be 61.6 in 2019 compared to 61.4 in sub-Saharan Africa. The mean years of schooling to 2.8. According to the results of the EHCVM-2018/2019, the proportion of the population living below the national poverty line, i.e., with an annual per capita income of less than 5006,533 GNF, is 43.7% and higher in female-headed households than those led by men, respectively 44.9% and 43.5%. The results show the high vulnerability of households headed by women due to their low educational level. Many female heads of households are divorced/separated or widowed by others. On the individual scale, the EHCVM-2018/2019 report also showed that more than half of the poor in Guinea are women (53.6%).

Education

Guinea has the lowest literacy rate, with 23% for women and 38% for men. Although significant progress has been made in education, especially in primary school and in technical and vocational education, much remains to be done. In Guinea, education is compulsory only at the primary school level, with primary school enrolment in 2015 being 81% for boys and 69% for girls. Secondary and higher school enrolment is much lower, especially for women, with percentages of 23% in secondary and 6% in higher secondary schools compared to 37% and 14% for men. Girls account for 46.21c/o of the total number of learners in technical education and public and private vocational training. However, there is strong segregation by sector of activity: men are the majority in secondary sector training and women in tertiary sector training. Women account for 67% of learners in tertiary sector training, and men account for 80% of learners in secondary education.

Moreover, in 2012, public IES had only 22.11% female students compared to 37.09% in private IES. Much remains to be done in education to develop skills for the country's socioeconomic transformation. The gross primary school enrolment rate rose from 81% in 2012 to 88.6% in 2017. However, this rate fell significantly in 2015 (79.8%) due to the Ebola epidemic before gradually improving to 88.6% in 2017. The primary completion rate fell from 59.4% in 2016 to 52.2% in 2017. As for secondary school, the enrolment rate increased from 38% in 2016 to 42.5% in 2017. With a Gross Primary Education Rate (GST) of 75.6% for girls and a still worrying dropout rate (9.0% for the whole, 10.1% for girls, and 8.2% for boys), Guinea is facing low enrolment among women/girls. As the training curriculum progresses, there has

been a decrease in the number of girls. In secondary school, women's GER is 28% compared to 49% for boys. During the 2014-2015 academic year, the proportion of female researchers was 6.2%, with an even lower proportion in the scientific and technical streams (2.36%).

Employment

According to the National Gender Policy Document 2017, the working-age population in Guinea is 2,306,244, of whom 54% are men and 46% are women. In this workforce, 49% of men and 72% of women work for themselves. Despite their demographic weight (51.7%), Guinean women make up only 9.7% of the formal labour force (public and private). Overall, women make up less than 30% of the public service workforce. However, Guinean women are economically very active, even though most work in the informal sector.

Salaried jobs generally occupy a small share of jobs in African countries. However, these jobs are the least precarious, and when they are regular, they are the best remunerated and provide those who hold them with social security. According to EHCVM 2017 In Guinea, the proportion of employed persons classified in the category of salaried jobs, jobs for which the holders receive wages, or can also be paid by commission on sales, or by other means remains very low, 13.5%. Data by sex show that the proportion of men who receive a salary among employment remains far superior to that of women (20.8% and 5.5%).

The unemployment rate is higher among women (2.5%) than men (2%). It is the same trend in urban areas (5.4% against 4.4%) as in rural areas (0.8% and 0.5%).

Health

The Guinea DHS 2018 revealed that between 2012 and 2018 there is a 10% drop in the level of infant and child mortality. But this drop is mainly due to child mortality (1 to 4 years) which decreased by 20% during the same period. The two components of infant mortality (neonatal and postneonatal) remained almost constant during this period. Approximately 81% of women aged 15-49 who have had a live birth in the 5 years before the survey received antenatal care, provided by a qualified staff. In nearly half of the cases, these are nurses or midwives who provided this prenatal care (49%), physicians provided care in 17% of cases and technical health workers (ATS) in 15% of cases. One in seven women (14%) received no prenatal care. According to the results of the test carried out during DHS V, 2018, the HIV prevalence in the whole Guinean population aged 15-49 is estimated at 1.5%. This prevalence ranges from 1.6% among women to 1.3% among men aged 15-49. The percentages of women and HIV-positive men increase with age. Very low at ages 15-19 and 20-24 years, the seroprevalence increases and reaches a maximum of 2.5% at 30-34 years in women and 2.6% at ages 40-44 years in men, then decreases by continues with age. The peak of prevalence is therefore reached earlier in women than in men.

Energy, transport and telecommunications

The access rate to electricity is 44% (including many illegal connections). The access rate is 20% in rural areas compared to 87% in urban areas. According to Doing Business, the country fell in terms of electricity connection from 119th in 2012 to 159th in 2018 with a score of zero in terms of reliability of supply and transparency of tariffs. The electricity tariff does not cover operating expenses. Electricity

is sold at a maximum price of 800 GNF (less than \$0.1) per kWh, while the average cost is 2,700 GNF per kWh (\$0.3).

Guinea is developing both the SE4ALL Action Agenda and the Investment Prospectus in the framework of the SE4ALL implementation in the ECOWAS region, coordinated by ECREEE. Before that, the main objectives of the Government in terms of access were fixed by a 2012 Energy Policy document that envisaged an increase of the access rate to 50% in 2020, as well as improvements in energy efficiency, an increase in the share of renewables and a reduction in the local electricity tariffs. A 50% access to clean cooking by 2025 was also foreseen. These objectives are being revised in the Action Agenda.

Guinea has considerable renewable energy resources, particularly for hydroelectricity, for which around 4740 MW of potential has been detected. The energy demand in Guinea is projected to rise considerably, and – according to government forecast – additional capacity between 535 and 1838 MW would be necessary by 2025.

Overall, there is a low per capita energy consumption level by any gender, about 500 kep (kilo oil equivalent). The specific situation of women is characterized by a decline in the connection to electricity, low access to electricity, and a quasi-dominant use of coal as an energy source. In rural areas, women and men are affected differently by the challenges of accessing modern energy sources. Indeed, in the absence of accessible alternative energy sources and innovative practices, firewood and charcoal remain predominant, affecting women more in their cooking meals (as mothers or caregivers), exposing them to the harmful smoke of burning wood.

Concerning the ICT use, the DHS 5 data showed that during the 12 months that preceded the survey, 15% of women and 32% of men said they had used the internet. Among these women and men, respectively 42% and 49% have used it almost every day. The Guinean's government has made the strategic choice to "make ICT a locomotive of the economic and social development of Guinea". The authorities thus consider the telecommunications and the digital economy as essential factors of development and a transversal sector with a direct multiplier effect on all the other sectors of economic activity. The PNDES falls within this perspective by relying on the six main levers for the development of telecommunications in Guinea⁹⁹: (i) the development of broadband networks; (ii) improving the energy supply; (iii) sharing infrastructures; (iv) the strengthening of regulations, through a "regulatory authority» strong and effective regulation"; (v) building the capacities of executives in the sector of telecoms/ICT; and (vi) the emergence of a telecommunications/ICT ecosystem.

Socio cultural

The Guinean population remains strongly influenced by ancestral customs that not only place the man at the head of the household but also grant the man dominance over the woman¹⁰⁰. Indeed, in most communities in Guinea, there are rules and customary practices that establish the distribution of roles and tasks according to gender and that are in disfavor of women. As a result, women are used by their husbands, brothers or fathers as available "labor". Due to the persistence of social and cultural factors and the inequalities they engender, women remain vulnerable and 65% of them are illiterate but also face violence of all kinds.

⁹⁹ Ministry of Posts, Telecommunications and Digital Economy, August 2016

¹⁰⁰ Canada: Immigration and Refugee Board of Canada, Guinea: Domestic violence, including legislation, protection provided to victims, and support services (2012 September 2015). Online available: <https://www.refworld.org/docid/563c5fb14.html>

Although the country's customary laws favor men as the head of the household, women have for some time gained some autonomy from their spouses. Indeed, according to DHS 2018 results, more than 73% of women in unions who were paid money for their work said they primarily decide how to use the money they earn. In 14% of cases, this decision is made jointly with the husband/partner. In contrast, 14% of women said it was mainly the spouse who decides on the use of the money they earn. Concerning the participation in making important decisions of the household: Overall, 30% of women have participated in making the 3 decisions and 37% were not involved in any decision making. It's also reported that 67% of women aged 15-49 think it is justified for a man to beat his wife/partner for one of the reasons given. At the men, the percentage who share this opinion is 55%. FGC is widely practiced in most regions of the country, with 95% of women aged 15-49 having been cut. However, this practice is declining, as the proportion of girls who have been cut between the ages of 0-14 is 39% nationwide¹⁰¹.

Policy and Legal framework

In 1997, the Ministry for the Promotion of Women, Children and the Family (MPFEF) was created as the main government institution responsible for women's empowerment and gender equality. It is responsible for monitoring the implementation of the National Policy for Gender Equality, adopted in 2010. This national policy sets the country's Vision, strategy, and priorities for strengthening gender equality and equity. It promotes equal rights for men and women, active and participatory citizenship, and equitable access to resources. One important component is to improve women's access to appropriate technologies that are less costly and less reliant on wood energy use. The "Gender and Development Thematic Group" (GT/GED) was established to facilitate dialogue between the Government, development agencies, and civil society to support the policy's implementation. ⁴⁹ In 2009, the Government attempted to adopt a new Family Code to introduce improvements for women's rights (inheritance, property, and marriage, among others). However, opposition from conservative groups forced the Government to withdraw the code. Two years later, a new code was introduced, resulting in several setbacks in terms of women's rights (World Bank, Mali Gender Assessment).

Gender based violence

Gender-based violence (GBV) is a major international health problem that constitutes a threat to sustainable peace and human dignity. As in many countries, the issue of gender-based violence is a major concern in Guinea. In fact, the phenomenon is becoming more and more recurrent, despite the efforts of women's rights organizations and human rights organizations. According to a report by the French development agency, "Between January 2012 and December 2015, the OHCHR office in Guinea and civil society organizations documented at least 3,021 cases of gender-based violence (GBV), including 1,001 cases of rape and sexual assault¹⁰²."

As mentioned in the sectoral document for social action, violence against women and children has increased in recent years in certain regions of the country. The most widespread and recurrent cases are rape of minors, early marriages, physical abuse, and female circumcision. This violence against

¹⁰¹ Republic of Guinea, (2018). Demographic and Health Survey 2018: Summary Report. <https://dhsprogram.com/pubs/pdf/SR262/SR262.pdf>

¹⁰² Agence Française de Développement, (2016). Gender Profile Guinea. <https://plateforme-elsa.org/wp-content/uploads/2014/02/Profil-Genre-Guinee.pdf>

women and vulnerable persons is as widespread in urban areas as in rural areas (although the prevalence rates of violence vary slightly according to ethnicity). In most parts of the country, the prevalence of early marriage is among the highest in the world. Some regions have an early marriage prevalence rate of more than 70%, while the average for sub-Saharan Africa is 37%.¹⁰³ However, the country has made significant progress in the fight against gender-based violence and all forms of inequality and inequity against vulnerable people. As a result, the National Economic and Social Development Plan for the period 2016-2020 has been developed, including the reduction of social and gender inequality with a particular focus on the promotion of employment for women and girls.

By taking the commitment to eradicate all forms of violence against vulnerable people, the country has adopted policies, plans and strategies to serve as a reference guide and achieve the objectives set. Thus, the country has developed the National Strategy to fight against gender-based violence; the National Strategic Plan for the abandonment of female genital mutilation 2012-2016 (PSN); the Poverty Reduction Strategy II III. The objective of the latter is to give special attention to the issue of "gender and equity" and in particular to promote the participation of women in political life and in decision-making bodies in order to correct inequalities between men and women^{104,105}.

Access to Finances

The financial inclusion of vulnerable people and women is a major issue in most countries. This situation is also of concern in Guinea Conakry, where only 23% of the population is banked. Nevertheless, access to credit and financing is essential to enable vulnerable people and women to launch an income-generating activity and escape poverty. To promote the financial inclusion of women and youth some studies and strategic plan on the promotion of financial inclusion of women and youth for entrepreneurship and job creation have been conducted at the National Level.

To promote the financial inclusion of women and youth, studies and strategic plan on the promotion of financial inclusion of women and youth for entrepreneurship and job creation have been conducted at the National Level. This is the case of the study conducted by the country in collaboration with the African Center for Economic Transformation (ACET); the Ministry of Youth, the Ministry of Social Action and Women's Promotion, banks, microfinance institutions, NGOs and other related associations where a responsive development-oriented financial system was proposed to meet the needs of the Guinean population, especially women and youth, who are mainly farmers.

However, already in 2011, the country had created a decree "ANAMIF" with the mandate to design, implement and evaluate the government policy on microfinance with the main objective of improving access to finance for women and youth. To implement this decree, an \$18.6 million microfinance fund for women and youth was created, with 80 percent of the resources dedicated to microcredit and 20 percent to financing support activities (SA, capacity building, etc.)¹⁰⁶. Following

¹⁰³ Agence Française de Développement, (2016). Gender Profile Guinea. <https://plateforme-elsa.org/wp-content/uploads/2014/02/Profil-Genre-Guinee.pdf>

¹⁰⁴ Republic of Guinea, (2011). Second National Poverty Reduction Strategy Paper for Poverty Reduction-DENARP II 2011-2015. https://www.cabri-sbo.org/uploads/bia/guinea-bissau_2011_planning_external_national_plan_author_region_portuguese_.pdf

¹⁰⁵ Republic of Guinea, (2013). Poverty Reduction Strategy Paper III (2013-2015). <https://scorecard.prb.org/wp-content/uploads/2018/05/Document-de-Strategie-de-Reduction-de-la-Pauvrete-DSRP-III-2013-2015.-Guinee.pdf>

¹⁰⁶ Republic of Guinea; The world bank, (2018). Diagnosis and preparation of a national financial inclusion strategy. <https://documents1.worldbank.org/curated/pt/577621548998046677/pdf/Guinea-Financial-Inclusion-Diagnostic.pdf>

the experience of ANAMIF and the government's commitment to private sector reform, Guinea has created a Private Investment Promotion Agency (APIP) whose mission is to implement the government's national private investment policy. In this regard, one of the agency's major objectives is that "all men and women, especially the poor and vulnerable, have equal rights to economic resources and access to new technologies and adequate financial services, including microfinance.

Nevertheless, these various actions taken by the Guinean state reveal important challenges. The main challenge is to close the urban-rural gap, the youth gap, the gender gap, and to ensure that excluded groups have the digital and financial capacity to benefit from the advantages of digital finance.

Poverty

The Republic of Guinea, despite its enormous natural and human potential, remains one of the poorest countries in the world, with a Human Development Index of 0.477 in 2019, ranking 178th out of 189. According to the results of the Harmonized Household Living Conditions Survey, the number of poor people is estimated at 5,264,038 in 2019. While the rural population represents more than 64% of the population in 2019, 55.4% of the rural population (nearly 4.5 million) lives below the poverty line. With a poverty rate of 44.6%, women remain the most vulnerable group in Guinea, compared to 42.8% for men. Although the difference is small, women remain the poorest segment of the population and account for more than half of the country's poor (53.6%). The incidence of poverty is 44.9% among female-headed households, compared with 43.5% among their male counterparts¹⁰⁷. More than 77% of the poor are young people under the age of 35. Although the depth and severity of poverty has improved since 2012 in the population as a whole, female-headed households remain the most affected. Women thus remain the poorest, most vulnerable, and least endowed with the capacities and resources to assert their rights and interests in the arbitrations in which they are involved alongside men.

Unequal Participation in decision taking

In recent years, Guinean populations have been affected by the negative impacts of climate change such as drought and flooding¹⁰⁸. However, because of the different roles and responsibilities assigned to men and women, they feel the impacts of climate change differently. Guinean culture relegates women to the background, which limits their access to decision making in the household, the workplace and in politics. According to the 2013 report by the Ministry of State for the Economy and Finance, 52.4% of women are not considered on the same level as men in agricultural water management and remain marginalized in the decision-making process. Thus, women's interests and needs are masked by their low participation in decision-making in this sector (agricultural sector) where they are satisfied only with market gardening as their source of income. And when, under the effect of climate change, populations are confronted with drought problems, this lack of consideration for women farmers becomes critical while their participation in the policy and decision-

¹⁰⁷ République de Guinée; National Institute of Statistics (NIS), (2019). Harmonized Survey on Living Conditions of Households, EHCVM-2018/2019: Final report. https://www.stat-guinee.org/images/Documents/Publications/INS/rapports_enquetes/INS_Rapport_Final_EHCVM%20GUINEE_01_03_2021.pdf

¹⁰⁸ République de Guinée, (2019) Plan d'Actions de la Guinée 2019 – 2023 pour la mise en place du Cadre National Pour les Services Climatiques (CNSC). https://gfcs.wmo.int/sites/default/files/GUINEE_PLAN_CORRIGE_11_2018_reducedsize.pdf

making process remains insignificant¹⁰⁹. However, provisions for decision-making on the sharing of land and the choice of areas to be developed have been included in the country's land and property code. Nevertheless, customary law deprives women of their rights.

In the energy sector, the lack of equal numbers of women and men in the energy ministries and parastatals appears to be the primary barrier to equal participation. Among the 33 senior executives in the ministry of energy, only 2 are women. Within Guinea's renewable energy division, there are 11 women and 50 men.¹¹⁰

At the political level and in the management of the country's administrative positions, very few women are represented. However, the country has made progress in the representation of women in parliament, increasing from 7% in 1995 to 22.8% in 2020¹¹¹. In May 2019 Guinea passed the Parity Law, ensuring equal representation for women on electoral lists from 30% to 50%¹¹².

¹⁰⁹ Ministry of Planning and International Cooperation. (2017b, January). Guinea's Accelerated Food and Nutrition Security and Sustainable Agricultural Development Program, 2016-2020. Republic of Guinea. <http://extwprlegs1.fao.org/docs/pdf/gui172926.pdf>

¹¹⁰ ECREEE (2015), Situation Analysis of Energy and Gender Issues in ECOWAS Member States: https://www.greengrowthknowledge.org/sites/default/files/downloads/resource/situation_analysis_of_energy_and_gender_issues_in_ecowas_ECREEE.pdf

¹¹¹ Inter-parliamentary Union (UIP), (2020). Women in Parliament: 1995-2020. <https://www.ipu.org/fr/file/8938/download>

¹¹² ONU Femmes: <https://www.unwomen.org/fr/news/stories/2019/5/news-guinea-adopts-law-on-parity>

4.11 Kenya

Demographics and human development

Kenya is a multi-cultural and multi-ethnic country with a population of 54,985,702, of which women make up over 53% of the population. The country is diverse in terms of geography and ethnic population. Indeed, many different groups make up the country's population. The following ethnic groups are found throughout the country: Kikuyu; Luhya; Luo; Kalenjin; Kamba; Kisii; Meru; Other Africans and Non-Africans. On the Human Development Index (HDI), Kenya scores 0.671 and is ranked 109th out of 153 countries on the Global Gender Gap Index 2020. Thus, the drops 33 places from the 2018 ranking. Similarly, in the Global Gender Gap Index ranking, the country is ranked 114th with a score of 0.598. This low score shows that Kenyans face a challenge in participating in economic opportunities in the country. Kenya's main economic sectors remain Agriculture (54.3%) Industry (6.2%) Services (39.4%). These three sectors contribute 35.2%, 16.2% and 42.2% respectively to GDP¹¹³. With the economic growth in recent years, Kenya's population has increased considerably, thanks to a decline in the mortality rate at birth from 39 in 2010 to 31 in 2020. Life expectancy at birth has increased since 2000 from 51 to 67 by 2020 (World Bank, 2022).

Education

In Kenya the national education system consists of three levels: compulsory primary education (starting at age six), secondary education, and higher education. Thanks to free schooling at the primary and secondary levels, the country has seen an increase in the national enrollment rate. In 2020, nearly 1.77 million women were enrolled in secondary schools in Kenya. Although primary education is now free in Kenya, families sometimes face barriers to sending their children to school. In rural Kenya, one in two girls is married before the age of 19. The legal age of marriage is 16. The percentage of girls who marry before age 18 is 30.5 percent. This situation prevents women from reaching higher education. In addition, housework was often left to girls. However, the development of girls through infrastructure projects, particularly electricity and telecommunications, will reduce the time spent looking for wood. The latter will be able to turn to new technologies to learn and strengthen their skills.

Employment

According to the country's national statistics, in 2020, about 17.4 million people were employed in Kenya, compared to 18.1 million people in 2019. The majority of employees were in the informal sector. About 14.5 million worked in informal conditions, while 2.9 million were employed in the formal sector. Although the unemployment rate in 2021 for the population aged 15-64 increased from 5.4 percent in 2020 to 6.6 percent, it remains low. To produce more quality jobs, investments in resilient infrastructure are needed.

Health

¹¹³ Republic of Kenya, (2022). Country profile Kenya. Online Available: [Les indicateurs économiques du Kenya : Croissance - Objectif Import Export \(objectif-import-export.fr\)](https://www.objectif-import-export.fr/en/indicateur/les-indicateurs-economiques-du-kenya)

The Kenyan health care system is divided into three categories: public providers, private non-profit organizations (including faith-based hospitals, mission hospitals, and local and international NGOs), and private for-profit providers. In recent years, the country's health care system. The goal is to Stay the Course on Universal Health Coverage in Kenya.

Energy, transport, and telecommunications

Kenya has a relatively well-developed physical infrastructure. Among other things, the country has four international airports, an extensive road and rail network, a modern deepwater port in Mombasa capable of handling bulk and other containerized cargo, an expanding liberalized energy sector, and digital telecommunications. Moreover, Vision 2030 emphasizes the development of key infrastructure sectors, including energy and roads. Despite a low population density (54.99 million inhabitants for a surface area of 580,370 km²) and a human development index of 0.671, which places it 109th in the world, Kenya has made rapid progress in electrification over the past 10 years. To achieve its Vision 2030, Kenya has made significant investments in roads, railroads, ports, airports, water and sanitation facilities, and telecommunications.

Nationally, the rate of access to electricity is 71.4% while over 62.7% of the rural population has access to electricity. Thanks to these investments in renewable energy, emissions from the Kenyan electricity sector are particularly low. In addition, the installation of power plants has enabled the development of communities, especially those living in rural areas, by enhancing the agricultural sector. Ultimately, the Kenyan energy sector is guided by various constitutional, policy and legal frameworks. The government has pronounced its commitment to gender equality through various statutory instruments and national international protocols and declarations that include. These are:

- The Constitution of Kenya 2010;
- The Energy Act, 2019
- The National Energy Policy, 2019;
- Kenya National Electrification Strategy
- Kenya's Vision 2030
- National Gender and Equality Commission Act, 2011.
- The National Policy on Gender and Development, 2000

In the transport sector, although the Logistics Performance Index (LPI), which measures the quality of trade and transport infrastructure, remains average, the country has taken a step backwards, from 3.2 in 2016 to 2.55 in 2018. In the telecommunications sector, Kenya's Vision 2030 proposes an intensified application of STI to increase output and efficiency levels across the three pillars.

Sociocultural

A multi-ethnic country, Kenya's cultural heritage is dominated by handicrafts. The gestures and methods of work are transmitted from generation to generation. The culture of Ghana is based on ancestral traditions. Each town and village in Ghana has a "royal family" descended from the first family to settle there. In fact, queen mothers are chosen from these families, and are the guardians of the cultural traditions. The current governmental situation has not integrated the status of queen mothers into the institutions representing the regions, and their role has been reduced to an essentially honorary title. However, as they become better educated and, more importantly, connected, Ghanaian queen mothers are beginning to reclaim their traditional role by modernizing it. They are

acquiring new skills and collaborating with their counterparts in other African countries. As a result, they are playing an increasingly important role in the fight for girls' education and against female genital mutilation, early marriage, poverty and other societal problems. Their involvement in community development projects will further fight against gender inequality.

Policy and Legal framework

A unitary state divided into 47 counties, the Republic of Kenya is governed by the national government and 47 county governments. The Parliament of Kenya is a bicameral chamber consisting of the National Assembly and the Senate. The National Assembly of Kenya has a total of 349 members plus the Speaker who is an ex-officio member. Kenya's political framework incorporates a strong focus on youth and the vulnerable, including the disabled, who are represented in the Senate¹¹⁴.

