Gabonese Republic

NATIONAL CLIMATE COUNCIL

SECOND CONTRIBUTION DETERMINED AT NATIONAL LEVEL (2nd CDN)

2020 - 2025

In accordance with decisions 1/CP.19 and 1/CP.20 and its strategic development plan, Gabon is using this document to communicate its second Nationally Determined Contribution (NDC) to combat climate change and all the information relating to this second NDC. The elements contained in Gabon's Nationally Determined Contribution summarise the ambitions and public policies of Gabon, which, at a turning point in its development, has chosen to make a firm commitment to sustainable development based on controlled greenhouse gas (GHG) emissions. This ambition is all the more resolute because it is proactive: as a result of its sustainable forest management policies, which have preserved a natural endowment that would otherwise have been doomed to dwindle under business as usual, Gabon is a major carbon sink, absorbing more greenhouse gases than it emits, and will continue to do so as a result of the further development of these policies, while choosing to reduce its greenhouse gas emissions further. This submission is doubly important for Gabon, firstly because of the commitment of the President of the Republic to pursue a sustainable development policy, and secondly to contribute to the global effort to combat climate change.

Table of contents

Gabon

Contribution Determined at National Level

2020 - 2025

Title

Gabon has made an unconditional commitment to remain carbon neutral until and beyond 2050.

Conditionally, Gabon will make every effort to guarantee a net carbon absorption of at least 100 million tonnes of CO2 per year beyond 2050.

Summary

Gabon currently absorbs around 100 million net tonnes of $_{CO2}$ equivalent per year (103 million $_{tCO2eq}$ in 2020). Over the last decade, Gabon has absorbed just over one **billion tonnes of net $_{CO2eq}$** and **increased its net sequestration capacity by around 100 million tonnes**. Gabon has increased its net absorptions, whereas most countries have seen a net increase in their emissions.

In the second NDC, the Republic of Gabon makes an unconditional commitment to remain carbon neutral beyond 2050***.*** Subject to continued access of Gabonese wood products to international markets, access to a carbon market for its net sequestration in the form of ITMOs (Internationally Transferable Mitigation Results) with a competitive carbon price and/or appropriate international non-market support. Gabon will do its utmost to guarantee net removals of at least 100 million tonnes of $_{CO2}$ equivalent per year beyond 2050. This goes well beyond the objective of carbon neutrality commonly adopted on a global scale by 2050.

Gabon's economic model, which is already being implemented in a proven and credible way, and which has enabled it and will continue to enable it to avoid the deforestation curve experienced by all countries, developed and developing, consists of implementing a vast programme of economic transformation through sustainable development in all sectors, supported by the creation of a sustainable forestry and timber processing industry in Gabon.

By processing wood locally, the value added in the national economy will be multiplied by ten, with the creation of ten times as many jobs. By supplementing wood production from natural forests with carbon-positive plantations and afforestation in savannah areas, Gabon can boost its timber industry from sales of $1 billion to $10 billion a year, and from the current 30,000 jobs to 300,000 by 2030,1 while securing the carbon sink through this controlled forest management and land use scenario.

However, supporting this controlled scenario will require substantial and ongoing direct investment in areas such as infrastructure, logistics, municipal services, town and country planning and administration; and, at the same time, a complete transformation of all sectors of the economy, including finance, healthcare, agriculture, construction, transport, retail and distribution, and so on.

[1] Gabonese Republic - Transformation Acceleration Plan 2021-23

Gabon plans to make a substantial effort to limit emissions from the energy sector, the second most emissive sector, to 2005 levels or below, in particular by switching from fossil fuels to hydraulic and solar energy, improving energy efficiency in households, services, industry and transport, converting natural gas-fired power stations, implementing the "zero flaring" plan in the oil industry, and generalising electricity interconnection.

In terms of agriculture, Gabon is committed to promoting no-till farming through the development of agricultural irrigation and agroforestry, the regularisation of agricultural land tenure, the preservation of High Conservation Value (HCV) zones in agro-industrial concessions, and the use of cover crops to reduce the use of chemical nitrogen fertilisers in plantations.

To achieve these goals, it is essential that Gabon is able to access climate finance in exchange for the ecosystem services it will continue to provide and, in doing so, access the long-term development capital financing that the country sorely needs to implement its sustainable economic development and transformation agenda.

If carbon and ecosystem payments were to become a reality in the future, they would make sustainable forestry more financially viable, further strengthening the model by making selective harvesting more competitive with other forest-destroying land uses, such as soya cultivation and cattle ranching. It would also make it possible to subsidise the costs of managing protected areas and forest concessions. The controlled scenario is based on the condition that these payments see the light of day.

The development of Gabon's NDC also depends on the effects of climate change not distorting the historical rates of change of carbon stocks in the tropical forests of the Congo Basin, so that their capacity to absorb carbon dioxide is significantly reduced. If this is the case, Gabon's NDC will need to be revised accordingly, with the level of effort maintained but taking into account scientific data on the targets.

Gabon's commitment to maintain its status as a net absorber of CO_{2eq} until 2050 is therefore conditioned by the potential impacts of climate change on the Congo Basin rainforests and by the ability to access the necessary investment capital, all related resources and clean technologies required to implement its development and economic transformation plan over the period to 2050, and in particular by :

1) continued access to international markets for Gabonese wood products (certified as legal, sustainable, positive for the climate and biodiversity, and socially responsible);

2) Access to international carbon market finance under the Paris Agreement, which recognises the historic and ongoing contribution of Gabon's net carbon sequestration to mitigating climate change crises and the loss of nature's services in the form of Internationally Transferred Mitigation Outcomes (ITMOs), as well as appropriate non-market mechanisms;

3) a step towards international recognition of the value of Gabon's ecosystem services;

4) the availability of investment in renewable energy, energy efficiency and sustainable agriculture.

For comparison purposes, the 2020-2025 NDC presents "Business as Usual" (BAU) scenario models for the various sectors responsible for GHG emissions. For the Forestry and Other Land Use (FOL) sector, emission levels are also compared with the Tropical Deforestation Average (TDA). Most tropical rainforest countries have followed and continue to follow trends similar to the TDA scenario.

Gabon could follow this trajectory in the decades to come, in the absence of strong measures that require the support of the international community.

The economic costs of adaptation will be significant, and Gabon will need support for adaptation.

This support will be needed in particular for :

1) To compensate Gabon for the loss of the 60% of our revenue currently generated by oil and gas, which could disappear by 2040;

2) Coping with increasing coastal erosion and rising sea levels, which could require the relocation of Gabon's second-largest city, Port-Gentil, as well as large parts of the capital, Libreville ;

3) To support the transformation of Gabon's agricultural sector into a modern, climate-resilient, low-carbon industry capable of supporting a society and economy in full growth and transformation;

4) Supporting the improvement of scientific monitoring by setting up a reliable climate data collection system that combines meteorological, oceanographic and hydrological information on a centralised platform;

5) Improve modelling of the complex climate system of the western Congo Basin, to enable better prediction of future threats;

6) Redesign cities and towns to make them climate resilient and implement the extensive regional, municipal and urban planning and provision of related services that will be required;

7) Building infrastructure that is resilient to climate change ;

8) Managing the inevitable increase in the number of climate refugees, who will flock to the humid Congo basin to cope with the loss of agricultural yields in the surrounding regions and countries;

9) Addressing issues such as the increase in human-elephant conflict due to climate change (fall in fruit production in the rainforest due to climate change) which have an immediate and significant impact on the well-being of rural populations.

Government of the Gabonese Republic

Nationally Determined Contribution

2020 - 2025

Headline

Gabon commits unconditionally to remain carbon-neutral up to and beyond 2050.

Conditionally, Gabon will strive to maintain its net absorption of carbon at a minimum of 100 million tonnes of CO2 equivalent per year beyond 2050.

Summary

The Gabonese Republic currently net absorbs just over 100 million tons of CO_2 equivalent (103 million tons of CO_{2eq}) per year. Over the last decade, we have **net absorbed** just over **1 billion tons of CO2eq** and **increased net absorptions by about 100 million tons**. We have increased net absorption whilst many countries have increased net emissions.

