Republic of Equatorial Guinea

MINISTRY OF AGRICULTURE, LIVESTOCK, FORESTRY AND THE ENVIRONMENT

NATIONALLY DETERMINED CONTRIBUTIONS (NDC)

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ACRONYMS

- ANDEGE: Friends of Nature and Development of Equatorial Guinea
- CARPE: Central African Regional Environmental Programme
- CC: Climate Change
- CH4: Methane
- UNFCCC: United Nations Framework Convention on Climate Change
- NDC: Nationally Determined Contributions
- CPDN: Intended Nationally Determined Contributions
- CO: Carbon monoxide
- CO2eq: Carbon Dioxide Equivalent
- CO2: Carbon Dioxide
- COMIFAC: Commission for the Forests of Central Africa
- COP: Conference of the Parties to the UNFCCC
- COVID19: Coronavirus 2019
- FAO: Food and Agriculture Organisation of the United Nations
- GHGs: Greenhouse Gases
- Gg: Giga grams
- INCOMA: National Institute for the Conservation of the Environment
- INDEFOR-AP: National Institute for Forestry Development and Protected Areas Management.
- INEGE: Instituto Nacional de Estadísticas de Guinea Ecuatorial (National Institute of Statistics of Equatorial Guinea).
- INGEI: National Greenhouse Gases Inventory
- IPCC: Intergovernmental Panel on Climate Change
- MAGBMA: Ministry of Agriculture, Livestock, Forestry and the Environment
- NAMA: Nationally Appropriate Mitigation Action (NAMA)
- N2O: Nitrous oxide
- SDGs: Sustainable Development Goals
- NGO: Non-Governmental Organisation
- PANDER: National Action Plan for the Development of Renewable Energies
- PCNGE: First National Communication of Equatorial Guinea
- GDP: Gross Domestic Product
- PNAF: National Forestry Action Plan
- NCCP: National Climate Change Programme
- PNDES: National Economic and Social Development Plan.

- PNI-REDD+: National Investment Plan for Reducing Emissions from Degradation and Deforestation, forest management, forest conservation and carbon stock.
- UNDP: United Nations Development Programme
- PPFVC: Green Climate Fund Country Programme
- REDD+: Reducing Emissions from Degradation and Deforestation, forest management, forest conservation and carbon stock.
- TCO2: Tonnes of Carbon Dioxide
- IUCN: International Union for Conservation of Nature
- UNGE: National University of Equatorial Guinea
- LULUCF: Land use, land-use change and forestry

SUMMARY

In 2015, the Republic of Equatorial Guinea drafted and submitted its First Nationally Determined Contribution (NDC) to the United Nations Framework Convention on Climate Change (UNFCCC). In 2018, it ratified the Paris Agreement, the main objective of which is to keep the global average temperature increase below 2°C compared to pre-industrial levels and to continue efforts to limit this temperature increase to 1.5°C.

At COP25, which took place in Madrid, it adopted that states parties increase the ambition of their NDCs and sectors as a matter of urgency.

Within this perspective, Equatorial Guinea has carried out the present Update of its CRCs since 2019, having been able to paralyse the process due to the COVID19 pandemic; resuming the process in 2021 with 9 consultancies and validation meetings.

The result of the INGEI, prepared from April 2021 to March 2021, was a progressive increase in GHG emissions. Bearing in mind that Equatorial Guinea's ambition in the first NDC was to reduce emissions by 20% by 2030, with a target of 50% by 2050, with reference to 2010. Equatorial Guinea's ambition in its updated NDC has been increased and aims to reduce emissions by 35% by 2030, with a target of 50% by 2050, with a total reduction of 379,291.54 Gg CO2eq, with reference to 2019 (446,215.38 Gg CO2eq). The next update will be in 2027.

To reduce these emissions, a series of adaptive, mitigation and cross-cutting activities have been selected, which are aligned to the Sustainable Development Goals (SDGs), as well as the country's territorial Priority Themes and the fight against Climate Change, its sectors and the departments involved; the estimation of the amounts required per action and possible sources of funding.

1. INTRODUCTION

One of the demands of the 19th Conference of the Parties (CoP-19) to the United Nations Framework Convention on Climate Change (UNFCCC), held in Warsaw (Poland) in 2013, was to invite country Parties to make efforts to initiate and intensify preparations for the development of so-called Intended Nationally Determined Contributions (INDCs), was to invite country Parties to make efforts to initiate and intensify preparations for the elaboration of so-called Intended Nationally Determined Contributions (INDCs), with the sole purpose of achieving a global commitment to reduce greenhouse gas (GHG) emissions as much as possible in a binding global agreement.

COP17, held in Durban (South Africa) proposed to adopt a ***Binding Agreement*** at COP21 in Paris, which was the priority theme of COP20, held in Lima (Peru) in December 2014, adopting decision 1/COP20.

Achievements during COP 20 also include: (i) the strengthening in inviting and defining the deadline for each Party to communicate to the UNFCCC secretariat its Intended Nationally Determined Contributions (known as INDCs and subsequently converted into the first NDC at the time of ratification of the Paris Agreement); (ii) inviting Parties to consider including adaptation initiatives or components in their NDCs; (iii) inviting Parties to consider including adaptation initiatives or components in their NDCs; (iii) encouraging each country to be more ambitious in the formulation of its national contributions; and, (iv) requesting the UNFCCC secretariat to prepare, by 1 November 2015, a synthesis report containing the aggregate effect of NDCs that have been submitted by Parties by 1 October 2015. To ensure the applicability of the above, most of the Parties to the Convention are willing to participate in the common fight against climate change. For this reason, the Republic of Equatorial Guinea, as a Party to the Convention, had to prepare and submit its first National Contribution, which at the time reflected the reality of the country and justified the political will of the Government to combat the effects of climate change.

Subsequently, already during COP 21 and on the basis of the actions and negotiations under the Lima-Paris Agenda, 195 nations unanimously adopted an unprecedented global agreement to combat climate change and drive action and investment for a low-carbon, resilient and sustainable future, the so-called Paris Agreement. The goals of the Agreement are to keep the global average temperature increase b e l o w 2°C above pre-industrial levels and to continue efforts to limit that temperature rise to 1.5°C. In addition, the Agreement aims to increase adaptive capacity to the adverse effects of climate change and to promote climate resilience and low GHG development, as well as to bring financial flows to a level consistent with a pathway towards low GHG development.

The COP21 held in 2015 has been a key negotiating event and of great expectation for the future of Mother Earth, adopting the Paris Agreement on Global Climate Change. Since then, as an indicator of the political support of the parties, an initiative has been taken to implement the NDCs, prioritising their scope, definition, enforceability and transparency.

The Paris Agreement states that all Parties must make and communicate ambitious efforts related to their Nationally Determined Contributions (NDCs), which constitute the global response to climate change. It further states that Parties aim to peak global GHG emissions as soon as possible, taking into consideration that developing countries will take longer to achieve this, and that thereafter GHG emissions should be reduced rapidly, in accordance with the best available science on the basis of equity and in the context of sustainable development and efforts to eradicate poverty. This being the case, each Party shall increase the ambition of its national contributions in successive submissions to the Convention in five-year periods, taking into account their common but differentiated responsibilities and respective capabilities in the light of different national circumstances.

On 16 July 2018, the Republic of Equatorial Guinea ratified the Paris Agreement.

COP25 took place in Madrid between 2 and 15 December in a completely normal manner and ended with the adoption of an agreement with the following clauses:

- Multilateralism and science prevailed at COP25, and the agreement calls for scientific knowledge to be the main axis that should guide decisions on climate change and increase the ambition of countries and sectors.
- The agreement calls for an increase in the ambition of commitments to combat climate change in 2020, following the timetable set out in the Paris Agreement and expresses the "urgent need" for these new commitments by countries to bridge the existing gap in current commitments with respect to the Paris objective of avoiding a temperature increase of more than 1.5 degrees Celsius.
- Commits to work on and deepen responses to irreversible damage caused by climate change in the most vulnerable countries under the Loss and Damage Mechanism.
- Agree on a new Gender Plan to respond to the unequal impact of climate change on women and girls
- Countries pledge to work on the design of market mechanisms at the next COP that avoid double counting, serve the ambition of the Paris Agreement and ensure the environmental integrity of the system.
- Finally, COP25 gives a boost and recognition to the action of non-governmental actors from all sectors. COPs are no longer only a forum for setting

rules. In this sense, the final decision recognises the importance of non-governmental actors in climate action, invites them to step up their action in the fight against climate change and to mainstream climate compatible strategies.

Within these realities, the Republic of Equatorial Guinea has updated its Nationally Determined Contributions to submit its new ambition to the UNFCCC.

By updating the CRC, Equatorial Guinea reaffirms its commitment to the fight against climate change, which today, as never before, requires action by all countries. Our world is facing a far-reaching and multi-faceted civilisational crisis: the adverse effects of climate change manifested in ecosystem imbalances exacerbated by a model of economic growth that has not considered the limits of the environment and the planetary capacity of life-support systems; a loss of bioculturality and the richness of traditions that characterise our societies, where poverty is a lacerating manifestation of an exclusionary and predatory growth model; as well as a health crisis which reminds us that ecosystem degradation caused by overharvesting of wildlife and health problems are intrinsically linked, and that these can compromise the social and economic well-being of our common home.

