



CENTRAL AFRICAN REPUBLIC

Unity - Dignity - Work

MINISTRY OF ENVIRONMENT AND SUSTAINABLE DEVELOPMENT

NATIONAL CLIMATE COORDINATION



NATIONALLY DETERMINED CONTRIBUTION (NDC) REVISED VERSION



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SUMMARY

The revision of the Nationally Determined Contribution (NDC) is in line with the objectives pursued by the Government of the Central African Republic within the framework of the National Recovery and Peacebuilding Plan (RCPCA), the country's main strategic planning instrument. It consolidates the achievements of the first generation of NDCs and significantly improves them from a methodological point of view.

It is based on the probable consequences of climate variations and changes projected for 2030, the evolution to date of greenhouse gas emissions and removals, existing and potential impacts and vulnerabilities, to:

- Describe a trend scenario (or Business *as Usual* (BAU) of greenhouse gas emissions over the 2010-2030 cycle in the most emitting sectors: Energy; Agriculture, Forestry and Other Land Use (AFOLU); Industrial processes; Rubbish;
- Propose mitigation measures that can bend the trend curve under an unconditional scenario (government investment) and a conditional scenario (additional investment needs required by the international community)
- Identify, according to a conditional and an unconditional scenario, adaptation measures in the most vulnerable sectors (Agriculture, Energy, Forestry, Water Resources, Health, Land Planning, Infrastructure and Housing), in line with the objectives pursued by the sector planning.

According to the trend scenario, greenhouse gas emissions will thus increase from 10,040 GgeCO₂ in 2010 to 14141 GgeqCO₂ in 2025 and 17,644 GgeqCO₂ in 2030. The sequestration capacity over the same horizons is 730,714 GgCO₂ and 733,607 GgCO₂ respectively.

The mitigation measures taken will generate, according to the unconditional scenario, a reduction in greenhouse gas emissions of 9.03% and 11.82% respectively by 2025 and 2030 compared to the baseline situation; and according to the conditional scenario, 14.64% and 24.28% by 2025 and 2030 compared to the baseline situation.

The CAR NDC builds on the existing inventory of short-lived climate pollutants (SLCPs), to broaden the spectrum of gases covered, in addition to greenhouse gases. Organic carbon (CO) emissions, which represent 61.9% of total LCCDP emissions, would experience a significant decline as a result of the proposed mitigation measures at the same time as the other LCCPs (13.67% to -55.31% depending on the type of pollutant by 2030).

In terms of adaptation measures, the targeted actions proposed in the most vulnerable sectors should make it possible, by 2030, to reduce the impacts and reduce the vulnerabilities generated by current and future climate change.

The financial requirements associated with the implementation of all the actions described above are estimated at \$1.764 billion, including:

- \$1.32 billion for mitigation: \$236 million unconditional and \$1.08 billion conditional;
- \$443.87 million for adaptation: \$44.38 million unconditional and \$399.48 million conditional.

Monitoring of the implementation of mitigation and adaptation actions and the support received in technology, capacity building and finance is ensured through a measurement, reporting and verification mechanism that builds on the national SDG monitoring mechanism. This MRV mechanism facilitates, among other things, the updating of inventories and the periodic reporting of the progress made by the CAR to the United Nations Framework Convention on Climate Change (UNFCCC).

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ACRONYMS

AEP:	Drinking water supply
AFAT:	Agriculture, forestry and other land use
AR6:	Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report (AR6)
CLTS:	Total Sanitation Led by the BAU Communities: Business As Usual
UNFCCC:	United Nations Framework Convention on Climate Change NDC: Nationally Determined Contribution
CO:	Organic carbon
CO2:	Carbon dioxide or carbon dioxide
NMVOCs:	Non-methane volatile organic compounds CH4: Methane
DGEP:	Directorate-General for Studies and Planning
DGEPC:	Directorate General for Studies, Programming and Control DGPC Directorate-General for Emergency Preparedness
DPEN:	HFC National Energy Policy Document: Hydrofluorocarbons
ICANS:	Central African Institute of Statistics and Economic and Social Studies ICRA: Central African Institute for Agricultural Research
GHG:	HDI greenhouse gases: Liquefied Petroleum Gases
MDERH:	Ministry of Energy and Water Resources Development MNV Measurement, Notification,
Verification	
MTPER:	Ministry of Public Works and Road Maintenance
MURF VH:	Ministry of Urban Planning, Land Reform, Urban Affairs and Housing NOx: Nitrogen oxides
N2O:	Nitrous oxide or nitrous oxide SDG: Sustainable Development Goals
PIUP:	Industrial Processes and Use of LCCP Products: Short-lived climate pollutants PM10; PM 2.5: Particulate matter
PNIASAN:	National Agricultural Investment Programme for Food and Nutrition Security
PNA:	National Adaptation Plan
NTFPs:	Non-timber forest products
SODEVA:	Central African Water Distribution Company
RCPCA:	National Recovery and Peacebuilding Plan
SARDS:	SNAT Rural Development, Agriculture and Food Security Strategy: National Spatial Planning Scheme

1. INTRODUCTION

The revision of the CAR NDC responds to the urgency of ambitious action in the face of the global climate crisis and the increase in global temperature.

In line with the first NDC of 2016 and the relevant provisions of decisions 1/CP.21, 4/CMA.1 and 9/CMA.1 of the United Nations Framework Convention on Climate Change (UNFCCC), the revised NDC confirms the country's aspiration to contribute significantly to global efforts to combat climate change. This second generation presents important advances compared to the first:

1. The formulation process was carried out in an inclusive manner, involving the various actors grouped around a multi-stakeholder committee ensuring strategic steering and validation of results, and sectoral working groups (six in total), responsible for proposing and/or amending the proposed contributions, under the heading of mitigation and adaptation. As a result, the data collected from primary providers is of higher quality. The processing and analysis were based on the expertise of the official bodies in charge of sectoral statistics.
2. It covers more sectors and gases:
 - a. The sectors and sub-sectors covered include, in addition to those of the first generation, transport, mining, land use planning and housing, in line with the recommendations of the assessment report of the first NDC.
 - b. Greenhouse gas coverage has been extended to hydrofluorocarbons (HFCs), in addition to carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O). Better still, short-lived climate pollutants (SLCPs) have been taken into account, because of their potential role in reducing global warming.
3. The revised NDC relies on an improved and more robust database to estimate emissions and removals in the baseline scenario: the time series used is presented with annual data, unlike the first NDC, where the summation results for the 2003-2010 time series show overestimates, particularly in the Agriculture sector. Forestry and Other Land Use (AFOLU). Therefore, the trend scenario or BAU scenario is more realistic and more credible, because it is built on more disaggregated and quality data, and covering more sectors.
4. The implications of the corrections indicated *above* are a revision of the emissions of the trend scenario compared to the first NDC. They are 10,040 GgeCO₂ in 2010 and 17,643 GgeCO₂ by 2030.
5. The greenhouse gas emission reduction ambitions of the revised NDC are, in relative terms, higher than the previous one (24.28% by 2030 compared to the trend scenario, compared to 5% for the first NDC). In absolute terms, this reduction is less significant: it is 4,284.42 GgeCO₂ compared to 5,500 GgeCO₂ for the first NDC.
6. The proposed mitigation measures incorporate the most realistic measures of the first NDC and consolidate them with new measures.
7. Adaptation planning is made more robust by measures based on targeted objectives, in line with sectoral objectives.
8. A measurement, notification and verification system is proposed.

In view of the improvements that the revision process has made possible, the CAR has an effective tool for steering public actions that take into account the projected effects of climate change in the medium term (2030), and the means to mitigate these effects.

2. NATIONAL CONTEXT

CURRENT AND FUTURE CLIMATE OF THE CAR

The climate in the Central African Republic is characterized by an upward trend in the average annual temperature of about 0.3°C per decade, which began in the 70s. This variation, which differed according to climatic zones, increased more rapidly from the 1950s onwards, especially in the south-western areas. Over the last thirty years, annual rainfall has shown a slight upward trend estimated at 8%². This relative increase is accompanied by an upward trend in extreme events materialized by the increase in the number of rainy days with 10 mm of precipitation over the same period. The most marked climatic hazards in recent years have been storms, floods (south-western areas³), and droughts (in the north). Climatic conditions remain favourable to epidemics linked to bacterial and viral diseases. The probability of annual epidemics of meningococcal meningitis during the dry season remains very high in the northern part of the meningitis belt.

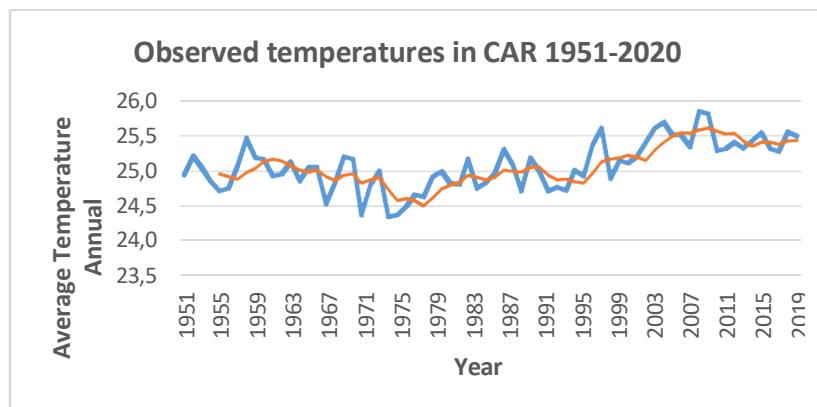


Figure 1: Temperatures observed in CAR 1951-2020 (Source: CCKP, 2021)

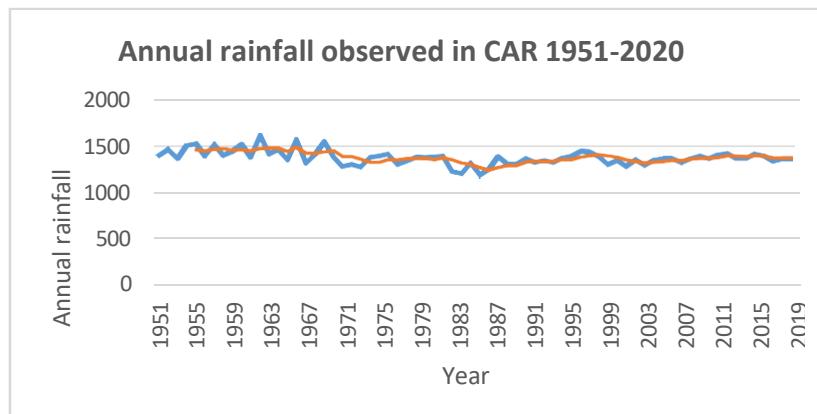


Figure 2: Average annual rainfall observed in CAR: 1951-2020 (Source: CCKP, 2021)

¹ WB Climate Change Knowledge Portal (CCKP, 2021). Central African Republic URL: <https://climateknowledgeportal.worldbank.org/country/central-african-republic/climate-data-historical>

² GERICS (2015). Climate-Fact-Sheet, Central African Republic

³ The 2009 protests around the urban areas of the capital, Bangui, cost \$6 million, and caused an estimated \$2.6 million in losses.