In its second NDC, the Gabonese Republic commits unconditionally to remain carbon-neutral up to and beyond 2050. Furthermore, and subject to continued access to international markets for its wood products, access to a carbon market for its net-sequestration carbon credits in the form of ITMOs (Internationally Transferred Mitigation Outcomes) at a competitive carbon price and / or appropriate international support through non-market mechanisms, Gabon will strive to maintain its net absorption of at least 100 million tons of CO2eq per year beyond 2050. This goes well beyond the global net carbon neutrality target for 2050 commonly adopted.

Gabon's economic model, which is already showing a track that will credibly allow it to avoid the deforestation curve experienced by all developed and developing nations alike, is to implement a broadly based programme of economic transformation through sustainable development across all sectors of the economy, underpinned by the establishment of a sustainable forestry and timber processing industry in Gabon.

By processing timber locally, the value-added in the national economy will be multiplied ten-fold, with the creation of ten times more jobs. By supplementing timber production from natural forests through afforestation with carbon- positive plantations in savanna areas, Gabon could transform its timber industry from a $1 billion turnover to $10 billion per annum and from 30,000 jobs at present to 300,000 by [2]2030, while securing its carbon sink through forest management and sound land-use planning.

However, this will require substantial and continuous direct investment in areas such as the provision of infrastructure, logistics, municipal services, land-use planning and administration; and in parallel, a comprehensive transformation of all sectors of the economy, including finance, through healthcare, agriculture, construction, transport, retail and distribution and the like.

Gabon plans to maintain our emissions in the energy sector, the second source of emissions, at or below 2005 levels, mainly by transitioning from hydrocarbon sources of energy to hydro and solar energy, by improving energy efficiency in households, services, industries and transport, by replacing fuel oil plants with natural gas, implementing a "zero flaring" policy in the oil industry and improving interconnectivity of the electricity grid.

[2] **Gabonese Republic - Transformation Acceleration Plan 2021-23**

In the agriculture sector, Gabon commits to promoting tow-till agriculture by developing irrigation and agro-forestry, formalising agricultural land-tenure systems, preserving High Conservation Value (HCV) areas in industrial concessions, and using cover crops to reduce the need for chemical fertilisers in plantations.

In order to achieve its objectives, it is essential that Gabon is able to access climate finance in exchange for the ecosystem services it will continue to provide, and in so doing, access the critically needed long-term development capital funding that we require in order to implement our programme of sustainable economic development and transformation.

Provided payments for carbon and ecosystem services become a reality in the future, these may make sustainable forestry more financially profitable, further strengthening the model and making sustainable harvest more competitive than other land uses that destroy the forests, such as soya and livestock ranching. They could also subsidise the management costs for protected areas and forestry concessions. The controlled scenario is based on the condition that these payments are made.

The elaboration of this NDC is also dependent on any climate change induced changes in historical rates of change in carbon stocks in the Congo Basin Forests, not resulting in reduced capacity to absorb carbon dioxide. In such a scenario, the NDC will have to be revised accordingly, with the ambition of maintaining the effort but taking into account the scientific data on the targets.

Gabon's commitment to maintaining its status as a net absorber of CO2eq through 2050 is accordingly conditional on the possible impacts of climate change on the Congo Basin rain forests, as well as on being able to access the necessary investment capital and all related resources and clean technologies required to implement its plan for economic development and transformation over the period to 2050, and in particular on:

1) Continued access of Gabonese timber products (certified legal, sustainable, climate and biodiversity positive and socially responsible) to international markets;

2) Access to international finance through a carbon market under the Paris Agreement, that recognises the historic and ongoing contribution Gabon has made through net sequestration of carbon to the mitigation of the climate change and the loss of services provided by Nature in the form of ITMOs, as well as through appropriate non-market mechanisms;

3) Progress towards international recognition of the value of Gabon's ecosystem services;

4) Availability of investment in Gabon's renewable energy sector, energy efficiency and sustainable agriculture.

For comparison purposes, the NDC 2020-2025 presents "Business As Usual" (BAU) models for the different sectors responsible for GHG emissions. For the forestry and other land-use (FOLU) sector, the emission levels are also compared to average tropical deforestation rates. Most other tropical rainforest countries have followed/are following similar TDA trends.

Gabon could follow this trajectory in coming decades in the absence of strong measures that Gabon plans to implement with the support of the international community.

The economic costs of adaptation will be significant, and Gabon will require support for adaptation to be made available.

In particular, this will be necessary to:

1) Compensate or accompany Gabon as we adjust to the loss of the 60% of our economy currently generated from oil and gas that will almost certainly disappear by 2040;

2) Deal with intensified coastal erosion and sea level rise, which may require the re-localisation of Gabon's second city, Port Gentil, as well as large parts of the capital, Libreville;

3) Support to transform Gabon's agriculture sector into a modern, low-carbon, climate resilient industry, capable of supporting a growing and transforming society and economy;

4) Support for the establishment of an improved scientific monitoring system for climate change and its impacts integrating meteorology, oceanography and hydrology measurements in a centralised database;

5) Developing improved climate modelling of the complex Western Congo Basin climate system, to allow for better prediction of future threats;

6) Re-design cities and towns to make them climate resilient and implement the substantial, regional, municipal and town planning and related provision of services that will be required;

7) Build climate resilient infrastructure;

8) Deal with the inevitable increase in climate refugees, who will flock into the humid Congo Basin as agricultural production in surrounding countries and regions fails;

9) Address issues such as climate change driven increases in human - elephant conflict (linked to the reduction in fruiting in rain forest plants du to climate change), which have significant immediate impact on the well being of rural populations.

1. Gabon's commitments in the fight against climate change

1.1. Major efforts to maintain the carbon sink

It is now widely acknowledged that the world is facing a dual crisis: climate change and the loss of nature and biodiversity. Internationally, Gabon is one of the countries that has contributed least to these crises. In fact, Gabon has maintained a positive carbon balance over the last millennium and, over the last decade, has absorbed just over a billion tonnes of CO_2 equivalent on net. Covering 11% of the tropical forest of the Congo Basin, Gabon is home to exceptional biodiversity and has shown strong leadership in the region in terms of the creation, management and conservation of protected areas, with almost a quarter of its national territory under protection.

With 88% of its territory covered by forests, Gabon is one of the most forested countries on the planet[3] and has a unique status, being a carbon sink whose total absorptions have remained well above its total emissions. This is not simply the result of a situation of natural rent, but on the contrary is possible thanks to two decades of effort, during which Gabon has developed strict environmental and forestry laws, transforming 21% of its territory into protected areas, and 60% of the territory into sustainable forest concessions.

Key policy decisions (see also Figure 1) include the 2001 Forestry Law (implemented from 2005), which makes sustainable management of all forest concessions mandatory; the 2002 decision (implemented by the 2007 National Parks Law) to create a network of 13 national parks, covering 11% of the country; the 2009 log export ban; the creation of the National Council on Climate Change in 2010 and the adoption of the National Climate Plan in 2012; the adoption of the Sustainable Development Act and the Environmental Protection Act in 2014; the ratification of the Paris Agreement in 2016; and the signing of a Climate Change Ordinance in 2021.