The Government of the Republic of Equatorial Guinea has adopted the United Nations 2030 Agenda and its 17 Sustainable Development Goals (SDGs) and the African Union's Agenda 2063. Internalising all this in the new National Plan for Economic and Social Development towards 2035 (PNDES), drawn up in 2019, in which 4 thematic blocks of national priority were established: Block 1 is the Eradication of Poverty, which focuses its analysis on the specific SDGs: SDG1, SDG2, SDG3, SDG4, SDG6, SDG8 and SDG17; Block 2 is Social Inclusion and Sustainable Peace, which focuses its analysis on the specific SDGs: SDG5, SDG10, SDG16, SDG17; Block 3, which is Productivity and Industrialisation, which focuses its analysis on the specific SDGs: SDG8, SDG9 and SDG17 and, Block 4, which is Environmental Sustainability, which focuses on the specific SDGs: SDG7, SDG11, SDG12, SDG13, SDG14, SDG15 and SDG17.

Following this revision of the 2035 NSDP, came the pandemic of COVID19 in 2020, which has forced nations to rethink their development models. In this context, the update of our NDC in the framework of the Paris Agreement lays the foundations to move towards a responsible and sustainable recovery. The Government of Equatorial Guinea recognises the close link between environmental protection and the well-being of the population as a necessary condition for accessing other dimensions of well-being such as health, food security and employment.

During COVI-19, the CRC and INGEI update project (2014-2021) was started, which did not progress in 2020 due to lack of data collection and institutional arrangements. A

As COVID-19 was reduced, the data needed for the update were obtained.

By their nature, the contributions planned and determined at the national level in the Republic of Equatorial Guinea fall into two main thematic areas:

I. Adaptation to climate change, as a vulnerable country; including:
   a. Integration of climate change and climate variability issues into policy and planning processes at national, regional and local levels;
   b. Implementation of risk reduction strategies and adaptation measures in pilot sites;
   c. Strengthen technical capacity to integrate climate risks into coastal zone management, and
   d. Disseminating lessons learned to key stakeholders

II. The mitigation of Greenhouse Gas (GHG) emissions to the atmosphere, taking into account the most influential sectors in the national climate impact:

   a. Energy Sector
   b. Sector Industrial processes and product use
   c. Agriculture, Forestry and Land Use Change Sector
   d. Waste Sector

To this end, it is essential to secure both national and international funding to meet the needs identified.

The objective of the Contribution is to establish mechanisms for the reduction of greenhouse gas (GHG) emissions *in the long term*; to position countries' progress in combating climate change in the period 2030-2050 in coherence with the post-2050 trajectory, with the aim of containing the increase in global warming to below 2ºC in relation to the pre-industrial period.

2. PUBLIC PARTICIPATION PROCESS

2.1. Institutional Arrangements

In fact, in the INGEI carried out in 2013, little data was collected at the national level, but a large part of the data was collected from sources of international organisations, which is why, at present, the lack of existence of sectoral databases, the disordered and fragmented physical data files with different results, the lack of accreditation and sectoral focal points, the lack of a regulation and/or strategy for data collection continue to be observed.

The current data collection campaign for the INGEI 2021 was carried out with the prioritisation of the institutional arrangement developed by MAGBMA in 2019, for which focal points were designated in the departments of the sectors involved, who attended the training conducted by MAGBMA.

MAGBMA on 27 August 2021 on the requirements for collecting the data and how to retain it.

All respondents consider that the current data collection scheme for the INGEI is not yielding the expected results because coordination is more on paper than in reality and the different sectoral ministries continue to operate in parallel, highlighting that the institutional collaboration agreement developed by MAGBMA in 2019 only three ministries (Interior and Local Corporations, Health and Social Welfare, and Fisheries and Water Resources) reacted positively by nominating their focal points.

The current system of institutional arrangements has sufficient human resources, but requires both logistical and financial support to be effective.

The Contribution of the Republic of Equatorial Guinea has been elaborated under the supervision of the Ministry of Agriculture, Livestock, Forestry and Environment, through the General Directorate of Environment with the collaboration of the Group of Experts of the National Coordination of Climate Change and the International Technical Assistance of UNDP.

The data collected in the documentation are from national and international databases (FAO and IPCC), with a participatory stakeholder approach.

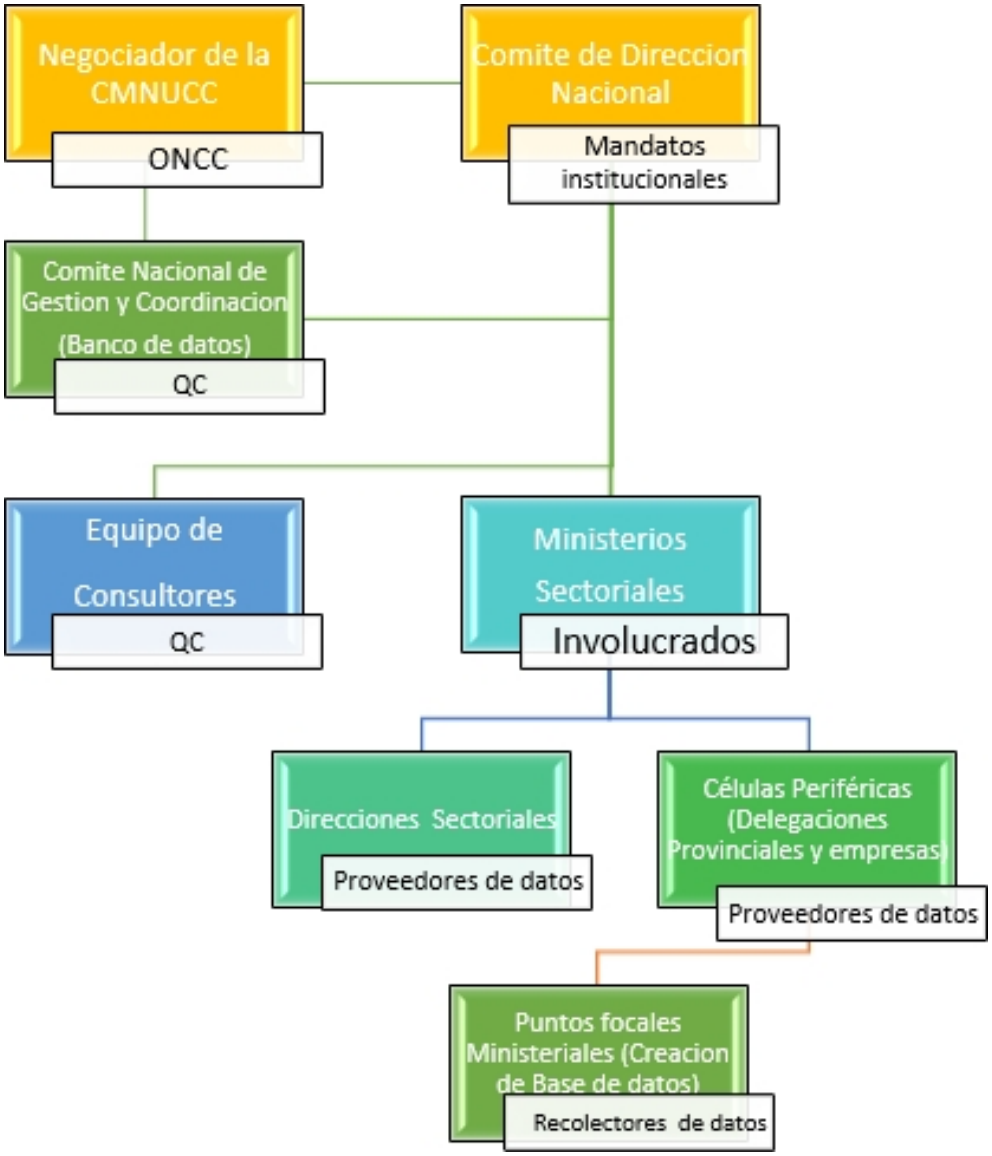

Figure 1.- Functioning of the institutional arrangement

2.2. Key Stakeholder Participation in the CRC update process

In the process of updating the NDC, we have worked with different key actors: 1) institutional actors in the collection of activity data for the INGEI 2021 update, 2) sectoral consultant actors, 3) actors in the validation of the consultants' reports, involving the public sector, the private sector, civil society and international institutions.

The actors holding activity data are: Ministry of Industry and Energy, Ministry of Civil Aviation, Ministry of Mines and Hydrocarbons, Ministry of Post, Transport and Telecommunications, Ministry of Agriculture, Livestock, Forestry and Environment, Ministry of Public Works, Housing and Urban Planning and Ministry of the Interior and Local Corporations.

In the 9 validation workshops of the consultants' reports, the gender approach to participation was taken into account.

