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Report No: PAD5038

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED LOAN

IN THE AMOUNT OF EURO 64.6 MILLION

(US$70 MILLION EQUIVALENT)

AND A

GRANT

IN THE AMOUNT OF US$12 MILLION

FROM THE GLOBAL PARTNERSHIP FOR SUSTAINABLE AND RESILIENT LANDSCAPES (PROGREEN)

TO THE

REPUBLIC OF CONGO

FOR A

CLIMATE-RESILIENT AND INCLUSIVE LIVELIHOODS PROJECT (PROCLIMAT CONGO)

March 1, 2023

Environment, Natural Resources and the Blue Economy Global Practice
Western and Central Africa Region

CURRENCY EQUIVALENTS
(Exchange Rate Effective January 31, 2023)

Currency Unit = CFA Franc (CFAF)
Euro

CFAF 605.29 = US$1

Euro 0.9227646 = US$1

FISCAL YEAR
January 1 – December 31

ABBREVIATIONS AND ACRONYMS

ACFAP	Congolese Agency for Wildlife and Protected Areas (*Agence Congolaise de la Faune et des Aires Protégées*)
AFD	French Development Agency (*Agence Française de Développement*)
ANAC	National Agency for Civil Aviation *(Agence Nationale de l'Aviation Civile)*
CAFI	Central African Forest Initiative
CBA	Cost-Benefit Analysis
CCAP	Climate Change Action Plan
CDD	Community-Driven Development
CE	Citizen Engagement
CEA	Cost-Effectiveness Analysis
CERC	Contingent Emergency Response Component
CPF	Country Partnership Framework
CSAIP	Climate Smart Agriculture Investment Plan
DA	Designated Account
DFIL	Disbursement and Financial Information Letter
ERP-SL	Emission Reductions Program in Sangha and Likouala
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and Social Framework
ESMF	Environmental and Social Management Framework
ESS	Environmental and Social Standards
EWRS	Early Warning and Response System
EX-ACT	Ex-Ante Carbon-balance Tool
FAO	Food and Agriculture Organization
FCV	Fragility, Conflict, and Violence
FM	Financial Management
GBV	Gender-Based Violence
GCRF	Global Crisis Response Framework
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHG	Greenhouse Gas
GIS	Geographic Information System

GRID	Green, Resilient, and Inclusive Development
GRM	Grievance Redress Mechanism
ICB	International Competitive Bidding
IFR	Interim Financial Report
IP	Indigenous People
IPCC	Intergovernmental Panel on Climate Change
IPF	Investment Project Financing
IPLCs	Indigenous People and Local Communities
ISP	Implementation Support Plan
LMP	Labor Management Procedures
LSO	Landscape Satellite Office
LUCF	Land-Use Change and Forestry
M&E	Monitoring and Evaluation
MAEP	Ministry of Agriculture, Livestock, and Fisheries (*Ministère de l'Agriculture, de l'Elevage, et de la Pêche*)
MATIER	Ministry of Territorial Management, Infrastructure, and Road Maintenance (*Ministère de l'Aménagement du Territoire, des Infrastructures et de l'Entretien Routier*)
MDB	Multilateral Development Bank
MEDDBC	Ministry of Environment, Sustainable Development, and the Congo Basin (*Ministère de l'Environnement, du Développement Durable et du Bassin du Congo*)
MEF	Ministry of Forest Economy (*Ministère de l'Economie Forestière*)
METT	Management Effectiveness Tracking Tool
MIS	Monitoring Information System
MPSIR	Ministry of Planning, Statistics, and Regional Integration (*Ministère du Plan, de la Statistique et de l'Intégration Régionale*)
MSMEs	Micro-, Small-, and Medium-Sized Enterprises
MTR	Midterm Review
NDC	Nationally Determined Contribution
ND-GAIN	Notre Dame Global Adaptation Initiative
NDP	National Development Plan
NG-ACBP	Next Generation Africa Climate Business Plan
NGO	Nongovernmental Organization
NPV	Net Present Value
NTFP	Non-Timber Forest Product
OHADA	Organization for the Harmonisation of Business Law in Africa
PAD	Project Appraisal Document
PANC	Northern Congo Agroforestry Project (*Projet d'Agroforesterie dans le Nord du Congo*)
PASD	Promotion of Sustainable Livelihoods in the Pool Department Project (*Projet d'Appui à la Promotion des Moyens de Subsistance Durables*)
PDAC	Commercial Agriculture Project (*Projet d'Appui au Développement de l'Agriculture Commerciale*)
PDO	Project Development Objective
PFDE	Forest and Economic Diversification Project (*Projet Forêt et Diversification Économique*)
PFM	Public Financial Management
PIM	Project Implementation Manual
PIP	Project Investment Plan

PIU	Project Implementation Unit
PPM	Project Procurement Plan
PPSD	Project Procurement Strategy for Development
ProClimat	Climate-Resilient and Inclusive Livelihoods Project
PUDT	Sustainable Land Use Program (*Programme d'Utilisation Durable des Terres*)
PV	Present Value
RCP	Representative Concentration Pathway
REDD+	Reducing Emissions from Deforestation and Forest Degradation and the role of conservation, sustainable management of forests, and enhancement of forest carbon stocks in developing countries
SBD	Standard Bidding Document
SEA	Sexual Exploitation and Abuse
SEP	Stakeholder Engagement Plan
SH	Sexual Harassment
STEP	Systematic Tracking of Exchanges in Procurement
TC	Technical Committee
ToR	Terms of Reference
UNHCR	United Nations High Commissioner for Refugees
WBG	World Bank Group
WFP	World Food Programme

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DATASHEET

BASIC INFORMATION

Country(ies)	Project Name	
Congo, Republic of	Climate-Resilient and Inclusive Livelihoods Project (ProClimat Congo)	
Project ID	**Financing Instrument**	**Environmental and Social Risk Classification**
P177786	Investment Project Financing	Substantial

Financing & Implementation Modalities

[ ] Multiphase Programmatic Approach (MPA)	[✓] Contingent Emergency Response Component (CERC)
[ ] Series of Projects (SOP)	[✓] Fragile State(s)
[ ] Performance-Based Conditions (PBCs)	[ ] Small State(s)
[ ] Financial Intermediaries (FI)	[ ] Fragile within a non-fragile Country
[ ] Project-Based Guarantee	[ ] Conflict
[ ] Deferred Drawdown	[ ] Responding to Natural or Man-made Disaster
[ ] Alternate Procurement Arrangements (APA)	[ ] Hands-on Enhanced Implementation Support (HEIS)

Expected Approval Date	Expected Closing Date
23-Mar-2023	31-May-2028

Bank/IFC Collaboration

No

Proposed Development Objective(s)

To strengthen landscape management and increase the use of improved livelihood activities in targeted communities

Components

Component Name	Cost (US$, millions)

Strengthening Capacity of Institutions and Promoting Social Cohesion	11.50
Strengthening Investments in Sustainable and Resilient Agriculture and Natural Capital Management	40.00
Promoting Inclusive, Climate-resilient Livelihoods and Value Chains	23.50
Project Management, Monitoring, and Evaluation	7.00
Contingent Emergency Response	0.00

Organizations

Borrower:	Republic of Congo
Implementing Agency:	Republic of Congo - Ministry of Planning, Statistics, and Regional Integration

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	82.00
Total Financing	82.00
of which IBRD/IDA	70.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Bank for Reconstruction and Development (IBRD)	70.00

Non-World Bank Group Financing

Trust Funds	12.00
Global P'ship for Sust. and Resilient Landscapes - PROGREEN	12.00

Expected Disbursements (in US$, Millions)

WB Fiscal Year	2023	2024	2025	2026	2027	2028	2029
Annual	0.00	6.00	12.00	17.00	17.00	14.00	4.00
Cumulative	0.00	6.00	18.00	35.00	52.00	66.00	70.00

INSTITUTIONAL DATA

Practice Area (Lead)

Environment, Natural Resources & the Blue Economy

Contributing Practice Areas

Agriculture and Food, Social Sustainability and Inclusion

Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	Moderate
2. Macroeconomic	Substantial
3. Sector Strategies and Policies	Moderate
4. Technical Design of Project or Program	Moderate
5. Institutional Capacity for Implementation and Sustainability	Substantial
6. Fiduciary	Substantial
7. Environment and Social	Substantial
8. Stakeholders	Moderate
9. Other	
10. Overall	Substantial

COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

[ ] Yes [✓] No

Does the project require any waivers of Bank policies?

[ ] Yes [✓] No

Environmental and Social Standards Relevance Given its Context at the Time of Appraisal

E & S Standards	Relevance
Assessment and Management of Environmental and Social Risks and Impacts	Relevant
Stakeholder Engagement and Information Disclosure	Relevant
Labor and Working Conditions	Relevant
Resource Efficiency and Pollution Prevention and Management	Relevant
Community Health and Safety	Relevant
Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Relevant
Biodiversity Conservation and Sustainable Management of Living Natural Resources	Relevant
Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Relevant
Cultural Heritage	Relevant
Financial Intermediaries	Not Currently Relevant

NOTE: For further information regarding the World Bank's due diligence assessment of the Project's potential environmental and social risks and impacts, please refer to the Project's Appraisal Environmental and Social Review Summary (ESRS).

Legal Covenants

Sections and Description
The Borrower shall, no later than three (3) months after the Effective Date, establish and maintain a high-level inter-ministerial steering committee ("Steering Committee") at all times during Project implementation. (Section I.A.2. of Schedule 2 of the Loan Agreement and the Grant Agreement)

Sections and Description
The Borrower shall, no later than five (5) months after the Effective Date, establish, hold the first meeting, and thereafter maintain at all times during the Project implementation period, an inter-agency technical committee ("Technical Committee") with functions, composition and resources satisfactory to the Bank. (Section I.A.3. of Schedule 2 of the Loan Agreement and the Grant Agreement)

Sections and Description
The Borrower, through the PIU shall, not later than three (3) months after the Effective Date, recruit and retain at all times during Project implementation: (i) a social safeguards specialist; (ii) an environmental specialist; and (iii) a

GBV specialist; all with terms of reference, qualifications and experience satisfactory to the Bank. (Section I.A.4.(d) of Schedule 2 of the Loan Agreement and the Grant Agreement)

Sections and Description

In order to ensure proper coordination and implementation of Project activities, the Borrower shall, not later than three (3) months after the Effective Date, create and, thereafter, maintain at all times during the Project implementation period, a Landscape Satellite Office ("LSO") in each landscape. (Section I.A.5.(a) of Schedule 2 of the Loan Agreement and the Grant Agreement)

Sections and Description

The Borrower shall, not later than six (6) months after the Effective Date, recruit and retain at all times during Project implementation a safeguards specialist in each LSO. (Section I.A.5.(b) of Schedule 2 of the Loan Agreement and the Grant Agreement)

Sections and Description

The Borrower shall, no later than one (1) month after the Effective Date, prepare and adopt a manual in form and substance satisfactory to the Bank which shall include detailed arrangements and procedures for implementation of the Project ("Project Implementation Manual" or "PIM"). (Section I.B.1. of Schedule 2 of the Loan Agreement and the Grant Agreement)

Sections and Description

For purposes of assisting the Borrower in the provision of Sub-grants and Matching Grants under Part 3 of the Project, the Borrower shall appoint, no later than nine (9) months after the Effective Date, a TPM Agency, with terms of reference, qualifications and experience satisfactory to the Bank. (Section G. of Schedule 2 of the Loan Agreement and the Grant Agreement)

Sections and Description

Per ESCP, prepare, disclose, consult upon and adopt the GBV action plan no later than six (6) months after effectiveness, and thereafter implement the SEA/SH Action Plan throughout Project implementation.

Sections and Description

Per ESCP, adopt the SEA/SH Action Plan no later than six (6) months after effectiveness, and thereafter implement the SEA/SH Action Plan throughout Project implementation.

Sections and Description

Per ESCP, establish the grievance mechanism not later than six (6) months after the Effective Date, and thereafter maintain and operate the grievance mechanism throughout Project implementation.

Sections and Description

Per ESCP, ESF briefing session during the launching workshop, and ESCP and SEP: not later than one (1) month from the effective date.

Conditions

Type	Financing source	Description
Effectiveness	IBRD/IDA	The PROGREEN Grant Agreement has been executed and delivered and all conditions precedent to the effectiveness of said agreement (except for the execution and effectiveness of this Agreement) have been fulfilled. (Article IV.4.01(a) of the Loan Agreement)
Effectiveness	Trust Funds	The Loan Agreement has been executed and delivered and all conditions precedent to its effectiveness or to the right of the Recipient tomake withdrawals under it (other than the effectiveness of this Agreement) have been fulfilled. (Article IV.4.01 of the Grant Agreement)
Effectiveness	Trust Funds, IBRD/IDA	The Borrower has established the Project Implementation Unit and recruited its key staff, including: (i) a Project coordinator; (ii) a financial management specialist; and (iii) a procurement specialist; each on the basis of terms of reference, qualification and experience acceptable to the Bank. (Article IV.4.01(b) of the Loan Agreement)
Disbursement	Trust Funds, IBRD/IDA	No withdrawal shall be made under Category (2) until and unless the Bank has received evidence that: the Borrower has: (i) recruited at least one Service Provider under a Service Agreement to implement PIP Microprojects; and (ii) adopted a PIP Manual, prepared by a Service Provider, in form and substance satisfactory to the Bank
Disbursement	Trust Funds, IBRD/IDA	No withdrawal shall be made under Category (3) until and unless the Bank has received evidence that the Borrower has: (i) recruited at least one Service Provider under a Service Agreement to administer and monitor Sub-projects, Sub-grants and/or Matching Grants; and (ii) adopted a Grant Manual, prepared by a Service Provider, in form and substance satisfactory to the Bank

I. STRATEGIC CONTEXT

A. Country Context

1. **The Republic of Congo is a lower-middle-income country in Central Africa with a gross domestic product (GDP) per capita of US$2,214 (2021).** Located in the Congo River Basin, its population of 5.6 million is growing rapidly, at around 2.5 percent per year.[1] With a total surface area of 342,000 km^2, Congo has one of the lowest population densities in the world (15.8 people per km^2). Two-thirds of its inhabitants, however, live in Congo's urban areas, mainly the capital of Brazzaville and the oil-producing region of Pointe-Noire.

2. **Congo's economic activity has been picking up in 2022 but has yet to recover from the fallout of the recent crises, illustrating the vulnerability of its undiversified economy to external shocks.** The removal of most COVID-19 restrictions in 2022 has helped strengthen the recovery in the non-oil sector, especially for services. As a commodity exporter, Congo is currently benefiting from higher oil prices linked particularly to Russia's invasion of Ukraine. The resulting increase in government revenues together with a moderation in public spending led to a fiscal surplus estimated at 1.4 percent of GDP (compared to a deficit in 2020). Higher oil prices, improved debt management, and debt restructuring agreements with two of Congo's three largest oil traders helped restore debt sustainability in the second half of 2021 as public debt fell sharply from 113.2 percent of GDP in 2020 to 102.2 percent of GDP in 2021. In the medium term, global changes in the markets for fossil fuels may negatively affect Congo's economy. While oil will remain an important energy source for the next few decades, the transition to a low-carbon economy globally is expected to permanently reduce oil demand starting around 2040. Lower global oil prices and reduced investment in Congo's oil fields are expected to negatively affect oil revenues and exports.

3. **The socioeconomic challenges that households and businesses face in Congo have been exacerbated by the economic contraction in 2020, especially in the rural areas.** With real GDP per capita falling by an estimated 4.6 percent in 2021, the poverty rate is estimated to have further increased, reaching 52 percent in 2021. Inflation remained contained in 2021, but disruptions in global supply chains and high international commodity and agricultural prices exerted inflationary pressures on domestic food prices, which increased by about 3.4 percent, particularly affecting the poor. With Russia's invasion of Ukraine, food prices have risen further in 2022, exacerbating food insecurity. Inequality levels also remain high by global comparison: non-inclusive growth has contributed to high inequality as seen in Congo's Gini coefficient of 0.489.[2] Income inequality is borne out spatially in the starkly different living standards experienced in Congo's urban and rural areas. The poverty reduction experienced between 2005 and 2011 was concentrated in urban areas, while the depth and severity of poverty was increasing in rural areas. Although the overall number of poor people decreased from 1.8 million in 2005 to 1.6 million in 2011, it rose in rural areas from 795,000 to 951,000 where the poverty headcount increased from 64.8 percent to 69.4 percent.[3]

[1] 2021 population projection, Institut National de la Statistique (INS).
[2] Data from the World Bank World Development Indicators, (accessed October 2022), *https://data.worldbank.org/indicator/SI.POV.GINI?locations=CG*.
[3] World Bank. 2019. *Country Partnership Framework (CPF) for the Republic of Congo for the Period FY20–FY24, Report No. 126962-CG*. Washington, DC: World Bank.

4. **The dynamics of exclusion and drivers of fragility in the Republic of Congo are multidimensional and further exacerbate poverty and inequality.** The dynamics of exclusion go beyond the spatial disparities between urban and rural areas and they are exemplified in the divide between population groups and along ethnic lines, with women, youth, persons with disabilities, and indigenous people (IP) being the most excluded groups nationally. In the Pool Department, cyclical fragility and violence hinder Congo's efforts to build a more resilient and inclusive society. Drivers of fragility include high levels of poverty, ongoing political competition among elites, the need to reintegrate ex-combatants into socioeconomic activities, high levels of youth unemployment, and severely limited access to basic and infrastructure services.[4] Marginalized groups are likely to be particularly affected by the socioeconomic impacts of the COVID-19 pandemic and the ensuing inflation. Given the strategic geographical proximity of the Pool Department to the capital, these drivers have national implications. As of September 2021, there were 52,631 refugees and asylum-seekers, 304,430 internally displaced people, and 199,400 people at risk of statelessness in Congo.[5] Without land or other economic assets, they are among the poorest and most vulnerable in the country. Displaced households headed by women were worse off (54.4 percent) than those headed by men (32.5 percent).[6]

5. **Climate change is increasingly affecting Congo and the country has low capacity to adapt to these impacts.** Congo has experienced significant climate variation over the past century.[7] Mean annual temperature has increased by 0.6°C, and both average maximum temperatures and average minimum temperatures have increased (+0.76°C and +0.69°C, respectively). Mean annual precipitation has decreased between the 1950s and 1980s, and greater fluctuations in intra-seasonal precipitation patterns have been observed in recent years. Congo has also seen more erratic and extreme rainfall. Projected climate changes foresee increased heat and continued erratic rainfall. Temperature projections under the high-emission Representative Concentration Pathway (RCP) 8.5 scenario of the Intergovernmental Panel on Climate Change (IPCC) indicate an increase for Congo of around 1.5°C by 2040 and from 2°C to 3.5°C by 2070.[8] By the middle to the end of the twenty-first century, the mean annual precipitation is expected to increase under all emissions scenarios.[9] Studies for the country, as part of a global exercise, show a loss of productivity as temperatures rise and a loss of biodiversity as ecosystems become affected by the changes. The Development Assistance Research Associates International Foundation estimates the costs of climate change in 2010 to have been 3.4 percent of GDP and projects costs at 6.5 percent of GDP for 2030.[10] According to a World Bank assessment for Congo, climate-related costs for four categories analyzed could amount to US$2.9 billion in 2020 prices by 2050 under a pessimistic scenario.[11] Congo is

[4] World Bank. 2019. *Risk and Resilience Assessment for the Republic of Congo*. Washington, DC: World Bank.
[5] UNHCR (United Nations High Commissioner for Refugees) September 2021.
[6] WFP Country Strategic Plan, 2019–2023.
[7] The World Bank Climate Change Knowledge Portal describes the climate variability observed between 1901 and 2016. https://climateknowledgeportal.worldbank.org/country/congo-republic/climate-data-historical.
[8] IPCC. 2013. "Climate Change 2013: The Physical Science Basis." In *Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change,* edited by T. F. Stocker, D. Qin, G.-K. Plattner, M. Tignor, S. K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex, and P. M. Midgley. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 1535.
[9] Note that far southern Congo shows little change in precipitation in these projections as the oceanic climate seems to have a mitigating impact.
[10] Development Assistance Research Associates. 2012. Methodological Document for the Climate Vulnerability Monitor 2nd Edition. www.daraint.org/cvm2/method.
[11] World Bank. 2022. *Republic of Congo: Economic Update, 9th Edition: Climate Change Impacts, Adaptation, and Opportunities*. Washington, DC: World Bank. The categories covered by the assessment are agriculture, health, floods and sea level rise, and labor productivity.

not sufficiently equipped to respond to such developments, having been ranked 186 out of 192 for readiness in the Notre Dame Global Adaptation Initiative (ND-GAIN) Country Index for 2020.[12]

6. **The impacts of climate change will exacerbate the socioeconomic challenges that Congo is facing and will require a multisectoral response that encompasses approaches to agriculture and natural capital management that reduce climate vulnerability and build people's resilience while leveraging additional development benefits.** Climate change is expected to threaten livelihoods, heighten levels of exclusion, and increase the high levels of fragility in Congo, with a disproportionate effect on the poorer and more vulnerable sections of society. For example, an increase in extreme weather events can have a crippling effect on people's food security, aggravating existing inequalities and intensifying social tensions. Climate change may also contribute to increased population mobility. The resulting influx of people that some areas could see can place additional burdens on local economies, increase environmental degradation, and contribute to conflicts over land and water. Learning from other countries in Sub-Saharan Africa, these compounding effects of climate change and fragility can heighten insecurity overall and could trigger future risks of increased violence due to competition over resources.[13] As climate change affects the livelihoods of the poor, particularly through its impacts on the agriculture sector, and as natural capital management can play an important role in reducing vulnerability and supporting carbon sinks, multisectoral action is key. Such a coordinated response can help mitigate various development challenges simultaneously, promoting shared prosperity, improving food security, limiting the degradation of natural resources, and diversifying the economy**.**

B. Sectoral and Institutional Context

7. **Climatic change is projected to have a heavy impact on Congo's agriculture and ecosystems, with negative consequences for its people already materializing.** Projected impacts include elevated flood risks, increased vulnerability of rain-fed agriculture (due to more erratic rainfall), and changes in pest and disease vectors (due to rising temperatures). In the Bouenza, Niari, and Pool Departments of southern Congo—specifically in the environs of the urban areas of Mindouli, Madingou, Nkayi, and Dolisie, areas with the highest levels of interannual variability in rainfall and some of the lowest seasonal rainfall in the country—increased risk of drought, associated with an increase in temperatures, is likely to increase the risk of forest fires, which will contribute to intensifying erosion pressures. In central and northern Congo, climate change is threatening communities with rising temperatures, increased number of days of extreme heat, and extreme weather events such as more frequent and severe droughts and more intense rainfall. This may translate into lower water availability, more variable and shorter growing seasons, and reductions in production potential. In the far north of Congo, heavy rainfall caused extreme flooding in 2019 and 2020, which affected approximately 170,000 people in the Sangha Department and 200,000 in the Likouala Department, as well as many in the Cuvette and Plateaux Departments. In 2021, about 72,000 people were affected in these departments. The floods devastated a large part of agricultural production, contributing to a significant increase in food prices and making emergency humanitarian assistance from the United Nations necessary. In 2022, maize yields were negatively affected by below-average rainfall. Extreme-weather events have direct negative impacts on ecosystems just as they have on crops,

[12] For vulnerability, Congo was ranked 142 out of 182. Congo's overall rating (combining vulnerability and readiness) is 169 out of 182. For the complete list of rankings, see https://gain.nd.edu/our-work/country-index/rankings/.

[13] Diallo, Yoro, and René Tapsoba. 2022. *Climate Shocks and Domestic Conflicts in Africa*, International Monetary Fund (IMF). Based on a review of 51 African countries, the paper demonstrates that climate shocks could increase the likelihood of domestic conflict by as much as 38 percent.

particularly in already degraded areas. Flora and fauna may face additional pressure when disaster-affected people need to compensate for harvest losses through increased hunting and gathering and expansion of agricultural lands.

8. **Climate impacts on agriculture would undermine a sector that, together with forestry and fishing, is of major importance to the economy yet remains far below its potential and has come under pressure from recent crises**. The sector is a major source of employment in Congo, providing about 40 percent of jobs[14] but contributed only an average of 9 percent to GDP in 2020.[15] Low population density in rural areas (65.58 percent of the population lives in urban areas) and a low level of mechanization hamper agricultural productivity.[16] The country produces only 30 percent of its national food needs and only 2 percent of arable land is cultivated. Agricultural exports are stagnant, and the country suffers from a rapidly deteriorating trade balance for food. Food imports amount to nearly US$2 billion annually, 80 percent of which correspond to animal products as local livestock production is limited due to a lack of animal feed.[17] The COVID-19 pandemic and Russia's invasion of Ukraine have been exacerbating food insecurity by reducing the supply of grain (both for human consumption and animal feed) and inputs such as seedlings, fertilizers, and pesticides. A May 2022 assessment by the United Nations estimated that grain prices increased by 40 percent due to the disruption of imports from the Russian Federation.[18] At the same time, the local production of food crops is expected to decline by 0.2 percent and 0.4 percent in 2023 and 2024, respectively.[19] Households are facing increasing food prices. In response, the Government increased its expenditures for subsidies, particularly for oil. In July 2022, the Government adopted a Resilience Plan on the Food Crisis 2022–2023 to tackle the food insecurity in the country. Financial resources and technical support to increase agricultural production are urgently needed to meet short-term consumption needs and increase the country's food production in the medium and long term. Factors that could contribute to such a structural transformation in an equitable manner include (a) improved access to rural finance (including long-term finance for producer groups/cooperatives); (b) access to improved inputs; (c) strengthened technical capacity on agricultural practices; (d) better organization of farmers and integration into value chains; and (e) improvements to infrastructure and facilities to reduce post-harvest losses.