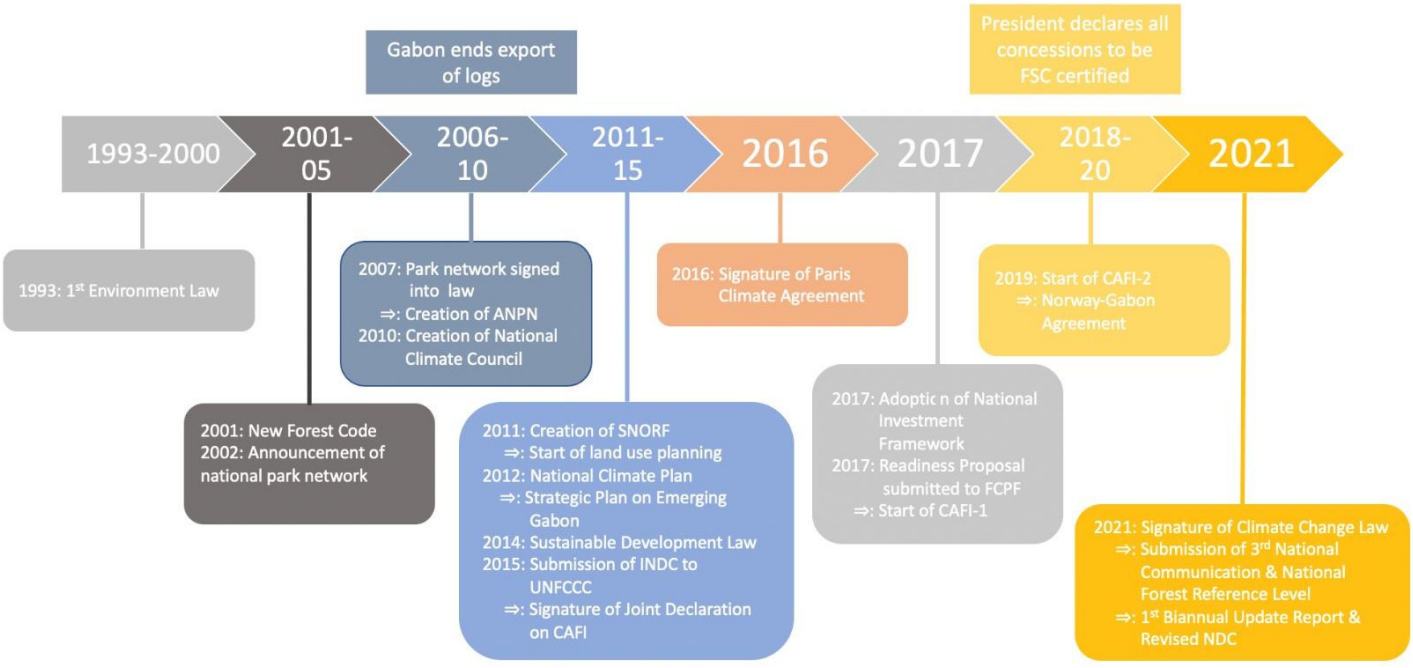


Figure 1: Chronology of Gabon's initiatives with an impact on GHG emissions and sequestration.

[3] Food and Agriculture Organization of the United Nations (FAO). (2020). Forest area (% of territory). World Bank. Available at : <https://data.worldbank.org/indicator/AG.LND.FRST.ZS>

Gabon is no longer limiting itself to its baseline commitment, as in its Nationally Determined Expected Contribution (NDEF), and instead intends to move towards a more ambitious approach.

This second CDN is national and covers all sectors.

Given that Gabon's carbon balance is not just neutral, but positive (the country absorbs more CO_2 than it emits), the approach is firstly to remain carbon neutral, and secondly to maintain Gabon's net absorption capacity and, if possible, increase this capacity, thereby having a positive impact on GHG levels in the atmosphere up to 2025 and 2030 and beyond.

Gabon has a rather special status within the Paris Agreement. The NDC process was designed to help net emitters achieve neutrality, and is therefore not easily applicable to Gabon. To a certain extent, it could be argued that Gabon has already achieved the Paris Agreement objective, thanks to measures taken from 2001 onwards, and that our aim now is to consolidate these gains.

However, Gabon wants to go further. As a member of a global community, Gabon recognises that it has the opportunity to play an important role in the global fight to achieve a carbon (storage)-positive economy. Depending on the terms of the Paris Agreement and future commitments by countries, Gabon could support certain Parties in meeting their climate commitments (carbon neutrality) through the exchange of Internationally Transferred Mitigation Results (ITMOs), combined with the corresponding adjustments.

1.2. Ensuring the sustainable preservation of Gabon's forests

The measures taken by Gabon to protect its forests have helped to create a global insurance policy against climate change and the loss of nature: its forests provide important ecosystem services [4] by storing carbon and helping to maintain stable climate and weather conditions. In Africa, Gabon's forests are part of the tropical forests of the Congo Basin, an essential ecosystem that stretches across West Africa and helps to regulate the region's natural climatic processes, including rainfall, river flow and water quality,[5] which also support the Sahel[6] and the Nile Basin.[7] The Nile Basin provides water to more than 200 million people and is under pressure from population growth and agricultural demand, which exacerbates the risk of transboundary water conflicts in the region.[8] Gabon, a country with "HFLD" (High Forest Cover and Low Deforestation) status, remains committed to preserving its forests to ensure that the communities and sectors that depend on the ecosystem services provided by the forests of the Congo Basin are not affected by the loss of these ecosystem services.

As such, forest dynamics are essential to the country's future emissions profile. All developed countries and almost all developing countries have recorded a fall in the deforestation curve (Figure 2). Gabon, as well as countries such as Guyana, Suriname and the Republic of Congo, are among the countries where deforestation is declining.

---

[4] The Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) explained the contribution of these ecosystem services to modern society in its 2019 Global Assessment Report on Biodiversity and Ecosystem Services as follows:

"Most of nature's contributions to people are not entirely replaceable, and some are even irreplaceable. Nature plays a critical role in providing food for humans and animals, energy, medicinal products, genetic resources, and a whole range of materials essential to people's physical well-being and the preservation of their cultural heritage. For example, more than 2 billion people use wood fuel to meet their primary energy needs, around 4 billion people rely mainly on natural remedies for their health, and some 70% of the drugs used to treat cancer are natural products or synthetic products inspired by nature. Through its ecological and evolutionary processes, nature maintains the quality of the air, fresh water and soil on which humanity depends, distributes fresh water, regulates the climate, ensures pollination, combats pests and mitigates the impact of natural hazards".

[5] Sonwa, D. J., Farikou, M. O., Martial, G., & Félix, F. L. (2020). Living under a Fluctuating Climate and a Drying Congo Basin. *Sustainability*, *12*, 2936.

[6] Ellison & Speranza (2020) From blue to green water and back again: promoting tree, shrub and forest-based landscape resilience in the Sahel. *Science of the Total Environment* **739**

[7] Ellison et al (2017). Trees, forests and water: Cool insights for a hot world. *Global Environmental Change* **43**: 51-61

[8] Gebrehiwot, S. G., Ellison, D., Bewket, W., Seleshi, Y., Inogwabini, B.-I., Bishop, K. (2018). The Nile Basin waters and the West African rainforest: Rethinking the boundaries. *WIREs Water*, **6(1**), 1317.

-and have the potential to remain in the first phase (High Forest Low Deforestation, HFLD) of deforestation.

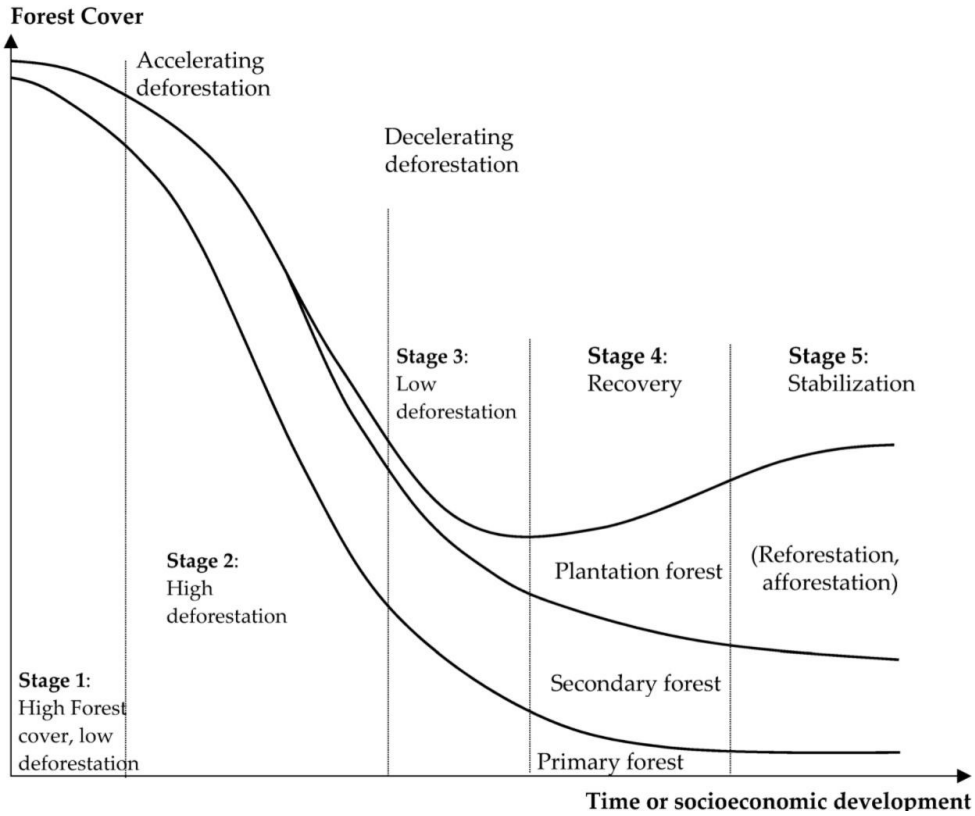


Figure 2. Stages of the deforestation curve.[9] Gabon is at stage 1.