Taking into account the principles of access to information and public participation, there was also a participation and communications strategy to socialise and raise public awareness about climate change management in the country and the updating of the NDC through a consultancy. To facilitate effective citizen participation, the communication pieces were designed based on a segmentation of actors that allowed maintaining a multicultural and gender focus as far as possible, and adapting the messages to the level of knowledge and information needs of the target audiences.

During the development of this update, an institutional diagnosis was carried out with the purpose of identifying gaps or problems in the existing institutional arrangements and proposing viable and feasible solutions. To this end, the research technique focused on the review of work carried out, interviews with the leaders of entities responsible for climate change issues at the national level and including those responsible for sectoral departments prioritised in the INGEI carried out in 2013 and in accordance with the provisions of articles 4 and 12 of the UNFCCC, which state:

Art.4: All Parties, taking into account their common but differentiated responsibilities and the specific nature of their national and regional development priorities, objectives and circumstances, should: (a) Develop, periodically update, publish and make available to the Conference of the Parties, in accordance with Article 12, national inventories of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol, using comparable methodologies to be agreed by the Conference of the Parties.

(a) A national inventory, to the extent practicable within its capabilities, of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol, using methodologies

(c) Any other information that the Party considers relevant to the achievement of the objective of the Convention and suitable for inclusion in its communication, including, if feasible, data relevant to the calculation of global emission trends.

3. COUNTRY CONTEXT

Equatorial Guinea has a surface area of 28,051 km² and is divided into two major regions: the mainland (26,000 km²) and the islands (2,017 km²). Some bays and capes stand out, such as Luba Bay, Cape San Juan and Annobón (located in the southern hemisphere), as well as the islets of Corisco, Elobey Grande, Elobey Chico and Mbañé located in the northern hemisphere.

Legend: CR = Continental Region and IR = Island Region

Figure 2.- Map of Equatorial Guinea.

The country is bordered by Cameroon to the north, Gabon to the east and south, and the Atlantic Ocean to the west. Equatorial Guinea is well endowed with arable land and mineral resources ranging from gold, oil, uranium, diamond and columbite-tantalite. The country also has an Exclusive Economic Zone (maritime area) of 314,000 km², 11 times the area of the mainland, with 600 km of coastline.

The population of Equatorial Guinea is 1,225,377 (INEGE, 2015 Census), with a young structure characterised by a large number of children and a small number of elderly (Ministry of Planning and Economic Development, 2002). According to the master plan "Equatorial Guinea Horizon 2020" (2007), 76.8 per cent of the population is below the poverty line, which increases its vulnerability to the capacity to respond to the

The economy relies heavily on the extraction of oil and liquefied gas, as well as the export of timber, cocoa and coffee. The economy relies heavily on oil and liquefied gas extraction, as well as the export of timber, cocoa and coffee.

The climate of Equatorial Guinea is of the "tropical rainforest" type with "tropical savannah" features at its easternmost end. The average annual temperature is around 25ºC. Rainfall is abundant and regular and usually exceeds 1,500 - 2,000 mm per year.

The country's main resources are agriculture, of a traditional and itinerant nature, which flourished during the colonial era (cocoa, coffee, palm oil, coconut). This agriculture has seen the same decline as forestry, but has never recovered. Only 8% of the country's land area has been devoted to agriculture. There are currently many projects to promote agriculture, such as model farms (pilot or experimental farms), which contribute to the emission of Greenhouse Gases (GHG) into the atmosphere. Any extreme variability will bring about a profound change in small-scale agriculture.

Timber declined sharply after independence (1968), only to grow in the 1990s. Equatorial Guinea's economy has relied on timber in previous decades, now it relies on oil.

According to the FAO, the rate of deforestation is increasing considerably, from 58.2 km^2 /year in 1990 to 150 km^2 /year in the period 1990-2005, under the influence of agricultural clearing and very intensive logging. These figures correspond to a deforestation rate of 0.9% (FAO, 2005, in Obiang, 2014).

The latest FAO Global Forest Resources Assessment 2010 (FRA) estimates that Equatorial Guinea has lost 12.6% of its total forest cover from 1990 to 2010, corresponding to an annual deforestation rate of 0.65%. Meanwhile, the GHG inventory study in the forestry sector conducted by Obiang (2014) estimated a deforestation rate of 0.8%, corresponding to 9.4 Gg of CO_2 emissions, which effectively contribute to the greenhouse effect and therefore to climate variability in the country and the world.

Oil production (barrels/year) in Equatorial Guinea started between 1992-1994 and reached its peak in 2008, and is currently declining. The flaring of the gas produced in the oil plants has increased with each increase in oil production, resulting in an increase of GHGs in the atmosphere, which contribute to the local and global greenhouse effect.

Oil and gas have dramatically and unprecedentedly increased GDP from CFA 83 billion in 1995 at the beginning of oil exploitation to CFA 5,130 billion in 2007 (7.8 billion euros). More than 90 per cent of national GDP comes from oil resources. In 1994, GDP per capita was $201 per capita, while in 2008 GDP reached $7,400 per capita (CEMAC, 2008). This increase in GDP,

helps the country to build large civil infrastructures, which contribute to deforestation and consequently to the emission of GHGs into the atmosphere.

With regard to biological diversity (fauna and flora), although no exhaustive studies have been carried out on the fauna of Equatorial Guinea, some studies have shown a great diversity of animal and plant species (Senterre 1999 and 2005). It is estimated that there are about 2000 plant species on Bioko, of which more than 40 are endemic. Small ornithological surveys have also found a great diversity of birds. The island of Bioko also has about 65 mammal species, of which 10 are primate species, including seven subspecies of monkeys that are endemic. All seven subspecies of monkeys are threatened by hunting by the island's inhabitants for animal protein.

In the Mainland Region, as on Bioko Island, there is a great diversity of mammals such as elephants (*Loxondonta africana*), gorillas (*Gorilla gorilla gorilla*), chimpanzees (*Pan troglodytes*), mandrills (*Mandrillus sphinx*), panthers (*Panthera pardus*) and numerous species of antelopes, amphibians, reptiles and birds. Hunting of these species is prized and consequently a very serious threat. In addition, evidence of significant temperature increase and precipitation change in the study localities would lead to this diversity becoming increasingly endangered.

Among the 55 National Legal Frameworks analysed, all were found to be obsolete in relation to GHGs, i.e. they do not contain articles or definitions on GHG Emissions, with the exception of PANDER, PNI-REDD+ and the Civil Aviation Mitigation Plan.

Although the other legal frameworks have general aspects of Environmental Conservation that can contribute to the reduction of GHG emissions, 45 of them lack Implementing Regulations.

4. COUNTRY PROFILE IN THE CONTEXT OF CLIMATE CHANGE

4.1. Alignment of the updated NDC with the National Climate Change Policy (NCCP) and relevant national planning instruments.

In the framework of the update of the CRC, the projects to be financed must be aligned with the priorities and strategies of the National Policies that contribute to the mitigation of Climate Change, which seek to guide public and private decisions towards climate-resilient and low-carbon development pathways, and at the same time seek that the priorities and strategies are focused on the fulfilment of national goals in the framework of the Paris Agreement with the CRC. As a fundamental axis is the adoption of a territorial vision articulated to sectoral initiatives that allow a comprehensive management of Climate Change, as proposed by the different strategies that the Policy articulates, which are listed below:

- National Forestry Action Programme (NFAP), adopted in 2000.

- Strategy and Action Plan for the Conservation of Biodiversity in Equatorial Guinea (ENPADIB), adopted in 2005.
- Implementation Programme of the "National Medium Term Investment Plan for Agriculture and Rural Development" (PNIMP), adopted in 2005.
- National Programme for Food Security (PNSA), adopted in 2012.
- National Adaptation Plan of Action (NAPA), the country prepared such a document in 2013.
- Mainstreaming Strategy for Sustainable Soil and Forest Management (ETGSSB), prepared in 2013.
- National Action Programme to Combat Deforestation and Land Degradation in Equatorial Guinea (NAP/LCD), the country has prepared and adopted such a strategy in the year 2015.
- Plan of Action of the Republic of Equatorial Guinea for the Mitigation of Emissions (PAMEGE) of CO_2 from International Aviation, prepared and adopted in the year 2016. Horizon 2035.
- National REDD+ Strategy (EN-REDD+), adopted in 2018.
- Action Plan for the Development of Renewable Energy in Equatorial Guinea 2018 - 2025 (PAER), this plan was adopted in 2018.
- National REDD+ Investment Plan (PNI-REDD+), adopted in 2019.
- Forest Reference Emission Level in 2019.
- Green Climate Fund Country Programme (GCFCP) in 2019.

Likewise, the alignment of all these Plans with the National Economic and Social Development Plan (PNDES), at the 2035 horizon, is considered relevant.