Cmip5	Projections under a RCP 8.54 scenario				
	Observations (1986 to 2005)	Horizon 2030	Horizon 2050	Horizon 2070	Horizon 2090
Annual temperature anomaly (°C)	+0.35 °C per decade	+0.7 to +1.5 (+1.1°C)	+1.4 to +2.7 (+1.9°C)	+2.3 to +4.2 (+2.8°C)	+3.1 to +5.7 (+3.8°C)
Annual Precipitation Anomaly (mm)	+8 %	-18.4 to +21.9 (0.8 mm)	-21.0 to +29.6 (1.7 mm)	-21.5 to +38.5 (5.5 mm)	-28.2 to +50.4 (6.6 mm)
Heavy rainfall (%)		-2 to +14%	-2 to +22%		
Dry spells (days)		-9 to +3 days	-15 to +3 days		

Table 1: Projected changes (Source: CCKP-2021 & GERICS-2015)

Temperature projections show an increase between 0.7 and 1.5°C by 2030 for the RCP 8.5 scenario, and an increase of 1.4 to 2.7°C by the middle of the 21st century⁵ compared to the 1986–2005 reference period. Projections for annual precipitation indicate a slight trend of increasing total annual precipitation.⁶

An increase in rainfall variability is expected to increase, marked by an increase in the frequency (strong trend) and intensity (slight trend) of extreme events⁷ likely to lead to occurrences of river flooding (see Figure 3) over a large part of the country, and urban flooding in the regions of Ombelle Mpoko (Bangui) and Haute Kotto (Bria). As far as dry periods are concerned, the highest risks are located in the regions of Vakaga and Haute Kotto.

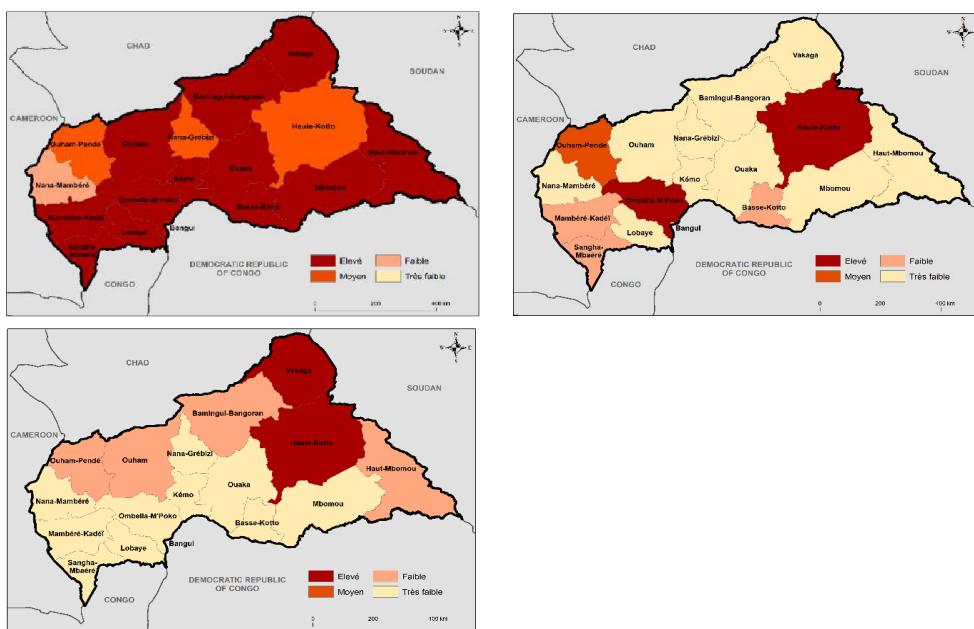


Figure 3: Risk of river, urban and drought flooding in CAR (source: ThinkHazard, 2021)

⁴ The value in bold is the range (10th-90th percentile) and the values in parentheses indicate the median (or 50th percentile). For heavy rainfall and periods of drought, the values correspond to the 5th and 95th percentile (90% in the centre).

⁵Ibid.

⁶Ibid.

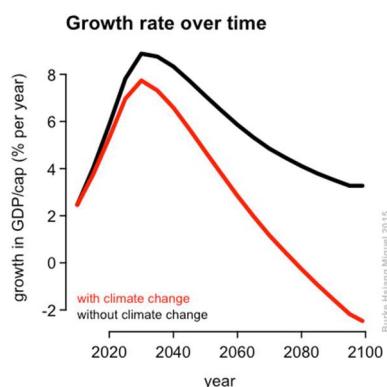
⁷ Confirmed by the 7th IPCC report. Cf: IPCC, 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Regional fact sheet – Africa.

At the macroeconomic level, these projected changes present all the more risks to the prospects for economic development, as the recovery phase that began in 2017 experienced setbacks in 2018 and 2020, in terms of GDP growth rates. This rate, which is expected to rebound with the completion of energy projects and the resumption of agricultural and mining activities, can only be maintained if the impact of climate variability and change does not compromise, among other factors, national ambitions. Indeed, in Central Africa, a warming of 1°C above the historical average is associated with a decrease of about 0.7 percentage points in GDP growth, ranging from -1.3 to -0.038.

Table 2 presents the GDP growth forecasts, and Figure 4 presents the potential effect of climate change on the projected GDP of the CAR.⁹

	2017	2018	2019	2020	2021	2022	2023
Rate gr owth of the GDP (%)	4,5	3,8	4,5	1,7	2,1	5	5

Table 2: Evolution of the CAR's GDP growth rate over the five-year period 2017-2021 (Source: MEPC, 2020)



Likelihood that climate change will reduce the Central African Republic's GDP per capita by:

- More than 10%: 100%
- More than 20%: 100%
- More than 50%: 99%

Figure 4: Economic impact of climate change on the Central African Republic (Source: Stanford, 2021)

⁸AfDB. Climate Change Impacts on Africa's Economic Growth. 2019.

⁹This effect is particularly evident in dry years, particularly on agricultural GDP, and by extension on national GDP: Sonwa, D. et al. (2014).

EVOLUTION OF GREENHOUSE GAS EMISSIONS AND REMOVALS AND SHORT-LIVED CLIMATE POLLUTANTS (LCDC)

GgeCO2		3rd National Communication
		Series: 2010-2016
		Base year: 2010
Energy		5151,99
Agriculture forestry and Other Land Use (AFOLU)		4244,36
Rubbish		643,779
Industrial Processes and Product Use (IPU)		0,078
Overall emissions (excluding removals from forestry)		10 040,20
AFOLU Absorptions		728 896

Table 3: Summary of emissions from the third national communication (Gg CO2e)

The table above presents the profile of greenhouse gas emissions (CO2, CH4, N2O, HFCs) in the following sectors: Energy; Agriculture, Forestry and Other Land Use (AFOLU); Industrial processes; Rubbish. The most significant emissions occur in the energy and AFOLU sectors, which account for nearly 94% of total volumes (see figure below).

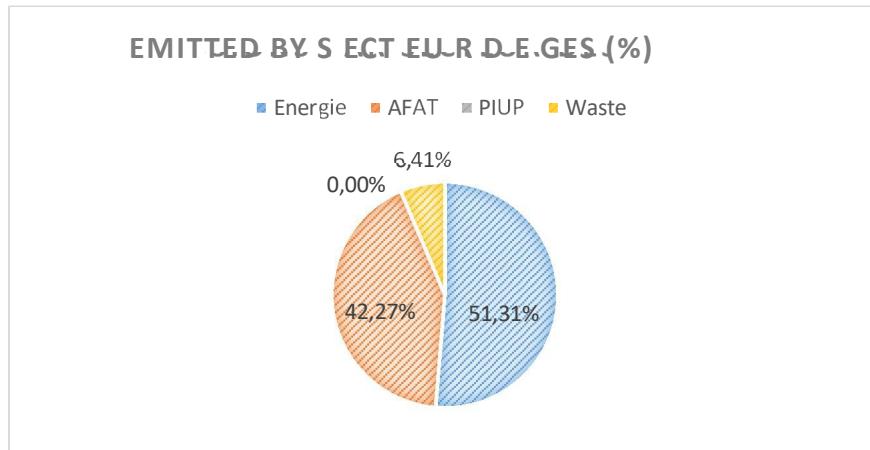


Figure 5: Distribution of GHG emissions by sector (Source: Third National Communication)

It should be noted, however, that despite its significant emissions, CAR's forest and grassland ecosystems remain an important carbon sink, with an estimated sequestration capacity of 728,896 GgeCO2.

In the same vein, and based on the assumption of a potential reduction in short-term global warming of 0.4-0.5°C by 2050¹⁰ by short-lived climate pollutants (SLCPs)¹¹, their inventory was carried out¹². Also, in addition to greenhouse gases (CO₂, CH₄, N₂O, HFCs), the main sources of emissions for SLCPs remain the AFOLU and Energy sectors. The most emitting gases are, in order of importance: organic carbon (CO), suspended particles (PM10), and to a lesser extent nitrogen oxides (NOx), PM 2.5, and non-methane volatile organic compounds (NMVOCs).