In 2005, a number of countries proposed the RED (Reducing Emissions from Deforestation) mechanism to the United Nations Framework Convention on Climate Change (UNFCCC) at COP11 in Montreal. In 2007, a second D (Degradation) was added at COP13 in Bali. REDD+, in today's terminology, came into being at COP15 in Copenhagen with a key decision on methodological guidance for activities relating to reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries. This voluntary process was designed to provide an urgent response to deforestation, which contributes around 11% of global GHG emissions[10]. In 2009, developed countries pledged $30 billion over 3 years to "kick-start REDD+".

At COP17 in Durban in 2011, it was clear that the fast-start funds could not be made available. Gabon was faced with a serious dilemma, as it could not put the future of its forests or its economy at risk while awaiting contributions from international donors for emission reduction payments.

What's more, with Gabon's oil economy set to wane in a future low-carbon world, carbon payments would be hard pressed to create the hundreds of thousands of jobs Gabon needs to keep its young population, nearly half of whom are under 20, occupied.

[9] Source: T. Michinaka. Approximating Forest Resource Dynamics in Peninsular Malaysia Using Parametric and Nonparametric Models, and Its Implications for Establishing Forest Reference (Emission) Levels under REDD+. Land **2018**, 7(2), 70; **https://doi.org/10.3390/land7020070**

[10] https://www.fao.org/redd/en/

The economic model for Gabon's timber industry is based on the premise that **a sustainably managed forest is a forest that is protected from alternative uses, and on the scientifically proven certainty that such a forest also stores increased quantities of carbon**. Logging, if carried out in a sustainable manner by applying the Reduced Impact Logging for Climate Change mitigation (RIL-C) set of practices - as envisaged by Gabon - is not harmful to the forest. The rate of removal is extremely low (1 to 3 trees per hectare) and RIL-C practices such as directional felling and better road planning limit the impact of activities on the biomass. It is estimated that **RIL-C practices by all concessionaires could reduce GHG emissions per hectare by 50% compared with the current national average.**

In addition, sustainable forest management is a gateway to **forest certification**, which Gabon hopes to extend by 2025, in particular through the Forest Stewardship Council (FSC) standard, and which should offer real added value for wood. By increasing the economic value of the forest, certification prevents the forest from being converted to other uses, while at the same time providing jobs and income. Similarly, Gabon's commitment to **local wood processing**, which took concrete form in 2009 with the ban on log exports, is helping to add value to wood and develop a strong forestry economy, contributing to growth in GDP and employment while significantly reducing emissions per GDP point.

For more than a century, Gabon, like many other African countries, has exported logs to Europe, then to the United States and South-East Asia. Yet logs represent only around 8% of the timber value chain (jobs created during the harvesting, extraction and transport of logs account for 8% of the total, and 92% of jobs in the sector are in processing). By banning the export of logs and developing wood processing in the country, Gabon could increase the value of the forestry sector and the resulting jobs by a factor of 10. By supplementing the wood harvested from natural forests with plantations of fast-growing species, the industry could further double this value creation, making the forest an essential resource for the Gabonese economy and providing hundreds of thousands of socially and environmentally sustainable jobs (there are currently 30,000 in the forestry sector) for a category of Gabonese people whose livelihoods depend on the sustainable management of the Gabonese forest. Gabon could, quite literally, **exploit the forests (sustainably) to save the forests**, creating a sustainable industry and economy capable of replacing oil and gas in its economy and thus combining a sustainable economy with maintaining the carbon sink.

The development of a high-quality timber industry will involve an **increase in the volumes harvested, which must be accompanied by sustainable management measures**. By making RIL-C practices the general rule for all concessions, it will be possible to increase production while reducing or keeping stable greenhouse gas emissions, and thus develop a sustainable and economically viable industry.

To achieve this, the implementation of this business model is based on 3 elements:

1) Attract sufficient private sector investment to develop the industry;

2) Continued access to international markets for certified tropical timber;

3) Create management and traceability systems to ensure that wood products from Gabon are legal, traceable, sustainable, climate-friendly, biodiversity-friendly and socially responsible.

Nevertheless, knowing that logging, even with the selective logging practices applied in Gabon with a harvest of 2 trees/ha over a rotation period of 25 years, is detrimental to the most sensitive part of tropical rainforest biodiversity, Gabon has joined the 30x30 programme of *the High Ambition Coalition for Nature and People,* aiming to transform 30% of terrestrial and aquatic ecosystems into protected areas by 2030.

The country's vision is to develop landscapes where the areas richest in biodiversity are protected, surrounded by a mosaic of forest concessions, community forests and rural areas.

2. Contributions to mitigation

2.1. Information needed to ensure clarity, transparency and understanding of the NDC

In accordance with decision 1/CP.21, Gabon presents "the information necessary for clarity, transparency and understanding" as part of its national contribution, which is shown in table 1 below.

Type of commitment	Commitment in absolute terms
Perimeter	The commitment covers all sectors that emit GHGs as well as the net absorption capacity of the forestry sector
Reference year	2005
Period commitment	2020-2030
Reduction level	In view of its special status as a carbon sink, and the importance of forests in Gabon's climate commitments, the country has undertaken to remain carbon neutral and, subject to support, to do its utmost to maintain its net absorptions at a level of 100 million $_{tCO2eq}$ per year. In 2030, gross emissions from the forestry sector should reach **30.4 million $_{tCO2eq}$ (30,381 $_{GgCO2eq}$)** thanks to the measures put in place**.** Similarly, gross absorptions should reach **152.5 million $_{tCO2eq}$ (152,489 $_{GgCO2eq}$)**. In 2030, emissions from the energy and agriculture sectors will amount to **3.8 million $_{tCO2eq}$ (3,798 GgCO2eq)** in a controlled scenario**: 3,322 GgCO2eq** for the energy sector, **476 GgCO2eq** for the agriculture sector.

Cover	The sectors covered are : **<u>Forestry and other land uses (FAT)</u>** For the forestry and other land use sector, the following reservoirs have been taken into account: above-ground biomass, below-ground biomass and dead organic matter (DOM). Harvested wood products have not been included, in line with the methodology for calculating the Reference Emission Level (REL) for the forestry sector, which was submitted to the UNFCCC by Gabon in February 2021. *Gas considered:* CO_2. **<u>Energy and oil/torching</u>** For energy and oil/torching, three types of greenhouse gas emitting activities will be taken into account, in accordance with the IPCC Guidelines. These are activities relating to stationary fuel combustion, mobile fuel combustion (natural gas, paraffin, diesel, petrol, etc.) and fugitive emissions relating to oil production, production and natural gas flaring. *Gases considered:* CO_2 *and fugitive methane emissions. Indirect GHGs: NOx, CO, CONMV,* SO_2. **<u>Agriculture</u>** For the agriculture sector, the carbon reservoirs considered are found in the burning of biomass, which is included here for savannah fire and agricultural residues. The carbon present in drained organic soils is also included for savannah and cropland. The other components of agriculture are not carbon reservoirs. *Gases considered:* CO_2, N_2O, CH_4 The **<u>waste and industrial processes</u>** sectors were included in the GHG inventories. However, they are not included in the quantified mitigation measures due to their very low impact in proportion to the three main sectors, i.e. FAT, energy and agriculture.
Process planning	The 2020-2030 NDC was drawn up using the following methodology: • An initial assessment of the 2015 NDC, the progress made and any difficulties encountered; • A second phase of consultation with stakeholders: institutions, civil society and the private sector; • A phase of analysis of sectoral priorities, governance, financeability and alignment with the Sustainable Development Goals (SDGs); • A cost-benefit analysis of mitigation and adaptation measures. Synergies have been sought with all sectoral and national policy documents, and studies completed or underway (IRENA, UNDP). The reports produced by the CNC for the UNFCCC (National Communications, Updated Biennial Report) were prioritised for the identification of actions to be implemented and the quantification of emissions and removals. The NDC was drawn up with a constant eye to inclusiveness and stakeholder involvement.
Hypotheses and methodological approach	The underlyings taken into account are : • Demographic growth of 2.7% per year ; • Economic growth (excluding the oil sector) averaging 3.5% a year from 2010. The **"controlled" scenario** takes into account all the public policies implemented after 2000 (forestry code, creation of national parks, national plan to reduce flaring, strategic planning of the PSGE with its low-carbon industrial development, National Climate Plan, CAFI's National Investment Framework (CNI), etc.) but also future trends: e.g. doubling of wood production volumes offset by the implementation of sustainable forest