4.2. Most relevant climate change programmes, plans and strategies for the Central African Region and the country.

At the Central African regional level, there is the **Economic Community of Central African States (ECCAS)** and the **Central African Forest Commission (COMIFAC).** The most relevant action plans in the framework of climate change are:

a) The **Economic Community of Central African States (ECCAS)** has an ***Action Plan for the Reduction of Catastrophic Risks (PARRC) 2015-2030***, which is part of its general policy on the environment and natural resource management, specifically in its axes: (Axis 1) Combating land degradation, drought and desertification; (Axis 4) Conservation and sustainable management of Central Africa's forest resources; and (Axis 5) Combating climate change in Central Africa.

b) In the **Central African Forest Commission (COMIFAC)**, there is a second ***Convergence Plan (CP) 2015-2025 towards a green economy***. The purpose of this institution is for all the signatory countries of the treaty to implement common actions at the national level, guided by the Convergence Plan. This Plan has six (6) thematic axes of interventions and three cross-cutting ones. Intervention axis number 4 "combating the effects of climate change and desertification", has a series of results expected from the member states, which include: (1) Increased capacity to deal with the effects of climate change, (2) Forest monitoring and follow-up systems, (3) Mitigation strategies (REDD+, Climate Plan, NAMA), (4) Control of greenhouse gas emissions from deforestation and forest degradation, (5) Reduction of greenhouse gas emissions from deforestation and forest degradation, (6) Reduction of greenhouse gas emissions from deforestation and

forest degradation, (7) Reduction of greenhouse gas emissions from deforestation and forest degradation, and (8) Reduction of greenhouse gas emissions from deforestation and forest degradation.

(5) National action plans to combat desertification, and (6) Increase of reforested areas.

At the level of the Republic of Equatorial Guinea, the obligations of the UNFCCC have been fulfilled among the States Parties of ECCAS and COMIFAC, by preparing the following national reports:

✓ First National Greenhouse Gas Inventory (INGEI) in 2013

✓ First National Communication (PCN) in 2019

✓ First National Adaptation Action Plan (NAPA) in 2013

✓ First Nationally Determined Contribution (NDC) in 2015

4.3. *GHG emissions and removals*

According to the PPFVC (2019), the relevant sub-sectors for emissions in the country are: Power Generation, 2) Forestry and land use change, 3) Agriculture, 4) Transport, 5) Waste, 6) Hydrocarbons, 7) Mining and 8) Energy use in infrastructure.

The time series was harmonised as far as possible to the 2014-2019 data series. The Scope of the Inventory was National.

The sectors inventoried according to the IPCC 2006 methodology were:

1. Energy
2. Industrial processes and product use
3. Agriculture, Forestry and land-use change
4. Waste

4.4. GHG emissions in 2021

Gross emissions, not including GHG emissions and removals from "Land use, land use change and forestry" (LULUCF), resulted in a total of 17,037.47 Gg CO2 eq. (Table 1). CO_2 has the highest contribution to emissions with 96.47 %, CH_4, 3.07 % and N_2 O only contributes 0.46 %.

Table 1. Gross GHG emissions by sector in Gg CO2 eq.

Sector	CO2	CH4	N2O	TOTAL
ENERGY	10.370,19	26,48	30,45	**10.427,12**
INDUSTRIAL PROCESSES	6.046,99	292,07	NA	**6.339,06**
AGRICULTURE	NA	76,97	6,54	**83,51**
WASTE	18,77	127,60	41,41	**187,78**
NATIONAL TOTAL	**16.435,95**	**523,11**	**78,40**	**17.037,47**

In contrast to gross emissions, GHG emissions and removals from the "Land use, land-use change and forestry" sector are included in the determination of net emissions. In Equatorial Guinea, CO_2 removals from biomass growth in forests exceed emissions in forests from timber removals and other causes. Net removals of CO2eq in Equatorial Guinea totalled -256,831.76 Gg CO2 eq (Table 2).

Table 2. Net GHG emissions by sector in Gg CO2 eq (Own elaboration)

Sector	CO2 Emissions	CO2 Absorptions	CH4	N2O
ENERGY	10.370,19		26,48	30,45
INDUSTRIAL PROCESSES	6.046,99		292,07	NE
AGRICULTURE AND LIVESTOCK	NA		76,97	6,54
FORESTRY AND LAND USE CHANGES	51.317,40	-325.186,62	NA	NA
WASTE	18,77		127,60	41,41
NATIONAL TOTAL	67.753,35	-325.186,62	523,11	78,40
	-257.433,27			

4.5. Degree of vulnerability, loss and damage

The temperature change is becoming more and more acute in both the Island and Continental Regions, as shown in the figure presenting the evolution from 1951 to 2008.

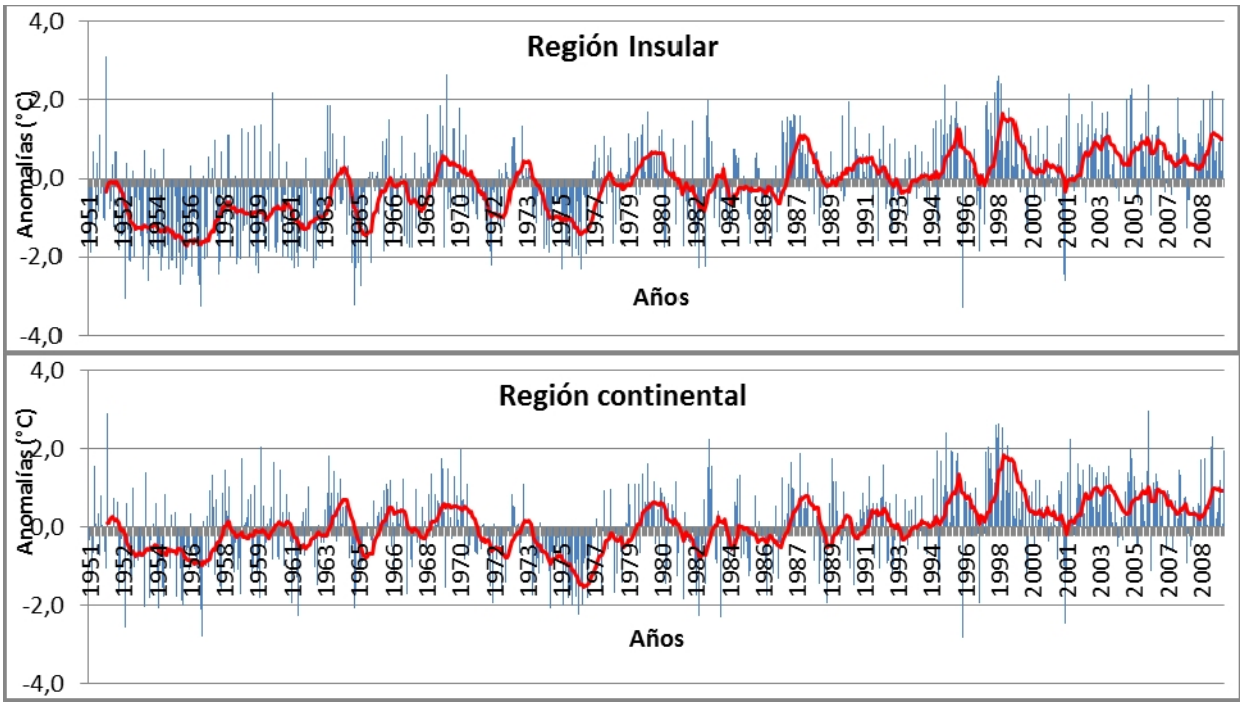

Figure 3.- Variation of monthly surface temperature values for the period 1951-2008. The red line represents a 12-point moving average.
Source: Ministry of Fisheries and Environment, 2013. PANA. Figure nº12 on page 34.

Equatorial Guinea, lacking meteorological stations for the measurement and evaluation of climatic factors (agrometeorology, hydrometeorology, wind isobars, etc.), is limited by

in knowledge about climate change and its effects. Based on forecasts (MPMA, PANA, 2013), it is exposed to increased rainfall variability (*general drought, more showers and sunnier days*), higher temperatures and rising sea levels (*along with more frequent storms and storm surges*). The population is confirming changes in climate behaviour such as more frequent storms, flooding, drought of springs and generally higher temperatures (MPMA, PANA, 2013). All this justifies their high vulnerability.

According to data from the only two ASECNA (Agency for the Safety of Air Navigation in Africa and Madagascar) weather stations in Equatorial Guinea, located in Malabo and Bata respectively. In Malabo, the temperature in all its modalities (maximum, minimum and average) shows statistically significant upward trends, contrary to the temperature in Bata. This significant increase is most noticeable in the minimum temperature. At the precipitation level, it shows a cumulative precipitation without statistically significant trends. But the number of rainy days shows a progressively increasing trend. In Bata, rainfall shows slight increasing trends, but not statistically significant, and a decreasing trend in the number of rainy days (Obiang, 2016).

A **Mann-Kendall trend test** was used to determine whether or not a trend exists in the time series data. It is a non-parametric test, meaning that no underlying assumption is made about the normality of the data. The assumptions for the test are as follows:
H_0 (null hypothesis): There is no trend present in the data. **H_A (alternative hypothesis): There is** a trend in the data. (This could be a positive or negative trend).
If the p-value of the test is less than some level of significance (common choices are 0.10, 0.05 and 0.01), then there is statistically significant evidence that a trend is present in the time series data (Obiang, 2016).