For better management and enforcement of legal texts at the national level, Kenya has adopted a specific legal framework for each sector of activity allowing the country to relax the conditions and criteria for investment in the country. Since 1998, the country has adopted the Kenya Information and Communications Act. Indeed, the main legislation governing the telecommunications sector in Kenya is the Kenya Information and Communications Act (KICA). This Act sets out the general legal framework for telecommunications in Kenya. This Act has enabled the country to attract a lot of foreign investment through PPPs in telecommunications / information and communication technologies.

In general, the Kenyan government has relied on PPPs for the implementation of strategic infrastructure projects since 2013. Adopted in 2013, this law made Kenya the first country in East Africa to have legislation governing PPPs. With the new investment, through PPP programs and projects Kenya has advanced the level of infrastructure development while reducing poverty and promoting gender equality and women's empowerment in the long term. To improve these relationships in terms of resilient infrastructure investment, Kenya has passed several pieces of legislation to promote gender equality, protection of the vulnerable and women's empowerment. The Access to Government Procurement Opportunities (AGPO) Act ensures that men and women participate fully in public procurement.

Gender based violence

Gender-based violence takes many forms, including female genital mutilation, rape, domestic violence, and forced and early marriage, sometimes to older men. According to a recent study in Kenya, gender-based violence affects 32% of young women between the ages of 18 and 24, compared to 18% of their male counterparts. For several years, Kenya has been experiencing the effects of climate change, particularly drought and floods. When the drought crisis intensifies, the population especially those in rural areas are heavily impacted. These impacts range from crop failure to loss of livestock and sometimes difficulty in finding wood for cooking. Due to the impact of the drought, dowries in cash, food, and livestock decrease, sometimes forcing families to marry off more girls (UNICEF, 2022). In northeastern Kenya, early marriage and genital mutilation are increasingly common, with more than four out of ten women being given in marriage before the

¹¹⁴ Republic of Kenya,(2022). The Government

and the Political System. Online Available: <http://www.kenyarep-jp.com/en/kenya/government/>

legal age of 18, while 80% of women. While girls face increased risks of child marriage, with prevalence rates already reaching 98%.

In pursuit of achieving these goals for the SDGs, one of which is to end all forms of gender-based violence by 2030, Kenya has put in place policies and strategies to prevent and respond to gender-based violence. For example, the National Policy on Prevention and Response to Gender-Based Violence was launched in 2014. The country has also ratified the Convention on the Elimination of All Forms of Discrimination against Women. In addition, for the country, including women in the planning, implementation and management of resilient infrastructure projects that affect their daily lives can help reduce gender inequalities and respect women's rights and needs. While women are an important source of quality labor to boost and accelerate progress towards the 2030 Agenda for Sustainable Development, at the same time, their contribution will help eradicate poverty in the country.

Access to Finances

With the opening up to investment in the country, Kenya has made significant progress in financial inclusion, tripling its financial sector in 13 years. In Kenya, several surveys have been conducted including in 2006, 2009 and 2013 to measure the country's financial inclusion landscape. The reports from these surveys showed that Kenya has made significant progress in promoting financial inclusion among its population. In addition, two more FinACCESS surveys were conducted in 2016 and 2021. According to the 2016 report, nearly 7 out of 10 Kenyan adults held a registered account with a formal financial institution¹¹⁵. According to the 2019 Financial Access Household Survey, financial access is available to over 83 percent of the Kenyan population. However, gaps still exist by wealth, gender and geography. The gender gap in financial inclusion in Kenya remains significant. Another household survey conducted in 2021 by Finaccess reveals that eight out of ten Kenyans (83.7%) have access to formal financial services. This time, the gender gap in access to financial services has improved from 8.5 percent in 2016, to 5.2 percent in 2019, to 4.2 percent in 2021¹¹⁶

To further involve women in the country's economic development process, the Kenya SDF has undertaken work on gender and women's economic empowerment through a number of actions. These include the Women's Economic Empowerment Project (completed in Marsabit), a survey of gender-sensitive financial products and services among urban women traders, and a gender review of financial laws in Kenya. Notwithstanding the multiple initiatives undertaken to facilitate improved access to financial services for the entire Rwandan population, people in rural areas largely do not benefit from these changes due to lack of essential infrastructure such as electricity. Moreover, energy is essential to charge phones and other digital equipment necessary for mobile money transactions. The project to extend the electricity network, especially renewable energy in Kenya, will indeed increase economic activity in rural areas and, in the medium term, the multiplication of mobile money services and, in the long term, the implementation of banking services.

Poverty

¹¹⁵ Financial Sector Deepening (FSD) Kenya, (2016). FinAccess

Household Survey. <https://fsdkenya.org/wp-content/uploads/2020/06/The-2016-FinAccess-household-survey-report4.pdf>

¹¹⁶ FSD Kenya, (2022). Online Available: <https://www.fsdkenya.org/blogs-publications/blog/putting-women-at-the-centre-of-inclusive-finance/#:~:text=Kenya's%20financial%20inclusion%20gender%20gap,then%20to%204.2%25%20in%202021.>

As the largest economy in the East African Community (EAC), with a GDP of USD 100 billion in 2019, or USD 1,998 per capita, Kenya is the only middle-income country in the EAC. To increase its growth, Kenya has long embarked on the process of modernizing all sectors of economic activity. As a result, the country's national poverty rate fell from 46.8 percent in 2005/06 to 36.1 percent in 2015/16. In rural areas, the poverty rate has dropped significantly from 50% in 2005/06 to 38.8% ten years later due to the industrialization of the agricultural sector and the electrification of rural areas¹¹⁷. The impact of climate change, particularly drought, has had a major impact on the population, especially the rural population. The weakness of rural infrastructure, especially irrigation, has limited the growth of agriculture. In addition, strong demographic growth, increased income of the population and urbanization have created increased pressure on the environment. Poverty and food insecurity have also increased pressure on natural resources. Also, opportunities for access to arable land are limited by disasters. Thus, the country is once again plagued by poverty, especially among the vulnerable and women. New investments in resilient infrastructure are an opportunity for the country to ensure continued economic growth while reducing the risks associated with climate shocks. The installation of power plants such as solar thermal or wind energy will allow Kenya to reduce greenhouse gases and also increase the country's energy security. According to the Government of Kenya's 2013 report, electricity generation from renewable sources including wind power could enable the country to reduce up to 2.5 metric tons of CO₂ by 2030 (Government of Kenya, 2013.)

Unequal Participation in decision taking

After a series of reforms in the country, including the revision of the constitution in 2010, equality for all and non-discrimination are among the important national values and principles of governance set out in Article 10 of the constitution. These national values and principles should guide the country in its process of economic development, modernization and effective gender mainstreaming in decision-making. In sum, the 2010 constitution promulgated in Kenya requires that the number of male MPs not exceed two-thirds of the members of parliament, i.e. at least 33% of the seats should be held by women. However, three years later, only 68 women were elected to the 349-seat National Assembly in 2013, representing less than 20% of the seats. This is because Kenya does not have a specific law on equality and non-discrimination, while the government has chosen simply to incorporate these principles into various pieces of legislation, policies and other interventions to provide protection to the vulnerable. Still, the country has achieved an all-time high in the number of women in high decision-making bodies, ranking 76th among the top 100 countries in the world ranking of women in national parliaments¹¹⁸.

In 2017, women were elected as governors and senators. In addition, the number of women in the country's decision-making bodies has increased globally. Now, women now hold 172 of Kenya's 1,883 elected seats, up from 145 after the 2013 elections. However, more work needs to be done as significant barriers remain for women seeking elected office. Now to further engage women in decision-making, new investments in resilient infrastructure can help Kenya achieve these goals. In fact, the project must involve companies at any stage of the infrastructure lifecycle that have more than 30 percent women in management, or more than 30 percent women on their boards, considering equity in the workplace.

¹¹⁷ World Bank, (2020). Poverty & Equity Brief; Sub-Saharan Africa; Kenya. https://databank.worldbank.org/data/download/poverty/33EF03BB-9722-4AE2-ABC7-AA2972D68AFE/Global_POVEQ_KEN.pdf

¹¹⁸ Republic of Kenya. https://ke.boell.org/sites/default/files/86_and_counting_bookweb_09_03_15.pdf

In Kenya, gender mainstreaming in the planning and delivery of transport and energy infrastructure and services is very important because women's and men's transport and energy access needs and patterns are different. In Kenya's local communities, women are generally not represented in decision-making roles or are sometimes very poorly represented. At the household level, there is a form of inequitable gender relations that limit women's decision-making power, as well as their access to public space. Women in communities hold positions as chiefs or leaders of villages or communities. However, they are poorly represented at the national level. At the chief's level, only 4.9% of women hold this position compared to 95.1% of men, and 8.3% of women participate in decision-making positions as assistant chiefs.

4.12 Mali

Demographics and human development

Mali's population is about 15.8 million inhabitants, of which 51 percent are women. The vast majority of the population (80 percent) lives in rural areas, where the national electrification rate in 2016 was 19.39 percent (39 percent national, 86 percent in urban areas).

Mali's HDI value for 2018 is 0.427, positioning it at 184 out of 189 countries and territories. The 2018 female HDI value is 0.380, significantly lower than the 0.471 for males, resulting in a Gender Development Index (GDI) value of 0.807. In terms of gender inequality, it is one of the unequal countries in the world: Mali has a GII value of 0.676, ranking it 158 out of 162 countries in the 2018 index. For every 100,000 live births, 587.0 women die from pregnancy-related causes; and the adolescent birth rate is 169.1 births per 1,000 women of ages 15-19. (Human Development Report, 2019).

Education

Similar to other countries in the region, women and girls in Mali have less access to education than men and boys. The adult literacy rate for women is 25.7 percent, whereas the rate for men is 46.2 percent. The proportion of adult women who have reached at least a secondary level of education (7.3 percent) is less than half the percentage of their male counterparts (16.4 percent). In comparison, 78.2 percent of school-age boys and 66.1 percent of girls are enrolled in primary schools, only 48.3 percent complete the primary school cycle. In some areas of the country, less than 36 percent of enrolled children are girls, one of the widest gender gaps in the world. This is unlikely to improve in the short term, as insecurity has resulted in the closure of many schools, particularly in Central Mali (WFP, Draft Mali country strategic plan 2020-2024).

Employment

World Bank data show that In Mali, Female participation in the labour market is 61.2 percent compared to 80.6 for men and As elsewhere in Sub-Saharan Africa, females are under-represented in political decision-making in business and employment. Females are also under-represented amongst owners and managers of formal enterprises in Mali – although according to estimates, the informal economy accounts for up to 70 percent. In 2010, females in the formal economy represented 13.1 percent of all managers, while in 2007, females were 16.3 percent of owners. Similarly, other Sub-Sahara African countries show that female-controlled firms differ from their male-controlled counterparts.

Health

Despite the interest given to maternal health in recent decades in Mali, in particular through the policies of free caesarean section (2005), free means of prevention and treatment of malaria in pregnant women (2010) and the institutionalization of notification of maternal deaths, peri and neonatal (2017), pregnancy and childbirth remain associated with high risks for mothers.

The results of the recent Demographic health survey indicate a maternal mortality rate among women aged 15-49 of 0.70 deaths per 1,000 woman-years of exposure. The highest rates are in the age groups 30-34 and 35-39 years (respectively 0.97 per 1,000 and 1.41 per 1,000). The overall percentage of female deaths that are related to motherhood is 21%. This percentage increases with the age of the mother up to the 35-39 age group, beyond which a decline is observed. Thus, the percentage of female deaths related to maternal causes is lower among women in the 40-44 age group (9%) and among those aged 45-49 (6%). The pregnancy-related mortality ratio decreased overall between 2001 and 2018, from 582 per 100,000 live births in the 7 years before 2001 to 465 per 100,000 live births in the 7 years before 2006, then to 368 per 100,000 live births in the 7 years before 2012-2013 and 373 per 100,000 live births in the 7 years before 2018.

Energy, transport and telecommunications

The national access to electricity in Mali is 41% (17% in rural areas), and the electrification rate remains low, with around 19% of households connected to the electricity network. The country has enormous potential for renewable energy sources. Still, these are poorly exploited, which accentuates the energy deficit as the country is dependent on imported petroleum products and wood combustible from its natural forests. This situation has a considerable impact on the country's environmental situation. Indeed, Mali's energy sector remains very vulnerable to climate change due to its high dependence on hydropower. The entire energy system is under the threat of climate change. This situation requires prioritization and more rapid deployment of renewable energy technologies such as solar energy and biomass. The burden of securing the household's energy supply falls disproportionately on women. Statistics on total energy consumption in the country in 2016 show that women account for 77 percent of all biomass use.

Mali faces significant environmental problems such as desertification, floods, and rapid deforestation. Women are more victims of the adverse effects of climate change. Still, certain women's activities, such as the artisanal transformations of agricultural products the sale of wood and coal, negatively impact the environment. So, concrete measures should accompany the ongoing awareness-raising campaigns, such as the development of collection pits for processing dyeing wastewater, development of soaps workshops, etc. The national priority is to strengthen efforts to promote the adoption of appropriate technologies that are less costly and less energy-consuming for all men and women in rural areas.

Mali has a vast classified road network, consisting of 89,024 km, of which approximately 24,000 km are developed, ranging from rural tracks (cotton and pastoral) to international road corridors, coated either with bituminous concrete or surface dressing. The paved network, consisting mainly of national roads, has a length of 5,700 km. The road density is 1.80km/100km², one of the lowest in Africa. This weakness is even more accentuated in the northern regions¹¹⁹.

In terms of communication infrastructure, Mali's telephone network is at a very low level of development. The development of its telecommunication infrastructure is mostly in the urban areas with 69.9% of all lines in the biggest cities. Its telephone density (telephones per hundred people) in urban areas is 1.78, compared to 0.08 for the rest of the country.

¹¹⁹ Note on the sector transport in MALI, AfDB 2014
<https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/AfDB - Mali - Note sur le secteur des transports.pdf>

Socio-cultural

As in most African countries, the social and professional situation of Malian women is often inferior to that of men for various reasons, all related to education. Certain ancestral practices are a hindrance to the education of girls. These practices range from child rape to early marriage. The large amount of time spent on certain activities such as the search for wood and household chores is a hindrance to the education of girls. Young girls who have been forced into marriage do not benefit from a pre-marital period that would allow them to gain space for expression as adults, to make those choices in education and to develop personal projects. Excision and infibulations are practices that affect the bodily integrity of Malian women in certain regions of the country even though they are denounced in the country.

In Mali, there is a gender division of labor based on a patriarchal organization that still keeps women in reproductive functions in society. This situation creates a disparity between men and women in their economic occupations. In these patriarchal social systems, the man is the authority in the household, and his wife owes him respect and obedience. He makes all important decisions and is responsible for providing for the family. Women have remained on the margins of literacy activities because of their multiple occupations, the reluctance of their husbands, socio-cultural constraints and the extreme poverty of the populations, especially in rural areas.

Policy and Legal framework

In 1997, the Ministry for the Promotion of Women, Children and the Family (MPFEF) was created as the main government institution responsible for women's empowerment and gender equality. It is responsible for monitoring the implementation of the National Policy for Gender Equality, adopted in 2010. This national policy sets the country's Vision, strategy, and priorities for strengthening gender equality and equity. It promotes equal rights for men and women, active and participatory citizenship, and equitable access to resources. One important component is to improve women's access to appropriate technologies that are less costly and less reliant on wood energy use. The "Gender and Development Thematic Group" (GT/GED) was established to facilitate dialogue between the Government, development agencies, and civil society to support the policy's implementation. 49. In 2009, the Government attempted to adopt a new Family Code to introduce improvements for women's rights (inheritance, property, and marriage, among others). However, opposition from conservative groups forced the Government to withdraw the code. Two years later, a new code was introduced, resulting in several setbacks regarding women's rights (World Bank, Mali Gender Assessment).

Gender based violence

Mali has few national legal instruments working for gender equality. With respect to violence against women, domestic violence, or sexual harassment, the country has no specific law; only rape is punishable under criminal law. Indeed, Mali has not yet brought its national system into line with the international instruments that have been ratified. In 2014, more than 40% of women and girls aged 15 or older were victims of domestic violence¹²⁰. According to the latest Mali Demographic Health Survey (EDSM) of 2018, 45% of women aged 15 - 49 have experienced physical or sexual sexual violence in the Kaye region. Approximately 89% of women aged 15-49 have been cut, three-quarters

¹²⁰LUX DEV, (2019). Gender equality in MALI https://luxdev.lu/files/documents/Genre_MLI_vf2.pdf

of them before the age of five, while 18% of women aged 25-49 are in union before the age of 15 and this proportion reaches 53% before the age of 18.¹²¹ Among children aged 0-14, 73% of girls have been excision. Despite the efforts made by the Malian government with the support of its partners, the indicators related to gender-based violence are very alarming. The main factors that contribute to GBV are, among others, the social and cultural constraints and the persistence of harmful practices such as female circumcision, levirate, sororate and child marriage.)

According to statistics from the Malian Association for the Monitoring and Guidance of Harmful Practices (AMSOPT), more than 200 cases of gender-based violence were recorded between 2019-2020 in the regions of Yélimané, Diéma and Kayes. In 2021, the number of GBV cases increased in Mali. Between January and October 2021, more than 7,900 new cases of GBV were recorded according to the GBV information and management system (MINUSMA, 2021). Approximately 49% of Malian women between the ages of 15 and 49 report having experienced emotional, physical and/or sexual violence at least once in their lives. In order to fight against GBV and promote gender equality and women's empowerment, several Malian civil society organizations and local NGOs have benefited from the technical and financial support of MINUSMA and international NGOs with expertise in GBV.

Access to Finances

Since 2020, the combined effect of the pandemic and poor agricultural performance has impacted the Malian economy, which is experiencing a slowdown in its growth rate (World Bank, 2020). This situation has an impact on the population, particularly women, who suffer from financial exclusion. With a rural population that represents more than 56%¹²² of the total population, the country's economic activities are dominated by the informal sector. This situation limits the population's access to basic financial services offered by the country's traditional financial institutions. A 2016 UNDP report shows that the net per capita income for women is US\$1,349 while for men it is US\$3,071 and 49.3% of the population lives on less than US\$1.90 per day. Four out of five Malians residing in rural communities do not have access to the financial capital needed to develop economic activities (FAO, 2020).

However, to improve the living conditions of its population, the Government of Mali has developed, with the support of its partners, strategies for the financial inclusion of its population, particularly women and the disadvantaged social strata. This includes the Inclusive Financial Services in the Agricultural Sector Project (INCLUSIF), co-financed by IFAD and the Kingdom of Denmark, to improve the financial inclusion of small farmers and small and medium-sized agribusinesses in Mali. A financial inclusion program in place since 2011 supports income-generating activities and community savings groups in the country. Finally, in order to better integrate Malian women, particularly those living in rural areas, the Malian government has adopted a law on agricultural orientation which provides for equitable access to agricultural land resources and the possibility of taking positive discriminatory measures for vulnerable groups.

Poverty

¹²¹ Republic of Mali,(2018). Demographic and Health Survey 2018: Summary Report . <https://dhsprogram.com/pubs/pdf/SR261/SR261.pdf>

¹²² The world Bank,(2020). Population rural (% de la population totale) – Mali. Online available : <https://donnees.banquemondiale.org/indicateur/SP.RUR.TOTL.ZS?locations=ML>

With a GDP per capita of \$862.5¹²³, and growing insecurity since 2012, most of the Malian population is experiencing food insecurity. Mali's population is growing at a rate of 3.6% per year, while more than three-quarters of its population lives in rural areas. In recent years, Mali has been faced with numerous security and environmental challenges. The impacts of climate change such as drought and floods have left thousands of Malians facing hunger. In fact, recurrent droughts and floods entrench poverty and undermine people's resilience. In 2017, 115,000 pregnant or breastfeeding women in need of nutritional assistance and 620,000 children¹²⁴ in a situation of acute malnutrition were counted across the country. This problem specifically impacts women since they tend, in the event of a lack of sufficient food, to deprive themselves of their ration in favor of their children. Between 2011 and 2013, the monetary poverty rate rose from 45.4% to 47.1%, an increase of 1.7%. However, in 2013 more than 54% of the rural population dominated by women, lived below the poverty line. In 2014, the highest poverty rates were recorded in the regions of Sikasso (65.8%) and Mopti (60.4%). At the national level, about 43.6% of the population lived below the national poverty line, 88% of whom (mainly women and children) live in rural areas over the 2018-2019 period.¹²⁵

Unequal Participation in decision taking

In Mali, women's decision-making capacity in reproductive health, financial empowerment, and politics is low. However, they play a very important financial role in nutrition and health expenditures within their households. Women are also marginalized politically and in terms of decision-making. Indeed, there are obstacles to Malian women's access to decision-making positions at the community, communal and parliamentary levels. Consequently, very few women are represented in decision-making bodies. In 2015, only 8 women were elected as mayors out of 703 available positions and 927 communal councillors out of 10,774, i.e., a representation rate of 8.6% for women versus 91.4% for men¹²⁶. There are also 6 women national councilors out of 75. In 2013, less than 10% of women were represented in the national assembly. Despite the strategies adopted and the laws that have been passed, the rate of women's representation and participation in decision-making in the governance of the country remains low. The low level of education and the weight of socio-cultural roles are two important blocking factors.

In December 2015, a law was passed to include women in decision-making bodies and at the forefront of the Malian political scene. This law calls for a 30% quota for women in nominative and elective positions in Mali. In fact, after the legislative elections of 2020, nearly 28% of women will be sitting in the Malian parliament. Since the beginning of the political crisis in Mali, the proportion of women parliamentarians has dropped considerably. In February 2021, only 8% of women sit in parliament; 17.4% of women hold leadership positions. However, senior and middle management positions are where women are better represented with a rate of 33.7%¹²⁷.

¹²³ The World Bank, (2020). GDP per capita (current US\$) - Mali <https://donnees.banquemondiale.org/indicateur/NY.GDP.PCAP.CD?locations=ML&view=chart>

¹²⁴ Republic of Mali, (2022). MALI: Nutrition Overview. Online Available. <https://www.instat-mali.org/laravel-filemanager/files/shares/eq/analyse-ipc-malnutrition-oct2021.pdf>

¹²⁵ Xun Yan, Boulel Toure, Aly Sanoh, (2020). Note on the state of the economy and Poverty in the Time of COVID-19. <https://documents1.worldbank.org/curated/en/193171601535830644/pdf/Mali-Economic-and-Poverty-Update-during-COVID-19.pdf>

¹²⁶ EISA, (2015). Appui à La Mobilisation et à la Participation Effective des Femmes au Processus De la Gouvernance Locale au MALLI. <https://www.eisa.org/pdf/mali2015women.pdf>

¹²⁷ UN Women, (2021). Online Available: <https://data.unwomen.org/country/gambia>

Women and youth are poorly represented in the decision-making bodies of civil society organizations (CSOs) and in municipal bodies. On this basis, women's intervention mechanisms capable of influencing decisions are lacking and their opinion in community projects (installation or rehabilitation of infrastructures) counts for very little. However, efforts have been made through the government and particularly through organizations that defend the rights of women and vulnerable people to ensure their effective and successful involvement in positions of responsibility. In addition, women constitute an important workforce in Mali's economic sectors. However, their proportion in decision-making bodies is much lower than that of men. In recent years, members of decision-making bodies in various infrastructure fields and women themselves have become aware of the need for their involvement in the management of public affairs at all levels: institutional, parliamentary, community and also at all stages of the infrastructure life cycle. At the local level, the presence and participation of women in the management of CSOs and community affairs are improved through the existence of parallel action mechanisms and the number of places for them in the bodies and instances of public life management.

