



RÉPUBLIQUE TOGOLAISE



REVISED NATIONALLY DETERMINED CONTRIBUTIONS (NDCS)

Interim document

October 2021

TOGO'S REVISED NATIONALLY DETERMINED CONTRIBUTIONS (NDCS)

Interim document

Acronyms.....	IV
List of Figures	X
List of Tables	XI
Introduction.....	1
Chapter 1: National Context.....	3
1.1. Overview	3
1.2. Summary of the assessment of the implementation of Togo's initial NDCs	4
Chapter 2: Governance.....	6
2.1. Existing institutional arrangements for NDCs	6
2.2. Analysis of the strengths, weaknesses, opportunities and threats of the system Existing institutional	6
2.3. Capacity building for governance	7
Chapter 3: Mitigation	9
3.1. Contributions to mitigation: baseline and mitigation scenarios.....	9
3.2. Information to improve clarity, transparency and understanding (ICTC) of the Revised Nationally Determined Contributions (ICTC)	17
Chapter 4: Adaptation.....	33
4.1. National context of adaptation to climate change	33
4.2. Analysis of the impacts, risks and vulnerabilities of priority sectors.	34
4.3. Priorities, objectives and adaptation measures.....	40
4.4. Accommodation Implementation Status	47
4.5. To know and gender-responsive measures in matters adaptation	54
4.6. Useful information: adaptation situation in connection with covid 19.....	55
Chapter 5: Financing	57
5.1. Investment needs for mitigation	57
5.2. Investment needs for the adaptation component.....	70
5.3. Needs investment in capacity building and technology	76

5.4. Total funding required for Togo's revised NDC.....	81
Chapter 6: Measurement, Reporting and Verification	82
6.1. MRV/MRV System	82
6.2. MRV capacity building needs.....	86
6.3. Improving the MRV system over time	87
6.4. MRV-relevant structure	87
Chapter 7: Communication Strategy for NDC Implementation.....	92
7.1. Diagnostic analysis of NDC communication in Togo	92
7.2. Strategy	93
Bibliography.....	99
Annexes	103

Acronyms

ADAPT	Adaptation of agricultural production to climate change
AFD	French Development Agency
AGR	Income-generating activities
SOUL	Multilateral environmental agreements
ANASAP	National Agency for Sanitation and Public Health
ANGEL	National Environmental Management Agency
ANPC	National Civil Protection Agency
AP	Storm Drainage, Protected Areas
ODA	Official development assistance
BAD	African Development Bank
BCEAO	Central Bank of West African States
BIE	Capital and Equipment Budget
BEEMER	World Bank
BOAD	West African Development Bank
CC	Climate change
CCD	United Nations Convention to Combat Desertification
CDQ	Neighbourhood Development Committee
ECOWAS	Economic Community of West African States
ECREEE	ECOWAS Centre for Renewable Energy and Energy Efficiency
THIS	Landfill site
CDN	Nationally Determined Contributions
CFC	Chlorofluorocarbons
CGES	Environmental and Social Management Framework
CSIGERN	Strategic Investment Framework for Environmental and Natural Resource Management
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CNDD	National Commission for Sustainable Development

UNFCCC	United Nations Framework Convention on Climate Change
COA/IWRM	West African Conference on Integrated Water Resources Management
COP/COP	<i>Conference of Parties</i>
CSI	Strategic Investment Framework
CVD	Village Development Committee
CPDD	Prefectural Commission for Sustainable Development
INDCs	Intended Nationally Determined Contribution
DAC	Directorate of Common Affairs
DCNCC	Second National Communication on Climate Change
FROM	Environment Directorate
DGSCN	Directorate-General for Statistics and National Accounts
DRERF	Regional Directorate of Environment and Forest Resources
DRF	Forest Resources Directorate
C-PRSP	Comprehensive Poverty Reduction Strategy Paper
EESS	Strategic Environmental and Social Assessment
EEDD	Education for the environment and sustainable development
ESIA	Environmental and social impact assessment
FAO	Food and Agriculture Organization/Organisation de Nations Unies pour l'Agriculture
FCPF	Forest Carbon Partnership Facility
FDR	Togo 2025 Government Roadmap
WEF	Global Environment Facility
SWOT	Strengths, weaknesses, opportunities and threats;
FNDF	National Forest Development Fund
FNE	National Environment Fund
GCF	Green Climate Fund
GAFFSP	<i>Global Agriculture and Food Security Program</i>
SFM	Sustainable forest management
GERN	Management for the environment and natural resources
IPCC	Intergovernmental Panel on Climate Change
GIFERC	Integrated management of water fertility and pests by fungi

GIFs	Integrated soil fertility management
IWRM	Integrated water resources management
GIZ	<i>Gesellschaft für Internationale Zusammenarbeit</i>
GERN/GRN	Environmental and Natural Resource Management/Natural Resource Management
GT	Working Group
GTVD	Waste Treatment and Recovery Management
IEC	Information, education, communication
NFI	National Forest Inventory
INSEED	National Institute of Statistics and Economic and Demographic Studies
IRENA	International renewable energy agency / Agence internationale des énergies renouvelables
EITI	Extractive Industries Transparency Initiative
ITRA	Togolese Institute of Agricultural Research
MAEH	Ministry of Agriculture, Livestock and Hydraulics
APRM	Ministry of Agriculture, Livestock and Fisheries
CDM	Clean Development Mechanism
MEAHV	Ministry of Water, Sanitation and Village Hydraulics
SEA	Ministry of Rural Equipment (currently merged with the MAEH)
MERF	Ministry of Environment and Forest Resources
MPDC	Ministry of Development Planning and Cooperation
MRV / MNV	Measurement, reporting and verification
MUH	Ministry of Urban Planning and Housing
NDT	Land degradation neutrality
NEPAD	<i>New Partnership for Africa's Development /</i>
ODD	Sustainable Development Goals
ODEF	Forest Development and Exploitation Authority
ITTO	International Tropical Timber Organization
MDGs	Millennium Development Goals
ONAEM	National body responsible for State action at sea
NGO	Non-governmental organization

CSOs	Civil society organization
OTR	Togolese Revenue Office
PADAT	Togo Agricultural Development Support Project
PALCC	Climate Change Support Programme
PAFN	Togo's National Forest Action Plan
PANA	National Climate Change Adaptation Action Plan
PAN-LCD	National Action Plan to Combat Desertification
PANSEA	National Action Plan for the Water and Sanitation Sector
FSEP	Agricultural Sector Support Programme
PAUT	Togo Urban Development Project
PAZOL	Lagoon area development project
CAADP	Comprehensive Programme for Agricultural Development in Africa
FULAH	Lomé Urban Environment Project
NTFP	Non-timber forest products
ESMPS	Environmental and Social Management Plan
PGFF	Refrigerant Management Plan
TBMP	Integrated Disaster and Land Management Project
GDP	Gross domestic product
SME	Small and medium-sized businesses
NCCP	National Climate Change Adaptation Plan
NADP	Program national of shares Decentralised from management Environment
PNASAP	Togo's National Strategic Plan for Sanitation and Public Health
PNAE	National Environment Action Plan
PND	National Development Plan
PNDS	National Health Development Plan
SOPs	National Water Policy
PNE TOGO	Togo National Water Partnership
PNGE	National Environmental Management Program
NHAT	Togo's National Hygiene and Sanitation Policy
PNIASA	Program national of investments agricultural and from food security

PNIASAN	Program national of investments agricultural and from Food and nutrition security
PNIERN	National Environment and Natural Resources Investment Programme
PNPC	National Emergency Preparedness Policy
PNR	National Reforestation Program
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
LDC	Least developed countries
PONAT	National policy on regional planning
PP	Public policy
WAAPP	West Africa Agricultural Productivity Program-
PRAPT	Project to strengthen the conservation role of Togo's national system of protected areas
PRCGE	Environmental Management Capacity Building Project
PRCNDGE	Decentralized National Capacity Building Project for Environmental Management
ProDRA	Rural Development Programme including Agriculture
ProREDD	Support Programme for REDD+ Preparedness and Forest Rehabilitation in Togo
PSSET	Strategic Plan for the Energy Sub-Sector in Togo
TFP	Technical and financial partner
PUDC	Emergency Community Development Program
PURISE	Emergency project for the rehabilitation of electricity services and infrastructure
QUIBB	Unified questionnaire of basic indicators of well-being
RAPD	Report on official development assistance
REDD+,	Reducing emissions from deforestation and forest degradation
RGPH	General population and housing census
RRC	Disaster Risk Reduction
CSR	Corporate Social Responsibility
CSR	Corporate Social Responsibility
M&E	Monitoring and evaluation

SAP	Early warning system
SCAPE	Strategy for accelerated growth and employment promotion
SDAL	Coastal development plan
SISL	Coastal Information and Monitoring System
SNGF	National Wildland Fire Management Strategy
NCRS	National Strategy for Disaster Risk Reduction
NBSAP	National Biodiversity Strategy and Action Plan
SRRC	National Strategy for Disaster Risk Reduction in Togo
Astronomic al unit	African Union
EU	European Union
WAEMU	West African Economic and Monetary Union
PMU	Project Management Unit
UNESCO	United Nations education, scientific and cultural organization / Organisation des Nations des Nations pour l'éducation, la science et la culture
UNICEF	United Nations Children's Fund
WACA	West Africa coastal areas management program
WACAF	Coastal areas of the West and Central Africa region
WASCAL	West African science service center on climate change and adapted land use

List of Figures

Figure 1: Scenarios of projected and actual mitigation in 2020 compared to The reference	5
Figure 2: Trends in GHG emission projections from different sectors Based on the Reference Case	10
Figure 3: Trends in overall GHG emission reductions relative to Reference scenario	12
Figure 4: Trends in GHG emission reductions relative to the scenario reference in the various sectors	14
Figure 5: Togo Adaptation Strategy Map.....	40
Figure 6: proportions of adaptation scenario actions by sector in terms of costs of investments out of a total of \$2.8 billion	76
Figure 7: Distribution of the costs of technology transfer needs by sector 79 Figure 8: Structure of the national MRV system.....	89

List of Tables

Table 1: Strengths, weaknesses, opportunities and threats of the institutional framework existing	7
Table 2: Mitigation ambition compared to current NDCs	15
Table 3: Information needed for clarity, transparency and Understanding (ICTC).....	18
Table 4: Priority adaptation measures by sector	42
Table 5: Togo's Adaptation Efforts	48
Table 6: Impacts of Covid 19 and priority responses in terms of adaptation to the Togo	55
Table 7: Investment costs of the revised NDC actions of the electricity production	58
Table 8: Total investment costs of the transport subsector	60
Table 9: Investment needs of CDN shares residential subsector 61	
Table 10: Investment requirements of NDC actions agriculture sub-sector 62	
Table 11: Investment needs of NDC actions in the forestry sub-sector and other land uses	64
Table 12: Investment needs of the CDN actions in the PIUP sector.....	66
Table 13: Investment needs of NDC actions in the waste sector.....	68
Table 14: Associated investment costs according to mitigation scenarios. 69	
Table 15: Investment costs for all mitigation measures (millions USD)	70
Table 16: Sectoral adjustment measures with cost estimates	71
Table 17: Technology transfer costs	78
Table 18: Priority needs for technical resources and strengthening of Institutional, individual and systemic capacities	80
Table 19: Mitigation and adaptation funding needed for the NDC Revised	81
Table 20: Strengths and weaknesses of the existing MRV system	84
Table 21: Assistance received by Togo in relation to MRV.....	90
Table 22: SWOT matrix of the analysis of the communication on implementation NDCs	92
Table 23: Development of Strategic Directions and Formulation of Objectives	95

Table 24: Intervention Performance Framework.....	96
Table 25: Budgeted Multi-Year Plan	98

At the 21st Conference of the Parties (COP21) in Paris on 12 December 2015, the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) reached a historic agreement to combat climate change. This is to accelerate and scale up the actions and investments needed for low-carbon sustainable development. The Paris Agreement (PA) entered into force in November 2016, following the universal adoption of the Agreement by the Parties. Through this agreement, all stakeholders have made voluntary commitments to transition to a climate-resilient and low-greenhouse gas (GHG) emission-emitting future.

Parties are required to undertake and communicate their efforts to contribute to the achievement of these objectives in the form of Nationally Determined Contributions (NDCs) reported to the UNFCCC (Article 3). NDCs are therefore the centerpiece of the Paris Agreement, which invites signatory countries to review their commitments every 5 years with a view to raising mitigation and adaptation ambitions in order to keep global warming below 2°C or even 1.5°C.

As a prelude to the Paris Agreement, Togo prepared and submitted its Intended Nationally Determined Contributions (INDCs) in 2015 which were confirmed as its NDCs after the adoption of this agreement. Togo, with the support of the United Nations Development Programme (UNDP) through the "Climate Promise" initiative and the *NDC Support Programme*, has embarked on the revision of its NDCs in 2020.

Togo aims, through the revision of its NDCs, to comply with the commitments made to the Paris Agreement and to ensure their alignment with its development priorities (National Development Plan-NDP and government roadmap 2025) and the Sustainable Development Goals (SDGs).

The revision of Togo's NDCs covers, among other things, the updating of data and information with regard to new programmatic and policy developments, the consideration of the infrastructure sector, a better integration of the water resources sector and the integration of hydrofluorocarbons (HFCs) and short-lived air and climate pollutants in gases whose emissions need to be reduced. This has made it possible to update the country's commitment targets by integrating new projects based on new incentives in the field of transport and renewable energy to raise the level of ambition.

Togo's revised NDCs outline the enhanced actions and enabling environment needed during the 2015-2020 period that laid the groundwork for more ambitious targets beyond 2020, contributing to the concerted effort to prevent a 2°C increase in the global average temperature and

continue efforts to limit the temperature to 1.5°C above pre-industrial levels.

By 2030, Togo plans to increase climate resilience through comprehensive mitigation and adaptation and disaster risk reduction strategies. Togo has set ambitious sustainability targets related to the production and consumption of food, water and energy. These objectives will be achieved by supporting empowerment and capacity building, improved delivery of basic social services, technological innovation and sustainable management of natural resources, in line with the principles of good governance.

Beyond the 2030 NDC target, Togo is committed to moving towards a long-term low-carbon development strategy and climate resilience through its National Development Plan (NDP 2018-2022) and the Government Roadmap 2025.

With this in mind, the country has adopted a plan for the preparation and implementation of its NDCs covering the period 2020-2024. This nine-program plan aims to accelerate transformational shifts towards low-carbon, climate-resilient development.

This revised NDC document has seven chapters on national context, governance, mitigation, adaptation, financial, technological needs and assistance requirements, the national measurement, reporting and verification (MRV) system, and the NDC implementation communication strategy.

Chapter 1: National Context

1.1. OVERVIEW

Togo is located in the intertropical zone. It enjoys a 4-season Guinean tropical climate in the southern part and a two-season Sudanese tropical climate in the northern part. The Maritime and Savannah regions are those that receive less than 1000 millimeters of water per year. An irregularity of the seasons has been observed in recent decades. The Atakora massifs and the mountains of Togo take Togolese territory from northeast to southwest. Mount Agou is the highest peak in the country, rising to more than 900 m in the southwest. On either side of this chain stretches the peneplain. In Togo, four main classes of soils are found. These are raw and poorly evolved mineral soils; tropical ferruginous soils; ferralitic soils and vertisols and hydromorphic soils.

With a forest cover of 24.24%, Togo's biological resources are numerous and diversified. The plant formations are made up of dense semi-deciduous forests, Guinean savannahs, Sudanian savannahs interspersed with dry forests or open forests depending on the locality, gallery and riparian forests, etc. In Togo, the flora includes 3491 terrestrial species and 261 identified aquatic species. The fauna, estimated at 3469 species, is composed of terrestrial species, avifauna and aquatic fauna. Togo is divided into five main phytogeographical areas. They are called ecological zones.

The water resources available to Togo are quite abundant. They are made up of surface water drained by the three main watersheds (Oti, 47.3%, Mono, 37.5%, Lake Togo, 16%) and renewable groundwater contained in the two aquifers of the basement and the coastal sedimentary. The total volume of renewable water resources is estimated at about 19 billion cubic meters per year, or about 27% of rainfall (about 70 billion cubic meters per year).

Togo has a 50 km long coastal area that stretches from Lomé to Aného with capital economic importance for the country. Indeed, a diversity of activities such as fishing, industry, crafts, tourism, etc. is exercised in this area. Opening onto the Gulf of Guinea, the balance of the physical setting of the coastline takes on a certain particularity because of the interrelationships that exist between the different elements of this fragile environment, the weight of demographic growth, and the existing developments that are expanding every year. It is exposed to coastal risks: erosion, flooding and pollution.

The November 2010 General Population and Housing Census established Togo's resident population at 6,191,155 inhabitants, with an average annual growth rate of 2.3 per cent. As of January 1, 2019, the number of employees was projected at 7,538,000

hbs. It will be 7,723,000 inhabitants on January 1, 2020. The average density was 109 inhabitants/km² in 2010. It varies according to the region and is denser in the Maritime region and lower in the Savannah region. In Togo, 53.5% (2017) of the population lives below the poverty line. The poverty rate decreased by 1.6 points between 2015 and 2017. In 2018-2019, a new poverty line estimate was made, in order to more accurately assess the proportion of households living below the poverty line. The incidence of poverty calculated on this new basis is 45.5% at the national level. Togo's Human Development Index (HDI) rose from 0.426 in 2000 to 0.484 in 2014 and 0.484 in 2015, which places the country 162nd out of 188 countries with comparable data.

Placing emergence at the heart of its ambition, Togo has made remarkable progress over the past 10 years and has set itself high objectives for economic growth and social and human development for the years to come. The global pandemic due to Covid-19 is an unprecedented shock that will have significant repercussions for Africa and particularly for Togo. However, Togo wishes to give new impetus to its economy and society in the form of a concrete strategic plan. Therefore, the government has defined a roadmap launched in October 2020 for the horizon 2025. The objective of this roadmap is to adjust the integrated national vision by having an overall understanding of the Togolese context, in particular by considering the Covid-19 context, to update Togo's portfolio of projects and reforms defined in its National Development Plan (NDP) taking into account the new vision and their progress and to guide the implementation of this new vision at the level of each ministry sectorial.

The government roadmap aims for "a Togo at peace, a modern nation with inclusive and sustainable economic growth". This vision is structured around three Axes Strategic Interdependent: (i) strengthen social inclusion and harmony and consolidate peace; (ii) boosting job creation by building on the strengths of the economy; and (iii) modernizing the country and strengthening its structures. The three axes are broken down into ten ambitions that respond to the country's main challenges. Togo places particular emphasis on issues related to climate change at the level of ambition 10, which places sustainable development and the anticipation of future crises at the heart of the country's priorities.

1.2. SYNTHESIS EVALUATION WORK OF

SOME IMPLEMENTATION CDN INITIALS OF TOGO

After the adoption of the Paris Agreement, creating synergies between climate action and development implementation has become an essential subject for the effectiveness of public policies in Togo. Two levels of reduction have been proposed: an unconditional reduction of 11.14% and a conditional reduction of 20% without

clarification on conditionalities for a total financing requirement estimated at \$US 3.54 billion (Adaptation = 1.54; Attenuation = 1.10; Technology transfer = 0.5; Capacity building = 0.4).

All the projects implemented in terms of mitigation and adaptation with mitigation co-benefits have enabled Togo to achieve 7,990 Gg CO₂-eq reduction in its emissions in 2020 instead of 5,075 Gg CO₂-eq initially planned, i.e. a reduction of 27.57% by 2020 instead of 17.51% compared to the baseline as shown in Figure 1. The additional reduction is therefore 10.06%.

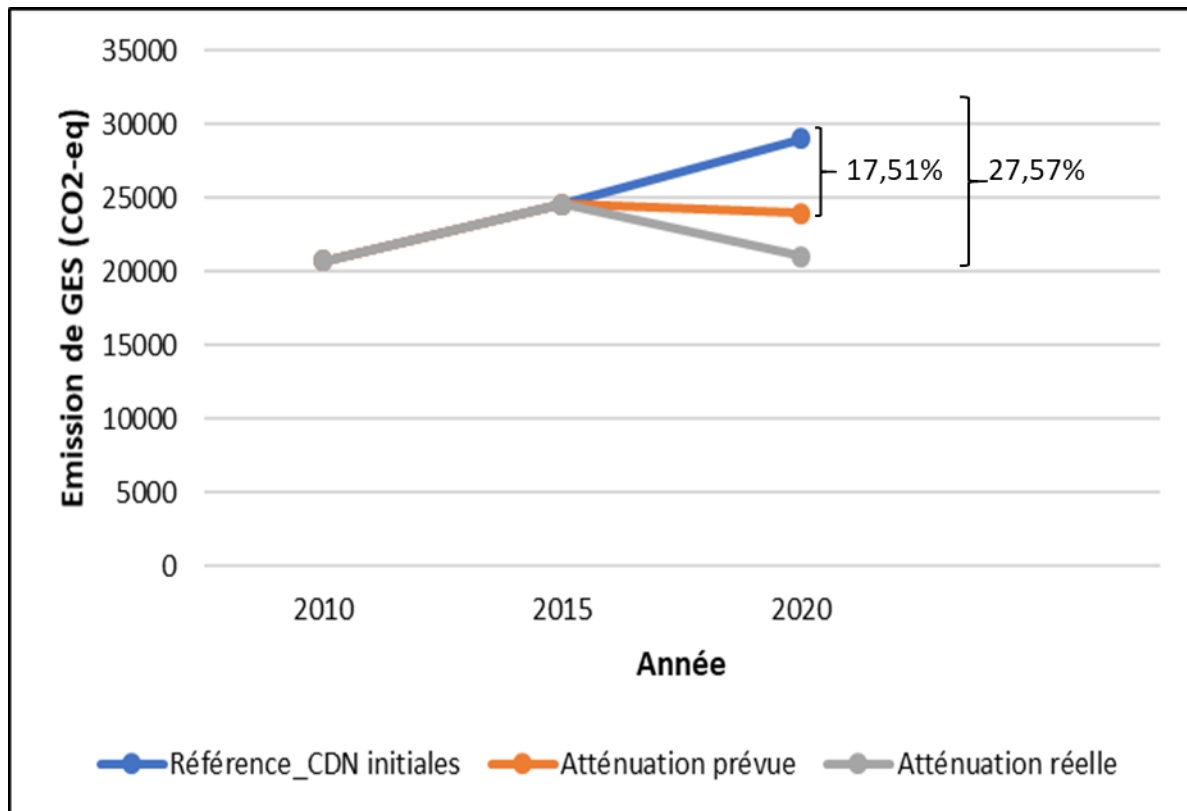


Figure 1: Scenarios of projected and actual mitigation in 2020 compared to baseline

Overall, Togo has been politically proactive in the area of climate change for more than 20 years and is committed to combating its adverse effects on the population and many sectors of economic activity through a series of actions, both in the context of multilateral actions and national initiatives.

Chapter 2: Governance

2.1. EXISTING NDC INSTITUTIONAL ARRANGEMENTS

In 2015, through the interministerial order No. 002/MERF/MMEFPD, a coordination committee for the process of developing the Intended Nationally Determined Contributions (INDCs) was set up. This INDC Committee was replaced in 2018 by the National Authority for the Coordination of the Process for the Preparation of National Communications (NC), Biennial Update Reports (BER) on Climate Change and NDCs, set up by Order No. 0095 / MERF/SG/DE of 13 July 2018. This authority, through the NDC subcommittee, is responsible for monitoring the implementation of the NDCs. This NDC sub-committee is composed of representatives of public institutions, the private sector, and civil society organizations concerned with the issue of climate change. These are the Presidency of the Republic, the Prime Minister's Office, the Ministry of Foreign Affairs, the Ministry of Finance, the Ministry of Planning, the Ministry of Agriculture, the Ministry of Energy, the Ministry for the Promotion of Women and Youth and other ministries, civil society organizations, and the employers.

2.2. ANALYSIS OF THE STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS OF THE EXISTING INSTITUTIONAL SET-UP

The existing institutional framework for NDCs suffers from some shortcomings (Table 1).