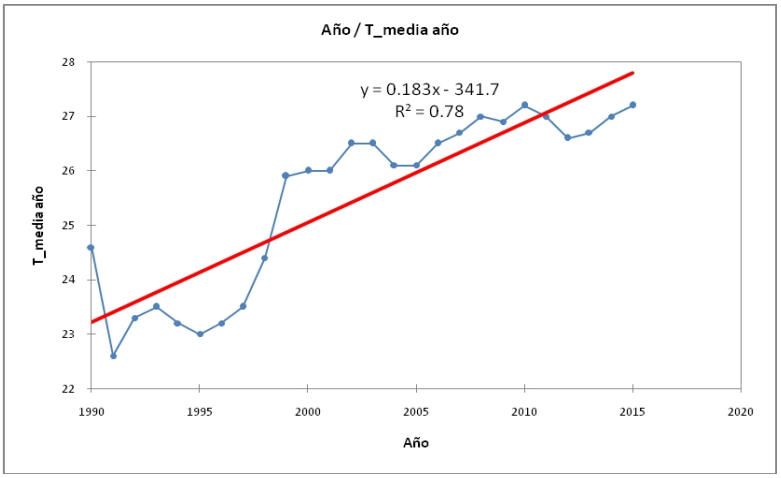

Figure 4. Comparison plot of Mann-Kendall statistical test trends for mean temperature in Malabo over 26 years (Extracted from OBIANG 2016).

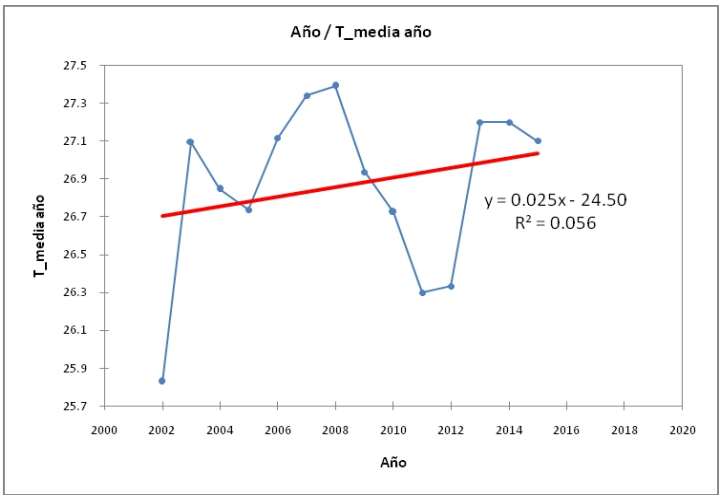

Figure 5. Mann-Kendall trend plot for mean temperature at Bata (Extracted from OBIANG 2016).

The sectors most vulnerable to the effects of climate change are considered to be: agriculture, fisheries, energy, housing, education, sanitation, drainage (flooding), health and environment (heat and high rainfall). The losses resulting from these damages, although very considerable, are currently difficult to quantify economically in the absence of statistical records.

5. LEVEL OF AMBITION OF THE UPDATED NDC

The Republic of Equatorial Guinea is a developing country whose economy depends exclusively on extractive industries and has to face a number of development challenges, such as poverty, education, health, road infrastructure, etc. Although, in terms of emissions, the Republic of Equatorial Guinea represents less than 0.1% of global emissions, however, the trend of emissions from some economic sectors is significant without taking into account the absorption of forests, in particular, forestry 75.19%, energy 15.26%, industrial processes 9.28% and, finally, waste with 0.27%.

In 2019, the Government adopted the third National Plan for Economic and Social Development (PNDES) at Horizon 2035, which fits perfectly with the Sustainable Development Goals and the ambitions for the reduction of CO2 emissions as it is committed to the diversification of the economy, with a focus on the green economy (*tourism, forestry, business, productivity, etc.*).

Compared to all years inventoried, there is an improvement in data collection in the last years 2018 and 2019 which is closer to the reality of current emissions, all due to data from the industrial and waste sector.

Better data quality is also observed in the forestry sector with the updated reports of the Ministry of Agriculture, Livestock, Forestry and Environment in collaboration with FAO, namely in the latest reports on deforestation and the forest emissions reference level study, which gave country-specific emission factors.

From 2014 to 2017, the data is very poor so emissions were low.

The following graph in Figure 6 shows an increasing trend per year from 2014 to 2019, with the same projections for the future.

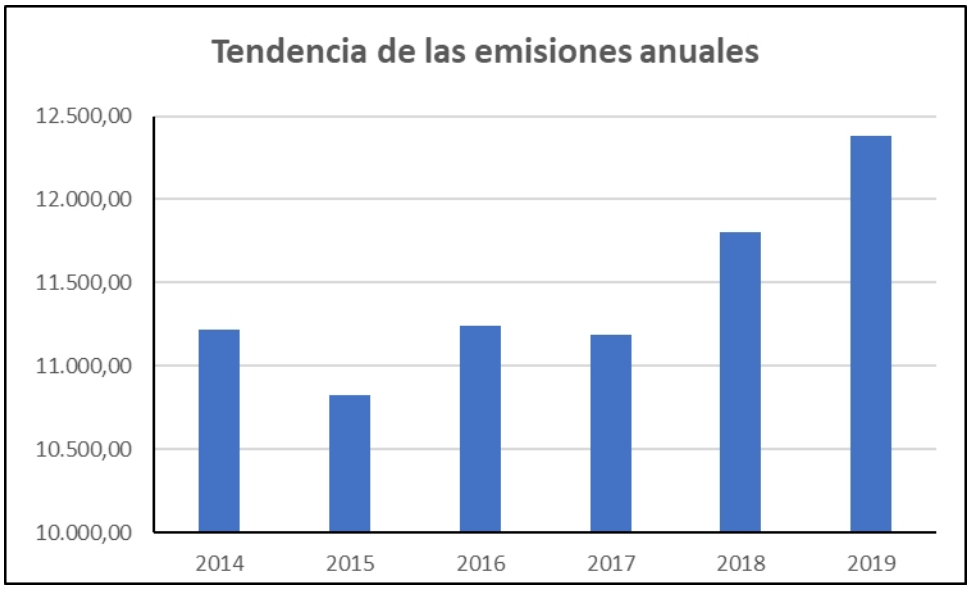

Figure 6. Increasing trend line of emissions 2014-2019 (Own preparation)

Based on the above, **Equatorial Guinea's ambition in this CRC update is to reduce emissions by 35% by 2030, with a target of 50% by 2050.**

This is conditional on favourable and predictable support, and on making climate finance mechanisms viable and correcting distortions in existing market mechanisms (i.e. facilitating access to finance mechanisms). Favourable technical and financial support from both the national government and the international community is necessary.

Establish national emission reduction budgets in each sector for the period 2022-2030 by 2023 at the latest.

The proposed sectoral reduction is as presented in table 3.

6. SCOPE OF APPLICATION OF THE UPDATED NDC

The Government of the Republic of Equatorial Guinea, aware that climate change is an international phenomenon, which is a priority, and within the framework of its development policy, has established actions based on very clear objectives and guidelines through the structures of the State, local authorities, the private sector and civil society organisations. This orientation is based on a series of adaptation and mitigation measures, which are presented below.

The next review will be in 2025

7. ADAPTATION AND MITIGATION ACTIONS AS WELL AS UPDATED NDC COST ESTIMATE

7.1. For climate change adaptation

Table 4: Adaptation actions and their estimated costs (in millions of US$)

Actions	Responsible	Estimated costs	
		2022-2030	2030-2050
1. Conduct periodic climate vulnerability assessments at the national level, according to international standards	MAGBOMA	12,3	14,5
2. Construction of meteorological stations throughout the country for the good monitoring of climatic factors in each area of the territorial administration.	MAGBOMA	17,5	13,5
3. Early warning systems f o r climatic hazards and other natural disasters	MAGBOMA	15,2	28,7
4. Periodic analysis of the resilience of all infrastructure in place and in progress.	MAGBOMA	11,5	22,3
5. Location of rainfall stations at hydropower plants to monitor changes in precipitation.	MAGBOMA	16,5	31,2
6. Establishment of mechanisms to achieve integrated river basin management.	MPRH	12,7	25,3
7. Promoting agricultural production systems that are more resilient to climate change.	MAGBOMA	13,5	17,3
8. Restoration of different ecosystems susceptible to loss of resilience.	MAGBOMA	15,3	18,5
Total		**114,5**	**171,3**

7.2. For mitigation of GHG emissions

Table 5: Mitigation sectors and their estimated costs (in millions of $US)