4.13 Mauritania

Demographics and human development

According to the National Agency of statistics the Mauritius' population is estimated to 4.3 million of inhabitant which 50.7% are women. the Mauritius' HDI value for 2019 is 0.804, which put the country in the very high human development category—positioning it at 66 out of 189 countries and territories. Between 1990 and 2019, Mauritius' HDI value increased from 0.624 to 0.804, an increase of 28.8 percent. The 2019 female HDI value for Mauritius is 0.791 in contrast with 0.811 for males, resulting in a Gender Development Index value of 0.976, placing it into Group of countries with high equality in HDI achievements between women and men. The Gender Inequality Index (GII) is estimated to a value of 0.347, ranking it 78 out of 162 countries in the 2019 index.

Education

Significant progress has been made in the education sector. The HDR 2020 shows that the mean years of schooling increased by 3.8 years between 1990 and 2019 and the expected years of schooling increased by 4.6 years in the same period. But some gender disparities remain concerning the level of literacy. The National Demographic and health survey (2019-2021) results showed an improvement in the literacy rate from the older generations to the younger but the gender gap remains. Among women, the literacy rate raises from 40% among those aged 45-49 to 68% at 15-19 and it goes from 67% to 75% respectively among men. The proportion of adult women who have reached at least a secondary level of education is estimated at and 65.8 percent compared to 68.5 percent of their male counterparts. The World Bank strategic country diagnostic in January 2022 revealed that the more pressing gender gaps in education are around sex segregation by subject, with women less likely to follow science, technology, engineering and math (STEM) streams at school, less likely to be in vocational education and, among those in tertiary education, less likely to be on doctorate (PhD) and master of business administration (MBA) programs. This segregation, informed by gender norms around the types of subject that are suitable for women and girls, feed into gender gaps in employment

Employment

According to the world Bank, in Mauritius, women stop working at an early age to marry and raise their children. So, their rate of participation in the labor market is particularly low 45.2 percent compared to 72.0 for men. The unemployment rate is certainly much higher among women than among men and this difference seems to be particularly accentuated among 24- to 33-year-old which is the right age to give birth. In 2012, female unemployment stood at 12.6%, i.e. 46% higher than that of men (8.6%) In Mauritania, the labor market participation rate for young women was only 18.5%. Indeed, the combination of several factors has shown that women have often have less access than men to productive resources, education, skills development and the labor market. They still remain confined to their vast majority in the exercise of domestic work, work in the informal sector (crafts and trade) and often work in lower paid jobs than men. This situation confirms their underrepresentation in several sectors of public or private life, especially in level of scientific and technical branches (for example in the transport and communication sector, 7.6% of employees are women against 92.4 for men). A recent Enterprise Survey conducted jointly by the Mauritian National Productivity and Competitiveness Council (NPCC) and the World Bank found that women account for only 13 percent of top managers

and only nine percent of businesses are majority female owned. However, having female management is associated with fewer skill shortages and increased support mechanisms for female employees¹²⁸.

Health

Even if there is room for improvement, Mauritius has a free and high-quality universal healthcare system and close to 100 percent of births are attended by skilled health staff, only a third of pregnant women initiate prenatal care in the first trimester and the maternal mortality rate (61 deaths per 100,000 live births) is high compared to the average for middle and high-income countries (43 and 11, respectively). The adolescent birth rate is 25.7 births per 1,000 women of ages 15-19. The number of infant deaths, that is deaths among children aged under one year, registered in 2019 was 173, corresponding to an infant mortality rate (IMR) of 14.3 per thousand live births compared to 13.8 in 2018 and to 15.3 in 2007. Although there are many encouraging results, the impacts of climate changes will have with a more detrimental impact on women, if gender equality is not addressed on time.

Energy, transport and telecommunications

In Mauritania, the transport sector is under increasing pressure from more congestion. Much of the primary and secondary road network, and virtually the entirety of the tertiary network, are not engineered roads and have been constructed by paving of the former tracks across sugar cane production areas, leaving them highly exposed to the impacts of climate change. The lack of Resilient Infrastructure and quality transport infrastructure remains a major obstacle to the growth of the Mauritanian economy, in general and in particular, the empowerment economy of women, especially in rural areas. Indeed, rural women still continue to suffer great problems for the sale of their products derived from crafts, market gardening and picking. Given the vastness of the country and the configuration of its reliefs, the development of transport infrastructure is an essential issue to promote the exchanges, reduce production costs, strengthen the competitiveness of the national economy and reach rural or remote areas which are areas where the poor are concentrated (including the majority are women), which, moreover, contain a significant potential for production and economic growth.

According to the world bank systematic country diagnostic report (2022), earlier efforts in the liberalization of the telecommunications sector in Mauritius allowed for new players to join the industry and provide competitive connectivity rates. Consequently, Mauritius is doing well in terms of access to telecommunications and broadband services, boasting high penetration rates such as 151 percent for mobile penetration and 87 percent for broadband penetration respectively. Much progress has also been done on the cornerstones for the digital governance. Recent years have been marked by the significant push of the Government of Mauritius to advance a digital strategy for services and the country's adoption of digital transformation is thus expected to achieve greater maturity in the coming years.

¹²⁸ World Bank (2021). Investing in Foundational Skills in Mauritius. Input to the World Bank's 2021 Systematic Country Diagnostic Report, March. Washington D.C.

Access to energy is a major problem in Mauritania, as the energy needs of the Mauritanian population are not covered. Indeed, only 47.3%¹²⁹ of the population has access to electricity in 2020. In addition, there are significant inequalities between urban and rural areas. The rate of access to electricity in 2020 in the urban area is 88.4% while in the rural area it is less than 10%. In 2020, the country adopted a national strategy for the transformation of its energy sector and aims to increase the access rate of the national population by turning more towards renewable energy. The country's goal is to increase the share of renewable energy to 60% by 2030.

Socio-cultural

Mauritania is a multicultural and multiethnic country, made up with different Arab and black African communities who all share the same religion, Islam. The Islamic rites are the cement that unites the people of the country despite the sociological and political differences that sometimes create inter-community tensions. Within Mauritanian society, the status of men and women is strongly influenced by religion but also by the customs and traditions of different social groups that make it up. As a result, the status of women differs from one community to another and from one social class to the other. Despite the strong political commitment of the Mauritanian Government, materialized by the adoption of several strategies and texts in favor of the advancement of women and gender equality.

Policy and Legal framework

The Ministry of Gender Equality, Child Development and Family Welfare is the government entity in charge of policies and programs for women's empowerment and the promotion of gender equality in Mauritius. For the Legal Framework the Government has taken the following actions towards gender quality:

- Mauritius has ratified the Convention for the Elimination of All Forms of Discriminations Against Women (CEDAW);
- Mauritius is party to the 1997 SADC Declaration on Gender;
- Mauritius is party to the 1998 Addendum on the Prevention and Eradication of Violence against Women and Children;
- Mauritius is party to the 1998 Addendum on the Prevention and Eradication of Violence against Women and Children;
- Mauritius has signed the African Union Declaration on Gender Equality in 2004;
- Mauritius has signed the Commonwealth Plan of Action on Gender Equality 2005-2015;

Mauritius has signed and ratified the Protocol on the Rights of Women of the African Charter on Human and People's Rights in 2005.

Gender based violence

The Demographic health survey 2019-2021 data revealed that in Mauritania, the percentage of women aged 15-49 who declared having already suffered violence since the age of 15 is 10% and this situation vary with the level of education of the women. Women with a higher level of education suffered acts of physical violence less frequently than the others (7% against 10% among those with primary education and 15% among those with no level of education). They were also more likely to report having been

¹²⁹ The World Bank. Access to electricity (% of population) – Mauritania
<https://donnees.banquemondiale.org/indicateur/EG.ELC.ACCS.ZS?locations=MR>

victims of sexual violence (13%) than those with primary education (6%) and those with secondary or higher (5%).

Access to Finances

According to Global Findex 2017 data, Mauritius has the highest financial inclusion rate on the African continent: 89.8%, more than double the average for sub-Saharan Africa (42.6%) and well above the average for high-income countries (73.1%). The financial inclusion rates were 80.1% and 82.2% respectively in 2011 and 2017. Gender disparities regarding access to financial services are minimal: 87.1% of women have access to the domestic financial system. In 2017, a Mauritian had an average of at least two bank accounts. Just under one in two (42%) bank accounts registered in the country benefited from a line of credit in the same year. In addition, more than two-thirds (68.5%) of the adult population made electronic payments in 2017, a level well above the sub-Saharan African average (34.4%) and slightly above the average for high-income countries (62.3%). The quality of the technological and financial infrastructure has also facilitated the rapid development of mobile money in the country: over 90% of the adult population has a mobile money account, while only 50% had one in 2013.

Poverty

Climate change affects men and women differently - which in turn affects exposure to poverty - depending on their roles and responsibilities in the household and community. In many communities, climate change has a disproportionately greater effect on women. The national official statistics showed that women are more likely to be in relative poverty¹³⁰. The proportion of female in relative poverty was 11.0% against 9.6% for male. Out of 130,500 persons in relative poverty, 70,300 were females and 60,200 were males. In 2017, 15.9% of female-headed households were in relative poverty as compared to 7.6% of male-headed households.

Unequal Participation in decision taking

In July 2006, the adoption of the ordinance relating to the promotion of the involvement of women in the political decision-making process which imposed a minimum quota of 20% for the representation of women on every municipal and legislative list has boosted their presence in municipal and parliamentary decision-making spheres. The 2020 human development report data showed that 20% of parliament seat are held by women and according to the 2021 UNDP annual report, 30.2% of managerial position are occupied by women in the country. Women also hold 20% of positions ministries, five of the 25 ministries being headed today by women.

A study on the gender country profile conducted in the Islamic Republic of Mauritania by the African Development Bank, shows that there is a low participation of women in decision-making positions in the Mauritanian administration. Within the civil service, key positions are mostly held by men and women are mainly administrative officers (25.2%) and secretaries (83.7%) and represent only 5.9% of the directors of the administration¹³¹. The country's energy sector, particularly the oil and gas sector, is a male-dominated industry. As a result, women are largely underrepresented in these sectors in decision-making positions.

¹³⁰ Republic of Mauritius (2020), statistics in Mauritius A Gender Approach Year 2018

¹³¹ [AFDB, \(2015\). Profil genre pays republique islamique de la Mauritanie. https://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/PROFIL_GENRE_MAUROITANIE-2015.pdf](https://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/PROFIL_GENRE_MAUROITANIE-2015.pdf)

4.14 Namibia

Demographics and human development

According to World Bank data the total population of Namibia is about 2.5 million, of which 52% reside in rural areas and 51.5% (WDI, 2020) are women. Namibia's 2019 HDI of 0.646 is above the average of 0.631 for countries in the medium human development group and above the average of 0.547 for countries in Sub-Saharan Africa. Between 1990 and 2019, Namibia's HDI value increased from 0.581 to 0.646, an increase of 11.2 %. The life expectancy at birth also increased by 2.1 years. The mean years of schooling increased by 1.4 years and expected years of schooling increased by 1.5 years. Namibia's GNI per capita increased by about 57.0 percent between 1990 and 2019.

Namibia performs relatively well on gender equality; however, further efforts are needed. In the 2018 Global Gender Gap Report, Namibia ranked 10th out of 149 countries, a significant improvement from 40th out of 142 countries in 2015. The gains have largely been driven by improvement 37.0 % of parliamentary seats are held by women and achievement of gender parity at all education levels. Despite the progress, gender inequality persists in many domains: the proportion of female population, for instance with at least secondary education in Namibia (39.9%) is lower than the average for medium Human Development Index (HDI) countries (42.9%), and employment rates for females (69.1%) are lower than their male counterparts (73.5%) according to the 2018 Labour Force Survey. This is despite the parity observed in primary and secondary education levels. Gender inequity also exists in access to finance and titled land. Furthermore, Gender Based Violence remains a challenge in Namibia. About 32% of all women aged 15-49 have experienced physical violence since the age of fifteen years.

Education

According to the UNDP, Namibia National Human Development Report 2019, Namibia has made progress in making education accessible to all boys and girls in primary and secondary schools. The differences in education literacy levels are visible between rural and urban areas. The level of education in Namibia is high, with only 5 percent of women and 8 percent of men having no formal education. Women are more likely to reach higher levels of education than men. In most regions in Namibia, women tend to complete more years of schooling than men, and 40.6 percent of adult women have reached at least a secondary level of education compared to 42.0 percent of their male counterparts. The World Bank data's show that the youth female literacy rate was 96.2% and 94.1 for their male counterpart in 2018. The most recent data (2018) on primary school completion rate is also high for women (96.9%) than men(91.2%).

Employment

According to the 2018 Labour Force Survey, there were 876,908 youth aged 15 to 34 in Namibia, of whom 310,854 (35.4%) were employed, and 265,770 (30.3%) were unemployed. This means that the labour force in these age groups totals 576,624 persons, giving a Labour Force Participation Rate (LFPR) of 65.8%. Sex disaggregated data show a labour force participation of 65.0% for women and 66.5 % for men. The statistics also show that the overall youth unemployment rate is 46.1% which is an increase of 2.7% compared to the youth unemployment rate of 43.4% reported in the year 2016. Female youth

experience a higher unemployment rate of 48.5% compared to their male counterparts 43.7%. In Namibia, women hold approximately 44% of leadership positions.

Energy, transport and telecommunications

According to the African Development Bank (AfdB country strategy paper, 2020-2024), Namibia's energy installed generation capacity currently stands at 611 MW, of which 521 MW is available against a peak power demand of 672 MW in 2018. Lack of access to energy remains a critical barrier to poverty alleviation and Namibia's industrialisation efforts. In 2019, only 35% of the rural population had access to electricity compared to 74.6% for the urban population. The current national electrification rate stands at 55.2%, compared to 87.4% in South Africa. Rising urbanisation and rapid growth in mining have exacerbated the electricity supply gap. The shortfall in domestic supply is met through imports from South Africa and the Southern African Power Pool (SAPP). However, supply is at risk as the region faces generation and transmission bottlenecks. Namibia is well endowed with renewable energy resources, including hydro, and natural gas, which have not been fully exploited. The Government's energy sector goal NDP5 is to have a sustainable mix of locally generated capacity of 755 MW by 2023 to support households and industry, reduce reliance on imports, and increase the national electricity access rate from 49% in 2018 to 67.5% by 2023. To this end, Government of Republic of Namibia (GRN) is encouraging investments by Independent Power Producers (IPPs) in the renewable energy space, while promoting off-grid solutions to ensure rural communities and peri-urban areas are supplied with electricity in a cost-effective manner in support of inclusive growth.

According to the Living Standards Survey 2016, when it comes to cooking activities, households headed by women are more likely to go without electricity than those headed by men (64% versus 58%); the same goes for lighting (66% versus 57%). The trend in energy consumption shows that female-headed households are in rural areas/slums where access to electricity is low. These areas either have low incomes or have different spending priorities. In addition, the heavy dependence on wood in the same areas for energy means that women will constitute the majority of people likely to suffer from deforestation, in the sense that they will have to walk long distances and spend more time looking for wood.

The AFDB country strategy paper also showed that Namibia has a relatively well-developed road network covering 45,380 km, of which 14% is paved. About 93% is either in good or fair condition. The rail network comprises 2,382 km of Cape gauge configuration like the rest of the region. The railway network plays an important role in the movement of bulk freight. Namibia's largest port, Walvis Bay, has recently undergone expansion and modernisation. The expansion of the port container terminal, which was commissioned in August 2019, is part of long-term plans to position the country as a logistics and distribution hub for the SADC region. The port is linked to the region through four transport corridors, the promotion of which is key to the sustainability of the port.

Namibia has achieved significant progress in the expansion of access to ICT services. The mobile phone population coverage and subscription rates have increased significantly, standing at 95% and 103%, respectively. However, in comparison with peer MIC countries, Namibia still lags behind in use of internet (31%) and fixed broadband subscription rate (2.2%). In the 2019 Global Competitiveness Report, Namibia is ranked 91st out of 141 countries on the ICT Adoption Pillar with a score of 48.1. This highlights the need for the country to make further progress in the ICT space to build a foundation for a knowledge-based economy.

In Namibia, culture has been integrated into key documents such as the 2001 Arts and Culture Policy and the National Development Plan 3 (2007-2012). However, in recent years, its role in the development process has been less important, especially since it is not integrated into the National Development Plan 4 (2013-2017)¹³². The country, therefore, faces the complex challenges of redressing socio-cultural imbalances. Addressing women's inequalities in Namibia remains complex as the country is divided into thirteen regions containing eleven ethnic groups with a wide range of tribes among them and ancient traditions.

It should be noted that for a long time women were considered the property of men until the country's independence. After independence, many changes to improve gender equality, as well as equality for all, were incorporated into the country's new constitution¹³³. As a result, women have the right to sign contracts, register property in their own names and be directors of companies.

Policy and Legal framework

The Namibian Constitution provides the foundation for principles of gender equality in Namibia. Those principles were highlighted in Article 10, Article 95(a). These constitutional provisions form the basis of the commitment of the Namibian Government to the improvement of the status of women in society and the eradication of the injustices of the past. Towards this end, measures have been implemented to promote economic and social justice for women.

The National Gender Policy conforms to the provisions of several national, regional, and international legal instruments, which the Namibian Government has adopted, signed, and/or ratified to promote gender equality. These include:

- The SADC Declaration on Gender and Development and its Addendum on the Prevention and Eradication of Violence against Women and Children
- The SADC Protocol on Gender and development
- The Beijing Declaration and Platform for Action (BPFA)
- The Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW, 1997) and its Optional Protocol
- The Convention on the Rights of the Child (1990)
- The Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa (2003)
- The UN Convention against Transnational Crime, 2000 (UNTOC) and the Protocol to Prevent, Suppress and Punish Trafficking in Persons, especially Women and Children, known as the Palermo Protocol
- The UN Security Council Resolution 1325 on Women, Peace, and Security (2000)
- The International Conference on Population and Development (1994)
- The Universal Declaration on Human Rights (UDHR)

¹³² Republic of Namibia Namibia's, (2012). Fourth National Development Plan <http://www.npc.gov.na/wp-content/uploads/2021/11/NDP4.pdf>

¹³³ The Borgen Project. Online Available: <https://borgenproject.org/gender-wage-gap-in-namibia/>. consulted on [06/20/2022]

- The International Covenant on Civil and Political Rights (ICCPR)
- The International Covenant on Economic, Social and Cultural Rights (ICESCR)

The Government adopted the National Policy Frameworks for promoting gender mainstreaming in Namibia, including the National Development Plans (NDPs) and Vision 2030, which recognizes the NDPs as the main instruments to implement policies and programs to achieve the Vision. The Third National Development Plan (NDP3) represents the first systematic attempt to translate the Vision 2030 objectives into concrete policies and actions. NDP3 identified five core areas to be mainstreamed through sector programs and programming processes. They include Gender, HIV and AIDS, Poverty, the environment, information, communication, and technology. The Gender Policy seeks to create an enabling environment for institutions and sectors to mainstream gender perspectives according to the NDP directives.

Gender based violence

As an equitable and gender-sensitive nation, the majority of Namibia's population, and women in particular, enjoy a safe environment, largely free from violence, including gender-based violence and crime. The country is prepared to face and respond to any man-made or natural calamity. According to the 2013 Namibia Demographic and Health Survey, 33 percent of women aged 15 to 49 have experienced some form of physical or sexual violence. Orphans in rural areas are particularly vulnerable to exploitation through trafficking and other forms of forced labor. In 2015, the first human trafficking case was successfully prosecuted in Namibia. As a result, the country has seen a significant decrease in the number of GBV. As a result, the country has set a target to lower the GBV prevalence rate from 3% (2013) to 20% by 2022¹³⁴.

Access to Finances

Financial inclusion plays a central role in fighting poverty and contributing to Namibia's inclusive economic growth. Indeed, the Namibian government has long viewed financial inclusion as a key driver of inclusive economic growth and prosperity for its people. In fact, the government has made it an overarching national program integrated into Namibia's financial sector strategy.

Poverty

With a population of over 2.5 million in 2020, 20% of the population lives on less than US\$1.9 per day and unemployment remains high. Women and people living in rural areas are among the most affected populations¹³⁵. The country ranks 8th in sub-Saharan Africa on the Human Development Index (HDI) and 130th out of 188 countries in the world. With the COVID-19 crisis and the effects of climate change impacts such as drought, the poverty situation especially in low-income communities has worsened.

Indeed, the Namibia Multidimensional Poverty Index (MPI) report (2021) shows that the incidence of multidimensional poverty (H) is 43.3%, which means that 43.3% of the Namibian population is

¹³⁴ Republic of Namibia, (2017). Namibia's 5th National Development Plan (NDP5). https://www.ecb.org.na/images/docs/Investor_Portal/NDP5.pdf

¹³⁵ Republic of Namibia, (2021). Country sheet. Online available: <https://www.tresor.economie.gouv.fr/Pays/NA/situation-economique-et-financiere-de-la-namibie-avril-2018#:~:text=Sur%20le%20plan%20social%2C%20le,peu%20plus%20de%2020%25%20fin>

multidimensionally poor. The report also highlights the fact that the incidence of multidimensional poverty is higher among female-headed households (with a rate of 46%), than among male-headed households (with a rate of 41%).

Unequal Participation in decision taking

Namibia is one of the countries with a high rate of women's participation in decision-making positions. In fact, since 2013, the 50/50 gender policy that requires "equal representation of men and women" in parliament has been implemented by the South West Africa People's Organization (SWAPO) party. After the implementation of this policy, women's positions in parliament increased from 25% to 44%. Thus, an inclusive environment, in political and urban settings, has been created for women in Namibia. As a result, the number of women in politics and decision making has increased significantly. The percentage of women in politics and decision making has increased from 44% to 47% (2015) with a target of 50% for the years 2021-2022¹³⁶.

For several years now, communities in the North have been working towards women's empowerment with many stakeholders dedicated to increasing the role of women in the justice system. The main actors are the International Development Law Organization (IDLO), which has been leading the project, and Women's Action for Development (WAD), an inclusiveness group with community members from every constituency in northern Namibia. In addition, women are increasingly participating in decision-making at the local level, as traditional gender norms have evolved and become more inclusive. Women chiefs are already working in the customary courts.

¹³⁶ Republic of Namibia, (2017). Namibia's 5th National Development Plan (NDP5). https://www.ecb.org.na/images/docs/Investor_Portal/NDP5.pdf

4.15 Federal Republic of Nigeria

Demographics and human development

The population of Nigeria is estimated above 184.6 million inhabitants, of which 49.3137 percent are women. Nigeria also has the fastest-growing demographics, about the average population growth rate for West Africa, i.e., 2.7% per year. The ratio between the urban and rural populations is 48.3 percent to 51.7 percent. According to UNDP (2020), Nigeria's Human Development Index (HDI) value for 2020 was 0.539, placing the country in the low human development category, ranking it at 161st out of 188 countries.

Nigeria is ranked 139 out of 156 on the 2021 Gender Gap Index countries, with a score of 0.627. On the AfDB Gender Equality Index 2015, Nigeria is ranked 23rd out of 52 countries. The AfDB Index reflects women's status in three dimensions of equality: economic opportunity, social development and law, and institutions. The ranking is 0-100, with 100 representing perfect gender equality. Nigeria's overall score is 54.7%; it ranks 18th in economic opportunities, an unsatisfactory 32nd in human and social development, and 30th in-laws and institutions.

Education

Data from the Demographic and Health Survey 2018 showed that men are better educated than women. Thirty-five percent of women and 22% of men age 15-49 have no formal education, while 11% of women and 17% of men have more than a secondary education. The percentage of women with no education has decreased since 2003, from 42% to 35%. The median number of years of schooling completed has increased from 5.0 to 6.5 years during the same period. Among men age 15-59, the median number of years of schooling has increased from 6.6 to 10.5 years. Results also revealed that the percentage of women who have a secondary education or more is highest in Lagos (68%) and lowest in Sokoto (5%).