Table 1: Strengths, weaknesses, opportunities and threats of the existing institutional framework

Forces	Weaknesses
<ul style="list-style-type: none"> ➤ Existence of the National Coordinating Authority for the development process, NCs, climate change RBAs and NDCs ➤ Existence of several committees of other bodies (DLCC, Technical Committee for the Coordination of the Process of Integration of Adaptation to Climate Change, etc.) on which the NDC Committee can rely ➤ Creation of a National MRV Committee ➤ Creation of a CDN subcommittee 	<ul style="list-style-type: none"> ➤ Non-operationality of some committees (National Committee on Climate Change, etc.) ➤ Non-transparent operation of institutional arrangements ➤ Weak technical capacity of the members of the National Coordinating Authority for the process of developing NCs, climate change RBAs and NDCs ➤ Limited technical expertise in all key themes related to the priority sectors of mitigation studies ➤ Low level of collaboration between institutions in charge of implementing government policies and institutions in charge of studies ➤ Non-allocation of financial resources for the operation of the NDC Implementation Committee ➤ Poor knowledge of the specifications of the various stakeholders ➤ Non-involvement of local authorities in the CDN committee
Opportunities	Threats
<ul style="list-style-type: none"> ➤ Existence of the CBIT initiative (under implementation) ➤ Availability of technical and financial partners to support climate governance 	<ul style="list-style-type: none"> ➤ Lack of coordination and coherence among the various thematic bodies, operational entities, implementing agencies and other organizations outside the Convention ➤ Low involvement of private sector actors, women's groups, parliamentarians and civil society

2.3. CAPACITY BUILDING FOR GOVERNANCE

In response to the constraints and gaps identified for the existing institutional framework, the following actions are proposed to ensure effective governance and coordination of the NDC implementation process. These will involve:

- ✓ to establish a framework for dialogue and communication among the various thematic bodies, operational entities, implementing agencies, civil society and private sector organizations and other organizations outside the Convention;

- ✓ strengthen the technical capacities of stakeholders in all key themes related to the priority sectors concerned by mitigation studies;
- ✓ mobilize the necessary financial resources to operationalize the NDC Implementation Committee;
- ✓ operationalize the various existing committees related to climate change;
- ✓ develop an institutional capacity building programme for the successful implementation of NDCs;
- ✓ strengthen the technical and operational capacities of the various stakeholders of the NDC Committee;
- ✓ strengthen collaboration between institutions in charge of implementing government policies and institutions in charge of studies;
- ✓ define the terms of reference of the various stakeholders of the NDC committee.

Chapter 3: Mitigation

To contribute to the effective fight against the harmful effects of climate change, efforts are being made by the Togolese government to reduce greenhouse gas emissions.

3.1. CONTRIBUTIONS TO MITIGATION: BASELINE AND MITIGATION SCENARIOS

3.1.1. Reference scenario

The data used are those from the thematic and sectoral studies of the 4th NC and the 2nd RBA. The sectors, gases, categories and pools covered by the revised Nationally Determined Contributions are:

Sectors : Energy; Industrial Processes and Product Use (IPPPs); Agriculture, Forestry and Other Land Uses (AFOLU); Rubbish

gases : CO₂, CH₄, N₂O, Hydrofluorocarbons (HFCs) in accordance with the Kigali Amendment to the Montreal Protocol.

Short-lived air pollutants (SLCPs): black carbon (BC), PM 2.5 and PM 10 particulate matter, nitrous oxides, volatile organic compounds and carbon monoxide.

For each sector, GHG emissions projections are made over the period 2010-2030 and are as follows (Figure 2):

- **energy sector** : emissions vary from 3725.16 Gg CO₂-eq to 13169.18 Gg CO₂-eq between 2010 and 2030, an increase of 254%;
- **PIUP sector** : the projection of emissions increases from 551.19 Gg CO₂-eq in 2010 to 3,203.54 Gg CO₂-eq in 2030, i.e. an increase of about 481% in the sector;
- **AFOLU sector** : emissions increase from 12,190.89 Gg CO₂-eq to 13,464.37 Gg CO₂-eq between 2010 and 2030, an increase of 10.45%;
- **waste sector** : emissions from the sector as a whole range from 335.7 Gg CO₂-eq in 2010 to 573.3 Gg CO₂-eq in 2030, an increase of 70.8%.

Overall, GHG emissions will increase from 16,802.92 Gg CO₂-eq in 2010 to 30,410.42 Gg CO₂-eq in 2030, an increase of 80.98%.

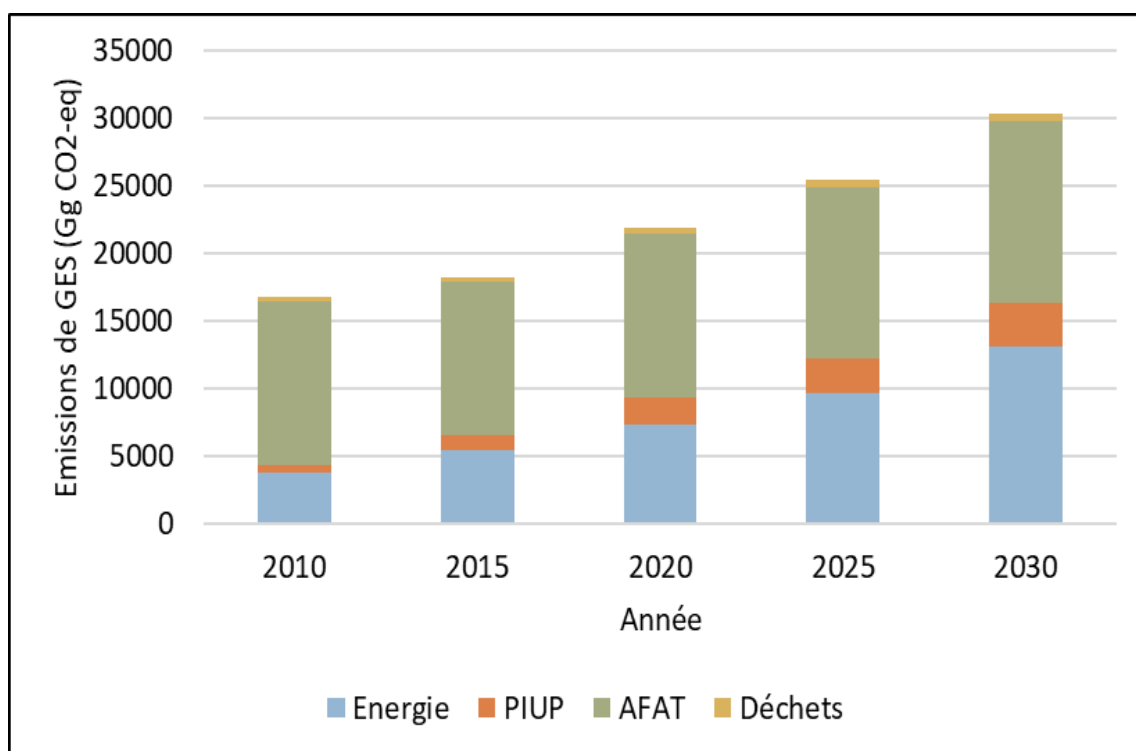


Figure 2: Trends in the GHG emission projections of the different sectors according to the Reference Case

3.1.2. Mitigation scenario

GHG emission reduction potentials are estimated by sector and are then aggregated at the national level. In general, the information provided is based on Togo's new programmatic developments, in particular the National Development Plan (NDP 2018-2022) and the government roadmap 2025. This information is also based on the sectoral measures and priorities as presented in Annex 1.

3.1.2.1. Global quantified commitments

Mitigation measures are guided by an aspiration for long-term low-carbon development that promotes the implementation of its 2025 government roadmap, its NDP (2018-2022), its food self-sufficiency policy and the fight against poverty to become an emerging state by 2050.

The implementation of the plans, strategies, programmes and other planning documents used in this study is based on the various resources (equity, national and international loans) that the government mobilizes for the country's development.

In addition, in order to ensure low-carbon sustainable development, Togo has embarked on an ambitious programme to combat climate change, the activities of which require sustained support from its technical and financial partners (capacity building, technology transfer and dissemination, and financial resources).

❖ **Unconditional contribution**

The results of the analysis of sectoral reductions indicate that Togo can commit to an unconditional contribution to reduce its greenhouse gas (GHG) emissions by **20.51%** by 2030, or 6,236.02 Gg CO₂-eq (Figure 13; Table 11).

❖ **Conditional contribution**

In the approach proposed for the mitigation scenario, the Togolese State commits, if it receives the required support, to achieve an additional **30.06%** reduction in GHG emissions compared to the reference scenario by 2030, i.e. 9,305.59 Gg CO₂-eq (Figure 3), without compromising its food self-sufficiency policy by proceeding in such a way as not to compromise its sustainable development.

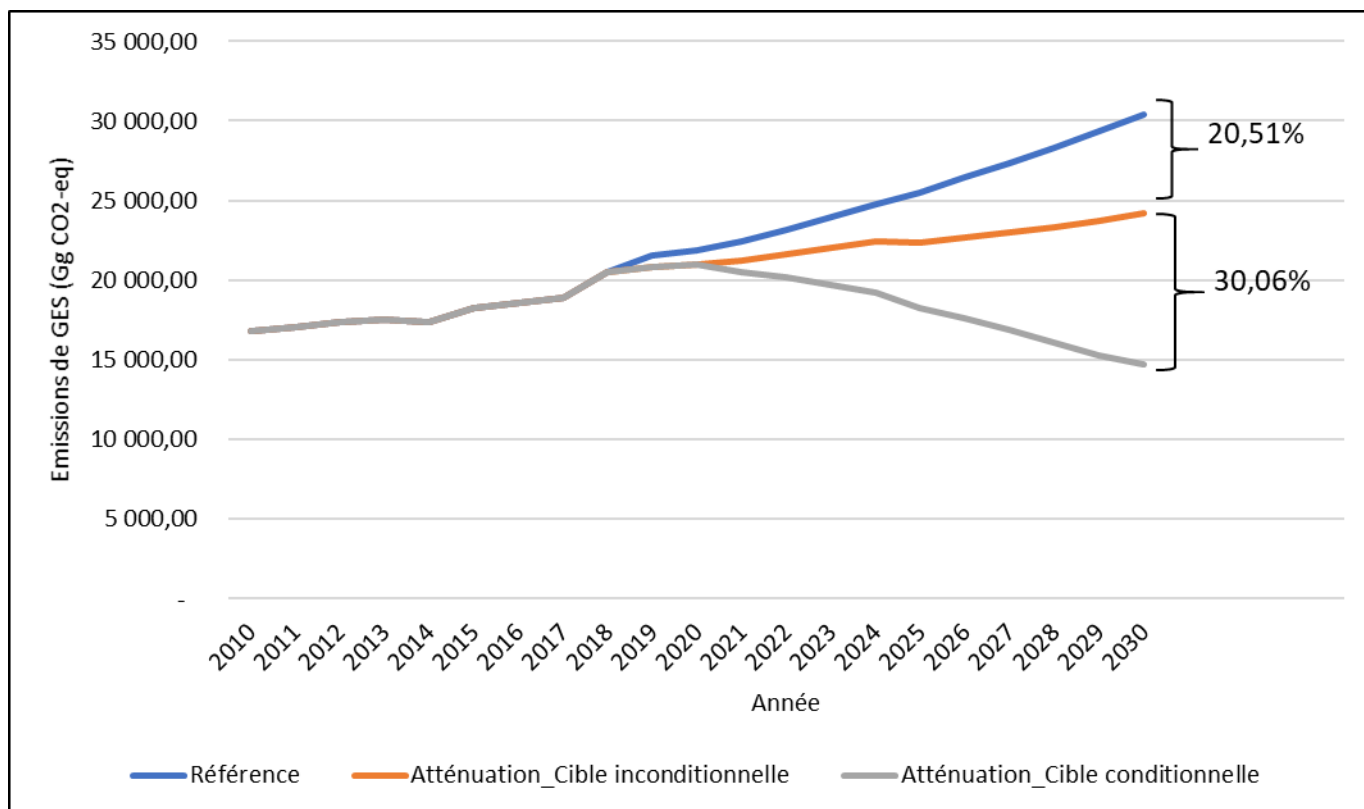


Figure 3: Trends in overall GHG emission reductions relative to the baseline scenario

❖ Overall contribution

Overall, Togo's contribution amounts to **50.57%**, or 15,378.55 Gg CO2-eq by 2030, distributed as follows:

- ✓ Unconditional target: 20.51%;
- ✓ Conditional target: 30.06%.

These new commitments represent an improvement on the original NDCs and represent the highest possible level of ambition, taking into account national circumstances in accordance with paragraph 3 of Article 4 of the Paris Agreement.

3.1.2.2. Commitments by sector

Figure 2 shows the level of mitigation in each sector:

- **energy sector** : the analysis of the mitigation scenario shows a reduction of 16.89% (2,224.87 Gg CO2-eq) by 2030 compared to the

Reference scenario. The reduction trends in this sector are shown in Figure 4a;

- **PIUP sector** : given that the cement production subsector does not generate any potential reductions, the reduction in emissions in the PIUP sector is limited to that of the hydrofluorocarbons (HFCs) subsector and corresponds to 0.8% by 2030 compared to the baseline scenario (Figure 4b);
- **AFOLU sector** : the estimated value of the mitigation scenario by 2030 is 9,640.17 Gg CO₂-eq compared to 13,464.37 Gg CO₂-eq for the reference scenario (Figure 4c), i.e. a reduction of 28.40% (3,824.20 Gg CO₂-eq);
- **waste sector** : the estimated value of the mitigation scenario by 2030 is 412.20 Gg CO₂-eq compared to 573.325 Gg CO₂-eq for the reference scenario, i.e. a reduction of 28.10% (Figure 4d).

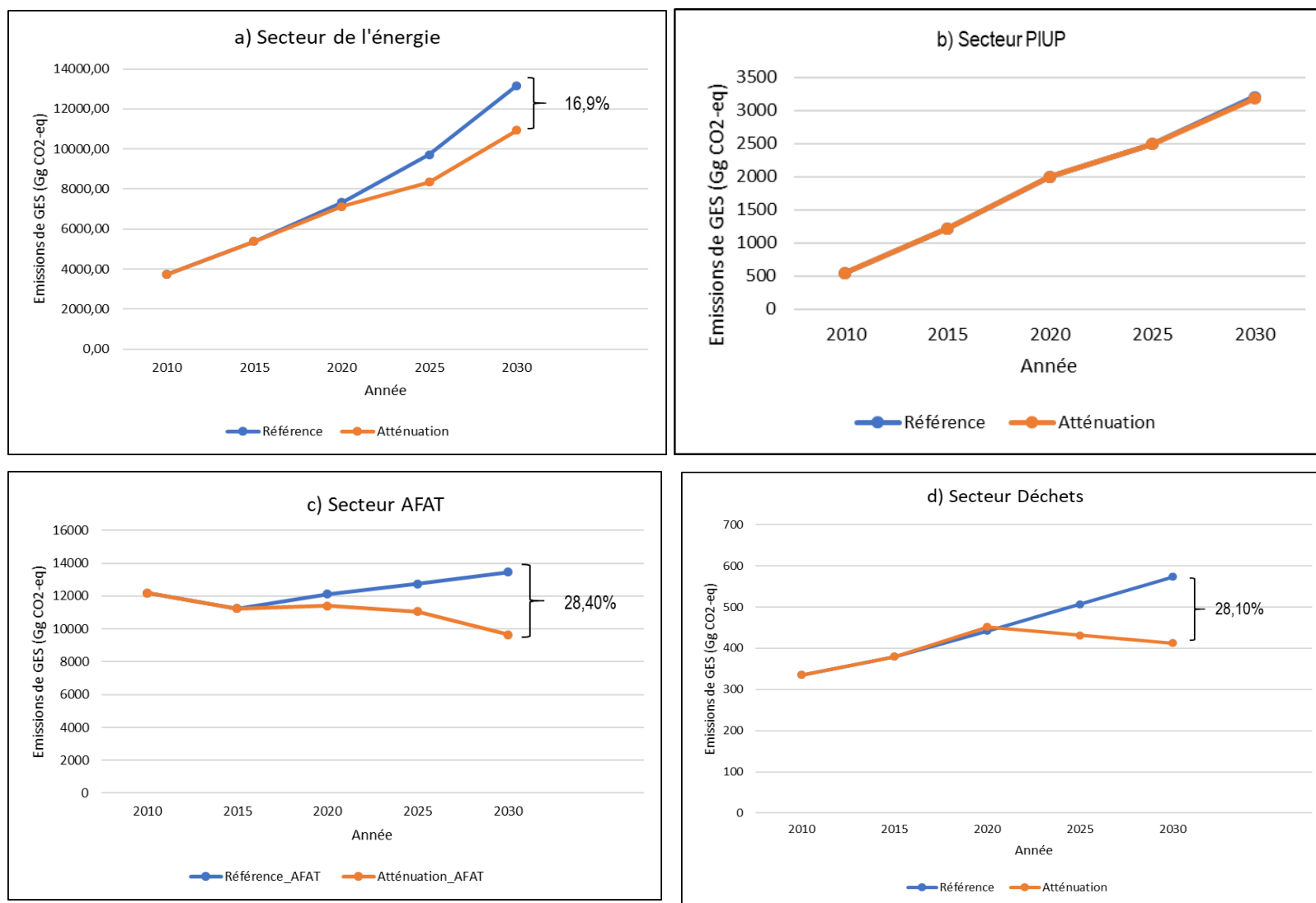


Figure 4: Trends in GHG emission reductions relative to the baseline across sectors

3.1.2.3. Increasing ambition

The revision of Togo's NDCs was carried out in consultation with stakeholders and is aligned with the development goals contained in the NDP and the government's 2025 roadmap, on the one hand, and the objectives of the Paris Agreement, on the other. As a Party to the Paris Agreement, Togo is committed to setting ambitious targets needed to effect change and remains fully supportive of the Paris Agreement and all the responsibilities and actions set out therein.

By submitting this NDC, Togo, a low GHG emitter, supports the call for all parties to make their submissions, to ensure that their NDCs are in line with their contributions to global emissions and their respective responsibilities under the Convention and to take measures that will limit the global temperature increase to 1.5°C; well below pre-industrial levels.

Togo's new contributions are fair and ambitious, taking into account national circumstances, such as the SDGs and poverty eradication, demography, geography, climate, dependence on external stimulators. They go far beyond the commitments presented in Togo's initial NDC submission, i.e. in terms of scope, sectoral ambition, coherence between adaptation and mitigation, horizontal themes, including gender, and including transparency. Details of the increased ambition are shown in Table 2.

The COVID 19 pandemic represents a moment of profound upheaval, causing an economic slowdown due to the decline in socio-economic activities, and aggravating the country's economic vulnerabilities to climate change. However, Togo still maintains that it is a priority to take appropriate measures to adapt to and combat the adverse effects of climate change.

Table 2: Mitigation ambition compared to current NDCs

Components of Improvement	Revised NDCs (2021)	Initial CDNs (2015)
Strengthening the GHG target	<p>Type of year-end target (2030 emissions level compared to 2010 emissions level):</p> <p>In 2030, the emission reductions broken down by sector are as follows:</p> <ul style="list-style-type: none">• Energy sector: 16.9%.• Industrial Processes and Product Uses (IPP): 0.8%.• Agriculture Forestry and Other Land Use (AFOLU): 28.40 %.	<p>Deviation from the type of SAM objective (baseline) in 2030:</p> <p>Emission reduction of 11.13% in 2030 compared to SAM.</p>

Components of Improvement	Revised NDCs (2021)	Initial CDNs (2015)
Geographical coverage	<ul style="list-style-type: none"> Waste sector: 28.10%. Total Unconditional Target: 20.51% 	
	National level	National level
Sector coverage	<ul style="list-style-type: none"> Energy PIUP AFOLU Rubbish 	<ul style="list-style-type: none"> Energy AFOLU
Blanket G GH	<ul style="list-style-type: none"> CO2 CH4 N2O Hydrofluorocarbons (HFCs) in accordance with the Kigali Amendment to the Montreal Protocol. 	<ul style="list-style-type: none"> CO2 CH4 N2O
Strengthening or adding policies and actions	<p>Mitigation policies and measures (MAP) in the following areas:</p> <ul style="list-style-type: none"> Energy (including: energy supply, residential and unspecified, industry, transport) Agriculture, Forestry and Other Land Use (AFOLU) Rubbish Additional MAP (Mitigation Action Facilitators) 	<p>mitigation MAP (in a higher ambition scenario) in the following sectors:</p> <p>Energy</p> <p>Emissions from the combustion of fossil fuels</p>
Strengthening or adding a non-GHG sector target	<p>The revised NDCs are consistent with the following non-GHG sectoral targets in 2030:</p> <ul style="list-style-type: none"> Renewable Energy Sources (RES) 10% from the consumption Energy Final in Transportation Energy Efficiency (EE) Final energy consumption savings compared to the baseline scenario Savings in primary energy consumption compared to the baseline scenario Short-lived air pollutants (SLCPs): <ul style="list-style-type: none"> Black Carbon (CB) Materials PM2.5 and PM10, nitrous oxides, volatile organic compounds and carbon monoxide. 	
Alignment of the implementation of the existing NDC with long-term objectives	In addition, the revised NDCs address the regional aspect contributing significantly to the priority actions identified in the energy sector in the NDP.	

GHG mitigation has integrated mitigation of short-lived climate pollutants in line with the National Plan for the Reduction of Air Pollutants and Short-Lived Climate Pollutants. As a result, the implementation of Togo's revised NDCs is expected to yield substantial benefits in terms of reducing short-lived climate pollutants and air pollutants, improving air quality, and public health.

The full implementation of the updated NDC is expected to reduce in 2030 compared to the baseline scenario:

- ✓ black carbon **emissions** by 80%,
- ✓ methane **emissions** by 32%,
- ✓ **particulate emissions** by 58%, and
- ✓ nitrogen oxide **emissions** by 51%.

In addition, HFC emissions would be reduced by 9% in 2030 compared to a baseline scenario with a significant reduction from 2029 onwards in line with the HFC phase-out schedule set out in the Kigali Amendment.

The main actions to achieve the objective of mitigating SLCPs while improving air quality and benefiting human health are:

- ✓ Increase the number of households that cook using improved efficiency biomass stoves and cleaner fuels such as LPG or electricity.
- ✓ increasing the efficiency of charcoal production kilns;
- ✓ renew the fleet to increase efficiency and compliance with more stringent vehicle emission standards;
- ✓ promoting the use of electric vehicles;
- ✓ increase the efficiency of livestock production to minimize emissions from enteric fermentation and manure;
- ✓ adopt alternative wetting and drying practices for rice production to reduce methane emissions;
- ✓ promote best practices in landfill management for municipal solid waste, including methane capture;
- ✓ Increase municipal solid waste collection and reduce open burning of municipal solid waste.

3.2. INFORMATION TO IMPROVE CLARITY, TRANSPARENCY AND UNDERSTANDING (ICTC) OF REVISED NATIONALLY DETERMINED CONTRIBUTIONS

Table 3 below presents the information necessary for clarity, transparency and understanding as recommended by annex I to decision 4/CMA1. It allows you to measure the extent of the information provided.