	Nox	CO	NMVOCs	SO2	PM10	PM2.5	BC	OC	NH3	TOTAL
Emissions (t)	10 786	107 740	15 894	527	17 609	11 956	1 996	5 574	1 746	173 833
%	6,21%	61,98%	9,14%	0,30%	10,13%	6,88%	1,15%	3,21%	1,00%	100%

Table 4: Distribution of SLCCP emissions by source

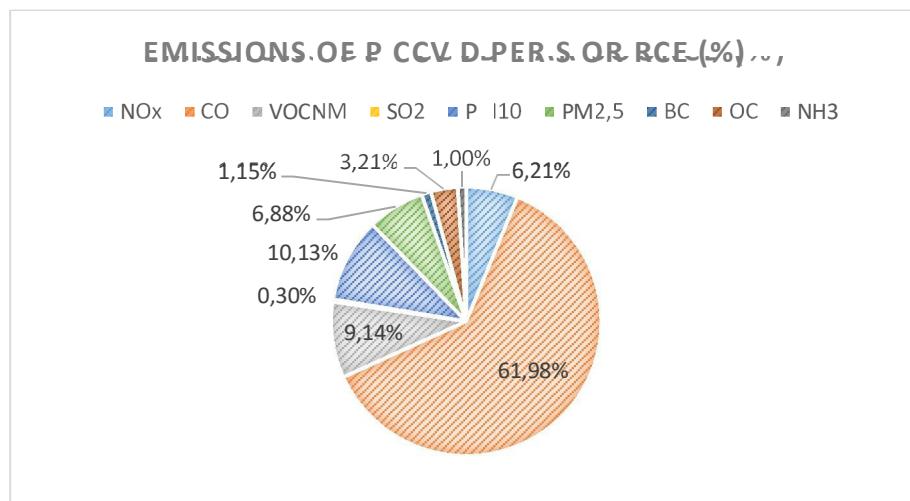


Figure 6: % of PCCVD emissions by source

¹⁰ UNEP & WMO (2011) Integrated Assessment of Black Carbon and Tropospheric Ozone. UNON/publishing Services Section/Nairobi, ISO 14001:2014

¹¹ These are particulate matter (PM2.5 and PM10), black carbon (CN), organic carbon (CO), nitrogen oxides (NOx), sulphur dioxide (SO₂), ammonia (NH₃), and non-methane volatile organic compounds (NMVOCs).

¹² MEDD (2020) Integrated Inventory of Short-Lived Climate Pollutants, Air Pollutants and Greenhouse Gases of the Central African Republic

3. Mitigation of greenhouse gas emissions and climate pollutants

VISION & GOALS

CAR's mitigation vision is the promotion of low-carbon development, by reducing emissions by 10% to 25% by 2030 (unconditional and conditional scenario) compared to the trend scenario. It has several objectives: (i) the development of renewable energy resources and energy saving; (ii) the promotion of agroecology; (iv) the sustainable use of natural resources; and (v) the improvement of the living environment.

BAU SCENARIO OR TREND SCENARIO (2010-2030)

The trend scenario or Business as Usual (BAU) scenario of greenhouse gas emissions (CO₂, CH₄, N₂O, HFC) over the 2010-2030 cycle is shown below for the sectors: Energy; Agriculture, Forestry and Other Land Use (AFOLU); Industrial processes; Rubbish. The CAR's emissions for 2025 and 2030 are 14141 GgeqCO₂ and 17,644 GgeqCO₂ respectively. The sequestration capacity over the same horizons remains high. It is 730,714 GgCO₂ and 733,607 GgCO₂ respectively.

For SLCPs, organic carbon (CO) is expected to account for 71% of short-lived climate pollutant emissions.

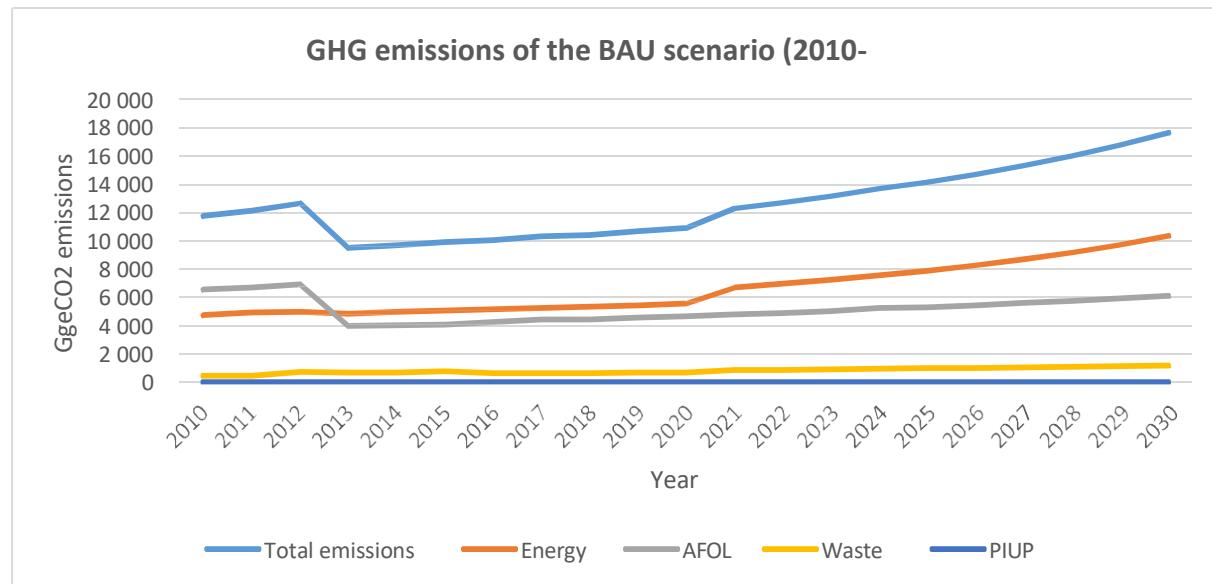


Figure 7: BAU Scenario GHG Emissions (2010-2030)

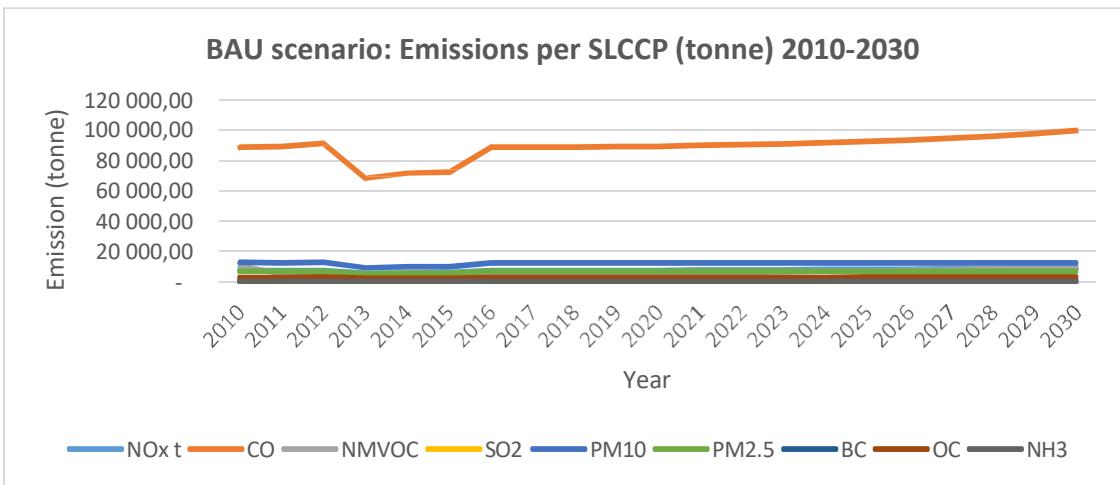


Figure 8: Issuance of the PCCVD-Trend scenario (2010-2030)

At the sectoral level, the mitigation measures set out below cover activities for which investments are planned to be made by the State (unconditional NDC), and activities for which additional investment needs are required (conditional NDC). For all the activities indicated *below*, the NDC will ensure equitable access to gender-based economic opportunities and will target in particular young people and indigenous peoples in the areas where they are present.

ENERGY SECTOR

The National Energy Policy Document (DPEN) supports an objective of contributing to economic growth, improving the quality of life while respecting the environment by increasing the rate of access to electricity from 4 to 20% by 2025 and securing energy supply. This ambition is applied to each sub-sector: traditional energy, electricity, new and renewable energies, hydrocarbons, energy management and saving.

In line with these ambitions, the CAR NDC structures its intervention in the field of energy, according to the actions and objectives below.

Traditional energy sub-sector				
	Objectives	Planned actions		
Unconditional CDN	Increase the yield from 10% charcoal production in 2025 and 25% in 2030 increase the share of coal in the consumption ¹³ by 4% in 2025 and 12.5% in 2030	from Promotion some Technical Improved carbonization: Formation; Valorization some rubbish to Industrial processing Final		
	Penetration of improved stoves in efficiency, by 5% in 2025 and 10% in 2030	Improvement from household energy of wood use-energy through the use of fireplaces		

¹³ Replacing firewood

	2030 (targets: 50% of women heads of household)	Improved: Prototypes; Production and distribution	Development from
	Households equipped in 2025 and 2030: Solar lighting: 5% and 50% Solar cookers: 5% in 2025 LPG: 10% by 2030 (targets: 50% female heads of household)	Modernization from Domestic energy: Study spinneret; Implementation of the pilot phase	Domestic energy: Study spinneret; Implementation of the pilot phase
Conditional CDN	Increase the yield from 10% charcoal production in 2025 and 25% in 2030 Increasing the share of coal in the final consumption of 8% in 2025 and 25% in 2030 ¹⁴	Cf. unconditional CDN	
	Penetration of improved stoves in households by 25% in 2025 and 50% in 2030	Cf. unconditional CDN	
	2% in 2025 and 15% in 2030 (targets: 50% of female heads of household)	Reducing the impact of waste on ecosystems by promoting biodigesters (% of waste recovery) organic waste)	
	Households equipped in 2025 and 2030: Solar lighting: 20% and 50% Solar cookers: 5% and 10% LPG: 25% in 2030	Cf. unconditional CDN	

Sub-sector Electricity		
	Objectives	Planned actions
Conditional CDN	10 MW in 2030	Construction of micro-hydropower plants: pre-feasibility and feasibility studies, commissioning, management and maintenance
	60 MW in 2030	Construction of the Lobaye hydroelectric power station; pre-feasibility and feasibility studies, implementation Operation, Management and Maintenance
	40 MWp in 2030	Construction of solar power plants: pre-feasibility and feasibility studies, commissioning, management and maintenance

Sub-sector Energy management and conservation		
	Objectives	Planned actions
Unconditional CDN	80% penetration rate by 2030 (targets: 50% of women heads of household)	Promoting energy saving in households through the popularization of low-energy lamps: Study spinneret; Implementation of the pilot phase

All the measures taken in this way will enable the CAR to change the baseline scenario (or "Business as Usual" scenario) in the energy sector, respectively by -

¹⁴ These percentages include the share of unconditional

2.02% and -6.53% in 2025, and -6.34% and -19.89% in 2030, under unconditional and conditional scenarios (see figure and table below).