How is the CDN ambitious and fair in light of given national circumstances	This NDC is a strategic document for Gabon, informed by extensive data collection, solid technical analysis and broad stakeholder engagement. In the case of mitigation, detailed information on the sectors and an estimate of the state of progress of these measures has made it possible to propose conditional and unconditional contributions over the period 2020 - 2030. All of the proposed measures are also in line with Gabon's development objectives set out in the PSGE and the Plan d'Accélération de la Transformation (2020). The NDC is particularly ambitious, as it proposes to maintain its status as a carbon-neutral country until at least 2050. Subject to support, Gabon will do its utmost to remain a **"net carbon sink"** by committing to maintaining a level of net absorptions in excess of **100 million tCO2eq**. At the same time, Gabon will pursue its economic development objectives in the energy, agriculture and forestry sectors, without impacting the country's carbon storage potential.

Table 1: Information to facilitate clarity, transparency and understanding (ICTU guidance) of the revision of the NDC.

2.2. Mitigation actions and implementation plan

Gabon is presenting two contrasting scenarios: the "Controlled" scenario and the "Business as Usual (BAU)" trend scenario (Figure 5). The controlled scenario represents the conditions under which policy actions have been and will be implemented to reduce or prevent greenhouse gas emissions. The controlled scenario takes into account historical data up to 2015 and projected data from 2020 to 2050. The BAU scenario represents conditions without mitigation measures and presents historical data up to 2005 and projected data from 2010 to 2050.

It is important to note that for the FAT sector, the projections for both scenarios (Controlled and BAU) have only taken into account "Forest" data - as presented in the FRL - and have not included data from Other Land Use[11] , as presented in the Greenhouse Gas Inventory (IGES). However, to ensure consistency with the IGES, historical data for the FAT sector as a whole is presented in Figure 5a for 2005-2015 (separated into "Forest" and "Other Land Use"). Emissions and removals from "Other Land Use" represent only 3% of net removals from the FAT sector and (a) are not expected to contribute significantly to projected net removals between 2020 and 2030, and (b) are not expected to be affected by the mitigation measures included in this NDC.

[11] Drained organic soil, mineral soil, fuelwood, gains on new land use after deforestation, gains-losses for conversions that do not involve forestry.

However, the "Other Land Allocations" sector will be included in future versions of the Gabon NDC to ensure completeness in the FAT sector and full consistency with the IGES.

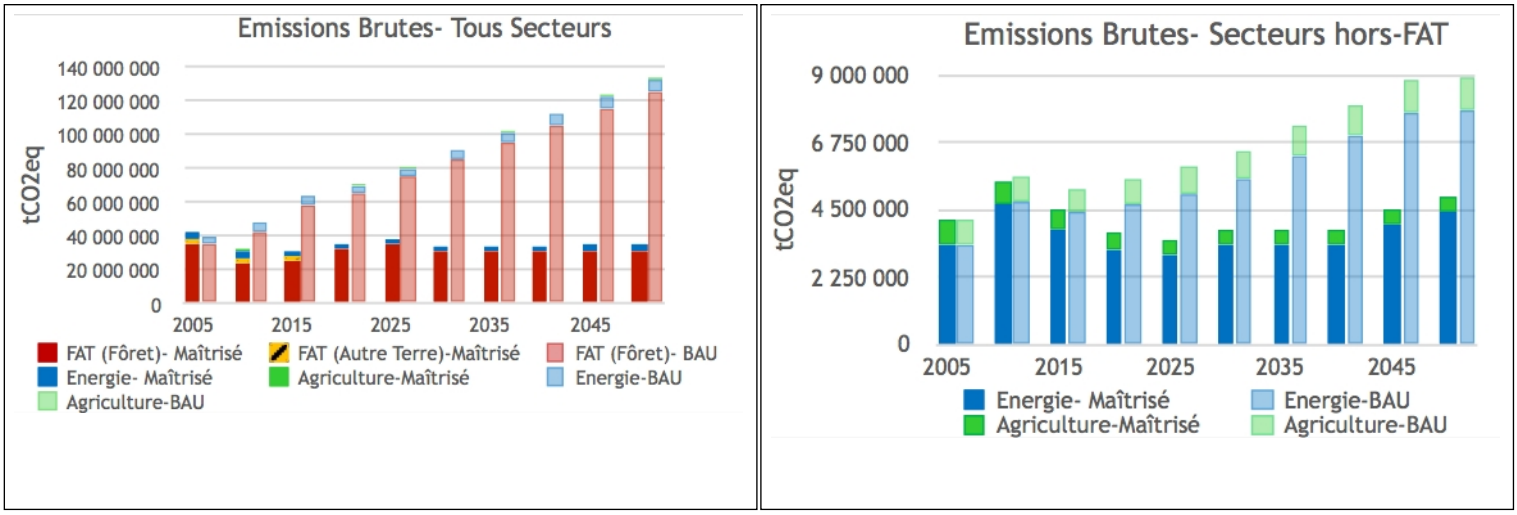


Figure 3: Projected emissions and business-as-usual (BAU) scenario for the FAT, energy and agriculture sectors. Data for 2005-2015 correspond to actual performance (striped columns). Scenario data is projected from 2020 and the business-as-usual (BAU) scenario is projected from [201012].

Tables 2 and 3 below show the ambitions for 2030 for the 3 key sectors: FAT (forestry), energy and agriculture, compared with the reference year 2005.

Sector	Emissions	2005	Controlled 2030	% change 2005-Mastered
FAT (Forest)	Gross emissions	35 623	30 381	*-14,7%*
	Gross absorptions	143 602	152 489	*6,2%*
	Net absorptions	**107 979**	**122 108**	*13,1%*

Table 2 Ambitions to 2030 for the FAT (Forest) sector ($_{GgCO2eq}$).

Sector	2005	Controlled 2030	% change 2005-Controlled
Energy	3 338	3322	*-0,5%*
Agriculture	799	476	*-40,4%*
Total	**4 137**	**3 798**	*-8,2%*

Table 3 Ambitions to 2030 for the energy and agriculture sectors: Gross emissions ($_{GgCO2eq}$)

In 2030, gross emissions will be of the order of **3,798 GgCO2eq** for the energy and agriculture sectors, and net absorptions of **122,108 GgCO2eq** for the FAT sector. Cumulatively, net absorptions for all sectors combined will be **118,310 GgCO2eq** in 2030.

[12] Data from the NRF and the Biennial Update Report (BIR) submitted to the UNFCCC.

Gabon's commitments for this NDC are illustrated in Figure 6. The figures for 2025 and 2030 are projections based on a controlled emissions scenario.

The commitment in this NDC covers the period to 2030. Figures for the period 2035 - 2050 are indicative.