Sectors/Actions **Energy Sector:** **SDGs 7, 8, 9, 11 and 13**	Performance indicators	Responsible	Estimated costs	
			2022-2030	2030-2050
1.1. Elaboration and adoption of an Energy Law and a National Strategy for Renewable Energy Regulation and Emission Reduction	At least 2 energy sector laws enacted	MIE	60.000	40.000
1.2. Exploitation of the hydroelectric potential of the Wele River, for the electrification of the entire continental region of the	A new hydroelectric power plant installed on the river wele with a renewable energy capacity of 205 MW, in order to reach 332,114 MW of renewable energy in 2030.	MIE	365.561.000	0
1.3. Reform and refurbishment of the Musola and Riaba hydroelectric centres for the electrification of the whole island of Bioko. And	At least generate 4.3 MW of renewable energy from hydroelectric centres for the whole island of Bioko. And 3.2 MW for Bata.	MIE	20.000.000	0
1.4. Focusing on wind, solar and/or tidal energy options for the remote islands of the country (Annobón, Corisco and	At least 5 MW of renewable energy to be generated on the island of Annobón by 2030	MIE	10.000.000	0
1.5. Adopt international standards for vehicle emission limits at MOT and allow the importation of vehicles less than 7 years old.	A presidential decree issued	MIE	50.000	0
1.6. Create a carbon pricing mechanism: Assigning a value to the combustion of a tonne of CO2, resulting from the imposition of a tax on liquid fuels.	A presidential decree issued	MAGBOMA	50.000	0
1.7. Acquisition and construction of the use of buses and urban and interurban public transport stations for the reduction of emissions due to the proliferation of individual transport.	At least 100 electric buses to be purchased nationally At least 8 battery charging stations and other uses constructed	MTCT	40.000.000	24.770.578
1.8. Implement energy and smart efficiency in the country.	By 2050, 100% LED lighting has been installed in all administrative buildings, private company headquarters and public lighting throughout the country.	MIE	1.000.000	1.000.000
1.9. Promote virtual meetings to avoid travel and the use of taxis and air travel.	Al at least 500 meetings virtual institutional meetings per year in all sectors	MAGBOMA	0	0
1.10. Improving management	At least 3 laws and 3 Implementing Decrees of	MAV & MTCT	100.000	100.000

of air, land and maritime traffic, including regulations necessary for the effective management of the sub-sector and taking into account the provisions of the MARPOL Convention	laws enacted by 2050, which include aspects of GHG emission reductions.			
1.11. Continuation of the modernisation of the of airport infrastructures, road traffic and airports, as well as y port infrastructures	Production of at least: 1 annual report on civil aviation GHG emission mitigation plan, 1 annual report on the GHG emission mitigation plan for land transport 1 annual report on the mitigation plan for the GHG emissions from shipping	MAV & MTCT	2.600.000	2.000.000
1.12. Elaboration of the Regulations of the Hydrocarbons Law and the Law of Mines	2 implementing regulations of the two enacted laws, which integrate the reduction of GHG emissions.	MMH	100.000	0
1.13. Promotion of integrated energy management for the industry hydrocarbon	- At least 1 annual environmental sustainability report voluntarily conducted on GHG measurement data of companies in the hydrocarbon sector. - At least 1 production and export database for the calculation of GHG emissions from the hydrocarbon industry by the relevant environmental authorities to promote the centralisation of information. environmental	MMH	500.000	500.000
1.14. Promote the use of natural gas and LPG in the country.	At least 50% of rural households will be promoted to the substitution of firewood by LPG by 2030	MMH	150.000	0
1.15 Energy efficiency management and increased processing to reduce the emissions intensity indicator per unit of production in cements and cement glue.	To have the annual report on cement and cement glue production up to 2050. To have the best technology with European standards for emission reductions by 2030.	MIE	8.000	10.000
1.16. Use of energy from renewable sources in manufacturing industries	By 2050, 100% of industries will use energy from renewable sources	MIE	0	0

1.17. Require importers of refrigerators re frigerator importers to import energy-efficient refrigerators with LED lighting and other energy saving having R-600a as	- At least by 2030, 80% of imported refrigerators are energy efficient and energy saving. - At least customs will have annual information on quantity by type of refrigerators.	MIE	50.000	0

refrigerant				
1.18. Set up sectoral focal points y databases to collect the information in the electricity sector.	By 2030, the following sectoral focal points are available: • 1 Directorate-General for Energy • 1 SEGESA • 1 Civil Aviation • 1 Vehicle traffic • 1 Maritime transport	MIE	100.000	100.000
2. Industrial sector and product use: SDGs 7, 11, 12 and 13	**Indicators**	**Responsible**		
2.1. Sustainable management of domestic refrigerators out-of-use	By 2030, there will be 2 treatment sites for domestic refrigerators after use.	MIE	100.000	0
2.2. Uses of lubricants such as engine oils, and use of solvents according to international standards	- By 2030, the country would have adopted regulations on the use of motor oils and solvents to avoid environmental degradation and GHG emissions. - At least Customs will have annual information on imports into the country of the types of oils and solvents, as well as its characteristics.	MIE	100.000	0
2.3. Develop a regulation on the use of ozone depleting products to ensure t he implementation im plementation of the Montreal Protocol on HFCs	- By 2030, the country would have adopted regulations on the use of ozone-depleting products. - At least annual information o n imports into the country of the types of products and substances that deplete the ozone layer will be available to customs.	MIE & MAGBOMA	100.000	0
2.4. Creating sectoral focal points y databases to collect the information in the industrial sector.	By 2030, the following sectoral focal points are available: • 1 Directorate-General for Industry • 1 Bata Regional Delegation	MIE	100.000	0
3. Forestry, Agriculture and Land Use Change Sector: ODS 1, 2, 3, 5, 6, 8, 11, 12, 13 y 15	**Indicators**	**Responsible**		
3.1. Developing appropriate legal frameworks frameworks including GHGs in the regulations necessary for the effective management of GHGs. of the agricultural sub-sector	By 2030, the country has a land law and a livestock law and their implementing regulations.	MAGBOMA	150.000	0

3.2. Review of adequate legal frameworks with GHG inclusion in the regulations	By 2030, the country has a forestry action plan, a forestry law and its implementing regulations.	MAGBOMA	100.000	0

necessary for the effective management of the forestry sub-sector				
3.3. Review of the legal framework on Protected Areas (PAs) and the strategies and y related regulations to integrate emission reductions and enhancement of removals	By 2030, the country has a protected areas law, a Biodiversity Conservation Strategy and a PA strategy and their implementing regulations,	MAGBOMA	150.000	0
3.4. Promoting a policy based on l a n d management and classification through cadastres	By 2030, the country has an implementing regulation on spatial planning.	MAGBOMA	100.000	0
3.5. Implementation of the Emission Reduction Strategy Emission Reduction Strategy by Deforestation Deforestation and Forest Degradation (REDD+) through NIP-REDD+ funding.	By 2050, current deforestation and degradation has been reduced to 80%.	MAGBOMA	4.100.000	2.200.000
3.6. Make Equatorial Guinea a reference country in terms of climate-smart agriculture in tropical areas with the objectives of ensuring food security, diversifying the national economy, limiting methane and nitrous oxide emissions, as well as favouring the uptake of carbon	- Reduction of agricultural land by 50%. - By 2030, the country would have increased production to 100% to avoid exports. - By 2030, the country has at least a few processing plants for agricultural products. - In 2050, the country will have intensive agroforestry systems in place - In 2050, the country uses 50% of organic fertilisers to increase productivity. - In the year 2030, a reduction of emissions by approximately 50%.	MAGBOMA	30.000.000	22.500.000
3.7. Building ecologically sustainable cities with new household energy mechanisms, green space-rich layouts and an optimum approach for waste management	-By 2050, the country will have 15,600 trees planted in 20 cities nationwide. -By 2050, there will be an absorption of 138,000 t $_{CO2eq}$ per year in the country.	MAGBOMA	5.000.000	4.838.106
3.8. Strengthening the National System of Protected Areas (SNAP) to promote ecotourism	- Increase new areas of terrestrial protected areas by 101,276 hectares - By 2030, at least 2 Protected Areas are expected to change category -By 2050, effective management of at least 50% of the total Protected Areas in the world is expected to be effectively managed. country.	MAGBOMA	13.407.648	16.759.560