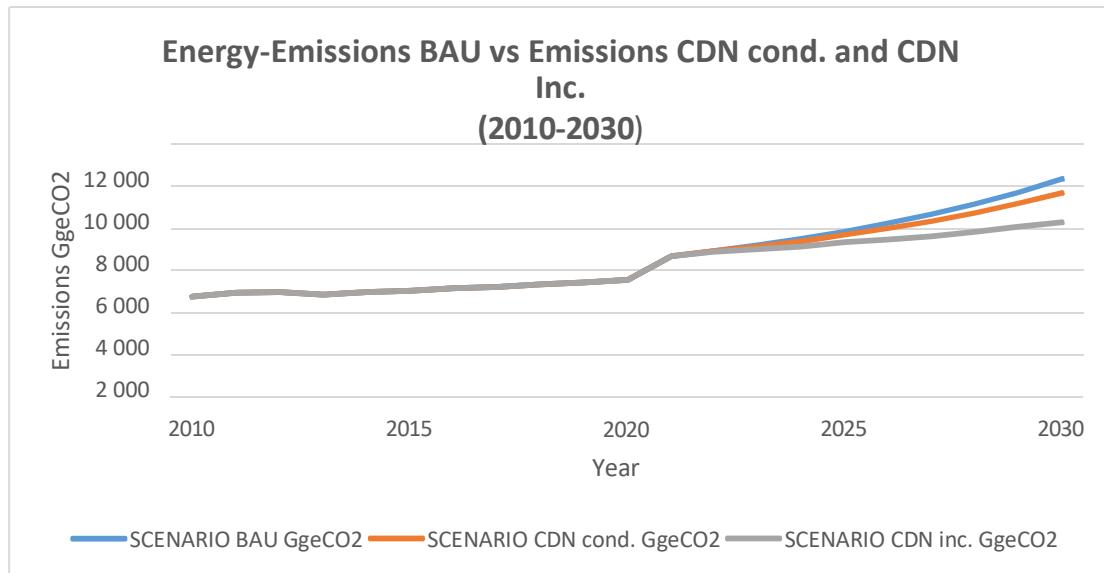


Figure 9: Emissions from the Energy Sector - Trend Scenario, Unconditional NDC and Conditional NDC

ENERGY	Emissions Trend scenario (GgeCO2)	Unconditional CDN (GgeCO2) emissions	% discount CDN unconditional	Conditional NDC Emissions (GgeCO2)	% discount CDN conditional
Horizon 2025	7 874	7 715	-2,02%	7 360	-6,53%
Horizon 2030	10 362	9 705	-6,34%	8 300	-19,89%

AGRICULTURE, FORESTRY AND OTHER LAND USE (AFAT) SECTOR

The Rural Development, Agriculture and Food Security Strategy (SDRASA) is structured around a vision by 2025 of a Central African agriculture, "productive, profitable, respectful of the environment, based on local initiatives and the concept of gender, creator of wealth, and conditions for the emergence of a dynamic private agricultural sector". It includes in its programming support for the management of natural resources and the development and dissemination of sustainable agricultural practices, as major axes of its policy. The SDRASA is complemented by the National Agricultural Investment Program for Food Security and Nutrition (PNIASAN) which focuses, among other things, on the revival of food sectors and the development of export sectors (cotton, coffee, oil palm).

In the field of forestry, the CAR has the ambition that "by 2035, forest ecosystems and the resources associated with them will be co-managed for the goods and services necessary for peace, sustainable and harmonious development, for the conservation of biological diversity and for the safeguarding of the global environment". This vision is reflected in the National REDD+ Investment Framework 2020-2025, which aims to support the country in the economic and social development of the AFOLU sector while ensuring that impacts on forest ecosystems are avoided, minimized and compensated.

Within these areas, the objectives and mitigation measures are as follows:

Agriculture Subsector		
	Objectives	Planned actions
Unconditional CDN	Reduce the Practices slash-and-burn by 15% in 2025	Encouraging sustainable agriculture through the promotion of agroecology: Local diagnostics, implementation of new technical and New experiments
	50,000 ha in 2030, based on agroforestry; including maintenance of the heritage agroforestry some Indigenous Populations	Increase the capacity from sequestration from carbon ecosystems by promoting Orchards and Palm trees Family Sustainable
	15,000 ha in 2030 (10,000 ha of coffee plantation, 5,000 ha cocoa), based on agroforestry (targets: 50% women heads of household)	Increasing the carbon sequestration capacity of agricultural systems by reviving a agronomically efficient agroforestry coffee-cocoa farming, Economic and environmental
Conditional CDN	Reduce the Practices slash-and-burn by 60% in 2030	Cf. unconditional CDN
	100,000 ha in 2030, based on agroforestry	Cf. unconditional CDN
	15,000 ha in 2030 (10,000 ha of coffee plantation, 5,000 ha cocoa), based on agroforestry	Cf. unconditional CDN

Forestry and Land Use Subsector		
	Objectives	Planned actions
Unconditional CDN	12.5% of urban households with planted at least 3 trees in their parcel by 2030 (targets: 50% of women heads of household)	Support for the development of the Urban and peri-urban forestry (FUPU)
	Make 12.5% of firewood harvesting renewable by 2030	Development of agroforestry combining wood energy and agricultural production; Planting forest and agroforestry in suitable areas
	Reduce wildfires by 6.25% in 2025 and 15% in 2030	Installation and maintenance of firewalls
	Restore 25% of post-mining sites annually by 2030	Reduce the impact of mining on national forest ecosystems through the promotion of Good Mining Practices
	Preserve 20% of the sequestration capacity of DPAs and NMFPs by 2030	Capitalizing on the carbon potential of the Dzanga-Sangha Protected Areas (APDS) and the Mbaéré National Park Bodingué (PNMB)
Conditional CDN	50% of urban households having planted at least 3 trees in their plot	Cf. unconditional CDN

Return renewable removal of firewood in 2030	25%	from Cf. unconditional CDN
Reduce wildfires by 25% by 2025 and 60% in 2030		Cf. unconditional CDN
Restore 50% some Sites post mining annually in 2030		Cf. unconditional CDN
Preserve 80% of the sequestration of APDS and PNMB in 2030		Cf. unconditional CDN

The actions thus taken, in accordance with the priority orientations defined in the CAR's sectoral planning and programming instruments in the fields of agriculture, forestry and land use, would make it possible to reduce greenhouse gas emissions according to the unconditional scenario of -2.76% and -4.33% respectively in 2025 and 2030; and under the conditional scenario of -11.03% and -17.30% in 2025 and 2030 respectively compared to the trend scenario (see figure and table below).

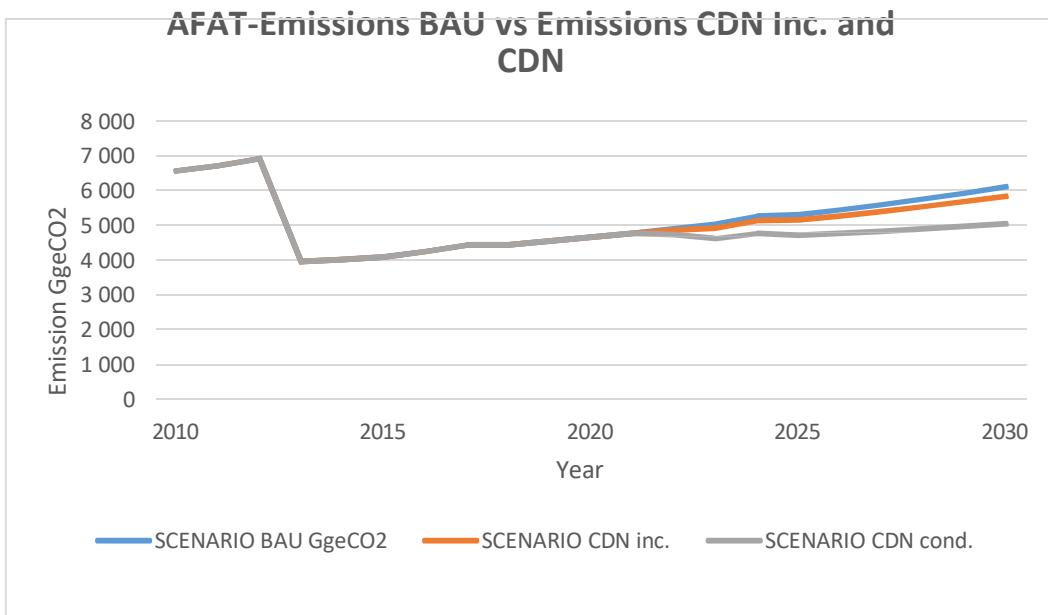


Figure 10: AFAT sector emissions - Trend scenario, unconditional CDN and conditional CDN

AFAT/Emissions	Emissions Trend scenario (GgeCO2)	Unconditional CDN (GgeCO2) emissions	% discount CDN unconditional	CDN Broadcasts conditional (GgeCO2)	% discount CDN conditional
Horizon 2025	5 293	5 147	-2,76%	4 709	-11,03%
Horizon 2030	6 106	5 842	-4,33%	5 049	-17,30%

WASTE SECTOR

The national water and sanitation strategy document pursues, at the level of the sanitation sub-sector, several sub-objectives, including the improvement of the living environment and the health of the population; the development of strategies for action in terms of hygiene and solid¹⁵ waste, liquid waste, excreta in rural and urban areas. This ambition is pursued within the framework of the National Water Policy (2020-2030) which has included in its strategic axes "access for all to water and sanitation by 2030". In line with such an approach, rational and sustainable waste management remains a major challenge for municipalities in general, and urban municipalities in particular, in a context of growing urban population, estimated at 41.4% of the population, and expected to reach 48% and 60% respectively by 2030 and 2050.

In this area, the objectives and mitigation measures relate to the treatment and recovery of municipal waste. The review, treatment and analysis of the proposed mitigation measures show that in the context of CAR, they are either (i) likely to generate methane emissions in addition to the emissions of the trend scenario, or (ii) the percentage reduction remains marginal (less than 1%) compared to the costs induced by the action. Thus, no measures are proposed under this component.

INDUSTRIAL PROCESSES AND PRODUCT UTILIZATION SECTOR (PIUP)

The legal framework for national climate action is mainly based on Law No. 07/018 of 28 December 2007 on the Environmental Code, which enshrines air protection as one of its priority interventions. The country has also ratified the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol, which aims to reduce and eliminate ozone-depleting substances.