Table 3: Information needed for clarity, transparency and understanding (ICTC)

Information needed for clarity, transparency and understanding (ICTC)		
Para	Guidance for decision 4/CMA.1	ICTC Guidelines for Togo's Revised NDC
1	Quantifiable information on the reference point (including, where applicable, a reference year):	
a)	Base year(s), base year(s), period (s) reference or other Starting point(s)	Base year: 2018 (which is the base year of the 4th National Communication and the 2nd Biennial Update Report)
b)	Quantifiable information on the benchmarks, their values in the base year(s), base year(s), reference period(s) or other point(s) (s) and, if applicable, in the target year	<p>Baseline indicator: National greenhouse gas inventory (GHES) for the 2018 reference year contained in the NIR and updated.</p> <p>The disaggregated emissions in 2030 are as follows:</p> <ul style="list-style-type: none"> • Energy sector : 13,169.18Gg CO₂-eq. • Industrial Processes and Product Uses (IPUP): 3,203.54 Gg CO₂-eq. • Agriculture, Forestry and Other Land Use (AFOLU): 13,464.37Gg CO₂-eq. • Waste sector : 573.33 Gg CO₂-eq.
c)	For strategies, plans and actions referred to in paragraph 6 of Article 4 of the Paris Agreement, or policies and measures as elements of Nationally Determined Contributions where paragraph 1 (b) above is not applicable, Parties shall provide other relevant information	NA
d)	Target relative to the benchmark, expressed numerically, by example as a percentage or amount of discount	<p>A detailed assessment of the identified GHG mitigation options for Togo estimates a total emission reduction potential of approximately 15,378.55 Gg CO₂-eq in 2030 compared to the estimated baseline emissions of the same year of 30,410.42 Gg CO₂-eq. This reduction is divided into unconditional contribution and conditional contribution.</p> <ul style="list-style-type: none"> • Unconditional contribution: A reduction of 20.51% from baseline in 2030; equivalent to an estimated mitigation level of 6,236.02 Gg CO₂-eq. This is an unconditional goal, based on sustained and sustainable mitigation measures and policies.

		<p>implemented at the national level. In 2030, the emission reductions of the unconditional target broken down by sector relative to the baseline scenario are as follows:</p> <ul style="list-style-type: none"> ✓ Energy sector : 16.9%. ✓ Industrial Processes and Product Uses (IPU): 0.8%. ✓ Agriculture, Forestry and Other Land Use (AFOLU): 28.40%. ✓ Waste sector : 28.10%. • Conditional contribution: An additional reduction of 30.06% from baseline in 2030; equivalent to an estimated mitigation level of 9,305.59 Gg CO₂-eq. This represents an additional targeted contribution, based on the provision of international support and funding
e)	News on the Sources from data used to quantify the Reference point(s)	<p>The data sources used to quantify the points are the analysis of the time series of the Fourth National Communication (4CN) and Second Report Biennial Updated (2RBA), thus that some information from consultations with the various relevant departments and consultations with the parties stakeholders. In addition, the information contained in the departmental strategies and estimates of international organizations were used to quantify reference points. The baseline scenario and the mitigation scenarios have been developed for all sectors using the LEAP software. For forestry and other land uses, IPCC spreadsheets 2006 were used and the results imported into LEAP.</p>
f)	Information on the circumstances in which the Party may update the values of the benchmarks	<p>In the following circumstances, Togo may update or modify the values of the reference indicators:</p> <ul style="list-style-type: none"> • In the next greenhouse gas inventory, Togo may update existing sector benchmarks and/or provide new values for sectors that were not previously covered. • The level of GHG emissions for the baseline scenario, unconditional and conditional targets in 2030 can be updated and recalculated based on methodological changes in the GHG inventory, such as the recalculation of the GHG inventory with the 2006 IPCC Guidelines or changes in global warming potential (GWP) in IPCC Assessment Reports, or the adoption of the 2019 IPCC refinement. Information on updates made will be included in the biennial Transparency Reports (BTRs).

		<ul style="list-style-type: none"> Togo is one of the least Advanced (PMA); Therefore, any major change in the economic and social environment may lead to updating or modifying the values of the benchmarks.
		<ul style="list-style-type: none"> Some of the actions are part of the Government Roadmap and the National Development Plan (NDP) and are the subject of international support (technical and financial); whose delay or lack of support could have unintended consequences on national circumstances. Togo is very prone to natural disasters (flood, drought, etc.), in case of major natural disaster or pandemic situation similar to COVID-19, Togo may update/change the reference point.
2	<i>Deadlines and/or implementation deadlines:</i>	
a)	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 Agreement (CMA)	January 1, 2021 to December 31, 2030
b)	Whether it's an annual or multi-year goal, as the case may be	<p>2030 annual target, including updates to the 2025 targets.</p> <p>NDC interventions will be implemented in stages in accordance with the annual work plan; however, the target year chosen is 2030.</p>
3	<i>Scope and coverage:</i>	
a)	General Description of the Target	<p>Activity- and policy-based sectoral targets, including emission reductions in selected sectors.</p> <p>The Government of Togo will achieve the conditional targets if international support for financing, technology transfer and/or capacity building is provided on a sustained and timely basis.</p>

b)	Sectors, gases, categories and pools covered by the Nationally Determined Contribution, including, case in accordance with the Group Directors	Sectors: <ul style="list-style-type: none"> ✚ Energy, ✚ PIUP ✚ AFOLU, ✚ Rubbish
	Intergovernmental Expert Conference on evolution of the (IPCC)	Gas: <ul style="list-style-type: none"> ✚ CO2 ✚ CH4 ✚ N2O ✚ F-gas: HFC-32, HFC-134a, HFC-125, HFC-143a. In accordance with the Kigali Amendment to the Montreal Protocol. Short-lived air pollutants (SLCPs): <ul style="list-style-type: none"> ✚ Black Carbon (CB) ✚ PM2.5 and PM10 particulate matter.
c)	How the Party has taken into account paragraph 31 (c) and (d) of decision 1/CP.21	<p>In accordance with paragraph 31 (c) of decision 1/CP.21, Togo committed to include all categories of anthropogenic emissions in its revised NDCs.</p> <p>The detailed assessment carried out during the process of formulating the revised NDCs showed that the data needed to set targets and rigorously assess the impact of policies and actions on emissions for all sectors was not available.</p> <p>Togo will gradually expand the coverage of its NDCs to all categories of anthropogenic emissions and removals, as more robust data becomes available.</p>

d)	Benefits related mitigation measures resulting from the Parties' adaptation measures and/or economic diversification plans, including a description of the Parties' specific projects, measures and initiatives for adaptation measures and/or economic diversification plans	<ul style="list-style-type: none"> • In accordance with the national climate change policy, the vectors for the implementation of the policy's objectives, strategies and results are the NDC and the National Adaptation Plan (NAP). The implementation of the actions articulated in each document will ensure the operational components of the policy. • Togo's National Adaptation Plan (NAP) (2017-2021), as well as projects currently under implementation, include mitigation co-benefits. The resulting reductions will contribute to the achievement of the objective described in point 1(d) and should not be considered as additional. • Togo also committed to continue to communicate data and information on quantified co-benefits of adaptation measures in its NAP and national communications. • Mitigation actions within adaptation projects will be reported through the data collection framework and the GHG inventory and reported in the respective sectors.
4	Planning Process:	
	Information on the planning processes undertaken by the Party to prepare	
a)	its nationally determined contribution and, where appropriate, on the Party's implementation plans, including, as appropriate:	
(i)	Institutional arrangements public participation and engagement with local communities and indigenous peoples, in a gender-responsive manner	<p>Provisions on governance and coordination at sectoral level are included in each of the NDCs' sectoral action plans.</p> <p>A National NDC Committee has been set up temporarily for the duration of the NDC programme implementation projects. This committee has not been functional at all and deserves to be rearranged and strengthened.</p> <p>New national institutional arrangements based on prior engagement of public, private, local community and gender stakeholders are being developed.</p>
(ii)	Contextual issues, including, inter alia, as appropriate:	

has.	National circumstances, such as geography, climate, economy, sustainable development and poverty eradication	<p>Recent political development in Togo. It was marked by the presidential elections of 2015 and 2020, the major marches of 2017, the legislative elections of December 2018 followed by the constitutional reforms and the municipal elections of June 2019.</p> <p>Geo-climatic profile. Togo is located in the intertropical zone. It enjoys a 4-season Guinean tropical climate in the southern part and a two-season Sudanese tropical climate in the northern part. The Maritime and Savannah regions are those that receive less than 1000 millimeters of water per year. An irregularity of the seasons has been observed in recent decades.</p> <p>Demographic characteristics and poverty. The General Population and Housing Census - final result of November 2010 establishes the resident population of Togo at 6,191,155 inhabitants with an average annual growth rate of 2.3%. On 1 January 2019, the number of inhabitants was projected to be 7,538,000. It will be 7,723,000 inhabitants on January 1, 2020. The average density was 109 inhabitants/km² in 2010. It varies according to the region and is denser in the Maritime region and lower in the Savannah region. In Togo, 53.5% (2017) of the population lives below the poverty line. The poverty rate decreased by 1.6 points between 2015 and 2017.</p> <p>Economic and sectoral context. The achievement of the objectives of the Togo 2025 government roadmap resulting from the revision of the National Development Plan (NDP 2018-2022) will affect all sectors, both public and private, of Togo's economic life. Overall, the national economic context has been marked by continued efforts to maintain the stability of the macroeconomic framework and improve the business environment.</p> <p><i>The State has full control over the energy sector with the participation of several ministries and other institutions state or private. All sources combined, the</i></p>
------	--	--

		<p>Final energy consumption amounted to 2145.29 ktoe in 2018 against 1973 ktoe in 2016, an increase of 172.29 ktoe (8.7%) in 3 years. Total final energy consumption in Togo per year and per capita has been stable since 2000 at 0.27 toe/hbt. The self-consumption of wood energy (charcoal and fuelwood) is predominant and represents 76% of national production compared to 24% for marketing.</p> <p><i>In the field of agriculture</i>, the cultivated area is estimated at 1.4 million hectares, or 41% of the cultivable area and 25% of the total area of the country. A comparative analysis of GDP and the budget reveals that in 2012, the value generated by agriculture at constant prices represented 42.2% of GDP. This sector provides a living for 2/3 of Togo's working population. The contribution of agriculture to the GDP growth rate, which was 0.7% in 2018, is expected to increase to 1% in 2019.</p> <p><i>The forest cover in Togo</i> is 24.24%. The role of the forestry sector in the economic development of the country is very important. Indeed, it contributes to job creation, unemployment reduction, wealth creation, etc. But despite this importance, the added value generated is low according to the statistics. Its contribution to GDP was 33 million \$US or 16.5 billion CFA francs, or 1.68 per cent of GDP in 2006. It should be noted, however, that the non-market and ecosystem services of the forest sector are not taken into account in these statistics. In 2015, the added value of the forestry sector reached 17.80 billion CFA francs for fuelwood and 71.19 billion CFA francs for charcoal, i.e. nearly 89 billion CFA francs for wood energy.</p> <p><i>Description of Togo's development priorities and their relationship with climate change.</i> Togo's vision of development today is guided by the government's Togo 2025 roadmap. This document clearly presents the country's development vision and priorities, which are divided into three main strategic axes, namely: (i) strengthening inclusion and social harmony and guaranteeing peace; (ii) boost job creation by building on the strengths of the economy and (iii) modernize the country and strengthen its structures. Beyond the national vision and priorities, each sector of the economy has its own development priorities that are grafted onto the national framework. These priorities are defined as sectoral operational policies. The issue of climate change, on the whole, is now included in national development policies. Despite the efforts made, it is clear that the degree to which the problem is taken into account in the policies initiated by the Government varies greatly from one sectoral policy to another.</p> <p>the other, with levels of execution in general,</p>
--	--	---

		weak.
b.	Good practices and experience related to the preparation of the Nationally Determined Contribution	<p>The revised NDCs capitalized on the analytical capabilities, participatory practice, experience, tools, and knowledge base that were created even before the initial NDCs, maintained and enhanced under the 4CN and 2BUR. Target setting was well informed by an existing robust and comprehensive GHG inventory.</p> <p>In addition, the revised NDCs integrated sustainable development into its P&Ms, quantifying the link between sustainable development and climate change mitigation. More specifically, with regard to the economic and environmental dimensions.</p> <p>Finally, the revised NDCs also include a regional dimension.</p>
c.	Other contextual aspirations and priorities recognized upon accession to the Paris Agreement	<p>A commitment to reduce GHG emission levels nationally will require cleaner technologies, expertise, and financing.</p> <p>Technology: The need for new innovations is rooted in the need to be more efficient and produce from cleaner technologies. The availability and transfer of technologies that are environmentally friendly and support low-carbon and climate-resilient development are paramount. As LDCs, these opportunities are often not easily accessible and the spirit of the Paris Agreement would therefore help foster North-South and South-South cooperation.</p> <p>Expertise: The integration and transformation of new ideas and technologies in the economy, society and the environment will require some capacity building for their appropriate applicability and dissemination.</p> <p>Financing: Technology transfer and capacity building cannot take place without sufficient financial resources to undertake the transition. As a heavily indebted poor country (HIPC) and highly vulnerable to the impact of climate change, it is important to find the right balance to build the country's resilience and implement the necessary adaptation and mitigation measures, while meeting the country's daily needs. The steps needed to make the transition are costly.</p>
b)	How the Party preparing its nationally determined contribution has been informed by the results of the global stocktake, in accordance with Article 4, paragraph 9, of the Paris Agreement	<p>Togo participated in the Talanoa Dialogue in 2018, which generated political momentum for enhanced climate action, including by calling on Parties to update their NDCs. In addition, the country has joined the High Ambition Coalition of countries determined to achieve their climate ambition by 2020. The preparation of the revised NDCs was in line with the recommendations of the Talanoa Call to Action and the High Ambition Coalition, taking into account national circumstances.</p>

c)	Each Party with a Nationally Determined Contribution under Article 4 of the Paris Agreement that consists of adaptation actions and/or economic diversification plans leading to mitigation co-benefits in accordance with Article 4(7) of the Paris Agreement to submit information on:	
(i)	How the economic and social consequences of the response measures summer Taken in the development of the Assessed contribution at National level	National and regional stakeholder consultations helped to take into account the social, economic and environmental impacts of national mitigation actions by integrating the data collected into the assessment tools when developing the revised NDCs.
(ii)	<p>Projects measurements and activities Specific at put in work for contribute the Co-mitigation benefits, including Understood information on adaptation plans that also produce some Co-benefits mitigation, which can cover but without there key sectors, Such that energy, the resources Water resources resources Coastal As well Human and planning Urban agriculture and forestry; and actions from diversification economical, which can cover but without there areas such as that the manufacture and industry, energy and mining, transport and communications th e construction, tourism, real estate, agriculture and</p>	<p>ENERGY sector :</p> <ul style="list-style-type: none"> - Promotion of electricity production from renewable energy sources in Togo - Continuation of the electrification for all policy – Extension of the network and deployment of decentralized systems to achieve 100% electrification, supported by the establishment of the Electricity for All Fund; - Increase in electricity generation, transmission and distribution capacity – Development of sustainable and reliable generation capacities, particularly in solar and hydropower, and corresponding strengthening of the transmission and distribution network (in synergy with the extension of the internet network); - Increase the share of renewable energies in energy production to 50% by 2025 - Increase the share of electric vehicles in the acquisition of new vehicles to 3% by 2025 - Extension of the rural road network – Construction of 4000 km of rural roads targeting agricultural areas with high export potential in order to connect farmers to the market; - Construction of the Unity Highway – Acceleration of the RN1 development project linking the productive hinterland to the agglomeration of Lomé and the port - Exemption from taxes on new vehicles - Increase the utilization rate of improved cookstoves from 40% in 2020 to 80% in 2030 - Increase the share of charcoal produced with improved techniques from less than 1% in 2020 to 45% in 2030 - Increase the share of the population using biogas for cooking to 4% in 2025 and to 12% in 2030 in the urban; to 6% in 2025 and 15% in 2030 in rural areas - Increase the share of the population using briquettes to 15% in urban areas and 10% in rural areas by 2030 - Increase the share of the population using LPG to 35% in urban areas and 8% in rural areas by 2030 <p>PIUP Sector :</p> <ul style="list-style-type: none"> - Distribution of gas recovery devices-F

	fishing	- Enhanced refrigeration technician capacity to reduce handling losses
--	----------------	--

		<ul style="list-style-type: none"> - Development of the fluorinated gas treatment and recycling sector - Promotion of the import of alternative refrigerants such as; propane (R290); Isobutane(R600a) used for freezers; refrigerated display cases and ice cream dispensers; R448A (HFC-HFO); R455A (HFC-HFO) as a replacement for R404A - Promotion of the construction of private and public buildings with thermal insulation materials - Tax exemption on new vehicles <p>AFOLU Sector</p> <ul style="list-style-type: none"> - Integrated development of the agricultural sector through the implementation of an effective strategy for the sustainable management of cropland; - Promotion and sustainable management of hydro-agricultural, hydro-pastoral and agricultural development and water supply works; - Organization of value chains: Organize the value chains for all major crops up to the processing and marketing chain of agricultural products and by-products; - the modernization of the livestock subsector through the increase of livestock productivity beyond the growth and natural development of herds, the establishment of livestock product processing units, genetic improvement for cattle breeding performance, the introduction of breeding breeders into the traditional system, the intensification of fattening and the strengthening of market access for the marketing of products breeding, etc.; - Support for reforestation for fodder with the introduction of fodder trees on farms with a view to the sustained production of quality fodder; - Restoration of existing forest landscapes through the promotion of the restoration of natural forests, fragile ecosystems and the conservation of biodiversity, by giving priority to support for projects related to territories already organized (protected areas, community or village forests, sacred sites), by limiting the fragmentation of forest massifs and by maintaining the connection of natural habitats; - Improvement of sustainable land management for the strengthening of carbon sinks and carbon sequestration through "massif development plans" promoted by private forests or community forests or "territorial forest charters" or poles of rural excellence; - Development of urban forestry through the establishment of urban plantations, the promotion and creation of green spaces; - Promotion of the processing of forest products and non-timber by-products and promotion of value chains and market access for
--	--	---

		<p>processed forest products;</p> <ul style="list-style-type: none"> - Strengthening participatory wildland fire control to contribute to carbon storage, reducing the current rate of deforestation and the impact of wildland fires, which are a source of carbon emissions into the atmosphere <p>Waste sector :</p> <ul style="list-style-type: none"> - Togo Water and Sanitation Project (PEAT1&2): development of a landfill site (CET) in Lomé and development of final landfills, implementation of a household waste collection system (OM), waste recovery, construction of latrines, extension of the drinking water distribution network in the cities of Tsévié, Atakpamé Sokodé, Kara and Dapaong
5	Assumptions and methodological approaches, including those for estimating and accounting for anthropogenic greenhouse gas emissions and, where appropriate, removals:	
a)	Assumptions and methodological approaches used to account for anthropogenic greenhouse gas emissions and removals corresponding to the Party's nationally determined contribution, in accordance with paragraph 31 of decision 1/CP.21 and the accounting guidance adopted by the CMA	<p>Togo accounted for its anthropogenic GHG emissions and removals using the 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories, the 2006 IPCC Software, and the 2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories for Wetlands.</p> <p>Togo also relied on:</p> <ul style="list-style-type: none"> • <i>IPCC Good Practice and Uncertainty Management Recommendations for National Inventories (GPG 2000)</i> • <i>IPCC Good Practice Recommendations for LULUCF (GPG LULUCF 2003)</i>
b)	Assumptions and methodological approaches used to report on the implementation of policies and measures or strategies in the Nationally Determined Contribution	<p>The quantification of the level of GHG emissions in the 2030 mitigation scenario is based on the following assumptions:</p> <ul style="list-style-type: none"> • In the transport category, the improvement and extension of road infrastructure (underway and planned in the Government Roadmap 2025) and the promotion of low-emission public transport will reduce the final energy intensity by 10% for motorcycles and 20% for cars and trucks; • In phase 1 of the HCFC Phase-out Management Plan (HPMP) project, 26% of refrigeration technicians were trained; Thus, according to the axes of orientation of the second phase of this project, which are similar to the axes of phase 1; 79% of refrigeration technicians will be trained by 2030; • In phase 1 of the HCFC Disposal Management Plan (HPMP) project, 3.4% of refrigeration technicians received recovery devices; thus, according to the axes of orientation of the second phase of this projects that are similar to the axes of phase 1; 9,4%

		<p>refrigeration technicians will receive recovery devices by 2030;</p> <ul style="list-style-type: none"> • In phase 1 of the HCFC Phase-out Management Plan (HPMP) project; 3 structures with large refrigeration installations have benefited from 70 split air conditioners based on R-290, which is an alternative F-gas with a low global warming potential; on this basis, phase 2, which will have the same orientations as those of phase 1, will reduce the import of HFCs by 5%/year through the component: Distribution of alternative F-gases to structures with large refrigeration facilities; • In Togo; non-used fixed refrigeration equipment at the end of its life cycle contains 55% of F-gases and is sold to scrap metal companies without treatment; the establishment of a recycling sector with a treatment capacity of 5 tonnes of F-gas per year will make it possible to recover 50% of it/year; • The construction of at least 100 green buildings using fewer air conditioners by 2030 will reduce the import rate of F-gases by at least 2%. • The Togolese government's continued efforts in reforestation would increase the forest cover rate from 24.24% to 30%, i.e. an increase of about 5% in the forest area and reforested land by 2030; • The implementation of actions to combat vegetation fires and measures to protect forest ecosystems will contribute to a 5% reduction in the area of vegetation burned by 5%; • Efforts to protect forest formations and respect for land use will contribute to reducing deforestation and limiting the conversion of forest land to agricultural land or other forms of land use; • The promotion of alternative sources of domestic energy and the popularization of improved stoves will reduce the use of wood energy and the CO₂ and other GHG emissions related to this form of energy; • In the agriculture subsector, many initiatives have been undertaken in recent years and aim to promote the transformation of 5% of manure and agricultural residues into compost (organic fertilizer) and/or biogas, thus resulting in a 3% reduction in the use of chemical fertilizers and the intensification of the use of organic fertilizers; • The implementation of the new strategic orientations in the cereal products production sector will contribute to the reduction of the area of irrigated rice fields by 3% for the promotion of rainfed rice cultivation; • Recovering 12% of urban solid waste by 2030
--	--	---

		<p>(i.e. 100000 tonnes) by composting in the main cities per year;</p> <ul style="list-style-type: none"> Recover by 2030, 80% of the biogas produced by the Lomé landfill site, per year into electrical energy for the needs of the site; Reduce the amount of waste destined for burning by 80% through improved waste collection and the creation of new CETs in secondary cities; Recover 5% of domestic wastewater in rural areas into biogas by 2030 through the installation of biogas septic tanks <p>The methodological approach used is that of the LEAP-IBC.</p>
c)	<p>The case Appropriate information on The manner whose the Party will hold account methods and existing guidance under the Convention for accounting anthropogenic emissions and removals, in accordance with Article 4, paragraph 14, of the Paris Agreement, as applicable</p>	<p>In accordance with paragraphs 13 and 14 of Article 4 of the Paris Agreement, Togo conducted an AQ/QC of the input data to ensure that there were no omissions or double counting.</p>
d)	<p>Methodologies and IPCC parameters used to estimate emissions and anthropogenic removals of greenhouse gases</p>	<p>The 2006 IPCC guidelines, good practice guidelines and the IPCC database were used to estimate anthropogenic GHG emissions and removals</p>
e)	<p>Sector, category or activity-specific assumptions, methodologies and approaches, in line with IPCC guidance, as appropriate:</p>	
(i)	<p>Approach to Addressing Emissions and subsequent removals of Natural disturbances on managed lands</p>	<p>GHG emissions and removals from natural disturbances, if any, will be accounted for in accordance with the prescribed 2006 IPCC guidelines.</p>