9. **The poor and marginalized groups are particularly vulnerable to climate-related shocks as they rely heavily on agriculture and ecosystem services.** About 27 percent of the population lives in a household whose head works in agriculture, a segment that has Congo's highest poverty rate. Most of Congo's poor are either unemployed or rely on agriculture and the informal sector for their livelihoods. According to the 2021 Global Hunger Index, about 38 percent of the population is undernourished and hunger is at a serious level of 30.3 percent, a figure that is high compared to middle-income peers.[20] The situation is even more dire among IP. About three out of four IP households surveyed in the departments of Kouilou, Lékoumou, La Likouala, Plateaux, and Sangha are food insecure. Only 17.8 percent of IP households are food secure, while 40.3 percent are moderately food insecure. IP in this latter category

[14] World Bank. 2019. *Country Partnership Framework (CPF) for the Republic of Congo for the Period FY20–FY24, Report No. 126962-CG*. Washington, DC. World Bank.
[15] MPSIR (Ministry of Economy, Planning, Statistics, and Regional Integration [*Ministère du Plan, de la Statistique et de l'Intégration Régionale*]). 2021. *Rapport d'évaluation du PND 2018–2022*.
[16] 2021 population projection, Institut National de la Statistique (INS)
[17] Figures based on World Bank calculations and data from INS.
[18] United Nations. 2022. *Effets socio-économiques de la guerre ukrainienne sur l'économie congolaise*.
[19] World Bank estimates based on data from INS.
[20] https://www.globalhungerindex.org/congo.html, accessed in October 2022.

have significant food consumption gaps or are only marginally able to meet their minimum food requirements without engaging in irreversible coping strategies.[21]

10. **While women play a critical role in agriculture, they face gender-specific barriers that limit their economic productivity and put them at a higher risk of vulnerability to climate change.** More than 41 percent of women ages 15–30 rely on agricultural income (for men, it is 28 percent); however, they tend to be concentrated in subsistence livelihoods groups with low productivity. While national data are scarce, consultations indicate that women dominate over 70 percent of informal livelihoods groups. However, this number decreases to as low as 10 percent when it comes to participation in large cooperatives and/or formalized groups involved in commercialization. Desk research and additional consultations conducted in rural areas in Congo show that factors of low productivity of women are multifold: at the economic level, rural women tend to concentrate in small livelihoods groups that lack access to assistance to formalize their groups, learn new agriculture techniques, and improve their agriculture yields. This is driven by the lack of childcare which limits women's economic participation, the concentration of women in food crops limiting their opportunities to move toward formalized and established cooperatives to participate in value chains, and limited access to improved and diversified skills to improve their yields, in addition to limited ownership of assets such as land.[22] At the social level, women have limited power in households and communities and lack bargaining power for local decision-making, which often excludes them from benefiting from local investments. A recent survey conducted by the Ministry for the Promotion of Women and Integration of Women in Development finds that women are underrepresented in important decision-making positions: only 25.6 percent of women are holding such positions in the public and private sector.[23] Incidents of gender-based violence (GBV) are high, reaching up to 40 percent. These numbers have been reported to be higher during the COVID-19 pandemic. In the context of increased risks of climate change, the impacts not only affect women's health, productivity, and development but also contribute to intensifying gender gaps. Furthermore, global evidence[24] shows that during climate-related disasters, women face additional risks, due in large part to gender inequities that result in women bearing a disproportional brunt of disaster impacts. Women in poverty are most reliant on natural resources for their livelihoods and have fewer resources to cope and adapt to climate shocks and natural hazards such as hurricanes, food shortages, droughts, and landslides.

11. **High unemployment rates and exclusion from the country's political, social, and economic opportunities put Congolese youth (mainly young men) at risk of being drawn into violence and crime and make them more vulnerable.** The population under 30 years of age accounts for nearly 50 percent of the total population. Latest surveys[25] conducted highlighted that 54 percent of youth under 20 years are no longer enrolled in the education system. This survey also reflected the worrying situation for youth employment, which is characterized by mass and long-term unemployment. One of the main drivers of unemployment among youth is the mass rural exodus trend that pushes young people toward cities and subsequently exacerbates urban unemployment. Youth unemployment has therefore increased over the

[21] International Working Group on Indigenous Affairs April 2022.
[22] WFP 2019. Congo Country Strategic Plan 2019–2023.
[23] World Bank. 2021. *Country Policy Institutional Assessment*.
[24] Hallegatte, Stephane, Mook Bangalore, Laura Bonzanigo, Marianne Fay, Tamaro Kane, Ulf Narloch, Julie Rozenberg, David Treguer, and Adrien Vogt-Schilb. 2016. *Shock Waves: Managing the Impacts of Climate Change on Poverty. Climate Change and Development.* Washington, DC: World Bank.
[25] International Labour Organization. 2016. *L'Enquête sur la transition vers la vie active (ETVA) 2016.*

years and has reached around 42 percent.[26] Frustrated youth who have less voice and limited access to economic opportunities are even more vulnerable to getting mobilized by criminal gangs, putting additional strain on the fragility of the country.

12. **Climate-smart natural capital management is a necessity to take full advantage of the opportunities that Congo's natural assets can provide to the economy and the population.** Congo's per capita wealth in renewable natural capital amounted to US$7,093 in 2018,[27] which corresponded to 16 percent of total wealth, covering particularly timber (US$2,178), ecosystem services (US$2,542), agricultural land (US$1,710), and protected areas (US$619).[28] Natural capital secures the livelihoods of many and serves as a safety net particularly for the poorest. For example, an estimated 575,000 Congolese live in forest areas, which house a diverse range of biomes, ecosystems, and habitats, including peatlands and evergreen, semi-deciduous, alluvial and mangrove forests, as well as a rich fauna. Congo's IP depend almost exclusively on natural resources found in forests for their livelihoods and nutrition. In areas with few formal income sources, local communities conduct slash-and-burn agriculture, engage in artisanal timber extraction, and hunt both legally and illegally. Many of these practices are unsustainable and growing human populations in areas with fragile ecosystems pose challenges to sustainable production and biodiversity conservation, requiring new approaches to agriculture, governance of natural resources, and access to alternative livelihoods. Climate change can further increase the pressure on ecosystems, be it directly through extreme weather or indirectly by inducing people to cultivate new land. This can negatively affect ecosystem services that are crucial for livelihood diversification and for agricultural productivity and resilience, such as moisture retention, temperature regulation, and soil stabilization. Conservation is thus an important element of climate-smart natural capital management and can build on Congo's existing network of protected areas. This opens up opportunities to sustainably increase the value derived from Congo's biodiversity to promote economic diversification and local livelihoods in a changing climate. Ecotourism (that is, sustainable, nature-based tourism) has significant growth potential as a high-value niche market. The country is home to forest elephants, gorillas, chimpanzees, and other species that would be of interest to tourists, yet the sector is not sufficiently organized and regulated. Over the last five years, growth in the tourism sector has always remained below 5 percent of GDP.[29] Ecotourism is constrained particularly by insufficient tourism infrastructure and services, logistical challenges, and a low international profile. To drive tourism growth, the country will need to safeguard its abundant biodiversity resources, empower local communities, develop accessible tourist experiences, and improve marketing.

13. **As co-benefit, reconciling agricultural development and natural capital management will also be imperative to avoid dangerous climate change globally.** Making up 12 percent of the Congo Basin's forest complex, the country's natural forests are the third largest expanse of tropical rainforest in Africa, covering 23.5 million ha (69 percent of its land area). Given the significance of the Congo Basin as a carbon sink, the sustainable management of Congo's forests and peatlands is necessary to avoid undermining global and national efforts to reduce emissions from deforestation and forest degradation and ensure conservation, sustainable management of forests, and enhancement of forest carbon stocks (REDD+[30]).

[26] World Bank. 2019. *Country Partnership Framework (CPF) for the Republic of Congo for the Period FY20–FY24, Report No. 126962-CG*. Washington, DC: World Bank.
[27] This amount is similar to the value of nonrenewable natural capital, which amounted to US$7,577 per capita.
[28] World Bank. 2021. *The Changing Wealth of Nations 2021: Managing Assets for the Future*. Washington, DC: World Bank.
[29] United States Forest Service. 2022. *Mission d'appui à l'élaboration d'une stratégie nationale de l'ACFAP sur la promotion de l'écotourisme dans les aires protégées du Congo*.
[30] REDD+ = Reducing Emissions from Deforestation and Forest Degradation and the role of conservation, sustainable management of forests, and enhancement of forest carbon stocks in developing countries.

Despite Congo's deforestation rate—0.052 percent per year from 2000 to 2012—being among the lowest annual net deforestation rates in Africa, land-use change and forestry (LUCF) contributed 83 percent of the total 2017 emissions of 48.39 million tCO_2e, presumably due to low levels of industrialization and thus low emissions from other sectors.[31] In the absence of mitigating measures, current trajectories and development plans indicate that the country's LUCF emissions may rise in the future.

14. **A landscape approach that harmonizes economic development needs and conservation while building people's resilience is a way forward to building a sustainable and inclusive economic pathway and managing climate risks in Congo.** Landscape approaches recognize the interdependence of human and natural systems and produce sustainable landscapes that promote prosperity. A variety of stakeholders at different levels need to work together to increase synergies between different, and often competing, sector-focused goals, for example, to avoid agricultural encroachment on protected areas. Integrated landscape management offers a multisectoral approach to addressing complex environmental and development challenges. It seeks to sustainably manage multiple land uses across landscapes, considering both the natural and human systems that depend on them and achieving impact at scale considering social, environmental, and economic factors. The proposed Climate-Resilient and Inclusive Livelihoods Project (ProClimat) will adopt such an approach.

15. **Within Congo's subnational government system, a landscape approach needs to be cognizant of all stakeholders to ensure mobilization and ownership of development activities.** Congo's subnational government has deconcentrated and decentralized functions that work in parallel. Departments are led by a *préfet* and have dual organization for decentralized and deconcentrated functions. On the deconcentrated side, line ministries have representatives at the department and district levels. They report to the central government while they serve as technical advisers to the *préfet*. Each district is governed by a *sous-préfet* who reports to the *préfet.* On the decentralized side, villages in the rural areas are organized into municipalities under an elected mayor who represents the State and the municipality. Within this complex system, fiscal decentralization remains minimal, and roles and responsibilities of functions of councils at the department and municipal levels are unclear. Learning from existing World Bank and other donor projects, developing a project with a landscape approach and strong community ownership would require building capacity of the various deconcentrated and decentralized services and ensuring their meaningful engagement and participation.

C. Relevance to Higher Level Objectives

16. **ProClimat is aligned with Congo's 2022–2026 National Development Plan (NDP).**[32] The plan focuses on diversifying the economy through six strategic pillars, two of which are dedicated to developing agriculture and tourism. For agriculture, the objectives include increasing the production of key crops; non-timber forest products (NTFPs) such as honey, mushrooms, and medicinal plants; and livestock for domestic consumption and export, with value chain support and capacity building for farmers and relevant institutions. The tourism pillar puts the appeal of Congo's biodiversity at its center, thus emphasizing the value of Congo's natural wealth as an economic asset. The NDP also prioritizes activities at the core of protected areas management: managing human-wildlife conflict and anti-poaching surveillance. Peace, security, and political stability as well as governance are included in the plan as areas

[31] Data from World Resources Institute's ClimateWatch, https://www.climatewatchdata.org/countries/COG.
[32] Republic of Congo. 2022. *2022–2026 National Development Plan: A Strong, Diversified and Resilient Economy for Inclusive Growth and Irreversible Sustainable Development*. Law no 3 2022 of January 14, 2022.

of support that are crucial for achieving the plan's objectives. Strengthening social cohesion and the decentralization process are listed as relevant actions. The plan reconfirms Congo's commitment to meet its international commitments on environmental issues, particularly the preservation of its forests. Climate change is identified as a risk to achieving the NDP's goals, particularly through the impacts that increases in drought, flooding, and erosion may have on agriculture.

17. **The proposed project will contribute to Congo's 2021 Nationally Determined Contribution (NDC), which lays out the main strategic axes to enhance the country's ambitions in the fight against climate change and counts agriculture and forestry as priority sectors for adaptation.** The NDC identifies activities that will be key to reduce vulnerability in these sectors, including a climate-smart approach to agriculture, and measures to reduce flood risk. This is consistent with Congo's first and second National Communications to the United Nations Framework Convention on Climate Change (2001 and 2009), which identified forestry, agriculture, and water resources as some of the sectors most vulnerable to the adverse effects of climate change. In the NDC, the forest sector is also considered key for mitigation as it is expected to contribute 28.3 percent of Congo's total emissions by 2030 under a business-as-usual scenario. Congo has been advancing particularly in the implementation of its strategy on reducing emissions from REDD+, a process that culminated in the signing of the Emission Reductions Program in Sangha and Likouala (ERP-SL; P163361) in April 2021.

18. **The project is also aligned with relevant sector strategies.** To prioritize investments that meet the challenges of the agriculture sector in a changing climate, the Government endorsed a Climate Smart Agriculture Investment Plan (CSAIP) that was supported by the World Bank and the French Development Agency (*Agence Française de Développement*, AFD). The CSAIP is based on Congo's institutional and policy framework and was developed through a participatory process. It proposes investments amounting to approximately US$240 million to sustainably increase agricultural sector productivity, strengthen climate resilience while reducing greenhouse gas (GHG) emissions, and increase food security. The CSAIP emphasizes the adoption of new agricultural practices, building of climate-resilient infrastructure, and supporting of relevant research. The development of agroforestry, particularly intercropping of cassava, maize, and banana, is a priority under the plan. The activities under ProClimat draw from the generic project proposals included in the CSAIP. In addition, the project's design takes into account the 2022–2023 Resilience Plan on the Food Crisis, which seeks to support local producers and ensure food security, particularly of the most vulnerable population people, among other priorities.[33] The project will be implemented in alignment with the 2020 Forest Code (Law No. 33-2020), which attempts to tackle key issues in forest management, specifically the significance of forests for moderating climate change, curtailing of illegal logging, biodiversity conservation, the nexus of forest resources and improving local development, and the integration of international best practices and dialogue. Aspects of particular significance to the project will be the improved processes for transparency and for consideration of indigenous people and local communities (IPLCs) in forest management. The project design has also been informed by the working draft of Congo's Ecotourism Strategy, which is currently being drafted under leadership of the Congolese Agency for Wildlife and Protected Areas (*Agence Congolaise de la Faune et des Aires Protégées*, ACFAP). The draft strategy emphasizes the importance of strengthening co-management of protected areas, implicating local communities in ecotourism development, and developing relevant infrastructure such as access roads and observation platforms.

[33] Republic of Congo. 2022. *Plan de résilience sur la crise alimentaire 2022–2023*.

19. **Sustainable natural resource management and agriculture are highlighted in the World Bank's CPF FY20–FY24 for Congo as important sectors to support the Government's strategy of economic diversification.**[34] The first focus area of the CPF aims to strengthen economic management to create an improved climate for private sector-led growth. This includes support for improved agriculture productivity and commercialization (Objective 1.3) and addresses climate resilience and productivity of subsistence farmers. The second focus area of the CPF seeks to build human capital and enhance resilience for social inclusion and sustainable growth. In the context of improving the sustainable management of natural resources (Objective 2.4), it particularly recognizes REDD+ as an opportunity to align Congo's economic development imperatives with its sustainability goals.

20. **ProClimat is in line with and contributes directly to several Strategic Directions of the World Bank's Next Generation Africa Climate Business Plan (NG-ACBP).**[35] The NG-ACBP, like its predecessor the Africa Climate Business Plan, is designed to render the key motors of Africa's development—natural capital, agriculture, and infrastructure—resilient to climate change while simultaneously fixing them on low-carbon growth pathways. ProClimat addresses three of the NG-ACBP's five Strategic Directions: food security and a resilient rural economy, ecosystem stability and water security, and climate shocks and risk governance. The project engages smallholder farmers and different levels of government to promote sustainable and resilient agriculture practices and natural capital management, value chain strengthening, and integrated landscape management. This will contribute to improved food security and hence a more sustainable, resilient, and inclusive rural economy across the areas of intervention.

21. **The project aligns with the World Bank's Green, Resilient, and Inclusive Development (GRID) approach; its Climate Change Action Plan (CCAP) (2021–2025); the Global Crisis Response Framework (GCRF); and priorities under the Gender Strategy and the Fragility, Conflict, and Violence (FCV) Strategy.** It includes activities that seek to provide more and better jobs for different groups (men, youth, women, ex-combatants, and people with disability) while protecting the poor and vulnerable affected by climate change, aligning with the Action Plan on Adaptation and Resilience under CCAP. Through its focus on green and resilient agriculture interventions, the project is aligned with the GCRF Pillars 1 (Responding to food insecurity through supporting production, facilitating trade, supporting the vulnerable, and investing in sustainable food system) and 3 (Strengthening resilience by identifying and supporting paths to build long-term resilience). It is also aligned with the GRID approach given its emphasis on inclusion and resilience. Finally, the project has targeted activities to improve gender outcomes in line with the World Bank's global efforts to scale up engagement on women's empowerment as a means to reducing fragility, preventing conflict, and addressing interpersonal violence under the first pillar of the FCV Strategy while enhancing women's voice and agency and removing constraints to more and better jobs (priorities under the Gender Strategy).

22. **Project activities will be closely integrated with planned and ongoing initiatives supported by the World Bank.** ProClimat is expected to contribute to emission reductions that will, in the departments of Sangha and Likouala, be eligible for performance-based payments under the ERP-SL (P163361), thus supporting the participation of smallholder farmers and agrobusiness in the program. It will furthermore apply approaches on agroforestry and inclusion of vulnerable groups that are being developed under the

[34] World Bank. 2019. *Country Partnership Framework (CPF) for the Republic of Congo for the Period FY20–FY24, Report No. 126962-CG*. Washington, DC: World Bank.
[35] World Bank. 2020. *The Next Generation Africa Climate Business Plan: Ramping Up Development-Centered Climate Action*. Washington, DC: World Bank.

Northern Congo Agroforestry Project (*Projet d'Agroforesterie dans le Nord du Congo*, PANC, P166189) and the Congo Dedicated Grant Mechanism (DGM, P169610). As these two projects include livelihood activities for communities in Sangha and Likouala, ProClimat may focus its support in these departments on supporting protected areas management to avoid overlaps in activities while harnessing synergies between conservation and community engagement. The project will work in concert with the Lisungi Safety Nets System Project (P145263) to leverage and complement existing socioeconomic analysis at the household level (including vulnerability and poverty analysis) with the aim of improving targeting of those communities most in need of external assistance. ProClimat will draw on approaches and lessons learned from across the World Bank's portfolio in Congo, most notably the Commercial Agriculture Project (*Projet d'Appui au Développement de l'Agriculture Commerciale*, PDAC, P159979), the Forest and Economic Diversification Project (*Projet Forêt et Diversification Économique*, PFDE, P124085), and the Support for Promotion of Sustainable Livelihoods in the Pool Department Project (*Projet d'Appui à la Promotion des Moyens de Subsistance Durables*, PASD, P149690).

23. **ProClimat has been designed to complement activities of various development partners in Congo.** For example, the project design has been coordinated with the Sustainable Land Use Program (*Programme d'Utilisation Durable des Terres*, PUDT) and the corresponding investment plan financed by AFD. ProClimat activities will be coordinated with PUDT geographically and in terms of technical scope, drawing from the land use instruments that the AFD project will create. Support for community-based early warning systems will be aligned with the activities of the project on Building Adaptive Capacity to Climate Change in Vulnerable Communities Living in the Congo River Basin (World Food Programme [WFP]) with financing from the Adaptation Fund). Synergies are also expected with AFD's Adapt'Action Facility Project, especially on climate-resilient agriculture. The project is aligned with the Letter of Intent that Congo signed with the Central African Forest Initiative (CAFI). A regular dialogue with these and other partners was held during project preparation and is expected to be continued throughout implementation.

II. PROJECT DESCRIPTION

A. Project Development Objective

24. The Project Development Objective (PDO) is to strengthen landscape management and increase the use of improved livelihood activities in targeted communities.

25. The proposed PDO-level indicators are as follows:

Strengthen landscape management

- Area under sustainable and resilient agriculture practices (hectares (ha)) (Climate Indicator)
- Land area under sustainable landscape management practices (ha) (Corporate Results Indicator (CRI); Climate Indicator)

Increase the use of improved livelihood activities in targeted communities

- Beneficiaries using improved livelihood activities supported by the project (number) (Gender Indicator)

- of which women (percentage)
- of which ex-combatants (percentage)
- of which IP (number)
- of which youth (percentage)
- of which people with disability (percentage)

- MSMEs[36] reporting an increase in profit of 20 percent or more from grants supported by the project (number) (Gender Indicator)
  - of which women-led (number)

Crosscutting

- Net greenhouse gas emissions (metric ton) (CRI; Climate Indicator)

B. Project Beneficiaries

26. **The beneficiaries of ProClimat will be rural communities in three distinct landscape areas in the north, center, and south regions.** The three landscape areas were selected using the following criteria: (a) presence of legally identified protected areas given their conservation value; (b) relevant parts of districts close to protected areas that may exert pressure on the areas' natural capital (for example, through agricultural encroachment and poaching); and (c) districts close to protected areas that suffer from high levels of fragility and exclusion, notably in the Pool and Lékoumou Departments. The three targeted landscapes are presented in Annex 2. It is important to note that certain districts or villages along the borders of these three landscapes might be added or removed based on proximity to other beneficiaries of the project, increased exposure to climate risks and fragility, and/or the potential for successfully promoting sustainable and resilient agriculture and natural capital management.[37]

27. **The project is expected to reach approximately 562,000 beneficiaries in addition to benefiting department, district, and local governments.**[38] Activities will be tailored to the respective landscape. For example, agriculture will only be supported in degraded or savanna areas and crops as well as value chain assistance will be adjusted accordingly. This will entail a stronger coordination mandate and presence at the local level through multi-stakeholder platforms.[39] In the Pool Department with its situation of fragility,

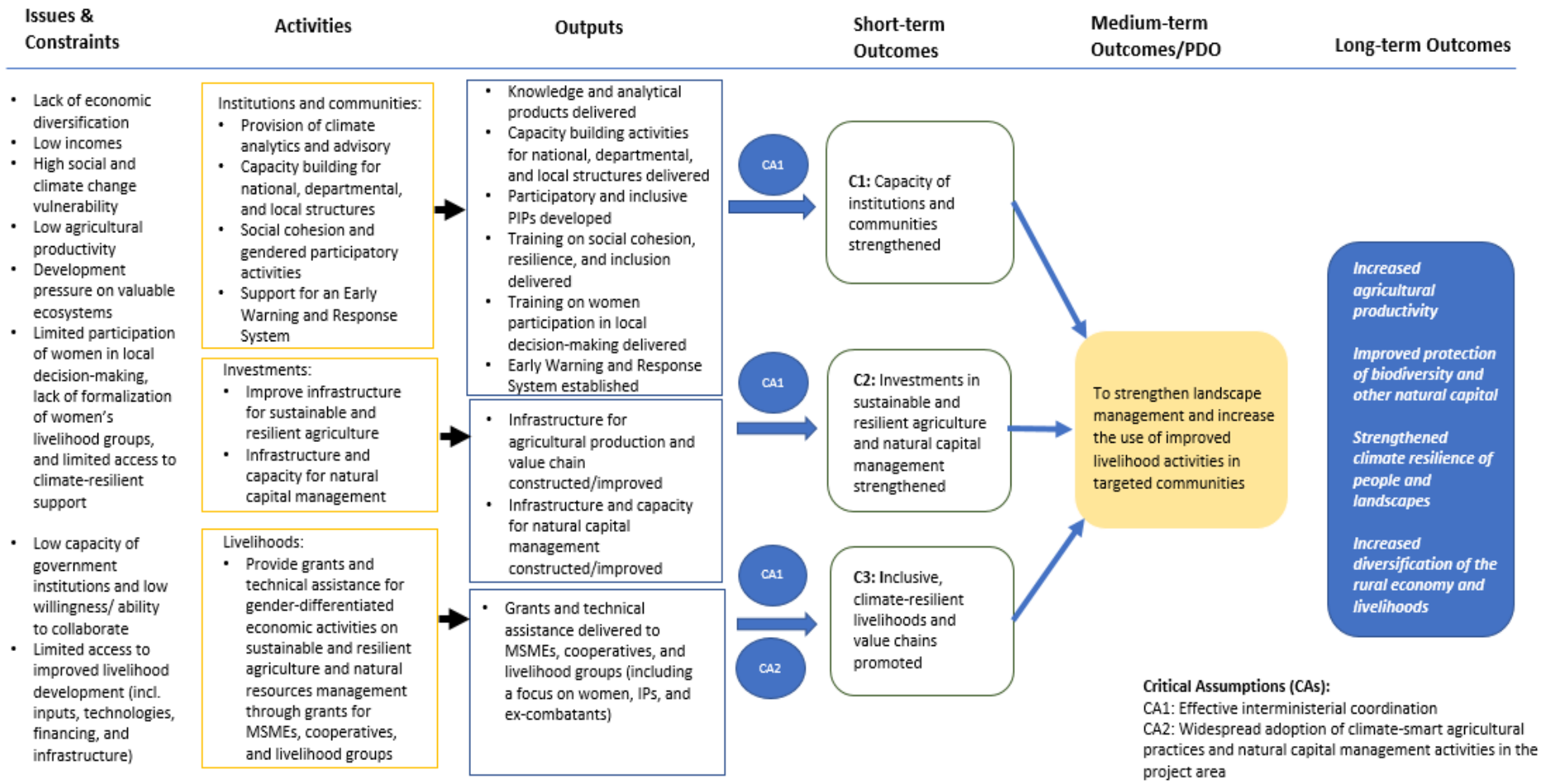
[36] MSMEs = Micro-, Small-, and Medium-Sized Enterprises.
[37] For the project, resilience is understood to include (a) economic resilience through increasing income-earning opportunities for beneficiaries and (b) social resilience through improving social networks and ties. The project will follow a resilience model that seeks to enhance the absorptive, adaptive, and transformative capacities of its beneficiaries. For example, reducing the exposure of communities and vulnerable areas to flooding, drought, and erosion will mitigate or even prevent the negative impacts of these hazards, improving absorptive capacity. Providing new and improved livelihood opportunities based on agricultural and environmental best practices can help people adjust to potential future impacts from hazards, thus increasing the adaptive capacity. Improved planning as well as conservation and restoration of natural ecosystems are examples of how transformative capacity can be improved by creating new systems to avoid negative impacts from hazards. The World Bank's Resilience Booster Tool was applied to this project and demonstrated high resilience targets, primarily due to its robustness, learning, and inclusion attributes (https://resiliencetool.worldbank.org/#/home). More information on the resilience model is available in World Bank. 2017. *Operational Guidance for Monitoring and Evaluation (M&E) in Climate and Disaster Resilience-Building Operations*. Washington, DC: World Bank.
[38] This figure corresponds to the population of the three target areas as of the last available census data (2007).
[39] Existing platforms will be used to the extent possible.

the project will prioritize areas with high concentration of ex-combatants to support their livelihood activities and promote social cohesion. Given Congo's weak institutional capacity, analytical work will be conducted during early project implementation to identify a landscape governance approach suitable for this context.

C. Results Chain

28. The theory of change of the project is summarized in Figure 1.

Figure 1. Theory of Change of ProClimat Congo



D. Project Components

29. **The project's components will be closely integrated to support a landscape approach that will ensure that the activities in each intervention zone address economic development needs, sustainable use of natural resources, and conservation simultaneously.** The focus will be on empowering communities to create and improve resilient livelihoods. The project will be divided into four main components that will complement and be closely linked to each other, thus providing comprehensive assistance for landscape management and livelihood support; it includes a fifth component for emergency response. Component 1 will focus on improving the capacity of institutions that are key for landscape management and supporting communities to lay the foundation for their effective inclusion in project activities. Component 2 will finance sustainable and resilient agriculture infrastructure prioritized by communities under Component 1. It will also support infrastructure investments in areas that provide ecosystem services for agriculture and in protected areas, guided by analytical work developed under Component 1. Component 3 will finance investment plans developed under Component 1 through livelihood grants accompanied by capacity support, leveraging the infrastructure investments financed under Component 2. Component 4 is dedicated to project management and monitoring and evaluation (M&E). The project includes a Contingent Emergency Response Component (CERC) as Component 5.