In view of the country's commitments in this area, the NDC's mitigation actions in this area are as follows:

Ozone Subsector		
	Objectives	Planned actions
CDN	Reduce the use of fluorinated gas appliances by 6.25% in 2025 and 12.5% in 2030	Reducing F-gas emissions
Conditional CDN	Reduce the use of fluorinated gas appliances by 25% by 2025 and 50% by 2030	Reducing F-gas emissions

The implementation of the actions for 2025 and 2030 will enable the CAR to reduce greenhouse gas emissions, in particular hydrofluorocarbons (HFCs), according to the unconditional scenario of -3.91% and -6.04% respectively in 2025 and 2030; and under the conditional scenario of -15.65% and -

¹⁵ Solid waste management is the responsibility of municipalities

24.16% in 2025 and 2030 respectively compared to the trend scenario (see figure and table below).

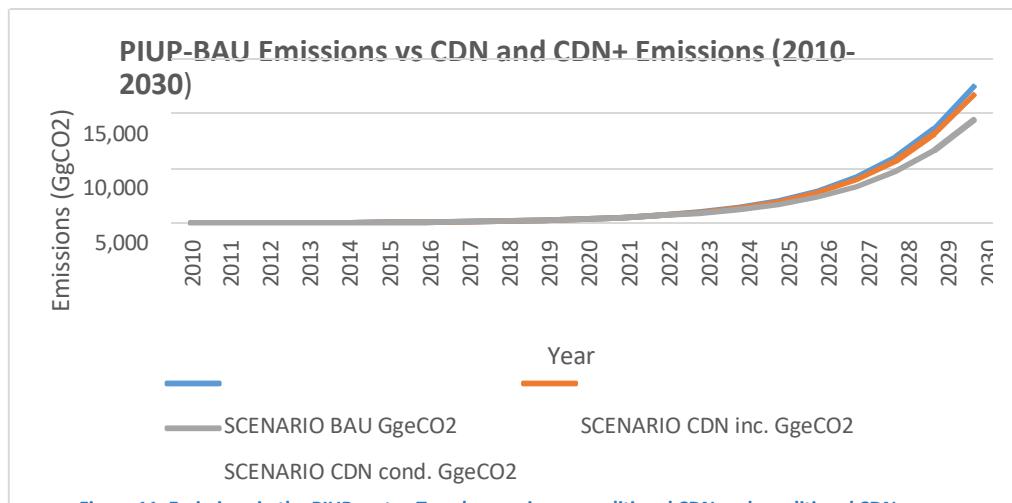


Figure 11: Emissions in the PIUP sector-Trend scenario, unconditional CDN and conditional CDN

PIUP	Emissions Trend scenario (GgeCO2)	Unconditional CDN (GgeCO2) emissions	% discount CDN unconditional	Conditional NDC Emissions (GgeCO2)	% discount CDN conditional
Horizon 2025	2,026	1,947	-3,91%	1,709	-15,65%
Horizon 2030	12,466	11,713	-6,04%	9,455	-24,16%

GLOBAL EMISSIONS AND REMOVALS BY 2025 AND 2030: TREND SCENARIO, UNCONDITIONAL CDN AND CONDITIONAL CDN

All the aggregated measures lead the CAR to a level of greenhouse gas reduction under an unconditional scenario of -9.03% and -11.82 respectively in 2025 and 2030. Assuming support from the international community, these reductions will reach -14.64% and -24.28% respectively in 2025 and 2030.

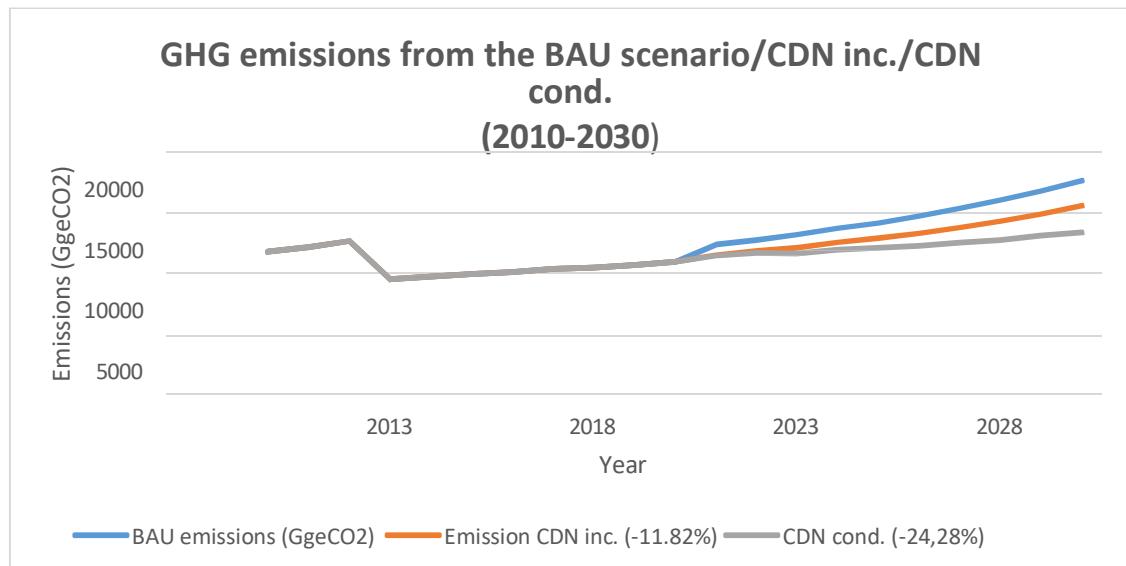


Figure 12: Overall Emissions-Trend Scenario, Unconditional NDC and Conditional NDC

Emissions	Emissions Trend scenario (GgeCO2)	Unconditional CDN (GgeCO2) emissions	% discount CDN unconditional	Conditional NDC Emissions (GgeCO2)	% discount CDN conditional
Horizon 2025	14 141	12 864	-9,03%	12 070	-14,64%
Horizon 2030	17 644	15 558	-11,82%	13 359	-24,28%

The measures taken in this way have both an inference on the decline in greenhouse gas emissions, but also on the improvement of the level of carbon sequestration by biomass and soils. This absorption capacity in 2030 is 735,140 GgCO₂ and 739,086 GgCO₂ respectively under unconditional and conditional scenarios.

Absorption	CO2 sequestered Trend scenario (GgeCO2)	CO2 sequestered CDN (GgeCO2)	% Unconditional CDN Increase	CO2 sequestered CDN conditional (GgeCO2)	% increase CDN conditional
Horizon 2025	730 714	732 036	+0,18%	735 763	0,69%
Horizon 2030	733 608	735 140	+0,21%	739 086	+0,75%

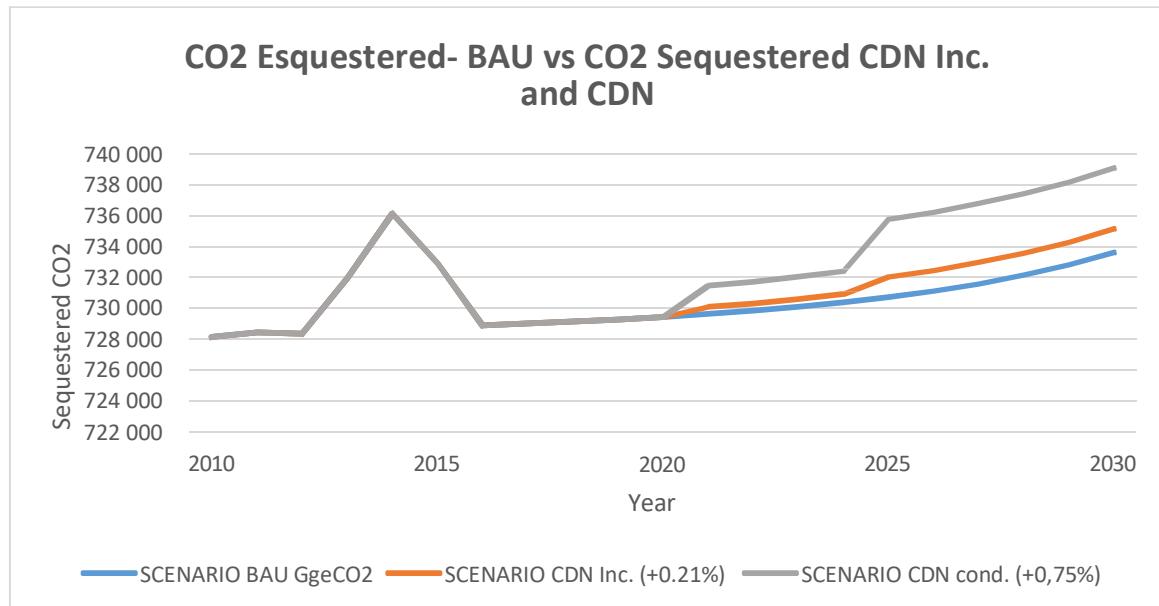


Figure 13: Global Absorptions - Trend Scenario, Unconditional NDC and Conditional NDC

For LCVs, emission reductions by gases are presented as follows.

	Horizon 2025					Horizon 2030				
	Cumulative emissions (tonne)	CDN	%	CDN+	%	Cumulative emissions (tonne)	CDN	%	CDN+	%
Nox	61 685	58440	-5,26	57346	-7,03	68480	50039	-26,93	44945	-34,37
CO	577 232	537033	-6,96	533620	-7,56	614099	382793	-37,67	361758	-41,09
NMVOCs	10388	97569	-2,81	95 783	-4,59	117047	101052	-13,67	90019	-23,09
SO2	2592	2343	-9,63	2341	-9,69	2573	1158	-54,97	1150	-55,31
PM10	94993	88804	-6,52	87944	-7,42	98330	63212	-35,71	57920	-41,10
PM2.5	67208	63659	-5,28	62816	-6,53	70846	50821	-28,27	45638	-3558
BC	12101	11760	-2,83	11517	-4,83	13048	11102	-14,91	9628	-26,21
OC	31862	30312	-4,86	29886	-6,20	33922	25210	-25,68	22572	-33,46
NH3	10831	10574	-2,37	10358	-4,37	11829	10389	-12,17	9040	-23,57

Table 5: Reduction of SLCCP emissions under unconditional and conditional scenarios

4. ADAPTATION TO THE EFFECTS OF CLIMATE CHANGE

VISION AND PURPOSE

The CAR's national vision on climate change is that "by 2030, the Central African Republic will be part of a dynamic of sustained, equitable and sustainable socio-economic development, because it integrates the challenges of climate change into all social and productive sectors, which will improve the general well-being of its population".

In line with such a vision, and in line with the adaptation objectives of the Paris Agreement, the SDGs and the priority orientations defined by the Government, the objective of adaptation is "to improve the resilience of communities and ecosystems in the socio-economic sectors most vulnerable to the adverse effects of climate change by 2030".