(ii)	Approach used to account for emissions and removals of harvested wood products	GHG emissions and removals from harvested wood products, if any, will be accounted for in accordance with the prescribed 2006 IPCC guidelines.
(iii)	Approach used to address the effects of age class structure in forests	NA
f)	Other assumptions and methodological approaches used to understand the Nationally Determined Contribution and, where appropriate, estimate the corresponding emissions and removals, including:	
(i)	How benchmarks, baselines, including, where applicable, sector, category or activity-specific baselines, are constructed, including, for example, key parameters, assumptions, definitions, methodologies, data sources and models used	<p>To quantify the level of GHG emissions in the projected 2030 Reference Case, the following assumptions were made for the drivers of emissions growth:</p> <ul style="list-style-type: none"> • The government will not take any other measures to combat GHG emissions in the socio-economic sectors of development other than those already underway; • Behavioural factors are considered to be constant throughout the projection period;
(ii)	For Parties whose assessed contributions to the level contain Components other than gases at effect from Greenhouse, information on Assumptions and methodological approaches such as the relation with these components, the f applicable	The methodological approach used for short-lived climate pollutants (black carbon, PM2.5 and PM10) is that of the LEAP-IBC.
(iii)	For climate forcings included in Nationally Determined Contributions not covered by the IPCC guidelines, information on how climate forcings are estimated	NA
(iv)	Other technical information, as needed	NA

g)	The intention to use voluntary cooperation under Article 6 of the Paris Agreement, if applicable	Togo recognizes the important role of market-based international cooperation in contributing to the mitigation of GHG emissions and the promotion of sustainable development. Togo will continue to explore the potential of bilateral, multilateral and international cooperation between the market-oriented regional market, including in the context of
		Article 6 of the PA, which can facilitate, accelerate and enhance technology development and transfer, capacity building and access to financial resources that support Togo's sustainable transition to low-emission and climate-resilient growth.
6	<i>How the Party considers its Nationally Determined Contribution to be fair and ambitious in light of its national circumstances:</i>	
a)	How the Party considers its nationally determined contribution to be fair and ambitious in light of its national circumstances	<p>Following the Talanoa Call to Action, launched by the Presidents of COP 23 and COP 24, Togo has made its revised NDC (2021) more ambitious than the NDC (2015) (i) by articulating the 2030 GHG emission reduction targets compared to 2010 levels.</p> <p>National commitments are well in line with the 2050 emissions trajectories that correspond to the long-term objective of the Paris Agreement. It is also important to note that the changing nature of a country's situation should be reflected in the equity review through the following indicators:</p> <ul style="list-style-type: none"> • Responsibility reflected in past and current GHG emissions. • Ability to invest in appropriate mitigation measures (ability to contribute to solving the problem of climate change) • Mitigation potential and costs
b)	Equity considerations, including fairness thinking	It should be noted that equity considerations from the national perspective encompass a variety of issues and that no single single indicator can accurately reflect equity or an equitable distribution of countries' efforts globally.
c)	How the Party has addressed Article 4, paragraph 3, of the Paris Agreement	<p>The revised 2021 NDCs propose an unconditional reduction of 20.51% compared to the baseline scenario in 2030 compared to 11.14% for the current 2015 NDCs.</p> <p>The overall contribution (unconditional and conditional combined) of the revised NDCs (2021) is a 50.57% reduction in GHG emissions compared to the baseline scenario in 2030 compared to 31.14% for the current NDCs (2015).</p>

d)	How the Party has addressed Article 4(4) of the Paris Agreement	Another issue that demonstrates the country's increased ambition is the application of an absolute economy-wide emission reduction target (in line with Article 4(4) of the Paris Agreement), which ensures that the targets are met in a relevant, comprehensive, consistent, transparent and accurate manner.
e)	How the Party has dealt with Article 4(6) of the	NA
	The Paris Agreement	
7	<i>How the Nationally Determined Contribution contributes to the achievement of the objective of the Convention as set out in Article 2 of the Convention:</i>	
a)	How the Nationally Determined Contribution contributes to the achievement of the objective of the Convention as set out in its Article 2	National commitments are well in line with the 2050 emission trajectories that correspond to the long-term objective of the Paris Agreement, thus contributing to the stabilization of GHG concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system, and sustainable development, in accordance with Article 2 of the Convention.
b)	How the Nationally Determined Contribution contributes to the achievement of Articles 2(1)(a) and 4(1) of the Paris Agreement	Togo's contribution through its NDCs is in line with global ambitions to limit the temperature to 2°C and consistent with Togo's Sustainable Development Goals

4.1. CONTEXT NATIONAL FROM ADAPTATION THE CLIMATE CHANGE

4.1.1. National situation

Togo's economy is dominated by agricultural activities (nearly 40% of GDP) that are highly dependent on climatic conditions. Other development sectors such as energy, water resources, the coastal zone, human settlements and health, forestry and other land uses also remain highly vulnerable.

It is in this sense that Togo committed in the initial NDCs to contribute to the fight against climate change, to strengthen the resilience of systems and means of production in accordance with its National Action Plan for Adaptation to Climate Change (NAPAA) developed in 2008. In 2016, the country adopted a National Climate Change Adaptation Plan (PNACC) which confirms its commitment to strengthening the adaptive capacity of populations to the adverse effects of climate change.

4.1.2. Institutional, legal and political arrangements

With regard to international commitments relating to the environment and adaptation to climate change, Togo has ratified the three conventions of the Rio generation: (i) the United Nations Framework Convention on Climate Change (UNFCCC) (8 March 1995); (ii) the Convention on Biological Diversity (CBD) (04 October 1995); and (iii) the Convention to Combat Desertification (UNCCD) (15 September 1995). At the national level, adaptation is part of the national environmental policy, the forest policy statement, the national strategy for sustainable development, the framework law on the environment and laws relating to forestry, water, health, hydrocarbons and merchant marine codes.

At the institutional level, several actors are involved in strengthening adaptation to climate change in Togo. The main actors in this system are: (i) the Ministry of Environment and Forest Resources with all its branches, (ii) the National Commission for Sustainable Development composed of representatives of public and private institutions, local authorities, NGOs and other legal entities, (iii) the National Committee on Climate Change, which is an information framework, consultation and monitoring of the implementation of the national policy on climate change, (iv) the Interministerial Committee for Monitoring the Implementation of NDCs and (v) the multidisciplinary team

climate change. These actors work together with other stakeholders such as Togo's public and private universities and the major institutions of the republic (Presidency of the Republic, the Prime Minister's Office, the National Assembly, etc.).

4.2. ANALYSIS OF THE IMPACTS, RISKS AND VULNERABILITIES OF PRIORITY SECTORS

Since 2014, the scenarios developed show that climate change is a real concern for Togo and that current and future trends will lead to harmful consequences in the absence of appropriate measures. With an economy essentially focused on agriculture, climatic hazards make the Togolese population as a whole vulnerable.

Climate variability in Togo leads to food and nutrition insecurity, degradation of forest resources, and difficult access to energy, water resources and quality health care. Indeed, Togo is confronted with a very accentuated spatio-temporal climate variability. Temperatures will increase by a maximum of 1.2°C in 2020, an increase of 20% compared to 2012. Rainfall is decreasing with amplitudes ranging from 15 mm to 98 mm of rain. This leads to climate risks that influence all development sectors and are manifested in floods, drought, high heat, seasonal shifts, strong winds, poor rainfall distribution, land erosion and coastal erosion.

Future projections of climate variability based on rigorous IPCC methods will look like this for Togo. If the country remains in the stabilization of emissions (RCP6.0) compared to 2020, temperatures will increase with a range of 0.6°C to 0.7°C in 2025 and from 2.15°C to 2.75°C in 2100. Precipitation will have deviations of -0.08% to +0.35% (2025) and -0.3% to +1.26% (2100).

On the other hand, if the country embarks on the process of reducing greenhouse gas emissions (RCP4.5), temperatures will increase by 0.66 to 0.84°C (2025) and by 1.53 to 1.96°C (2100). Precipitation will range from -0.09% to +0.39% (2025) and from -0.21% to +0.89% (2100).

4.2.1. Energy sector

4.2.1.1. Biomass energy

Wood energy represents 80% of the energy used by households and 90% of the local population uses this energy source in Togo. The potential of current wood energy will only meet 28% and 12% of demand

by 2025 and 2050 respectively. On the basis of multi-criteria analyses, the wood energy sector has an average vulnerability index estimated at 0.58 at the national level. At the regional level, the two northern regions of the country (Savanes and Kara) face a high level of vulnerability with an index between 0.6 and 0.8.

The impacts of this vulnerability on this sector are essentially the low growth and production of biomass for wood energy, the scarcity of wood energy species and the destruction of protected ecosystems far from homes that constitute refuges for most endangered species.

The vulnerability of the wood energy sector will worsen in the future. Indeed, in the event of stabilization (RCP6.0), the vulnerability index of this subsector will fall into the high class from 2075 for the whole country. If appropriate measures are not taken, there will be socio-economic repercussions such as the increase in the price of firewood and charcoal, the increase in the poverty index in rural areas, etc.

4.2.1.2. Hydroelectricity

In Togo, hydroelectric power production is exclusively provided by the Kpimé and Nangbeto dams, which are fed by large rivers. The current vulnerability of this sector is medium with an index of 0.51. In the future, his vulnerability will move to the upper class from 2075 if nothing is done. This will accentuate the current impacts of climate change, which are reflected in the reduction of the water level of hydroelectric dams, the destruction of hydroelectric structures, and the low capacity to supply energy to companies and industries.

If the integrated water resources management (IWRM) measures provided for in the sector's planning documents, as well as the renewable energy development policy, are implemented, the vulnerability index will be significantly reduced by 2025 (0.48) and 2050 (0.35).

4.2.1.3. Hydrocarbons

As Togo is not a producer of hydrocarbons, the vulnerability of this sector to climate change is not direct. It is linked to that of the wood energy sector and hydroelectricity. Thus, the decrease in the energy supply of biomass and hydroelectricity will accentuate the consumption of hydrocarbons. As Togo imports the petroleum products it needs, the hydrocarbon sector remains very sensitive to fluctuations in oil prices. In terms of impacts, there is an increase in expenditure due to an increase in hydrocarbon consumption with negative repercussions on the transport sector.

4.2.2. Agriculture, Forestry and Other Land Use Sector (AFOLU)

In Togo, the AFOLU sector is the most exposed to the effects of climate change. On a national scale, a downward trend in rainfall coupled with an increase in temperatures is forecast. Likely effects on biodiversity, species habitat, ecosystem services and agricultural production are expected in Togo. These effects are mostly related to drought, floods and the appearance of pests.

4.2.2.1. Forestry and Other Land Use (ATL) Subsector

The resulting vulnerability of the forestry and other land use subsector is 0.59 for the country as a whole, which is equivalent to a "medium" level of vulnerability. However, it is "high" for the Central, Kara and Savanes regions, and "medium" for the Plateaux and Maritime regions. This vulnerability in the TF sector is reflected in all regions of the country by:

- ❖ **The increase in natural mortality of woody trees in the natural ecosystems of Togo.** High temperatures and drought increase the intensity of fires, which are responsible for most woody mortalities in forest areas. The natural mortality rate is 8.60%, 5.41% and 5.42% respectively for the Savannah, Kara and Central regions.
- ❖ **The deterioration of the health status of woody stands.** In Togo's natural ecosystems, an average of 20 plants per hectare are attacked by parasites. According to field investigations, the high temperatures recorded in recent years explain the recurrence of attacks on woody plants by pests and parasitic plants.
- ❖ **The windthrows.** The estimated damage caused by strong winds to forest areas is estimated at 9 feet/ha in natural ecosystems.
- ❖ **Low regenerative capacity.** With climate change, wildland fires are more violent, regeneration is suppressed or delayed. In the forest landscapes of protected areas, less than 30% of the potential regeneration installed survives the fires that become more and more violent with the CC.
- ❖ **Land use.** The drying of the climate, the increase in temperatures and evapotranspiration intensify soil leaching and laterization, while heavy rains increase soil erosion, especially in rugged environments. This leads to further land degradation. In addition, extensive slash-and-burn agriculture leads to a reduction in forest cover.

Highly exposed to climate change, the TF sector suffers impacts such as loss of forest cover, loss of biodiversity and ecosystems

the disappearance of certain forest species and the low productivity of mangroves.

In the future, the vulnerability of this subsector will worsen at the national level by 2050 with an index of 0.63 corresponding to high vulnerability. This situation will be observed in all regions except in the plateaus, which will remain in the middle class. In this context, outside the Atakora range, all forest ecosystems in Togo will be very exposed to lower rainfall and higher temperatures, with an aggravation of impacts related to climatic hazards.

4.2.2.2. Sub-sector of agriculture, livestock and fisheries

The major disruptions to agriculture, livestock and fishing in all economic regions of Togo are climatic hazards. These are the modification of the season, irregular rainfall with pockets of drought, the increase in temperature, floods and pest attacks. These hazards make this subsector very vulnerable with the repercussions on food security (crop losses).

❖ Vulnerability and impacts of the agriculture subsector

The resulting vulnerability of the crop production sector is generally high for the country as a whole, and particularly in the savannah region. The impacts of this vulnerability are reflected in yield declines estimated over the last ten years at between 30% and 51% for the main food crops.

Indeed, the pockets of drought observed caused yield losses of 1.3 t/ha, 1.0 t/ha and 0.7 t/ha respectively for maize, rice and yam. Pests, in particular the fall armyworm, caused losses ranging from 0.5 to 0.95 t/ha for maize. In 2020, the total area of flooded food crops is 6902 ha with production losses estimated at nearly 9000 t.

Currently estimated at 0.70, the national vulnerability index of the agriculture subsector will remain high with a slight increase to reach the value of 0.75 by 2050. This will accentuate the impacts on the agricultural sector with the disruption of the agricultural calendar, the devastation of crops by pests (armyworms, desert locust whiteflies), the appearance of new invasive species, the disappearance of certain cultivars, the decline in agricultural yields, the erosion of arable land, etc.

❖ Vulnerability and impacts of the livestock subsector

In all regions of Togo, poultry farming is a widespread activity in rural areas. This type of family farming, which occupies women, is less

demanding in water. However, the breeding of small ruminants and large livestock, which is widely practised in the savannah and plateau regions by sedentary herders and transhumant herders, is demanding with regard to the availability of natural resources, particularly water. With the prolonged drought trend in recent decades, there has been a recurrence of conflicts between herders and farmers, which accentuates vulnerability in the livestock subsector.

In the savannah region, there is a decimation of livestock due to lack of water and fodder. In addition, the proliferation of epizootics such as anthrax, African swine fever and avian influenza in the regions is linked to the high temperatures that are increasingly being felt. This situation affects national livestock production, which covers less than 50% of the population's needs.

❖ **Vulnerability and impacts of the fisheries subsector**

Fishing is concentrated on the coast, the lagoon complex of southern Togo, the Nangbéto basin, and along the Mono and Oti rivers. With the drought and the high temperature, the fishing sector becomes more vulnerable. Thus, the coverage rate of fishery products increased from 35% in 2015 to 29% in 2017. High temperatures, flooding and early low water levels in rivers make spawning areas sensitive, thus reducing the availability of fish. As with livestock farming, the future vulnerability of the fisheries sub-sector may increase, with an accentuation of impacts, in particular, the decrease in catches, the siltation of watercourses and the disappearance of certain fish species. These impacts will also affect the government's efforts in aquaculture development with the scarcity of fingerlings.

4.2.3. Water Resources Sector

High temperatures, irregularity and changes in the distribution of rainfall are reflected in a decrease in water stocks in groundwater and surface water. This situation makes the water sector very vulnerable at the national level, especially in the savannah region. Based on the Standardised Precipitation Index (SPI), the years between 1961 and 2018 are dominated by moderate to severe drought in the Kara and Maritime regions. Currently, the impacts associated with climate change in the water sector are the early drying up of wells and streams, silting up of rivers, saline intrusion in the terminal continent, and water pollution.

Simulations indicate that in the event of stabilization (RCP6), the two major river basins (Oti and Mono) and the lagoon complex of Togo will be affected in different ways by 2030. Indeed, water stocks (surface and groundwater) will increase from 7 to 28 million cubic meters in the Mono basin. However, they will decrease by

60 to 500 million and 120 to 750 million cubic meters respectively in the Oti and Lake Togo basins.

If action is not taken, the problems of availability and accessibility of drinking water for the population will increase and the government will have difficulties in ensuring easy, universal and equitable access to drinking water (SDG6 Target 1) and improving its quality by reducing pollution (SDG6 Target 3). The impacts will worsen with the lack of drinking water in households and the risk of conflicts over water supply sources.

4.2.4. Human Settlements and Health Sector

Human settlements are becoming increasingly vulnerable in Togo. In 2020 and 2021, the overflow of rivers in the Oti and Mono basins caused enormous material damage with loss of human lives. We are witnessing the weakening and collapse of human facilities and infrastructure (roads, markets, health centers, homes, schools, electricity and telecommunications, etc.) which will become more pronounced in the future.

In terms of health, high heat and flooding lead to the outbreak and proliferation of the germs of certain diseases such as malaria, meningitis, typhoid fever, cholera and respiratory diseases that were once localized and controlled. So far, the northern regions (Savannah and Kara) are the most vulnerable. However, the simulation shows that in the future, the risk of these diseases could spread southwards with an aggravation in the northern regions. The mortality rate is expected to increase and the vulnerability of the elderly, pregnant women, people with disabilities, people living with HIV/AIDS and children will become increasingly high.

4.2.5. Coastal area

The phenomenon of erosion of the Togolese coast, which has been the subject of scientific observations since 1964, has resulted in a modification of the coastline over the years. Storms and natural cycles of undulations linked to climate change aggravate the advance of the sea towards human settlements on land, materialized by the retreat of the beach by an average of 10 m per year. This erosion threatens 42% of the national population, industrial units, economic and port activities, tourist remains, fishing villages.

In the future, all climate scenarios indicate an amplification of this phenomenon because the amplitude of sea level rise will increase from 11.35 cm in 2025 to 62 cm in 2100. This situation will aggravate the current impacts of the complete disappearance of some of the coastal villages, the considerable loss of land and coastal ecosystems, and the destruction of seaside infrastructure

(roads, houses, hotels, etc.), the disruption of economic activities and the destruction of spawning areas.

4.3. PRIORITIES, OBJECTIVES AND ADAPTATION MEASURES

4.3.1. Priorities

The following diagram represents the strategic map that will strengthen the adaptation capacities of populations in all the priority sectors broken down here into axes. The objectives defined stem from the national priorities reflected in the PNACC and other national and sectoral planning tools (Figure 5). The implementation of activities to achieve these objectives is based on the promotion of the principles of equity, gender, cooperation, research and transparency.

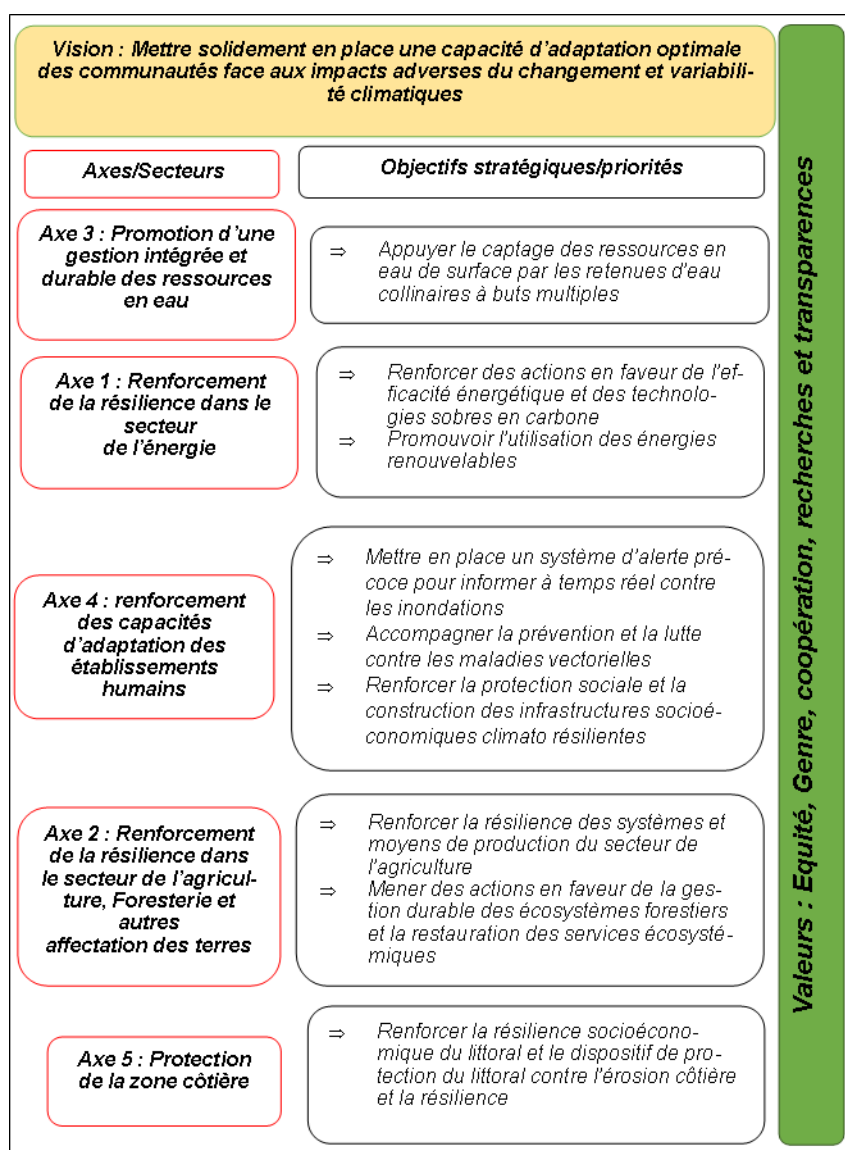


Figure 5: Togo Adaptation Strategy Map

4.3.2. Adaptation measures/Co-benefits for mitigation

To strengthen the resilience of populations, adaptation measures, including those that result in beneficial effects in the field of mitigation, are identified in the priority sectors (Table 4).

The various measures identified in Togo incorporate nature-based solutions that can contribute to mitigation while strengthening adaptation to climate change. These co-benefits include increased carbon sequestration potential, crop capacity to cope with water stress and pest attacks, reduced flood risk and pathogen proliferation.

These measures identified respond to a number of needs that persist in terms of strengthening the resilience of communities to the effects of climate change despite the efforts undertaken by the State (Table 4).

In addition, identified actions will contribute to the implementation of frameworks to strengthen adaptation at the national and international levels.

At the national level, the various adaptation measures will essentially contribute to the operationalization of the National Development Plan. They are also in line with the Government's 2025 roadmap and will contribute primarily to project 35 (response to the main climate risks) and project 36 (green mobility programme). They also target projects 2 and 3 (implementation of the single social register, implementation of universal health coverage), project 5 (continuation of the electrification policy for all), project 6 (increase in access to drinking water and sanitation), projects 12, 13, 14 and 15 (improvement of agricultural yields, extension of the rural road network, acceleration of the MIFA, expansion of the Kara agropole in partnership with the private sector).

At the international level, the adaptation measures identified are intended to contribute to the achievement of the Sustainable Development Goals (SDGs), in particular SDG2, which aims to ensure food and nutrition security; SDG3 on good health and well-being; SDG5, which aims to ensure the empowerment of all women; SDG8, which aims to ensure economic growth through decent work, and SDG15, which aims to preserve and restore terrestrial ecosystems.