30. **The project is fully dedicated to building climate resilience in targeted communities.** As discussed earlier, Congo is among the world's most vulnerable countries to climate change. In the coming decades, climate change is expected to have alarming impacts on the country's agriculture, ecosystems, infrastructure and, most importantly, on the livelihoods and way of living of communities.[40] The project intends to build climate resilience through a holistic and integrated approach, selecting activities with high adaptation and mitigation potential. Annex 4 includes a description of (a) the country's climate change vulnerability context; (b) the climate activities with their estimated climate co-benefits; and (c) activities' eligibility within the mitigation categories agreed on by Multilateral Development Banks (MDBs).

31. **To support agriculture-based livelihoods in line with its objective, the project will adopt an approach to sustainable and resilient agriculture that draws on the priorities of the CSAIP.** These include, for example, (a) developing agroforestry systems for cassava, maize, bananas, and cocoa; (b) improving soil fertility and restoring degraded lands; (c) promoting aquaculture; and (d) providing irrigation kits. Deforestation-free agriculture supply chains are emphasized to avoid conversion of natural forests. If requested by communities, the project may also finance activities outside the CSAIP if they are conducive to meeting the PDO and pass a climate change screening based on criteria that will be defined in the Project Implementation Manual (PIM). Guiding principles of agroecology will be applied to implement the approaches and techniques prioritized in the CSAIP. As a holistic and integrated approach, agroecology simultaneously applies ecological and social concepts and principles to the design and management of sustainable agriculture and food systems.[41] ProClimat will operationalize the concept of agroecology to explicitly take into account climate change considerations. Agroecology's focus on optimizing the interactions between plants, animals, humans, and the environment while also addressing the need for

[40] World Bank. 2022. *Republic of Congo: Economic Update, 9th Edition: Climate Change Impacts, Adaptation, and Opportunities*. Washington, DC: World Bank.
[41] Definition provided by the Food and Agriculture Organization (FAO as per https://www.fao.org/agroecology/overview/en/ (accessed on November 11, 2022).

inclusive food systems will be conducive to implementing the project's people-centered landscape approach.

32. **The project activities are designed with a focus on inclusion to ensure sustainability and ownership.** Integrated landscape approaches require a high degree of collaboration and trust-building among all stakeholder to ensure local ownership of activities and sustainability of the landscape. This is even more important in an FCV context such as in Congo. Therefore, project activities are designed to build trust between different levels of the Government (national, departmental, and local) and promote close collaboration with various stakeholders to jointly define the potential and limitations of the resources in each landscape, the different needs and interests of the groups involved, and how the resources in each landscape are to be used. The project activities are intended to also address drivers of fragility identified earlier and ensure a participatory approach that targets certain traditionally excluded groups. The Results Framework of the project will be disaggregated, where applicable, by target group to allow for inclusion monitoring during project implementation.

33. **The project addresses multiple gender gaps through its design.** As identified earlier, there are social and economic barriers that contribute to women's lower productivity, which the project will aim to address. These barriers combined prevent women-led livelihoods groups from formalizing, accumulating profit, and graduating into cooperatives and MSMEs that are viable and capable of participating in value chain and commercialization activities. The project will adopt a multifold approach to address these gaps. First, the project will address limited participation of women in local decision-making by designing and implementing trainings on leadership and participation that specifically target women to support their agency, promote their participation in local Project Investment Plans (PIPs), and ensure their full integration in the various investments of the project. The indicator used to measure the outcomes of this activity is 'Beneficiaries reporting that PIPs reflect their needs', which will be disaggregated by the various target groups of the project, given the broader focus on inclusion. The target value for women is 70 percent, meaning that 70 percent of the beneficiaries reporting on the indicator should be women. The second gender gap that will be addressed is the concentration of women in non-formal livelihoods groups, which limits their opportunities to move toward formalized and established cooperatives to participate in value chains, and the limited access to improved and diversified skills to increase profit. The project has a dedicated subcomponent to work with livelihoods groups that are dominated by women to offer social and economic packages and support them in formalizing and increasing profitability. The indicator used for these activities is 'Livelihoods groups reporting an increase in profit of 20 percent or more due to grant support or training provided by the project', with a target value of 60 percent of these being led by women. The project also includes other activities targeting women to facilitate their participation in the activities described above, such as psychosocial support, support to acquire identification documents to participate in livelihoods, and others as outlined in the component descriptions below.

34. **Citizen engagement (CE) is an integral part of ProClimat, with people being at the center of its implementation.** The project aims to strengthen CE through bottom-up and top-down means. Community members will be empowered to participate in decision-making and planning. Local authorities will be supported to include community members in planning and execution of project activities. Specifically, the project will use the following CE mechanisms:

- **Grievance redress mechanism (GRM).** The project will develop an accessible and robust GRM to allow beneficiaries and other stakeholders to submit project-related complaints and share

concerns and feedback. The GRM will ensure that queries or clarifications about the project are responded to in a timely manner and that grievances are addressed efficiently and effectively.

- **Consultations.** Periodic inclusive consultations will be conducted throughout project implementation. The project will ensure that the process of social mobilization and participatory planning is inclusive so that the voices of disadvantaged and vulnerable groups are enhanced and all social groups, including women, IP, ex-combatants, and youth, are involved.
- **Participatory planning and decision-making.** As part of strengthening citizen participation in the project activities, the project will support a participatory process at the level of each village, bringing together community leaders, women, youth, and other vulnerable and marginalized groups, in addition to local authorities and NGOs operating in the area, to develop PIPs. These plans will be consulted on widely and will be endorsed by the communities and local district and departmental stakeholders. With the project adopting a Community-driven Development (CDD) approach, the project will put beneficiaries in the driver's seat at the department, municipal, and district levels. It will promote inclusive participation of all stakeholders, including vulnerable groups, in local decision-making.
- **Capacity building for CE.** As part of the community engagement process to develop the PIPs and support social inclusion and climate resilience, the project will finance leadership and empowerment trainings, dialogue sessions, mentorship programs, and mental support for beneficiaries to ensure their full participation in the drafting of local development plans and strengthen their participation in local decision-making.
- **Citizen perception surveys.** To ensure satisfaction of communities and solicit periodic feedback of beneficiaries, the project will conduct beneficiary perception surveys on an annual basis.

35. The project will measure CE-specific indicators through the Results Framework: Intermediate indicators will include (a) Beneficiaries reporting that PIPs reflect their needs; (b) Beneficiaries reporting improved participation in local decision making because of project activities; and (c) Grievances registered related to delivery of project benefits that are actually addressed through the GRM.

Component 1: Strengthening Capacity of Institutions and Promoting Social Cohesion (Total US$11.5 million equivalent, of which US$9.8 million IBRD and US$1.7 million PROGREEN)

36. The component will finance activities supporting institutional and community capacity to build inclusive livelihoods in a changing climate and ensure inclusive participation in such processes. Activities in this component fall under GCRF Pillar 3 due to their importance for building resilience in the medium and long term.

Subcomponent 1.1: Building Institutional Capacity on Sustainable and Resilient Agriculture and Natural Capital Management at the National, Departmental, and Local Levels (Total US$5.0 million equivalent, of which US$4.3 million IBRD and US$0.7 million PROGREEN)

37. **The subcomponent will strengthen the capacity of ministries, their deconcentrated structures, and decentralized structures relevant for sustainable and resilient agriculture and natural capital management.** It will finance technical assistance for these different stakeholders to participate in the project, build their knowledge on the proposed landscape approach and technical issues, and ensure their ownership of project activities. Focus will be on improving stakeholder capacity to collaborate effectively

to implement a landscape approach. To the extent needed for the implementation and monitoring of the infrastructure and livelihood activities of the project, key stakeholders, most notably departmental and local public administrations for agriculture and forest economy, will be provided with additional office and logistical equipment.

38. **Additionally, this subcomponent will finance analytical work and advisory services focused on impacts of climate change to facilitate the implementation of subsequent project activities.** Based on stakeholder consultations during preparation, activities would likely include the following:

- **Landscape management for climate adaptation and mitigation.** This workstream will provide analytics and assess policies and practices to reconcile multiple land uses in the project area to promote equitable and sustainable use of land while mitigating emissions and adapting to climate change.[42] This will include (a) developing a conceptual model for institutionalizing an integrated landscape approach suitable for Congo's context, drawing on models successfully tested in other countries of the region, for example, Mozambique and Madagascar and (b) establishing and supporting multi-stakeholder platforms (for example, strengthening existing committees at the department level to ensure coordination among all relevant line ministries as well as district and local authorities). The study is expected to analyze the inextricable links between agriculture, forests, and biodiversity and propose effective adaptation and mitigation measures in the context of an increasingly extreme and unpredictable climate in the project areas.
- **Climate change diagnostics:** (a) identifying the differential impacts of climate change on vulnerable populations in the project area, including women, youth, and IP, to help improve targeting of project beneficiaries; (b) identifying bottlenecks and opportunities to improve meteorological early warning and response for rural communities; (c) providing advisory services to support Congo's Government in its strategic priority to operationalize the Blue Fund for the Congo Basin, which is intended to be hosted by the Development Bank of the Central African States; (d) providing advisory services on implementing Congo's NDC in alignment with the NDP; and (e) providing assistance for integrating climate-smart reforms into existing policies, laws, and regulations, for example, by applying climate resilience criteria for allocating funding to sustainable practices for agriculture, infrastructure adjustments, and natural resource conservation.
- **Sustainable and resilient agriculture.** As climate change is a major threat to food and nutritional security in the country, this study will address the most pressing climate concerns, by (a) examining the state-of-the-art knowledge regarding future impacts of climate change on the country's agricultural sector, for example, changes in crop yields, shifts in harvesting times, and higher risk of perishability due to increasingly damaged roads as a result of extreme events; (b) identifying the agro-ecological approaches suitable for Congo's context and complementary to the CSAIP; (c) conducting organizational and technical assessments of producer groups, cooperatives, and enterprises in the target areas; and (d) identifying agricultural crops adapted to different agri-ecological zones (for example, climate-resistant varieties of millet), as well as

[42] Integrated landscape approaches have demonstrated to be suitable for promoting both climate change mitigation and adaptation, for example, by expanding protected areas, improving their connectivity and integration via biological corridors, reducing deforestation, increasing afforestation, protecting wetlands, improving sustainable forest management, and introducing changes to local farming systems. The work stream will identify opportunities to implement such measures. (World Bank. 2021. *Toward a Holistic Approach to Sustainable Development: A Guide to Integrated Land-Use Initiatives*).

practices that increase carbon sequestration in soil and vegetation (for example, restoring degraded land through regenerative techniques, such as crop rotation and no/low-till farming).

- **Natural capital management.** As climate change is expected to reduce the value of ecosystem services in natural areas—for example, accelerated conversion of forests to agricultural uses—this study will support climate-smart natural capital management by (a) identifying hotspots of land degradation and interventions suitable for restoring these areas; (b) identifying and quantifying the value of ecosystem services of particular importance for climate mitigation (for example, carbon storage) and adaptation (for example, water regulation for downstream agriculture); (c) assessing the zoonotic risk and corresponding mitigation measures for selected areas; (d) investigating the potential of ecotourism as a means of livelihood diversification and climate change adaptation in protected areas, assessing demand, and developing respective action plans for promoting ecotourism in line with the NDP; (e) providing support to improve the legislative and policy framework for natural capital management; (f) assessing the effectiveness of management arrangements for Congo's protected areas; and (g) improving the Government's capacity to plan, operate, and manage the national parks system, including through the support to ACFAP based on a needs assessment.
- **Women's economic empowerment and gendered dimensions of climate change.** This workstream will identify barriers for women's inclusion and participation in project activities, including applying a climate lens to understand the gendered dimensions of climate change. The work will propose specific inputs for project activities to increase women's participation and increase their adaptation and resilience. This will include (a) developing a climate-gendered assessment of women's barriers and opportunities for participating in economic activities in the targeted landscapes and (b) mapping other projects in the targeted areas that support women's economic empowerment to ensure synergies and coordination.

Subcomponent 1.2: Promoting Social Cohesion and Inclusive Participation (Total US$6.5 million equivalent, of which US$5.5 million IBRD and US$1.0 million PROGREEN)

39. **This subcomponent will finance activities at the village, municipal, and district levels for mobilization and inclusion of local communities.** This subcomponent will ensure inclusive participation of all individuals, especially women, youth, ex-combatants, IP, and people with disabilities, and promote their integration in local decision-making; create awareness and buy-in of project activities; put communities and stakeholders at the department, municipal, and district levels in the driving seat to identify their needs for the subsequent components through a consultative process and ensure their role and contribution for the sustainability of outcomes; and improve local communities' knowledge about climate risks and opportunities for resilience. These activities combined will ensure transparency and accountability for the implementation of the subsequent components of the project and sustainability of activities. It is expected that the activities under the subcomponent will be implemented by one service provider per landscape area.

40. The service provider at the level of each landscape will be responsible for the implementation of a communication campaign to generate awareness about the overall project and ensure sensitization about the cross-cutting issues of climate change and social inclusion that the project addresses through its activities. The campaign will be designed at the department, municipal, and village levels and implemented in each of the targeted areas of the project to ensure the creation of an adequate enabling environment for implementation. Once the campaign is under implementation and creates an enabling

environment for the project, the subcomponent will finance, at the level of each village, a participatory process bringing together community leaders, women, youth, and other vulnerable and marginalized groups in addition to local, district, and departmental governments and nongovernmental organizations (NGOs) operating in the area to develop the PIPs. These plans will take into account climate risks faced by the target communities (as identified under Subcomponent 1.1) to include resilient infrastructure and livelihood activities. The PIPs will be consulted on widely by the communities and local district and departmental stakeholders and will form a roadmap of activities to be financed under Components 2 and 3. The PIPs will also include (a) a community mapping to identify the most vulnerable households and ensure their full inclusion in project activities; (b) a list of prioritized resilient small infrastructure to be financed under Component 2 to support climate-smart livelihoods in the community; and (c) a needs assessment for existing producer groups, cooperatives, and enterprises to help inform the livelihoods packages under Component 3.

41. As part of the community engagement process to develop the PIPs and support social inclusion and climate resilience in the proposed activities, the service provider will conduct a series of capacity-building activities and dialogue sessions. These will include:

- Trainings and information sessions on climate impacts and opportunities for adaptation to improve overall knowledge and ensure that priorities of the PIPs reflect the climate change adaptation needs in the target areas and are aligned with the CSAIP and principles of agroecology;
- Trainings on the role of communities in operating and maintaining selected infrastructure;
- Leadership and empowerment training and dialogue sessions for women and people with disability to ensure their full participation in the local development plans and strengthen their participation in local decision-making;
- Psychosocial support provided by specialized service providers for ex-combatants and survivors of violence (including GBV) to support their agency and ensure their inclusion in the PIPs;
- Mentorship for youth and mediation sessions to address grievances at the community level and promote inclusion of vulnerable people; and
- Communication and behavioral change activities on social inclusion to foster positive norms around the activities of the project.

42. **To ensure participation of community members in these activities and dialogue sessions, a social cohesion fund will be established and managed by the service provider in coordination with the Project Implementation Unit (PIU) to provide targeted financial support and technical assistance to individuals who face specific challenges that impede them from participating in local development activities.** For example, financial support could be provided for translating documents into local languages and acquiring identification papers to participate in livelihoods activities. Technical assistance could be provided to support community solutions for childcare.

43. **Building on the activities above, this subcomponent will finance a community-based Early Warning and Response System (EWRS) for climate preparedness.** Climate change has affected the agricultural cycle, forcing farmers to adapt their planting calendar. Meteorological information is being collected and analyzed by the national agency for civil aviation (*Agence Nationale de l'Aviation Civile*, ANAC), but the responsible agency does not have the systems in place to disseminate it at the local level,

where it is urgently needed. The EWRS will include (a) identification and training of farmers as 'early warners'; (b) development of a system for reporting climate and harvest changes at the regional and national levels (early warning component) using SMS-based technology; (c) diffusion of information from the national level to the 'early warners' for local dissemination to facilitate early response; and (d) training to farmers on the use of the information. The establishment of the EWRS is expected to be carried out by the same service providers selected for the other activities under this subcomponent, given their work at the community level. The design and contracting arrangements of this activity may be adjusted to ensure alignment and synergies with related activities of other donors, most notably AFD and WFP.

44. **This subcomponent will also finance the establishment of a local GRM.** The mechanism will ensure survivor-centered processes for GBV survivors. It is expected that the GRM will help link GBV survivors to existing services within the target areas. The subcomponent will therefore also finance GBV services mapping if such information does not already exist.

Component 2: Strengthening Investments in Sustainable and Resilient Agriculture and Natural Capital Management (Total US$40.0 million equivalent, of which US$34.1 million IBRD and US$5.9 million PROGREEN)

45. This component finances infrastructure for sustainable and resilient agriculture and natural capital management. Investments will leverage nature-based solutions to maximize ecosystem services, for example, through stabilization and restoration of degraded areas, wetlands (including peatlands), mangroves, and riverbanks. Financed infrastructure will be subject to climate screenings and have Environmental and Social Management Plans (ESMPs) and plans for operation and maintenance. Activities in this component fall under GCRF Pillar 3 due to their importance for building resilience in the medium and long term.

Subcomponent 2.1: Improving Infrastructure for Sustainable and Resilient Agriculture (Total US$20.0 million equivalent, of which US$17.1 million IBRD and US$2.9 million PROGREEN)

46. **This subcomponent will support livelihoods in sustainable and resilient agriculture by financing microprojects for agriculture infrastructure identified and prioritized in the PIPs developed under Subcomponent 1.2.** Microprojects will be designed to ensure the resilience of infrastructure to weather shocks and alignment with climate-smart agriculture practices. Priority will be given to projects under the CSAIP. Activities could include (a) constructing, rehabilitating, upgrading and/or expanding feeder roads, including small bridges and other crossing structures, in accordance with climate-proofed standards for infrastructure design, construction, and maintenance, for example, using pavement mixtures and road drainage systems suitable for extreme heat and rainfall events; (b) improving access to public infrastructure needed for livelihoods (for example, off-grid electrification, renewable energy-based water points, climate-proofed warehouses, and markets) in coordination with national institutions as relevant;[43] and (c) providing infrastructure to manage drought and flooding, for example, construction and enhancement of small dikes and small-scale irrigation and drainage systems, especially in areas prone to flooding, with consideration of appropriate standards for the expected run-off increase due to climate change. A refresher training for communities and relevant stakeholders on key aspects for receiving support, particularly climate screenings, agroecological approaches, and ensuring operations and maintenance, will also be provided under this subcomponent, thus complementing the activities

[43] This may include, for example, the National Rural Electrification Agency and the National Rural Hydrological Agency.

conducted under Subcomponent 1.2. Additional eligibility criteria for selected investments and a list of ineligible activities will be included in the PIM.

47. **Each village will receive infrastructure support in two phases, the value of the works not exceeding US$150,000 per phase.** Joint proposals for villages and municipalities will be encouraged to promote connectivity and access between villages. All construction and rehabilitation activities will be contracted by the PIU to service providers and will prioritize the use of local labor and material. Emphasis will be placed on providing equal opportunities for ex-combatants, women, and youth, IP, and people with disabilities (including equal pay for equal work) and ensuring opportunities for all who want to participate in subproject construction.

Subcomponent 2.2: Improving Natural Capital Management (Total US$20.0 million equivalent, of which US$17.1 million IBRD and US$2.9 million PROGREEN)

48. **The subcomponent will finance infrastructure and capacity building to better integrate different land uses, particularly by improving Congo's ability to preserve natural assets and the ecosystem services they provide (including carbon sinks of global significance) and leverage them for livelihood activities.**[44] This subcomponent will focus on investments that preserve or increase the value of ecosystem services for agriculture, and on interventions that improve the management capacity of formally designated protected areas, which will particularly improve regulating ecosystem services.

49. **The subcomponent will invest in supporting ecosystem services for agriculture.** Natural areas, such as forests and other vegetated land, provide ecosystem services that are critical for the productivity of agriculture nearby, for example, by regulating water flow, soil moisture, and temperature. However, climate change poses enormous threats to both natural areas (for example, decline in tree growth rate due to extreme temperatures) and the agricultural activities they support (for example, crop loss due to increased heat or floods). This subcomponent will help improve the resilience of landscapes by stabilizing or enhancing the value of ecosystem services on which agriculture depends. This will allow the project to go beyond what can be achieved by improving agricultural infrastructure (Subcomponent 2.1) and practices (Component 3) alone. To do so, the subcomponent will build on the ecosystem services assessment under Subcomponent 1.1 to provide more granular analytics for selected geographical areas, quantifying in further detail the environmental services provided to agricultural activities and recommending measures that would help preserve or even enhance the specific ecosystem services identified. The subcomponent will then finance the implementation of these measures, in alignment with the planning instruments and consultations under Subcomponents 1.1 and 1.2 and in synergy with the livelihood activities under Component 3. Supported activities are expected to include, for example, restoration of degraded land, particularly through nature-based solutions with mitigation potential, such as reforestation, afforestation, and assisted natural regeneration, and adaptation potential, such as soil

[44] Ecosystem services are the benefits that people derive from ecosystems. They can be organized into four types: (a) provisioning services, which are the products people obtain from ecosystems and which may include food, freshwater, timbers, fibers, and medicinal plants; (b) regulating services, which are the benefits people obtain from the regulation of ecosystem processes and which may include surface water purification, carbon storage and sequestration, climate regulation, and protection from natural hazards; (c) cultural services, which are the nonmaterial benefits people obtain from ecosystems and which may include natural areas that are sacred sites and areas of importance for recreations and aesthetic enjoyment; and (d) supporting services, which are the natural processes that maintain the other services and which may include soil formation, nutrient cycling, and primary production. (World Bank. 2016. World Bank Environmental and Social Framework. Washington, DC.)

stabilization, erosion control, bank stabilization, enrichment planting, selective felling, and fire management. The characteristics of the locations and their role in the landscape will determine the exact intervention to be supported. Areas for restoration will be coordinated with the Government's existing programs of relevance, for example, on reforestation. The rural population will actively participate in implementation of these activities, which will provide employment opportunities. Training in the supported practices and highlighting their benefits will assist in their long-term adoption.

50. **In addition, the subcomponent will, in coordination with ACFAP, invest in improving the management capacity of protected areas, thus helping protect the natural assets that are providing important regulating ecosystem services and that will be key for achieving the NDP's ambitions on ecotourism.** Congo's protected areas cover around 12 percent of Congo's land area and include four national parks, several types of reserves (wildlife, biosphere, and forestry) and two hunting areas.[45] As these areas are managed with widely varying degrees of effectiveness, the scale and nature of project support will vary accordingly. Activities will help overcome the main challenges that protected areas in Congo are facing: (a) remote location and difficult access; (b) lack of park infrastructure and weak management capacities; (c) lack of capacity and infrastructure to create revenue; (d) lack of engagement and benefit sharing with IPLCs; and (e) low resilience to climate risks, most notably increases in temperature, flooding, and extreme events, which are expected to result in more forest fires, reduced tree growth, peatland drying, reduced ecosystem services, and coastal erosion. Support will focus on investments that can be expected to increase the respective protected area's score on the Management Effectiveness Tracking Tool (METT), the most widely used protected area assessment system. This is expected to maintain and further reduce levels of degradation. Such support will include (a) developing or updating park management plans (including specific strategic issues such as managing zoonotic risk, conducting vulnerability assessments, and promoting energy and water conservation); (b) constructing and upgrading essential park infrastructure, particularly in areas vulnerable to the effects of climate change (including firebreaks, guard stations, and park boundary markers); (c) financing operational costs (including staffing); (d) providing and renewing essential equipment (including vehicles and office, surveillance, and patrolling equipment, including cameras); (e) improving wildlife surveillance capacity (including through aerial and/or unmanned aerial vehicle flyovers and satellite monitoring); (f) supporting restoration activities for conservation and adaptation purposes (for example, infrastructure for controlling increased erosion due to severe storms); and (g) training for park management staff in conservation (including nursery establishment for and replanting of indigenous tree species), management, and community engagement (to ensure participatory involvement of communities in determining how best to manage the park). The management plans are expected to sufficiently outline capacity needs, operational costs, and surveillance costs related to the management of the park and its buffer zones, so that the project can support their implementation. In addition, the subcomponent will finance readiness assessments on ecotourism in selected areas and make corresponding pilot investments (infrastructure and capacity building) in areas with demonstrated commitment and potential/demand. The focus for these pilots will be on improving revenue streams for protected areas and developing a model approach on benefit sharing with communities. All investments in infrastructure within protected areas will be screened to ensure that they are climate-smart and do not interfere with conservation goals. The support to protected areas will be closely coordinated with the infrastructure investments for sustainable and resilient agriculture under Subcomponent 2.1 and the livelihood activities under Component 3. This will help reconcile local development and conservation needs at the landscape level, improving relations with communities and actively engaging them in conservation and the resulting benefits. The specific protected

[45] *Ministère de l'Economie Forestière et du Développement Durable. 2014. Plan d'Action Quinquennal 2016–2020.*

areas to be supported will be agreed upon in consultation with the Government based on criteria that will be defined in the PIM. These are expected to include the following: (a) completed legal designation of the protected area; (b) number of people in/around the protected area; and (c) existence of a management plan (or its equivalent based on sufficient stakeholder consultations).

Component 3: Promoting Inclusive, Climate-resilient Livelihoods and Value Chains (Total US$23.5 million equivalent, of which US$20.1 million IBRD and US$3.4 million PROGREEN)

51. **This component will finance climate-resilient economic activities and provide value chain support to groups at different stages of professionalization.** For agriculture activities, the priority will be given to those aligned with the CSAIP. These activities will not only help increase incomes (which in itself may help vulnerable populations prepare for and recover from the negative impacts of climate change) but will also allow farmers to better adapt to changing climate and market conditions by having a wider range of tradable products available. Some activities are expected to reduce farmers' vulnerability to climate risks—particularly extreme heat and flooding—by promoting conservation agriculture (for example, crop rotation and improved soil fertility), while others have mitigation potential, such as the provision of clean energy technologies (for example, introduction of improved cookstoves) or potential to do both (for example, agroforestry with cocoa and bananas). Increasing climate resilience will be an important criterion for selecting activities to be funded under this component. Activities in this component fall under GCRF Pillar 1 as they help address food insecurity in the medium term through supporting production, facilitating trade, supporting the vulnerable, and investing in sustainable food systems.