Employment

According to World Development Indicators the female labour force participation rate is 44.2 % in 2021. The latest Demographic and Health Survey (2018) showed that seventy-four percent of currently married women age 15-49 were employed in the 12 months before the survey, as compared with 99% of currently married men (Table 15.1). Among those employed, women are less likely than men to be paid in cash only (73% versus 80%). Fifteen percent of women and 8% of men do not receive any payment for their work. Trends: The percentage of currently married women employed in the 12 months before the survey has increased slightly over time, from 71% in both 2008 and 2013 to 74% in 2018. After increasing from 81% in 2008 to 93% in 2013, the percentage of employed married women who receive cash earnings (including cash and in-kind) declined to 85% in 2018. The percentage of employed married women not paid for their work declined from 17% to 6% between 2008 and 2013 before rising to 15% in 2018.

Health

The health profile of Nigeria has improved in recent years, but it remains worrisome overall. The under-5 mortality rate has been enhanced from more than 191 per 1,000 live births in 1990 to 89 per 1,000 live births in 2014. However, it remains higher than the regional and global averages. The most frequent causes of child mortality are malaria (20%), pneumonia (17%), other diseases (14%), prematurity (12%), and diarrhea (11%). Child malnourishment is widespread. The rate of children under five with stunted growth has stagnated above 40 % since 2000. For the population, the most frequent causes of death are infectious diseases (81%), non-communicable diseases (14%), and injuries (5%). Nigeria is one of the few countries worldwide where polio persists. However, it is limited to the northeastern states. Fertility is at six children per woman, above the regional average (5 children) and the world average (2.5 children). Maternal mortality was 243 per 100,000 live births in 2014, which was higher than the world average (200 deaths per 100,000 live births) (see figure 12). Life expectancy at birth was 49 years in 2005 and has increased to 52.3 years in 2012 (53.4 years for women and 51.7 years for men).

Energy, transport and telecommunications

Although Nigeria is rich in energy resources and the largest oil-producing country in Africa, access to modern energy such as electricity, liquid and gaseous fuels, modern cooking options, and mechanical power remains a major challenge for its citizens'. With 55.4%¹³⁸ access, nearly half the population is unelectrified, and most households, especially in the rural areas (only 25.5% access), use mainly biomass to cook.

While access to modern energy services is documented as necessary for economic growth and development, Nigeria's energy sector has struggled with low investment, inadequate, and ailing infrastructure, which resulted in shortages and consequent rise in costs, access, and affordability to the vast majority of people. This situation is severe among more vulnerable women. In Nigeria, as within the ECOWAS region and most Sub-Saharan African countries, there is heavy dependence on traditional biomass, with 85% of people still cooking with charcoal and firewood. Biomass represents 57% of the final energy consumed¹³⁹.

The primary energy source for most rural people in Nigeria is biomass, which may be sourced in some cases more than five kilometres away. This harms women in traveling long distances on foot, but women usually carry heavy loads of firewood on their heads, compromising physical health and wellbeing.

On energy (electrification) access: i) there is differential access by men and women to electrification, possibly because of socioeconomic status; ii) women and men have different preferences for off-grid lighting products and appliances; iv) in patriarchal societies of which Nigeria is one, men usually make buying decisions within the household with men going for 'luxury' type goods (i.e., television) rather than domestic appliances that can help lessen the domestic chores of women. Also, men and women use electricity differently.

Concerning access to ICT, according to a youth survey report issued by the National Bureau of Statistics, in Nigeria young men are almost twice as likely to have a career in computer science and technology-related fields as women. Also, no access to Information and Communications Technology

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139 SITUATION ANALYSIS OF ENERGY AND GENDER ISSUES IN THE ECOWAS MEMBER STATES, 2015

(ICT) infrastructure or to the internet for municipal use is not the only evidence of digital gender divide, education, lack of electrical infrastructure, income, and urban drift, and a variety of other social and political factors also contribute to Nigeria's growing digital gender divide. The Nigeria's DHS 2018 report showed that, internet has gradually become an important means of transacting business and sharing information through social media. Other forms of media organisations have also adopted the internet as a means of reaching people. There are currently online shopping platforms through which business is transacted on a daily basis in Nigeria. Also, some e-health platforms have started operating in the country. The internet has become a very important tool through which information is accessed. Overall, 30% of women and 31% of men age 15-49 use the internet at least once a week

Socio-cultural

The culture of Nigeria, is one of the oldest in West Africa, with several cultural practices from the many civilizations that have followed. However, some of the socio-cultural factors in the country pose a threat to the health and well-being of Nigerian women. These factors limit: the access of the girl child to education in some settings, women's access to decision making and their participation in the socio-economic and political activities of the country.

Similarly, the Nigerian society is traditionally patriarchal which places the man at the head of the family and dominates over the woman. This situation has a negative impact on women's participation in formal and informal decision making. Discrimination against women is one of the factors that limit their full capacity. While the economic value of women is estimated to represent in 2015 about 30% of the gross national product (UNDP, 2015), the majority of them are paid less than men. In several regions of the country, especially in rural areas, women face cultural practices that oppress them (early marriage, female genital mutilation, widowhood practices, etc.).

To date, several women's and vulnerable people's rights organizations are advocating for women-friendly constitutions and legal frameworks and financial inclusion of women for their development.

Policy and Legal framework

Nigeria has developed a national gender policy (NGP) to replace an erstwhile National Policy on women, to actually;

- Eliminate all bearers
- Advance gender equality and reduce poverty levels
- Not only economically empowering women through income earnings, but also consciously empowering them to own production assets.

Various international instruments on the protection of the reproductive health rights of women has been signed and ratified by Nigeria:

- Universal Declaration of Human Rights (UDHR) 1948
- International Covenant on Economic, Social and Cultural Rights (ICESCR) 1966
- Convention on the Elimination of all Forms of Discrimination against Women (CEDAW) 1979
- The Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa, 2005

Gender based violence

Gender-based violence remains one of the most persistent human rights violations in Nigeria, particularly in rural areas. These cases of violence are observed in homes, schools, health facilities, and administrative settings. Indeed, with the insurgent activities of armed groups in some parts of Nigeria, gender-based violence (GBV) is increasing astronomically. This violence ranges from forced and early marriages to physical, mental, and sexual assaults on women and minor female children. According to a 2013 Nigeria Demographic and Health Survey study, nearly 30% of Nigerian women experienced physical violence before the age of 15 (NDHS 2013). According to the 2018 Nigeria Demographic and Health Survey, the proportions of women aged 15-49 who are victims of emotional, physical and sexual violence are 31%; 9% and 6% respectively. While the country is taking steps to protect women, girls and vulnerable persons from violence in all its forms, it is clear that these cases of violence have increased in recent years. Indeed, there has been an increase in cases of violence against women since 2008. In fact, the prevalence of one or more of these forms of domestic violence was higher in 2018 than in 2008 (31%) and 2013 (25%)¹⁴⁰. However, civil society organizations, women's rights and vulnerable persons' organizations, and the country's international partners have stepped up efforts to combat gender-based violence. This was the case with the project "Strengthening the Response to Sexual and Gender-Based Violence (SGBV) in Nine Nigerian States" funded by the United States Agency for International Development. Communities in these states were sensitized on SGBV¹⁴¹.

Access to Finances

In Nigeria, there is a large and growing gender gap in financial inclusion. In fact, there is a problem of difficult access for my women and especially those living in rural areas. In the late 2000s, Nigeria saw financial inclusion as a driver of economic development. As a result, in 2010, the exclusion rate fell to 46.3 percent due to improved efforts to facilitate access to credit and loans for women and populations, down from 53 percent in 2008. According to the results of the 2018 Improving Financial Innovation and Access study, financial inclusion nationwide stood at 59.1% for women versus 67.5% for men, a gender gap of 8.4%¹⁴².

As in some African countries, there is a gender gap in access to financial services in Nigeria. However, the gender gap in Nigeria is relatively smaller and has been steadily decreasing over the past 10 years. In fact, the gender gap in access to financial services is 8.4% in 2022, while in 2016 it was 9.7%. Since 2009, several surveys have been conducted in Nigeria by EFINA on access to financial services. The 2018 results reveal that 39.7 million (39.7% of the adult population) have access to a bank account. Compared to 2016 (36.9 million), this represents an increase of 2.6 million adults¹⁴³.

¹⁴⁰ Federal Republic of Nigeria, (2018). Demographic and Health Survey. <https://www.dhsprogram.com/pubs/pdf/FR359/FR359.pdf>

¹⁴¹ Federal Republic of Nigeria, (2017). Strengthening the Response to Sexual and Gender-Based Violence (SGBV) in Nigeria. Online available: <https://www.pathfinder.org/projects/strengthenig-the-response-to-sexual-and-gender-based-violence-in-nigeria/>

¹⁴² Federal Republic of Nigeria, Alliance for Financial Inclusion (AFI) ,(2020). Nigeria's central bank advances women's access to finance Online available: <https://www.afi-global.org/newsroom/blogs/nigerias-central-bank-advances-womens-access-to-finance/#:~:text=According%20to%20a%202018%20survey,9.8%20percent%20recorded%20in%202016.>

¹⁴³ Enhancing Financial Innovation & Access (EFInA), (2018). EFInA Access to Financial Services in Nigeria 2018 Survey. https://www.efina.org.ng/wp-content/uploads/2019/01/A2F-2018-Key-Findings-11_01_19.pdf

Despite this increase in access to financial services, the goal of closing the gender gap in financial inclusion is far from being achieved. Thus, the country has developed a National Financial Inclusion Strategy (NFIS) to address the specific gaps and challenges that hinder Nigerian women's access to financial services and, at the same time, close the gender gap and reduce inequality. A 2019 study on assessing women's financial inclusion in Nigeria¹⁴⁴ reveals that the majority of women excluded from the financial system have financial needs and ambitions. However, their low income limits their perceived need for financial services.

Poverty

In 2014, 53% of the Nigerian population lived in rural areas where poverty was particularly acute at 44.9%¹⁴⁵. The recession crisis (induced by the fall in oil prices) that the country experienced in 2016 and the strong demographic growth exceeding the growth of the real GDP have plunged again some bangs of the population, especially those living in rural areas, into poverty. With the rise of local companies producing bananas, maize, cassava, cocoa, groundnuts, and the installation of large industries in petrochemicals, Nigeria observed a strong growth of its GDP (in purchasing power parity) in 2018. Thus, with the economic recovery, the ratio of poor people living on less than \$1.90 a day was 39.1%.

However, women remain the most affected by poverty. According to the study "Poverty among Women in Nigeria - Psychological and Economic Perspective" conducted in southwestern Nigeria, women account for over 60% of the poorest people in the country¹⁴⁶. With over 87 million people in extreme poverty, Nigeria has about 52 million women struggling with extreme poverty (IMF, 2018).

Furthermore, according to World Bank data, about 4 out of 10 Nigerians were living below the poverty line in 2019, or about 80 million people, while Nigeria aspires to lift all its people out of poverty by 2030. However, achieving this goal remains difficult because the country has gone through more or less complicated periods in recent years. Indeed, climatic and conflict shocks are phenomena that disproportionately affect the poor in Nigeria. A difficult situation for women with difficult access to the financial system and to this is added the COVID-19 crisis.

Unequal Participation in decision taking

In recent years, Nigeria has made significant progress in human development indicators. Nigeria has long been a patriarchal society, where social and legal organization is based on men holding authority to the explicit exclusion of women. This constitutes a major social and economic challenge to eliminate gender inequalities that hinder women's participation in the country's economic activities. At times, women are simply relegated to the background, with reduced power to act and decide in all areas - economic, social, security. According to the results of the Promoting Women's

¹⁴⁴Enhancing Financial Innovation and Access (EFInA), (2019). Assessment of Women's Financial Inclusion In Nigeria. <https://www.cbn.gov.ng/out/2020/dfd/assessment%20of%20womens%20financial%20inclusion%20-%20exec%20summary.pdf>

¹⁴⁵ FIDA, Federal Republic of Nigeria. Country Documents: Country strategic opportunities programme,. Online Available: <https://www.ifad.org/fr/web/operations/w/pays/nigeria>

¹⁴⁶ Onwuka Ifeanyi, Nwadiubu Anthony & Isiwu Prisca,(2018). Poverty among Women in Nigeria–Psychological and Economic Perspective: A Study Based On South West, Nigeria. <https://ccsenet.org/journal/index.php/ijbm/article/download/0/0/41007/42365>

Decision Making and Empowerment Study in Ibadan, only 44% of Nigerian women participate in decisions about their own health care, compared to 82% of men¹⁴⁷.

On the national political scene, very few women are making their way into the country. Indeed, since 2019 there are only 6.2% of women in both the Senate and the House of Representatives compared to 93.8% of men¹⁴⁸.

In infrastructure sectors such as transport, energy and industry, very few women hold positions of responsibility. In addition, the prohibition or lack of opportunity for women to work at night in an electricity company or gas plant, and the transportation of goods is a legal barrier to women's employment in these different sectors, which reduces their access to positions of responsibility and decision making.

¹⁴⁷ Sebany, M., OlaOlorun, F. and John, N. (2020). Toward gender equity in the household: promoting women's decision-making and empowerment in Ibadan, Nigeria. Washington, DC: International Center for Research on Women. https://www.icrw.org/wp-content/uploads/2020/07/Promoting-womens-decision-making-and-empowerment-in-Ibadan-Nigeria_June2020_ICRW.pdf

¹⁴⁸PLAC (Policy and Legal Advocacy Centre), (2019). Legislative Bills on Improved Women's Representation and Issues: A Review. <https://placng.org/i/wp-content/uploads/2019/12/Legislative-Bills-on-Improved-Womens-Representation-and-Issues-A-Review-1.pdf>

4.16 Rwanda

Demographics and human development

Rwanda is a landlocked country in East Africa with an estimated population of 13,276,517 of which over 50% are women. Covering an area of only 26,338 km², the country has one of the highest population densities in Africa at 538 inhabitants per km² and an annual population growth rate of 2.5% (World Bank, 2021).

In terms of human development, the country has made excellent progress as between 1990 and 2019, Rwanda's HDI value increased from 0.248 to 0.543, an increase of 119.0%¹⁴⁹. Despite this progress, the country is classified in the low human development category, ranking 160 out of 189 countries and territories.

Education

Rwanda has long linked the modernization of the education system to the country's development process. In fact, over the years, the education budget has been increasing while the budget for other sectors such as social protection, health, public financial management, water and electricity also contributes to education. In the fiscal year 2021-2022, the Rwandan government has allocated 42.4 billion FRW to various public institutions that indirectly contribute to education.

Employment

Considered one of the fastest growing economies in the world in recent years, Rwanda has clearly demonstrated its quality in socio-economic development. Already in 2007, the country adopted the National Employment Policy a long-term strategic vision "vision 2020" with key development pillars that would help Rwanda move from a very poor country to a middle-income country with employment as one of the fundamental pillars. The working population represents more than 50% (or 6,643,949) of the total population. Within this category, the proportion of women is approximately 51.6% of the active population, although this rate is down from 51.8% in 2019.

According to the International Labor Organization's 2019 country report, less than 50% of the Rwandan working age population is currently employed, as the Employment to Working Age Population Ratio is only 43.77%. In addition, unemployment in 2019 affects more than 15% of the population. The three sectors that will employ the most people in Rwanda in 2020 are Agriculture (40%); Trade, restaurants and hotels (16%); and Construction (13%)¹⁵⁰. The infrastructure sector such as transport, telecommunication, energy (electricity, gas, water) and manufacturing, together employ only 10.7% of the working population¹⁵¹.

¹⁴⁹ UNDP, (2020). Human Development Report: Rwanda <https://hdr.undp.org/sites/default/files/Country-Profiles/RWA.pdf>

¹⁵⁰ Danish Trade Union Development Agency, (2022). Labour Market Profile Rwanda – 2021/2022 <https://www.ulandssekretariatet.dk/wp-content/uploads/2021/05/LMP-Rwanda-2021-Final.pdf>

¹⁵¹ Ibid

Despite the orientation of investments in these infrastructures, they are for the moment less job creators compared to the other sectors. The vulnerability of some sectors, such as transport and industry, to the impacts of the climate could explain their low capacity to generate sustainable employment. However, further investment in resilient infrastructure is needed to address both the urgency of climate change and the country's economic development.

Rwanda is a country vulnerable to the impacts of climate change, while some sectors essential to economic development, notably the transport sector and the manufacturing industry, are often affected and sometimes stopped. This situation naturally impacts the employment sector, which is reflected in the low contribution of these sectors to the employment of the active population. On the other hand, taking adaptation into account in projects to make infrastructure resilient could contribute to the creation of sustainable employment.

Health

In the aftermath of the political crises that Rwanda experienced, several works to rebuild the country's infrastructure were undertaken. In the health sector, considerable investments have been made to improve the health infrastructure, particularly in the country's major cities. As a result, maternal and child health has improved considerably over the past two decades and has exceeded the MDG targets. In addition, maternal mortality decreased by 80% between 2000 and 2014 while infant and child mortality decreased by over 70% over the same period¹⁵². Thanks to its rapid economic growth and strong development potential, Rwanda has improved the livelihoods of its people at all levels. Life expectancy has increased from 49 years in 2000 to 66.6 years in 2017

Energy, transport, and telecommunications

Despite the rapid growth of the Rwandan economy in recent years, the population's access to electricity remains low. Indeed, according to World Bank data, only 46.6% of the Rwandan population has access to electricity in 2020. Thanks to the improvement of the Nyirabuhombohombombo micro-hydro plant, as well as the commissioning of Giciye III, the total installed capacity of the country's electricity production has increased from 228.418 MW to 238.37 MW between 2020 and 2021.

In the transport sector, Rwanda has about 44,671 km of national road network, of which 1,973 km are paved. However, national roads account for 72% of the total. Similarly, the country has at least 97% of its paved national road network in good condition¹⁵³. As of 2018, Rwanda has three airfields (Ruhengeri, Butare and Nemba), one national airport (Gisenyi) and two international airports (Kigali and Kamembe).

¹⁵² Republic of Rwanda, (2020). 7 Years Government Programme: National Strategy for Transformation (NST1) 2017-2024. https://www.nirda.gov.rw/uploads/tx_dce/National_Strategy_For_Trsansformation-NST1-min.pdf

¹⁵³ Republic of Rwanda; Ministry of infrastructure, (2021). national transport policy and strategy for Rwanda https://www.mininfra.gov.rw/fileadmin/user_upload/Mininfra/Publications/Policies/Transport/NATIONAL_TRANSPORT_POLICY_AND_STRATEGY_APRIL_2021.pdf

Through its partnership with the private sector, Rwanda has strengthened its telecommunications infrastructure, including the installation of 7,000 km of fiber optics and 4G LTE coverage of 95% of the territory¹⁵⁴.

Overall, Rwanda has modernized its economic system, from production to marketing to industrial processing. Rwanda is admitted to Alibaba's Electronic World trading platform. Efficient transport/mobility solutions such as carpooling, electric mobility and assembly have been adopted. In addition, the country is one of the first countries in the world to offer drone delivery services for medical items. As the first smartphone manufacturing plant in Africa, currently operational in the Kigali Special Economic Zone with nearly 20,000 devices produced, Rwanda has been able to leverage these investments¹⁵⁵.

Sociocultural

Rwandan society is characterized by a patriarchal social structure that underlies unequal social power relations between men and women, boys and girls. In fact, men have naturally assumed a form of domination and women a position of subordination. According to social and cultural rules, gender inequalities were not considered unjust, but as a social normality that especially women had to respect. However, women have long played a largely dominant role in Rwandan society, and certain positive trends existed within Rwandan culture that reinforced women's social role and ensured their autonomy. Indeed, women played a central role in the management of household resources and participated in decision making at various levels.

Legal framework

Rwanda has long been committed to promoting equality and equity among all Rwandans by ensuring that the vulnerable, socially and historically disadvantaged, especially women and children, are given the same opportunities as the rest of the population. According to Article 16 of the Constitution of the Republic of Rwanda of 2003 amended in 2015, "All Rwandans are born and remain equal in rights and freedoms", discrimination based on ethnic origin, skin color or race, gender, economic categories, economic status, physical or mental disability are prohibited and punishable by law.

to achieve its objective in implementing the 2010 National Gender Policy, Rwanda has also put in place an enabling legal framework to strengthen GEWE, including among others¹⁵⁶:

- Organic Budget Law N° 12/2013, instituting gender responsive budgeting: This law applies accountability measures for gender responsive resource allocation in all sectors;

¹⁵⁴ The World Bank Group, (2021) Rwanda Economic Update <https://documents1.worldbank.org/curated/en/992631626808031540/pdf/Rwanda-Economic-Update-The-Role-of-the-Private-Sector-in-Closing-the-Infrastructure-Gap.pdf>

¹⁵⁵ Ibid

¹⁵⁶ Republic of Rwanda, (2021). Accelerating the Effectiveness of Gender Mainstreaming and Accountability for National Transformation. https://www.migeprof.gov.rw/fileadmin/user_upload/Migeprof/Publications/Guidelines/Revised_National_Gender_Policy-2021.pdf

- Law No. 22/99 of 12/11/1999 on matrimonial regimes, gifts and inheritance, granting women the same inheritance rights as men;
- Organic Law on Land N°08/2005: Equal access to land for men and women;
- The Labor Law was published in the Official Gazette in 2009;
- Strategic Plan for Women's Employment;
- Guarantee and fund for women;

In its commitment to ensure effective promotion of gender equality and women's empowerment, the Rwandan government has put in place a strong institutional framework known as the National Gender Machinery composed of the following four institutions:

- Ministry of Gender and Family Promotion (MIGEPROF)
- Gender Monitoring Office (GMO).
- National Women's Council (NWC) is a forum whose mission is to build women's
- Rwandan Forum for Women Parliamentarians (FFRP)

List of regional instruments on women's and children's rights to which Rwanda is party (in chronological order):

1. African Charter on Human and Peoples' Rights (1981);
2. The African Charter on the Rights and Welfare of the Child (1990);
3. The New Partnership for Africa's Development (2001);
4. The Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa (2003);
5. The Solemn Declaration on Gender Equality in Africa (2004);
6. The African Youth Charter (2006);
7. International Conference for the Great Lakes Region, Protocol on the Prevention and Suppression of Sexual Violence against Women and Children (2006);
8. The Nairobi Declaration on Women's and Girls' Right to a Remedy and Reparation (2007);
9. The Treaty for the Establishment of the East African Community as amended on 14/12/2006 and 20/08/2007;
10. The Gender Policy of the African Union (2008)

Gender based violence

In Rwanda, gender-based violence (GBV) is widespread throughout the country and remains one of the problems that hinders not only the well-being of the population, but also the development of the country. The most frequent forms of violence are sexual violence and early marriage of young girls. According to a UN study conducted in 2019, 25% of girls and 10% of boys are victims of sexual violence before the age of 18. According to the Rwanda Bureau of Investigation's analysis report, the number of GBV cases increased by 19.6% during the 2019-2020 fiscal year compared to 2018-2019. In addition, 10,842 GBV-related crimes were recorded in 2019 and 12,657 in 2020, the most cited being child defilement, assault and domestic violence.

Access to Finances

Despite the country's openness to large-scale investment, Rwanda has a low rate of bank penetration. However, up to 93% of the Rwandan population now has access to financial products and services to meet their needs for insurance, credit, savings, or financial transactions. Compared to 2012 (72%) and 2016 (89%)¹⁵⁷, financial inclusion is on the rise in the country. The country has taken advantage of the digital revolution to allow cell phone subscribers to perform financial transactions and money transfers from their phones. The population now has a secure solution for storing cash, even for those working in the informal economy. On the other hand, the rate of formal financial inclusion and the rate of banking remain low, and are below the objective that the country has set through several initiative, programs and policies. Considered an indispensable tool for achieving its development and poverty reduction objectives, the country aims to reach 90% formal financial inclusion by 2024¹⁵⁸. In Rwanda, there is a gender gap in financial inclusion. Despite the high rate of mobile money account ownership in Rwanda, it should be noted that the proportion of men is significantly higher than women (46% of men vs. 33% of women). In addition, women use informal mechanisms much more to conduct banking transactions; 24% for women versus 17% for men.

In summary, the gender gap in financial inclusion in Rwanda narrowed from 14 percent in 2014 to 11 percent in 2017, according to the Global Findex database.