Table 4: Priority adaptation measures by sector

Sectors/	Priorities	Priority adaptation measures	Needs/Goals	Contribution to Executives	
				National	International
Axis 1 : Building resilience in the energy sector	Strengthening actions in favour of energy efficiency and low-carbon technologies	• Promotion of biofuels	• Supply populations in alternative energy such as domestic gas	PND	Target 1 SDG 13
		• Research of TFPs for the production of new and renewable energies		Expected effect 2.5 and 3.7	
		• Sustainable management of traditional energies		FDR 2025	
		• Promotion of plantations for wood energy		Project 35	
	Promoting the use of renewable energies	• Development of renewable energies	• Facilitating the development of renewable energy for men, women, girls and vulnerable people	PND	Target 1 SDG 13
		• Tax Facilitation for the Import of Renewable Energy Equipment		Expected effect 2.5 and 3.7	Target 2 from SDG 7
		• Development of hybrid mini-grids for rural electrification		FDR 2025	
		• Promotion of high-performance and climate-resilient varieties		Project 35	Target 1 SDG 13
		• Strengthening Integrated Soil Fertility Management (IPFM)		PND	
		• Definition/development of transhumance corridors and areas and grazing and watering areas		Expected effect 2.1 and 2.2	Targets 3, 4 and 5 of SDG2
Axis 2 : Building resilience in the sector from Agriculture	Strengthening the resilience of agricultural systems and means of production	• Reducing crop loss and damage caused by floods, pockets of	FDR 2025		
			Project 12		

	animals	Droughts	and pests.		
	<ul style="list-style-type: none"> • Strengthening the agricultural insurance system in the face of climate risks • Construction and/or rehabilitation of water reservoirs for micro-irrigation • Mastery from Water in rice and vegetable production • Popularization some Good agro-ecological practices • Fight against the Plagues and epizootics • Strengthening early warning and health surveillance systems • Strengthening the resilience of agricultural processing units 				
Leading actions for the sustainable management of forest ecosystems and the restoration of ecosystem services	<ul style="list-style-type: none"> • Support for the development of mapping of climate-sensitive areas • Reforestation and protection of fragile ecosystems • Promotion of urban forestry • Development of community forestry sensitive to 	<ul style="list-style-type: none"> • Promoting traditional practices for the protection of forest resources and the environment • Increase the availability of quality seeds and seedlings • Reducing the degradation of natural ecosystems • Strengthening services 	PND Expected effect 3.12 FDR 2025 Project 35	Target 1 SDG 13 SDG15 Targets 1 to 9	

		gender	Ecosystem		
		<ul style="list-style-type: none"> Establishment of sustainable and participatory gender-responsive management of key forest resources Restoration and enhancement of degraded natural forests and protected areas Capacity building of actors involved in the TF sub-sector without leaving anyone behind 			
Axis 3: Promotion of a Integrated and sustainable water resources management	Supporting the abstraction of surface water resources by multi-purpose hill water reservoirs	<ul style="list-style-type: none"> Improving knowledge of water resources Protection of water resources Improving water management in the agricultural sector Rainwater conservation and wastewater recycling Improving groundwater management Improving access to safe drinking water Improvement some hygiene and water quality practices Study of the water potential of the coastal sedimentary basin and its resilience to CC 	<ul style="list-style-type: none"> Increase the availability and accessibility of all water resources, especially in rural areas Ensuring the restoration and maintenance of watersheds and wetlands Strengthen the capacities of institutions involved in water resources management. 	PND Expected effect 3.6 FDR 2025 Project 6	SDG 6 Targets 1-6 Target 1 SDG 13

<p>Axis 4 :reinforce Adaptabil ity human settlements</p>	Setting up an early warning system in case of risks	<ul style="list-style-type: none"> Disaster Risk Protection Cartography some Areas at risk Improved management and exploitation of risk areas 	<ul style="list-style-type: none"> Strengthening the system of security of the population against flooding and other Natural disasters 	<p>PND Expected effect 3.12</p> <p>FDR 2025 Project 35</p>	Targets 1 and 3 of SDG 13
	Supporting the prevention and control of vector-borne diseases	<ul style="list-style-type: none"> Strengthening the regulatory framework for health and the environment Provision of adequate health infrastructure in rural areas Protection of populations against Covid 19 and other pathogens 	<ul style="list-style-type: none"> Improving access to health care for populations Reduce mortality rates from infectious diseases and other pathogens 	<p>PND Expected effect 3.2</p> <p>FDR 2025 Projects 3 and 4</p>	<p>Target 1 SDG 13</p> <p>SDG3 Targets 1 and 7</p>
	Strengthening social protection and the construction of Climate-resilient socio-economic infrastructure	<ul style="list-style-type: none"> Implementation of urban planning tools Reinforcement sanitation infrastructure in urban centres Sustainable management of urban waste Development some Urban centres Development harmonious and balanced spatial structure of urban centres 	<ul style="list-style-type: none"> Strengthening the economic resilience of the population, especially women and youth 	<p>PND Expected effect 3.6 and 3.9</p> <p>FDR 2025 Project 35</p>	<p>Target 1 SDG 13</p> <p>SDG1 Targets 4 and 5</p>



- Development some AGR

Axis 5: Protection of the coastal zone			climato	Resilient	for				
				Women					
	Initiating IGAs for communities		•	Capacity building of marine fisheries stakeholders	•	Ensuring the safety of coastal populations against flooding and coastal erosion	PND	SDG1 Targets 4 and 5	
	arket gardeners and fishermen in the coastal area	m	•	Initiation of IGAs for market gardening and fishing communities in the coastal zone	•	Improving the incomes of vulnerable populations in the coastal zone	Expected effect 3.5, 3.12	Targets 1, 2 and 14b	
						Reducing pollution and nuisances in the coastline	FDR 2025	from	
							Project 35	m	
								SDG14	
								Target 1	
								SDG 13	
	Strengthen the system of coastal protection against coastal erosion (natural and artificial)		•	Improvement of the regulatory framework and knowledge management of the phenomenon of coastal erosion	•				
			•	Carrying out structuring investments to protect the coast					
			•	Rehabilitation of coastal vegetation formations such as mangroves					

4.4. STATUS OF IMPLEMENTATION OF ADAPTATION MEASURES

4.4.1. Progress on gender mainstreaming and inclusion in adaptation in Togo

Since the initial NDCs, Togo has made efforts in the implementation of adaptation actions through development projects and programs that take into account gender and inclusion.

In Togo's initial NDCs, issues related to legal and institutional frameworks as well as gender were not explicitly addressed. However, progress in implementing adaptation has taken these aspects into account. The following table provides a summary of the main adaptation efforts in Togo (Table 5).

Table 5: Togo's Adaptation Efforts

Sectors	Measurements in the initial NDCs	Progress
Energies	Development of some renewable energies (to reach 4% of the energy mix)	<ul style="list-style-type: none"> Establishment of four mini-photovoltaic solar power plants with a total capacity of 600 KW operational; Solar electrification of 314 health centers and equipping 122 health centers with solar water heaters;
	Sustainable management of traditional energies (firewood and charcoal)	<ul style="list-style-type: none"> Training of 1,500 charcoal burners on the Casamance millstone and provision of Casamance millstone equipment to the cooperatives Establishment of more than 200 ha of reforestation for wood energy 100 cooperatives trained on wood-energy forestry entrepreneurship and sustainable management of natural resources Promotion and dissemination of about 20,000 wood-fired stoves and improved stoves for the benefit of households 15,000 improved stoves and 25,000 biogas kits distributed, Promotion of the use of gas through awareness-raising with the aim of reaching 24,000 users, including 18,000 women
	Implementation of electrical energy saving strategies	
	Development of hybrid mini-grids for rural electrification	<ul style="list-style-type: none"> Electrification of more than 53,000 households by individual solar kits or solar photovoltaic nanogrids in December 2020 Installation of 2,000 solar irrigation systems; 500 solar kits in schools; 500 solar pumping systems for drinking water supply (DWS) and 12,000 solar street lights.
	Promoting low-carbon modes of transportation and new clean technologies in the building sector	<ul style="list-style-type: none"> Tax relief on new and hybrid vehicles
Agriculture	Promotion of some Varieties Climate-Resilient Models	<ul style="list-style-type: none"> Extension of short-cycle varieties

	Strengthening Integrated Soil Fertility Management (IPFM)	<ul style="list-style-type: none"> • Distribution of 300 micro-irrigation kits, establishment of 50 ha of market gardening with GIFERC products • Installation of stone bunds for integrated fertility management • Support for community restoration of degraded land in the Nangbani region to improve the resilience of local agriculture to climate change • Promotion of good agricultural practices for climate change resilience and sustainable land management in the Avé prefecture
	Definition/development of corridors and transhumance areas	<ul style="list-style-type: none"> • A transhumance map made
	Construction and/or rehabilitation of water reservoirs for micro-irrigation and livestock watering in rural areas in all regions	<ul style="list-style-type: none"> • Installation of 15 pastoral water points • Development of 10 small water reservoirs
	Support for the development of mapping of climate-sensitive areas	<ul style="list-style-type: none"> • Training of 2,863 PO members in impact assessment and vulnerability to CC
	Support for the dissemination of good agro-ecological practices	<ul style="list-style-type: none"> • Organization of 6 awareness-raising workshops for political decision-makers organized • Initiation of groups/cooperatives and young agricultural entrepreneurs in the prefectures of Agou and Kloto to good practices of sustainable land management
	Promotion of the rice production system that consumes very little water and induces low GHG emissions (SRI: Intensive Rice Farming System)	<ul style="list-style-type: none"> • Summary development of lowlands, soil amendment by organic manure, • Support for the sustainable management of rice-growing land in Asséré
Forestry and other assignments so	Mapping and orientation of areas of human activity adapted to each environment and natural context	<ul style="list-style-type: none"> • Participatory zoning and mapping at the village or cantonal level to target sites to be restored/developed • Restoration of more than 1000 ha of state forests

me

earths	<p>Capacity building (technical and material) of meteorological services for good forecasting and planning of activities</p> <p>Reforestation and protection of areas with fragile ecosystems (mountainsides, river banks) to combat flooding, high winds and erosion</p> <p>Promotion of the Ecology and Awareness Programme in Togolese schools</p> <p>Preparation of the national land use plan and implementation of pilot actions</p>	<ul style="list-style-type: none"> • Management of more than 6000 ha of community forests • Equipment of 9 weather stations with automatic equipment • Rehabilitation of brigades and forest tracks in protected areas. • Implementation of nearly 1000 ha of reforestation by the ODEF • Training, equipment of 175 nurserymen and production of 145,000 plants • Acquisition and distribution of 88,223 seedlings for reforestation on an area of 220 ha • Restoration of 240 ha with reforestation of 150,000 seedlings in degraded areas of protected areas • Construction and equipment of two CC research laboratories • Conducted 27 CC-related studies • Establishment of 13 agro-ecological field schools in 13 prefectures • Carrying out Togo's second national forest inventory • Installation of nearly 300 ha of cashew orchards • Support for the creation and management of nearly 50 community forests
Human settlements	<p>Strengthening sanitation and stormwater drainage in major urban centres</p>	<ul style="list-style-type: none"> • Support to local authorities in the context of sanitation and waste management • Strengthening the operational capacities of ANASAP • Creation and restoration of dams and water retention basins (13 basins restored and maintained in Greater Lomé and 1 dam under construction in Binaparba in the prefecture of Bassar) • Construction of 2300 ECOSAN-type family latrines

Development and rehabilitation of urban roads in the main urban centres	<ul style="list-style-type: none"> • Development of major roads and nearly 90,000 km of rural roads
Promotion of urban forestry	<ul style="list-style-type: none"> • Creation and maintenance of 49,556 m2 of green spaces. • Urban reforestation of the city of Lomé with 10,000 seedlings planted
Rational and sustainable waste management in urban areas	<ul style="list-style-type: none"> • Organization of waste management control missions in hospitals, industries, households and public latrines throughout the city • Construction of Monfort-type incinerators for biomedical waste in the 5 regions. • Elimination of 369 illegal dumps with 39,160 m3 of waste and disposal of municipal waste • Evacuation of urban waste from bins installed on the sides of roads through the city (28,400 m3 of urban and peri-urban waste evacuated)
Development of spatially harmonious and balanced urban centres	<ul style="list-style-type: none"> • Development, revision and implementation of master plans for development and urban planning (SDAU) • Regularization of de facto subdivisions
Strengthening the institutional and regulatory framework for health and the environment	<ul style="list-style-type: none"> • Development of a climate strategy for the health sub-sector • Strengthening the resilience of the entire Togolese population to malaria and other diseases; • Increase in the provision of integrated HIV/AIDS FP services with a percentage of SPOs offering these services reaching 91%; • Support for the improvement of health and nutritional situation in 1000 localities • Strengthening Community Health Activities in the Maritime Region
Protection against the Risks of disasters	<ul style="list-style-type: none"> • Emergency Rehabilitation of Electrical Infrastructure and Services Project (PURISE) • Census of geodetic points • Identification of new points to be built

	<p>Improving water management in the agricultural sector</p> <p>Rainwater conservation and wastewater reuse</p> <p>Improving groundwater management</p>	<ul style="list-style-type: none"> • Cartographic database of flood zones in Greater Lomé, the Maritime and Savannah regions • Disaster management maps • Integrated rehabilitation of flood-affected populations in 60 localities • Creation of dams inside • Installation of 15 pastoral water points • Development of 10 small water reservoirs • Rehabilitation of 60 boreholes and construction of 30 new boreholes; • Extension of the water supply network in large cities; • Installation of the solar pumping system on 400 human-powered water points
Coastal area	<p>Study of the water potential of the coastal sedimentary basin and resilience to CC</p> <p>Improvement of the regulatory framework and knowledge management of the phenomenon of coastal erosion</p> <p>Realization some Structuring investments to protect the coast</p>	<ul style="list-style-type: none"> • Carrying out a study on the assessment of post-harvest losses in artisanal maritime fisheries in Togo • Production and/or adaptation of long-term planning tools for marine and coastal territories • Establishment of appropriate cross-sectoral political, legal and institutional frameworks to implement guidelines and ensure sustainable development of marine and coastal areas • Creation of a ministry in charge of the blue economy • Implementation of eleven (11) community sub-projects for a total cost of 1,730,825,544 CFA francs in the coastal prefectures. All of these projects aim to reduce vulnerability and build socio-economic resilience to the impacts of climate change • Support of nearly €270,000 for the development of alternative income-generating activities for the benefit of coastal sand extraction actors. • Capacity building for 250 women market gardeners

- Development and operation of Twenty (20) hectares for market gardening on the coast
- Support for the restoration of mangrove ecosystems

4.5. TRADITIONAL KNOWLEDGE AND GENDER-RESPONSIVE ADAPTATION MEASURES

According to recent studies and field investigations, various adaptive measures have been implemented by local populations to cope with the effects of climate change, especially in the Oti basin. In the agricultural sector, the populations are praising the increase in the area sown (96.6%), agroforestry (75.9%), the treatment of livestock by veterinary services instead of traditional methods (62.1%), off-season crops and crop diversification (50.6%), the adoption of early varieties and the conservation of fodder for periods of drought (35%).

In the human settlements sector, the populations of the Oti plain carry out annual construction of straw houses according to flood periods (25%) and the construction of bait with a ceiling that serves as a support for the harvested products based on estimates of the height of the flood waters (6.5%).

In the forestry sector, as a result of the continuous degradation of their land and the disappearance of certain forest species, some communities, such as those of Tchavadè (central region), have undertaken to extend their sacred forest by fencing 100 ha all around it and enriching it with multi-use plants that are used in traditional therapy or food. These forests are historical and cultural places for the population while providing a special microclimate.

In the water sector, rural populations reduce the amount of water allocated for personal hygiene (57%) and make small holes in river beds to trap a few litres of water (10.5%). It is mainly women who are responsible for water chores and are the ones who are most involved in the application of these endogenous strategies.

In the field of energy, all the populations in rural areas resort to the use of oilcake, sawdust, palm nut shells and corn straw and sorghum to cook food. Also, the population prefers the electric torch to the detriment of kerosene lamps which were once the main source of lighting in rural areas (98%).

The measures identified in Togo's revised NDCs integrate the needs and interests of women and men into all plans and sectors. Indeed, the different measures recognize the differences between men and women and target the specific needs of men and women.

4.6. USEFUL INFORMATION: ADAPTATION SITUATION IN RELATION TO COVID 19

In Togo, the COVID-19 pandemic is not only having an impact on the health system but is also weakening production and marketing systems at all levels. In terms of adapting to the pandemic, more than 52.7% of households have resorted to the stress strategy (sale of non-performing assets and debts). Crisis strategies (sale of productive assets) and emergency strategies (sale of plots and houses) have been adopted by the population. With the measures taken in the context of the state of health emergency, the only socio-economic alternatives for the population in rural areas have been the abusive exploitation of fisheries and forestry resources. The COVID-19 crisis disrupted the implementation of the 2018-2022 national development plan, which included several actions to promote adaptation. Overall, in Togo, COVID has only aggravated the impacts related to climatic conditions, leading to certain emergency responses to strengthen the resilience of populations (Table 6).

Table 6: Impacts of Covid 19 and priority adaptation responses in Togo

<p>Impacts of Covid 19 aggravating CC</p>	<ul style="list-style-type: none"> ➤ Increased exploitation of certain species ➤ Abuse of timber resources for subsistence ➤ Reallocation of climate change budgets ➤ Increased pressure on medicinal plants ➤ Delay in the implementation of adaptation projects ➤ Disruption of the implementation of planning tools that integrate adaptation aspects ➤ Worsening food insecurity ➤ Cancellation of national and international climate events ➤ Increased health risk ➤ Increase in health-related spending
--	--

<p>Priority Responses or Actions</p>	<ul style="list-style-type: none"> ➤ 3 billion CFA francs in cash transfers to the most vulnerable people through the solidarity program (Novissi) ➤ Food aid program for vulnerable populations through community restaurants ➤ Distribution of food kits to vulnerable households ➤ Subsidy of 2,408,034,430 CFA francs for free social assistance with regard to electricity and water ➤ Exemption from tax in the transport, land, agricultural, industrial and energy sectors, etc. ➤ Partnership with traditional medicine practitioners ➤ Increase in public health spending (20 billion CFA francs of public spending)
---	---

Chapter 5: Financing

Financing for the implementation of the NDC will have to come primarily from Togo's public funds and investments from Togolese and foreign private actors (households, SMEs and large companies, diaspora). A significant and unprecedented commitment by the actors of Togolese society is required, particularly those in the financial sector who have the means to influence investment flows and international financial partners.

Achieving the overall target of 50.57% requires an estimated investment of about US\$5.4 billion between 2020 and 2030. The achievement of the conditional portion of this target, i.e. 74%, whose investment is estimated at USD 3.97 billion, is conditional on access to new sources of financing and additional support, compared to that received in recent years. External support (bilateral or multilateral) in the implementation of the NDC is crucial, both in terms of capacity building, technology transfer and financing of climate infrastructure projects. This support can drive all the actions of the revised NDC in terms of both mitigation and adaptation. The shares that go to mitigation and adaptation actions are USD 2.7 billion and USD 2.6 billion respectively.

5.1. INVESTMENT NEEDS FOR MITIGATION

The planning focuses on sectors with high reduction potential such as Energy, AFOLU, PIUP and waste retained in the revised NDC. However, adaptation sectors such as water resources, human settlements and health, and the coastal zone have been addressed in the NDC and will also be the subject of planning.

5.1.1. Need for investment in the energy sector

5.1.1.1. Power generation subsector

An institutional framework has been put in place for the development of renewable energies and the supervision of projects, including the institutionalisation of renewable energy management and energy efficiency at the national level through the creation of the AT2R.

Created by Presidential Decree No. 2016 – 064/PR of May 11, 2016, the Togolese Agency for Rural Electrification and Renewable Energies (AT2ER) is a public institution, with financial autonomy. The agency is responsible for the implementation of the country's rural electrification policy, the promotion and development of renewable energies.

As a central player dedicated to the development of renewable resources, AT2ER aims to transform the country's natural energy potential into electrical energy for the development of rural localities. Thus, the AT2ER has the dual responsibility of accelerating rural electrification and increasing the share of renewable energies in Togo's energy mix. From now on, any intervention with the aim of guaranteeing the supply of electricity to rural populations is carried out by the agency¹.

Table 7: Investment costs of the revised NDC actions of the power generation sub-sector

Revised actions	CDN	Investment costs	Unconditional		Conditional			Total Cost
			%	Costs	%	Costs	Cost from stake implementation	
Improvement of the electrical energy distribution network, promotion of light bulbs, economy and		32 680 000	12	3 921 600	88	28 758 400	4 313 760	36 993 760
Promoting energy efficiency in households		12 680 000	10	1 268 000	90	11 412 000	1 711 800	14 391 800
Promotion of electricity production at Source Base Renewable of energy hydroelectric from the m		328 124 778	20	65 624 956	80	262 499 823	39 374 973	367 499 752
Promotion of electricity production from some Sources		477 794 974	15	71 669 246	85	406 125 728	60 918 859	538 713 834

of energies renewable to							
-----------------------------	--	--	--	--	--	--	--

¹ <https://at2er.tg/>

Togo (individual solar kits, solar mini-grids, solar power plant)									
Total	851 279 752	1 5	142 802	483	8 5	708 951	795	106 392	319 957 599 146

Source: NDC Support Project, September 2021

The investment costs of the revised NDC shares of the power generation sub-sector are estimated at USD 957,599,146, of which USD 815,115,343 is for conditional financing, i.e. 85% of the total cost. This is reflected in the implementation of several short-, medium- and long-term action plans to develop the fields of solar power generation and hydroelectric power plants, thus promoting the achievement in 2030 of the estimated target of 41.1% in terms of mitigation effort of 455.66 Gg CO₂-eq of this sub-sector.

5.1.1.2. Transportation subsector

The transport sector, a driving force in the country's growth and development, nevertheless remains a major concern, particularly because of its greenhouse gas (GHG) and polluting gas emissions and, by extension, its direct impact on climate change.

In Togo, this sector contributes 7% to the formation of the GDP, including 70% of road transport, i.e. a contribution of 5%; the remaining 30%, i.e. 2% of GDP, constitutes the share of other modes of transport, mainly maritime transport, which is concentrated in the activities of the Autonomous Port of Lomé². Transport accounts for 81.11

% of final consumption of petroleum products (including a significant share for road transport, in particular for two-wheeled machinery)³.

However, the 2021 Finance Law, like the 2020 Finance Law, provides for exemptions or the reduction of the tax burden (customs duties and VAT) on the import of electric, hybrid and new vehicles with a lifespan of 5 years. This aims to eradicate overly polluting cars from the car fleet that is being renewed.

In the same vein, the NDP intends to develop all modes of transport and position Togo as a reference platform in the sub-region and on the continental level. The Togo 2025 government roadmap resulting from the NDP sets the following objectives:

- increase the share of electric vehicles in the acquisition of new vehicles to 3% by 2025;

² A Brief Overview of Togo's Transport Sector 2016

³ Sustainable Energy for All (SE4ALL) Sustainable Energy for All by 2030 (SE4ALL-20National Action Programme, October 2015)

- Expand the rural road network by building 4000 km of rural roads targeting agricultural areas with high export potential in order to connect farmers to the market,
- build the Unity Highway by accelerating the RN1 development project linking the productive hinterland to the agglomeration of Lomé and the autonomous port.

The implementation of the national energy efficiency programme in transport, compulsory technical inspections and eco-driving training are measures that contribute to achieving the objectives of the NDC.

Table 8: Total investment costs of the transport subsector

Revised actions	CDN	Investment costs	Unconditional		Conditional			Investment cost Total
			%	Costs	%	Costs	Cost of implementation	
Program	from	39 974	2,0	799	98,0	39 175	5 876	45 851 074
Green mobility		781	0	496	0	285	293	
Improvement	som							
Infrastructure								
Road								
decongestant		31 587	1,0	315	99,0	31 272	4 690	
urban centres		920	0	879	0	041	806	36 278 726
Total		71562701		1 115 375		70447326	10567099	82 129 800

Source: NDC Support Project, September 2021

The total amount of financial needs in the transport sub-sector is estimated at USD 82,129,800 with USD 1,115,375 of unconditional investment. It could lead to a reduction in cumulative emissions of 9,960.04 Gg CO₂-eq over the period 2020-2030 compared to a "business as usual" scenario through the projects set out in the appendix.

5.1.1.3. Residential subsector

Places of residence and business contribute to GHG emissions because of the level of energy consumption. Generally, this level of consumption depends on the type of energy used for cooking meals, for ventilation, heating, lighting, household appliances, etc. On the national territory, this level is on the rise with rapid urbanization, especially in the city of Lomé, where the trends towards the Western way of life can be observed, with increasingly important energy needs. Housing development policies will only exacerbate the problem if they neglect the environmental side.

For this sub-sector, the scenario assumes that (i) the share of the population using biogas for cooking will increase to 4% in 2025 and to 12% in 2030 in urban areas; to 6% in 2025 and 15% in 2030 in rural areas, (ii) the share of the population using briquettes to 15% in urban areas and 10% in rural areas in 2030 and (iii) the share of the population using LPG to 35% in urban areas and 8% in rural areas by 2030.

This is reflected in the implementation of two short-, medium- and long-term action plans, the needs and benefits of which are estimated as follows in the NDC.