52. **Activities of this component will be closely linked with Components 1 and 2.** They will build on (a) the capacity assessment (organizational and technical) of producer groups, cooperatives, and enterprises; (b) assessment of barriers and opportunities for women's participation in economic activities; and (c) participatory community mapping of vulnerable households conducted under Component 1. The component will finance diversified economic activities and value chains including sustainable and resilient agriculture (for example, agroforestry, market gardening, poultry, and fisheries), community forestry (through forest plantations, particularly for fuel wood) in line with the new Forest Code and NTFP valorization (for example, production/collection of honey, mushrooms, medicinal herbs, black pepper, and gnetum africanum), and tourism (including hospitality and cultural activities). Beneficiaries and activities will be selected to maximize development benefits in terms of reducing poverty and fragility, minimize food insecurity, build resilience to climate change beyond income diversification (for example, by supporting soil improvement and water conservation practices), restore degraded lands, and reduce degradation of protected areas. For example, agricultural activities could be supported either in zones of strategic importance to reduce Congo's reliance on food imports (including in the Protected Agricultural Zones that the Government has been setting up) and/or in the vicinity of protected areas to reduce pressure on natural ecosystems through hunting. Activities will be closely coordinated with relevant actors, including forest concession holders and protected areas management. Where relevant due to the proximity of humans and wildlife, activities will take into account diversifying sources of protein to help reduce zoonotic risk.

Subcomponent 3.1: Supporting Micro-, Small-, and Medium-sized Enterprises (MSMEs) on Climate-resilient Livelihoods and Value Chains (Total US$9.5 million equivalent, of which US$8.1 million IBRD and US$1.4 million PROGREEN)

53. **Building on the activities and lessons learned from PADEC, PDAC, and PFDE, this subcomponent will support the competitiveness of MSMEs**. This will particularly include MSMEs involved in agriculture, community forestry, and NTFPs, from input supply to the production, processing, marketing, and distribution of products, as well as the delivery of relevant services, and MSMEs involved in ecotourism. MSMEs in Congo face efficiency challenges linked to the cost of storing, processing, packaging, transporting, and marketing their products. Efficiency gains in operations will result in higher-quality agricultural products (compliant with nutritional and safety standards), jobs (full-time, part-time, and seasonal), and a secure market that rewards producers with quality produce with higher prices. This subcomponent will provide a one-time matching grant to MSMEs on a sliding scale with a maximum of US$150,000, with targeted technical assistance to improve their skills and knowledge, improve technology transfer (processing equipment) to increase their production, reduce their ecological footprint, and connect them to markets. The activities will be coordinated with sectoral production federations, as relevant. Women-owned MSMEs will be offered additional technical assistance, including business leadership and entrepreneurship training, with additional mentorship and networking support to help them strengthen their presence and competitiveness in the market. To receive the matching grant, the MSME will need to submit a solid business plan that will include at least the following: a project description; a realistic assessment of the marketing prospects and post-grant sustainability; a complete financing plan, including a financial contribution from the MSME for the investments and operation and maintenance; and description of potential provisions for local employment (seasonal or full-time) and use of agroecological approaches and climate-smart technologies in their activities.

Subcomponent 3.2: Supporting Cooperatives on Climate-resilient Livelihoods and Value Chains (Total US$7.0 million equivalent, of which US$6.0 million IBRD and US$1.0 million PROGREEN)

54. **The subcomponent will finance activities to improve capacity, production, and sustainability of cooperatives in agriculture, community forestry, NTFPs, and ecotourism.** Using the assessment completed under Component 1, cooperatives will be given a technical capacity-building package complemented with two matching grants spread over two years where each grant will have a ceiling of US$60,000. These packages will aim to transition the cooperatives from traditional practices to more efficient and sustainable approaches (for example, from low-yield practices to agribusiness practices). The capacity-building package will cover (a) training workshops to familiarize beneficiaries with the Uniform Act on cooperative societies of the Organization for the Harmonisation of Business Law in Africa (OHADA); (b) cooperative management skills (including operations management, financial management [FM]; governance, and partnerships); and (c) agricultural and environmental best management practices. Project support will also include technology support (for example, support on drought-resistant seed production through pilot farms, distribution systems, and technology transfer, as well as irrigation and flood drainage), production and supply of organic fertilizers, establishment of connections with banks for loans and with other private sector partners, production, and commercialization of products.

55. **To receive each matching grant, a business plan will need to be developed that includes a financial contribution from the cooperative.** The business plan of the first grant will be used as a proof of concept for the proposed work of the cooperative, while the business plan of the second grant should include a proposed vision of the cooperative on how to sustain activities beyond the project. Business plans must include a complete financing plan including a financial contribution from the cooperative. Activities financed under the business plan could include nurseries (for banana sprouts and fruit trees), vehicles (tractors and transport vehicles) in cases with particular value added, tools (for example, chainsaws, hoes, machetes, rakes, and wheelbarrows), small processing equipment (for example, rice

husking machines, juice extraction machines, banana chips production machines, yoghurt preparation equipment, and *foufou* mills), and small infrastructure to support commercialization (for example, rural road maintenance, storage buildings, and packaging facilities). Support can also come in the form of skills development for access to jobs in ecotourism and conservation, including scholarships to attend vocational colleges on tourism, natural resource management, and conservation.

56. **This subcomponent will create the enabling conditions for formal win-win partnerships between MSMEs and cooperatives in the target landscapes and support the latter to move toward an enterprise model.** Partnership agreements will help cooperatives secure market access and supply sustainable raw materials to MSMEs for processing, packaging, marketing, and so on. Thus, local value chains would be developed with visible positive impacts at the local level.

Subcomponent 3.3: Supporting Resilient Livelihood Groups and their Value Chains (Total US$7.0 million equivalent, of which US$6.0 million IBRD and US$1.0 million PROGREEN)

57. **The project will also provide support for livelihoods groups, especially as they tend to be informal and dominated by women.** Through the activities of this subcomponent, the project will particularly help women-dominated livelihoods groups increase their profitability, move toward formalization, and eventually participate in value chains and commercialization activities. The activities financed under this subcomponent will support existing groups or help build new ones, depending on local needs. They will empower these groups to transition into formal registered cooperatives. In the Pool Department specifically, mentoring for livelihoods groups and cooperatives that are led by or include ex-combatants will be provided in addition to support for mediation to clarify misunderstandings that might arise at the community level.

58. **Training on sustainable and resilient agriculture practices, community forestry, NTFPs, and/or tourism will be provided to all livelihoods groups to guide them in understanding and adapting to specific challenges.** Additionally, the groups will receive three packages for support.

- **Support for group norms and development.** Having identified the various producer groups, targeted activities will be conducted to strengthen their group norms. If new groups need to be developed, there will be targeted activities to do so. Working on group norms will help these groups move toward formalization and will entail (a) training in coping and adaptation strategies to increase their socioeconomic resilience to shifting weather patterns, for example, planting drought-tolerant crops, crop diversification, and other technical skills needed to address the changing climate and (b) participating in a set of five core group principles: regular meetings, regular savings, inter-loaning, timely repayment, and record keeping. These groups will integrate the dialogue sessions conducted under Component 1 to identify challenges faced by women producer groups, need for childcare, their adaptation to shocks (for example, climate and pandemic), security and safety issues (especially when it comes to protecting their areas of work), and opportunities to grow female-led and female-dominant livelihoods groups. The service provider will work with these women groups to identify solutions for some of these issues, which could be financed under the grant packages mentioned in the next paragraph.
- **Life skills and business development packages.** These packages are intended to build the groups' agency and confidence and enhance the effectiveness and sustainability of their livelihood activities. Given that these groups are dominated by women, training topics will include literacy,

business management, and financial literacy as well as group management, leadership, decision-making, communication, and business negotiations. Moreover, these packages will support training for developing climate-resilient businesses (for example, using low-energy technologies for food processing and using waste as an eco-friendly alternative to firewood), business plans, and their associated budgets and technical assistance for the plan's implementation.

- **Livelihood grant packages.** Each group will receive up to two grants with a ceiling of US$20,000 per grant over two years based on the business plans presented. Mentoring and support for implementing the business plans will be provided to the groups. Specific support will be provided to women-led groups to help them take advantage of incentives for climate-resilient agriculture through extension services, connecting with existing formalized cooperatives, creating bank accounts, and accessing digital services. Groups that receive a second grant will need to include in their business plans activities for formalizing their groups into cooperatives (in accordance with the OHADA Uniform Act on cooperative societies in the case of agriculture activities) and allocate funds for this. All business plans should be climate-informed and 100 percent of the grants will need to support climate-resilient/climate-smart livelihoods investments.

Component 4: Project management, monitoring, and evaluation (Total US$7.0 million equivalent, of which US$6.0 million IBRD and US$1.0 million PROGREEN)

59. **This component will finance project management, implementation, and M&E.** It will also provide support to capacity building for oversight and monitoring. The component will further finance an expert for independent third-party monitoring of project implementation once per year. It will fund environmental and social impact assessments; project management reporting; and administration and logistical support for project implementation, including knowledge and learning. Given the multisectoral approach of the project, the component will also support knowledge assessment and learning for government staff, particularly for strengthening technical, technological, and managerial capacities, to improve multi-sectoral coordination and provide lessons on how to improve implementation of activities on a yearly basis for course correction. The component will also finance the installation and operation of a geo-spatial platform for monitoring the activities of the project (number, type, and geo-location of infrastructure built; type, presence, and size of livelihoods activities; and so on). It will further finance the operational costs of the Steering Committee providing strategic guidance for the project, the Technical Committee (TC), and the GRM.

Component 5: Contingent emergency response (US$0 million)

60. **Designed as a mechanism to implement the Government's rapid response to an emergency, this component will allow the project to finance emergency recovery activities and reconstruction subprojects under an agreed manual.** It will enable the immediate disbursement of funds and allow the Government to request a reallocation of project funds to partially cover an eligible crisis or emergency. A crisis or emergency eligible for financing is an event that has caused, or is likely to imminently cause, a major adverse economic and/or social impact to the client, associated with a natural or man-made crisis or disaster. If no such event occurs during the lifetime of the project, the component will not be activated.

E. Rationale for World Bank Involvement and Role of Partners

61. **The World Bank is uniquely positioned to support Congo in developing and implementing a landscape approach as a strategic milestone to achieve national development goals and global climate**

change objectives. It has relevant expertise particularly in agriculture, natural capital management, and CDD, building on technical and operational lessons from a long list of relevant operations in Congo, including the Congo PDAC (P159979), the PFDE (P124085), and the Support for PASD (P149690). Grant funding and technical support from the World Bank Multi-Donor Program PROGREEN (the Global Partnership for Resilient and Sustainable Landscapes) will particularly increase knowledge sharing (including across countries); scale up coordination across geographic zones, sector entities, and development partners; and increase the scale, depth, and inclusivity of analytics and consultation processes. The World Bank's value added is also anchored in its strong analytical approach on climate change and inclusion at the global level (NG-ACBP) and specifically in Congo (CSAIP). It can draw from its experience with the implementation of landscape approaches across the continent and around the globe, with considerable experience in supporting governments with the preparation and implementation of large programs that require coordination across sectors and partners. Furthermore, the World Bank can increase impact by combining finance from different sources, for example, from IBRD, the Forest Carbon Partnership Facility, and the Forest Investment Program. The proposed project will also explore options to leverage funding for landscape-level activities from additional trust funds, such as the Global Environment Facility (GEF).[46] Close collaboration with other major donors in the country, including the AFD, Food and Agriculture Organization (FAO), and CAFI, will be facilitated by the World Bank. The World Bank would thus contribute to Congo's goals of economic diversification in line with its mandate to reduce poverty while also helping preserve the forests of the Congo Basin as a carbon sink of global significance.

62. **Development partners active in Congo have been consulted during project preparation and will be actively engaged during implementation.** ProClimat is closely aligned with the projects of other bilateral and multilateral development agencies, as described in detail in section I.C. Table 1 presents an overview of relevant projects that these agencies are expected to implement in Congo simultaneously with ProClimat. Additional partners will be engaged in project implementation as well, most notably the international NGOs that manage conservation areas and are thus of strategic importance for supporting local livelihoods.

Table 1. Overview of Relevant Projects That Have Been Implemented by Development Partners

Donor	Sector	Name	Expected Implementation Period
AFD (with CAFI)	Land management	Sustainable Land Use Program (*Programme d'Utilisation Durable des Terres*, PUDT)	2022–2027
AFD (with CAFI)	Land management	Investment Plan of the Sustainable Land Use Program (*Programme d'Investissement du Programme d'Utilisation Durable des Terres*, PI-PUDT)	2023–2028
AFD	Forest	Northern Congo Forest Landscape Project (*Projet Paysage Forestier du Nord-Congo,* PPFNC)	2020–2025
AFD	Agriculture	Agricultural Sector Revitalization Project (*Projet d'Appui à la relance du Secteur Agricole*, PARSA)	2021–2026
AFD	Climate Change	Adapt'Action Facility Project	Phase 1: 2018–2022 Phase 2: 2022–2027
USAID	Conservation	Conservation through Economic Empowerment in the Republic of Congo (CEERC)	2020–2026

[46] The GEF-8 funding cycle offers opportunities to tap into integrated programs financing within the Congo Basin, both for wildlife conservation and ecosystem restoration.

Donor	Sector	Name	Expected Implementation Period
FAO	Forest	Project to Reduce Greenhouse Gas Emissions from Forests (PREFOREST)	2021–2029
FAO	Forest	Project to Strengthen Sustainable Wood-energy Potential (PROREP Wood-Energy)	2022–2026
WFP (with Adaptation Fund)	Climate change	Building adaptive capacity to climate change in vulnerable communities living in the Congo River Basin	2020–2025
European Union (EU)	Conservation	Sustainable Wildlife Management (SWM) Congo Program	2020–2025

F. Lessons Learned and Reflected in the Project Design

63. **ProClimat draws lessons from the implementation of different World Bank-financed projects in Congo, particularly PFDE, PDAC, and PASD.** For example, all three projects illustrated the importance of community consultations and sensitization before launching project activities and throughout implementation. This is necessary not only to adequately assess community needs but also to ensure ownership of activities and acceptance by all stakeholders. Similarly, community investments need to be accompanied by technical assistance (including agricultural extension services and training/advisory activities) to ensure that they can unfold their full potential. PFDE, PDAC, and PASD also demonstrated the potential of partnering with local NGOs to deliver services to rural populations in the absence of strong community and government institutions at the local level, underlining the importance of strengthening the capacity of such institutions or working with alternative governance arrangements. PDAC's approach of having a PIU with local satellite offices proved useful for close and continuous supervision of project activities and is thus also reflected in ProClimat's implementation arrangements. PASD showed that providing targeted community-based psychosocial support to ex-combatants contributed to social cohesion in the Pool Department by enabling participants to take advantage of socioeconomic opportunities and improve their overall well-being.

64. **In developing and implementing a landscape approach, the project incorporates insights from similar activities in other countries.** For example, the Mozambique Conservation Areas for Biodiversity and Development Project (MozBio, P131965) illustrated the importance of making conservation and livelihood development compatible for protected areas to be successful. ProClimat thus recognizes the importance of linking conservation and livelihood support because local communities can put additional pressure on protected areas or contribute to their protection and benefit from it, depending on their options. As this requires action at a large scale, the project will collaborate closely with other initiatives in the targeted landscapes, particularly streamlining activities in the agriculture and forestry sectors to transform rural livelihoods. More broadly, ProClimat's design has been informed by the World Bank's Guide to Integrated Land Use Management,[47] which draws from a wide range of experience across regions and institutions.

[47] World Bank. 2021. *Toward a Holistic Approach to Sustainable Development: A Guide to Integrated Land-Use Initiatives*.

65. **Community-led approaches as adopted by the project are best suited to identify local needs and priorities, implement small infrastructure, and manage investments**.[48] Several meta-analyses of CDD programs have shown that communities are capable of effectively managing grants to provide small-scale infrastructure and that these investments have positive effects on material welfare. By transferring decision-making powers and implementation responsibilities to communities, CDD programs are able to lighten the institutional load on governments and can often expand rapidly across large geographic areas. Studies across multiple CDD projects have shown that infrastructure and public works are built at comparatively lower cost without sacrificing technical quality. Studies from the Philippines, Indonesia, Nepal, Burkina Faso, and Malawi, for example, demonstrate 15 to 40 percent lower costs, depending on the type of investment. These savings come primarily from the elimination of middlemen or contractor overhead, as well as community contributions of labor or materials.[49] However, the process of mobilization and planning must be inclusive and participatory to ensure that all social groups, including women and youth, are involved. A sensitive and tailored engagement process is crucial to ensure that the voices of disadvantaged groups are expressed and to prevent elite capture.

66. **Integrated packages to support livelihoods and infrastructure within a landscape can potentially deliver the community-level resilience that is necessary for adapting to climate change and managing disaster risk.**[50] The community-led approach adopted under the project has the potential to provide communities with a broad platform for empowerment and poverty reduction in addition to a diverse range of risk management mechanisms for climate change, making use of local knowledge and expertise to operate effectively in insecure environments. In post-conflict Aceh, Indonesia, villages participating in the Community-Based Assistance for Reintegration of Conflict Victims (BRA-KDP) CDD program, experienced a 11 percent decline in poverty compared to villages outside the program, with almost 90 percent of funds in the BRA-KDP program being used for purchasing private goods. In Nepal, operating during active conflict, the Poverty Alleviation Fund helped raise the average nominal income for extremely poor and marginalized households in project communities by 145 percent.[51]

67. **A group-based approach has shown positive evidence in supporting women's economic empowerment compared to individual targeting approaches.**[52] Recent impact evaluations show that group-based interventions, including with livelihoods, health, and financial groups, have had a positive impact on women's decision-making, participation in the labor market, and ultimately social and economic empowerment. This is attributed to the integrated packages that are often offered to these groups. Also, in the context of Congo, the recent experience of PASD has confirmed that integrated support built the skills of women's groups, provided them with access to capital and intensive coaching, made it possible to limit the diversion of funds, and strengthened the establishment of their business. Similarly, the project's integrated packages would include financial assistance, coupled with social and

[48] World Bank. 2013. *Designing Community-Driven Development Operations in Fragile and Conflict-Affected Situations. Lessons from a Stocktaking*. Washington, DC: World Bank.
[49] Myint, Nikolas, and Corey Patterson. November 2018. *Operationalizing the Pathways for Peace Study in Community-Driven Development Operations: Guidance Note*. Washington, DC: World Bank.
[50] Arnold, Margaret, Robin Mearns, Kaori Oshima, and Vivek Prasad. 2014. *Climate and Disaster Resilience: The Role for Community-Driven Development*. Social Development Department. World Bank, Washington, DC.
[51] Myint, Nikolas, and Corey Patterson. November 2018. *Operationalizing the Pathways for Peace Study in Community-Driven Development Operations: Guidance Note*. Washington, DC: World Bank.
[52] Dìaz-Martin, Lucìa, Akshara Gopalan, Eleonora Guarnieri, and Seema Jayachandran. 2020. "What Works to Enhance Women's Agency: Cross-Cutting Lessons from Experimental and Quasi-Experimental Studies." J-PAL Working Paper. https://www.povertyactionlab.org/sites/default/files/research-paper/gender_womens-agency-review_2020-march-05.pdf.

technical skills, and integration with a network of other women for economic and social support. Similar evaluations for groups of adolescent girls have also shown positive impacts.

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

68. **The implementing agency will be Ministry of Planning, Statistics, and Regional Integration (*Ministère du Plan, de la Statistique et de l'Intégration Régionale*, MPSIR).** It will coordinate the relevant line ministries, most notably, the Ministry of Agriculture, Livestock, and Fisheries (*Ministère de l'Agriculture, de l'Elevage, et de la Pêche*, MAEP); the Ministry of Environment, Sustainable Development, and the Congo Basin (*Ministère de l'Environnement, du Développement Durable et du Bassin du Congo*, MEDDBC); the Ministry of Forest Economy (*Ministère de l'Economie Forestière,* MEF); the High Commission for the Reintegration of Ex-Combatants (*Haut-Commissariat à la Réinsertion des Ex-Combattants;* under the Presidency); and the Ministry of Territorial Management, Infrastructure, and Road Maintenance (*Ministère de l'Aménagement du Territoire, des Infrastructures et de l'Entretien Routier*, MATIER). A preliminary technical assessment of the ministries found that implementation capacity is weak and that effective cross-ministerial collaboration for project implementation has been uncommon so far. It is therefore proposed that the project be implemented by a new PIU under MPSIR, whose staff will be recruited competitively.

69. **The institutional and implementation arrangements will be developed at the national, regional, and local levels using the following principles:** (a) build institutional capacity by supporting existing government systems and mechanisms that have proven to be effective for approaches of similar projects; (b) ensure presence at the department and district levels; in line with the deconcentration and decentralization policies; and (c) support national coordination for the multisectoral approach of the project by engaging relevant government agencies in project implementation and supervision. Details of the implementation arrangements are shown in Figure 2.

At the national level

- **Steering Committee.** The high-level inter-ministerial Steering Committee (*Comité de Pilotage*) will provide strategic guidance and ensure consistency in and support for the multisectoral project activities. The committee will be chaired by MPSIR and will include, *inter alia*, representatives from ministries involved in the project. The roles and responsibilities of the *Comité de Pilotage* will be elaborated in the PIM. It will meet at least once per year and approve the project's annual work plans and budgets.
- **PIU.** A PIU will be established under the oversight of MPSIR to implement the multisectoral approach of the project. Technical staff will include, at a minimum, a project coordinator, an infrastructure specialist, and a conservation specialist for Component 2; a rural livelihood specialist who will lead supervision of Component 3 and build capacity of identified ministerial staff in this area; and a GBV specialist to ensure gender inclusion across the implementation of project components. The PIU will also include a procurement specialist, an FM specialist, an FM assistant, a social safeguards specialist, an environmental safeguards specialist, an accountant, and an M&E specialist. The PIU staff will be recruited through a competitive process, or the positions will be filled by qualified civil servants.

- **TC.** Given the multisectoral nature of the project, a TC will be formed with technical focal points nominated by the core ministries participating in project implementation (for example, MPSIR, MEF, MEDDBC, and MAEP). The purpose of the TC will not be to oversee or direct the work of the PIU but rather to provide a forum for discussing implementation issues and solutions to roadblocks and challenges in a multisectoral way and notify the Steering Committee of actions that may be recommended. The core ministries may recruit technical consultants to support the Directors for improved coordination, technical backstopping, and capacity building. The TC will keep the relevant ministries apprised of project activities between the less frequent meetings of the Steering Committee. The TC will meet every other month during the first year of implementation (frequency may change based on need).

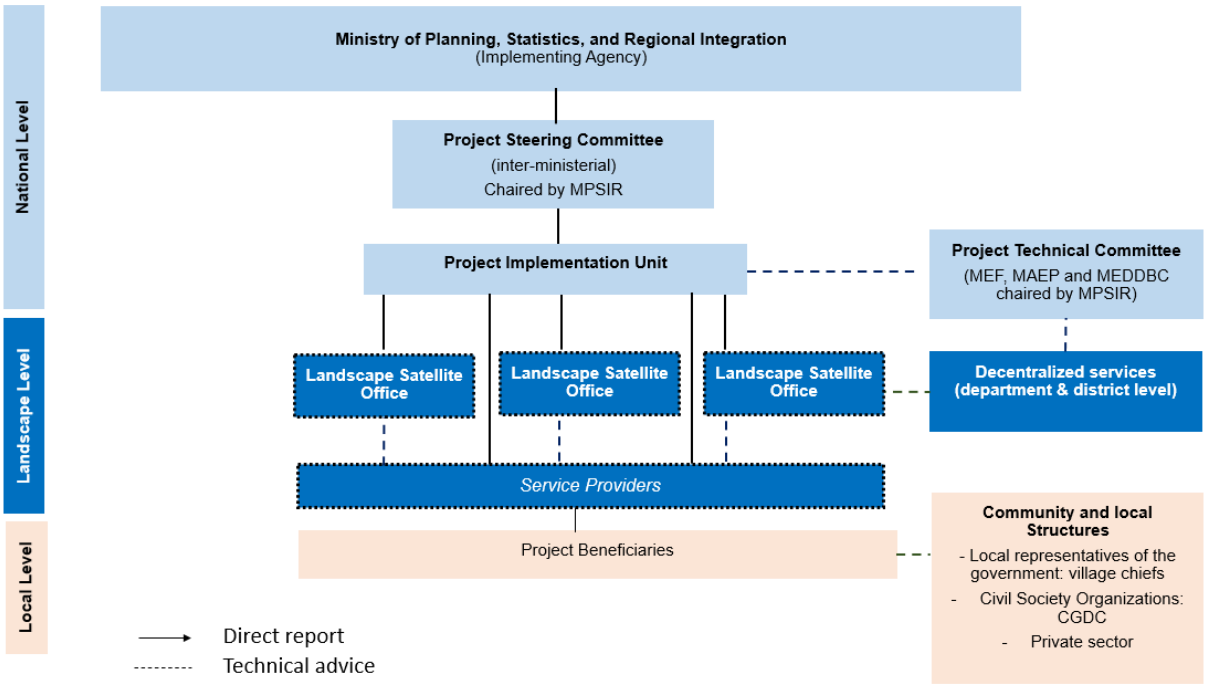
At the landscape level

- **Landscape Satellite Offices (LSOs)** will be established at the landscape level to ensure coordination and close follow-up of project activities. Each LSO will be led by a landscape-level focal point supported by an environmental and social safeguards specialist and an accountant. The LSOs will closely follow the implementation of project activities by the service providers (below), address bottlenecks, ensure coordination with decentralized and deconcentrated services, and harness synergies with the activities of other donors and the private sector in the landscape areas.

At the local level

- **Service providers.** Service providers will be contracted by the PIU to support implementation of the different components. The service providers will work directly with the project beneficiaries and will support M&E of the project.

Figure 2. Implementation Arrangements of ProClimat



Note: CGDC = Community Development Management Council (*Comités de Gestion et de Développement Communautaire*).

B. Results Monitoring and Evaluation Arrangements

70. **The M&E system will generate regular, real-time data directly from project beneficiaries to allow for flexibility and mid-course correction.** The PIU will have primary responsibility for M&E through a dedicated team, which will include a project M&E specialist hired at the national level and who will coordinate closely with the LSOs. Service providers are also expected to have their own M&E specialists to support the national M&E specialist at the PIU level. The overall M&E system is guided by the project's Results Framework. It will use smartphone technology and a web-based Monitoring Information System (MIS) to support efficient data collection, aggregation, and analysis to enhance transparency and allow for real-time monitoring of project progress and facilitate rapid corrective actions. All results will be disaggregated by gender, youth, IP, and ex-combatants to the extent possible, as shown in the Results Framework. The project will report on PROGREEN results indicators as indicated in the Monitoring and Evaluation Plan in Section VII.