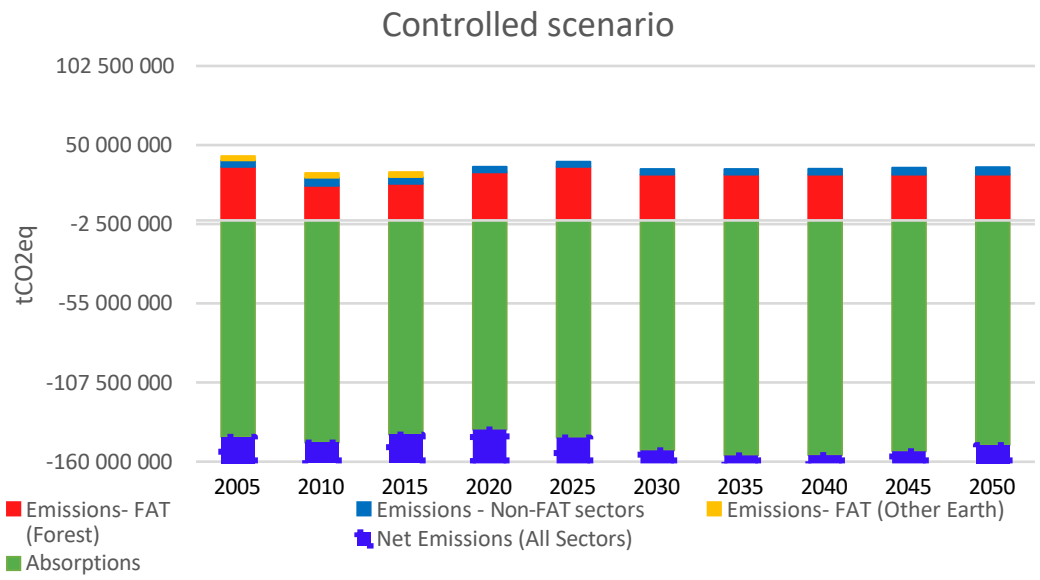


Figure 4: Actual (striated columns) and projected emissions and sequestrations from the FAT, energy and agriculture sectors for the period 2005-2050 and net emissions (or net removals)[13].

Gabon's vast forests, covering 88% of the country, represent an important carbon stock and a permanent and continuous carbon sink. As described above (and in much more detail in Gabon's Forest Reference Level (FRL)[14),] a series of strong policy decisions and management actions have kept deforestation below 0.1% per [year16] and ensured that protected and managed forests maintain their carbon stock and carbon sequestration function. While Amazonian forests are suffering the impacts of climate change, the African ecosystem is proving much more resilient and its potential to absorb carbon per hectare as a result of climate change is expected to decrease by only 14% by [2030015]. NRF data shows that carbon sequestration is higher in logged forests than in undisturbed forests, which explains the variations in gross sequestration (see NRF for more details - Figure 6).

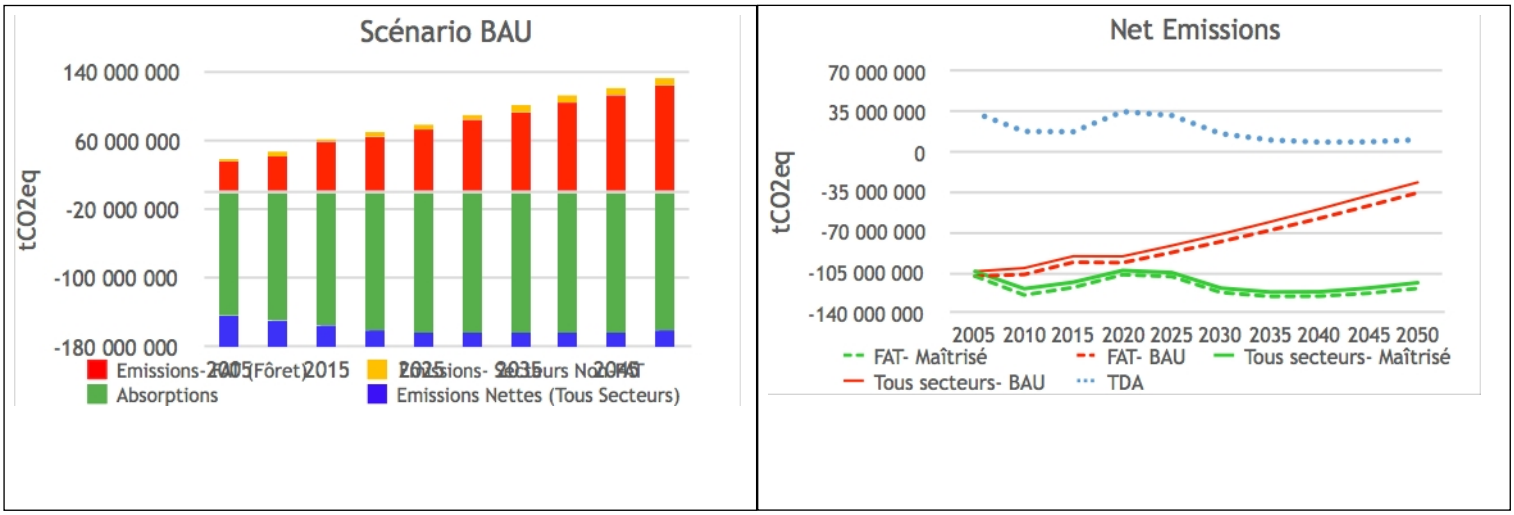
Figure 7 compares the controlled and trend scenarios for the FAT, energy and agriculture sectors and also presents a scenario in which we apply the average deforestation rates of tropical forest [countries16] to Gabon.

[13] Data sources NERF (2021, UNFCCC website); 3ème national communication (2021, UNFCCC website); RBA (2021, UNFCCC website).

[14] Gabonese Republic (2021). Gabon's Proposed Modified National REDD+ Forest Reference Level (https://redd.unfccc.int/).

[15] Hubau et al (2020). Asynchronous carbon sink saturation in African and Amazonian tropical forests. ***Nature*** https://doi.org.10.1038/s41586-020-2035-0

[16] Achard et al (2014). Determination of tropical deforestation rates and related carbon losses from 1990 to 2010.Global Change Biology, v20,p2540-2554.



(a)

(b)

Figure 5: (a) BAU scenario projections of emissions, sequestration and trend net emissions from the FAT sector (Forest) and other sectors; and, (b) controlled and trend emissions for the FAT, energy and agriculture sectors (all sectors) from a 2005 baseline to 2050 compared with the Tropical Deforestation Average (TDA). (Note that the FAT -Mastery line (green dotted line) includes Forest + Other Land for 2005 - 2015, Forest only 2020-2050). The FAT- BAU line includes Forest only 2005-2050

Although Gabon's revised NDC commitment is not expressed in reference to a 'business as usual' scenario, it is clear from Figures 5 and 7 that, in the absence of the good environmental stewardship demonstrated by Gabon's leaders over the past two decades, the country's emissions profile would have been on an upward trajectory that would have brought it close to neutrality with no carbon sinks (and therefore on a poor historical trend) by 2060. Figure 5b shows that if Gabon were a typical rainforest country with average deforestation, its economy would be a net emitter.

Gabon has chosen not to make its commitment to a business-as-usual scenario, as was the case in its CPDN, because future projections are a simulation which, of necessity, are based on subjective judgements, which could be contested. Had Gabon followed the reasoning of other rainforest countries in Africa and beyond, it might have seemed inevitable that business-as-usual scenarios would become a reality as countries develop (see Figure 4). That said, Figure 5 **clearly shows that Gabon is on track to meet its CPDN commitment to reduce its greenhouse gas emissions by 50%, relative to a BAU model**.

Through its sustainable economic development plan, Gabon is attempting to reverse this trend and is undertaking, through this NDC, to remain a net carbon absorber until 2030 and beyond, subject to an influx of structured, climate-friendly and responsible investment (public, private and state-guaranteed) to accelerate the transformation of its forestry, energy and agricultural sectors, complemented by market and non-market finance to reward our net carbon sequestration based on the results and ecosystem services provided by Gabon's ecosystems.

In other words, Gabon also believes that the contribution of the carbon stock, contained in its intact forests, to climate mitigation efforts should be recognised through climate finance (i.e. finance that is not derived from transferable carbon units). Gabon is therefore seeking additional climate finance in the form of performance-based payments based on the value of its forest carbon stocks and associated ecosystem services (i.e. climate and weather regulation, biodiversity conservation, etc.).