Table 9: Investment needs of CDN shares residential subsector

Revised actions	CDN	Unconditional		Conditional			Total investment costs
		%	Costs	%	Costs	Cost of implementation	
Promotion from the bioenergy modern for the cooking			-	100	38 000 000	5 700 000	43 700 000
Promotion of LPG in households		40	10 976 000	60	16 464 000	2 469 600	29 909 600
Total			10976000		54 464 000	8 169 600	73 609 600

Source: NDC Support Project, September 2021

The investment requirement of the residential sub-sector amounts to USD 73,609,600, of which USD 10,976,000 for unconditional and USD 62,633,600 for conditional.

5.1.2. Need investment and of the Sector Agriculture forestry Other land uses

5.1.2.1. Investment needs of the CDN actions agriculture sub-sector

The agricultural sector plays a major economic and social role in Togo. Indeed, in recent years, it has employed 65% of the working population, accounted for 15% of exports and contributed about 38% to the formation of real GDP. It aims to be the engine of Togo's development through the National Agricultural Investment and Food and Nutrition Security Program (PNIASAN 2017-2026) which aims to raise Togo in 2026 to a growth rate of the gross agricultural domestic product (GDPA) of at least 10%, to improve the agricultural trade balance by 15%, to double the average income

of agricultural households, to contribute to the reduction of malnutrition through the fight against

food insecurity and halving the rural poverty rate to 27%.

This sector is very sensitive to climate change. The latter exacerbates current unsustainable trends, such as the degradation of water resources, soil erosion, desertification and the loss of agrobiodiversity. These resources are vital for agriculture.

The agricultural sector enjoys many privileges due to Togo's new position on the international scene. This position comes from the resumption of cooperation with the main technical and financial partners, Togo's eligibility for the HIPC initiative and the effective start of the implementation of certain projects included in the PNIASA I and II and the PNIASAN 2017-2026, the main tool for the implementation of the policy focused essentially on the development of Agropoles (agricultural development poles).

Table 10: Investment requirements of NDC actions agriculture sub-sector

Actions Agriculture Mitigation	Unconditional		Conditional			Total Cost of Investments
	%	Costs	%	Costs	Cost from stake implementation	
Integrated development of the agricultural sector through the implementation of an effective strategy for the sustainable management of cropland	40	1860000	60	2790000	418500	5068500
Promotion and sustainable management of hydro-agricultural development structures, hydro-pastoral and agricultural and water supply systems;	30	195000	70	455000	68250	718250
Organization of value chains: Organising the value chains for all the main crops up to the chain from Processing and marketing of agricultural products and by-products	60	2790000	40	1860000	279000	4929000

The modernization of the subsector at through the increase from Productivity Farms beyond growth and to the production of products, breeding, genetic improvement for Performance Livestock some Cattle, the introduction of the system, intensification and for the marketing of livestock products, etc.;	35	10675000	65	19825000	2973750	33473750
Support for reforestation for fodder with the introduction of fodder trees on farms with a view to the sustained production of quality fodder;	25	45125000	75	135375000	20306250	200806250
Total	23	60645000	77	160305000	24045750	239 927 250

Source: NDC Support Project, September 2021

The financing needs for the agriculture sub-sector are estimated at USD 239,927,250, of which USD 60,645,000 is for unconditional actions. The country must mobilize 77% of this amount under the conditional scenario to achieve the cumulative emission reduction target of 3799.23 Gg CO₂-eq over the period 2020-2030.

5.1.2.2. Forestry and other land use subsector

Togo's forest ecosystems fall into three main categories, namely natural forest formations, forest and agro-forest plantations, and

and specific ecosystems (protected areas and community forests). There are also inland water ecosystems or wetlands (lakes, rivers and lagoons). The forest cover rate is estimated at 24.24% (NFI, 2015), with an annual forest area loss rate currently estimated at 1.7% (MERF, 2017).

The loss of forest areas is the result of the effects of deforestation and deforestation due to a strong agricultural expansion with unconservative practices, the uncontrolled exploitation of forest resources, the lack of control of the schedules of often wild wildland fires and the abusive supply of wood energy.

Although poorly appreciated, Togo's forestry sector is estimated to contribute nearly 1.7% to the national GDP to the national economy⁴. It allows the supply of wood up to 90% of the biomass energy needs and contributes significantly to the need for timber. In 2015, the value added (VA) of firewood in the GDP reached 17.80 billion CFA francs, 71.19 billion CFA francs for charcoal, and 88.99 billion CFA francs for wood energy. The organs of several plants (bark, leaves, roots, etc.) are used in traditional pharmacopoeia, cosmetics, fodder, food and others.

In addition to reforestation and forest climate risk management projects, the revised NDC includes energy efficiency projects in wood use as well as adaptation projects with mitigation co-benefits.

Table 11: Investment needs of NDC actions in the forestry and other land use subsector

Action CDN	Unconditional		Conditional			Total Cost
	%	Costs	%	Costs	Cost from stake implementation	
Restoration of existing forest landscapes through the promotion of the restoration of natural forests, fragile ecosystems and conservation from biodiversity, by favouring support for projects related to territories already organised (protected areas, community or village forests, sacred sites), by limiting the fragmentation of forest areas and	50	388152000	50	388152000	58222800	834526800

⁴ National Accounts (2014) and MERF estimates, 2017 for the year 2014

maintaining the connection of natural habitats						
Improvement of sustainable land management for the enhancement of carbon sinks and carbon sequestration through "massif development plans" promoted by private or community forests or "territorial forest charters" or poles of rural excellence;	25	37891000	75	113673000	17050950	168614950
Development of urban forestry through the establishment of urban plantations, the promotion and creation of green spaces;	10	276 400	90	2 487 600	373 140	3 137 140
Promotion from processing of forest products and non-timber by-products and promotion of value chains and market access for processed forest products;	8	2 116 800	92	24 343 200	3 651 480	30 111 480
Total FAT		489 081 200		688 960 800	103 344 120	1 281 386 120

Source: NDC Support Project, September 2021

The subsector's financing requirement is estimated at USD 1,281,386,120. The mitigation measures all have a conditional component valued at USD 792,304,920 between 2020-2030 and which aims to accentuate the national effort already undertaken in the field.

5.1.3. Investment need of the PIUP Sector

In Togo, the industrial fabric varies very little and remains concentrated in the extractive industries (phosphate production and cement works) and the manufacturing industries (food, beverages and tobacco; textiles, clothing; wood and wood products; printing, paper, publishing; chemical industries; and articles in Togo;

metals). The clinker manufacturing industries are the key emission category in Togo.

The industrial sector in Togo is relatively recent and is characterized by the modest contribution to GDP, which has increased from 23% in 2005 to 15.6% in 2018. In addition to modern industries, there are craft activities (Metallurgical Extraction, textiles, agri-food).

The objectives of the NDC in the industrial sector are directly in line with the HCFC Phase-Out Management Plan, which aims to reduce the consumption of ozone-depleting substances (ODS) and avoid their significant release into the atmosphere at the end of the life cycle of equipment containing them, thus reducing GHG emissions. This plan counts on the construction of at least 100 green buildings using fewer air conditioners by 2030 and reducing the import rate of F-gases by at least 2%.

The national ozone office under the Ministry of the Environment is a technical player that supports companies in the implementation of this HCFC phase-out management plan. Eight measures have been set out in the 2030 plan, which aim in particular to ensure the reduction of emissions in the sector.

Table 12: Investment needs of the CDN actions in the PIUP sector

Action CDN	Unconditional		Conditional			Total Cost of Investments
	%	Costs	%	Costs	Cost from stake Implementation	
Enhancing the value of fluorinated gas treatment and recycling systems	1	300 000	99	29 700 000	4 455 000	34 455 000
Promote the import of alternative refrigerants such as; propane (R290) ; Isobutane(R600a) used for freezers; refrigerated display cases and ice cream dispensers; R448A (HFC-HFO); R455A (HFC-HFO) in R404A replacement	-	-	100	800 000	40 000	840 000

Develop registers containing information on the quantities and types of fluorinated gases installed, any quantities added and the quantities recovered during operations from maintenance and maintenance	0	0	100	80000	4000	84000
National census on refrigeration actors in Togo	0	0	100	5000000	250000	5250000
Promote the construction of private and public buildings with thermal insulation materials	0	0	100	100000	5000	105000
Promote the manufacture of cements composed of less clinker such as Portland limestone types; to the slag; blast furnace cement	0	0	100	40000000	2000000	42000000
Develop some Technologies C O2 Capture & Storage		0	100	6000000	300000	6300000
Total PIUP	14	300000	96	81680000	4084000	89 034 000

Source: NDC Support Project, September 2021

The financing needs for the PIUP sector, mainly in the hydrofluorocarbons (HFCs) subsector, amount to USD 89,034,000, of which more than 96% can be mobilized under the conditional scenario.

5.1.4. Waste sector

The waste sector is sorely lacking in data. Garbage collection and wastewater disposal is one of the biggest challenges faced by municipal authorities. The

individual production of waste varies from 0.4 to 2 kg per inhabitant per day.

Emissions from the sector as a whole range from 335.7 Gg CO₂-eq in 2010 to 573.3 Gg CO₂-eq in 2030, an increase of 70.8%.

In addition to the importance of the issue from an environmental and natural resources point of view, the collection, recovery and treatment of waste become, in this context, an economically promising sector, a source of added value, competitiveness, job creation and limitation of the increase in greenhouse gas emissions. The plan is thus degraded as follows in Table 13.

Table 13: Investment needs of NDC actions in the waste sector

	Unconditional		Conditional			Needs Total investments
	%	Costs	%	Costs	Cost from stake implementation	
Promote Better sanitation	30	45 754 225	70	106 759 859,30	16 013 979	168 528 064
Convert 3.5 Gg (approximately 2.9 million m³) of methane produced at the centre into energy landfill in Lomé.	10	3 027 456	90	27 247 100,32	4 087 065	34 361 621
Sort and valuation of 145,000 Tonnes rubbish (50 000 Tonnes by composting) for burning.	10	5 256 220	90	47 305 976,13	7 095 896	59 658 092
Total Waste		54 037 901		181 312 936	27 196 940	262 547 777

Source: NDC Support Project, September 2021

The cost of the three mitigation options in the waste sector is estimated at \$262 USD 547,777 including USD 54,037,901 for unconditional shares. The mobilization of the amounts of the conditional scenario estimated 208509876 USD will make it possible to achieve the target of reducing 412.20 Gg CO₂-eq of cumulative emissions over the period 2020-2030 in the sector.

5.1.5. Cost aggregation, mitigation component

This section presents the aggregation of options and costs assessed by key sectors

for GHG contributions. The key sectors identified are:

Agriculture, waste and energy, which includes electricity generation, transport and residential and tertiary sectors, as well as industries. Table 14 shows the estimated funding needs based on unconditional (nationally funded) and conditional contributions for the period 2020-2030

Table 14: Associated investment costs according to mitigation scenarios

SECTORS	COST	COSTS	TOTAL COST	
	UNCONDITIONAL Million	CONDITIONAL Million	Million	in %
Energy	154, 576	915, 064	1 069,640	39,63
Agriculture	60, 645	184 ,351	244,996	9,08
CONCEITED	428, 160	607, 955	1 036,115	38,38
PIUP	0,300	85,764	86,064	3,19
Rubbish	54, 038	208, 510	262,548	9,73
TOTAL	697,719	2 001,643	2 699,363	74,41

The financing needs associated with all identified mitigation options are estimated at US\$2,699.363 million by 2030, of which US\$697.719 million for unconditional options and US\$2,001.643 million for conditional actions. These represent the required capital investment costs and implementation costs.

For Togo to reach its target in 2030, it must put in place strategies to mobilize conditional resources, which account for more than 74% of mitigation financing needs.

The investment levels for each sector broadly correspond to the estimated mitigation shares in each emitting sector, The graph shows that energy and TF projects account for more than 80% (40% and 38% respectively) of total investment over the period 2020-2030. Investments in reduction efforts in agriculture account for the bulk of the remaining needs.

Table 15 shows the estimated needs as a proportion of funding based on unconditional (nationally funded) and conditional contributions for sectors and subsectors.

Table 15: Investment costs for all mitigation actions (USD million)

SECTORS /Subsectors	UNCONDITIONAL		CONDITIONAL		TOTAL Cost
	%	COST Million	%	COST Million	Million
Power generation	20,42	142,48	38,5	772,00	914,48
Transport	0,16	1,12	4,05	81,01	82,13
Residential	1,57	10,98	3,13	62,63	73,61
Agriculture	8,69	60,65	9,21	184,35	245,00
CONCEITED	61,37	428,16	30,36	607,95	1 036,11
PIUP	0,04	0,30	4,28	85,76	86,06
Rubbish	7,74	54,04	10,41	208,51	262,55
TOTAL		697,72		2002,23	2699,94

Source: NDC Support Project, September 2021

The analysis of the table shows that for the conditional scenario, investments in the production subsector occupy a significant share (38.56%), followed by projects in the TF subsector with 30.36%. This is supported by a major investment announced in the field of solar electrification and the desire of the public authorities to increase the share of renewable energies in the energy mix from 3 to 50% by 20235. In the TF sub-sector, this desire can be observed with the ambition to plant one billion trees by 2030. For its part, the agriculture sub-sector, although a major source of GHGs, occupies only 9.21% because adaptation is the priority in this sector already shaken by the adverse effects of climate change.

5.2. ADAPTATION INVESTMENT NEEDS

Togo's economy has been based on the primary sector from the outset, the sector that has been most exposed to the effects of climate variability for decades now and is now considered the most vulnerable to climate change.

The planned adaptation investment plan builds on the actions proposed for the adaptation component of the revised NDC (Table 16).

⁵ <https://at2er.tg/>

Table 16: Sectoral adjustment measures with cost estimates

Accommodations	Objectives of the measure	OPTIONS AND COSTS					
		Unconditional		Conditional		costs from stake work in (15%)	Total cost (US\$ million)
		Proportional	Costs in USD million	Proportional	Costs in USD million		
	Energy Sector						
Reinforcement of reforestation actions for wood energy (17,400 ha)		0	0	100	27,3	4,095	31,40
Development of modern bioenergy: installation of briquette and pellet production plants in the major rice and oil palm production basins, promotion of biodigesters for biogas production, promotion of gasification equipment		7%	2	81%	23	3,45	28,45
Promotion of energy efficiency: improved stoves, improved carbonization mills (in large charcoal production areas), efficient electrical equipment		7	2	81%	24	3,6	29,60
Development of hybrid mini-grids for rural electrification (solar, biomass, small hydropower)		20	76	74%	386	57,9	519,90
SUBTOTAL Energy sector			80		460,3	69,045	609,35

Strengthening of research in the field of phytosanitary (development of low-cost biopesticides, research on biological control)			7,6		8,4	1,26	17,26
Support for the dissemination of good agro-ecological practices			3		45	6,75	54,75
Promotion of water control and village water management for multiple purposes (hydro-agricultural development, promotion of small-scale irrigation, development of lowlands for farming)			8		299	44,85	351,85
Strengthening Integrated Soil Fertility Management (IPFM)					141	21,15	162,15
Definition/development of corridors and transhumance areas					20	3	23,00
Capacity building (technical and material) of meteorological services for good forecasting and planning of activities			0,3		39	5,85	45,15
Promotion some Varieties Efficient and resilient to climate change			10		123	18,45	151,45
SUBTOTAL AGRICULTURE			28,9		675,4	101,31	805,61
	Forestry and other land use subsector						
Reforestation and protection of areas with fragile ecosystems to combat flooding, high winds and erosion			3		139,5	20,925	163,43

Promotion of non-timber forest products sectors in the country's 5 regions (capacity building and organization of actors, development of marketing channels) to strengthen the resilience of communities			2		13	1,95	16,95
SUBTOTAL FAT			5		152,5	22,875	180,38
Human Settlements and Health Sector			Human Settlements and Health Sector				
Strengthening sanitation and stormwater drainage in major urban centres			50		169	25,35	244,35
Development and rehabilitation of urban roads in the main urban centres			150		20	3	173,00
Development some services Emergency medical			20		40	6	66,00
Development and implementation of a health monitoring plan (national and local level)			0,1		25	3,75	28,85
Rational and sustainable management of municipal waste			0,6		159,4	23,91	183,91
SUBTOTAL Human settlements and health			220,7		413,4	62,01	696,11
Water Resources Sector			89		85	12,75	186,75
Improvement of access to drinking water (rehabilitation some drinking water supply works at the village level, installation of new boreholes / water supply systems with solar pumping)			36		10	1,5	47,50

Rainwater harvesting and reuse of treated wastewater			37		60	9	106,00
Improvement of knowledge of surface and groundwater resources (increase of the hydrological and hydrogeological observation network)			16		10	1,5	27,50
Action plan for the technology of mini-drinking water supply, technology for the rehabilitation of surface water reservoirs, gravity drainage of rainwater					5	0,75	5,75
SUBTOTAL water resources			89		85	12,75	186,75
Coastal Zone Sector							
Reinforcement some Structuring investments to protect the coast and raise the level of resilience			75		80	12	167,00
Support for vulnerable populations in coastal villages and along the Gbaga channel for the development of IGAs (off-season market gardening; creation of fish ponds, training, cold rooms for fish conservation, training and equipment for women for fish trading and packaging) in order to reduce their vulnerability			2		70	10,5	82,50
SUBTOTAL coastal zone			77		150	22,5	249,50
Transversality	Transversality						

Support for the development and implementation of sectoral adaptation plans to climate change, taking into account national, regional and local levels					35	5,25	40,25
Support for the revision and implementation of the MRV system taking into account progress and impact indicators for all climate change adaptation instruments					10	1,5	11,5
SUBTOTAL Transversality					45	6,75	51,75
Total			500,6		1981,6	297,24	2 779,44

Source: NDC Support Project, September 2021

The total amount of revised NDC adaptation interventions is estimated at more than USD 2,779.44 million until 2030, of which USD 2278.84 million is for conditional actions and USD 500.6 million for unconditional actions. Figure 2 below shows the financing needs by sector associated with all identified adaptation interventions, estimated at USD 2,779.44 million until 2030.

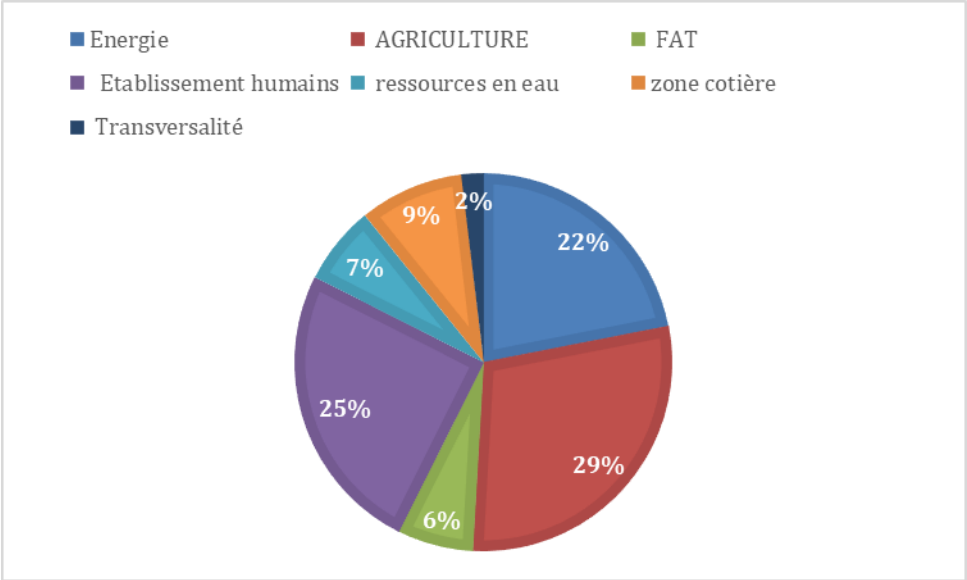


Figure 6: proportions of the actions of the Adaptation Scenario by sector in capital costs out of a total of \$2.8 billion

Figure 6 above summarizes the financial needs by sector in adaptation as reported by each department. The total funding needed for adaptation actions amounts to just over USD 2.8 billion. The largest funding is required for agriculture (29%, USD 805.61 million), human settlements (26%, USD 696.11 million) and energy (22%, USD 609.35 million). Most of the financing requested depends on international support, i.e. a proportion of 81.99% of the total amount to be invested.

5.3. INVESTMENT NEEDS IN CAPACITY BUILDING AND TECHNOLOGY TRANSFER

Under the Paris Agreement, developed countries have also committed to providing technology transfer and capacity building to developing countries, technology transfer and capacity building to developing countries. Many developing countries and developing countries will need strengthened capacities to effectively monitor the flow of bilateral and multilateral resources and support and to identify opportunities for

gaps and outstanding needs and supports and identify gaps and outstanding needs

5.3.1. Technology transfer

Priority needs for technology transfer have been identified for the energy, agriculture and forestry sectors. The GHG emission potential of the sectors, the importance of these sectors in the socio-economic development of the country; and their vulnerability to climate change are the criteria that guided their choice. Since June 2015, Togo has been engaged in the second phase of the "Technology Needs Assessment" (TBA) project in the identification and analysis of technological needs with a view to identifying a portfolio of projects and programs capable of addressing the adverse effects of climate change through the transfer of and access to clean technologies for both adaptation and mitigation

Only four sectors had benefited from technology needs assessment (TBA) studies, two of which were in mitigation and two for adaptation. These are the transmission and production of electricity for mitigation.

For adaptation, the priority technologies covered two sectors and are ranked below in order of importance:

- For the Agriculture sector: 1) agricultural land management, 2) integrated agricultural production systems and 3) off-season agriculture.
- For the Water Resources sector: 1) mini-drinking water supply, 2) rehabilitation of surface water reservoirs and 3) gravity drainage of rainwater.

Table 17 summarizes the costs of the needs resulting from this assessment.

Table 17: Technology transfer costs

Sectors	Proposed Technology Measure	Investissement (in million dollars)	Implementation cost (15%)	Total (\$ millions)
ENERGY	Implementation of the Action Plan for Large Hydropower Plant Technology (CHGP)	5,152	0,7728	5,9248
	Action Plan for Grid-Connected Solar Photovoltaic (PV) Technology (SPRR)	4,586	0,6879	5,2739
	Action Plan for Small or Mini Hydropower Plant (SMP) Technology	0,964	0,1446	1,1086
TRANSPORT	Action Plan for Technology for Improvement of Road Infrastructure Decongestion in Urban Centres (AIRDCU)	2,172	0,3258	2,4978
	Action Plan for Bus Transit Technology Development (DTCB)	8,37	1,2555	9,6255
	Action plan for technology: establishment of standards for road transport	1,122	0,1683	1,2903
AGRICULTURE	Action Plan for Agricultural Land Management Technology (ATA)	2,818	0,4227	3,2407
	Integrated Agricultural Production System (IPIS) Technology Action Plan	2,284	0,3426	2,6266
	Off-Season Agriculture Technology (ACS) Action Plan	26,442	3,9663	30,4083
WATER RESOURCES	Action plan for the technology of mini-drinking water supply	1,348	0,2022	1,5502
	Technological Action Plan for the Rehabilitation Technology of Surface Water Reservoirs	1,488	0,2232	1,7112
	Technological Action Plan for Gravity Drainage of Stormwater	1,066	0,1599	1,2259
	TOTAL	57,812	8,6718	66,4838

Source: NDC Support Project, September 2021

The total estimated cost in the EBT Action Plan is \$57.812 million. It should be noted that for reasons of inflation and implementation cost, this amount will be increased by 15% of the capital. As such, the investment needs in technology transfer amount to USD 66.4838 million that can be financed under the conditional and distributed as follows in Figure 7.