71. **MIS and supporting Geographic Information System (GIS).** The project's MIS will provide data on key project inputs, outputs, and progress. This will include the tracking of financial and physical progress in project implementation. The approach of the Geo-Enabling Initiative for Monitoring and Supervision (GEMS) for using digital data is expected to be applied. For field monitoring, the KoBoToolbox software will be used to collect and process data relating to the location of project activities. The PIU will regularly review and analyze these data to report on progress, assess performance, and identify issues for follow-up action. The M&E system will include a GIS to map all expected infrastructure to be rehabilitated, support for livelihoods, and social activities to ensure complementarity of the landscape approach. This GIS is expected to provide real-time data regarding the progress of the work and will assist the World Bank team in remote supervision in case of restrictions on travel due to the pandemic or security impacts. Also, the GIS will map activities of other donors in the same targeted areas to support coordination and collaboration. The national PIU will hire a GIS specialist for managing the system and will be supported by the World Bank technical team to establish this platform.

72. **Evaluations and assessments.** A study will be conducted at the start of implementation to establish baseline data and at mid-term and project closing to assess project results in a qualitative and quantitative manner. Several additional studies will be undertaken to enhance understanding of key aspects of the project, including the following:

(a) **Economic analysis** of selected completed subprojects, including an assessment of the impact on income that the investments made under Component 3 have had.

(b) **Technical reviews** of the quality of infrastructure works and their maintenance. A sample of completed subprojects under Component 2 will be visited by teams of engineers to assess the quality of construction and ongoing functionality and identify issues with maintenance.

(c) **Beneficiary perception surveys** of the project by a third-party monitoring agency will be conducted on an annual basis to ensure satisfaction of the communities with the works. The results of these beneficiary surveys will be disaggregated by women, youth, IP, ex-combatants, and so on.

(d) **Process evaluation.** Teams of qualitative researchers will spend extended periods in a small sample of villages to document the bottom-up planning process and project implementation to identify good practices that can be shared and potential bottlenecks that need to be dealt with by management. Work will commence on these studies in the second year of implementation so that results are available for the midterm review (MTR) to inform mid-stream corrections, as needed.

C. Sustainability

73. **The sustainability of the project is anchored in its landscape-wide coverage, focusing on multisectoral engagements in conservation and agriculture that seek to build both the capacity of national, regional, and local governments and the resilience and resource base of local communities.** The project is sustainable along the following dimensions:

- **Institutional sustainability.** The project is anchored in MPSIR to ensure multisectoral engagements and will be supported by technical ministries of agriculture, environment, and forest economy. The project will provide an opportunity for these ministries to gain new skills in project management, oversight, and coordination to ensure sustainable and integrated development. At the regional, district, and village levels, improved capacity for planning, budgeting, implementation, and collaboration will pave the way for better institutional coordination for development. Component 3 will strengthen livelihoods groups, cooperatives, and micro-enterprises in the project areas through access to finance and technical assistance.
- **Infrastructure sustainability.** Operations and maintenance plans will be a pre-condition for approval of infrastructure microprojects under Subcomponent 2.1 to ensure sustainability. Villages and local and regional governments will be required, through the consultative process under Subcomponent 1.2, to ensure that these plans are developed and implemented with their contribution in the form of monetary support or labor.
- **Economic sustainability.** All investments under Subcomponent 2.1 and relevant investments under Subcomponent 2.2 will be screened for return on investment. All investments under Component 3 will be screened for financial viability and economic potential. The economic sustainability of all investments will be monitored as part of the project's Results Framework.
- **Environmental sustainability.** The project focuses on preserving natural capital through a participatory approach and without compromising the livelihood needs of the local population, which is expected to ensure support for conservation activities beyond project duration. In addition, all activities will be subject to the World Bank's Environmental and Social Framework (ESF), which will not only avoid environmental harm but will also help identify opportunities for harnessing additional environmental benefits.
- **Social sustainability.** The project's strong emphasis on inclusive planning processes, awareness campaigns, and various capacity-building activities for social empowerment with a specific focus on women, IP, ex-combatants, youth, and people with disability are expected to build trust between different groups in society, support the integration of those who have been excluded or marginalized from decision-making, and build social cohesion and resilience of people against future shocks (including climate change, pandemics, and conflict).

IV. PROJECT APPRAISAL SUMMARY

A. Technical, Economic and Financial Analysis

74. **Technical analysis**. Improving landscape management and livelihoods requires sound information on people's needs and on adequate solutions that balance local development and sustainable management of natural resources. Technical elements of ProClimat's design that will help generate long-term benefits in line with the best available information include the use of (a) technical solutions following international best practices adjusted to Congo's local conditions, particularly based on stakeholder consultations (for example, to identify suitable agroecological approaches, climate-smart technologies, and areas with high potential for ecosystem services); (b) sound, participatory approaches that include women, youth, and other vulnerable groups in implementing project activities; (c) up-to-date technologies for effective outreach and monitoring (for example, mobile phone-based technologies for information dissemination and GPS[53] for zone demarcation); and (d) competitive processes to identify the beneficiaries of grants, with a selection process based on simple criteria that incorporate economic, social, and environmental concerns.

75. **Expected project impacts.** The project is expected to provide the following types of benefits:

- **Local:** For example, increased agricultural productivity due to adoption of sustainable and resilient agriculture practices and improved access to climate data and enhanced revenues as a result of livelihoods activities and value chain support.
- **National:** Improved ecosystem services for agriculture in suitable areas (for example, erosion control and water purification); increased value of forest ecosystem services, including the potential for future ecotourism in protected areas; and strengthened social cohesion and more empowered communities, thus promoting peace-building, gender equality, and conflict resolution.
- **Global:** Carbon sequestration and biodiversity conservation in the areas targeted by the project.

76. **Justification for public sector provision.** Land degradation is an important problem in the country, and climate change is expected to aggravate it in the future. A recent World Bank assessment estimated the impact of climate change on land degradation at about 7 percent of the country's GDP in 2030.[54] Land degradation causes on-site effects (for example, reduced productivity) and off-site problems (for example, sediment build-up that affects water availability downstream). Farmers have a strong incentive to address on-site effects but insecure tenure or a lack of financial means are often strong barriers in doing so. Moreover, the off-site effects are externalities from the perspective of the farmers, who have no incentive to address them without outside support. Therefore, using public sector funds to finance the project is crucial for addressing these problems.

77. **The economic and financial analysis considers the project's framework approach.** Due to this approach, several activities have not yet been identified in detail as they will be agreed on during project implementation in consultation with stakeholders and based on a menu of possible activities. Therefore,

[53] GPS = Global Positioning System.
[54] The estimate covers the impacts of climate change on agricultural land, forest land, desertification, and biodiversity loss. World Bank. 2022. Republic of Congo Economic Update. Climate Change Impacts and Adaptation. World Bank.

it is not possible to conduct a cost-benefit analysis (CBA) at the project or component level as part of project preparation. Instead, the economic and financial analysis includes (a) a cost-effectiveness analysis (CEA) for the project and groups of activities; (b) CBAs conducted for representative activities of each component; and (c) an economic valuation of the carbon benefits provided by the project.

Cost-Effectiveness Analysis

78. **Table 2 presents the results of a CEA conducted at the project level and for selected groups of activities.** The project has a cost of US$82 million and aims to reach 562,000 beneficiaries. This corresponds to a unit cost of about US$150 per beneficiary, which is in the same range as similar projects in West Africa. As part of Component 2, the project, for this analysis, is estimated to spend US$10 million[55] to improve the management of about 1.2 million ha of protected areas. This gives a unit cost of about US$9 per ha, which is in the same range found for other countries of the region. Finally, under Component 3, the cost of promoting climate-resilient livelihoods and value chain (US$1,000 per beneficiary)[56] is within the range of costs for similar activities implemented by other projects. These figures suggest that the overall project and the groups of activities related to protected area management and livelihoods and value chains are cost-effective.

Table 2. Results of the CEA

Types of Activities/Cost	Current Project	Other Projects
Total project cost (US$/beneficiary)	150	70 in Burkina Faso, 150 in Niger, 210 in Nigeria, 250 in Ghana[57]
Cost of protected area management (US$/ha)	9	2 in Côte d'Ivoire, 15 in Guinea, 1–6 in other protected areas in Congo
Cost of promoting climate resilient livelihoods and value chains (US$/beneficiary)	1,000	700 in Congo (PDAC), 1,200 in Congo (PANC), 2,400 in Chad

Sources: Based on data derived from the following World Bank projects: Burkina Faso Communal Climate Action and Landscape Management Project (P170482), Project Appraisal Document (PAD); Niger Community Action Project for Climate Resilience (P125669), Implementation Completion and results Report (ICR); Nigeria Agro-Climatic Resilience in Semi-Arid Landscapes (P175237), PAD; Ghana Landscape Restoration and Small-Scale Mining Project (P171933), PAD; Côte d'Ivoire Protected Area Project (P111290), ICR; Guinea Natural Resources, Mining, and Environmental Project (P168613), PAD; Congo PDAC (P159979), PAD; PANC (P166189), PAD; and Chad Value Chain Support Project (P133021), ICR.

Cost-Benefit Analysis

79. **Table 3 presents the results of a CBA carried out for selected investments.** The analysis considered all costs, including investments, operation and maintenance costs, and other opportunity costs (for example, opportunity cost of land). It estimated the benefits for which data were available, for example, returns from sales of bananas and cocoa, opportunity cost of time saved due to road

[55] According to this estimate, an additional US$10 million would be dedicated to supporting ecosystem services for agriculture. However, given some uncertainty at this stage regarding the exact area of intervention, activities, and types of ecosystems services, the CEA does not cover these investments.
[56] Estimated as US$23.5 million (cost of Component 3) for 23,250 direct beneficiaries. The estimated number of direct beneficiaries of Component 3 was calculated as (40 MSMEs × 10 people per MSME + 50 cooperatives × 25 people per cooperative + 200 producer groups × 15 people per producer group) × 5 (estimated household size) = 23,250.
[57] Only the costs and the number of beneficiaries related to the landscape restoration part of the project were used in this analysis.

rehabilitation, and so on. The results, summarized in Table 3, show that the selected activities are both economically and financially attractive. The results are considerable underestimates as they do not account for several off-site benefits, such as erosion control. Annex 3 includes the details of the analysis.

Table 3. Results of CBA for Selected Activities[a] (NPV, 20 years, 6 percent discount rate)

Selected Activities under Each Component	Economic NPV	Financial NPV
Component 1		
Setting up a community-based EWRS (in US$, millions)	0.9	1.3
Component 2		
Rehabilitating roads (US$/km)	135,800	152,400
Building renewable energy-based water points (US$/water point)	78,900	107,200
Improving management of protected areas (US$/ha)	10	n.e.
Component 3		
CSA: agroforestry cocoa-banana (US$/ha)	6,300	9,900
Transforming *foufou* into *foufou* flour (US$/activity)	7,000	12,600
Transforming bananas into banana chips (US$/activity)	9,400	14,300

Source: Annex 3.
Note: n.e. = not estimated due to data limitations; NPV = Net present value.
a. The results reflect the additional net benefits generated by the selected activities ('with project') compared to alternative practices ('without project').

80. **It should be noted that the success of these activities is contingent on the operation and maintenance costs being regularly covered by beneficiaries after the end of the project.** This has been reflected in the project design through mechanisms such as requiring a financial contribution from the MSMEs and cooperatives as a precondition for their business plans to be supported and providing the second grant to these entities only upon submission of concrete plans on how the activities would be sustained beyond the end of the project. In addition, although the country's deforestation rate is among the lowest in Africa, the project design aims to ensure that the livelihood and value chain activities are not inducing further deforestation, for example, by requiring the beneficiaries to avoid deforestation through their business plans and by ensuring adequate monitoring.

Carbon Benefits

81. **GHG mitigation benefits.** The World Bank has adopted the Ex-Ante Carbon-balance Tool (EX-ACT) to assess the impact of agricultural and forestry investments on GHG emissions and carbon sequestration. The tool allows to assess the net carbon balance[58] of a project compared to a 'without project' scenario. Based on the EX-ACT calculations, ProClimat's activities are expected to reduce or avoid 24,308,794 tCO_2-eq over 20 years. The details of the GHG assessment are available in Annex 4.

82. **The project is expected to generate global benefits due to reduced GHG emissions.** The economic valuation of these reductions is based on the shadow price of carbon, following the corresponding World Bank (2017)[59] guidance and adjustment to 2022 prices. Accordingly, the shadow price of carbon is US$51 per tCO_2 (low scenario) and US$102 per tCO_2 (high scenario) for 2023, with an annual increase of 2.25 percent. Using these figures, the present value (PV) of carbon benefits from the

[58] The net carbon balance is defined as the net balance of CO_2 equivalent GHG that were emitted or sequestered as a result of project activities.
[59] World Bank. 2017. *Shadow Price of Carbon in Economic Analysis*. Washington, DC: World Bank.

project is estimated to be between US$804 million (low scenario) and US$1.6 billion (high scenario). Table 4 presents the results of a sensitivity analysis to changes in the discount rate. It should be noted that, as the measures used for carbon valuation (welfare-based) are different from those employed for the valuation of tangible products issued from other project activities (market-based), the results of these estimations are neither additive nor comparable.

Table 4. Carbon Benefits Derived from the Project during 2023–2042 (US$, billions)

	Base Analysis (r = 6 percent)	Sensitivity Analysis to Discount Rate (r)		
		r = 2 percent	r = 8 percent	r = 10 percent
PV (low scenario)	0.8	1.2	0.7	0.6
PV (high scenario)	1.6	2.5	1.3	1.1

Sources: EX-ACT model application in 2022 for emission reduction quantities; World Bank (2017) for carbon shadow pricing, adjusted to 2022 prices.

83. **Moreover, there is potential for future trade of carbon due to emission reductions in the project area.** This can be achieved, for example, by selling emission reductions from eligible project activities at US$5 per ton under ERP-SL. However, it is not possible at this stage to estimate the financial benefits expected from selling emission reductions from ProClimat. These benefits will depend on (a) the eligibility of the project areas for contracts between carbon buyers and the Government; (b) the actual quantity of emission reductions generated; and (c) the agreed price of carbon, less the costs related to monitoring, reporting, and verification.

B. Fiduciary

(i) Financial Management

84. **FM will be led by the PIU that will be established under MPSIR**. An assessment of the prospective PIU of ProClimat was conducted to determine the requirements of the latter to carry out the project's FM activities. The purpose was to ensure that the PIU's fiduciary team will operate in accordance with the World Bank Directive on the Financial Management Manual for World Bank Investment Project Financing (IPF) Operations and the World Bank Guidance Reference Material on Financial Management in World Bank IPF Operations. Arrangements have to ensure that the PIU (a) uses project funds only for the intended purposes and in an efficient and economical way; (b) prepares accurate and reliable accounts and timely periodic financial reports; (c) safeguards assets of the project; and (d) has acceptable auditing arrangements.

85. **The FM arrangements of the new PIU to be created would be acceptable subject to the following requirements being met:** (a) opening a Designated Account (DA) in a financial institution acceptable to the World Bank; (b) agreeing with the World Bank on the terms of reference (ToR) for the recruitment of an experienced FM specialist and subsequent recruitment; (c) agreeing with the World Bank on minimal financial and accounting procedures to be included in the PIM that will consider the grant and loan specificities and the World Bank's FM guidelines; (d) agreeing with the World Bank on ToR for the recruitment of an external professional practice firm to implement the internal audit function and subsequent recruitment; and (e) agreeing with the World Bank on ToR for the recruitment of an external auditor and subsequent recruitment. Once the PIU has been established, the World Bank's task team will review whether these requirements have been fulfilled.

(ii) Procurement

86. **Procurement for the project will be carried out in accordance with the World Bank's Procurement Regulations for IPF Borrowers: Procurement in IPF Goods, Works, Non-Consulting and Consulting Services, dated July 1, 2016, and revised in November 2020 (Procurement Regulations).** The PIU will carry out all procurement activities, except where these are delegated through corresponding agreements with service providers. The project will be subject to the World Bank's Anti-Corruption Guidelines, dated October 15, 2006, revised in January 2011, and as of July 1, 2016. The project will use the Systematic Tracking of Exchanges in Procurement (STEP) tool to plan, record, and track all procurement transactions. Procurement will be carried out using the World Bank's Standard Bidding Document (SBD) or Standard Request for Proposals, for all international competitive bidding (ICB) for goods and all recruitment of international consultants, respectively. For national competitive bidding, the Borrower will use the World Bank's SBD for ICB for goods and the World Bank's Standard Request for Proposals for the recruitment of consultants. Annual procurement audits will be carried out throughout the duration of the project.

87. **The Government prepared a Project Procurement Strategy for Development (PPSD) and a Project Procurement Plan (PPM) for the project.** The PPSD provides the basis and justification for procurement decisions, including the approach to market and selection methods. Findings of the PPSD confirm the presence of service providers suitable for implementing project activities and underline the importance of bundling activities into procurement packages to make them attractive to high-quality providers. The PPM for the first 18 months was submitted and approved by the World Bank on January 31, 2023. All goods, works, and non-consulting services will be procured in accordance with the requirements set forth or referred to in Section VI. Approved Selection Methods: Goods, Works, and Non-Consulting Services of the Procurement Regulations. The consulting services will be procured in accordance with the requirements set forth or referred to in Section VII. Approved Selection Methods: Consulting Services of the Procurement Regulations, the PPSD, and the PPM.

88. **Procurement supervision.** In addition to the prior review and the implementation support missions carried out by the World Bank, post review of contracts will be scheduled once a year for procurement activities subject to post review. The post review will be carried out based on the information and documentation filed in STEP and project site visits.

89. **The mitigated fiduciary risk is rated Substantial.** Given (a) the country context and associated risk; (b) the fact that this project will be implemented under the World Bank's New Procurement Framework of which a new PIU may have limited knowledge; and (c) the importance of adequate contract management capacity of the new PIU, the project's FM and procurement risks before the mitigation measures are rated High. The risk can be considered Substantial provided that mitigation measures such as the recruitment of qualified fiduciary staff and the establishment of adequate financial and contract management systems are put in place.

C. Legal Operational Policies

	Triggered?
Projects on International Waterways OP 7.50	Yes

Projects in Disputed Areas OP 7.60	No

90. **Operational Policy 7.50 "Projects on International Waterways" has been triggered by the project.** The reason is that project activities may involve the use or pollution of water resources of the Congo River system, which is shared by Angola, Burundi, Cameroon, Central African Republic, Democratic Republic of the Congo, Gabon, Republic of Congo, Rwanda, Tanzania, and Zambia. However, as the project is (i) not expected to adversely change the quality or quantity of water flows to the other riparians; and (ii) not expected to be adversely affected by the other riparians' possible water use, the Regional Vice Presidency granted an exception to the riparian notification requirement on February 17, 2023.

D. Environmental and Social

91. **The project will apply the ESF.** The relevant Environmental and Social Standards (ESS) that have been identified include ESS1: Assessment and Management of Environmental and Social Risks and Impacts; ESS2: Labor and Working Conditions; ESS3: Resource Efficiency and Pollution Prevention and Management; ESS4: Community Health and Safety; ESS5: Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement; ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources; ESS7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities; ESS8: Cultural Heritage; and ESS10: Stakeholder Engagement and Information Disclosure.

92. **Overall, the project is expected to have positive impacts.** It aims to strengthen landscape management and improve communities' livelihood activities by supporting the agricultural sector, improving infrastructure in rural areas, reducing landscape degradation, and developing adaptation/resilience capacities regarding climate change. The project will do so while ensuring the inclusion of vulnerable groups such as women, youth, ex-combatants, persons with disabilities, and IP.

93. **The environmental and social risk ratings of the project are considered Substantial.** The environmental risk rating is mainly linked to activities under Components 2 and 3 that might result in risks of soil and water pollution due to oil spills and pesticide use, disruption of community activities, construction accidents, waste generation, loss of cultural heritage, degradation and loss of vegetation cover, loss of ecosystem services, disruption of sensitive habitats and ecosystems with risk of migration of certain animal species, and decrease in biological diversity. The social risk rating for this project has also been classified as Substantial because activities might result in adverse social risks and impacts. Those social risks are mainly risks related to elite capture and unconscious discrimination or exclusion of vulnerable and disadvantaged groups, particularly in remote and conflict-prone areas, during the selection of targeted beneficiaries. It is also possible that project activities will lead to certain labor risks, lack of significant and inclusive stakeholder engagement in certain project areas, potential GBV risks and/or sexual exploitation and abuse (SEA), and negative impacts on community health (including the risk of transmission of diseases as well as the transmission and propagation of COVID-19). The magnitude of land acquisition under this project is not expected to be significant. However, activities of Components 2 and 3 might result in temporary physical and economic displacement. Project activities might also occur in areas where IP are present. Careful considerations are therefore needed to ensure that they are fully included in project activities and that the activities themselves will not have adverse impacts on those

communities and their access to natural resources. Although child labor is prohibited by national law,[60] reports indicate that children under 16 years have been engaged in labor, with indigenous children and children from rural areas being the most affected as they are likely to be subjected to the worst forms of child labor.[61] To mitigate the risk of child labor and contribute to strengthening the rights of children, the project will include adequate measures in the safeguards instruments and the PIM.

94. **To mitigate the abovementioned risks, the project developed the following instruments:** (a) an Environmental and Social Commitment Plan (ESCP); (b) an Environmental and Social Management Framework (ESMF); (c) a Resettlement Policy Framework (RPF); (d) a Stakeholder Engagement Plan (SEP); (e) Labor Management Procedures (LMP); (f) an Indigenous Peoples Framework (IPPF); and (g) a Process Framework (PF). All instruments were disclosed by the client and the World Bank on January 21, 2023 (an updated version of the ESCP was disclosed on February 16, 2023).[62]

95. **The project activities are also associated with the risk of GBV or SEA and sexual harassment (SH).** Various aspects of the project bring the GBV risk to a 'Substantial' risk rating, and the implementing agency has conducted a GBV risk assessment as part of the ESMF. Accordingly, the PIU will hire a GBV specialist. Within six months of project effectiveness, the PIU will prepare a GBV Action Plan in line with the World Bank's Good Practice Note (GPN). In addition, and as explained in further detail in the SEP, the GRM will need to provide multiple channels to report SEA/SH, including anonymous reporting and ensuring that these cases will be handled by qualified staff. The GRM will therefore have protocols for handling project-related GBV/SEA/SH complaints, including referral to GBV support services. Finally, all PIU staff will need to have the adequate training on GBV and SEA/SH risks and sign a code of conduct. These requirements have been laid out in the ESCP. The SEA/SH aspects will need to be carefully monitored throughout program implementation by dedicated and qualified staff in the PIU and according to the GPN.

96. **Capacity-building measures and training will be introduced in the project to further strengthen the capacity of the Borrower.** This is necessary given that the implementing agency does not have strong expertise in implementing the ESF and that the current environmental and social capacity is limited.

97. **GRM.** Component 4 will support the development of a project GRM. A worker's grievance mechanism will also be developed and implemented in compliance with the requirements of ESS2 and the outline described in the LMP and before hiring project workers. The project will develop a robust and operational GRM system (incorporating CE and social accountability to ensure project ownership and inclusive and participatory processes) to ensure that any feedback will generate a response in a timely and comprehensive manner and that an acceptable resolution is found by the project where needed. Beneficiaries will be regularly informed about the existence of the GRM and the means of accessing it.

[60] Article 116 of the Labor Code (26).
[61] UNHCR: https://www.refworld.org/pdfid/57f4e8552.pdf. Specific data breaking down the prevalence of child labor across various sectors and regions are not available.
[62] Government disclosure: https://plan.gouv.cg/Documents; World Bank disclosure: https://projects.worldbank.org/en/projects-operations/document-detail/P177786

V. GRIEVANCE REDRESS SERVICES

98. **Grievance redress.** Communities and individuals who believe that they are adversely affected by a project supported by the World Bank may submit complaints to existing project-level grievance mechanisms or the Bank's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the Bank's independent Accountability Mechanism (AM). The AM houses the Inspection Panel, which determines whether harm occurred, or could occur, as a result of Bank non-compliance with its policies and procedures, and the Dispute Resolution Service, which provides communities and borrowers with the opportunity to address complaints through dispute resolution. Complaints may be submitted to the AM at any time after concerns have been brought directly to the attention of Bank Management and after Management has been given an opportunity to respond. For information on how to submit complaints to the Bank's Grievance Redress Service (GRS), please visit http://www.worldbank.org/GRS. For information on how to submit complaints to the Bank's Accountability Mechanism, please visit https://accountability.worldbank.org.

VI. KEY RISKS

99. **The overall mitigated risk rating of the project is Substantial.** The rating is based on the nine risk categories summarized in the datasheet. The main risk factors are related to the macroeconomic, institutional capacity, fiduciary, and environmental and social risks outlined in the following paragraphs.

100. **Mitigated macroeconomic risk is assessed as Substantial**. Congo just returned to debt sustainability and is still in debt distress. Debt sustainability is highly sensitive to oil prices. A sudden sharp decline in oil prices could threaten fiscal and debt sustainability. To mitigate this risk, the project was designed to not depend on counterpart funding. In addition, it leverages a trust fund-financed grant to further reduce the dependence of activity implementation on the macroeconomic context.

101. **The risk related to institutional capacity for implementation and sustainability is rated Substantial after mitigation measures were applied.** The ministries that would be involved in project implementation and their agencies suffer from low management capacity, with relevant key units being underfunded and understaffed. This holds true particularly for the MEDDBC, MEF, MAEP, and the High Commission for the Reintegration of Ex-Combatants. In addition, coordination and collaboration among ministries are generally weak. Low capacity is also an issue for many local service providers and decentralized government institutions. The project will therefore not only support program implementation but will also build capacity among key stakeholders, so that the functions fulfilled by the PIU and service providers can be progressively integrated into the local, departmental, and national institutions in the longer term. To ensure sufficient capacity in remote areas where project activities take place, the project will establish LSOs and work with service providers of international repute. Cross-ministry coordination and collaboration will be ensured through the Steering Committee, the TC, and multistakeholder platforms.

102. **The mitigated fiduciary risk is rated Substantial.** As discussed in further detail in Section IV.B., this assessment is based on the country context, the potential lack of familiarity of the new PIU with the

procurement framework, and the PIU's potentially limited contract management capacity. Mitigation measures will include recruiting qualified fiduciary staff and establishing adequate fiduciary management systems.

103. **The environmental and social risk ratings of the project are considered Substantial.** Risks include particularly soil and water pollution due to oil spills and pesticide use, construction accidents, waste generation, loss of ecosystem services, disruption of sensitive habitats, elite capture, unconscious discrimination or exclusion of vulnerable groups, labor risks, lack of significant and inclusive stakeholder engagement in certain project areas, and potential GBV risks. To mitigate these and additional risks, the project developed the corresponding safeguards instruments. Further details are provided in Section IV.D.