3.9. Sustainable management of forests with the implementation of plans of the management of the	- In 2050, some 1,307,692 ha of forests are being managed sustainably. - The forest is going to absorb 17,000,000 t of	MAGBOMA	29.500.000	10.000.000

forest concessions	CO2eq per year.			
3.10. Cocoa and coffee plantation rehabilitation at agroforestry systems	- 70% of plantations rehabilitated by 2050	MAGBOMA	15.000.000	20.000.000
3.11. Monitoring of forestry activities to avoid deforestation and degradation	-By 2030, the established traceability system will -In 2030, illegality in forestry is reduced to 80%.	MAGBOMA	1.500.000	500.000
3.12. Elaborate sectoral development plans that enter into the spatial planning process	- A Silvo-pastoral Systems Plan elaborated and implemented - An urban planning plan in all cities developed and implemented - An elaborated and implemented tourism plan - An elaborated and implemented hydrological plan - Etc. -All plans technically and politically validated.	MAGBOMA &SECTORS	500	500
3.13. Promote economy blue economy and protection of seas and coasts, as well as as well as green economy	- By 2030, the blue and green economy concepts are integrated into the relevant legal frameworks. - By 2030, at least one project in blue and green economy in operation - By 2050, 50% of the coasts are protected	MAGBOMA	5.000.000	5.000.000
3.14. Protection of mangrove ecosystems	- By 2050, 1,300 ha have been restored and 24,700 ha conserved, - Between now and 2050, an uptake of 344,500 t CO2eq per year	MAGBOMA	5.995.000	4.000.000
3.15. Create sectoral focal points y databases to collect the information information at sector Agriculture, Forestry y other land uses	By 2030, the following sectoral focal points are available: • 1 Directorate-General for Agriculture • 1 Directorate-General for Livestock • 1 Directorate General in the forestry sector • 1 Directorate-General for Planning • 1 INDEFOR • 1 INPAGE • 1 INCOMA	MAGBOMA	700	0
4. **Waste Sector: SDGs 6, 11, 12 and 13**	**Indicators**	**Responsible**		

4.1. Elaboration and implementation of a waste law and its implementing regulations in Equatorial Guinea. in Equatorial Guinea, in line with GHG emissions.	By 2030, the country would have enacted a law and implementing regulations on waste.	MICL	100.000	0
4.2. Policy advocacy	By the year 2050, the country will have 8 power plants in the	MICL	5.000.000	3.000.000

from efficient waste treatment and the construction of plants for the recycling and reuse of waste from waste	Waste treatment for the other operating heads of provinces			
4.3. Construction of several hospital landfills for the deposition of hospital waste y its destruction	By 2050, the country will have 10 hospital landfills in operation.	MICL & MSBS	3.000.000	2.000.000
4.4. Construction of wastewater treatment systems and promotion of private investment in provincial capitals	By the year 2050, the country has 8 wastewater treatment plants and their operation	MICL	4.000.000	3.000.000
4.5. Promoting integrated municipal solid waste management	By 2030, the 19 districts at the national level have an integrated solid urban waste management system with a production-collection database.	MICL	13.575.000	13.575.000
4.6. Create sectoral focal points y databases to collect information in the industrial sector.	By 2030, the following sectoral focal points are available: • 1 National Waste Directorate • 1 Bata Regional Delegation	MICL	100.000	0
Total			**576.607.848**	**135.893.744**

MAGBOMA: Ministry of Agriculture, Livestock, Forestry and the Environment
MIE: Ministry of Industry and Energy
MPRH: Ministry of Fisheries and Water Resources
MTCT: Ministry of Transport, Posts and Technologies
MAC: Ministry of Civil Aviation
MMH: Ministry of Mines and Hydrocarbons
MICL: Ministry of the Interior and Local Government
MSBS: Ministry of Health and Social Welfare

7.3. For other institutional and capacity building needs

Table 6: Other needs and their estimated costs (in millions of $US)

Themes: SDGs 4 and 17	Estimated costs	
	2022-2030	2030-2050
Institutional needs	44,5	64,2
Information, awareness raising and education on climate change	24,8	32,3
Training and applied research on climate change	83,7	123,7
Total	**153,0**	**220,2**

8. NEEDS TO MEET THE UPDATED NDC COMMITMENTS

8.1. Institutional needs

- Raise the issue of Climate Change to the rank of a State Secretariat;
- The creation of a Committee for Economic Modelling of Climate Impacts and the Integration of Climate Change in the State Budget;
- Establishment of a National Climate Change Committee;
- Creation of a service in charge of national Environmental Impact Assessments and Environmental Audits in accordance with international standards.

8.2. Information, awareness raising and education on climate change

- Development of information and awareness-raising programmes on the threats of climate change in order to reach more and more of the general public.
- Development of formal and informal education modules on the importance and conservation of the environment;
- Publication of magazines, brochures, environmental diaries and other material to promote environmental awareness at national level.
- Development of joint action plans on biodiversity conservation, fight against desertification, to strengthen the synergy between the three Rio conventions and other signatories for the country.

8.3. Training and applied research on climate change

- Development of specialised training modules on adaptation and mitigation techniques.
- Operationalisation and equipping of the National Institute for the Conservation of the Environment (INCOMA), for applied environmental research.
- Promotion of scientific and technological research on Adaptation and Mitigation.
- Provision of geographic information system (GIS) laboratories at the National University of Equatorial Guinea (UNGE) and professional forestry and environmental schools for climate modelling and the promotion of research habits,
- Development of tenders and research offers of different modalities in the field of climate change.
- Operationalisation of the National Fund for the Environment (FONAMA)

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Annex 1. Territorial Priority Issues of the country and the fight against Climate Change

Issues prioritised in territorial planning and climate change instruments	**Departments concerned.**
Low emission transport	
Creation of urban, inter-urban, maritime and air public transport companies (ref. transport law), Promotion of environmentally friendly transport,	Ministry of Agriculture, Livestock, Forestry and Environment. Ministry of Public Works, Housing and Urban Development, Ministry of Transport, Post and Telecommunications.
Conservation and restoration	
Strengthen the national system of protected areas, Improve the range of forests in communal reserves, Multiplication and conservation of native species of flora and fauna. Reforestation, ecological restoration, recovery, rehabilitation of vulnerable areas, protective areas of water catchment areas, environmental protection areas, fragile areas of ecological importance, water supply basins. Recovery of ecosystem goods and services. Biological corridors.	Ministry of National Security, Ministry of Justice, Worship and Penitentiary Institutions, Ministry of Agriculture, Livestock, Forestry and Environment, Ministry of Finance, Economy and Planning, Ministry of Public Works, Housing and Urban Development, Ministry of Education, University Education and Sports, Ministry of Labour, Employment Promotion and Social Security, Ministry of Mines and Hydrocarbons, Ministry of Fisheries and Water Resources, Ministry of Industry and Energy, Ministry of Social Affairs and Gender Equality, Ministry of Culture, Tourism and Promotion of Crafts and Skilled Crafts, Ministry of Labour, Employment Promotion and Social Security, Ministry of Mines and Hydrocarbons, Ministry of Fisheries and Water Resources, Ministry of Industry and Energy, Ministry of Social Affairs and Gender Equality, Ministry of Culture, Tourism and Promotion of Crafts and Crafts
Strategic ecosystem management	
Protection of fallow land, plateaus and wetlands. Promotion of civil society reserve areas. Implementation of Protected Area Management Plans with adaptation and mitigation strategies.	Ministry of Agriculture, Livestock, Forestry and Environment, Ministry of Finance, Economy and Planning, Ministry of Public Works, Housing and Urban Development, National University of Equatorial Guinea (U.N.G.E), INDEFOR, INCOMA, NGO ANDEGE, COMIFAC, IUCN/CARPE,
Coastal Marine Management	

Conservation of marine-coastal ecosystems (mangroves, dunes, corals).	Ministry of Fisheries and Water Resources, Ministry of Industry and Energy,
REDD+	
Creation of green spaces in cities, Urban forestry, reduction of deforestation	Ministry of Agriculture, Livestock, Forestry and Fisheries (MAFF) Environment, Ministry of Finance,

in urban and rural areas.	Economy and Planning, Ministry of Public Works, Housing and Urban Planning, Ministry of Education, University Education and Sports, INCOMA
Food Security	
Produce for local consumption, family gardens, municipal farms, Transform agricultural products taking into account the raw material.	Ministry of Agriculture, Livestock, Forestry and Environment, Ministry of Finance, Economy and Planning, Ministry of Industry and Energy.
Good agricultural/livestock practices	
Reduce the use of chemicals in agriculture, Technical assistance to implement resilient and low GHG emission production systems. Clean agricultural technologies adapted to climatic conditions. Intensive silvopastoral systems.	Ministry of Agriculture, Livestock, Forestry and Environment, Ministry of Finance, Economy and Planning.
Plantations	
Reforestation in areas for timber harvesting, production and marketing. Commercial forest cultivation of native species.	Ministry of Agriculture, Livestock, Forestry and Environment, Ministry of Finance, Economy and Planning, Ministry of Industry and Energy.
Irrigation systems and efficient water use in the agricultural sector	
Rainwater harvesting for productive projects, Groundwater management and monitoring, Water harvesting	Ministry of Fisheries and Water Resources, Ministry of Agriculture, Livestock, Forestry and Environment,
Agro-climatic information for crop planning	
Implementation of agro-climatic systems for areas of special agricultural interest.	Ministry of Fisheries and Water Resources, Ministry of Agriculture, Livestock, Forestry and Environment, ASECNA, UNGE, INCOMA.
Value chains that promote green growth	
Economic valuation of services and goods of urban and natural green spaces.	Ministry of Fisheries and Water Resources, Ministry of Agriculture, Livestock, Forestry and Environment, ASECNA, UNGE, INCOMA. Ministry of Finance, Economy and Planning.
Value chains that promote the commercialisation of agricultural products.	