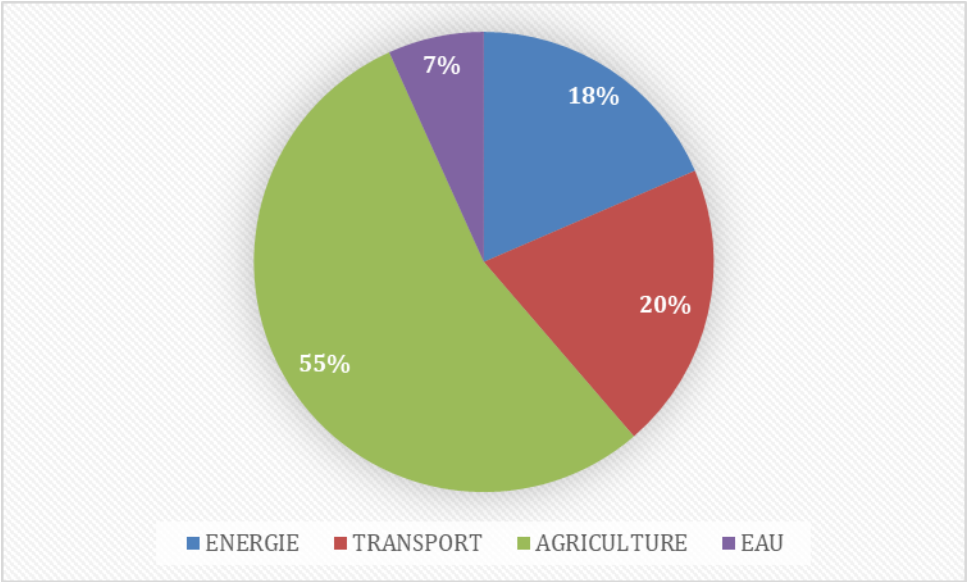


Figure 7: Distribution of the costs of technology transfer needs by sector

5.3.2. Capacity building and knowledge management.

From the INC to the QCN, needs for capacity building and technical resources have always been identified and formulated. The importance of these needs had necessitated a programme on the National Self-Assessment of Environmental Capacities to Be Strengthened (ANCR) implemented between 2006 and 2008.

The NCRA, the CGRP and the NCDRP have been instrumental in building capacity on global environmental issues and specifically on climate change. These documents remain a national reference on this issue.

Although efforts are being made, consultations with stakeholders reveal that most of the needs identified at the national level for environmental management (ANCR, 2008) and in the context of national communications processes (CNI, DCN, TCN), including the PRBA, are still relevant and actions deserve to be taken to meet them. These are the institutional, individual (human) and systemic capacity building needs summarized and prioritized in Table 18.

Table 18: Priority Needs for Technical Resources and Institutional, Individual and Systemic Capacity Building

Focus area	Sectors	Actions to be carried out (identified projects)	Cost (Million US Dollars)	Cost from stake implementation	Total
Capacity building	Institutional	Support for the establishment of a frame institutional harmonious for one stake in work UNFCCC to Togo	7	1,05	8,05
	Human individual /	Capacity building of Delegates Togolese for one Active and beneficial participation for the country in the negotiations on Climate	35	5,25	40,25
		Reinforcement from capacity some national experts on tools and methodology development some studies Thematic National Communications	20	3	23
	Systemic	Capacity building of actors in both the public sector and the private sector for the mobilization of the Climate finance	12	1,8	13,8
		Stake in place of a system national acquisition, use and from diffusion some data activities and some news Relating the changes Climate	125	18,75	143,75
		Information and formation some decision-makers on the opportunities for development offered by the implementation of the UNFCCC work	5	0,75	5,75
		TOTAL	204	30,6	234,6

Source: NDC Support Project, September 2021

The Priority Needs for Technical Resources and Institutional, Individual and Systemic Capacity Building are estimated at US\$234.6 million, which can be fully mobilized

from external funding sources

5.4. TOTAL FUNDING REQUIRED FOR THE REVISED NDC OF TOGO

Financial needs remain high despite ongoing efforts. Most of the actions that require future funding and resource mobilization will be a fair mix of domestic and foreign funds. The estimated net cost of the established NDC mitigation actions is expected to be approximately USD 2.70 billion and more than USD 2.88 billion for adaptation targets, reflecting a combined need of approximately USD 5.58 billion in finance.

Table 19 summarizes the value of funding required over the next ten years. Unconditional measures account for 22 per cent of the overall projected aid and 78 per cent for conditional measures.

Table 19: Mitigation and adaptation financing needed for the revised NDC

	Mitigation (USD billion)	Adaptation (USD billion)	Total (USD billion)
unconditional	0,698	0,501	1,198
conditional	2,002	2,279	4,281
Total	2,700	2,779	5,479

The overall expected cost of mitigating the NDC defined in this 2030 investment plan is estimated at approximately USD 2.70 billion and USD 2.78 billion for adaptation targets, reflecting a total financing need of approximately USD 5.48 billion. Unconditional measures account for 22 per cent of the overall projected aid and 78 per cent for conditional measures.

It should be noted that this evaluation does not cover aspects related to capacity building and technology transfer. The latter are valued at US\$66.4838 million and US\$234.6 million respectively during the period 2020-2030.

Chapter 6: Measurement, Notification and Verification

6.1. MNV/MRV SYSTEM

6.1.1. Different types of MRVs existing in Togo

6.1.1.1. Emission Systems

Since 2017, Togo's MRV system has been based on the institutional framework for national communications and biennial updated reports on CCs. This institutional arrangement was set up at the TCN and replicated during the PRBA. It was materialized by a memorandum between the MERF and the research structures of the University of Lomé. But in 2019, this system was reinforced within the framework of the 4CN & 2RBA by a formal agreement between the MERF and the UL. The UL research structures involved in the emission studies under this agreement are:

- ✓ Regional Center of Excellence for Energy Management of the Ecole Nationale Supérieure des Ingénieurs (ENSI) for emissions in the energy sector;
- ✓ Laboratory of Atmospheric Chemistry (LCA) for emissions in the Industrial Processes and Product Use (PUIP) sector;
- ✓ Laboratory of Research on Agro-Resources and Environmental Health for the Agriculture sector;
- ✓ Laboratory of Plant Biology and Ecology (LBEV) for emissions in the Forestry and Other Land Use sector;
- ✓ Laboratory for Waste Management, Treatment and Recovery (LGTVD) for emissions in the waste sector.

This system is reinforced by the recruitment of a coordination team of the IGES whose role is to train and provide technical support to the research structures involved in the study of emissions.

6.1.1.2. MRV of measurements

As well as the emissions system, the studies on the mitigation measures of the sectors selected under the 4CN & 2RBA have been entrusted to the University of Lomé (UL) through the following research structures:

- ✓ Regional Center of Excellence for Energy Management of the Ecole Nationale Supérieure des Ingénieurs (ENSI) for the Energy sector;
- ✓ Laboratory of Research on Agro-Resources and Environmental Health for the Agriculture sector;
- ✓ Laboratory of Plant Biology and Ecology (LBEV) for the Forestry and Other Land Use sector.

This system is reinforced by the implementation of:

- ✓ National Forest Monitoring System (NFMS): This system is set up as part of the REDD+ process. The objective is to regularly quantify GHG emissions/removals associated with deforestation and forest degradation, enhancement of forest carbon stocks, conservation and sustainable management of forests, and aspects related to governance, benefits and distribution. This system developed the Togo Forest Reference Level (FRL) which was submitted in January 2020 to the UNFCCC Secretariat.
- ✓ National Forest Inventory Database Management Unit (CGBD/IFN) and Cartographic Database Management Unit (UGBDC) of the Ministry of the Environment: the CGBD/IFN is responsible for the organization, collection and management of forest data. The UGBDC is responsible for monitoring forest dynamics using satellite data. Since March 2021, these structures have been implementing, as part of the REDD+ process, Togo's second national forest inventory.

6.1.1.3. Support MRV

The MNV of support in Togo is a mechanism under construction with some initiatives. These are:

- ✓ EBT initiative: Togo has implemented the "Technology Needs Assessment" project which has resulted in the development of a Technology Action Plan (PTA). This plan includes the prioritization of technologies, based on a multi-criteria decision-making analysis taking into account, among other things, development priorities, economic viability, local employment. It has been developed for a

better programming of actions with a view to providing specific responses to the problem of climate change;

- ✓ Aid Management Platform (AIP): this is an initiative of the Ministry of Economy and Finance set up in 2012 and which makes it possible to capitalize on all the development support received by Togo. This platform is designed to disaggregate climate support. This takes into account the support received by the State as well as by the private sector and civil society organisations. Since 2014, this platform has not been operational. In order to boost the PGA, a working session between the Ministry of Development Planning and technical and financial partners (TFPs) was held on February 13, 2018. This meeting provided an opportunity to discuss the measures to be taken to relaunch the Aid Management Platform (ASP). It was decided to continue with Gateway and move towards empowerment for the relaunch of PGA;
- ✓ Regional Collaborating Centre (RCC) MRV networking: The CRC has a system that covers the three forms of climate support, namely finance, capacity building and technology transfer.

6.1.2. Analysis of the strengths, weaknesses, opportunities and threats of Togo's MRV system

The diagnosis carried out on this existing MRV system shows that it suffers from certain deficiencies (Table 20).

Table 20: Strengths and weaknesses of the existing MRV system

FORCES	WEAKNESSES
<ul style="list-style-type: none"> ➤ Development of a national MV system (SN-MNV); ➤ Existence of a high-capacity server within the Ministry of the Environment that can host the SN-MNV geoportal; ➤ Existence of a MRV System linked to the National Forest Monitoring System (MRV/SNSF) in the context of REDD+; ➤ Good experience in measuring, reporting and verifying GHIs and mitigation measures; ➤ Togo's membership in the West African network for sharing experiences on VRM; ➤ Existence of an MRV community in Togo 	<ul style="list-style-type: none"> ➤ Insufficient communication on the MRV system; ➤ Insufficient knowledge and understanding of the MRV system, thus creating conflicts of responsibility and interest between the actors; ➤ Non-harmonized methodology between ODEF MRV/SNSF and AFOLU sector MRV; ➤ Database on NGOs and technical structures holding data on CCs is non-exhaustive; ➤ Confidential or sensitive data not accessible; ➤ Lack of knowledge of tools and methods for assessing and developing mitigation scenarios and technical difficulties

<p>bringing together the various stakeholders;</p> <ul style="list-style-type: none"> ➤ Existence of a national MRV committee; ➤ CBIT project that will carry out capacity building actions in favour of MRV; ➤ Several capacity building actions carried out in favor of actors on the MRV system; ➤ Methodologies based on IPCC and UNFCCC guidelines, guides and recommendations; ➤ Better mastery of IPCC methodologies through the upgrading of national experts; ➤ Availability of national expertise for emissions in all relevant sectors; ➤ Several levels of verification of the reliability of the emissions data collected; 	<p>identification of appropriate technologies;</p> <ul style="list-style-type: none"> ➤ Difficulties in disaggregating climate actions in development projects, ➤ Insufficient financial resources to deepen data collection; ➤ Inappropriate format for storing and archiving data with data-holding structures; ➤ Lack of QA/QC procedures in data-producing institutions; ➤ Data collection format not harmonized between INSEED, data producers and emission study developers; ➤ Lack of activity data for certain categories in all sectors; ➤ Poor proficiency by expert evaluators in emission study and QA/QC methodologies to ensure proper evaluation of emissions study reports; ➤ Insufficient qualified personnel to apply methodologies for estimating emissions; ➤ Lack of equipment for measurement and data collection in AFOLU sectors.
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> ➤ CBIT project that will carry out capacity building actions in favor of MRV; ➤ Scheduling of a future review of the institutional framework and formulation of measures for the operationalization of the national MRV system by the CBIT project; ➤ Existence of a Directorate-General for Aid Mobilization and Partnership; ➤ Existence of a pilot platform on aid management that takes into account all sectors (public, private and CSOs). 	<ul style="list-style-type: none"> ➤ Lack of a quality management system for activity data; ➤ Lack of a framework for consultation of TFPs on the management of official development assistance; ➤ Ineffectiveness of the implementation of the monitoring and evaluation mechanism at the level of all ministries; ➤ Lack of a framework for consultation and interconnectivity between ministries; ➤ Non-operational Aid Management Platform (ASP).

6.2. NVM CAPACITY BUILDING NEEDS

A clear and robust mechanism to ensure transparency and accountability is critical to the success of the MRV system for NDC implementation. Thus, based on the analysis of the strengths, weaknesses, opportunities, and threats of the various existing MRV systems, several actions are proposed. These actions concern all stakeholders involved in the implementation of the MRV system. These are:

- ✓ set up a harmonized data collection format between INSEED, data producers and emission study developers;
- ✓ build the capacity of stakeholders on data management issues, including robust data quality assurance and archiving;
- ✓ build capacity in monitoring, reporting and verification (MRV), including capacity development for the data generation and management system,
- ✓ develop an electronic data archiving system for mitigation and/or adaptation data;
- ✓ strengthen the capacities of stakeholders on the mastery of tools and methods for assessing and developing mitigation scenarios;
- ✓ strengthen national capacities to establish a framework for collaboration facilitating better coordination between public and private institutions and civil society organizations to enable the collection and documentation of information on mitigation, adaptation and support actions;
- ✓ strengthen the capacity of stakeholders on the understanding and importance of the MRV system;
- ✓ strengthen the capacities of the Ministry of Economy and Finance executives for the effective revival of the Aid Management Platform (ASP) with existing national skills;
- ✓ training of data producers and holders (such as DTRF, DGE, INSEED, DST, etc.) on the consideration of emission data formats and mitigation measures;
- ✓ build the capacity of data producers and users on the management of confidential or sensitive data;
- ✓ Strengthen the capacity of national experts on the concept of good practices in the calculation of uncertainties in the collection of activity data and the compilation of statistical data.

In addition to these capacity-building needs, there are other needs to be considered for effective implementation of the MRV, including:

- ✓ formalization of a collaboration agreement between the national coordination of CCs and public or private institutions producing or holding data;
- ✓ signing of confidentiality agreements between producers and users of sensitive or confidential data;
- ✓ strengthening communication on the MRV system;
- ✓ Organization of national and sectoral data collection structures and provision of the necessary means to conduct a GHG inventory, data storage and archiving.

6.3. IMPROVEMENT OF THE VM SYSTEM OVER TIME

For the improvement of the MRV system over time, several recommendations are made to the national MRV committee. These are:

- ✓ establish a mechanism to ensure that the outputs of MRV systems can inform regular updates on climate mitigation, adaptation and finance planning processes, and that lessons can be incorporated into subsequent actions undertaken under the implementation of the NDC;
- ✓ assess the effectiveness of the MRV system in collecting and reporting relevant data, and adjust the implementation plan and systems based on lessons learned;
- ✓ communicate regularly with stakeholders to obtain feedback on the functioning and effectiveness of the MRV system;
- ✓ working with countries with targets in their NDCs and similar MRV needs to exchange lessons learned and best practices;
- ✓ Continue the process of operationalizing the national MRV system with a view to moving from the transition from biennial updated reports to biennial transparency reports in 2024.

6.4. RELEVANT STRUCTURE FOR THE MNV

Ensuring transparent climate action in the NDC process is a key priority for Togo. To achieve the goals of the Paris Agreement, the country must show that it is meeting its commitments in a transparent manner. To this end, measurement, reporting and verification (MRV) has been recognized as the key process for monitoring, evaluating and reporting progress in the implementation of commitments, including NDCs. Since 2017, Togo has designed a national system for measuring, reporting and verifying changes

which brings together the three types of MRV described above. This system includes the following elements (Figure 8):

- ✓ Data and metadata collection that concerns all key stakeholders at the national level in the different sectors concerned with emissions, mitigation, adaptation, as well as support.
- ✓ Data processing and management, which consists of data storage and archiving, data processing, analysis and interpretation, and monitoring of indicators.
- ✓ Notification concerning the publication of processed and interpreted data and their availability to national decision-makers and/or international partners on climate issues.

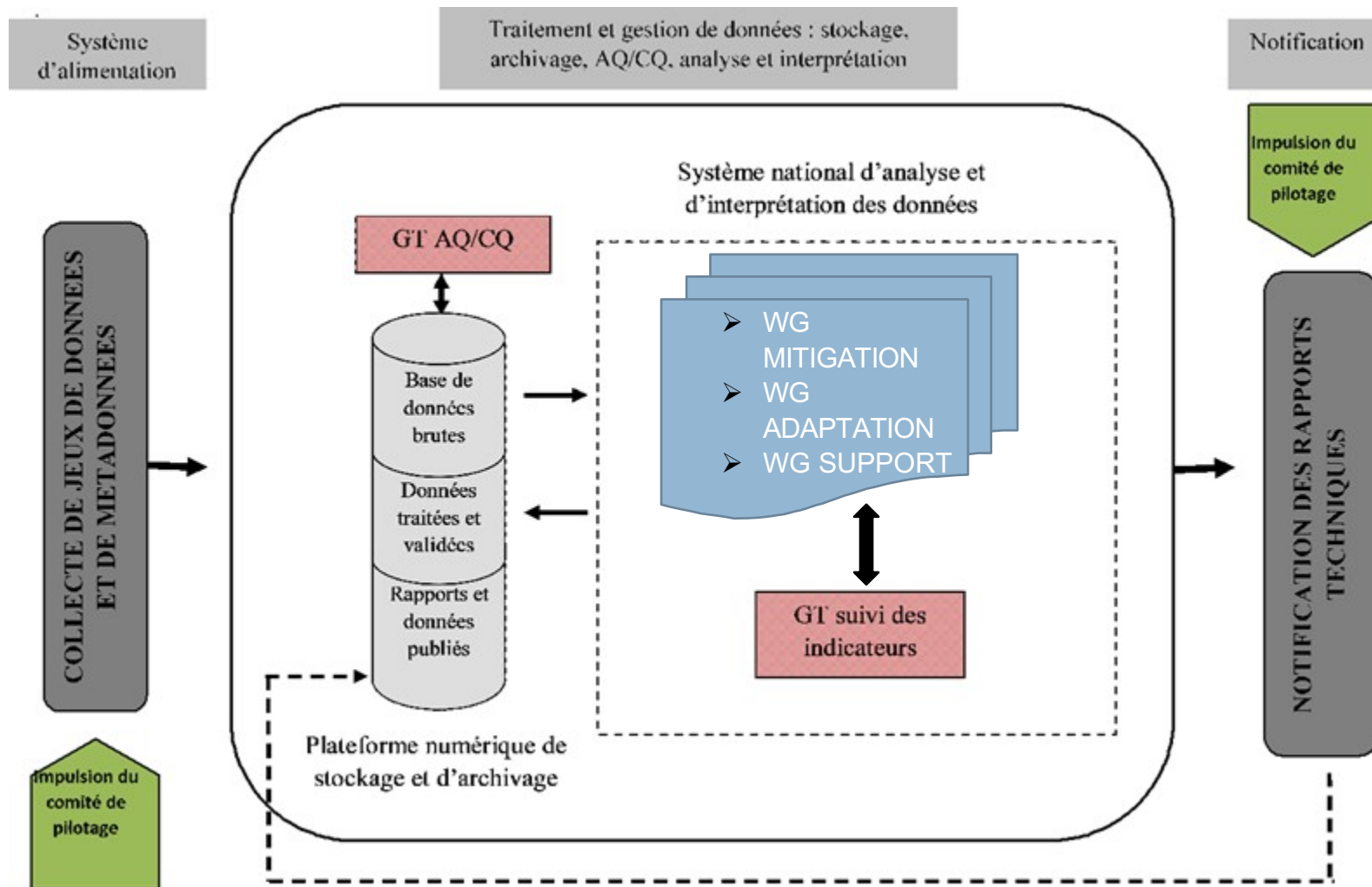


Figure 8: Structure of the national MRV system

6.4.1. Institutional framework for the NDC MRV system

Since 2017, the country has begun the operationalization of this MRV system. In this context, an exchange platform (MRV community of practices) has been created by the MERF. This platform is run two (2) times a month and addresses issues related to the operationalization of the MRV, the method of collecting activity data, data management, including robust quality assurance and data archiving. As part of the operationalization of the system, several capacity-building actions were carried out between 2017 and 2020. These are (i) capacity building of national actors on VRM, (ii) capacity building of MRF actors on their role and responsibility in terms of operationalization of the MRV system, (iii) capacity building of stakeholders on MRV through the community of practice on MRV, (iv) updating of the MRV Country report combined with capacity building of the members of the MRV Select Committee of Togo. These actions are mainly supported by the UNFCCC secretariat, the EU, UNDP, GEF, the Global Support Program and the Government of Canada (Table 21).

It should also be noted that the CBIT project, the implementation of which has just started, has planned capacity-building activities for transparency in accordance with Article 13 of the Paris Agreement. It essentially aims to:

- Strengthening institutional, legal and regulatory arrangements;
- Develop the capacities of actors in the priority sectors of Climate Change;
- To review the institutional framework and formulate measures for the operationalization of the national MRV system.

Table 21: Assistance received by Togo in relation to MRV

Type of aid	Helping Activity	Year R ception	Status	Amount (USD)	Spring elp H
Capacity building	Training of stakeholders on MRV	2020	Finalized	Not estimated	UNCAC Secretariat a t through CDI
	Capacity building of national actors on MRV	2020	Finalized	Not estimated	Global Support program
	Capacity building of MERF actors on their role and responsibility in the operationalization of the MRV system	2020 a nd 2021	Finalized	22061,22	EU/PALCC
	Capacity building		Finalized	Not estimated	Government

	stakeholders on MRV through the MRV Community of Practice				t of CANADA
	Update of the MRV Country report combined with capacity building of the members of the Togolese MRV Select Committee	2020	Finalized	7229,03	GEF/UNDP

6.4.2. Global coordination of the MRV

To ensure quality assurance and quality control (QA/QC), better consideration of reporting, measurement, reporting and verification (MRV) and to enable the establishment of a coherent archiving system, two institutions were created, one in 2018 (National Authority for the Coordination of the Process for the Development of CNs, Climate Change ABRs and NDCs) and the second in 2020 (National MRV Committee). Thus, the institutional framework of the MRV CDN system is as follows:

- ❖ National MRV Committee: This committee was set up by memorandum No. 0230/SG/DE on July 15, 2020 as part of the operationalization of the national MRV system. It is responsible for reviewing the institutional framework and formulating measures for the operationalization of the MRV system. This committee is strengthened by the appointment of MRV sectoral focal points to the ministries in charge of environment and finance.
- ❖ The Climate Change Division (DLCC): It ensures the coordination of all the working groups and intervenes through three structures, namely the UNFCCC focal point, the National Climate Change Committee and the steering committee of the 4CN & 2RBA project.
- ❖ National Authority for the Coordination of the Process for the Development of CNs, Climate Change ABRs and NDCs: this authority set up by Order No. 145 / MERF/SG/DE of 6 November 2018 has a sub-committee that is in charge of the MRV on climate.

It should also be noted that there are two (2) MRV focal points (one at the Ministry in charge of the environment and the second at the Ministry of Finance) and focal points in all data-holding structures. These focal points are responsible for ensuring the operationalization and implementation of the MRV system at the national and sectoral levels.

Chapter 7: Communication Strategy for the Implementation of Work of the NDCs

7.1. DIAGNOSTIC ANALYSIS OF NDC COMMUNICATION IN TOGO

The diagnostic analysis of the various communication experiences on climate change in Togo has made it possible to identify the strengths and weaknesses as well as the opportunities and threats that weigh on communication on the implementation of NDCs in Togo (Table 22).

Table 22: SWOT Matrix of NDC Implementation Communication Analysis

INTERNAL DIAGNOSIS	
FORCES	WEAKNESSES
<ul style="list-style-type: none"> ➤ Existence of a frame policy, technical and legal for NDCs. ➤ Good knowledge from The purpose of the Paris Agreement. ➤ Good knowledge some Climate risks. ➤ Buy-in to adaptation initiatives. ➤ Integration of resilience actions. ➤ Participation in mitigation actions. ➤ Development of individual and community endogenous adaptation/mitigation initiatives. ➤ High expectation of adaptation and mitigation measures. ➤ Strong potential for mobilization at the local level. ➤ Pro activity of universities and climate research centres. 	<ul style="list-style-type: none"> ➤ Lack of internal and external communication on CDNs. ➤ Low ownership of NDCs at sectoral and local level. ➤ Insufficient SBCC actions targeting target groups ➤ Lack of gender-inclusive actions.
EXTERNAL DIAGNOSIS	
OPPORTUNITIES	THREATS

<ul style="list-style-type: none"> ➤ Activation of decentralization in the implementation of the structural framework of actions to combat the harmful effects of CCs. ➤ Media pluralism. 	<ul style="list-style-type: none"> ➤ Disruptions in the mobilization of financing. ➤ Absence of CCs in the priorities of the Togolese.
<ul style="list-style-type: none"> ➤ Availability of development partners to support Togo in implementing actions on CC. ➤ Bilingualism of the populations. 	