VII. RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY: Congo, Republic of

Climate-Resilient and Inclusive Livelihoods Project (ProClimat Congo)

Project Development Objectives(s)

To strengthen landscape management and increase the use of improved livelihood activities in targeted communities

Project Development Objective Indicators

Indicator Name	PBC	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Strengthen landscape management							
Area under sustainable and resilient agriculture practices (Hectare(Ha))		0.00	2,500.00	7,500.00	15,000.00	20,000.00	25,000.00
Land area under sustainable landscape management practices (CRI, Hectare(Ha))		0.00	117,600.00	352,800.00	705,600.00	940,800.00	1,176,000.00
Increase the use of improved livelihood activities in targeted communities							
Beneficiaries using improved livelihood activities supported by the project (Number)		0.00	2,325.00	6,975.00	13,950.00	18,600.00	23,250.00
of which women (Percentage)		0.00	10.00	20.00	30.00	50.00	70.00
of which ex-combatants (Percentage)		0.00	2.00	4.00	6.00	8.00	10.00

Indicator Name	PBC	Baseline	Intermediate Targets				End Target
			1	2	3	4	
of which IP (Number)		0.00	2.00	4.00	6.00	8.00	10.00
of which youth (Percentage)		0.00	5.00	10.00	15.00	20.00	30.00
of which people with disability (Percentage)		0.00	2.00	4.00	6.00	8.00	10.00
MSMEs reporting an increase in profit of 20% or more from grants supported by the project (Number)		0.00	5.00	10.00	20.00	30.00	35.00
of which women-led (Number)		0.00	10.00	20.00	30.00	40.00	50.00
Crosscutting							
Net greenhouse gas (GHG) emissions (CRI, Metric tons/year)		0.00	1,300,000.00				3,400,000.00

Intermediate Results Indicators by Components

Indicator Name	PBC	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Strengthening Capacity of Institutions and Promoting Social Cohesion							
Project Investment Plans that incorporate climate change considerations (Percentage)		0.00	100.00	100.00	100.00	100.00	100.00
Beneficiaries reporting that Project Investment Plans reflect their needs (Number)		0.00	40,000.00	80,000.00	120,000.00	160,000.00	200,000.00

Indicator Name	PBC	Baseline	Intermediate Targets				End Target
			1	2	3	4	
of which women (Percentage)		0.00	10.00	20.00	30.00	50.00	70.00
of which ex-combatants (Percentage)		0.00	2.00	4.00	6.00	8.00	10.00
of which IP (Percentage)		0.00	5.00	10.00	15.00	20.00	30.00
of which youth (Percentage)		0.00	5.00	10.00	15.00	20.00	30.00
of which people with disability (Percentage)		0.00	2.00	4.00	6.00	8.00	10.00
Beneficiaries reporting improved participation in local decision making because of project activities (Number)		0.00	10,000.00	40,000.00	85,000.00	115,000.00	150,000.00
of which women (Percentage)		0.00	10.00	20.00	30.00	50.00	70.00
of which ex-combatants (Percentage)		0.00	2.00	4.00	6.00	8.00	10.00
of which IP (Percentage)		0.00	2.00	4.00	6.00	8.00	10.00
of which youth (Percentage)		0.00	5.00	10.00	15.00	20.00	30.00
of which people with disability (Percentage)		0.00	2.00	4.00	6.00	8.00	10.00
Grievances registered related to delivery of project benefits that are actually addressed through the Grievance Redress Mechanism (Percentage)		0.00	100.00	100.00	100.00	100.00	100.00
Index for improvement of agriculture practices because of the EWRS (Number)		0.00	2.00	3.00	4.00	5.00	6.00
Strengthening Investments in Sustainable and Resilient Agriculture and Natural Capital Management							
Beneficiaries that have access		0.00	35,000.00	105,000.00	175,000.00	280,000.00	350,000.00

Indicator Name	PBC	Baseline	Intermediate Targets				End Target
			1	2	3	4	
to infrastructures (built and/or rehabilitated by the project) in targeted communities, disaggregated by types of service and infrastructure (Number)							
of which women (Percentage)		0.00	10.00	20.00	30.00	50.00	70.00
of which ex-combatants (Percentage)		0.00	2.00	4.00	6.00	8.00	10.00
of which IP (Percentage)		0.00	2.00	4.00	6.00	8.00	10.00
of which youth (Percentage)		0.00	5.00	10.00	15.00	20.00	30.00
of which people with disability (Percentage)		0.00	2.00	4.00	6.00	8.00	10.00
Protected areas under improved management for conservation and sustainable use (Hectare(Ha))		0.00	100,000.00	335,000.00	570,500.00	922,500.00	1,175,000.00
Promoting Inclusive, Climate-resilient Livelihoods and Value Chains							
Employees in project-supported MSMEs (Number)		0.00	30.00	90.00	150.00	240.00	300.00
of which women (Percentage)		0.00	10.00	20.00	30.00	50.00	70.00
of which ex-combatants (Percentage)		0.00	2.00	4.00	6.00	8.00	10.00
of which IP (Percentage)		0.00	2.00	4.00	6.00	8.00	10.00
of which youth (Percentage)		0.00	5.00	10.00	15.00	20.00	30.00
of which people with disability (Percentage)		0.00	1.00	4.00	6.00	8.00	10.00
Cooperatives with project-		0.00	2.00	6.00	10.00	16.00	20.00

Indicator Name	PBC	Baseline	Intermediate Targets				End Target
			1	2	3	4	
facilitated partnership agreements with MSMEs (Number)							
of which women-led (Percentage)		0.00	10.00	20.00	30.00	45.00	60.00
Livelihoods groups reporting an increase in profit of 20% or more due to grant support or training provided by the project (Number)		0.00	15.00	45.00	90.00	135.00	150.00
of which women-led (Percentage)		0.00	10.00	20.00	30.00	45.00	60.00
Geo-spatial platform established and operational (Yes/No)		No	No	Yes	Yes	Yes	Yes

Monitoring & Evaluation Plan: PDO Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Area under sustainable and resilient agriculture practices	The indicator measures the area in which agricultural activities are implemented by beneficiaries that adopt/follow a sustainable and resilient approach supported by the project through grant support or	Annually.	Project reports.	The list of activities eligible to be counted for this indicator will be defined further in the PIM.	PIU.

	training. For the purpose of this PAD, a "sustainable and resilient" approach is understood to only refer to practices that are at the same time agroecological and climate-smart. Agroecology is a holistic and integrated approach that simultaneously applies ecological and social concepts and principles to the design and management of sustainable agriculture and food systems. Examples of these land-related agroecological activities include, but are not limited to, agroforestry, intercropping, and market gardening. This indicator is used to report on the following PROGREEN indicators: Area of production landscapes under sustainable use (ha); Area under agroecological food production (ha); and Area of food production systems with improved climate resilience (ha).				
Land area under sustainable landscape management practices	The indicator measures, in hectares, the land area for	Annually.	Project reports	Data for this indicator will be collected	PIU.

	which new and/or improved sustainable landscape management practices have been introduced. Land is the terrestrial biologically productive system comprising soil, vegetation, and the associated ecological and hydrological processes; Adoption refers to change of practice or change in the use of a technology promoted or introduced by the project; Sustainable landscape management (SLM) practices refers to a combination of at least two technologies and approaches to increase land quality and restore degraded lands for example, agronomic, vegetative, structural, and management measures that, applied as a combination, increase the connectivity between protected areas, forest land, rangeland, and agriculture land.			through the aggregation of data from individual subcomponents. Due to porosity of data, the preliminary target will be confirmed through field-level surveys conducted in the first year of implementation. For the purpose of the project, this indicator is considered a climate indicator. This indicator is used to report on the PROGREEN indicator: Landscapes with improved climate resilience (ha) (adaptation).	
Beneficiaries using improved livelihood activities supported by the project	Beneficiaries are defined as individuals that use (in the sense of adopting)	Annually.	Project reports.		PIU.

	livelihood activities that have been supported by the project through grant support or training. Livelihood activities include, among others, agriculture (agroforestry, market gardening, poultry, fisheries), community forestry (forest plantations, particularly for fuel wood), NTFPs (for example, honey and mushroom production), and tourism (including hospitality and cultural activities). This indicator will state in its comment section the number of farmers adopting agroecological agricultural practices in order to report on the corresponding PROGREEN indicator.				
of which women					
of which ex-combatants					
of which IP					
of which youth					
of which people with disability					
MSMEs reporting an increase in profit of 20% or more from grants supported by	Profit is defined as sales minus fixed and variable	Annually.	Project reports.		PIU.

the project	costs. The indicator is considered a gender indicator as it explicitly measures and sets a target for the participation of women.				
of which women-led					
Net greenhouse gas (GHG) emissions	Project net greenhouse gas (GHG) emissions are calculated as an annual average of the difference between project gross (absolute) emissions aggregated over the economic lifetime of the project and the emissions of a baseline (counterfactual) scenario aggregated over the same time horizon. They are reported in metric tons of carbon dioxide equivalent per year.	To be estimated at the MTR and at the end of the project based on activity data.	Project reports.	Application of the Ex-ACT tool. This indicator is considered a climate indicator. Its absolute value is used to report on the PROGREEN indicator: GHG emissions reduced in targeted landscapes (tons of CO2 equivalent). The target represents emission mitigation reduction results and are estimated based on the GHG assessment that was conducted for the project.	PIU.

Monitoring & Evaluation Plan: Intermediate Results Indicators					
Indicator Name	**Definition/Description**	**Frequency**	**Datasource**	**Methodology for Data Collection**	**Responsibility for Data Collection**
Project Investment Plans that incorporate climate change considerations	PIPs are defined as the planning instruments developed under Subcomponent 1.2. The details of the climate change screening will be determined in the PIM but is expected to ensure that activities proposed in the PIPs are in line with climate change objectives, particularly with a view to adapting to the negative impacts of climate change.	Annually.	Project reports.		PIU.
Beneficiaries reporting that Project Investment Plans reflect their needs	The indicator measures the participation of beneficiaries in informing and evaluating project activities and thus considered a citizen engagement indicator. In addition, it is considered a gender indicator as it explicitly measures and sets a target for the participation of women. The target value for women is 70%, meaning that 70% of the beneficiaries reporting on the indicator should be women.	Annually.	Project reports.		

of which women					
of which ex-combatants					
of which IP					
of which youth					
of which people with disability					
Beneficiaries reporting improved participation in local decision making because of project activities	The indicator measures the participation of beneficiaries in informing and evaluating project activities and thus considered a citizen engagement indicator. In addition, it is considered a gender indicator as it explicitly measures and sets a target for the participation of women.	Annually	Project reports.		PIU.
of which women					
of which ex-combatants					
of which IP					
of which youth					
of which people with disability					
Grievances registered related to delivery of project benefits that are actually addressed through the Grievance Redress Mechanism	The indicator encourages the participation of beneficiaries in informing and evaluating project activities and is thus	Annually.	Project reports.		PIU.

	considered a citizen engagement indicator.				
Index for improvement of agriculture practices because of the EWRS	The indicator is measured based on farmer surveys and expressed on a scale from 1-10.	Annually.	Project reports.		PIU.
Beneficiaries that have access to infrastructures (built and/or rehabilitated by the project) in targeted communities, disaggregated by types of service and infrastructure	The indicator is considered a gender indicator as it explicitly measures and sets a target for the participation of women. It is used to report on the PROGREEN indicator: People in targeted landscapes with increased benefits (number).	Annually.	Project reports.		PIU.
of which women					
of which ex-combatants					
of which IP					
of which youth					
of which people with disability					
Protected areas under improved management for conservation and sustainable use	Protected Areas Management refers to the assessment of how well protected areas are being managed considering context and planning, appropriateness of management systems and processes, and delivery of protected area objectives.	Annually.	Project reports.		PIU.

	The area of a targeted protected area will be considered to be under improved management when its METT score has increased by 40% (as compared to baseline values). This indicator is used to report on the PROGREEN indicator: Area of conservation landscapes under sustainable use (ha). In addition, it will state in its comment section the number of key habitats protected (which is assumed to correspond to the number of protected areas under improved management) in order to report on the PROGREEN indicator: Key habitats protected (number).				
Employees in project-supported MSMEs		Annually.	Project reports.		PIU.
of which women					
of which ex-combatants					
of which IP					
of which youth					

of which people with disability					
Cooperatives with project-facilitated partnership agreements with MSMEs		Annually.	Project reports.		PIU.
of which women-led					
Livelihoods groups reporting an increase in profit of 20% or more due to grant support or training provided by the project	The indicator is considered a gender indicator as it explicitly measures and sets a target for the participation of women.	Annually.	Project reports.		PIU.
of which women-led		Annually.	Project reports.		PIU.
Geo-spatial platform established and operational		Annually.	Project reports.		PIU.

ANNEX 1: Implementation Arrangements and Support Plan

I. Project Institutional and Implementation Arrangements

1. The institutional and implementation arrangements will be developed at the national, regional, and local levels using the following principles: (a) build institutional capacity by supporting existing government systems and mechanisms that have proven to be effective for approaches of similar projects; (b) ensure presence at the department and district levels, in line with the deconcentration and decentralization policies; and (c) support national coordination for the multisectoral approach of the project by engaging relevant government agencies in project implementation and supervision. More specifically, the arrangements include the following (further details are described in the main text of this document in Section III.A):

(a) **At the national level:** The high-level interministerial Steering Committee will provide strategic guidance and ensure consistency in and support for the multisectoral project activities. A PIU will be established to implement the multisectoral approach of the project. A TC will be formed with technical focal points nominated by the core ministries participating in project implementation and provide a forum for discussing implementation issues in a multisectoral way.

(b) **At the regional level:** LSOs of the PIU will be established at the landscape level to ensure coordination and close follow-up of project activities, working in collaboration with the service providers and decentralized and deconcentrated services.

(c) **At the local level:** Service providers will be contracted by the PIU to support implementation of the different components, working directly with the project beneficiaries and supporting M&E of the project.

II. Implementation Support Plan

2. The strategy for the Implementation Support Plan (ISP) has been devised to undertake the necessary mitigation measures to address the major risks identified in the Systematic Operations Risk-rating Tool (SORT) that are within the control of the project: (a) institutional capacity; (b) fiduciary risks; and (c) environmental and social risks. The project design cannot eliminate all risks, but measures are in place to mitigate most. The ISP is designed to ensure that the mitigation measures are effective and can be reinforced where necessary.

3. The ISP will be implemented by the World Bank through three major approaches: (a) continuous implementation support through day-to-day remote and in-person implementation support and frequent implementation support missions for project activities, including at the local level and with consultations with beneficiaries; (b) technical capacity building for the PIU, its LSOs, the TC, the Steering Committee, and key staff of participating ministries and deconcentrated/decentralized services); and (c) maintaining the high-level dialogue with the Government on key themes of the project, including landscape management, climate change, natural resources management, and social inclusion. In the initial period of project implementation, the ISP will focus on supporting core management skills to help ensure compliance with World Bank fiduciary and safeguards requirements. The World Bank will also provide

targeted technical assistance on M&E. Furthermore, the World Bank will use its convening power to ensure coordination with the activities of other development partners.

4. To support specifically the procurement, FM, and safeguards capacity of the implementing agency, the World Bank will provide a series of targeted training to all PIU staff and particularly the corresponding PIU specialists.

5. The World Bank's task team at the start of implementation will be led by a Task Team Leader (TTL) based in Brazzaville and a TTL in headquarters. The team will include country-based FM, procurement, environmental and social safeguards, and sector specialists. The team will use particularly the following instruments to support implementation: (a) day-to-day remote and in-person implementation support and regular implementation support missions (at least twice a year and more frequently if needed, in addition to more frequent missions of country-based staff, including field visits); (b) an MTR, which will be an opportunity to review project performance and make adjustments to the project design as necessary; (c) independent third-party monitoring of project implementation once per year; (d) regular fiduciary compliance reviews, including review of unaudited Interim Financial Reports (IFRs) and external audits; (d) technical assessments to facilitate learning; and (e) implementation completion activities. The main areas of expected implementation support activities are summarized in Table 1.1.

Table 1.1. Main Areas of Implementation Support Activities

Time	Focus	Main Skills Needed	Resource Estimate
Year 1	• Setting up implementation arrangements • Support to the PIU on project management and technical issues • Support to building blocks of project management (safeguards, FM, procurement, M&E) and participatory planning processes • Drafting ToR and recruiting service providers for key analytical work, community engagement, and infrastructure/livelihood investments	Task management Agriculture Natural resources management Social development Climate change Livelihoods GBV Environmental and social safeguards (country office-based) FM (country office-based) Procurement (country office-based) Communications M&E	• 4 implementation support missions • Ongoing support (in-person and remotely)
Years 2–4	• Joint implementation support missions with the Government and continuous monitoring of implementation performance • Review of annual work/financial plans • Review of project reports • Review of audits/IFRs • Support to revisions of the PIM • MTR	Task management Agriculture Natural resources management Social development Climate change Livelihoods GBV Environmental and Social Safeguard (country office-based) FM (country office-based)	• 2 implementation support missions per year • Ongoing support (in-person

Time	Focus	Main Skills Needed	Resource Estimate
		Procurement (country office-based) Communications	and remotely)
		M&E	
Year 5	• As above, plus • Project completion	As above	As above

III. Financial Management

6. **In accordance with World Bank Directive: Financial Management Manual for World Bank IPF Operations and World Bank Guidance: Reference material - Financial Management in World Bank IPF Operations, the FM arrangements of the ProClimat PIU have been assessed to determine whether they are acceptable and satisfy the World Bank's requirements.** These arrangements would ensure that the implementing entity (a) uses project funds only for the intended purposes in an efficient and economical way, (b) prepares accurate and reliable accounts and timely periodic financial reports, (c) safeguards assets of the project, and (d) has acceptable auditing arrangements.

7. **The World Bank team determined that FM arrangements at the ProClimat PIU could be deemed adequate for project implementation subject to meeting the following requirements:** (a) opening the DA in a financial institution acceptable to the World Bank; (b) drafting a manual of procedures to take into account the new project and grant specificities; (c) acquiring an adequate management accounting software to record project transactions and prepare quarterly unaudited IFRs, no longer than three months after effectiveness; (d) agreeing with the World Bank Group (WBG) on the ToRs for the recruitment of an external professional practice firm to implement the internal audit function, and subsequent recruitment; (e) agreeing on the ToRs for the recruitment of an independent external auditor, acceptable to IDA/IBRD, based on acceptable ToR; and (f) completing the recruitment of an experienced FM specialist officer and an accountant.

8. The detailed risks and the corresponding mitigation measures are presented in Table 1.2.

Table 1.2. Risks and Mitigating Measure

Risks	Risk Rating	Risk Mitigating Measures	Residual Risk Rating	Conditions for Effectiveness (Y/N)
Inherent Risk				
Country level: Poor governance and slow pace of implementation of public financial management (PFM) reforms that might hamper the overall PFM environment.	**H**	Overall, the fiduciary environment of the country is weak, with the main reasons detailed below. • Inefficiency in public spending, primarily due to weaknesses in the country PFM system, led to the adoption of some PFM reforms which are yet to be effective. • Last available PEFA ratings have low scores in public budget (a) accounting, recording, and reporting; (b) external scrutiny and	H	N

Risks	Risk Rating	Risk Mitigating Measures	Residual Risk Rating	Conditions for Effectiveness (Y/N)
		audit; and (c) budget comprehensiveness and transparency. • Oil revenues account for about one-third of the country's GDP, two-thirds of its fiscal revenues, and more than 80 percent of its exports of goods, and the sharp drop in oil prices since mid-2014 has led to a severe terms-of-trade loss, with a drastic fall in government revenue with public spending and imports remaining constant. • Persistent security issues since the 2016 presidential election has disrupted the movement of goods, contributing to increased costs of doing business and leading to public fund reallocations to address security concerns away from other sectors. • The overall budget deficit has widened considerably despite a sharp downturn in spending and the public debt-to-GDP ratio has soared. The weakness of formal institutions charged with the oversight of public finances has enabled the widespread use of discretionary power. • The ballooning deficit and lack of funds for the operational and other programmatic expenditures of line ministries and most public entities, make the project funds a target for potential misuse.		
Entity level - Line ministry interference: The PIU will not yet have fully adapted to the new country WBG IPF partnership context in which counterpart funds are severely reduced and virtually nonexistent, and IBRD funds are	**H**	• Increase deterrence and control measures by disseminating definition of ineligible expenditures in the manual of procedures and outsourcing the external audit function to improve independence and objectivity.	H	N

Risks	Risk Rating	Risk Mitigating Measures	Residual Risk Rating	Conditions for Effectiveness (Y/N)
the main source of financing for the project; accountability as well as efficiency and economy in the use of funds is still an ongoing process.				
Project level: Presumptive; the PIU has a poor track record in managing WBG projects.	**S**	• Perform FM supervisions more regularly. • As much as possible and, where feasible, suggest change in FM staff. • Same measures as above.	M	N
Overall Inherent Risk	***H***			
Control Risk				
Budgeting: Weak prospective budgeting and monitoring of commitments	**S**	• The manual of procedures will define the arrangements for budget formulation and budgetary control and the requirements for budgeting revisions. • An annual work plan and budget will be prepared each year. Annual detailed disbursement forecasts and analysis and explanation of significant variances are required.	M	N
Accounting: Due to the novel nature of the project, there may be issues in correctly accounting for transactions.	**H**	• Acquire separate management accounting software and customize it to generate financial reports of the project. • Ensure appropriate criteria are set for recognizing assets and liabilities. • Recruit an accountant with proven experience in managing World Bank-financed projects.	S	N
		• Recruit an FM specialist		Y
Internal control: Potential ineligible expenditures and delay in providing reports as a result of incomplete documentation provided by the implementing agencies or use of	**H**	• The nature of eligible expenditures will be clearly defined. • Due to the limited nature of possible transactions that are eligible under the program, there needs to be a clear definition of the types of allowable expenditures. • Outsourcing internal audit function to an external firm.	S	N

Risks	Risk Rating	Risk Mitigating Measures	Residual Risk Rating	Conditions for Effectiveness (Y/N)
funds for non-project-related expenditures		• Periodic fiduciary implementation support will be provided by the World Bank fiduciary team.		
Funds flow: Ensure withdrawal applications are submitted on a frequent basis—at least monthly.	**S**	• Require the project to ensure compliance with Disbursement Letter stipulations, especially the monthly submission of withdrawal applications.	M	N
Financial reporting	**M**	• For the grant, the PIU will be required to prepare and submit quarterly IFRs for use by the project management in assessing the financial performance of the project and its link to physical progress. The IFRs shall be submitted to the World Bank within 45 days of the end of the relevant quarter. • The existing accounting software will be configured to generate separate stand-alone financial reports relative to the use of grant proceeds.	M	N
External auditing	**S**	• Recruit an independent external auditor based on agreed ToRs developed in line with International Accounting Standards (including fraud and corruption). • ToRs will be subject to approval by IDA.	M	N
Fraud and corruption	**M**	• Organize frequent controls of each actor to help prevent and mitigate the risk of diversion of funds. • Payment requests will be approved by the coordinator and the financial manager before disbursement of funds. • Require the future FM team to ensure monthly submission of the withdrawal application.	S	N
Overall control risk	**S**		**S**	
Overall FM risk	**S**		**S**	
The overall FM risk is deemed Substantial (S)				

Note: H = High; M = Medium; S = Substantial.

9. The project implementation entity will be the ProClimat PIU.

10. **Staffing and training.** An experienced FM specialist officer and an accountant will be recruited to implement the project. The internal audit function will be externalized.

11. **Budgeting.** The budgeting arrangements will include an annual work plan and budget to be prepared for each year. The project FM manual of procedures will define the arrangements for budgeting and budgetary control and the requirements for budgeting revisions. Annual detailed disbursement forecasts and budgets will be required—the prospective nature of such forecasts will need to be emphasized so that uses of funds are adequately covered. IFRs will provide information on budgetary control and analysis of variances between actual and budget. Current budget mechanisms will be revised to incorporate the new project specifications.

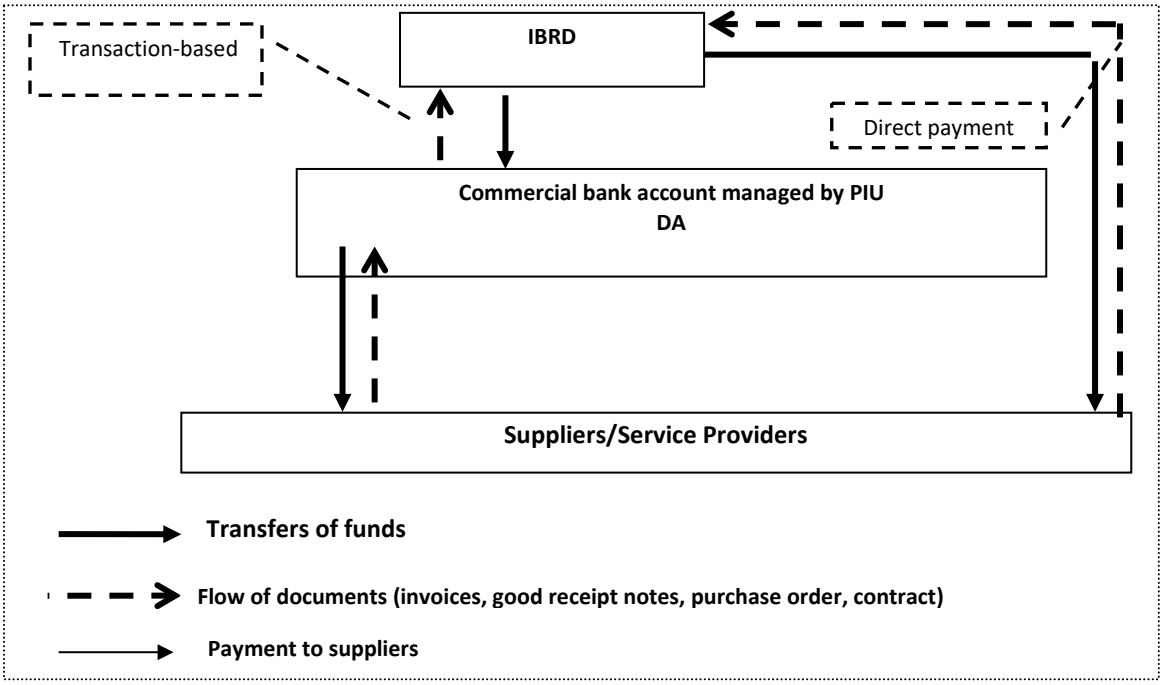
12. **Internal audit.** The internal audit function will be outsourced to an external audit firm to improve independence and objectivity. The PIU shall agree with the World Bank on the content of the ToRs for the recruitment of an external professional practice firm to implement the internal audit function and carry out its subsequent recruitment. As necessary and based on project activities to be performed, specific agreed-upon procedures will be incorporated in the ToRs.