Gabon plans to review emissions and sequestration figures at least once every five years, or as improved data becomes available. The sequestration projections are consistent with the Forest Sector Emissions Reference Level (FRL) and take into account refined calculations as the country strives to continuously improve its methodology. As such, the revised projections take into account expected reductions in annual sequestration rates due to the effects of climate change[17]. Gabon reserves the right to adjust the figures as our data on sequestration in different ecosystems improves and if there is an unexpected increase in climate-related emissions from African rainforests, as has been observed in the Amazon.

2.3. Gabon's approach to its forest carbon stock, emissions and removals

In 2030, in a controlled scenario, gross emissions for the FAT (forestry) sector are estimated at **30,381 GgCO2eq**, i.e. :

- A reduction in emissions of **5,242 GgCO2eq or 14.7%** compared with the 2005 baseline.
- A reduction in emissions of **54,720 GgCO2eq, or 64%** compared with the BAU.
- A reduction of **119,480 GgCO2eq or 80%** compared with the TDA scenario, which is 149,862 GgCO2eq for 2030.

Gabon is the custodian of around 18.9 billion tonnes of CO_2 stored in its forests and a further 11 billion tonnes stored underground[16].

The main mechanism for maintaining the sequestration capacity of forests is sustainable harvesting and local processing of wood into finished and semi-finished products for export. Carbon and climate finance will be needed to ensure that this commitment is met.

Accordingly, Gabon will seek to attract carbon finance in the form of performance-based payments and/or by generating carbon offset credits to achieve its goal of developing a sustainable economy over the coming decades. Gabon will only seek funding for carbon sequestration beyond the volume required to remain carbon neutral and is committed to generating carbon offsets that are Paris Agreement compliant, of high integrity and represent real mitigation.

Gabon is considering two methodologies for establishing the baseline for generating carbon offsets, both of which recognise the strong policy measures and programmes implemented by Gabon since 2005 that have kept its forest resources intact. They are not mutually exclusive and will both be underpinned by the same high-quality data and research programmes.

The first option recognises that Gabon's forests are a net sink for CO_2. This is the result of the continued growth of existing forests and recovery from past disturbances, such as agriculture and logging. Gabon believes that the "net sequestration" approach is consistent with the objectives of the Paris Agreement and will enable continued sustainable development. Under this approach, all emissions and removals in Gabon's forests will be accounted for, with results consistent with those submitted to the UNFCCC under the enhanced transparency framework. Only the portion of net removals that goes beyond simple carbon neutrality will be considered tradable in the form of carbon offset credits. These carbon credits will comply with the Paris Agreement and can be sold to other parties to the UNFCCC or to the private sector, subject to corresponding adjustments.

The second option, which Gabon can use in combination with the net sequestration approach, consists of generating carbon offset credits using a BAU scenario, in relation to the emissions that

[17] FRL, 2021

would have been generated without these policies and measures (consistent with other sectors) for activities including, but not limited to:

1. **Avoided deforestation**: net carbon dioxide emissions avoided as a result of the implementation of Gabon's forest protection policies from 2005 onwards, compared to the BAU scenario without these policies, including carbon dioxide absorbed by existing forest stock growth on an annual basis that is attributable to avoided deforestation (foregone removals);

2. **Forest degradation avoided**: net carbon dioxide emissions avoided thanks to the implementation of sustainable forest management policies and practices since 2005 compared to a BAU scenario without these policies**;**

3. **Afforestation**: carbon dioxide emissions absorbed by reforestation and restoration activities on an annual basis ;

4. **Replacing** hydrocarbon-based energy sources with renewable energy sources, improving the electricity network to increase efficiency and reduce losses, improving energy efficiency, replacing heavy fuel oil power plants with natural gas, implementing a "zero flaring" plan in the oil industry, and making electricity interconnections more widespread;

5. To achieve these goals, it is essential that Gabon is able to access climate finance in exchange for the ecosystem services it will continue to provide and, in so doing, access the long-term development capital financing that the country sorely needs to implement its sustainable economic development and transformation agenda;

6. **Investment** in climate-sensitive agriculture**,** in particular through the promotion of no-till farming with the development of agricultural irrigation and agroforestry, the regularisation of agricultural land tenure, the preservation of High Conservation Value (HCV) zones in agro-industrial concessions, and the use of cover crops to reduce the use of chemical nitrogen fertilisers in plantations;

7. Improving waste management;

8. Climate-sensitive urban **planning** and construction technology.

2.4. Gabon's approach to energy and agriculture

As a developing country, Gabon must pursue its economic growth and, in particular, ensure its food and energy self-sufficiency. These objectives may involve, at least in the short term, an increase in greenhouse gas emissions. Nevertheless, controlled development of the agriculture and energy sectors will enable us to maintain a level of emissions that is relatively stable compared with the trends observed since 2015.

Thus, in a controlled scenario, gross emissions from the energy and agriculture sectors will amount to 3,798 $_{GgCO2eq}$ in 2030, compared with 4,137 $_{GgCO2eq}$ in 2005.

- In 2030, gross emissions from the energy sector will be 3,322 GgCO2eq in the controlled scenario.
- In 2030, for the agriculture sector, gross emissions will be 476 GgCO2eq in the controlled scenario.

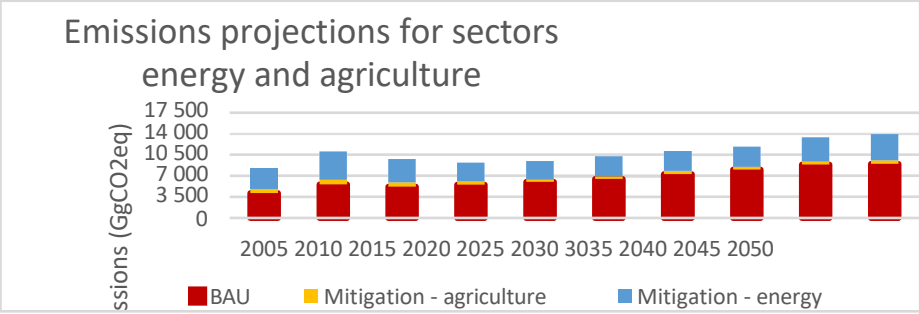


Figure 6 - Emissions from the energy and agriculture sectors compared with the BAU scenario.

2.4.1. ENERGY

A gradual replacement of diesel power stations by natural gas-fired power stations is already underway (70 MW completed). At the same time, the emphasis is on developing hydropower, with a target of 260 Mega Watts (MW) of installed capacity by 2030 and 630 MW by 2050. This will make it possible to reduce dependence on fossil fuels and optimise Gabon's considerable hydraulic potential.

The development of photovoltaic solar energy, which is currently in the planning stage, should be supported by international donors. The measure aims to develop a grid-connected solar power plant with a capacity of 115 MW by 2030, as well as installing hybrid mini-grids (solar/diesel) and 330,000 solar water heaters.

Improving energy efficiency in transport, households and industry (installation of solar and LED street lamps, etc.) will also have a significant impact on reducing emissions. Forthcoming regulations should limit the import of incandescent lamps in favour of LED and compact fluorescent lamps (CFLs). 9 million low-energy light bulbs (LBCs) are to be supplied to households, along with 35,000 compact air conditioners. At the same time, energy efficiency in services and industry is to be improved (installation of solar and LED street lamps, etc.).

The development and interconnection of the electricity transmission networks will improve access to electricity for the Gabonese population and reduce losses on the network.

The Zero Gas Flaring Plan for the oil and gas industries will be updated in the light of the conclusions of the Gas Strategy Task Force. Finally, a new Electricity Code is currently being drafted, which will provide a clearer legal framework for energy efficiency measures.

2.4.2. AGRICULTURE

Gabon wants to promote no-till farming through the development of agricultural irrigation and agroforestry, the regularisation of agricultural land tenure, the use of cover crops, and the training and awareness-raising of agricultural stakeholders in the use of good agricultural practices.