Promote the marketing chain of agricultural products (Producer-Consumer).	Ministry of Agriculture, Livestock, Forestry and Environment, Chamber of Commerce. Ministry of Transport, Post and Telecommunications.
Solid waste recovery and disposal	
Improve waste management, implementation of sanitary landfills.	Ministry of Agriculture, Livestock, Forestry and Environment, Chamber of Commerce. Ministry of Transport, Post and Telecommunications. Ministry of Finance, Economy and Planning.
Infrastructure-Based Adaptation	
Housing, aqueducts, sewage systems, with adaptation and mitigation criteria. Reduction of vulnerability in primary and secondary road infrastructure.	Ministry of Public Works, Housing and Urban Development, Ministry of Transport, Post and Telecommunications.
Sustainable construction	
Elaborate and implement a land use law, Improve industrial timber harvesting.	Ministry of Public Works, Housing and Urban Development, Ministry of Justice, Worship and Penitentiary Institutions, Ministry of Agriculture, Livestock, Forestry and Environment.
Restoration in urban areas	
Environmental clean-up	Ministry of Public Works, Housing and Urban Development, Ministry of Agriculture, Livestock, Forestry and the Environment. Ministry of Health and Welfare
Efficient water use	
Management and administration of domestic and industrial water supply.	Ministry of Public Works, Housing and Urban Development, Ministry of Agriculture, Livestock, Forestry and the Environment. Ministry of Health and Welfare
Renewable and non-conventional energy	
Improve the electricity distribution system, Support alternative sources of energy, Use of wind, solar and hydro power	Ministry of Public Works, Housing and Town Planning, Ministry of Agriculture, Livestock, Forestry and Environment. Ministry of Fisheries and Water Resources, Ministry of Industry and Energy.
CROSS-CUTTING PRIORITY ACTIONS	

Information, Science, Technology and Innovation	
Implement and improve the environmental education system at all levels, Construction of a laboratory for the wood sector.	Ministry of Education, University Education and Ministry of Finance, Economy and Planning. Sports, UNGE,
Management and Planning	
Studies on greenhouse gas emissions (carbon dioxide)	Ministry of Agriculture, Livestock, Forestry and Environment. Ministry of Public Works, Housing and Urban Development, Ministry of Transport, Post and Telecommunications.
Climate change education	
Education for knowledge management on climate change. Community capacity building	Ministry of Education, University Education and Ministry of Finance, Economy and Planning. Sports, UNGE,

Annex 2. Funds identified for the financing of climate programmes and projects applicable in Equatorial Guinea

Fund Name	**Siglas**	**Site Web if available**	**Ownership and Governance**	**Mode Mode of Operation**	**Implementing Entity**	**Funded projects**	**Applicability Equatorial Guinea**
Global Environmental Global Environmental Facility (Global Environmental Facility)	GEF	(https://www.thegef.org/)	It is a UNEP fund. Governed by a Committee composed of the Assembly, the Council, GEF Focal Points and the GEF Secretariat	Offers donations a countries at development y countries with economies in transition transition economies for projects in the areas of biodiversity, climate change, international waters, land degradation, land degradation, depletion of the depletion ozone layer y persistent organic pollutants.	UNDP, FAO	Sustainable development, mitigation and y adaptation to climate change	Applicable
Green Climate Fund (Green Climate Fund)	GCF	https://www.greenclimate.fund/	The Board of Trustees will have 24 members from countries at development and developed.	The Green Climate Fund (GCF) has a mandate to assist developing countries to at development a collect y realise its ambitions Nationally Determined Contributions (NDCs) Nationally Determined Contributions (NDCs) towards low	UNDP, FAO	Mitigation and Adaptation	Applicable

				emissions y resilient cl imate resilient.			
Central African Forest	CAFI	https://www.cafi.org/welcome	The Board CAFI's Executive Board (EB) is the authority of	CAFI assists its 6 partner countries: Cameroon, the Republic	FAO, UNDP	REDD+, Mitigation y	Applicable e. RE DD+ NIP elaborad

Initiative			socket fro m responsible for policy dialogue and fund p olicy dialogue and fund management. Decisions are are taken at its meetings or intersessionally.	Central African Republic, the Democratic Republic of Congo, Equatorial Guinea, Gabon and the Republic of Congo a implement the Paris Agreement on Climate Change, fight poverty and develop sustainably and meet the post-2020 biodiversity framework		Adaptation	o
Multilateral Fund for the Implementation of the Montreal Protocol	FM PM	www.multilateralfund.org/default.aspx	Governed by an Executive Committee of 14 members. members, 7 from developing develo ping countries and 7 from devel oped countries.	The **Multilateral Fund** for the Implementation of the **Montreal Protocol** is the body responsible for providing **funds** and financing to assist d e v e l o p i n g countries to phase out the use of ozone-depleting substances. Countries eligible for funding are those listed under Article 5.	UNDP	Mitigation	Applicable.
International Finance Corporation	IFC (English acronyms)	https://www.ifc.org	Part of the World Bank	Its main focus is to offer private sector companies and institutions the following services financial a	World Bank	Sustainable Development	Applicable wit h institutional arrange

							ments

				wide range of financing products and services.			
Forest Carbon Partnership Facility	FCPF	www.forestcarbonpartnership.org.	Executive Committee 28 members	It has two sub-funds, one for REDD+ readiness and the other for the implementation of adopted measures.	UNDP	Mitigation, REDD+	Equatorial Guinea does not currently participate (could be applicable with certain institutional arrangements). with certain institutional arrangements)
Clean Technology Fund	CTF		Implemented through the WB, ADB, AfDB, EBRD and IDB)	Promote scaled-up financing for the demonstration, deployment and transfer of low-carbon technologies with significant potential for long-term greenhouse gas savings.	UNDP	Mitigation, Energy Efficiency	Applicable

NAMA Fund	FNAMA	www.nama-facility.org.	Fund for measures appropriate mitigation measures at the national nationally appropriate mitigation measures (UK, Germany, Denmark United Kingdom, Germany, Denmark and the European Commission). The central decision-making body of the NAMA Facility is its Council. The Board includes representatives of the NAMA Facility'sthe NAMA Facility.	Provide financial support to developing countries and emerging economies that show leadership in the fight against climate change and wish to implement NAMAs. nationally-led transformational change within the global architecture of the mitigation in the	Ministry local with support Legal Entity as a partner	NAMAS	Applicable

				short and medium term.			
Internationally conserved carbon fund	FCCI	http://www.conservation.org/about/	Conservation International	It supports the design and upfront costs of early-stage forest restoration and conservation projects, and assists in the trading of carbon credits through partnerships with the private sector.	Public and Private Sector	REDD+ Conservation	¿?
Programme for Scaling Up Renewable Energy in Low Income Countries (SREP)	SREP (in English)		Group World Bank Group	(a) Annual electricity production; (b) Improved access to energy for individuals, businesses and community services; (c) GHG emissions reduced / avoided (tons CO2 equivalent); (d) increased public and private investments in the selected subsectors (co-financing); (e) increased public and private investments in the selected subsectors (co-financing); (f) increased public and private investments in the selected subsectors (co-financing).	Public and Private Sector	Renewable energies	¿?

Forest Investment Programme (FIP)	FIT		Group World Bank Group	The Forest Investment Programme supports developing countries' efforts to reduce deforestation and forest degradation and promote sustainable forest management leading to reduced emissions and increased forest stocks. forestry of	Public and Private Sector	Adaptation, Mitigation	¿?

				carbon (REDD+).			
Global Climate Change Alliance	GCHA (English acronym	https://climateandhealthalliance.org/en/en/start/a bout/	Committee	The vision is a world where the health impacts of climate change are kept to a minimum, and the health co-benefits of climate change mitigation are maximised.	Public/Private	Mitigation	¿?
Global Energy Efficiency and Renewable Energy Fund (GEEREF)	GEEREF	¿?	European Union	The Global Energy Efficiency and Renewable Energy Fund (GEEREF), proposed by the European Commission, will make it easier to attract private investment for energy efficiency and renewable energy projects.	Private sector	Mitigation	¿?
BioCarbon Fund or		https://wbcarbonfinance.org/	World Bank	It provides carbon finance for projects that fix or conserve greenhouse gases in forests, agricultural and other ecosystems.	Public and private entities	REDD+; Forestry; Land Land Management; LULUCF (Land Use and of Land Use, Land Use Change and y forestry); Reforestation forestry; Reforestation.	Applicable
The UN REDD Programme		http://www.un-redd.org/	A	The UN REDD Programme (United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries)	Public/Private	REDD+, Mitigation, forestry, reforestation, reforestation	Applicable

Congo Basin Forest Fund (CBFF)	CBFF				Public Private	REDD+, Mitigation, forestry, reforestation, reforestation	Applicable
Carbon Market Readiness Partnership (MCP)	PMR	https://www.thepmr.org	Role of the **World Bank:** PMR Secretariat; Trustee; and Implementing Partner, through regional offices.	he PMR is a global platform, which provides funding and assistance technical to explore and develop market-based instruments that support the reduction of greenhouse gas emissions.	Public	Mitigation through carbon markets	¿