Poverty

Thanks to its growing economies, Rwanda has been able to reduce inequality and poverty, supported by numerous investments in several areas including infrastructure and some changes in the employment structure. Indeed, the country adopted in 2001 the National Poverty Reduction Program in addition to vision 2020 allowing the country to contribute to economic development at all levels and social welfare of the population. According to World Bank data, the multidimensional poverty rate has been declining since 2010, from 44.4% to 28.7% in 2016¹⁵⁹. However, the country is still in the low-income category.

Despite the reduction in gender inequality, inequality according to place of residence is still significant. Indeed, poverty affects about 27% of the urban population, while in rural areas, the impact is much greater, with up to 63% of the rural population living in poverty¹⁶⁰. In addition, the country is having difficulty achieving the objective of the National Poverty Reduction Program, while the weakness of the minimum wage system has slowed the pace of poverty reduction. In fact, based on the Sustainable Development Goals in Rwanda labor market issues, up to 44% of workers are living

¹⁵⁷ European Investment Bank, (2016). Le secteur bancaire en Afrique subsaharienne : tendances récentes et inclusion financière numérique.

https://www.eib.org/attachments/efs/economic_report_banking_africa_digital_financial_inclusion_fr.pdf

¹⁵⁸ National Bank of Rwanda, (2022). Financial Inclusion. Online Available: <https://www.bnr.rw/financial-inclusion/> [Accessed on: 02/09/2022]

¹⁵⁹ World Bank Group. Multidimensional poverty headcount ratio. Online Available: <https://donnees.banquemondiale.org/indicateur/SI.POV.MDIM?locations=RW>. [Accessed on: 31/08/2022]

¹⁶⁰ World Bank Group, (2020) Poverty & Equity Brief Rwanda https://databankfiles.worldbank.org/data/download/poverty/33EF03BB-9722-4AE2-ABC7-AA2972D68AFE/Global_POVEQ_SSA.pdf

below the poverty line in 2019 (population of workers living on less than \$1.9/day)¹⁶¹. In addition, only 3.2% of the population is effectively covered by a social protection system in 2016, including social protection floors.

Unequal Participation in decision taking

In spite of the numerous laws and strategies in favor of women, they face enormous difficulties regarding their participation in the decision-making bodies of local and institutional governments. The exclusion of women from institutional power also prevents them from finding their place in informal networks. These networks support and reproduce the social systems that local governments use.

Nevertheless, the constitution guarantees representation in Parliament for particular categories of Rwandans, including youth, women, people with disabilities and¹⁶² historically marginalized people. Clearly, the country's constitution confers at least 30%¹⁶³ of positions to women in all decision-making bodies. Although women represent more than 50% of the population, they are less represented than men in decision-making bodies. In Rwanda, women represent more than 50% of the population, they are part of the decision-making bodies. With more than 61% in 2015 and 63% in 2019 of women in the Chamber of Deputies, the country leads the world.

Rwanda recognizes the role of women in the country's development and promotes women's participation and leadership in decision making. However, efforts still need to be made to ensure that women hold positions of responsibility at the local and community levels. According to the report of the study on women's representation in local decision making bodies, women are very little included in decision making positions. According to this report, the gap between men and women who represent their villages in the Cell Council is 24.8%¹⁶⁴ in favor of men. Similarly, men are more represented in the positions of Executive Secretary and youth representatives. Despite the efforts of the Rwandan government to promote gender equality at all levels of the country's socio-political and economic life, the gap between women and men in rural areas remains significant. Indeed, only 17% of women own or run businesses in rural areas, compared to 83% of their male counterparts¹⁶⁵. In the telecommunications sector, a woman was appointed in 2022 to head the pan-African telecommunications group MTN as managing director for its Rwanda subsidiary.

¹⁶¹ Danish Trade Union Development Agency, (2022). Labour Market Profile Rwanda – 2021/2022 <https://www.ulandssekretariatet.dk/wp-content/uploads/2021/05/LMP-Rwanda-2021-Final.pdf>

¹⁶² Republic of Rwanda, (2021). Accelerating the Effectiveness of Gender Mainstreaming and Accountability for National Transformation https://www.migeprof.gov.rw/fileadmin/user_upload/Migeprof/Publications/Guidelines/Revised_National_Gender_Policy-2021.pdf.

¹⁶³ Ibid

¹⁶⁴ Republic of Rwanda, (2016). Study on the representation of women in local decision-making bodies at the local level. https://profemmes.org/IMG/pdf/low_female_representation_study_3_jan_2017_francais_-_whole_.pdf.

¹⁶⁵ Gihana, D., Kooijman, A. (2020), Fiches thématiques par pays sur le genre et l'énergie — Rwanda, ENERGIA

4.17 Sierra Leone

Demographics and human development

Sierra Leone's HDI value for 2019 is 0.452— which puts the country in the low human development category—positioning it at 182 out of 189 countries and territories. The rank is shared with Burkina Faso. Between 1990 and 2019, Sierra Leone's HDI value increased from 0.287 to 0.452, increasing 57.5 percent. Sierra Leone's life expectancy at birth increased by 16.1 years, mean years of schooling increased by 2.1 years, and expected years of schooling increased by 5.2 years. Sierra Leone's GNI per capita decreased by about 6.0 percent between 1990 and 2019.

Sierra Leone's 2019 HDI of 0.452 is below the average of 0.513 for countries in the low human development group and below 0.547 for countries in Sub-Saharan Africa. From Sub-Saharan Africa, Sierra Leone is compared with Burundi and Guinea, with HDIs ranked 185 and 178. The 2019 female HDI value for Sierra Leone is 0.423 compared to 0.479 for males.

Sierra Leone has a GII value of 0.644, ranking it 155 out of 162 countries in the 2019 index. In Sierra Leone, 12.3 percent of parliamentary seats are held by women, and 20.1 percent of adult women have reached at least a secondary level of education compared to 33.0 percent of their male counterparts. Women of ages 15-19. Female participation in the labour market is 57.3 percent compared to 58.5 for men.

Education

The Government of Sierra Leone considers the issue of narrowing the gender gap as a key priority in its development programming activities. The Government introduced free education for girls in public primary schools to achieve gender parity at the primary level of education. Its Vision is that 'by 2035', 90 percent of Sierra Leoneans should read and write its development programming activities. The Statistics Sierra Leone, 2015 Population and Housing Census results show that just over half of all people (51 percent) in Sierra Leone are literate but that men make up a much higher proportion of that number (59 percent) than women (44 percent). Data also shows the gender disparity of male and female enrolment from primary to senior secondary levels of education. At the primary level, more females are enrolled (Net Enrolment Rates (NER) for Primary Level of 67.1 for women and 63.5 for men). Still, there is a change as they move from the primary level to the junior secondary (21.2 for males and 20.7 for females) and senior secondary levels (14.9 for men and 13.6 for women) of education. There is a drop for both sexes from primary level to junior secondary school. The drop is even sharper when pupils move from junior secondary to senior secondary. These findings highlight the challenges young girls in Sierra Leone face in their education. Young girls' education is shrouded in challenges related to early marriage, teenage pregnancy, and parents not being ready to support girls in their educational pursuits.

Employment

The 2015 census results showed that there is a slightly higher proportion of women in the working population of Sierra Leone (ages 15-64 years), with 56.4 percent female compared to 54.8 percent male. However, there is a slightly higher proportion of males in the under 14 years age-dependent population but slightly more women in the 65 years plus age-dependent population.

Health

For every 100,000 live births, 1120.0 women die from pregnancy-related causes; and the adolescent birth rate is 112.8 births per 1,000. Overall, the sanitation situation is more or less critical compared to some countries in the sub-region. According to statistics, more than 67% of households have access to an improved source of drinking water. This situation is much more critical in rural areas, where more than 51% of the population does not have access to drinking water, compared to only 8% in urban areas.

Moreover, climatic phenomena such as floods and tornadoes threaten the health of the population and particularly those living in rural areas. In 2017, for example, heavy rains, a mudslide and flash floods destroyed hundreds of homes and left many dead, injured and missing, particularly in the Western Area, Western Area Rural and Western Area Urban districts, as well as thirteen low-lying communities. In some areas, health centers were affected, which further aggravated the health situation of these populations, especially those of nursing and pregnant women.

All in all, the country has the highest maternal mortality rate in the world and one of the highest under-five mortality rates. For every 1,000 live births, more than 13 mothers and 111 children under the age of five die. In addition, the Centers for Disease Control and Prevention (CDC) and other partners, including the Bill & Melinda Gates Foundation, have provided technical and financial support to help the country achieve health security for its population¹⁶⁶. This support will also help establish a national public health institute that will serve as the central structure for public health functions.

Energy, transport, and telecommunications

Less than 10% of the population has access to electricity. About 87% of energy usage in the country is biomass, firewood, and charcoal. More than 80% of the population uses fuelwood or charcoal for cooking. Women and girls are responsible for collecting wood and fuel for domestic consumption. They have to walk long distances, which leads to fatigue and endangers their physical security and health.

In Sierra Leone, only 13.0 percent of persons 10 years and older have access to the Internet. The proportion of males (16%) with access is higher than females (10%). The results clearly show that most women and men have no access to the Internet. The ICT policy launched in January 2011 focuses on, among other matters, how to include women in the country's ICT agenda. The policy aims to create awareness about the use and benefits of ICT for women, create resource centres nationwide to train and encourage greater access to ICT for women, set up Internet access points throughout the country targeting women, use the capabilities of the Internet and e-commerce to facilitate women's access to business and entrepreneurial opportunities and finally, disseminate national, regional and international policies, conventions and activities on gender equality and women's empowerment.

Socio cultural

Sierra Leone is a highly patriarchal society where power is held solely by men. In fact, the country has strong institutional gender inequalities, which are the result of discriminatory customary practices with

¹⁶⁶ Centers for Disease Control and Prevention, (2021). Global Health – Sierra Leone. https://www.cdc.gov/globalhealth/countries/sierra-leone/pdf/CGH_CountryFS_SierraLeone.pdf

respect to marriage, property rights, inheritance, civil action, and sexual offenses. Sierra Leone has "one of the highest rates of female genital mutilation" in the world, with 90 percent of girls and women between the ages of 15 and 49 undergoing the violent procedure. There are discrete societies in the country that present themselves as important "cultural institutions" and which the population believes represent a form of protection for the community. Genital mutilation procedures "without anesthesia" are often performed by female community members using knives, razors, and even shards of glass.

Policy and Legal framework

The GoSL's approach and response to gender equality are informed and influenced by local and international commitments and frameworks. At the local level, the Truth and Reconciliation Commission, established in 2000 as one of the structures for national reconciliation, recommended the repeal of all statutory and customary laws that discriminate against women. At the international level, Sierra Leone ratified the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) in 1988 and its optional Protocol in 2004. Sierra Leone is a signatory to the International Convention on Civil and Political Rights (ICCPR), Child Rights Convention (CRC), International Covenant on Civil and Political Rights (ICCPR), the Protocol to the African Charter on Human and People's Rights on the Rights of Women in Africa, the Solemn Declaration on Gender Equality in Africa and the Beijing Platform for Action, among others.

Sierra Leone's policy framework for promoting gender equality and women's empowerment is guided mainly by its two national policies, the Gender Mainstreaming Policy and the National Policy on the Advancement of Women, both adopted by Parliament in 2000. The National Policy on the Advancement of Women aims to create an enabling environment to improve women's status and participation in the development process. The Gender Mainstreaming Policy reinforces the overall development objectives in the country. It emphasizes Government's commitment to gender-responsive development and seeks to strengthen and provide a legal basis for gender-oriented sectoral policies.

Gender based violence

Gender-based violence (GBV) is a major and urgent concern in Sierra Leone. Sierra Leone is a country that has experienced periods of violent conflict resulting in forced displacement and family separation. This has influenced the nature and extent of gender-based violence in the post-conflict phase of the country. However, the state's support and consideration for women is insignificant in addressing the health, psychosocial, and economic consequences of sexual violence experienced during the war and the persistent discrimination they face.

According to the 2019 Sierra Leone Demographic and Health Survey, 62 percent of women aged 15-49 report having experienced physical or sexual/emotional violence¹⁶⁷, while in 2018 this percentage was 19.8 percent¹⁶⁸, suggesting an increase in the incidence of gender-based violence. The absence of a law, legal text, or mechanism to prosecute perpetrators of violence against women has contributed to a culture of impunity for crimes committed against women.

¹⁶⁷ Republic of Sierra Leone; Ministry of Health and Sanitation, (2020). Demographic and Health Survey. https://sierraleone.unfpa.org/sites/default/files/pub-pdf/sldhs_2019.pdf

¹⁶⁸ UN Women, Sierra Leone. Online available: <https://data.unwomen.org/country/sierra-leone>

Access to Finances

Gender mainstreaming and women's empowerment are important objectives of Sierra Leone's national plan. Indeed, Sierra Leone is among the first countries in Africa to include a stand-alone pillar on gender equality in its national development plan. Despite the fact that over 52% of the Sierra Leonean population is dominated by women, women's access to economic assets remains low. Sierra Leone's private sector is characterized by a large number of micro-enterprises. In fact, at the private sector level, about 84 percent of rural women and 63 percent of urban women are involved in microenterprises such as small-scale agriculture, table trade, artisanal mining, and small-scale fishing¹⁶⁹. However, women often face a number of challenges including: lack of development of the essential financial services they need; lack of business skills. However, financial inclusion of women and people living in rural areas is increasing according to a survey conducted by the World Bank (Global Findex 2017).

Poverty

Poverty is widespread in Sierra Leone. The country's first Poverty Reduction Strategy Paper (PRSP1) 2005-2007 stated that 70% of the population is poor and 26% is food poor, i.e., they cannot afford a basic diet. Additionally, poverty was identified as a rural phenomenon, with the rural areas accounting for almost 73% of the country's poor, exceeding their population share of 66%.² Urban poverty was more acute in the provincial centres at 64.9%, while in Freetown, the capital city, it was 22.2% (AfDB, 2009). Although the GoSL has concentrated its development efforts since the end of the civil war on alleviating poverty, the current poverty level of 60% noted in its 2010 MDG Progress Report is still very high. While the report noted that some progress had been made in reducing poverty. The country's poverty profile shows that the main poverty indicators are inadequate food, poor housing, poor health, high infant and maternal mortality, high illiteracy, limited access to clean water, and lack of money.

Unequal Participation in decision taking

In Sierra Leone, girls and women have limited access to educational opportunities, decision-making, and government compared to boys and men. Indeed, women hold only 12.3 percent of parliamentary seats in 2021¹⁷⁰. Societal barriers are among the obstacles that prevent women from entering politics and governance at the local, regional, and national levels. According to the report, promoting women's participation in decision-making, governance and politics, 70% of women said that their religion disapproved of their participation in politics¹⁷¹. Women make up 52 percent of the total population of Sierra Leone, but hold less than 20 percent of elected positions (USAID, 2022). Their visibility, active participation, decision-making, and representation in elected and appointed positions remain very low compared to men. In addition to these challenges, there is also a lack of

¹⁶⁹ Republic of Sierra Leone, (2014). National Study on Women's Access to Financing in Sierra Leone. <https://cherieblairfoundation.org/wp-content/uploads/2021/11/National-Study-on-Womens-Access-to-Financing-in-Sierra-Leone.pdf>

¹⁷⁰ UN Women, Sierra Leone. Online available : <https://data.unwomen.org/country/sierra-leone>

¹⁷¹ Republic of Sierra Leone, (2020). Promoting women's participation in decision-making, governance, and politics. <https://www.sendsierraleone.com/Assets/documents/Cost%20of%20womens%20participation%20in%20politics%20Report.pdf>

economic independence, high illiteracy, and entrenched customs and traditions in social and sometimes administrative practices.

In the majority of Sierra Leonean communities, women were not allowed in some community meetings and were excluded from decision making. This is the case in Grima where the notion of women as leaders was not part of the culture of this community. When in 2015, the community began working with One Village Partners, women held only two leadership positions. as a result, women rarely attended community meetings or development activities and were confined to household chores¹⁷². However, a new model of leadership that includes women, youth, and community members outside of the ruling families is beginning to emerge in some communities across the country, where women leaders are becoming more vocal in decision-making bodies

¹⁷² OneVillage Partner. Women's Leadership is Born in Grima
<https://www.onevillagepartners.org/news/womens-leadership>
 Available: <https://www.onevillagepartners.org/news/womens-leadership>

4.18Togo

Demographics and human development

According to the last survey on the Togolese household's livelihood (EHCVM-TOGO, 2018- 2019) data, Togo's population is estimated to be 7 635 896 inhabitants, of which 52.3 percent are women. This population is very young, with those under 15 years representing 43.5 percent of the total population and those over 64 are 3.4 percent. With an annual growth rate of 2.67 percent in 2021, this population will increase to more than 8.5 million (UNFPA, 2021), of which more than 70 percent are under 25 years old. Togo's HDI value for 2019 is 0.515— which puts the country in the low human development category— positioning it at 167 out of 189 countries and territories. Between 1990 and 2019, Togo's HDI value increased from 0.406 to 0.515, increasing 26.8 percent. Between 1990 and 2019, Togo's life expectancy at birth increased by 5.2 years, mean years of schooling increased by 2.0 years, and expected years of schooling increased by 5.1 years. Togo's GNI per capita increased by about 21.7 percent between 1990 and 2019.

Gender Inequality Index value of 0.573, ranking Togo 145 out of 162 countries in the 2019 index. In Togo, 16.5 percent of parliamentary seats are held by women, and 27.6 percent of adult women have reached a secondary level of education compared to 54.4 percent of their male counterparts. For every 100,000 live births, 396.0 women die from pregnancy-related causes; and the adolescent birth rate is 89.1 birth per 1,000 women of ages 15-19.

Education

The Integrated Regional Survey on Employment and the Informal Sector (ERI-ESI, Togo 2017) shows a literacy rate of 60.4 percent at the national level and highlights a big gender gap between men and women regardless of age group. Men are more literate than women at the national level, with 73.5 percent of men and 49.2 percent of women literate. While most women and men went to primary school, differences in education are significant for secondary and tertiary education. More than 50% of men visited a secondary school. This is true for only 28% of women. Women are much less represented in tertiary education, accounting for only 40% of male persons benefitting from tertiary education.

Employment

According to the ERI-ESI, Togo 2017 survey report, the majority of Togolese (95.6 women find themselves in informal sector People and more employment vulnerability (87.4%)- i.e., workers for own account and family- than men (60.6%). Female participation in the labour market is 76.3 percent compared to 78.9 for men. (Human Development Report, 2019). The Togolese salary rate is 22.5 percent. It is higher among men (36.0 percent) with the law prohibiting discrimination in employment and occupation based on gender. In the light of the law only covers workers in the formal sector, but in the informal sector where the Government did not effectively enforce the law, it confronts many challenges for women. For example, the salary rate below the minimum wage affects women (17.6%) more than men (9.8%).

Under traditional law, which applies to most women, a husband legally may restrict his wife's freedom to work and control her earnings. Gender discrimination in employment and occupation existed even though the country had laws prohibiting it. In Togo, the formal labor market is dominated by the public sector, which is rigid and uncompetitive and employs only about 9.7 percent of the workforce. In

addition, there are three main areas of employment in Togo. These are the agricultural sector, the informal sector and the modern sector (public and private).

Energy, transport, and telecommunications

The rate of access to electricity in Togo is in progression (from 17 percent in 2000 to 35 percent in 2016) but with huge disparities between urban areas (access rate = 87 percent) and rural (access rate = 7 percent). Renewable energies (solar, wind, etc.) are present in the country's electricity generation capacity. In the energy sector, women are less represented than men. Indeed, 2015 statistics show that, within the Compagnie Energie Electrique du Togo (CEET), only 140 of 818 employees (17%) are women¹⁷³.

According to the National Development Plan 2018-2022, The ICT is confronted with the inadequacy of communication infrastructures and equipment in relation to new conditions based, among other things, on the economy, business and social well-being: the administrative and technical buildings of the State infrastructure are in a state of advanced deterioration as well as equipment are obsolete and dilapidated resulting in unequal geographical coverage by ICT infrastructure. The establishment of a logistics hub of excellence and a first-class business center in the Sub Saharan-region, in particular through the improvement of existing infrastructure and multimodal connectivity and ICT is one of the first pillar of this agenda.

Sociocultural

According to The National Equity and Equality Policy (PNEEG), Togolese society is characterized by a patriarchal social structure based on unequal social and power relations between the sexes. Traditional values grant privileges to men, resulting in women's subordination in society. The man, head of the family, embodies the authority within the household. He establishes the rules, ensures the control and management of family assets, decides on the distribution of land assets family, and plans its use. It makes the capital decisions ensures the supply of livelihoods to household members. The woman owes him respect and obedience. The woman, mother, and wife remain the first educator responsible for transmitting moral and spiritual values. It has the social charge of the functioning of life domesticated. It also has the role of supporting man in his social mission at the family level, taking charge of everything that contributes to accomplishing this mission, including executing these decisions. It is the same when the man is in the situation of incapacity (absence, illness), where she will have to replace him in the realization exercise of its prerogatives. She becomes de facto "head of the family" without benefiting from the social recognition and the resulting privileges. Those sociocultural factors weigh heavily on women's status in the family and society, restricting their education chances limiting their ability to make decisions and participate in the management of public and private affairs of the community with the same opportunities as men.

Policy and Legal framework

In Togo, the principle according to which "men and women are equal before the law" enshrined in Article 11 of the Constitution is achieved through various actions combining the strengthening the

¹⁷³ ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE), (2015). Situation Analysis of Energy and Gender Issues in ECOWAS Member States.

legal and institutional framework and implementing strategies aimed at reducing gender inequalities and empowering women to all levels among which we have:

- The Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW) in 1983 and, after the Beijing World Conference about women
- The National Equity and Equality Policy (PNEEG) was adopted in 2011 to strengthen the integration of gender in the management of the development.
- The double revision of the Personal and Family Code in 2012 and then in 2014 has made it possible, among other advances, to define the same marriage age for both sexes and to restore equality between the spouses by allowing them to jointly assume the moral and material responsibility in the common interest of the household and the children (section 99). This provision abolishes the status of the husband's reserved head of the family for a long time, resulting in an equal right to civil servants' men and women to tax benefits. In addition, the new code establishes the custom as an exception rule in matters of succession when it complies with human rights and the fundamental principles of the Constitution (article 403), thus improving women's social and cultural status.
- The Penal Code revised by Law No. 2015-10 of 24 November 2015 considers the provisions of the Children's Code strengthens the legal protection of women and girls by including specific provisions on genital mutilation, rape, pedophilia, and violence against women in all their forms.

Gender based violence

In Togo, violence against women and girls is multiform. They include domestic violence, sexual harassment, rape, forced marriage, levirate, female genital mutilation, food prohibitions, widowhood rites, internment in convents, etc. The study conducted on gender-based violence (GBV) in 2019 reveals that out of 1,357 child victims of violence, abuse and exploitation, 862 (63.5 percent) are girls and 495 (36.5 percent) are boys¹⁷⁴. In order to combat violence against vulnerable people, particularly women and children, the Togolese government has taken several initiatives to promote gender equality and has modernized several of the country's laws. Even though despite these efforts, the number of gender-based violence cases decreased in 2020 compared to 2019, women and female minors are still the most affected. In fact, of the 589 cases of violence recorded in 2020, 65.5 percent were committed against women and minor children.

Since 2015, Togo has put in place gender equity and equality coordination mechanisms, community justice structures and gender-based violence management structures for the implementation of the national gender policy. Thus, new codes and strategies have been adopted. These include a more egalitarian penal code; a land code that sweeps away the ambivalence of customary and modern texts that penalize women; a national strategy for integrating gender into development policies and programs; and a revised strategy to combat gender-based violence¹⁷⁵. To reinforce these actions, the country has put in place various sectoral programs that encourage women to report cases of

¹⁷⁴ Republic of Togo, (2022). Gender Responsive Budget Document 2022 <https://finances.gouv.tg/wp-content/uploads/2021/11/Document-budgetaire-sensible-au-genre-DBSG-2022-Togo-VF-publiee.pdf>

¹⁷⁵ Hervé Akinochi (Janvier 2019). Gender equality in Togo: Progress and dark spots. https://www.afrobarometer.org/wp-content/uploads/migrated/files/publications/Documents%20de%20politiques/ab_r7_policypaperno53_egalite_genre_au_togo_1.pdf

violence and denounce their aggressors. Finally, in terms of prevention, Togo has put in place provisions and mechanisms to prevent and punish all forms of discrimination against women.