IMPACTS AND ADAPTATION MEASURES

At the national level, vulnerability is more marked in areas included in the National Recovery and Peacebuilding Plan 2017-2021 (RCPCA) as part of the Government's priorities. These are: Agriculture, Energy, Forestry, Water Resources, Health, Spatial Planning, Infrastructure and Housing. It is exacerbated by political insecurity and inequality, in a context marked by an amplification of gender inequality, which is considered to be one of the highest in the world. The country is ranked 159th out of 162 countries according to the United Nations' 2019 Gender Inequality Index (GII). This inequality has increased in recent decades due to successive crises, with the index rising from 0.743 in 1995 to 0.680 in 2019.

The table below presents in detail the sectoral impacts and vulnerabilities, in relation to the expected effects of climate change.

Horizon	203016									
Temperature variation (°C)	0.2°C	0.4	0.6	0.8	1	1.2	1.4	1.6	1.8	
Precipitation anomaly (mm)	-20	-15	-10	-5	0	+5	+10	+15	+20	
National economy	GDP regressed from -2.6% to -3.4% in 203017. Worsening incidence of poverty.									
Agriculture and food security	<ul style="list-style-type: none">• Increase in land degradation to levels > to 1.3% of the national territory/year¹⁸, due to the exposure of ferrallitic soils (75%) that are shallow and vulnerable to erosion and cultural practices• Decrease in the productivity (up to -20%) of sesame, sorghum, groundnuts and millet in dry spray,									

¹⁶ The proposed mode of presentation does not mean that there is a correspondence between the value of temperature and that of precipitation on the same axis

¹⁷ AfDB. Climate Change Impacts on Africa's Economic Growth. 2019. RCP 2.6 and RCP 8.5 scenarios

¹⁸ Rate of degradation between 2000 and 2010

	<ul style="list-style-type: none"> Severely food insecure population is rising to levels > at the rate of 30 to 50% of the population¹⁹. 	Increase in cassava productivity under wet spraying, by 2025,
Forestry	<ul style="list-style-type: none"> Increase in forest area loss > 0.1% per year 	15% contraction of forest area Under the assumption of an increase of 4°C
Water Resources	<ul style="list-style-type: none"> Low water levels of dams supplying hydroelectric power plants (Example: Boali) Increase in the rate of households without access to basic water services (>62.5%), due to the reduced reliability of groundwater and surface water sources during prolonged dry phases. 	Increased flow variability, Intensification of high flows and Reduction of low flows. Hydroelectric benefits
Energy	<ul style="list-style-type: none"> Increase in the frequency and intensity of heavy rainfall likely to impact electricity infrastructure. 	
Health	<ul style="list-style-type: none"> Increased conditions conducive to disease (typhoid, respiratory infections, meningitis, diarrhoeal diseases, malaria) and transfer to other New Zones 	
Infrastructure and housing/ Spatial planning	<ul style="list-style-type: none"> Negative impact of annual damage and loss caused by recurrent floods on GDP: Average annual damage and loss estimated at XAF 3.1 20 billion (USD 7 million). 	

Table 6: Sectoral Impacts and Vulnerabilities

SPECIFIC OBJECTIVES AND ADAPTATION MEASURES

To achieve the overall adaptation objective, intermediate targets and measures have been identified. They are aligned with the SDGs, the RCPA, the National Adaptation Plan, and the country's third national communication.

OBJECTIVE 1: ENSURE THE SECURITY OF AGRO-SYLVO-PASTORAL SYSTEMS AND WATER RESOURCES, BY CAPTURING THE OPPORTUNITIES ASSOCIATED WITH PROJECTED CLIMATE VARIATIONS

Alignment with the NAP : National Agricultural Investment Program, Food Security and Climate Change Resilience

Option	Targets/Base Year: 2010	Actions and measures to achieve the targets
Agriculture and Livestock		
Development of sustainable, intensive and diversified agriculture, and Promotion of management actions	<ul style="list-style-type: none"> Improvement and dissemination of technical itineraries of production of food chains, 	Popularize the technical packages of high-performance crops likely to induce a sustainable improvement in

¹⁹ CPI averages between 2016 and 2021.

²⁰ Report of the Joint Needs Assessment (September 2009) on urban flooding in Bangui

<p>sustainable land that includes youth, women and indigenous peoples</p>	<p>taking into account climate projections (5 by 2030: Cassava (+26%), Peanut (+13%), Maize (+33%), Sorghum/Millet (+29.7%), Sesame (+23%).</p> <ul style="list-style-type: none"> • By 2030, reduce the loss of land productivity by 50% (targets: 50% women owners) 	<p>productivity and environmental preservation in a context of climate change (resistant varieties)</p> <p>Integrate land degradation neutrality (LDN) into national priorities; ensure the integration of agriculture and livestock farming in degraded cropping areas; promote agro-forestry systems for sustainable soil management; Ensuring the reforestation of areas degraded by fodder crops in areas pastoral degraded.</p>
	<ul style="list-style-type: none"> • Reduce slash-and-burn cultivation practices by 60% by 2030 	<p>Cf. Attenuation-AFOLU</p>
<p>Development of agricultural research adapted to climate change</p>	<ul style="list-style-type: none"> • Develop by 2030 food crop varieties adapted to water stress and/or temperature in the Central and Northern regions of CAR, for the benefit of the most vulnerable communities: Cassava; peanut; maize; rice; sesame (at least 10 varieties) 	<p>Technical capacity building (varietal development, use of impact models for simulation of productivity and production by scenario); Strengthening of CIFAR's material capacities (simulation models, laboratories, seed multiplication centres)</p>
<p>Prevention and Management of the Effects of Exceptional Climatic Occurrences on the Agro-Sylvo-Pastoral System</p>	<ul style="list-style-type: none"> • Establish and operationalize by 2030 a system for the prevention of food crises associated with climate variability and change (including early warning system an information system 	<p>Existence of a functional hydro-meteorological and seasonal forecasting system</p>
<p>Improving the climate resilience of traditional pastoralist communities and systems</p>	<ul style="list-style-type: none"> • By 2030, seven new land use plans (for the seven regions of the CAR) redefine, among other things, livestock areas and transhumance corridors, in line with variability and changes current and projected climate • By 2030, improve the level of sedentarization of transhumant herders and reduce the risks related to climate variability and change, by increasing the area of fodder crops in forest areas and ensure monitoring Zootecnics and adapted veterinarians 	<p>Development of a natural resource zoning adapted to the current and planned climatic zoning, Rehabilitation, construction of water reservoirs in certain livestock areas</p> <p>Installation of fodder crop plots, improved and maintained water points; Ensure the supply framework of the Pastoral Organizations with vaccines and veterinary medicines; Support to vulnerable households for the development of IGAs</p>

Option	Targets/Base Year: 2010	Actions and measures to achieve the targets
Forestry		
Restoration of deforested landscapes, through the reforestation of species with multiwise to reduce the sensitivity and exposure of forests to climatic hazards	<ul style="list-style-type: none"> By 2030, restore and maintain 1,000,000 ha, including degraded forest landscapes in mining areas 	<ul style="list-style-type: none"> Ensure the reforestation of degraded areas by urban, peri-urban and community forestry; Reducing the pressure on the use of wood as an energy source through the modernisation of domestic energy (see mitigation)
Regulation of artisanal timber and wood energy harvesting and measures to reduce pressure on resources	<ul style="list-style-type: none"> A master plan for the sustainable exploitation of the supply of wood and energy to Bangui has been defined, and the application texts drawn up by 2025 Make 25% of firewood harvesting renewable in 2030 	<ul style="list-style-type: none"> Identification of Bangui's wood-energy supply basins Support for the sustainable management of existing supply basins cf. Mitigation AFOLU)
	<ul style="list-style-type: none"> Penetration of improved cookstoves in households of 25% in 2025 and 50% in 2030 Increase charcoal production yield from 10% to 25% by 2030 LPG: 10% in 2030 	<ul style="list-style-type: none"> Improvement of the energy efficiency of the use of wood energy (see Energy Mitigation) Promoting alternative energies to wood energy through LPG
Promoting agroforestry to reduce climate risks and diversify economic options	<ul style="list-style-type: none"> Planting of 100,000 ha by 2030 (50,000 ha of orchards, 20,000 ha of palm groves 30,000 ha of hardy plants (date palm, shea butter, tamarind tree) 	<ul style="list-style-type: none"> Cf. Mitigation-AFOLU Capacity Building technical and material aspects of the parties stakeholders on agroforestry; Establish incentives: quality seeds, nurseries, training materials and extension and identification of product markets.
Support and formalization of the sector and the forest products circuit (NTFPs) to diversify the sources of supply foodstuffs, in a situation of Climate crisis	<ul style="list-style-type: none"> Increase the production of Food NTFPs (shea, pepper wild, Gnetum africanum, Dorstenia sp, caterpillars, fungi) by 30% by 2030 (targets: 50% of women heads of household 	<ul style="list-style-type: none"> Information, training, installation propagation nurseries and processing units; stake collection depots and storage; Organization of the Marketing of NTFPs

Alignment with the NAP : Integration of climate change adaptation into national and regional water resources management; Strengthening the resilience of rural and urban areas to climate change through better management of community water resources

Option	Targets/Base Year: for 2010	Actions and measures Achieve Targets
Water Resources, Water and Sanitation Services		

<p>Improvement of the Governance of the water and water sector to changes climatic</p>	<ul style="list-style-type: none"> Equip ourselves with the tools by 2025 in-depth sanitation, in line with water per basin; development taking into account the projections <p>Climate change: the master plan development and management the master plan for the treatment of waste water and excreta, the national water information system, the Updated IWRM Action Plan</p>	<ul style="list-style-type: none"> Vulnerability scans strategic management of the National Water Policy, current and future vulnerability of tools based on water resources vulnerability
<p>Setting up a monitoring system</p> <p>monitoring to ensure the safety²¹ and water use context of variability and Climate Change</p>	<ul style="list-style-type: none"> By 2025, develop a Asset tracking system in groundwater and surface water and establish a system of Water quality monitoring (SQE) 	<ul style="list-style-type: none"> Maintenance and renewal and Asset tracking tools water water (hydrometric stations, piezometers, Establishment of protocols quality assessment of waters Tools for processing and analyzing data by utilities
<p>Capacity building</p> <p>Development of Municipalities collection, management and Implementation</p>	<ul style="list-style-type: none"> By 2025, train 30% of Municipalities (technical staff) in the collection, management and solid waste recycling and equip them with the equipment Necessary 	<p>Benchmarking; Institutional Training modules on collection, valorization; Solid Waste Recycling training, acquisitions of Necessary equipment</p>
<p>System layout</p> <p>supply facilities, association with the promotion of efficiency</p>	<ul style="list-style-type: none"> Improving the proportion of populations using services large cities; Implementation of water use AEP systems, boreholes urban areas (Bangui and secondary centres) in the face of drought risks 	<p>Reinforcement of drinking water SODAC; Expansion of the network in drinking water supply to 75% of the rural and</p>