13. **Accounting policies and procedures.** The accounting systems and policies and administrative and financial procedures will be documented in the project's Administrative, Accounting, and Financial Manual. It will be used by (a) the project staff as a reference manual; (b) IDA/IBRD to assess the acceptability of the project accounting, reporting, and control systems; and (c) the auditors to assess project accounting systems and controls and design specific project audit procedures. Accounting management software that can handle multiple projects, sites, and donor characteristics will be procured. At least two sets of financial reports will be prepared by the PIU: the quarterly IFRs, as required by the World Bank, and the annual financial statements that will include the project's consolidated financial statements. The quarterly IFRs will be prepared and submitted to the World Bank 45 days after the close of each quarter. The IFRs will be based on formats developed in the World Bank's Guidelines on Financial Monitoring Reports with some adjustments. The manual of procedures will indicate provisions for quarterly and yearly financial reporting, including physical progress. The quarterly reports will include a table on budget execution. The format of this report will include (a) a statement of sources and uses of funds; (b) a table summarizing the use (utilization) of funds by category, activities, and components; (c) an updated PPM; (d) a report on the physical progress of activities; and (e) the summary of missions of internal audit as well as the implementation status of the recommendations of internal or external audit and supervision missions. Project accounts will be maintained on an accrual basis, supported with appropriate records and procedures to track commitments and safeguard assets.

14. **Flow of funds.** Project activities will be financed through a DA that will be opened in a commercial bank acceptable to the World Bank. The DA will be managed according to the disbursement procedures described in the PIM and Disbursement and Financial Information Letters (DFILs) for the project. The ceiling of the account will be decided by the disbursement services of the World Bank and should take into account the disbursement capacity of the various structures implementing the project. The PIU should also manage counterpart funding, which will be deposited in the same commercial bank. The ceiling of the DA will be set at CFAF 3 billion for the loan and CFAF 300 million for the grant. Additional advances to the DA will be made on a monthly basis against withdrawal applications supported by

Statements of Expenditures or records and other documents as specified in the DFILs. The flow of funds is summarized in Figure 1.1.

Figure 1.1. Flow of Funds and Disbursement Arrangements



15. **Disbursement arrangements (disbursement methods).** Given the high-risk environment, the report-based disbursement will not be applicable by default. Therefore, upon project effectiveness, transaction-based disbursements will be used. An initial advance up to the ceiling of the DA will be made into the DA and subsequent disbursements will be made on a monthly basis against submission of Statements of Expenditures or records as specified in the DFILs. Thereafter, the option to disburse against submission of quarterly unaudited IFRs (also known as the report-based disbursements) could be considered subject to the quality and timeliness of the IFRs submitted to the World Bank and the overall FM performance as assessed in due course. The other methods of disbursing the funds (reimbursement, direct payment, and special commitment) will also be available to the project. The minimum value of applications for these methods is 20 percent of the DA ceiling. The project will have the option to sign and submit withdrawal applications electronically using the eSignatures module accessible from the World Bank's Client Connection website.

16. **Financial reporting and monitoring.** The manual of procedures will indicate provisions for quarterly and yearly financial reporting, including physical progress. The quarterly reports include a table on budget execution. The format of this report will include (a) the statements of sources and uses of funds and utilization of funds per category; (b) the updated PPM; (c) the physical progress; and (d) the summary of missions of internal audit and the implementation status of the recommendations of internal or external audit and supervision missions.

17. **External auditing.** The project financial statements and internal control system managed by the PIU will be subject to annual audits by an independent external auditor acceptable to the World Bank whose mandate will be renewed every two years.

18. **The audit report should reflect all the activities of the FM program and be submitted to the World Bank within six months after the end of each fiscal year.** The selection of an external auditor of project financial statements should be presented to the World Bank for 'no objection'. Appropriate ToR for the external auditor will be provided to the project team.

19. **The external auditor will give an opinion on the annual financial statements in accordance with auditing standards of International Federation of Accountants.** In addition to audit reports, the external auditor will provide a management letter on the internal control procedures outlining recommendations for improving the control system, accounting, and financial procedures as a result of the audit and maintaining compliance with financial covenants under the Financing Agreement.

20. **The project will be required to submit, not later than June 30 of each fiscal year, the annual audited financial statements.** In line with the new access to information policy, the project will comply with the disclosure policy of the World Bank of audit reports (for instance making available to the public without delay after receipt of all reports the final financial audit, including audit reports qualified) and place the information on its official website within one month after the acceptance of the final report by the World Bank.

Implementation Support and Supervision Plan

21. **FM implementation support missions will be consistent with a risk-based approach and will involve a collaborative approach with the project team.** The first implementation support mission will be performed six months after project effectiveness. Afterward, the missions will be scheduled by using the risk-based approach model and will include the following: (a) monitoring of the FM arrangements during the supervision process at intervals determined by the risk rating assigned to the overall FM assessment at entry and subsequently during implementation (Implementation Status and Results Report); (b) integrated fiduciary review of key contracts; (c) review of IFRs; (d) review of the audit reports and management letters from the external auditors and follow-up on material accountability issues by engaging with the task team leader, client, and/or auditors; the quality of the audit (internal and external) also is to be monitored closely to ensure that it covers all relevant aspects and provides enough confidence on the appropriate use of funds by recipients; (e) physical supervision on the ground; and (f) assistance to build or maintain appropriate FM capacity.

22. Based on the outcome of the FM risk assessment, the ISP is proposed in table 1.3.

Table 1.3. Implementation Support Plan

FM Activity	Frequency
Desk reviews	
IFR review	Quarterly
Audit report review of the program	Annually
Review of other relevant information such as interim internal control systems reports	Continuous, as they become available

FM Activity	Frequency
On-site visits	
Review of overall operation of the FM system	Quarterly (implementation support mission)
Monitoring of actions taken on issues highlighted in audit reports, auditors' management letters, internal audit, and other reports	As needed
Transaction reviews (if needed)	As needed
Capacity-building support	
FM training sessions	Before project starts and thereafter as needed

23. The objective of the ISP is to ensure that the project maintains a satisfactory FM system throughout the project's life.

Conclusion of the Assessment

24. **The overall residual FM risk at preparation is considered Substantial.** The proposed FM arrangements for this project are considered adequate to meet the World Bank's minimum fiduciary requirements under World Bank Directive: Financial Management Manual for World Bank IPF Operations and World Bank Guidance: Reference material - Financial Management in World Bank IPF Operations.

IV. Eligible Expenditures

25. Table 1.4. specifies categories of eligible expenditures.

Table 1.4. Eligible Expenditures

Category	Amount of the IBRD Loan Allocated (expressed in US$)	Amount of the PROGREEN Grant Allocated (expressed in US$)
(1) Goods, works, non-consulting services, consulting services, and operating costs and training for the Project	37,395,000	6,430,000
(2) PIP Microprojects under Part 2.1 of the Project	17,070,000	2,930,000
(3) Sub-grants and Matching Grants under 3.1(a)(b); 3.2(a)(b), and 3.3(a)(b) of the Project	15,360,000	2,640,000
(4) Emergency Expenditures under Part 5 of the Project	0	0
(5) Front-end Fee	175,000	0
(6) Interest Rate Cap or Interest Rate Collar premium	0	0
Total amount	**70,000,000**	**12,000,000**

V. Procurement

26. **Procurement for the project will be carried out in accordance with the World Bank's Procurement Regulations.** The PIU will carry out all procurement activities, except where these are delegated through corresponding agreements with service providers. The project will be subject to the World Bank's Anti-Corruption Guidelines, dated October 15, 2006, revised in January 2011, and as of July

1, 2016. The project will use the STEP tool to plan, record, and track all procurement transactions. Annual procurement audits will be carried out throughout the duration of the project.

27. **Major procurement activities are expected to include the contracting of service providers (particularly NGOs) that will implement the infrastructure and livelihood activities.** The project contains numerous activities that will necessitate several small and medium contracts with service providers, a design that requires robust procurement capacity and close supervision. A significant amount of money will be spent on many smaller items, such as seedlings, which presents an opportunity for funds to be diverted if not followed closely. The Borrower prepared a PPSD and a PPM that have been approved by the World Bank. The PPSD findings indicate that there will be international and national firms and consultancies with inclusion of international markets given the lack of adequate technical experience and human resources required to execute the design of the first three components of the project. The PPSD provides the basis and justification for procurement decisions, including the approach to market and selection methods. All goods, works, and non-consulting services will be procured in accordance with the requirements set forth or referred to in Section VI. Approved Selection Methods: Goods, Works, and Non-Consulting Services of the Procurement Regulations. The consulting services will be procured in accordance with the requirements set forth or referred to in Section VII. Approved Selection Methods: Consulting Services of the Procurement Regulations, the PPSD, and the PPM. An assessment of the PIU will be carried out once it has been set up.

28. **Procurement supervision.** In addition to the prior review and the implementation support missions carried out by the World Bank, post review of contracts will be scheduled once a year for procurement activities subject to post review. The post review will be carried out based on the information and documentation filed in STEP and project site visits.

29. **Procurement risks were identified and include the following:** (a) insufficient capacity, knowledge, and experience in the application of the World Bank Procurement Regulations; (b) limited experience in open ICB and procurement of consulting services among PIU staff; (c) change of key staff; (d) inadequate contract management capacity; (e) low response of service providers to show interest in procurement opportunities; and (f) delay in payments to service providers. The overall procurement risk is rated Substantial.

30. **The following procurement risk mitigation measures will be adopted**: (a) the project will provide procurement training for project staff during project preparation to ensure proper use of the World Bank Procurement Regulations; (b) the project will competitively hire an experienced procurement specialist who has vast knowledge of the World Bank Procurement Regulations; (c) the project procurement officers will specifically be trained on procurement and contract management in enhancing skills; (d) the Expression of Interest will be published on the World Bank's external website, through the embassies, and in newspapers for a longer duration; (e) as part of the contract management activities, framework agreements will be entered into for the supply of frequently procured items such as stationery, as this will help achieve value for money; and (f) invoices will be promptly settled as this strengthens service providers' cash flow and engenders their confidence in the procuring entity, thereby ensuring early contract completion.

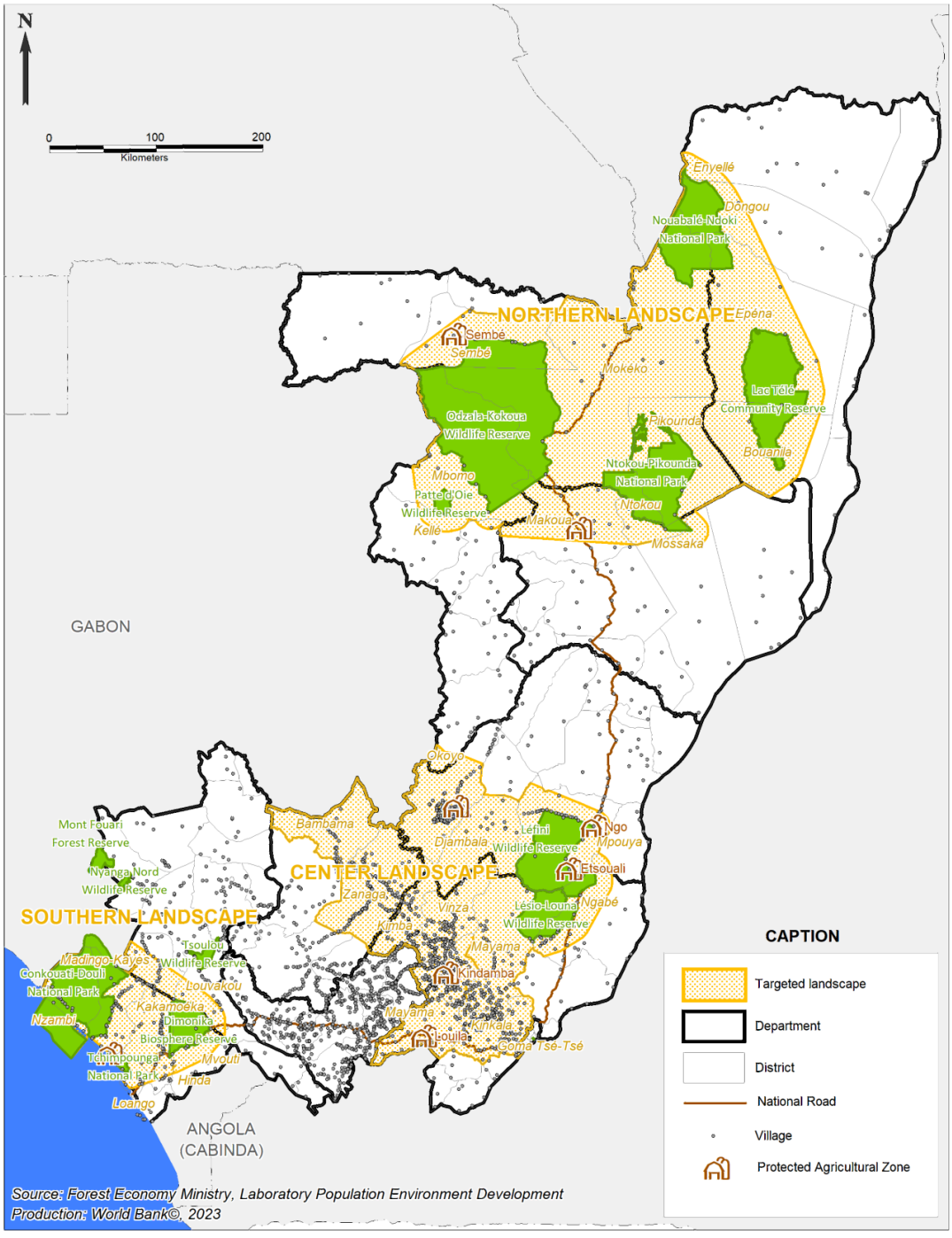
31. **Procurement thresholds.** The thresholds for particular market approaches and procurement methods and the thresholds for the World Bank's prior review requirements will be set for the project based on the procurement risk rating.

32. **Frequency of procurement implementation support.** In addition to the prior review, targeted procurement support will be provided to the PIU by the World Bank. Implementation support missions will include a procurement specialist to carry out strategic post reviews of procurement activities.

33. **Standstill period, publication of awards, and debriefing.** Publication of results of the bidding process for goods contracts and for consultant contracts will follow Paragraphs 5.78 to 5.96 of the World Bank Procurement Regulations.

34. **Fraud and corruption.** All procuring entities as well as bidders and service providers, that is, suppliers, contractors, and consultants, shall observe the highest ethical standards during the procurement and execution of contracts financed under the project, in accordance with all applicable World Bank guidelines.

ANNEX 2: Map of Targeted Landscapes



Note: Map clearance obtained on January 17, 2023.

ANNEX 3: Economic and Financial Analysis

1. **This annex provides details about the economic and financial analysis of the project.** As mentioned previously, the project is framework based, meaning that many activities will only be identified, selected, and executed during project implementation.[63] Therefore, at this stage, many of the activities that will be implemented by the project are not yet known in detail. Hence, a CBA at the project level cannot be conducted at this stage.

2. **As the project envisages a range of practices eligible for implementation, an economic analysis is conducted for selected activities.** Every effort was made to identify representative activities for each component, based on consultations with the project team and drawing on examples from other, similar projects such as PDAC (P159979) and PFDE (P124085) and on practices recommended by the country's CSAIP.[64] The analysis is based on the CBA method, using a discount rate of 6 percent (World Bank 2016[65]) and a time horizon of 20 years, to account for the project's long-term benefits.

Component 1: Strengthening Capacity of Institutions and Promoting Social Cohesion

3. **The analysis focuses on the setting up of the community-based EWRS.** This activity will establish and implement an EWRS using mobile phone-based technology to alert farmers with sufficient lead time regarding the climate risks that might affect their crops, livestock, and lives. The costs related to this activity include investment costs during project implementation and the necessary annual maintenance costs. Their PV has been estimated at US$0.5 million (Table 3.1). In terms of benefits from the EWRS, the team estimated the expected agricultural benefits in terms of avoided losses. No such valuation was found for Congo at the time of writing. However, the available literature shows that (a) in most countries, 5–10 percent of national agricultural production is lost annually due to weather events[66] and (b) improved weather prediction and EWRS can reduce these losses by 10–30 percent, as exemplified in several West African countries.[67] It can be conservatively assumed that only 5 percent of agricultural production is lost due to weather events in Congo and that improved EWRS can only reduce this loss by 1 percent. Knowing that the project affects 30 percent of the agricultural households in the country,[68] the estimated annual benefit attains 0.02 percent of the country's agricultural GDP, starting in Year 6. Using current data on the country's GDP and future projections provided by the World Bank and IMF statistics, the PV of the agricultural benefits due to the ERWS established by the project is estimated at US$1.4 million.

[63] These activities will be part of the PIPs, which will be developed within Component 1.
[64] République du Congo. 2020. *Plan d'Investissement Agricole Climato-résilient. Banque Mondiale/AFD/AAA/Kinome*.
[65] The choice of the 6 percent discount rate is based on the country's average growth of GDP per capita per year, which was estimated at about 3 percent between 2015 and 2020; World Bank. 2016. *Discounting Costs and Benefits in Economic Analysis of World Bank Projects*. World Bank.
[66] FAO. 2019. *Handbook on Climate Information for Climate Communities: What Farmers Need and What Is Available*. FAO.
[67] Tarchiani, V. 2019. *Evaluation Report of Metagri Operational Project* (2012–2015); Kull, D., L. P. Riishojgaard, J. Eyre, and R. A. Varley. 2021. *The Value of Surface-Based Meteorological Observation Data*. World Bank.
[68] Estimated based on the population of the project area (562,000) and the total rural population in the country (1.8 million), based on World Bank Open Data, https://data.worldbank.org. It is assumed that the share of agricultural households in the target area versus total area in the country is similar to the share of rural population in the target area versus total area in the country.

4. **Overall, the analysis shows an economic NPV of US$0.9 million and a benefit-cost ratio (BCR) of 3.** This is a conservative estimate, as it does not include other benefits such as saving lives and reducing injuries from extreme weather events. When the costs supported by the project are excluded, the financial NPV for the project communities is US$1.3 million (Table 3.1).

Table 3.1. CBA for Setting Up a Community-Based ERWS (US$, millions, 2022 prices)

	Year 1	Year 2	…	Year 5	…	Year 20	PV
Investment costs	0.1	0.1	…	0.1	…	0	0.4
Annual costs	0	0.01	…	0	…	0.01	0.1
Total costs (1)	*0.1*	*0.1*	…	*0.1*	…	*0.01*	*0.5*
Agricultural benefits	0	0	…	0	…	0.2	1.4
Total benefits (2)	*0*	*0*	…	*0*	…	0.2	*1.4*
Economic net benefits	*–0.1*	*–0.1*	…	*–0.1*	…	*0.2*	***0.9***
Financial net benefits	*0*	*0*		*0*		*0.2*	***1.3***

Component 2: Strengthening Investments in Sustainable and Resilient Agriculture and Natural Capital Management

5. **Under this component, the analysis focuses on two investments in agricultural infrastructure (Subcomponent 2.1) and one in natural capital management (Subcomponent 2.2).** The results are presented in the paragraphs below and illustrated in Table 3.2.

Rehabilitating Roads

6. **The analysis focuses on rehabilitating 1 km of roads.** The costs include the investments in rehabilitation (US$17,600 per km) and the annual maintenance costs, estimated at about 20 percent of investment costs, based on discussions with the project team. Hence, the PV of the cost is valued at US$53,700 per km. The benefits cover the reduction in transport costs of produce (for example, to local markets) and people (for example, to their homes and other destinations). Only the first benefit is estimated, using data drawn from Congo's PDAC, updated to 2022: (a) number of beneficiaries served by 1 km of road (250 on average); (b) transport cost of produce, without project (40 percent of farmers' revenue); and (c) expected reduction of transport costs due to the project (30 percent of what would have been without the project, based on local information). Accordingly, the PV of this benefit is estimated at[69] US$189,500 per km.

7. **Overall, this activity provides an economic NPV of US$135,800 per km and a BCR of 4 (Table 3.2).** This is a conservative estimate as it does not capture other benefits, such as the economic value of time saved for the passengers travelling on the rehabilitated roads. The financial NPV is estimated at US$152,400 per km, as shown in Table 3.2.

Building Renewable Energy-Based Water Points

8. **The team conducted the analysis for one water point.** The costs include the investment in the water point (US$30,000, based on local knowledge); the expected maintenance and repair costs (every

[69] It should be noted that this is a rough estimation that does not capture the possible long-term changes in local prices of produce and in quantities to be sold at local markets due to increased competitiveness that might be induced by road rehabilitation.

year); and other costs, such as replacing the system batteries (every five years). Additional costs, such as the opportunity cost of land on which the water point will be established, are considered negligible, due to the small area needed (that is, 10 m^2). Accordingly, the PV of the cost is valued at US$65,200. The benefits include the saved time spent on fetching water for domestic use. Based on communications with local experts, a new water point can serve about 200 households and helps them save about two hours a day throughout the year. This corresponds to about 146,000 hours saved per year. Assuming the contribution of adults in carrying water (25 percent) and the opportunity cost of time in the project area (half of the average salary), the economic value of the time saved is estimated at US$13,700 per year, starting the year after the water point is built. Accordingly, the PV of the benefits reaches US$144,100.

9. **Overall, this activity provides an economic NPV of US$78,900 per water point and a BCR of 2.** Similar to the previous analyses, the results underestimate the true value of benefits as they do not capture the value of time saved on getting water for irrigation. The financial NPV is estimated at US$107,200 per water point (Table 3.2).

Improving the Management of Protected Areas

10. **The project will invest US$10 million in a wide range of activities to improve the management of 1.2 million ha of protected areas.** As of now, the exact types of activities that will be implemented in the different protected areas are not known and neither is the magnitude of the benefits expected from these areas. Hence, a CBA was conducted for one average hectare of protected areas by estimating the breakeven point for which this activity is economically feasible. The costs include the investments (US$8.5 per ha over the project's five years) and the annual maintenance costs (20 percent of the investment costs). Accordingly, the PV of the costs attains US$11 per ha. Regarding the benefits, the investment is expected to generate an increase of the value of the ecosystem services provided by the protected areas. At the time of writing this PAD, no study estimating the economic value of protected areas in Congo had been found. However, the World Bank's most recent Changing Wealth of Nations study (World Bank 2021)[70] provides a global assessment of the economic value of forest ecosystem services and protected areas in all countries. For Congo, the authors estimated the forest ecosystem benefits at US$83 per ha per year[71] and the protected areas benefits at US$200 per ha per year. However, they also explain that the methodology used to approximate the former value is sounder than that used for the latter. Therefore, the value of forest ecosystem benefits (US$83 per ha per year) was used to estimate the current value of protected areas in Congo. As forests account for 69 percent[72] of the protected areas, the team calculated the average annual value of protected area ecosystem benefits to be US$57 per ha.

11. **A break-even CBA analysis shows that the planned investment in improving protected areas management would be justified as long as protected area benefits increase by at least 2.5 percent compared to their value in the absence of the project.** For example, a 5 percent increase of the protected area value due to the project would correspond to an incremental benefit of US$2.8 per ha per year, with a PV of US$21 per ha. Under this assumption, the activity would generate an economic NPV of US$10 per ha and a BCR of 2 (Table 3.2). A more refined analysis needs to address (a) the specific protected areas that the project will target; (b) the specific types of activities that the project will implement in these

[70] World Bank. 2021. *The Changing Wealth of Nations*. Washington, DC: World Bank.
[71] Updated to 2021. The estimate includes habitat value (US$16 per ha per year), water protection (US$33 per ha per year), recreation (US$13 per ha per year), and non-wood forest products (US$21 per ha per year) (World Bank 2021).
[72] Based on the decrees of establishment and development plans of 20 protected areas in Congo.

areas; and (c) identification and assessment of the individual forest benefits expected to be generated from the project, which will depend largely on the types of activities mentioned in (b).

Table 3.2. CBA of Selected Activities of Component 2 (2022 prices)

	Year 1	Year 2	…	Year 5	…	Year 20	PV
Rehabilitating roads (US$/km)							
Investment costs	17,600	0	…	0	…	0	
Annual costs	0	3,520	…	3,520	…	3,520	
Total costs	*17,600*	3,520	…	3,520	…	3,520	*53,700*
Reduction in transport costs	0	18,000	…	18,000	…	18,000	
Total benefits	*0*	18,000	…	18,000	…	18,000	*189,500*
Economic net benefits	*–17,600*	*14,480*	…	*14,480*	…	*14,480*	***135,800***
Financial net benefits	*0*	*14,480*		*14,480*		*14,480*	***152,400***
Building water points (US$/water point)							
Investment costs	30,000	0	…	0	…	0	
Maintenance, repair, and battery replacement	0	3,300	…	3,300	…	3,300	
Total costs	*30,000*	*3,300*	…	*3,300*	…	*3,300*	*65,200*
Saved time to get water	0	13,700	…	13,700	…	13,700	
Total benefits	*0*	*13,700*	…	*13,700*	…	*13,700*	*144,100*
Economic net benefits	*–30,000*	*10,400*	…	*10,400*	…	*10,400*	***78,900***
Financial net benefits	*0*	*10,400*	…	*10,400*	…	*10,400*	***107,200***
Improving management of protected areas (US$/ha)							
Investment costs	1.7	1.7	…	1.7	…	0.0	
Annual costs	0	0.3	…	0.3	…	0.3	
Total costs	*1.7*	*2.0*	…	*2.0*	…	*0.3*	*11*
Improvement in protected area value	0	0	…	2.8	…	2.8	
Total benefits	0	0	…	2.8	…	2.8	21
Economic net benefits	*–1.7*	*–2.0*	…	*-2.0*	…	*2.5*	***10***
Financial net benefits	*n.e.*	*n.e.*	…	*n.e.*	…	*n.e.*	*n.e.*

Notes: n.e. = not estimated due to data limitations regarding the population living in the protected areas and the part of the protected areas additional benefits provided by the project that would contribute their livelihoods.

Component 3: Promoting Inclusive, Climate-resilient Livelihoods and Value Chains

12. **Under this component, the analysis focuses on three types of investments:** agroforestry, transformation of bananas into banana chips, and transformation of *foufou* (cassava tubers) into *foufou* flour. The results are presented below and illustrated in Table 3.3.

Agroforestry

13. **This activity—development of cocoa-banana agroforestry—is one of the practices recommended by the country's CSAIP for agricultural diversification and climate change adaptation.** The costs include the investment costs supported by the project (for example, purchase of plants, establishment of plantations, materials and equipment, and training), the annual costs related to the investment, and the opportunity costs of the alternative land use (cassava). The benefits cover the economic returns from sales of bananas and cocoa. The results indicate an economic NPV of US$6,300 per ha and a BCR of 1.4. This is a conservative estimate as it does not account for the value of ecosystem

services expected to be generated by improved vegetation cover (for example, soil conservation) compared to the land use that would have been in place had the project not been there (that is, cassava). The financial NPV is estimated at US$9,900 per ha.