Access to Finances

According to 2015 World Bank statistics on Togo, women represent more than half of the country's total population. However, women's access to the labor market and to bank financing for their development remains limited. The Togolese banking sector has since developed considerably and the country has progressively improved access to financing and credit for women and thus contributed to their financial inclusion. Thus, since 2014, Togo has implemented some social development instruments including the National Fund for Inclusive Finance (FNFI) which is currently deploying about ten projects in favor of youth; vulnerable women and farmers and artisans. These include Access to Financial Services for Youth (AJSEF), Access to Financial Services for Farmers (AGRISEF), Financial Inclusion Support Project for Vulnerable Women (PAIFF), Access to Financial Services for the Poor (APSEF), Seasonal Product (SP), Special Support Product (SSP), Formalization Support Product (FSP). Indeed, within the framework of the PAIFFV, the country benefited from a financing of about 1,532,846 dollars from the African Development Bank¹⁷⁶.

Poverty

The incidence of poverty is lower in male-headed households than in female-headed households; it is 54.6 percent in the former group and 57.5 percent in the latter. On the other hand, poverty among male-headed households decreased between 2011 and 2015 (from 59.6 percent to 54.6 percent), while female-headed households increased over the same period, from 54.3 percent to 57.5 percent. However, the World Bank believes that poverty remains far too high in the country. In rural areas, more than 69 percent of households lived below the poverty line in 2015. Moreover, women are the most vulnerable, as they have less access to economic opportunities.

In Togo, as in some countries in the sub-region, the level of poverty is twice as high in rural areas (58.8%) as in urban areas (26.5%)¹⁷⁷. Recurrent droughts sometimes cause water shortages for agriculture. At the same time, periods of heavy rainfall create flooding phenomena that ravage fields or damage the harvest season, which affects rural areas much more during the dry and rainy seasons. These factors aggravate the already difficult situation of rural populations, especially women.

Unequal Participation in decision taking

In Togo, women represent more than 50.2% of the population in 2020, however, they are less represented in decision-making bodies. Due to their status, the socio-cultural environment and the development mechanisms put in place by the country, women encounter difficulties, which not only limit their access to certain activities and slow down their promotion in the field of employment, but also accelerate their marginalization in the economic context of the country. Women have long been poorly represented in the country's decision-making bodies, although there have been gradual improvements in recent years. Indeed, the proportion of women .

¹⁷⁶ African Development Bank Group, (2016). Online available: <https://www.afdb.org/pt/news-and-events/la-bad-octroie-950-millions-de-francs-cfa-au-togo-en-contribution-a-lautonomisation-economique-des-femmes-16268>

¹⁷⁷ The World Bank (2022). The World Bank in Togo. Online Available: <https://www.banquemondiale.org/fr/country/togo/overview>

The proportion has risen from 1.2% in 1995 to 18.7% in 2020¹⁷⁸. Better still, based on data from the World Bank, the proportion of women in the workforce will represent 48.8% in 2020, whereas it was less than 47% in 1995.

Since 2011, Togo has developed a document on the National Policy for Gender Equity and Equality whose objective is to promote in the medium and long term, gender equity and equality, women's empowerment, and their full participation in decision-making at all levels of the country's development process. Despite the adoption of this policy at the national level, results have not followed. According to Togo's MDG monitoring report, women are poorly represented in decision-making bodies. Moreover, 39.4% of wage earners in the non-agricultural sector are women¹⁷⁹.

The proportion of seats held by women in parliament increased from 15.4% in 2014 to 18.7% in 2015¹⁸⁰. These proportions are far from the MDG target of 50%, but the country has made remarkable progress. In 2015, 17.4% of women held the office of minister. In 2018, the office of the National Assembly has three women in addition to the President. Key ministerial positions traditionally held by men are now headed by women.

In Togo, women play a leading role in the development of port activities, where they are promoted accordingly. However, their participation in decision-making positions is very low. In 2017, the Togolese port platform employed 783 agents, 67 of whom were women, or about 9% of the staff¹⁸¹. Of this workforce, (9%), 49 women occupied positions of responsibility (i.e. 75%), including Human Resources, the Port Community (Alliance for the Promotion of the Port of Lomé), the Medical-Social Center and the General Administration. The head of the Study and Development Department is a woman engineer in Civil Engineering¹⁸².

¹⁷⁸ UIP (International Parliamentary Union), (2020). Women in Parliament: 1995-2020. <https://www.ipu.org/file/8994/download>

¹⁷⁹ Republic of Togo, (2019). Review of the implementation of the Beijing declaration and program of action commitments between 2014 and 2019. <https://www.unwomen.org/sites/default/files/Headquarters/Attachments/Sections/CSW/64/National-reviews/Togo.pdf>

¹⁸⁰ Inter-Parliamentary Union for Democracy for All, (2020). Women in parliament: 1995-2020 https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwj4sfj74L6AhUASvEDHd9WBEoQFnoECBEQAQ&url=https%3A%2F%2Fwww.ipu.org%2Ffile%2F8994%2Fdownload&usq=AOvVaw1p4BpjQiuA2tGL_GseMlar

¹⁸¹ Republic of Togo. The promotion of women in the maritime sector in Togo. Online available: <https://www.togo-port.net/la-femme-dans-le-secteur-maritime-au-togo/>

¹⁸² Ibid

4.19 Zambia

Demographics and human development

Zambia, a southern African state, and a member of the Commonwealth shares its borders with 8 countries including the Democratic Republic of Congo, Tanzania, Malawi, Mozambique, Zimbabwe, Botswana, Namibia and Angola. In 2021, the Zambian population is estimated at 18,920,657 inhabitants of which nearly 51% are women (or 9,550,918 women). to World Bank population data, about 55 of Zambia's population lives in rural areas. According to World Bank population data, about 55 of Zambia's population lives in rural areas.

In terms of gender inequality, the country is making considerable progress in promoting the rights of girls and women. However, much remains to be done to promote gender equality and achieve gender equity. Indeed, after a regression in the Gender Inequality Index (GII) where Zambia went from 0.517 in 2017 to 0.540 in 2018, the report records a slight decrease in 2019 in its gender inequality index which places it in 146th place out of 178 countries according to the Gender Inequality Index.

When it comes to health, women and girls are at a disadvantage compared to their male counterparts. Indeed, in some parts of the country, particularly in rural areas, many women in pregnancy or childbirth suffer from the lack of health infrastructure, the lack of qualified and specialized personnel, the lack of operating equipment, etc. Over the period 2015-2016, the maternal mortality ratio (MMR) increased from 111 deaths per 100,000 live births to 252 deaths per 100,000 live births in 2018, while the pregnancy-related mortality rate (PRMR) was 278 deaths per 100,000 women.

Education

Zambia has made considerable progress in education, as enrolment and completion of primary schooling are almost universal. However, the country faces some challenges, particularly in terms of relevance, efficiency, equity and the shortage of qualified teachers. Clearly, women are disadvantaged compared to men in terms of education. From the quality of school infrastructure, to gender equity in schooling, to the quality of school and post training, Zambia has embarked on the modernization of its entire education system. Indeed; the country has developed professional standards for its teachers, with the aim of improving the efficiency and performance of schools.

According to the 2018 Demographic and Health Survey report, the majority of Zambians have no formal education or only some primary education. Indeed, 60 percent of women and 54 percent of men aged 6 years and older have no or only some primary education. In 2017, the net secondary school enrollment rate increased by 25.4 percent in to 42.9 percent. At the same time the net enrollment rate in primary school decreased from 90.4 percent in 2016 to 87.9 percent in 2017.

Employment

The statics of the Gender Inequality Index report show that there is an increase in inequalities that exist in women's participation in the labour market. In Zambia, the employment sector is dominated by men, while women make up about 50.5 per cent of the country's population. In 2019, women's participation in the labour market declined from 77.7% to 35.3% in 2019. In 2021, only 26.7% of women participate in the labour market, compared to 44.8% of men. Women's participation in traditionally male-dominated industries remains remarkably low, at 20 per cent. While there has been progress in gender equality, inequalities persist in some areas. Women's labor force participation rate is 78.3 percent, compared to 95.0 percent for men.

Renewable energy and transport infrastructure projects, including roads and rail voices, will increase the involvement of women, girls and vulnerable people in the country's workforce.

Energy, transport, and telecommunications

Zambia has extensive energy, transportation, industrial, and telecommunications infrastructure. However, Zambia's economic infrastructure is dominated by the industrial sector, particularly the extractive industry. Abundant energy resources, including hydropower, biomass, coal, and renewable energy (solar and wind) are available in Zambia. However, only 31% of the country's population has access to electricity. In Zambia, the majority rural population is particularly energy poor. Indeed, in rural areas, the rate of access to electricity is less than 11%. In recent years, Zambia has begun mainstreaming and monitoring gender in its development policies, particularly across key sectors such as infrastructure. Through a gender assessment of the energy sector conducted in 2018, Zambia through the Ministry of Energy has developed a gender mainstreaming strategy and action plan, which will inform the Integrated Resource Plan (IRP) process.

In Zambia, as in most African countries, women make up more than half of all road users. However, they are less involved in transport infrastructure construction and redevelopment projects. Gender mainstreaming in transport infrastructure in Zambia is a critical issue in the country. However, the impact of improved rural transport on women is significant. In recent years, Zambia has faced significant challenges including the impact of climate, economic conditions, and poorly maintained transport infrastructure. In this situation, the country requires additional investment to address these challenges.

Sociocultural

A predominantly patriarchal society whose customs and traditions often prohibit women's empowerment, in Zambia, gender inequalities are perceived at all levels, and at all levels of the country's population.

In Zambia, there are certain socio-cultural beliefs that limit women's access to certain socio-economic activities and are the root causes of gender-based violence. In the majority of the country's customs, women generally submit to marital demands in accordance with societal norms, regardless of their personal health and choice.

Policy and Legal framework

To promote gender equality and empowerment of women and girls and the vulnerable, Zambia has strengthened its policy and legal frameworks. Indeed, Zambia has been working with the United Nations for several years to incorporate international instruments into the country's national legislation. As regards the legal framework, the Constitutional (Amendment) Act No. 2 of 2016 confirms the equal value of women and men. Indeed, the country signed a new constitution in February 2016 that sets out an affirmative new framework for a 30 per cent gender equality rule for elected and appointed positions, while recognizing equal rights and establishing a Gender Equality Commission.

A number of other progressive laws exist in the country and are among others:

- The Gender Equity and Equality Act (GEEA) of 2015, which aims to incorporate into domestic law certain provisions relating to women's rights and gender equality contained in regional, continental and international instruments to which Zambia is a party.

- The National Gender Policy formulated in 2014 is the main framework for the implementation of gender equality commitments. The policy also provides for equal opportunities for women and men to participate in and contribute actively to national development.
- In 2005, the penal code was revised, making penalties for (sexual) violence against women and children more severe.

However, effective implementation of these laws and policies has been slow and an acceleration of their implementation is desired.

Gender based violence

Gender-based violence is used by all social strata of the Zambian population and all age groups. According to police nation's 2021 annual report on gender-based violence, disaggregated annual data shows that 5,301 child victims of abuse across the country, accounting for 25.8% of all victims of gender-based violence. Of these 5,301 child victims of serious abuse, girls accounted for more than 77.6 per cent. In total, more than 25,000 cases of GBV were recorded in 2021. More than one-third (36%) of women age 15-49 have experienced physical violence at least once since age 15 and 14% have experienced sexual violence 183. In short, women and girls are more vulnerable to the growing trend of "sextortion" in exchange for services and opportunities.

In addition, to improve access to justice for victims of GBV and to ensure prompt resolution of cases, Zambia has established expedited courts for gender-based violence cases.

Access to Finances

Since the 1990s, Zambia has undergone extensive financial sector reforms. However, the expected benefits of a market-based banking system have not materialized. Indeed, more than 40 percent of Zambian adults do not have access to quality financial products, and at the same time, about 60 percent of adults who do have access do not use them, according to Zambia's 2017-2022 National Financial Inclusion Strategy document.

Also, the population in rural areas is disadvantaged. People in remote rural areas still rely on cash or barter, or use unregulated and unsecured channels, to make payments and store savings. Just like globally, women's financial inclusion is a top priority for Zambia. Indeed, women's access to banking services contributes to economic growth, economically empowers women and supports several Sustainable Development Goals in the country.

In 2015, women's financial inclusion in Zambia was 30%. Through the use of mobile money, the gender gap in access to financial services has been reduced and up to 58% of women are financially included.

Poverty

The impacts of climate change are strongly felt among the Zambian population, especially in rural areas. In addition, human action such as deforestation combined with the negative effects of

183 European Union, Zambia, (2021). EU GENDER ACTION PLAN III, 2021-2025 ZAMBIA COUNTRY LEVEL IMPLEMENTATION PLAN (CLIP).

<https://www.eeas.europa.eu/sites/default/files/documents/Zambia%20Gender%20Country%20Level%20Implementation%20Plan%20%28CLIP%29.pdf>

climate change such as drought increase the distances to collect firewood used for domestic energy, which has an impact on women and children who are usually responsible for collection.

According to the European Union's report on the National Level Implementation Plan for Zambia, about 55.8% of the country's population is poor, and of these, 40.8% are extremely poor. According to World Bank data, poverty rates among Zambia's rural population were stubbornly high, reaching 78 percent of the population and disproportionately affecting adolescent girls and women.

Unequal Participation in decision taking

The statistics of the Gender Inequality Index report show that there is an increase in the inequalities that exist in the number of women parliamentarians. Only 14.9% of parliamentary seats are held by women and even fewer women hold Cabinet positions at approximately 7%¹⁸⁴. While women make up more than half of the population in Zambia, they are poorly represented in decision-making and accountability bodies in public office. In 2016, the country signed a new constitution in February 2016 that establishes a new positive framework for a 30% gender equality rule for elected and appointed positions, while recognizing equal rights and establishing a Gender Equality Commission.

In Zambia, many ethnic groups follow a matrilineal system, where women own the land and pass it on to the maternal line. However, ownership does not necessarily mean access, use and control of land. This remains a consequence of the failure to take women into account in decision-making facilities within local communities. Women are very limited in their participation in the energy and industrial value chain in the country, especially as entrepreneurs or business owners in renewable energy or heavy industries. Many Zambian women have better qualifications, however, they are not considered for higher positions in higher institutions and strategic positions

¹⁸⁴ European Union, Zambia, (2021). EU GENDER ACTION PLAN III, 2021-2025 ZAMBIA COUNTRY LEVEL IMPLEMENTATION PLAN (CLIP).

<https://www.eeas.europa.eu/sites/default/files/documents/Zambia%20Gender%20Country%20Level%20Implementation%20Plan%20%28CLIP%29.pdf>

V. GENDER DISPARITIES TO INFRASTRUCTURAL ACCESS AND SERVICES AND CONTRIBUTION OF THE PROJECT

Owing to growing social science and interdisciplinary research on the effects of infrastructure disruption in time of disasters¹⁸⁵, it is possible to understand gender and social inclusion considerations of climate resilient infrastructures. Despite many important research gaps, it's still possible to understand how infrastructure disruption can affect populations and economies, considering gender specificities.

Such research has established the criticality of electric power and telecommunication services in advancing gender equality and the heightened vulnerability of certain population groups to infrastructure disruption. While the importance of understanding and reducing infrastructure disruption impacts is well-established, omitting the socioeconomic impacts of infrastructure disruptions can lead to underinvestment in mitigating the consequences of the disruption.

When extreme events damage infrastructure, the impact materialises not only in term of physical damages, but also the socio-economic impacts. For example, when a road or a bridge damages, it disrupts connectivity and prevents access to school, hospital. This prevents women in developing countries from receiving urgent medical care and could result in maternal death, defined as deaths while pregnant or within 42 days of giving birth. Lack of resilient transport infrastructure can also negatively impact girls' school enrolment; limit women access critical urban infrastructure and services and prevent their access to more activities that generate remuneration. Beyond access to medical care and other education and livelihood opportunities, inadequate transport systems are shown to be an enabler of gender-based violence.

The promotion of climate resilient infrastructure will help achieve universal energy access, environmental sustainability, and gender equality in the energy sector, leading to positive developmental outcomes for all. The lack of access to electricity affects women and girls disproportionately because non-existent or irregular electricity supply can considerably increase their time poverty, reducing the number of productive hours in a day and increasing the unpaid domestic work burden. The responsibility for collecting biomass fuels for cooking such as wood, dung, and crop residues falls on women and girls in low-income rural households. On average, they spend long hours per week on these activities due to the need to travel long distances in search of fuel. Furthermore, women and girls disproportionately suffer from adverse health outcomes due to indoor air pollution caused by unclean, combustible fuels for household energy, accounting for 6 out of 10 of the 4.3 million premature deaths globally in 2012 .

By promoting sustainably, the transition to clean energy, ICRF is critical to contribute to a better access for all including women and reduce gender inequalities by helping lengthen the day by one to two hours, allowing women to spend more time on productive, income-generating, or leisure activities. Through the program, the role of women is reaffirmed as key for improving electricity access.

In today's world, access and control over information increasingly symbolise empowerment. Digital communications infrastructure is instrumental in enabling knowledge sharing and creating more inclusive and empowered societies. However, within the digital divide – 52 percent of the world's

¹⁸⁵ Insights into these impacts derive from a variety of information sources, including surveys, field observations, analysis of secondary data, and computational models.

population is without access to the Internet – there is a wide gap between male and female digital communications users. There is an estimated Internet usage gap of 11 percent globally, which increases to 23 percent in Africa and 31 percent in the least developed countries. The divide also extends to the use of mobile phones. In low- and middle-income countries, women are 10 percent less likely to have a mobile phone and 26 percent less likely to have a smartphone than men. The likelihood of having access to mobile Internet is about 34 percent lower in Sub-Saharan Africa. . Multiple causes reinforce this gender divide. The cost of digital communications technology and the significant number of women living in poverty are considered the greatest barriers to accessing digital communications services and the Internet. Women are usually paid less than men for equal work and have more difficulties accessing financial assets, consequently limiting their ability to own or use any type of technology, including digital communications.

Furthermore, illiteracy among women and girls, who make up nearly two-thirds of the world's illiterate, and the lack of knowledge of English in rural areas, which is the primary language of the Internet, are significant obstacles to closing the digital gender gap. This program can have significant positive outcomes in multiple dimensions of development as it increases access to digital communications technology for women. First, it can improve access to education for women and girls, giving the wide range of learning opportunities, content, and tools available on the web. Second, it can trigger new economic and employment opportunities for women and women-owned businesses by increasing access to international markets and online service-based industries, where women are more likely to work. Third, digital communications infrastructure can also positively impact the reduction of gender-based violence and insecurity through mobile applications where women can report unsafe areas, quickly reach emergency services, and share their position to ensure their safety. Especially during times of crisis, digital communications can be a critical lifeline by providing access to emergency services. For example, gender-based violence against women has increased worldwide due to COVID-19. Technology can facilitate the reporting of incidents in cases like this.

In all of ICRF's target countries, there are major challenges and setbacks to gender equality. In addition, women and men are distinctly vulnerable to the impacts of climate change. Therefore, specific intervention strategies for each target group are needed. Across critical infrastructures, opportunities have been identified to contribute to and increase positive gender relations through equitable actions. In short, in the analysis of gender and socio-economic indicators, it appears that countries do not have the same characteristics in terms of gender mainstreaming at all levels of socio-economic, cultural and political life. However, ICRF's areas are essential and targeted to contribute effectively to the improvement of people's living conditions and above all to reduce gender inequalities and discrimination against women and vulnerable people.

In addition, the project for the rehabilitation and installation of resilient infrastructure remains an opportunity for countries and an excellent way for better gender mainstreaming through development projects and the effective and active participation of women in the national development process.

Energy: The installation or expansion of renewable energy plants such as solar, wind, etc. offer significant potential to support the development of women-owned microenterprises, especially in rural areas. The project therefore aims to extend the electricity network to areas not covered in order to provide women and vulnerable people with opportunities to develop and use technologies that require energy such as cell phones. As a result, vulnerable populations, especially women, will be able to seize opportunities to access credit and training and solve the financial inclusion problem faced by most countries. The Solar Power Plant Project requires maintenance, upkeep, cleaning and verification. Thus, the planned training programs will allow a significant participation of women and youth in order to strengthen their professional skills, to increase their employability and to reinforce their social and economic power. In rural areas, two factors increase exposure to violence against

women and girls. These are poor lighting in villages; countryside; hamlets, etc. and the social expectation that women and girls collect firewood. Thanks to the projects of installation or extension of power plants, these areas will be connected, which will avoid the search for wood for girls. The lighting of these areas will allow both women to exercise or develop activities requiring energy while young people will spend more time to learn their lesson.

Transport: Through the construction or upgrading of road transport facilities, isolated populations, especially those in rural areas, will be provided with access to economic opportunities, health care, education, and other services and infrastructure needed to improve their well-being. Finally, the agricultural community in these areas, sometimes dominated by women, will be able to access the domestic market for the sale of their products with significant benefits. In addition to their major contribution to economic growth and the creation of economic opportunities for vulnerable groups; transport also contributes to increasing women's productivity and promoting gender equality. In line with the gender requirements and the increase in the number of women in decision making that AFC is committed to implementing throughout the project, women; women's groups or women-led businesses will be represented at every stage of the planning and design process of transport project investments. The women's groups; community associations; and NGOs that have been identified and consulted already constitute a structured approach to understanding women's needs.

Industry: The industrial platform projects offer an excellent way to reduce gender inequality and especially to reduce cases of gender-based violence (GBV). In addition to the direct and indirect employment opportunities that these industrial platforms offer to women and youth, the project also encourages the establishment of cooperative farmers and breeders to deliver products in quantity and quality. This strategy will not only protect girls and women from need through various income-generating activities, but also reduce or eliminate the socio-cultural practices they suffer from. The industry projects targeted by ICRF are oriented towards job creation, manufacturing, services and innovation. In addition, women-owned businesses will be further included in the manufacturing value chain. Thus their capacities will be strengthened to assume new roles in the transition to industry and consequently increase their share in decision making.

VI. RESULTS OF SURVEY THE GENDER PERCEPTIONS IN ICRF COUNTRIES

To find out the level of gender mainstreaming as well as the degree of women's participation in all stages of the infrastructure life cycle, an online survey was conducted from April to June 2022 on gender and social inclusion for infrastructure projects in countries covered by the ICRF project, including Benin; Cameroon; Chad; Côte d'Ivoire; Djibouti; DRC; Gabon; Gambia; Ghana; Guinea; Kenya; Mali; Mauritania; Namibia; Nigeria; Rwanda; Sierra Leone and Togo.

This section presents a summary of the results of the survey, which was designed to determine the level of gender mainstreaming in infrastructure projects, particularly in transport, energy, heavy industry and telecommunications. This section completes the presentation of the gender mainstreaming and social inclusion framework in ICRF countries. The report draws on responses and information from the questionnaire sent to women's groups and associations, and officials of implementing agencies and institutions on how to mainstream gender into environmental policies, programs and infrastructure projects in ICRF countries. Thus, information on the level of women's participation throughout the infrastructure life cycle was collected as well as information on the national gender strategy of these countries.

It should be noted that the questionnaire is organized into different sections including project objectives and target groups; access, control of resources and impacts of infrastructure projects; women's participation and consultation strategies; women's role as decision-makers; and finally sex-disaggregated data on infrastructure. As such, the analysis covers the areas of transportation; energy; industrial platforms; and telecommunications in the context of climate change.

6.1 Project objectives and target group

According to the survey, the design of the infrastructure project recognizes that women and men have different needs and priorities in their use of the infrastructure, but more often than not women's needs are not taken into account or are only partially taken into account. For women's groups, the constraints and obstacles to women's participation in infrastructure project activities and access to project benefits remain gender-based discriminatory practices; reluctance to assign work to women; reluctance to include women in the workforce in certain sectors; lack of anti-discrimination protections; lack of gender-specific policies and benefits, etc.