GOAL 2: ADAPT THE LAND AND ENERGY SYSTEMS TO CURRENT AND FUTURE CLIMATE CHANGE

Option	Targets/Base Year: 2010	Actions and measures to achieve the targets
Spatial Planning		
<p>Conformation of land and natural resource uses, through a legal and regulatory framework that integrates the current and future climate</p>	<ul style="list-style-type: none"> 1 National Spatial Development Plan (SNAT) and 20 pilot spatialized local development plans, integrating environmental issues achieved by 2025 	<p>Participatory mapping of uses and rights of use; Technical studies on land potential and land use; Database of geo-referenced data of specific risks and resources</p>

²¹. Availability of the resource in sufficient quantity and quality to ensure socio-economic development, livelihoods, health and ecosystems

	<ul style="list-style-type: none"> The Land Code and the Land Code agro-pastoral projects are finalized and adopted by 2025 	<ul style="list-style-type: none"> Revision and harmonization of the Legal framework on the Code land; Make texts more adapted and applicable in the CC Context
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Option	Targets/Base Year: for 2010	Actions and measures Achieve Targets
Energy		
Promoting carbonization improved wood waste from Logging	<ul style="list-style-type: none"> See mitigation Subsector Traditional energies 	
Rural electrification	<ul style="list-style-type: none"> See mitigation Sub-sector Electricity 	
Regulation and control artisanal timber exploitation and wood energy	<ul style="list-style-type: none"> See Sub-sector adaptation Forestry 	
Promoting the reforestation of areas degraded by growing plants fast for use as Wood Energy	<ul style="list-style-type: none"> See Sub-sector adaptation Forestry 	

OBJECTIVE 3: INFORM AND PREPARE INFRASTRUCTURE AND HOUSING, HEALTH SYSTEMS, AND CLIMATE RISKS BY IMPROVING AND PRODUCING EVIDENCE IN THESE AREAS

Option	Targets/Base Year: 2010	Actions and measures to achieve the targets
Housing and Infrastructure		
Improve knowledge of habitat and infrastructure vulnerability and identification of adaptation options	<ul style="list-style-type: none"> By 2025, in-depth vulnerability assessments are conducted and capitalized on in sector planning By 2025, a participatory action plan for the housing and infrastructure sectors in adaptation planning at the national level is developed and operationalized 	Climate change modelling; assessment of risks, impacts and vulnerabilities, and adaptation options; Integration into sector planning
Promotion of a sustainable housing construction model, in connection with the sedentarization of the AKA indigenous populations in a Climate change context	<ul style="list-style-type: none"> Construction of pilot habitats 	Realization of Free, Prior and Informed Consent to Indigenous Peoples on Sedentarization and Sustainable Habitats
Improving stormwater drainage systems to anticipate the effects of recurrent flooding in the most vulnerable cities	<ul style="list-style-type: none"> By 2030, improve the network by 25% 	Drainage infrastructure, restructuring, relocation.

Option	Targets/Base Year: 2010	Actions and measures to achieve the targets
Public health		
Improving knowledge of Vulnerability of the health sector climate change and	<ul style="list-style-type: none"> • By 2025, in-depth vulnerabilities are carried out and capitalized on in the sectoral planning 	Change Modeling climatic; risk assessment, impacts and vulnerabilities, and adaptation options; integration in sector planning
Identification of options adaptation	<ul style="list-style-type: none"> • 	
Hygiene Promotion and Basic sanitation	<ul style="list-style-type: none"> • By 2030, Total Sanitation Led by Communities (CLTS) in 500 villages 	Capacity building of actors and harmonizations of CLTS Approach
Development of a Monitoring for prevention and control against epidemics and diseases sensitive to climate (malaria, cholera, meningitis, etc.)	<ul style="list-style-type: none"> • By 2030, establish a information and alert on climate-sensitive diseases and Epidemics 	Identify the most important areas Vulnerable; Implement the tools for processing and analyzing Risk data Environmental Trends and Trends Epidemiological; Identify or Establish the system for the dissemination of news

CROSS-CUTTING MEASURES

Alignment with the NAP : Establishment of an integrated early warning system

Option	Targets/Base Year: 2010	Actions and measures to achieve the targets
Cross-cutting measures		
Change Modeling and scenarios evolution for the CAR	<ul style="list-style-type: none"> • By 2025, the projections Detailed climate conditions based on the most important information (AR6) are carried out for CAR 	Institutional support for instrumentation and production Climate information
Disaster Risk Monitoring, Rapid Post-Disaster Needs Assessment (PDNA), and Operations Management	<ul style="list-style-type: none"> • By 2030, a multi-hazard early warning system (bushfires, floods, drought) is in place and operational • By 2030, a multisectoral disaster management system is in place, coordinated by PWCB 	Strengthening of the technical and material capacities of the DGPC (training and equipment); Establishment of a cross-sector risk management platform
Special Adaptation Program for Indigenous peoples	<ul style="list-style-type: none"> • By 2030, 50% of Indigenous communities initially targeted have seen their Ability to adapt to Climate Change 	Specific needs assessments and CLIP, strengthening practices CC-resilient agricultural systems Water supply, housing construction sustainable exploitation, sustainable

	Reinforced	exploitation of NTFP.
Climate Education	<ul style="list-style-type: none"> • By 2025, ensure the integration of basic concepts of change into the primary and secondary education curriculum Climate 	Capacity building of teacher-researchers, Curriculum development, Validation, Testing, Operationalization
Resource mobilization	<ul style="list-style-type: none"> • By 2030, mobilize the Domestic Financing necessary for the implementation of the NDC and financing Conditional exterior 	Formulating a plan investment and Capacity building on Climate finance

5. MEANS OF IMPLEMENTATION

FINANCING NEEDS

The financing needs of the NDC over the decade 2021-2030 are estimated at \$1.764 billion, including \$1.321 billion for mitigation and \$443.872 million for adaptation. The CAR's contribution, from its domestic resources, is \$280.44 million (or 16%). The expected contribution from international partners is \$1.483 billion (or 84%).

MITIGATION

Sector	Unconditional Cost (\$ millions)	Conditional cost (\$ millions)	Total Cost (\$ millions)
Energy	58	476	534
AFOLU	178	606	784
PIUP	0,29	0,15	0,44
Cross-cutting measures	0,23	2,07	2,3
TOTAL	236	1084	1321

ADAPTATION

Sector	Unconditional Cost (\$ millions)	Conditional cost (\$ millions)	Total Cost (\$ millions)
Agriculture and Livestock	12,377	111,396	123,774
Forestry	0,0451	22,524	22,570
Water Resources, Water and Sanitation Services	13,05	117,45	130,5
Spatial Planning	0,187	1,689	1,876
Energy	See Attenuation	See Attenuation	See Attenuation
Housing and Infrastructure	8,22	73,98	82,2
Public health	0,15	1,35	1,5
Cross-cutting measures including communication	8,332	74,995	83,328
TOTAL	44,387	399,484	443,872

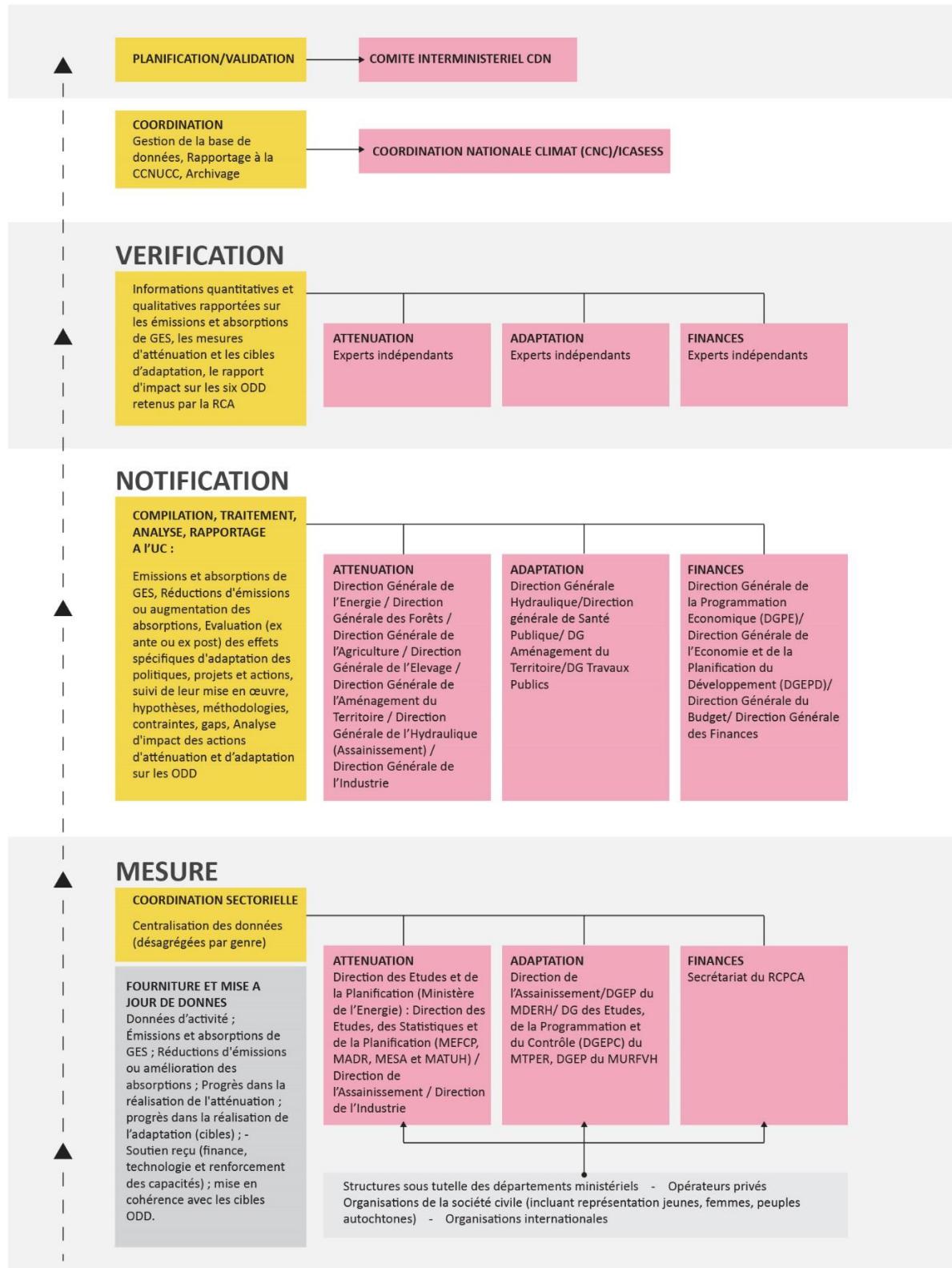
TECHNOLOGY NEEDS AND CAPACITY BUILDING

The implementation of certain adaptation and mitigation actions requires the use of technologies. Technology transfer in this area will include both capacity-building and the provision of equipment.