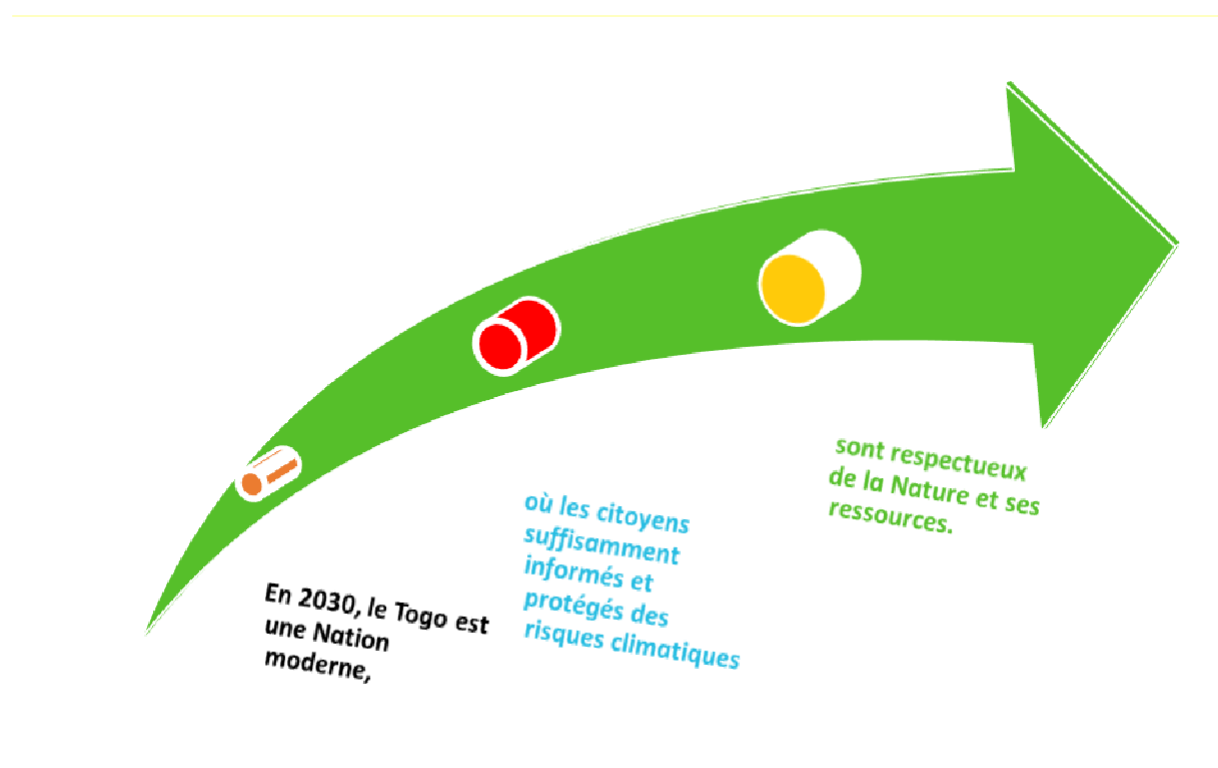
7.2. STRATEGY

7.2.1. Strategic Directions

❖ Vision

The Vision is based on the objectives of the government's roadmap in line with ambition 10 of strategic axis 3: "Putting sustainable development and anticipation of future crises at the heart of the country's priorities".

Thus, the NDC Communication Vision is as follows:



❖ Overall objective

Through the vision adopted: *"in 2030, Togo is a modern nation, where citizens informed and protected from climate risks are respectful of Nature and its resources"*, the development objective of the communication on NDCs is worded as follows:

CONTRIBUTE TO THE EMERGENCE OF CITIZENS WHO ARE AWARE OF CLIMATE RISKS AND RESPECTFUL OF NATURE AND ITS RESOURCES.

❖ Strategic axes and communication objectives

The vision of the communication on NDCs formulated and based on a matrix of strategic orientations, three (3) strategic options are described and three (3) strategic orientations are declined. Tables **23 and 24** present the main strategic orientations and the performance framework, respectively.

Table 23: Development of Strategic Directions and Formulation of Objectives

Strategic Options	Development of strategic orientations	Strategies formulated	Communication objectives
Strategic Direction 1: Seize Opportunity 1 and Use Strength 1 to Eliminate Weakness 2	Seize decentralization and build on the existence of a policy, legal and technical framework to eliminate the low ownership of NDCs at the sectoral and local levels	Adopt <i>N</i> DC planning at all levels	Encourage sectoral ministries and municipalities to integrate NDCs into their development plans
Strategic Direction 2: Seize Opportunity 3 and use Strengths 4,5,6,7, 8, 9 and 10 to eliminate Weaknesses 3 and 4 and Threat 2.	Capture the availability of TFPs and use the buy-in of target groups in adaptation initiatives, their participation in mitigation actions, their development of individual and community-based endogenous adaptation/mitigation initiatives, and the proactive activity of universities and climate research centers to eliminate insufficient SBCC actions targeting target groups, insufficient gender-inclusive actions, and disruptions in the mobilization of finance	Reinforce <i>Ad</i> aptive skills <i>an</i> d Target Group Mitigation	Train target groups on innovative adaptation and mitigation practices and adaptive financing
Strategic Direction 3 : Seize Opportunity 2 and use Strengths 2 and 3 to eliminate Weakness 1 and Threat 1	Seize media pluralism and use good knowledge of the purpose of the Paris Agreement and good knowledge of climate risks to eliminate the internal and external communication deficit and the absence of CCs in the priorities of Togolese.	Improve <i>N</i> DC visibility	Improve the communication system of the CDNs

Table 24: Intervention Performance Framework

Results	Performance indicators	Audit Sources	Risks and Assumptions
OG Outcome : Effect of Specific Objective 2 of the FRS (Protecting Togolese from climate risks)	SRF SO2 Outcome Indicators	Investigation report	Risks identified for SO2 from the FRS
Outcome 1 : NDCs are integrated into all development plans at sectoral and communal levels	<p>1. By the end of 2030, 100% of the sectoral action plans related to the NDCs and Communal Development Plans have integrated adaptation and mitigation.</p> <p>1.1 By the end of 2026, at least 80% of sectoral, local and economic policymakers have a full knowledge of the vision and objectives of NDCs</p> <p>1.2 By the end of 2026, at least 100% of municipalities and sectoral ministries are equipped with NDC planning.</p>	<p>Sectoral Action Plans and CFPs</p> <ul style="list-style-type: none"> • Activity report • Press publications • CDN Reports 	Change of CDN Policy
Outcome 2 : Target groups are trained on innovative practices and mobilization A Adaptive Financing	<p>2. By the end of 2030, at least 60% of groups or companies operating in areas of climate vulnerability have integrated adaptation and mitigation into their productive practices.</p> <p>2.1 By the end of 2026, 117 facilitators had provided training in municipalities in vulnerable areas.</p> <p>2.2 By the end of 2026, at least 6000 people , including at least 1240 women active in vulnerable areas, are equipped to develop and implement innovative adaptation and mitigation projects</p>	<p>Report evaluation or investigation</p> <ul style="list-style-type: none"> • Training Reports • Innovative projects implemented • Press publications <p>Activity report</p>	Absence or delay of Financing

Results	Performance indicators	Audit Sources	Risks and Assumptions
Result 3: The communication system of the NDCs is improved	<p>3. At the end of 2030, CCs are among the ten priorities of the Togolese population.</p> <p>3.1 By the end of 2026, at least 80% of requests for information on NDCs have been met.</p> <p>3.2 By the end of 2026, at least 70% of the population has become aware of the importance of NDCs.</p> <p>3.3 At the end of 2026, at least one tool for capitalising on innovative practices is published.</p>	<p>Investigation report</p> <ul style="list-style-type: none"> • Copying Tools 	<p>Absence or delay in financing</p>

7.2.2. ACTION PLAN

A multi-year action plan (PAP) is proposed for communication. This plan may be revised in the light of the resources raised for the implementation of the said actions. The financial estimates of the actions selected and planned from 2022 to 2026 amount to **1,072,114 US dollars**. Table 25 summarizes the budget by each component.

Table 25: Budgeted Multi-Year Plan

RESULTS	YEARS OF CONSTRUCTION (Costs in millions of US dollars)					TOTAL
	2022	2023	2024	2025	2026	
Outcome 1: NDCs are Integrated in all development plans in the sectoral levels and municipal	84 660	106 636	0	0	0	191 296
Outcome 2: Groups targets are trained on the innovative practices and mobilization Adaptive Financing	34 518	182 073	120 160	33 251	28 524	398 526
The Educational system and communication of NDCs is improved	49 305	128 745	90 098	88 465	125 680	482 292
TOTAL	168 483	417 454	210 258	121 715	154 204	1 072 114

- Belgian Cooperation Agency (ENABEL)**, Communication for Development: Dialogue and Participation for some results Sustainable
https://www.enabel.be/sites/default/files/communication_pour_le_developpement_dialogue_et_participation_pour_des_resultats_durables_guide_c4d_ctb_fr_final.pdf
- Brabant P., Darracq S., Egue K. and Simonneaux V., (1996)**. State of land degradation resulting from human activities. Explanatory note to the map of degradation indices. Collection Note Explanatory n°112, ORSTOM Eds, Paris, 66 p.
- Intended Nationally Determined Contribution (INDC)** under the United Nations Framework Convention on Climate Change (UNFCCC), September 2015
- Craig M., Snow R., Le Sueur D., 1999**. A Climate-based Distribution Model of Malaria Transmission in Sub-Saharan Africa. In *Parasitology Today* 15 (3): 105 – 111.
- Diop, A., (2017)**, "Study on local authorities facing climate change in Senegal, with a view to supporting the advocacy process of local authorities", International Association of Francophone Mayors, European Commission.
- Directorate General of Statistics and National Accounts (DGSCN), 2011**. Fourth population and housing census. Final report, Togolese Republic, 57 p.
- Ern H., 1979**. Die vegetation Togo. Gliederrung, Gefährdung, Erhaltung. Willdenowia 9: 295-312
- Study on the Climate Change Adaptation Component in Togo's Revised NDCs** , Togo's Nationally Determined Contributions (NDCs) Support Project, June 2021
- FAO/ECOWAS, 2018**. National gender profile of the agriculture and rural development sectors. Gender Country Assessment Series, Report, 118 p.
- Togo 2025 Sectoral Roadmap**, January 2021
- GIZ, 2020**. Study of the risks and vulnerabilities related to climate change in the health sector in Togo. Final report, 100 p.
- National Institute of Statistics and Economic and Demographic Studies (INSEED), 2015**. Togo's Demographic Outlook 2011-2031.
- Ministry of Agriculture, Livestock and Hydraulics (MAEH), 2015a**. Agricultural Policy Paper 2016-2030, 56 p.
- Ministry of Agriculture, Livestock and Hydraulics (MAEH), 2015b**. National Strategy Paper for Agricultural and Rural Training in Togo (SNFAR-TOGO) 2016-2020, 75 p.

Ministry of Agriculture, Livestock and Hydraulics (MAEH), 2017. National Programme for Agricultural Investment, Food Security and Nutrition (PNIASAN) - Investment Plan 2017-2025.

Ministry of Agriculture, Livestock and Fisheries / World Food Programme (APRM/WFP), 2018. Zero hunger strategic review in Togo. Final report, 201 p.

Ministry of Environment and Forest Resources (MERF), 2001. Initial National Communication of Togo. United Nations Framework Convention on Climate Change, 210 p.

Ministry of Environment and Forest Resources (MERF), 2009. National Action Plan for Adaptation to Climate Change.

Ministry of Environment and Forest Resources (MERF), 2010. Assessment of damage, losses and reconstruction needs after the 2010 flood disasters in Togo. Final report, 39 p.

Ministry of Environment and Forest Resources (MERF), 2015a. Third National Communication on Climate Change. Final report, 160 p.

Ministry of Environment and Forest Resources (MERF), 2015b. Intended Nationally Determined Contribution (INDC) under the United Nations Framework Convention on Climate Change (UNFCCC). Final report, 21 p.

Ministry of Environment and Forest Resources (MERF), 2017a. Togo's first biennial update report on climate change. Final Report, Rep. Togolaise, 176 p.

Ministry of Environment and Forest Resources (MERF), 2017b. In-depth study on the dynamics of the use of wood energy in Togo. Final Report, Rep. Togolese, 114 p.

Ministry of Environment and Forest Resources (MERF), 2018a. National Strategy for the Reduction of Emissions from Deforestation and Forest Degradation (REDD+) 2020-2029. Final version 1, 179 p.

Ministry of Environment and Forest Resources (MERF), 2018b. Technological Action Plan and Project Ideas, 145 p.

Ministry of Environment and Forest Resources (MERF), 2018c. Strategic Investment Framework for the Management of the Environment and Natural Resources in Togo (CSIGERN 2018–2022). Lomé, Togo.

Ministry of Environment and Forest Resources (MERF), 2020a. Assessment of the vulnerability of the energy sector to the adverse effects and impacts of climate change in Togo. Draft of the 4th National Communication and 2nd Biennial Update Report of Togo, Final Report, 96 p.

Ministry of Environment and Forest Resources (MERF), 2020b. Assessment of the vulnerability of the agriculture, forestry and other land use sector to the adverse effects and impacts of change

in Togo. Draft of the 4th National Communication and 2nd Biennial Update Report of Togo, Final Report, 117 p.

Ministry of Environment and Forest Resources (MERF), 2020c. Economic analysis and climate sensitivity of selected major crops including maize, millet, sorghum, rice, yam and cassava in Togo. Draft of the 4th National Communication and 2nd Biennial Update Report of Togo, Final Report, 98 p.

Ministry of Environment and Forest Resources (MERF), 2020d. Analysis of current demand and simulation in 2030 in terms of surface water and groundwater withdrawals in Togo's basins in the face of climate change. Draft of the 4th National Communication and 2nd Biennial Update Report of Togo, Final Report, 65 p.

Ministry of Environment and Forest Resources (MERF), 2020 e. Joint technical feasibility studies for coastal protection of the Togo-Benin border segment. West Africa Coastal Zone Resilience Investment Project (WACA RESIP – BENIN), Phase 3 - Detailed Preliminary Design Study of the Preferential Adaptation Option, Report, 97 p.

Ministry for the Advancement of Women (MPF), 2011. Togo's National Policy for Gender Equity and Equality, 65 p.

Ministry of Health and Social Protection (MSPS), 2017. National Health Development Plan (PNDS) 2017-2022. Final report, 99 p.

Ministry of Mines and Energy (MME), 2015a. National Action Plan for Renewable Energies (PANER), 121 p.

Ministry of Mines and Energy (MME), 2015b. National Energy Efficiency Action Plan (PANEE 2015-2030), 64 p.

Guidelines for the integration of gender into Togo's National Adaptation Plan (NAP) process, September 2019

National Action Plan for Adaptation to Climate Change – PANA, September 2009

Action Plan for the Implementation of the National Strategy for the Reduction of Emissions from Deforestation and Forest Degradation (REDD+) 2020-2029, Final Version, December 2020,

NDC Implementation Readiness Plan (NDC-OMPP) 2020-2024 December 2019

Togo's National Climate Change Adaptation Plan (PNACC), 2016

Togo's First Biennial Updated Report, National GHG Inventory Report, September 2017

First Biennial Report Updated TOGO PRBA, September 2017

United Nations Development Programme (UNDP), 2019. Annual report, 70 p.

Green Climate Fund Country Programme, April 2018

Fourth National Communication on Climate Change, Second Biennial Update Report, National Circumstances Report, December 2019 **Republic of Togo**

Plan national adaptation to the changes Togo. Final report, 96 p.

Togolese Republic, 2019a. Establishment of climate scenarios in Togo. Draft of the 4th National Communication and 2nd Biennial Update Report of Togo, Final Report, 77 p.

Togolese Republic, 2019b. Report on national circumstances. Draft Fourth National Communication on Climate Change & Second Biennial Update Report of Togo, 117 p.

Communication Strategy of the REDD+ Readiness Support Project, July 2020

Communication Strategy of the REDD+ Readiness Support Project, July 2016

Communication Strategy on Climate Change and the Transition to the Green Economy in Togo, November 2012

National Strategy for Information, Education and Communication (IEC) on the Environment in Togo (2011 – 2015). Capacity Building Programme for Environmental Management, October 2010

National Strategy for Reducing Emissions from Deforestation and Forest Degradation (REDD+) 2020-2029, Final Version, October 2019

Appendix 1: Long-term mitigation measures

Sector	Actions and priorities	Description
Energy	Creation of the Togolese Agency of Rural Electrification and Energy Renewable by Decree No. 2016-064/PR of 11 May 2016, (AT2ER).	Promotion of renewable energy and rural electrification
	Law No. 2018-010 of 08 August 2018 with 8 implementing texts	Promotion of electricity production from renewable energy sources in Togo
	Leaf from Government Road 2025	<ul style="list-style-type: none"> - Continuation of the electrification for all policy – Extension of the grid and deployment of decentralized systems (e.g., individual solar panels) to reach 75% electrification, supported by the establishment of the Electricity for All Fund - Increased generation, transmission and distribution capacity – Development of sustainable and reliable generation capacities, particularly in solar and hydropower, and corresponding strengthening of the transmission and distribution network (in synergy with the extension of the internet network). - Increase the share of renewable energies in energy production to 50% by 2025

		<ul style="list-style-type: none"> - Increase the share of electric vehicles in the acquisition of new vehicles to 3% by 2025 - Extension of the rural road network <ul style="list-style-type: none"> – Construction of 4000 km of rural roads targeting agricultural areas with high export potential to connect farmers to the market - Construction of the Unité Highway <ul style="list-style-type: none"> – Acceleration of the RN1 development project linking the hinterland productive to the agglomeration of Lomé and the port -
	Strategy from Electrification of Togo	<ul style="list-style-type: none"> - Increasing the rate of electrification to 100% by 2030 - (i) deploy more than 300 mini-grids by 2030, representing an installed capacity of around 9 MW; (ii) electrify 555,000 households by Solar Kits by 2030, i.e. up to 85 MW of installed solar generation capacity by 2030; and (iii) expand and densify the grid to reach approximately 670,000 connections by 2030, representing approximately 108 MW of additional capacity
	2019 Five-Year Plan-2023 of the AT2ER	<ul style="list-style-type: none"> - Install one 88.2 MW of additional hydropower capacity by 2023 - Install 99 MW of solar capacity to be connected to the grid by 2025 - Install 4 MW of solar mini-grid capacity in 2023 - Install a capacity of 11.71 MW of solar kits in 2023
	National Action Plan from the Bioenergy	<ul style="list-style-type: none"> - To wear the rate Usage Stoves improved by 40% in

		2020
	(PANBE) in Adoption Proceeding	<p>to 80% in 2030</p> <ul style="list-style-type: none"> - Increase the share of charcoal produced with improved techniques from less than 1% in 2020 to 45% in 2030 - Increase the share of the population using biogas for cooking to 4% in 2025 and to 12% in 2030 in urban areas; to 6% in 2025 and 15% in 2030 in rural areas - Increase the share of the population using briquettes to 15% in urban areas and 10% in rural areas by 2030 - Increase the share of the population using LPG to 35% in urban areas and 8% in rural areas by 2030
PIUP	Distribution of F-Gas Recovery Devices from	Reduce the consumption of ozone-depleting substances (ODS) and prevent their significant release into the atmosphere at the end of the life cycle of equipment containing them, thereby reducing GHG emissions.
	Reinforce the Customs Agent Capacity	Fight against the illegal trade in ODS, thus reducing their consumption, and consequently reducing GHG emissions. Through this project, 150 customs officers are trained each year.
	Reinforce the Refrigeration Technician Capacity	Reduce the consumption of ozone-depleting substances (ODS) and prevent their significant release into the atmosphere at the end of the life cycle of equipment containing them, thereby reducing GHG emissions. Through this project, 100 refrigeration technicians are trained each year.

	Enhancing the value of fluorinated gas treatment and recycling systems	Implement an annual collection system for non-used equipment. Once collected, the equipment will be transported to the industrial unit. Has
		through thousands of jobs will be created and several tons of F-gas will be recycled per year and consequently GHG emissions will be reduced.
	Promoting the import of alternative refrigerants	Reduce HFC imports, train customs officers on the identification of HFCs and equipment containing them, raise awareness and train refrigeration technicians on the use of new gases. The execution of this project will also make it possible to strengthen the BNO with adequate personnel and technical equipment. Thanks to this project, the import of HFCs will be reduced by 5% per year and by 10% if the country receives support from financial partners.
AFOLU	National Reduction Strategy Emissions from Deforestation and Forest Degradation (REDD+ 2020-2029)	<ul style="list-style-type: none"> • Increase the forest cover rate by 30% by 2050; • Reduce the direct and indirect factors that aggravate the country's vulnerability to forest resource degradation and respond to the political and technical issues/challenges on land degradation at the national, regional and local levels for the effective fight against the consequences of these hazards
	National Reforestation Programme (NRP)	<ul style="list-style-type: none"> • Establish new plantations that occupy 34,400 ha, a net increase of 0.7% in 2021; • increasing Togo's forest cover area could reach 43,557 ha by 2030

	Climate Change Support Programme (PALCC)	<ul style="list-style-type: none"> Establish sustainable forest and land management zones through the reforestation and/or sustainable management of 600 ha of state forests (i.e. 100 ha to be carried out per year); 6,000 ha of forests, and
		community and private land rehabilitated, reforested and sustainably managed
	Land Degradation Neutrality (LDN) Target Setting Program	<ul style="list-style-type: none"> restore by 2030, at least 80% of degraded land (i.e. 187,920 ha) and limit the degradation of land not yet degraded to 2% (i.e. 108,802 ha) with a view to strengthening the preservation of terrestrial ecosystems compared to the baseline (2010)". increase the area of Togo's forests by 3% (or 43,557 ha); reduce by 1/3 (i.e. 73,260 ha) the land with a negative trend in net productivity
	Politics Agricultural Togo (2015-2030)	<ul style="list-style-type: none"> implement production intensification programmes combining conventional intensification (use of modern inputs) and agroecological practices, in line with climate-smart agriculture (CSA); Strengthen the prevention or mitigation of the effects of climate change requiring that 20% of land (720,000 ha) are reserved for reforestation

	<p>Program</p> <p>National Agricultural Investment and Food Security Initiative</p> <p>and nutritional (PNIASAN):</p> <p>Plan investment 2016-2025</p>	<ul style="list-style-type: none"> • achieve a growth rate of at least 10% in the gross domestic product (GDP) by 2026; • to improve the agricultural trade balance by 25%, to double the average income of agricultural households, to contribute to the reduction of malnutrition; • strengthen the fight against food insecurity and halve the poverty rate in rural areas at 27%;
Rubbish	<p>The waste sector</p> <p>east oriented by the</p> <p>Politics National</p> <p>Hygiene</p> <p>and</p> <p>Sanitation (HNAPP)</p>	<p>That document fixed the Roles and Responsibilities some Actors State</p> <p>some Communities Local</p> <p>some Organizations No Government</p> <p>some Populations some Partners</p> <p>technical and financial aspects in the implementation of the implementation of the said policy. This policy</p> <p>east Accompanied by of the Plan Action</p> <p>National Water and Sanitation Sector Sanitation (PANSEA) who aims</p> <p>Improvement of the level</p> <p>access the</p> <p>basic sanitation services and</p> <p>Collective by the reinforcement and the</p> <p>consolidation some Infrastructure</p> <p>Technical or by the promotion</p> <p>infrastructure Adequate and</p> <p>accessible to all. Universal access to</p> <p>Water and sanitation on the horizon 2030, Advocated by the</p> <p>Objectives from</p> <p>Sustainable Development (SDGs) is therefore</p> <p>Consideration</p>

Transverse		-
------------	--	---