According to the responses of one Sierra Leonean agency that responded to the questionnaire, the gender mainstreaming strategy has been developed, but the effective implementation of gender policies and programs through infrastructure projects remains problematic. The tasks performed by women are affected, particularly in the area of transport, where the redesign of a road slows down or sometimes stops their income-generating activities. For this reason, women's groups or women's promotion agencies have not been consulted and/or involved in the decision-making process concerning the "location and timeframe" of the work.

6.2 Resource control and impacts of infrastructure projects

Gender equality is an important aspect in the development process of countries but is largely neglected in the planning and provision of infrastructure. Consultation and involvement of women or women's groups in decision-making regarding the location or type of infrastructure provided in the locality and/or region of the country remains very limited in some ICRF countries.

According to the survey results, the participation of women, especially rural women, in public works as wage labor is hindered by some major factors. In Namibia, for example, the division of domestic labor usually assigns women the primary responsibility for childcare and other domestic tasks. This limits the time they can devote to productive activities, and often means that they can only participate in work done in their locality. For the National Network of Rural Women's Associations RENAFER in DRC, identifying women's groups and integrating them into the management of infrastructure in a formal way will help overcome the often traditional constraints and obstacles that hinder women's participation in leadership positions.

Opportunities for women to be employed and trained in the construction and operation of infrastructure exist but are mostly limited to the labor force. Indeed, support services for women such as childcare and health centers to encourage their participation in infrastructure projects are either lacking or simply not considered.

Similarly, women have been very little involved in infrastructure projects but they benefit from their installation. In Nigeria, for example, roads have been built to enable women to transport their agricultural products to markets in the nearby city. It should also be noted that women are not integrated at all stages of the life cycle of infrastructure projects. For some associations, the imposition of quotas for women at all levels of design and implementation of infrastructure projects remains the best strategy to ensure that they participate and are not disadvantaged by these projects. Therefore, gender action plans and assessments must be considered at all phases of the project cycle. Women must be integrated into the infrastructure project in the planning and implementation stages.

According to the DRC-based National Network of Rural Women's Associations RENAFER, women are not sufficiently integrated into infrastructure projects. According to RENAFER, the main constraints and obstacles to women's participation in infrastructure activities remain gender-based discriminatory practices and the lack of education and training opportunities.

6.3 Strategies for women's participation and consultation in infrastructure projects

Strategies for gender mainstreaming in the development process exist, but they have not been identified to overcome barriers to women's participation and benefits from infrastructure projects. Indeed, the majority of ICRF countries have a national strategy or action plan on gender equality and/or gender mainstreaming at all levels. In most cases, sector ministries/agencies are responsible for implementing these national strategies or plans. In the case of Chad, Namibia, Nigeria, and Togo, for example, the country's gender mainstreaming strategies are led by the Ministry of Women, Family and Child Welfare; Namibia's Ministry of Women's Affairs and Child Welfare; the Federal Ministry of Women's Affairs and Social Development; and the Minister of Social Welfare and Women's Development, respectively.

Regarding equal access between men and women to infrastructure projects, women suffer more than men from the lack of access to quality infrastructure. For the associations, it is essential that women take part in the definition of priorities in terms of design and operation of infrastructures so that they effectively contribute to both development and the benefit of women. Despite the implementation of these national strategies and plans, there are constraints and obstacles to women's participation in infrastructure projects. Moreover, the respondents emphasize a lack of monitoring of the implementation of the strategy throughout the life cycle of the infrastructure. As a

result, there is a gap between the main directions of the decisions taken within the technical ministries and the implementation of actions to fully integrate gender into infrastructure projects.

Moreover, the implementation of these strategies sometimes remains concentrated in one area without covering all areas. In Nigeria, for example, in order to implement the national gender strategy in the area of environment, the Federal Ministry of Environment first developed the National Action Plan on Gender and Climate Change followed by the development and validation of its implementation strategy. On the other hand, the underdeveloped gender-blind infrastructure is one of the main factors preventing women and girls from accessing basic services to promote their upward social mobility and reduce gender disparities.

In Sierra Leone, there are no specific gender mainstreaming guidelines for infrastructure, but there is a national gender empowerment policy. However, the government has developed policies and laws to build women's capacity, awareness and empowerment opportunities. In Côte d'Ivoire, most ministries and structures show a clear commitment to gender mainstreaming and have fully implemented the national gender strategy, but there is a lack of tools and specialized human resources. In some sectors, economic and social infrastructures have been designed, planned and implemented without taking gender concerns into account. However, the ICRF's major concern is to take into account the gender dimension in infrastructure projects: roads, bridges, railroads, ports, air transport, energy, telecommunications and heavy industry.

6.4 Women's role as decision makers in infrastructure projects

Regarding the role of women in decision-making, particularly through infrastructure projects, there is little opportunity for the project to support women as infrastructure managers in either a formal or informal way. When asked whether women and women's groups are often consulted and involved in decision-making regarding the location or type of infrastructure provided in their locality/region, the majority of responses were no. However, women's groups are organized in a way that allows them to participate in the decision-making process. However, women's groups are organized to participate in various key project activities.

Furthermore, the possibilities for the project to support women as infrastructure managers in a formal or informal way must go through the identification of women's groups and their integration into the management of infrastructure in a formal way. With regard to the practical needs and strategic interests of women that need to be taken into account in infrastructure projects, the creation of a women's boarding school near industrial infrastructures and the training of "gender officers" responsible for implementing and monitoring the action plan and supporting gender mainstreaming in infrastructure projects would be an asset for these women. In this regard, the majority of respondents emphasize that the issue of "practical and strategic gender interests" is becoming more widespread in communities where project promoters, especially infrastructure projects, are linking women and sustainable development. For the respondents, there are many ways to achieve these objectives, and setting up monitoring and data collection mechanisms disaggregated by sex would be a step towards achieving these objectives.

According to some of the agencies interviewed, gender inequality issues in infrastructure projects depend on the sector or area of infrastructure. In the energy and transport sectors, for example, the challenge of gender inequality in this sector stems almost entirely from the absence of gender considerations in the planning process. In fact, society has traditionally granted (and in some regions or localities continues to grant) differential rights based on gender, in the sense that women could not perform tasks in certain areas of activity. This also resulted in a traditional and economic legacy in which people, based on their gender, had different opportunities to access the labor market,

financial capital and human capital. These inequalities have ended up being transposed into the various policies and plans for energy, transport and industry. Work in these sectors is thus approached in a gendered manner.

For example, women's groups emphasize the need to build childcare, maternity facilities, schools, and health care facilities near industrial centers. In Nigeria, for example, both men and women are involved in the decision-making process, particularly with regard to infrastructure, but not at all stages of the infrastructure life cycle. In fact, taking gender into account throughout the infrastructure life cycle will further promote gender equality in Nigeria.

6.5 Gender-disaggregated data on infrastructure.

Climate change considerations that need to be taken into account throughout the life cycle of infrastructure should be thoroughly analyzed at the project planning stage. And the essential tool for monitoring any project is data collection. However, it should be noted that there is a lack of collection and centralization of gender-disaggregated data related to infrastructure projects in most countries. For the survey participant representing the Federal Ministry of Environment in Nigeria, synergy between environmental agencies and institutions with the National Bureau of Statistics to collect such data would be an asset for future plans or initiative in gender disaggregated data collection. In Namibia, for example, data is regularly collected in the areas of infrastructure, energy (electricity, oil, gas), and telecommunication through geographic information. Although the majority of respondents reported a lack of data collection in their country, countries are conducting research on the gender dimensions of climate-resilient infrastructure that incorporates the differential needs and use of infrastructure by women and men.

Ultimately, this survey highlighted the provisions of the gender equality and social inclusion policy in the transport, energy, telecommunications and industrial platform sectors. The development of practical tools to facilitate gender mainstreaming in sustainable infrastructure project interventions will be used for both monitoring and collecting sex-disaggregated data.

VII. SUMMARY OF CONSULTATIONS UNDERTAKEN WITH GENDER AND WOMEN'S ORGANIZATIONS

The different actors, organizations and groups that participated in the consultation are part of the stakeholders that have been previously identified among the following categories of actors :

Competent national ministries; Regulatory bodies; Relevant research institutions; Non-governmental organizations (NGOs); Civil society organizations (CSOs); Meteorological agencies; Indigenous peoples' organizations; Official CVF observers.

These stakeholders were selected based on the target sectors within the host countries of the proposed project and classified into the following groups:

- Anglophone West Africa: Ghana, the Gambia, Nigeria, Sierra Leone
- Eastern and Southern Africa: Kenya, Rwanda, Namibia
- Francophone Central Africa: Cameroon, Chad, Djibouti, Democratic Republic of Congo, Gabon
- Francophone West Africa: Benin, Côte d'Ivoire, Guinea, Mali, Togo.

Table 2 Table of gender consultations:

Country	Type of Actor	Organisation	Contacts
Cameroon	NGOs and Civil Society Organisations (CSOs), including gender groups	Forum des Femmes Autochtones du Cameroun (FFPAC)	+237 672 101 577 ffac@ffacameroon.org / www.ffacameroon.org
		Réseau Camerounais des Organisations des Droits de l'Homme /Cameroon Network of Human Rights Organizations	Joseph Desire Zebaze zebyjodes@gmail.com
	Indigenous Peoples	Mbororo Social and Cultural Development Association (MBOSCUDA)	contact@mboscuda.org

Country	Type of Actor	Organisation	Contacts
		Santa Mbororo Youths Association (SAMUSA)	mboyascam@yahoo.com
Chad	NGOs and Civil Society Organisations (CSOs), including gender groups Indigenous Peoples	ONG Nirvana	contact@ongnirvana.org
		Association des femmes peules et peuples autochtones du Tchad	hindououmar@gmail.com
DRC	NGOs and Civil Society Organisations (CSOs), including gender groups	ONG Femme main dans la main pour le développement intégral	contact@fmmdi.org +243 977 367 571 +243 810 350 586
		Women for Women International	NA
		Equateur Magazine Association	Hornela Mumbela
		Action Aid DRC	NA
	Indigenous Peoples	CREDDHO	+243 999 922 088 +243 822 078 694 info@creddho-rdc.org / creddhocoordin@gmail.com
		FDAPID-Hope for indigenous peoples	+243 810127090, 998401598 info@fdapid-hopeip.org ,fdapidrdc@gmail.com, coordination@fdapid-hopeip.org
		Dynamique des Groupes des Peuples Autochtones (DGPA)	info@dgpardc.org contact@dgpardc.org +243 895 111 616
		Centre d'Accompagnement des Autochtones Pygmées et Minoritaires Vulnérables	camvorg@yahoo.fr + 243 997 706 371 + 243 853 793 160
Gabon	NGOs and Civil Society Organisations (CSOs), including gender groups	Agir Pour le Genre	+241 770 625 77 agirpourlegenre_gab@yahoo.fr
		Association pour le développement de la culture des peuples pygmées du Gabon (ADCPPG)	

Country	Type of Actor	Organisation	Contacts
	Indigenous Peoples representatives	Mouvement National des Minorités Autochtones et Pygmées du Gabon	+ 241 078 925 90 / + 241 062 860 55 + 241 073 513 32/ odambol@yahoo.fr
Djibouti	NGOs and Civil Society Organisations (CSOs), including gender groups	Organisation de Bender Djedid Pour le Developpement Socio-Economique	ongbenderjedid@yahoo.fr +253 21 357 565
Kenya	GCF Observers	Ogiek Peoples' Development Program (OPDP)	Daniel M. Kobei / Lilian Maina lilianmaina@ogiekpeoples.org
	Indigenous Peoples	Pastoralist Women for Health and Education. (PWHE) IL'Laramatak Community Concerns (ICC)	
Namibia	NGOs and Civil Society Organisations (CSOs), including gender groups	Ywca -Young Womens Chirstian Association	
	Indigenous Peoples	Nama Indigenous People's Forum In Namibia (NIPFIN) or !Nunisen Nyae Nyae Conservancy	
Rwanda	Indigenous Peoples	African Initiative for Mankind Progress Organization (AIMPO)	Richard Ntakirutimana info@aimpo.org
		Action pour la Promotion des Droits des Minorités Autochtones en Afrique Centrale (APDMAC)	Adrien Sinafasi Makelo Godefroy Batano Chubolire +243 998 611 352 / 997 706 362 apdmac2000@yahoo.fr sinamake@yahoo.fr
Gambia		Agency For The Development of Women & Children ADWAC	+220 572 0106 / 572 0075 / 990 1991 / 991 5217 adwac@qanet.gm
Ghana		African Women's Development Fund	Hamda Zakaria AWDF@awdf.org or grants@awdf.org + 233 242700881
Nigeria	GCF Observers	Niger Delta Women's Movement for Peace and Development	
	Indigenous Peoples	Movement for the Survival of the Ogoni People (MOSOP)	mosop@phca.linkserve.co Legborsi Saro Pyagbara (+234) 84 233907

Country	Type of Actor	Organisation	Contacts
Sierra Leone	NGOs and Civil Society Organisations (CSOs), including gender groups	Sierra Leone Association of NGOs (SLANGO)	Joseph Rahall; (+232) 22 220 400 / +232 76 601 979 josephrahall@gmail.com greengreenscenery@gmail.com
Benin	NGOs and Civil Society Organisations (CSOs), including gender groups	ONG ESAM	+229 95 01 01 95 esam_benin@yahoo.fr
		Organisation pour le développement des activités des femmes (ODAFEM)	YO épouse DRO Henriette (+225) 20 38 20 43 (+225) 07 40 65 85
Côte d'Ivoire		National Union of Disabled Women of Côte d'Ivoire (UNAFEHCI)	YO épouse DRO Henriette (+225) 20 38 20 43 (+225) 07 40 65 85
Guinea			
Mali	NGOs and Civil Society Organisations (CSOs), including gender groups (2 - 4)	COFEM - Collectif des Femmes du Mali Fédération Nationale des Femmes Rurales du Mali (FENAFER)	Djeneba HAIDARA djenbahaidara1@yahoo.fr
Togo	NGOs and Civil Society Organisations (CSOs), including gender groups	Femme De Demain (FDD) ONG CASE TOGO Association pour l'accès à l'éducation et à la formation (AccEd)	+228 90 06 02 22 fdd_tg@yahoo.fr Email: info@casetogo-an.org Phone: +228 90 26 16 56 Phone: +228 96 06 16 01 +41 22 940 02 80 Email: info@acced.ch



VIII. INTRODUCTION TO ICRF

Current and future infrastructures in Africa face risks associated with climate change which is often not a key consideration in infrastructure planning, design, financing, commissioning and construction. Climate-resilient infrastructure would help provide the quantity, quality and accessibility to infrastructure and the associated services to connect people and enhance the quality of life.

The Africa Finance Corporation (AFC) wholly-own Capital Partners is establishing the Infrastructure Climate Resilient Fund (ICRF) to offer tailored financial products (concessional equity and parametric insurance) to finance climate-resilient infrastructure and reduce the impact of climate hazards on the physical infrastructures in the selected African nations. The ICRF will be supported by targeted technical assistance and policy interventions to ensure a long term and systematic approach towards infrastructure financing in Africa.

This analysis is prepared to assess potential Gender and Social inclusion Risks that might be associated to the implementation of the ICRF in the targeted countries, with the view to propose an action plan to ensure a gender-responsive implementation of the ICRF.

The proposal targets 19 countries in Africa and is structured around three (3) components.

- Component 1 – Financial instruments to reduce market failure and attract investment in Climate Resilience;
- Component 2 – Strengthening capacity, systems and networks to improve understanding of current and future risks; and
- Component 3 – Policy interventions to support investments in Climate Resilient Infrastructure.

IX. ENTRY POINTS FOR GENDER AND SOCIAL INCLUSION CONSIDERATIONS IN ICRF

Activities requiring mainstreaming of gender and social inclusion in the program.

Outcome 1 - Blended finance at scale and innovative climate risk insurance products are deployed for CRI Asset Classes investments in the beneficiaries' African countries

	Entry point	Proposed interventions	Responsible / relevant actors	Estimated Budget and budget Source
Output 1.1 Activities	ICRF is fully operational and raised capital at the fund level			
1.1.1 ICRF structure and registration	Yes	Commitment to gender equality in ACP and ICRF design structure ¹⁸⁶	AFC and ACP senior management	N/A
1.1.2 Consummate Initial closing at the Fund level with GCF as Anchor Investor	No			
1.1.3 Prepare ICRF teaser, IM, evaluate Fund suitability;	No			
1.1.4 Hold roadshows with commercial capital providers (pension funds, insurance funds, family offices, private banks, philanthropies, high net worth individuals, and other institutional investors);	No			

¹⁸⁶ As a good starting point the CEO of ACP and ICRF is a woman.

1.1.5 Negotiate and close LPs commitments.	Yes	Commitment to collaborate with partners that hold high ESG standards including commitment to Gender equality and social inclusion	ACP and ICRF team	N/A
Output 1.2 Activities	ICRF de-risks CRI Asset Classes mobilizing commercial capital at scale			
1.2.1 Source CRI pipeline and launch investment process	No			
1.2.2 Conduct analysis to support de-risking financial mechanisms 1.2.3 Conduct first level due diligence	No			
1.2.4 Structure the pipeline through SPVs and investment platforms	No			
1.2.5 Engage with the market proponents for capital raising at the pipeline level	No			
1.2.6 Prepare documentation for Investment Committee	No			
1.2.7 Financial closure for CRI Asset Classes projects	No			
1.2.8 Pipeline management	No			

1.2.9 Reporting on the program results and holding ICRF annual audit.	No			
Output 1.3 Activities	ICRF launches climate-risk parametric insurance (CRPI) scheme for CRI Asset Classes.			
1.3.1 Implementing standards and climate data analytics into CRI projects risk assessment at ICRF;	No			
1.3.2 Engaging with insurance companies to negotiate premiums and payouts for CRPI, simplifying access for the market;	Yes	<ul style="list-style-type: none"> • Commitment to collaborate with partners that hold a high ESG standards including commitment to Gender equality • Encourage the insurance industry to develop a better awareness of gender differences in designing their products and distribution channels • Ensure that equal opportunities are provided to women and men in Experts appointment and recruitment through advertisement that strongly encourages women to apply and also by advertising through various channels 	ACP and ICRF team ICRF Partners and consultants	Include in the outcomes 2 and 3 budget
1.3.3 Negotiating long-term agreement on CRPI for ICRF	No			
1.3.4 Piloting CRPI scheme in ICRF investments				
1.3.5 Integrating CRPI in ICRF investment process	No			

Outcome 2 - Improved climate risk assessments and adaptation solutions for CRI Asset Classes and improved capacity for scaling up CRI in Africa;

	Entry point	Proposed intervention	Responsible	Estimated Budget and Source
Output 2.1 Activities	Deployment of climate risk assessments and adaptation solutions for ICRF investments in CRI Asset Classes and improved capacity for scaling up investments in CRI in Africa			
2.1.1 Procurement of technical firms for detailed climate risk assessments, CRPI recommendations, engineering assessments of climate adaptation solutions for each ICRF projects	Yes	<ul style="list-style-type: none"> References to commitment to gender equality in the tender document Ensure that equal opportunities are provided to women and men in Experts appointment and recruitment through advertisement that strongly encourages women to apply and also by advertising through various channels 	ACP & ICRF Team	N/A
2.1.2 Capacity building for ICRF and AFC on climate risk assessment, adaptation solutions, and CRPI requirements for CRI Asset Classes	Yes	<ul style="list-style-type: none"> Commitment to prioritize women qualified consultants and to include the need for gender disaggregated data – wherever possible- in the various terms of reference 	ACF & ICRF Team and consultants	Included in the outcome 2 budget
2.1.3 1st level assessment for CRI Asset Classes project selection for ICRF investments, by the technical firms incl. climate risk assessment, embedding climate risk analytics, design for adaptation solution, incremental cost for adaption, economic and financial analysis,	Yes	<ul style="list-style-type: none"> Commitment to prioritize women qualified consultants and to include the need for gender disaggregated data – wherever possible- in the various terms of reference For all recruitment, ensure that equal opportunities are provided to women and men in Experts appointment and recruitment through 	ACF & ICRF Team and consultants	included in the outcome 2 budget

and CRPI requirements		advertisement that strongly encourages women to apply and also by advertising through various channels		
2.1.4 Managing development of the selected CRI Asset Classes projects for financial closure preparation incl. feasibility studies, economic and financial analysis, CRPI T&C recommendations	No			Included in the outcome 1 budget
2.1.5 Issuing RFP and support management of EPC open tender procurement	Yes	<ul style="list-style-type: none"> • Commitment to collaborate with partners that hold a high ESG standards including commitment to Gender equality • References to gender equality in the tender documents • Commitment to support women led company wherever possible • For all recruitment, ensure that equal opportunities are provided to women and men in Experts appointment and recruitment through advertisement that strongly encourages women to apply and also by advertising through various channels 	ACP and ICRF team	N/A
2.1.6 Overseeing construction and implementation of ICRF projects to ensure adaptation solutions deployed	Yes	<ul style="list-style-type: none"> • Commitment to promote gender equality • Commitment to collaborate with partners that hold a high ESG standards including commitment to Gender equality 	ACF Technical assistance	Included in the outcome 1 budget

		<ul style="list-style-type: none"> • Commitment to secure women ingenieur in the various teams- wherever possible • For all recruitment, ensure that equal opportunities are provided to women and men in Experts appointment and recruitment through advertisement that strongly encourages women to apply and also by advertising through various channels 		
2.1.7 Reassessment of CRPI requirements during construction and implementation phases	No			
2.1.8 Lessons learned are captured from ICRF CRI investments and roadmap for replication across the continent	No			
2.1.9 Training and knowledge sharing for public and private sector to raise awareness about existing and future climate change risks, and de-risking methodologies based on ICRF investments	Yes	<ul style="list-style-type: none"> • Commitment to collaborate with partners that hold a high ESG standards including commitment to Gender equality • Commitment to ensure gender balance participation in the capacity building and trainings activities • For all recruitment, ensure that equal opportunities are provided to women and men in Experts appointment and recruitment through advertisement that 	ACF and ICRF Team Technical assistance service providers; Gender expert	included in the outcome 2 budget

		strongly encourages women to apply and also by advertising through various channels		
Output 2.2	Implementation of M&E, EMSF, Gender Action plan for ICRF program			
Activities 2.2.1 Onboarding experts for M&E, EMSF, Gender Action plan implementation for ICRF program including Components 1, 2, and 3.	Yes	For all recruitment ensure that equal opportunities are provided to women and men in Experts appointment and recruitment through advertisement that strongly encourages women to apply and also by advertising through various channels	ACF consultants	Included in the outcome 2 budget
2.2.2 Design and approval of M&E, EMSF, Gender Action plan implementation	Yes	Integrate a gender-sensitive approach into baseline surveys, indicators and methodologies for continuous project monitoring and impact assessments	ACP and ICRF team and consultants in collaboration with Women Affairs and Social Development and relevant stakeholders of respective countries	= 10.000 *12 =120 000 USD ICRF action plan in PMC
2.2.3 Implementation of M&E, EMSF, Gender Action plan implementation	Yes	Collect and present sex-disaggregated statistics to measure enhanced access for women to assets, inputs and financial products, including insurance.	ACP and ICRF team and consultants in collaboration with Women Affairs and Social Development and relevant stakeholders of respective countries	= 10.000 *12 =120 000 USD ICRF action plan in PMC

Outcome 3 - Strengthened regulatory framework and enabling environment for investments in CRI Asset Classes in Africa.