Transformation of Foufou into Foufou Flour

14. **This activity supports the purchase of equipment to process *foufou* into flour.** This includes an electrical machine for product transformation and one for packaging the flour. The costs include the investment costs supported by the project (for example, purchase of equipment for product transformation and packaging) and the annual costs of operation and maintenance of this equipment, net of the costs related to the situation without the project. The benefits cover the difference between (a) the revenues from selling *foufou* flour, estimated based on the expected quantity of *foufou* (6 tons per equipment per year), a 2 percent loss due to transformation, and the local price of *foufou* flour (US$1,800 per ton) and (b) the revenues from selling the *foufou* product in the absence of the project, estimated based on the expected quantity (6 tons per year) and the local price of *foufou* (US$1,350 per ton). Overall, this activity generates an economic NPV of about US$7,000 and a financial NPV of US$12,600.

Transformation of Bananas into Banana Chips

15. **This activity supports the purchase of equipment to process bananas into banana chips and package the chips.** The costs include the investment costs supported by the project (for example, purchase of equipment), the annual costs of materials, and operation and maintenance, net of the costs related to the situation without the project. The benefits cover the difference between (a) the revenues from selling banana chips, estimated based on the expected number of bags of chips (20,300 per year[73]), and the local price of a bag (US$1.13 per bag) and (b) the revenues from selling bananas in the absence of the project, estimated based on the expected quantity of bananas (22 tons per year) and the local price (US$900 per ton). Overall, this activity generates an economic NPV of about US$9,400 and a financial NPV of US$14,300.

Table 3.3. CBA of investments for Component 3

	Year 1	Year 2	…	Year 5	…	Year 20	PV
Agroforestry: cocoa and bananas, high density (c) (US$/ha)							
Investment costs (a)	4,200	20	…	20	…	20	
Annual costs	500	500	…	500	…	500	
Opportunity cost of land	400	400	…	400	…	400	
Total costs	*5,100*	*920*	…	*920*	…	*920*	*14,500*
Revenues from bananas	1,100	2,700	…	2,050	…	0	
Revenues from cocoa	0	0	…	900	…	1,400	
Environmental externalities (b)	n.e.	n.e.	…	n.e.	…	n.e.	
Total benefits	*1,100*	*2,700*	…	*2,950*	…	*1,400*	*20,800*
Economic net benefits	*-4,000*	*1,780*	…	*2,030*	…	*480*	***6,300***
Financial net benefits	*-200*	*1,780*	…	*2,030*	…	*480*	***9,900***
Transforming foufou into foufou flour (US$/activity)							
Investment costs (d)	7,400	0	…	0	…	0	

[73] Estimated based on the total quantity of bananas (22 tons per year), conversion factor for the transformation of bananas into chips (3.25 kg), losses during transformation (10 percent), and quantity of one bag of chips (300 g).

	Year 1	Year 2	…	Year 5	…	Year 20	PV
Annual costs	0	700	…	700	…	700	
Total costs	*7,400*	*700*	…	*700*	…	*700*	*17,900*
Additional benefits from selling *foufou* flour versus selling *foufou*	0	2,500	…	2,500	…	2,500	
Total benefits	*0*	*2,500*	…	*2,500*	…	*2,500*	*24,900*
Economic net benefits	*–7,400*	*1,800*	…	*1,800*	…	*1,800*	***7,030***
Financial net benefits	*–1,500*	*1,800*	…	*1,800*	…	*1,800*	***12,600***
Transforming bananas in banana chips (US$/activity)							
Investment costs	6,400	0	…	0	…	0	
Annual costs	0	1,200	…	1,200	…	1,200	
Total costs	*6,400*	1,200	…	1,200	…	1,200	*21,100*
Additional benefits from selling banana chips versus selling bananas	0	3,100	…	3,100	…	3,100	
Total benefits	0	3,100	…	3,100	…	3,100	30,500
Economic net benefits	*–6,400*	*1,900*	…	*1,900*	…	*1,900*	***9,400***
Financial net benefits	*–1,300*	*1,900*	…	*1,900*	…	*1,900*	***14,300***

Notes: (a) These include the cost of plants, plantation establishment, materials and equipment, and training.
(b) Includes soil conservation provided by the vegetation cover of the agroforestry system.
(c) High density refers to planting 1,100 cocoa plants and 1,100 banana plants on 1 ha.
(d) These include the cost of the electrical processing machine and of the wrapping machine.

16. **In conclusion, the analysis shows that the selected investments are economically attractive.** This is the case even though off-site externalities of the project (for example, soil conservation and downstream water protection) are not captured due to data limitations. Moreover, the investments are financially attractive for the local communities because they incur only a part of the up-front investment cost. However, their attractiveness is highly contingent on the operation and maintenance costs being regularly supported after the end of the project. This is an important aspect that has been carefully considered during project preparation and will be monitored during implementation.

17. **Carbon benefits.** In addition to the above national-level benefits, the project will provide global benefits. The ex-ante GHG assessment estimated that the project will reduce GHG emissions by 24.3 million tCO_2-eq. over 20 years (Annex 4). The economic value of these benefits is calculated based on a shadow price of carbon of US$51 per tCO2 (low scenario) and US$102 per tCO2 (high scenario) for 2023, with an annual increase of 2.25 percent, based on the World Bank (2017) guidance. Table 3.4 provides the detailed calculations.

Table 3.4. Economic Valuation of Carbon Benefits

Years	Net carbon balance (million $tCO_{2eq.}$)	Shadow low price (US$/$tCO_{2eq.}$)	Shadow high price (US$/$tCO_{2eq.}$)	Carbon value (low, US$ million)	Carbon value (high, US$ million)
	(a)	(b)	(c)	(a) * (b)	(a) * (c)
2023	0.2	51	102	12	24
2024	0.5	52	103	24	48
2025	0.7	53	105	37	73
2026	0.9	54	108	50	100
2027	1.2	56	111	64	129
2028	1.4	57	113	79	158
2029	1.4	58	116	80	161
2030	1.4	59	118	82	164
2031	1.4	60	121	84	167
2032	1.4	61	124	85	172
2033	1.4	63	126	87	176
2034	1.4	65	129	90	179
2035	1.4	66	132	92	184
2036	1.4	67	135	94	187
2037	1.4	69	138	95	192
2038	1.4	71	142	98	197
2039	1.4	72	144	100	200
2040	1.4	74	148	103	205
2041	1.4	76	151	105	210
2042	1.4	77	155	107	215
PV base case (6% discount rate)				**804**	**1,608**
PV sensitivity analysis (2% discount rate)				1,237	2,475
PV sensitivity analysis (8% discount rate)				662	1,322
PV sensitivity analysis (10% discount rate)				551	1,101

Sources: EX-ACT for (a) ; World Bank (2017) for (b) and (c).

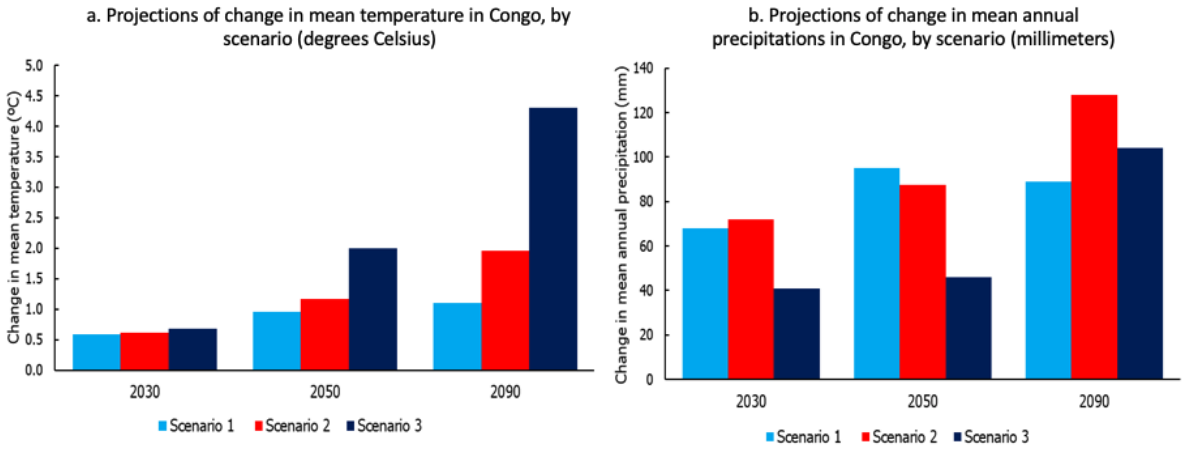
ANNEX 4: Climate Co-Benefits and Greenhouse Gas Assessment

Part A. Climate Co-Benefits

Climate Change Vulnerability Context

1. **Congo is one of the most vulnerable countries to climate change in the world.** According to the ND-GAIN Country Index, Congo is among the world's 15 countries most vulnerable to climate change.[74] The country has experienced significant climate variation over the past century. Between 1901–1910 and 2011–2020, the mean annual temperature increased by 0.6°C. This was accompanied by increases in both average maximum and minimum temperatures. During the same period, mean annual precipitations have not changed significantly; however, the country witnessed more erratic and extreme rainfall.[75] In the future, climate change is expected to result in even higher temperatures. The magnitude of these increases depends on the RCP scenario considered, for example, between 1°C and 2°C by 2050, as shown in Figure 4.1a. The projections for the average annual precipitation indicate higher levels of precipitations compared to the 1995–2014 baseline, as seen in Figure 4.1b; however, these estimates are more uncertain than the projections for temperature. It is important to note that increased frequency and severity of precipitations will particularly affect the project areas (for example, Pool, Plateau).

Figure 4.1. Projected Changes in Mean Temperature and Precipitation According to Three RCP Scenarios



Source: World Bank (2022),[76] based on World Bank Climate Change Knowledge Portal.
Notes: Scenario 1 is an optimistic scenario under which GHG reductions lead to average global temperatures increasing by 1.5°C from pre-industrial levels. Scenario 2 is a moderate scenario that stabilizes the increase at 2°C. Scenario 3 is a pessimistic scenario under which no further measures are taken to stabilize temperatures beyond those already committed and temperatures could rise as much as 5–6°C by the end of this century.[77] Projections

[74] The ND-GAIN Country Index summarizes a country's vulnerability to climate change and other global challenges in combination with its readiness to improve resilience. In 2020, Congo was ranked 169 out of 182 in terms of vulnerability to climate change. https://gain.nd.edu/our-work/country-index/rankings/.
[75] https://climateknowledgeportal.worldbank.org/country/congo-republic/climate-data-historical.
[76] World Bank. 2022. *Republic of Congo: Economic Update, 9th Edition: Climate Change Impacts, Adaptation, and Opportunities*. Washington, DC: World Bank.
[77] *Climate Model: Temperature Change (RCP 8.5) - 2006 - 2100 - Science on a Sphere (noaa.gov).*

are made for 2030, 2050, and 2090, in comparison with the baseline represented by the averages for 1995–2014.

2. **The impacts of climate change in Congo, already concerning, are expected to worsen in the coming decades.** A recent World Bank assessment estimated the damages due to climate change at 3 percent of the country's GDP in 2010, rising to 16 percent of the GDP in 2030, and 20 percent of the GDP in 2050.[78]

- **The agricultural sector** is vulnerable to increased temperatures, elevated flood risks, and erratic rainfall. Climate change is projected to result in substantial losses—especially in the production of millet, bananas, and other fruits and vegetables. These impacts have been estimated at 4 percent of the country's GDP for 2030. In the long run, climate change could exacerbate hunger and malnutrition for households that suffer from income losses due to crop failure.
- **Ecosystem services**, such as biodiversity value and water regulation provided by natural areas (forests and other vegetated land) and designated protected areas, are expected to decline due to climate change, either directly—as a result of increased temperatures and peatland drying in the northern landscape, fluvial flooding in the central landscape (for example, Lefini and Lesio-Luna Parks), and coastal erosion in the southern landscape (for example, Tchimpounga and Conkouati-Douli Parks)—or indirectly, by inducing poor people to convert forests into agricultural land. These impacts have been estimated at 3 percent of the country's GDP for 2030.[79] In the project area, ecosystem services are crucial for livelihood diversification (for example, by promoting ecotourism in protected areas) and increased agricultural productivity (for example, by improving the water regulation function of forests). In the long term, insufficient adaptation measures are likely to reduce ecosystem value, increase social tensions, and worsen poverty.
- **Infrastructure,** such as roads, bridges, and small-scale irrigation systems, is vulnerable to high temperatures (which can, for example, cause pavements to soften or break) and erratic rainfalls (which can, for example, destroy infrastructure in the absence of climate-smart road drainage systems). If left unattended, these damages could induce major negative impacts on the transportation time and safety of goods and people in the project area.
- **Communities** are profoundly affected by climate change, particularly rural livelihoods that are heavily reliant on agricultural activities and more vulnerable to climate-induced risks and shocks. The poor are the most affected, as agriculture is their main source of income. Women are particularly fragile, because they have the poorest quality of land, few resources, and little access to technology to adapt to climate change. A failure to adopt climate-resilient measures to support sustainable livelihoods is likely to jeopardize food and income security may lead to the loss of assets and increased impoverishment.

3. Currently, the country has a low capacity to adapt to the abovementioned impacts, having been ranked the seventh least-ready country in ND-GAIN Country Index for 2020. Hence, a multisectoral response that encompasses climate-smart approaches to agriculture, infrastructure, natural capital management, and social dimensions is essential to reduce climate vulnerability and improve people's

[78] World Bank. 2022. *Republic of Congo: Economic Update, 9th Edition: Climate Change Impacts, Adaptation, and Opportunities*. Washington, DC: World Bank.
[79] This represents the cost of habitat loss in terms of biodiversity decline and impacts of sea level rise, based on World Bank. 2022. *Republic of Congo: Economic Update, 9th Edition: Climate Change Impacts, Adaptation, and Opportunities*. Washington, DC: World Bank.

welfare. ProClimat has the explicit intention to provide such a response, as detailed in the following section.

Link to Project Activities

4. ProClimat intends to address climate change vulnerability through integrated solutions that enhance resilience of the agricultural sector, infrastructure, natural capital management, and communities' way of life. It does so by (a) supporting technical assistance aimed at strengthening institutional capacity and climate change awareness (for example, to identify the climate change impacts on vulnerable populations, formulate climate-sensitive reforms of policies, and so on); (b) building a community-based EWRS for climate preparedness; (c) developing climate-smart infrastructure for agriculture, drawing on the priority projects developed under the country's CSAIP (for example, renewable energy-based water points and agroforestry); (d) improving the management of the country's natural capital, with the aim of better adaptation of vulnerable communities to future climate risks (for example, increased temperatures and floods) and improved mitigation outcomes (for example, through reforestation, afforestation, and agroforestry); (e) promoting climate-resilient technologies within activities aiming to improve livelihoods and value chains (for example, by supporting soil improvement, water conservation practices, and use of low-energy technologies); and (f) improving the overall resilience of communities against climate shocks by building their knowledge and capacity. Table 4.1 provides a summary of project activities that bring adaptation and mitigation benefits.

Table 4.1. Climate Change Activities Integrated in Project Components (costs only refer to IBRD financing)

Climate Change Activities	Estimated Costs (US$, millions; IBRD financing only)
Component 1: Strengthening Capacity of Institutions and Promoting Social Cohesion	
Climate Change Activities under Component 1	**7.8**
Subcomponent 1.1. The activities are dedicated to both adaptation and mitigation and will be integrated under the following workstreams: - **Landscape management:** Focus on assessing policies and practices for multiple land uses, to ensure sustainable use of land while strengthening measures to mitigate and adapt to climate change. - **Climate change diagnostics:** Focus on identifying the impacts of climate change on vulnerable populations in the project area (for example, women, youth, and so on) and providing technical assistance for integrating climate-smart reforms into existing policies, laws, and regulations (for example, introducing climate resilience criteria for allocating funding resources to sustainable land use practices). - **Sustainable and resilient agriculture:** Examine the state-of-the-art knowledge on future impacts of climate change on the country's agricultural sector and identify agricultural crops with adaptation (for example, climate-resilient varieties of millet) and mitigation potential (for example, crop rotation and agroforestry). - **Natural capital management:** Identifies and quantifies the value of ecosystem services of particular importance for climate mitigation (for example, carbon storage) and adaptation (for example, water regulation for downstream agriculture) and investigates the potential of ecotourism as a means of livelihood diversification and climate change adaptation in protected areas.	3.9

Climate Change Activities	Estimated Costs (US$, millions; IBRD financing only)
- **Women's economic empowerment:** Develops a climate-gendered assessment of women's barriers and opportunities for participating in economic activities in the targeted landscapes.	
Subcomponent 1.2. Climate change concerns will be integrated under the following activities with adaptation benefits: - **Capacity-building activities and dialogue sessions:** All trainings and information sessions will support social inclusion and better adaptation of communities vulnerable to climate change (for example, youth, poor, and women). - **Development of PIPs:** Based on up-to-date knowledge on the climate risks, the PIPs will prioritize resilient small infrastructure to support climate-smart livelihoods in the project communities. - **Establishing a community-based EWRS:** The system will have direct adaptation benefits (for example, by informing decisions about crop choice and harvest time) and indirect mitigation benefits (for example, by improving productivity and thus reducing slash-and-burn agriculture and the resulting deforestation).	3.9
Climate Change Activities under Component 2	**27.6**
Subcomponent 2.1. Climate concerns will be integrated under the following activities: - **Rehabilitating feeder roads:** Focus on rehabilitation in accordance with climate-proof standards for infrastructure design, construction, and maintenance (for example, using pavement mixtures and road drainage systems suitable for extreme heat and rainfall events). - **Public infrastructure for livelihood:** Focus on public infrastructure that reduces carbon emissions (for example, renewable energy-based water points) and uses materials that provide insulation to extreme heat (for example, climate-proof warehouses). - **Infrastructure to manage drought and flooding:** Focus on infrastructure to manage drought and flooding, for example, drainage systems built with consideration of appropriate standards for the expected run-off increase due to climate change.	14.2
Subcomponent 2.2. Climate change activities are incorporated as follows: - **Supporting ecosystem services for agriculture:** Substantial GHG emission reductions are expected to result from the improved management of protected areas that the project will support. As indicated in the GHG assessment (Table 4.2 below), this may reduce GHG emissions by 23.7 million tCO2-e over 20 years. In addition, focus will be on improving the agricultural resilience to climate change by enhancing the value of ecosystem services on which the agricultural sector depends by (a) quantifying the value of the ecosystem services (for example, water flow regulation) and recommending measures that will help conserve/enhance them and (b) restoring degraded land through nature-based solutions with mitigation benefits (for example, afforestation, reforestation, and assisted natural regeneration), with adaptation benefits (for example, bank stabilization and erosion control) and with both mitigation and adaptation outcomes (for example, fire management and soil conservation). - **Improving the management of protected areas:** Focus will be on increasing resilience to temperature increases and extreme events by (a) developing or updating park management plans with incorporation of climate considerations (for example, vulnerability assessments and promoting energy and water conservation); (b) constructing and upgrading essential park infrastructure, particularly in areas vulnerable to the effects of climate change (including firebreaks, guard stations, and park boundary markers); (c) supporting restoration activities for conservation and adaptation purposes	13.4

Climate Change Activities	Estimated Costs (US$, millions; IBRD financing only)
(for example, infrastructure for controlling increased erosion due to severe storms); and (d) training for park management staff in conservation through nursery establishment for and replanting of indigenous tree species, which generates mitigation benefits.	
Climate Change Activities under Component 3	**20.1**
Subcomponent 3.1. All activities under this subcomponent contribute to improving communities' climate resilience. Specifically, these activities will contribute to increasing rural incomes (which will help vulnerable populations prepare for and recover from negative impacts of climate change) and will allow farmers to better adapt to changing climate and market conditions by having a wider range of tradable products. Some activities are expected to reduce farmers' vulnerability to climate risks—extreme heat and floods—by promoting conservation agriculture (for example, crop rotation and improved soil fertility) while others have mitigation potential, such as clean energy technologies (for example, use of improved cookstoves) or potential to do both (for example, agroforestry with cocoa and bananas). Climate resilience will be an important criterion of selecting activities to be funded under this subcomponent.	8.1
Subcomponent 3.2. Similar to the previous subcomponent, all activities are expected to improve beneficiaries' income and provide resilient ways to cope with climate risks through livelihood adaptation and diversification. Specifically, the subcomponent will finance climate-resilient agriculture as prioritized in the CSAIP, with adaptation benefits (for example, improved small-scale irrigation infrastructure and improved soil productivity), activities with mitigation benefits (for example, community forestry and NTFPs), and activities providing both adaptation and mitigation benefits (for example, agroforestry). Ecotourism support in protected areas will be tailored to have both adaptation benefits (for example, short-term coping strategy for people suffering from decreased revenues due to climate hazards) and mitigation outcomes (for example, reduced solid waste discharge in nature).	6.0
Subcomponent 3.3. All activities are intended to improve the beneficiaries' income and provide resilient ways to cope with climate risks through livelihood adaptation and diversification. Along these lines, examples of climate change activities are as follows: - **Support for group norms and development:** Training in coping and adaptation strategies to increase their socioeconomic resilience to shifting weather patterns, for example, planting drought-tolerant crops, crop diversification, and other technical skills needed to address the changing climate. - **Life skills and business development packages:** Training for developing climate-resilient businesses (for example, using low energy technologies for food processing, using waste as an eco-friendly alternative to firewood) and developing their associated business plans and budget. - **Livelihood grant packages:** Support to women-led groups to take advantage of incentives for climate-resilient agriculture, through extension services, learning from existing formalized cooperatives, creation of bank accounts, and access to digital service.	6.0
Estimated total cost (US$, millions)	**55.5**

Link to MDB List of Eligible Mitigation Activities

5. ProClimat will invest in activities that will induce a reduction in GHGs emissions and provide mitigation co-benefits. The paragraphs below illustrate examples of these activities, as part of the following MDB-defined categories:

- **Agriculture: energy efficiency.** The project will support investments in climate-smart businesses that use low energy technologies for food processing and/or waste as an eco-friendly alternative to firewood (Subcomponent 3.3).
- **Agriculture: carbon sequestration.** The project will support knowledge and investments in agricultural practices that increase carbon stock in the soil through technical work on identifying the practices that increase carbon sequestration in soil, for example, restoring degraded land through crop rotation and no-/low-till farming (Subcomponent 1.1); promoting awareness on climate mitigation potential of resilient agriculture through training of vulnerable groups (Subcomponent 1.2); and activities that improve climate resilient livelihoods and value chains, such as agroforestry (Subcomponent 3.1).
- **Forestry: GHG emission reduction and carbon sequestration.** The project will support knowledge and investments in forest-related practices that sequester carbon such as technical work on quantifying the value of ecosystem services for climate change mitigation (Subcomponent 1.1); promoting of awareness on climate change mitigation potential of forestry activities and training of vulnerable groups (Subcomponent 1.2); restoration of degraded land through afforestation, reforestation, assisted natural regeneration, and prevention of fires through firebreaks (Subcomponent 2.2); and support for forest plantations, agroforestry, and community forestry (Component 3). Moreover, in the long run, it is expected that the establishment of a community-based EWRS will contribute to enhanced nutrition and improved self-sufficiency, hence reduced need for deforestation for agriculture (Subcomponent 1.2).
- **Water: energy efficiency and demand management in water supply.** The project will support public infrastructure based on renewable energy, that is, renewable
- energy-based water points (Subcomponent 2.1).

Part B: Greenhouse Gas Assessment

6. **The World Bank has adopted EX-ACT by FAO to assess the impact of agricultural and forestry investments on GHG emissions and carbon sequestration.** EX-ACT allows project teams to assess the net carbon balance of a project compared to a without-project scenario. Net carbon balance is defined as the net balance of CO_2 equivalent GHGs that were emitted or sequestered as a result of project activities/implementation. A GHG analysis was conducted for ProClimat as part of project preparation.

Application of EX-ACT

7. **Basic assumptions.** For the GHG analysis, the selected climate was tropical wet, with low activity clay soils as the dominant soil type in Congo. The project's implementation period and the GHG analysis is for 5 years, with a project capitalization period of 15 years.

8. **Inputs to the analysis.** For the analysis, the project is assumed to have activities in approximately 1,201,000 ha of land:

- 25,000 ha of non-vegetated lands placed under agroecological practices
- 1,176,000 ha of tropical dry forests placed under sustainable landscape management practices.

9. Under Component 2, the project will finance investments for agroecology and natural capital management. Approximately 25,000 ha will be placed under agroecological practices, though the final location will only be determined during implementation. The project will only intervene in degraded or non-vegetated lands. In the center of the country, savannah lands dominate. Component 2 will additionally have interventions aiming at improving the management capacity of approximately 1,176,000 ha of formally designated protected areas.

10. **Outcomes.** The project is expected to reduce or avoid 24,308,794 tCO_2-eq. over 20 years. The details are available in Tables 4.2, 4.3, and 4.3.

Table 4.2. Total GHG Mitigation Potential of the Project

Project Components		**Gross Fluxes**		
		In tCO_2-eq over the whole period analysis (positive = source / negative = sink)		
		Without	**With**	**Balance**
Land use changes	Other land use	0	–309,604	–309,604
Cropland	Perennial	0	–298,098	–298,098
Forest management		0	–23,704,092	–23,704,092
Total emissions, tCO_2-e		**0**	**–24,308,794**	**–24,308,794**
Total emissions, tCO_2-e/ha		**0**	**–20**	**–20**
Total emissions, tCO_2-e/ha/year		**0**	**–1**	**–1**

Table 4.3. GHG Average Annual Emissions and Mitigation Potential of the Project

Project Components		**Gross Fluxes**		
		In tCO_2-e over the whole period analysis (positive = source / negative = sink)		
		Without	**With**	**Balance**
Land use changes	Other land use	0	–15,480	–15,480
Cropland	Perennial	0	–14,755	–14,755
Forest management		0	–1,185,205	–1,185,205
Total emissions, tCO_2-e		**0**	**–1,215,440**	**–1,215,440**

Table 4.4. Share per GHG of the Balance

Project Components		Direct and Indirect Contributions under Project Components				
		In tCO_2-e (positive = source / negative = sink)				
		CO_2 BIOMASS	**CO_2 SOIL**	**N_2O**	**CH_4**	**All Non-AFOLU Emissions[80]**
Land use changes	Other land use	–267,896	–41,708	0	0	0
Cropland	Perennial	–4,688,177	4,212,542	180,538	0	0
Forest management		–23,704,092	0	0	0	0
Total emissions, tCO_2-e		**–28,660,165**	**4,170,833**	**180,538**	**0**	**0**
Total emissions, tCO_2-e/ha		**–23.9**	**3.5**	**0.2**	**0**	**0**
Total emissions, tCO_2-e/ha/year		**–1.2**	**0.2**	**0.0**	**0**	**0**

[80] AFOLU = Agriculture, Forestry, and Other Land Use