Component	Need for technology	Need for capacity building
Attenuation	• Cogeneration Technology (Biogas, Wood and Derivatives)	Use of geospatial technologies for ecosystem monitoring
	• Biomethanization technology	Conservation ploughing
	• Solar photovoltaic technology	Agroecology
	• Solar field connected to the domestic grid;	Management of persistent organic pollutants (POPs)
	• Hydroelectric technology	Management of industrial standards
	• Large power plant	Full baseline of adaptation and mitigation measures
	• Improvement of the energy efficiency of service equipment (pumps, generators, etc.) and Recovery of energy produced not consumed	
	• Mini and micro power plants	
	• MAGE Enhanced Furnace-Based Carbonization Technology	
	• Metal Engineering (Improved Fireplace, Solar Cooker)	
Adaptation	Non-Timber Forest Products (NTFPs): processing and Storing wild pepper	Agroforestry Scenario and climate projection Conduct of vulnerability assessments
	Meteorological Instrumentation Devices	
	Simplified no-till technology or Simplified Cultivation Techniques (TCS)	Development of climate change integrated curricula at the primary and secondary levels
	Drought-tolerant crops	
	Materials and tools for monitoring wildfire alerts by remote sensing	

6. MEASUREMENT, REPORTING, AND VERIFICATION (MRV) MECHANISM

The proposed MRV system covers the components of mitigation, adaptation, and finance. It integrates the SDGs in a cross-cutting manner (the CAR has selected six priority SDGs to follow: 4, 8, 10, 13, 16 and 17), technology transfer and capacity building.



7. Information to facilitate clarity, transparency and comprehension²²

1.	Quantifiable information on the reference point (including, where applicable, a base year)	
(a)	<i>Base year(s), base year(s), reference period(s) or other starting point(s)</i>	Base year for emissions projections: 2010 Base year for BAU emission target: 2030
(b)	<i>Quantifiable information on the benchmarks, their values in the base year(s), base years, reference periods or other starting points and, where applicable, the target year</i>	The projected emission level in 2030 is 17,643 GgeCO ₂ .
(d)	<i>Benchmark target, expressed numerically, e.g. as a percentage or amount of the reduction</i>	The reduction in GHG emissions is 24.28% compared to the baseline level (BAU) in 2030.
(e)	<i>Information on the data sources used to quantify the baseline(s)</i>	CAR's third national communication was used to quantify the GHG baseline The CAR Integrated Inventory of Short-Lived Climate Pollutants was used to quantify the level of Short-lived climate pollutants (SLCPs) reference
(f)	<i>Information on the circumstances under which the country Party may update the values of the benchmarks</i>	The BAU scenario has been updated based on the final data from the latest available inventories (GHG and PCCVD). The CAR plans to update the GHG inventory in the first biennial report scheduled for the year 2024. An emissions measurement, reporting and verification (MRV) tool will be developed and used to update the inventory. Benchmark indicators may change as a result of waginger Up to date.
2.	Implementation timelines and/or periods	
(a)	<i>Timetable and/or period for implementation, including start and end dates, in accordance with any other relevant decision adopted by the Conference of the Parties serving as the meeting of the Parties to the Paris (CMA)</i>	January 1, 2022-December 31, 2030
(b)	<i>Whether it's a one-year or multi-year goal, as the case may be</i>	One-year objective (2030).
3.	Scope and coverage	
(a)	<i>General Description of the Target</i>	The proposed mitigation measures will allow CAR to reduce its GHG emissions relative to the trend scenario. The level of GHG reductions in 2030 is in absolute value of 4284.42 GgeCO ₂ , and in relative value of 24,28%.

²² According to Decision -/CMA.1: Further guidance on the mitigation section of decision 1/CP.21

		The level of reduction of PCCVDs varies from -13.67% to -55.31% depending on the type of pollutant by 2030.
(b)	<i>Sectors, gases, categories and pools covered by the Nationally Determined Contribution, including, where appropriate, in accordance with the guidelines of the Intergovernmental Panel on the Evolution of the Environment. (IPCC)</i>	Greenhouse gases: CO ₂ , CH ₄ , N ₂ O, HFCs Short-lived climate pollutants: PM _{2.5} , PM ₁₀ , CN, CO, NO _x , SO ₂ , NH ₃ , NMVOCs
(c)	<i>How the country Party has taken into account paragraphs 31(c) and (d) decision 1/CP.2123</i>	The revised NDC includes all relevant anthropogenic emission or removal categories, consistent with the 2006 IPCC Guidelines. Compared to the first NDC, the coverage of the revised NDC is extended to the PCCVD.
(d)	<i>Mitigation co-benefits resulting from the Parties' adaptation actions and/or economic diversification plans, including the description of specific projects, measures and initiatives, adaptation actions and/or economic diversification plans of the Parties</i>	Mitigation co-benefits can be expected from the implementation of the following adaptation measures: Restoration through reforestation of multi-use species of deforested landscapes; Regulation of artisanal timber and wood energy exploitation and measures to reduce pressure on resources; Promotion of agroforestry for climate risk reduction and Diversification of economic options.
4.	Planning process	
(a)	<i>(a) Information on the planning processes that the country Party has undertaken to prepare its NDC and, if available, on implementation plans</i>	The process was led by the National Climate Coordination, with the support of the UNDP Climate Promise initiative. A Steering Committee (CoPIL) representative of all parties (including representatives of women's, youth and indigenous peoples' organizations), created by ministerial decree, acted as an Intersectoral Technical Working Group in charge of accompanying the process of formulating and validating deliverables at the various stages. Consideration of LVCPs, in addition to greenhouse gases, is a good practice on which other countries Parties could draw inspiration.
(c)	<i>How the country Party's preparation of its NDC has been informed by the results of the global stocktake, in line with Article 4(9) of the Paris Agreement</i>	The first CAR NDC was submitted in 2016. In accordance with Article 4(9) of the Paris Agreement, this second NDC is developed five years after the first. With the global stocktake scheduled for 2023, the revision of the NDC was inspired by the September 2021 synthesis report of the United Nations Framework Convention on Nuclear Weapons. Climate Change (UNFCCC).
5.	Assumptions and methodological approaches, including those for estimating and accounting for anthropogenic greenhouse gas emissions and, where applicable, removals	
(a)	<i>Assumptions and methodological approaches used to account for anthropogenic greenhouse gas emissions and removals corresponding to the Party's NDC, in accordance with paragraph 31 of decision 1/CP.21 and the accounting guidance adopted by the Meeting of the Parties to the Paris Agreement (CMA)</i>	Emissions and removals are reported in accordance with IPCC guidelines. There is methodological consistency between the 3rd National Communication and the NDC The CAR intends to report on the GHG inventory in accordance with decision 18/CMA.1. It will report on progress in the implementation of the NDC by 31 December 2024.

²³ Parties shall endeavour to include all categories of anthropogenic emissions or removals in their nationally determined contributions and, where a source, sink or activity is taken into account, shall continue to include it

(d)	<i>IPCC methodologies and metrics used to estimate greenhouse gas emissions and removals;</i>	GHI Tool: Tier 1 Tier 1 Method (1996 GHG Inventory Manual, revised and 2006 version); Air Pollution Emissions Inventory Tool EMEP / /CORINAIR Base year: 2010 Baseline: Third National Communication
(i)	<i>How are reference indicators, reference levels constructed?</i>	The national inventory report of the third national communication was used to construct the baseline scenario. It is combined with a top-down statistical method of extrapolation from the average annual rate of change, and from the growth scenarios set out in the sectoral policy instruments. They can be improved and/or revised in future processes by making more data available and confirming or correcting growth rates average annual
6.	How the country Party considers its NDC to be fair and ambitious in light of its situation National	
(a)	<i>How the country Party considers its Nationally Determined Contribution to be fair and ambitious in light of its national circumstances;</i>	Despite the country's socio-economic situation (188th country out of 189 in the HDI), the CAR aims to contribute to the reduction of greenhouse gas emissions at the global level, according to the principle of common but differentiated responsibility. The revised NDC covers more sectors and gases. In relative terms, it has greater ambitions compared to the previous one (24.28% for the revised NDC and 5% for the first NDC), and less important in absolute terms: 4,284.42 GgeCO ₂ compared to 5,500 GgeCO ₂ for the first NDC. This difference is due to the revision of the BAU scenario, which is more realistic, as it is built on more data and sectors. The country is a major carbon sink (728,896 GgeCO ₂), which it aims to protect and advance through the proposed sequestration measures. Better still, it introduces a new approach from a conceptual point of view that could be of interest to other countries towards the low-carbon development.
(b)	<i>Equity considerations, including a reflection on equity</i>	See 6 (a)
(c)	<i>How the country Party has addressed Article 4, paragraph 3, of the Paris Agreement²⁴</i>	See 4 (c). The same goes for 6 (c) and 6 (d)
7.	How the NDC contributes to the achievement of the objective of the Convention as set out in its Article 2	
(a)	<i>How the Nationally Determined Contribution contributes to the achievement of the objective of the Convention as set out in its Article 2</i>	See 4 (c).
(b)	<i>How the Nationally Determined Contribution contributes to Article 2(1)(a) and Article 4(1) of the Paris Agreement</i>	See 4 (c). The revised CAR NDC relies on an improved and more robust database to estimate baseline emissions and removals and mitigation reductions

Table 7: Information to facilitate clarity, transparency and understanding

²⁴ Each Party's next NDC will represent a progression from the previous NDC and will correspond to its highest possible level of ambition, taking into account its common but differentiated responsibilities and respective capabilities, taking into account different national contexts