	Entry point	Proposed intervention	Responsible	Estimated Budget and Source
Output 3.1 - Activities	Regulatory framework for new CRI Asset Classes and enabling environment are strengthened through standards, construction codes, and CRPI policies			
3.1.1 Procure consortium of legal and policymaking firms for improving regulatory framework for CRI Asset Classes and CRPI, and capacity building in the Program States	Yes		ACP and ICRF team and consultants in collaboration with Women Affairs and Social Development and relevant stakeholders of respective countries	
3.1.2 Engage with key proponents, public and private sector participants, civil societies to identify the regulatory gaps for investments in CRI Asset Classes, CRPI and initiate consultation process for recommendations report;	Yes	Collaborate in partnerships with Public and private sector actors to develop delivery channels that enhance the accessibility to financials asset to women, for example through a women's group or via digital distribution channels that overcome women's mobility constraints.	ACP and ICRF team and consultants; Gender expert; civil societies/women's associations	
3.1.3 Create a work group from the consortium of legal and policymaking firms for new CRI Asset Classes and construction codes implementation	Yes	Provide equal opportunities to women and men participation in expert groups	ACP and ICRF team and consultants in collaboration with Women Affairs and Social Development and relevant stakeholders of	

			respective countries	
3.1.4 Create and share recommendation reports for improving regulatory framework for CRI Asset Classes and CRPI per country	No			
3.1.5 Support legal regulatory and policy making process for CRI Asset Classes to implement the recommendations according to each country needs 3.1.6 Publish reports on achievements and the roadmap for further strengthening regulatory framework per country for CRI Asset Classes and CRPI	No			
3.1.7 Knowledge sharing with the public and private sector participants	Yes	<ul style="list-style-type: none"> • Ensure knowledge product include lessons learnt on gender and social considerations in ICRF • Provide equal opportunity for participation of men and woman in the events 	ACP and ICRF team and consultants	
Output 3.2 Activities	Opportunities for fiscal incentives are explored for CRI Asset Classes			

<p>3.2.1 Procure fiscal regulatory framework and policymaking firms for promoting fiscal incentives for CRI Asset Classes in the Program Countries</p>	<p>Yes</p>	<ul style="list-style-type: none"> • Commitment to collaborate with partners that hold a high ESG standards including commitment to Gender equality • References to gender equality in the tender documents • Commitment to support women led company wherever possible • For all recruitment, ensure that equal opportunities are provided to women and men in Experts appointment and recruitment through advertisement that strongly encourages women to apply and also by advertising through various channels 	<p>ACP and ICRF team and consultants</p>	
<p>3.2.2 Engage with key proponents, public and private sector participants, civil societies to identify the regulatory gaps for investments in CRI Asset Classes and initiate consultation process for recommendations report</p>	<p>Yes</p>	<p>Ensure consultations process engage both men and woman actors</p> <p>Budget for recruitment of gender and women at national level to support these consultations</p>	<p>ACP and ICRF team and consultants</p>	<p>=USD 10000*12 =USD 120000</p> <p>ICRF action plan PMC</p>

3.2.3 Create and share recommendation reports per country for CRI	Yes	Commitment to capture lessons on gender considerations in ICRF	ACP and ICRF team	Included in the outcome 3 budget
3.2.4 Support legal regulatory and policy-making process to implement the recommendations according to each Country's needs	Yes	Commitment to capture lessons on gender considerations in ICRF	ACP and ICRF team and consultants in collaboration with Women Affairs and Social Development and relevant stakeholders of respective countries	Included in the outcome 3 budget

X. GENDER ACTION PLAN

At the beginning of each project, further gender analyses will be undertaken by the promoters to identify (i) gender disparities that may affect the success of these projects; (ii) the opportunities offered by projects to improve women's access to essential infrastructure, economic opportunities and, above all, decision-making, which they are often victims of; and (iii) at the end of specific indicators, or other mechanisms to ensure that women and men are included at and benefit from all stages of the project.

For the implementation of the action plan described below, a call for tenders will be launched to establish a shortlist of reputable companies covering a wide range of expertise in order to strengthen AFC's sustainability practices. Thus, gender will be covered as part of the expertise mobilized. From this process, the AFC will have a roster of gender equality experts to review gender assessments submitted by sub-project proponents. The criteria for competition of experts will be identified by applying the principles of inclusion, equal opportunity and non-discrimination with regard to the selection of consultation files.

However, for equitable access to procurement opportunities for women-owned businesses, an invitation to these women-led stakeholder companies or those committed to gender and the advancement of women to apply – will be duly taken into account in the selection process to ensure equal opportunities. At the same time, an activity (2.1.5.) is devoted to issuing calls for tenders and supporting the management of open tenders. Companies are selected on a rigorous competitive basis and on the basis of their track record in infrastructure construction.

Over the life of the Fund (20 years), ICRF will have to invest in 15 to 20 projects. Thus, for each project to be approved by ICRF, the project proponent will submit a comprehensive documentation that will include a detailed gender and social inclusion assessment and an action plan including a budget for the implementation of the associated action plan. This will be the gender analysis at the project level.

Activities	Indicators and Targets	Timeline	Responsibilities	Costs
<p>Impact Statement: Increased climate resilience of infrastructure in the ICRF African countries optimizing the opportunity of the program to address gender inequalities by increasing women's access to reliable energy, transportation and telecommunication services.</p> <p>Outcome Statement: In addition to promote infrastructure that will advance gender equality but will be implemented through a strong gender approach ensuring equal opportunity, equal voice, balance representation, use of disaggregated data are mainstreamed in the implementation of the program. AFC, ACP and ICRF Team will advocate and raise awareness of women's empowerment at different levels of engagement. Lessons learnt from gender consideration in ICRF will be captured and documented as part of the knowledge products prepared under ICRF. In addition to the Fund's budget, additional budget from sub projects sponsors will be assigned to ensure dedicated gender experts are hired to ensure effective gender consideration in implementation.</p>				
<p>Output(s) Statement: ICRF will focus on 4 key areas (Climate Resilient Transportation and Logistics; Climate-Resilient Energy Systems; Climate-resilient economic zones; and Climate Resilient Digital and Telecommunications Infrastructure) and pursues the following outcomes:</p> <ul style="list-style-type: none"> (a) Strengthen the capacity of the ICRF to raise capital at the fund level for investments in resilient infrastructure (b) Eliminate risk to the IRC asset classes by raising large-scale commercial capital. (c) Launch a parametric climate risk insurance (CRPI) system for IRC asset classes. (d) Collaborate with a partner that holds strong ESG standards including commitment to gender equality 				
<p>Outcome x :</p>				
<p>Output 1.1 - Parametric insurance: ICRF launches climate-risk parametric insurance (CRPI) scheme for CRI Asset Classes.</p>				
<p>1.1.1 ICRF structure and registration</p>	<p>1.1.1.1 Total and share of women-led organizations listed as ICRF inventors</p>	<p>Prior and during The project implementation Year 1 to Year 10</p>	<p>Executing entity (EE) and ACP senior management;</p>	<p>N/A</p>

Activities	Indicators and Targets	Timeline	Responsibilities	Costs
	Target [On best effort] 1.1.1.2. % of suppliers included in the project; 1.1.1.3 % of policies adopted and of; GCF funding received			
1.1.5 Negotiate and close LPs commitments.	1.1.5.1 Total and share of women-led partners collaborating with ICRF (women as the head of the institutions and or as the lead contact person on ICRF engagement) Target [On best effort] 1.1.5.2. Number of women included in the negotiation of commitments	On a rolling basis, as subprojects come through Year 1 to Year 10	ACP and ICRF team	N/A
1.3.2 Engaging with insurance companies to negotiate premiums and payouts for CRPI, simplifying access for the market;	1.3.2.1 Total and share of women on ICRF Committees and Board (ACP to provide) Target [30% to 50%] 1.3.2.2 Total and share of women-led partners collaborating with ICRF (women as the head of the institutions and or as the lead contact person on ICRF engagement) Target [30% to 50%]	Prior and during the project implementation Year 1 to Year 20	ACP and ICRF team ICRF Partners and consultants	Include in the outcomes 2 and 3 budget
Output 2.1: Deployment of climate risk assessments and adaptation solutions for ICRF investments in CRI Asset Classes and improved capacity for scaling up investments in CRI in Africa				

Activities	Indicators and Targets	Timeline	Responsibilities	Costs
<p>Technical assistance (TA) to sponsors in the integration of climate risks into the design and construction of projects; in the development of standardized codes for climate-resilient infrastructure.</p>	<p>The systematic and long-term approach to infrastructure financing in Africa is ensured through ethnic assistance;</p> <p>Gaps are identified and filled and capacity to collect, disseminate data on climate risk and climate change is strengthened;</p> <p>Climate risk assessment and adaptation solutions with climate innovations for CRI asset classes are deployed;</p> <p>Creating an enabling environment for IRC expansion in Africa</p>	<p>Year 1 to Year 20</p> <p>Collection, processing, and dissemination of data on climate risks and climate change.</p>	<p>GCF</p>	<p>Included in outcome 2 budget</p>
<p>2.1.1 Procurement of technical firms for detailed climate risk assessments, CRPI recommendations, engineering assessments of climate adaptation solutions for each ICRF projects</p>	<p>2.1.1.1 Total and share of women-led partners collaborating with ICRF (women as the head of the institutions and or as the lead contact person on ICRF engagement</p> <p>Target [30% to 50%]</p> <p>2.1.1.2. % of women-led technical firms for climate risk assessment and adaptation solutions.</p>	<p>During the project implementation</p> <p>Year 1 to Year 5</p>	<p>ACP & ICRF Team</p>	<p>N/A</p>
<p>2.1.2 Capacity building for ICRF and AFC on climate risk assessment, adaptation solutions, and CRPI requirements for CRI Asset Classes</p>	<p>2.1.2.1 Number of trainings and workshops for designated CFA and CRPI teams;</p>	<p>During the project implementation</p> <p>Year 1 to Year 20</p>	<p>Executing entity (EE) & ICRF Team and consultants</p>	<p>Included in the outcome 2 budget</p>

Activities	Indicators and Targets	Timeline	Responsibilities	Costs
	2.1.2.2. Total and share of women in top-level positions in AFC and ACP (ACP to provide) Target [30% to 50%]			
2.1.3 1st level assessment for CRI Asset Classes project selection for ICRF investments, by the technical firms incl. climate risk assessment, embedding climate risk analytics, design for adaptation solution, incremental cost for adaption, economic and financial analysis, and CRPI requirements	2.1.3.1 Total and share of women-led partners collaborating with ICRF (women as the head of the institutions and or as the lead contact person on ICRF engagement) Target [On best effort] 2.1.3.2. % of women on the ICRF Investment Committee for project selection 2.1.3.3. % of women involved in making recommendations on adaptation solutions for CRI asset classes	During the project implementation Year 1 to Year 5 Year 2 to Year 20	EE & ICRF Team and consultants EE & ICRF Team and consultants	
2.1.5 Issuing RFP and support management of EPC open tender procurement	2.1.5.1. Number of women-led enterprises recruited; 2.1.5.2. Number of female-led technical firms contributing to the EPC bidding for ICRF projects; 2.1.5.3. Total and share of women on ICRF Committees and Board (ACP to provide). Target [20% to 50%]	During the project implementation Year 1 to Year 5 Year1 to year 20	EE & ICRF Team EPC; Gender expert EE	

Activities	Indicators and Targets	Timeline	Responsibilities	Costs
	2.1.5.4. % of women on the EPC contract review team for deployment of adaptation solutions	Year1 to year5	EPC; Gender expert	
2.1.6 Overseeing construction and implementation of ICRF projects to ensure adaptation solutions deployed	2.1.6.1 Total and share of women as speakers and participants invited or selected for training, 2.1.6.2. Number of policies strengthened or developed with respect to gender equality and climate change; 2.1.6.3. % of technical enterprises run by women to oversee the construction and completion phases of acceptance	During the project Year 1 to Year 5 Year 2 to year 20 Year 1 to Year 5	EE Technical assistance service providers;	
2.1.7 Reassessment of CRPI requirements during construction and implementation phases	2.1.7.1 conferences, panels, and workshops (review of the speakers-participants list) Target [40% to 50%] 2.1.7.2.Gaps are filled and the capacity of the actors involved is strengthened	Year 1 to Year 20 Annual evaluation	EE and ICRF Team Technical assistance service providers; Gender expert;	included in the outcome 2 budget

Activities	Indicators and Targets	Timeline	Responsibilities	Costs
<p>2.1.9 Training and knowledge sharing for public and private sector to raise awareness about existing and future climate change risks, and de-risking methodologies based on ICRF investments</p>	<p>2.1.9.1 Total and share of women consultants contracted for ICRF implementation Target [40% to 50%]</p> <p>2.1.9.2. Number of women-led enterprises or women's organizations that have benefited from the training and participated in the collaborative process</p> <p>2.1.9.3. Annual/country reporting on CRI investments for replication</p>	<p>Year 2 to Year 20 Annual evaluation</p> <p>Annual data will be disaggregated on climate risk assessments and adaptation solutions</p>	<p>EE and ICRF Team Technical assistance service providers; Gender expert; All countries</p>	<p>included in the outcome 2 budget</p>
<p>Output 2.2: Implementation of M&E, EMSF, Gender Action plan for ICRF program</p>				
<p>2.2.1 Onboarding experts for M&E, EMSF, Gender Action plan implementation for ICRF program including</p>	<p>2.2.1.1 Number of monitoring and assessment report including gender analysis Target [100%] % of women gender experts included in the evaluation</p>	<p>Year 1 to Year 20 during the project implementation</p>	<p>EE and ICRF Team Gender expert; ACF consultants; All countries</p>	<p>included in the outcome 2 budget = 10.000 *18</p>
<p>2.2.2 Design and approval of M&E, EMSF, Gender Action plan implementation</p>	<p>2.2.2.1 Percentage of projects/programs that have integrated gender expertise into project preparation, monitoring, and evaluation; 2.2.2.2. Number of reports showing sex-disaggregated data</p>	<p>during the project implementation Year 1 to Year 5 Year 2 to Year 20</p>	<p>ACP and ICRF team and consultants in collaboration with Women Affairs and Social Development and relevant stakeholders of respective countries; Gender Expert</p>	<p>=180 000 USD ICRF action plan in PMC</p>

Activities	Indicators and Targets	Timeline	Responsibilities	Costs
	2.2.2.3 Percentage of monitoring and evaluation reports that include a gender perspective.		ACP Program	
<p>Output 3.1 Regulatory framework and enabling environment: Regulatory framework for new CRI Asset Classes and enabling environment are strengthened through standards, construction codes, and CRPI policies</p>				
<p>3.1.2 Engage with key proponents, public and private sector participants, civil societies to identify the regulatory gaps for investments in CRI Asset Classes, CRPI and initiate consultation process for recommendations report;</p>	<p>3.1.2.1 Preparation of the initial mapping of relevant organizations and networks engaged in infrastructure and climate change in Africa. Identification of organizations;</p> <p>3.1.2.2. Total and share of women women's organizations participants engaged in consultations</p> <p>3.1.2.3. % of women-led businesses in stakeholder groups Identified to hold consultations on gaps and opportunities to improve the regulatory framework for CRI asset classes by country;</p>	<p>During the project implementation Year 1 to Year 3</p> <p>Throughout the project:</p> <p>For years 2 to the last year of the project, a regional meeting will be organized for the sharing of experiences</p>	<p>EE and ICRF team and consultants; Gender expert; civil societies/ women's associations All countries</p>	
<p>3.1.3 Create a work group from the consortium of legal and policymaking firms for new CRI Asset Classes and construction codes implementation</p>	<p>3.1.3.1 Number of gender focused capacity building workshops for all countries</p> <p>3.1.3.2. The legal and regulatory capacity of ICRF States in the area of building codes is strengthened.</p>		<p>EE and ICRF team and consultants; Gender expert; civil societies/ women's associations All countries</p>	

Activities	Indicators and Targets	Timeline	Responsibilities	Costs
	<p>3.1.3.3. Terms of reference for tendering in accordance with FTA's procurement policy are issued</p> <p>3.1.3.4. Number of women-led expert firms selected for capacity building.</p>			
<p>3.1.7 Knowledge sharing with the public and private sector participants</p>	<p>3.1.7.1 Capacity building and new experience for 100% of women-led partners collaborating with ICRF</p> <p>3.1.7.2. 20-50% of women-led businesses benefit from knowledge sharing.</p>		<p>EE and ICRF team and consultants;</p> <p>Gender expert;</p> <p>civil societies/ women's associations</p> <p>All countries</p>	
<p>Output 3.2: Opportunities for fiscal incentives are explored for CRI Asset Classes</p>				
<p>3.2.1 Procure fiscal regulatory framework and policymaking firms for promoting fiscal incentives for CRI Asset Classes in the Program Countries</p>	<p>3.2.1.1 Percentage of women-led firms responsible for developing policies to promote tax incentives for CRI asset classes in participating countries</p> <p>3.2.1.2. Number of women-led firms applying for tender</p> <p>3.2.1.3. Number of women-led firms selected.</p>	<p>During the project implementation</p> <p>Year 1 to Year 3</p>	<p>EE and ICRF team and consultants;</p>	

Activities	Indicators and Targets	Timeline	Responsibilities	Costs
<p>3.2.2 Engage with key proponents, public and private sector participants, civil societies to identify the regulatory gaps for investments in CRI Asset Classes and initiate consultation process for recommendations report</p>	<p>3.2.2.1 Number of project proposals which have included 'gender'</p> <p>3.2.2.2. Number of consultation reports with key proponents of IRC's asset classes;</p>	<p>During the project implementation</p> <p>Year 1 to Year 3</p>	<p>EE and ICRF team and consultants;</p> <p>Gender expert;</p> <p>civil societies/ women's associations</p> <p>All countries</p>	
<p>3.2.3 Create and share recommendation reports per country for CRI</p>	<p>3.2.3.1 Country ownership capacity is increased</p> <p>3.2.3.2. % of experts are women for the recommendation report</p>	<p>During the project implementation</p> <p>Year 1 to Year 3</p>	<p>EE and ICRF team and consultants;</p> <p>Gender expert;</p> <p>civil societies/ women's associations</p> <p>All countries</p>	
<p>3.2.4 Support legal regulatory and policy-making process to implement the recommendations according to each Country's needs</p>	<p>3.2.4.1.Total and share of women as speakers and participants invited or selected for training, conferences, panels, and workshops (review of the speakers-participants list)</p> <p>3.2.4.2. % of women in country offices and in the AND team</p> <p>3.2.4.2.% Formulation of policy recommendations for CRI asset classes</p>	<p>During the project implementation</p> <p>Year 1 to Year 3</p>	<p>EE and ICRF team and consultants;</p> <p>Gender expert;</p> <p>civil societies/ women's associations</p> <p>All countries</p>	

ANNEXES

Annexe 1

Gender and social inclusion survey for Infrastructure Projects (This questionnaire is intended for groups or associations of women beneficiaries of the ICRF project.)

Section A: General information		
Code	Description	Response
A01	Please name your organization or association _____	
A02.	Please put the e-mail of the organization if possible _____	
A03	Please enter the date _____	
A04	Please select your country of residence or location of the survey _____	
A05	Which industry are you directly or indirectly engaged in? 1- Transport (port, airport, public works (road, bridges) 2- Telecommunications 3- Industry (essentially industrial parks, Heavy Industry) 4- Energy	|__|

Section B-1: Project Objectives and Target Group	
<p>Note. Throughout this questionnaire, please refer to the following infrastructure: Transportation infrastructure (Roads; Railroads; Ports; Airports; Bridges); Energy infrastructure (power grids, photovoltaic plants; solar thermal; Wind power; Geothermal energy); Industrial infrastructure(Cement</p>	

<i>factories; electronic industries; electrical industries; textile industries; chemical industries); Telecommunication infrastructure (fiber optics, cable trays).</i>			
B01	Does the infrastructure project design acknowledge that women and men may have different needs and priorities in their use of infrastructure? 1. Yes 2. No	|_ |	
B02.	Do you think that women's need was considered in the infrastructure design in your country, region or locality? 1. Yes 2. No	|_ |	If B2 is No, go to B4
B03	If yes, please list some of the needs that have addressed.		
B04	What are the constraints and barriers to women's participation in infrastructure project activities and access to the benefits of these projects? 1. Gender-based discriminatory practices 2. Lack of educational and training opportunities. 3. Lack of gender-specific policies and benefits 4. Reluctance to include women in the workforce 5. Lack of anti-discrimination protections 6. Other	|_ | |_ | |_ | |_ | |_ | |_ |	
B05	If there are other constraints and barriers, please add them here. _____		
B06	Do infrastructure projects in your country/region/locality take into account the tasks performed by women that could be affected (such as transporting food and other goods to market, collecting fuel and water)? 1. Yes 2. No	|_ |	If B6 is No, go to section C

B07	Have women or groups of women been consulted and involved in decision-making about the location or infrastructure that is provided in your area? 1. Yes 2. No	|_ |	
B08	If yes, give one or more examples of infrastructure projects where women were consulted.		

Section C. Access; control of resources; control of the benefits and project impacts			
C01	Are there opportunities for women to be employed and trained in the construction and operation of infrastructure in your country? 1. Yes 2. No	|_ |	
C02.	Will infrastructure construction restrict women's access to resources needed to carry out their tasks? 1. Yes 2. No	|_ |	
C03	Will location, price, and other resources necessary for using the infrastructure restrict poor women's access? 1. Yes 2. No	|_ |	
C04	Have support services for women to encourage their participation in infrastructures projects been considered? (e.g., childcare, health care, a nearby school) 1. Yes 2. No	|_ |	
C05	Please add additional information to your answer if possible _____		

Section D: Participation and consultation strategies			
D01	<p>Have strategies been identified to address constraints to women's participation and benefits in infrastructure projects?</p> <p>1. Yes 2. No</p>	|_ |	If D1 is No, go to D4
D02.	<p>If so, what are these strategies?</p> <p>1. Capacity building and women's empowerment 2. Develop mechanisms to visualize the positive image of women in the implementation of infrastructure projects 3. To constitute a data bank on all women capable of occupying positions of responsibility throughout the different life cycles of the infrastructures; 4. Capacity building for women involved in decision making at all stages of the infrastructure life cycle through training in decision making, leadership, and development 5. Improved capacity of institutions and organizations in governmental and non-governmental mechanisms that work for women 6. Adoption of human resource policies and practices to promote a balanced workforce when installing or building infrastructure 7. Implementation of procurement policies to ensure that women or women-led organizations can participate in the infrastructure value chain (transport, energy, industry, telecommunications) 8. Other</p>	|_ | |_ | |_ | |_ | |_ | |_ | |_ | |_ |	
D03	<p>If there are other strategies, please add them here</p> <p>_____</p> <p>_____</p>		
D04	<p>Have women been both participants and beneficiaries of infrastructure projects in your country or locality?</p> <p>1. Yes 2. No</p>	|_ |	

D05	<p>If so, give some examples of projects</p> <p>_____</p>	|_|	
D06	<p>Do women and men have equal access to infrastructure projects and decision-making?</p> <p>1. Yes 2. No</p>		
D07	<p>How do women or women's groups participate in planning infrastructure projects without being disadvantaged by the project? <i>(Please provide more information and detail in your response)</i></p> <p>_____</p>		
	<p>List any separate activities that you feel are necessary for women to ensure that they participate and are not disadvantaged by the infrastructures projects? <i>(Please provide more information and detail in your response)</i></p> <p>_____</p>		

Section E: Women's Social Status and Role as Decision Makers		
E01	<p>Are women and women's groups consulted and involved in decision-making about the location or type of infrastructure that is provided in your locality/region/country?</p> <p>1. Yes 2. No</p>	|_ |
E02.	<p>What opportunities does the project have to support women as infrastructure managers in formal or informal ways?<i>(Please provide more information and detail in your response)</i></p> <p>_____</p> <p>_____</p>	|_ | |_ | |_ | |_ | |_ | |_ | |_ | |_ |
E03	<p>What practical needs and strategic interests of women are addressed in the infrastructure projects developed in your region?</p> <p>1. The establishment of practical tools to facilitate the consideration of gender in interventions related to sustainable infrastructure projects</p> <p>2. Establishment of a women's boarding school near industrial infrastructures</p> <p>3. The training of "gender officers" in charge of implementing and monitoring the action plan and supporting gender mainstreaming in infrastructure projects</p> <p>4. Other</p>	
E04	<p>Is there one or more ongoing consultations with community groups, including women's groups, directly or indirectly involved in infrastructure projects in the country/region or locality?</p> <p>1. Yes 2. No</p>	

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