The preservation of High Conservation Value (HCV) areas within land reserved for agriculture, already implemented in OLAM's oil palm plantations, will limit the impact of industrial agriculture on Gabon's forests.

2.4.3. WASTE

The waste sector emits GHGs through open-air waste incineration and wastewater management. Emissions from this sector represent a marginal share of national emissions and are therefore not included in Gabon's mitigation commitments, but given the country's strong demographic growth (2.7% per year), emissions from this sector are set to increase. Visit

Gabon is already considering mitigation measures aimed at improving waste management (sorting, recycling, composting) and waste recovery (biogas from municipal solid waste). This sector is not subject to a quantified commitment in terms of GHG reductions, but the country is committed to studying and developing the proposed measures.

3. Gabon's needs - adaptation

Gabon is in the process of completing its national plan for adaptation to climate change. It is clear that it will need support to enable it to adapt to the effects of climate change, including rising sea levels, the intensity of extreme weather events, the temperature of our cities and the repercussions of climate change on neighbouring countries, in particular climate-related migration. There is also the question of economic adaptation, given that 60% of our economy depends on oil and gas revenues, which are set to decline or even disappear over the next two or three decades. Gabon will improve its future NDCs to include clearer objectives and needs for adaptation, based in particular on the future national adaptation plan.

The following list of key adaptation measures will require support, which will be quantified at a later date:

- Gabon's transition from an economy dependent on oil and gas to a sustainable green economy. This will require significant investment in sustainable forestry and wood processing, as well as appropriate logistical infrastructure (roads, railways and ports). The availability of concessional or sovereign financing for private sector commercial enterprises that adhere to climate and sustainability principles would significantly accelerate this transition;
- Strengthening coastal infrastructures in Libreville and Port-Gentil in the short and medium term and assessing the possible need to relocate and rebuild Port-Gentil, which will be located below 2 m in altitude in the medium to long term;
- Urban planning, climate-resilient architecture and relocation of people and industries to areas that will be prone to flooding in the coming decades;
- Creating green spaces and planting trees in urban areas to reduce the temperature of urban environments;
- The transition to climate-resilient, modern tropical agriculture with a positive carbon footprint;
- In Gabon, we are already seeing a decline in fruit production from rainforest trees (perhaps as a first response to climate stress, reducing investment in fruit production to concentrate resources on growth), resulting in a lack of food for the rainforest's fruit-eating animals. Elephants have become less fit over the last two decades (they are thinner because they are starving) and there has been a significant increase in crop raiding by elephants in rural and even peri-urban areas. The country must adapt to this situation by installing electric fences to protect crops from elephants[18].
- Investment in the Centre international de recherches médicales de Franceville, CIRMF, to enable it to monitor and mitigate the effects of climate change on health and emerging diseases;
- Investing now in the preservation of strategic ecosystems, such as mangroves, which will alleviate flooding in cities in the future, or coastal forests, which are essential for maintaining rainfall inland;

[18] E. Bush et al., 2020. Long-term collapse in fruit availability threatens Central African forest megafauna. *Science* 24 Sep 2020: eabc7791DOI: 10.1126/science.abc7791

- Irrigation of industrial crops as rainfall falls in the interior of the country;
- Improved land-use planning and investment in the maintenance of the main catchment areas, both urban and natural, with a view to limiting flooding caused by extreme weather events;
- Investments to ensure the climate resilience of key infrastructure ;
- Preparing for increased climate-related migration and instability in the region;
- Investment in research and related capacity building to better monitor, understand and predict the effects of climate change.

4. Means of implementation

4.1. Information on financing - calling for access to climate and carbon financing

In line with the intent of the Paris Agreement, which supports results-based payments and the monetisation of climate mitigation results through the creation and sale of internationally transferred mitigation results and carbon offset credits, Gabon's NDC recognises that Gabon should have access to the full range of international climate and carbon finance sources (recognising the importance of avoiding double counting) as presented in Table 4.

4.1.1. CARBON FINANCE

Thanks to its ability to store and absorb more CO_2 than it emits, Gabon can and should claim financing from carbon markets.

Ordinance no. 019/2021 of 13 September 2021 on climate change will make it possible to set up a national carbon credit market, already outlined in 2014 in the Sustainable Development Act. This national market can contribute to the financing of certain actions, through a system of financial compensation for the effort to reduce GHG emissions via a national greenhouse gas register, which will have the task of channelling and stimulating part of the financial flows dedicated to reducing emissions (State budget, private investments, carbon fee, income from credits on the domestic market, via a carbon tax on transactions of credits or loans from TFPs).

The climate management body, created for this purpose, will also be able to market carbon credits internationally and thus obtain money from the sale of credits, which can be used to finance other actions. However, these credits may only be sold for emission reductions that do not fall within the objectives of this NDC, to avoid double-counting of emissions.

The question of the **price of carbon** remains crucial: it must be **fair**, given the importance of the forests of the Congo Basin for the climate resilience of the entire African continent, and sufficiently **remunerative** to cover the investment costs of the measures and finance additional programmes, particularly those linked to adaptation to climate change.

	Results-based country-to-country payments for payments linked to results for continued sequestration above the sectoral emissions of the ITMO Gabon (article 5.2 of the Paris Agreement).	Country-to-country sale of mitigation results transferred internationally (article 6.2 of the Paris Agreement)	Sale of carbon offsets to meet compliance and voluntary obligations (Article 6.4 of the Paris Agreement; voluntary markets)
Climate financing			
Existing forest carbon stock Existing forest carbon stocks, the environment and associated ecosystem services (climate regulation and weather conditions)	x		
Carbon finance			
Net sequestration (option 1) Part of the net absorption of carbon dioxide in forests, beyond what is necessary to ensure Gabon's carbon neutrality	x	x	x
Avoided deforestation (increase in net sequestration compared to BAU) (option 2) Net carbon dioxide emissions avoided through the implementation of Gabon's forest protection policies relative to a 2000-2009 baseline, including carbon dioxide absorbed due to the increase in existing forest stock on an annual basis that is attributable to avoided deforestation (foregone removals).	x	x	x

Forest degradation avoided (increase in net sequestration compared with BAU) (option 2) Net carbon dioxide emissions avoided thanks to the implementation of Gabon's forest protection policies, compared with the reference period 2000-2009.	x	x	x
Reforestation (increase in net sequestration) (option 2) Carbon dioxide emissions absorbed from reforestation and restoration activities per year	x	x	x
Reductions in line with the Paris Agreement, "Clean Development Mechanism (CDM) equivalent" in the energy, agriculture, industry and waste sectors (option 2)	x		x

Table 4 Different options for climate and carbon financing.

4.1.2. TECHNICAL AND FINANCIAL PARTNERS (TFP)

4.1.2.1. Green Climate Fund (GCF)

As part of the fight against the effects of climate change, the Green Climate Fund (GCF) has granted Gabon USD 300,000. This sum represents the first grant awarded to the country to strengthen the institutional capacities of the Designated National Authority (DNA)[19]. In 2018, Gabon submitted its country programme document to the Green Climate Fund (GCF), defining its investment priorities in the fight against climate change in six priority sectors: forestry, hydrocarbons, electricity, coastal adaptation and climate information, agriculture and cities. The Caisse des Dépôts et Consignation du Gabon is in the process of being accredited by the GCF in order to increase its capacity to attract financing for climate action, although it is already acting as a service provider on behalf of the GCF. Other potential entities have been identified in the country programme to serve as accredited entities: FGIS, ANPN and ANGT, thus expanding the portfolio of potential projects. Capacity building for these accreditation candidates is an essential prerequisite, and part of this could be financed directly by the VCF as part of its readiness support.

4.1.2.2. Other TFPs

At regional and international level, already accredited entities can be mobilised, capable of carrying out larger-scale projects: Africa Finance Corporation, International Finance Corporation, AFD, ADB, World Bank or even FAO for the agricultural sector.

In the **oil sector**, the country received $372 million to reduce flared gas under the World Bank's Global Gas Flaring Reduction (GGFR) initiative after adopting a national plan to reduce flaring and recover associated gas in November 2015.

In the **electricity sector**, the CDN highlights the development of hydroelectricity, which should cover 80% of production by 2025, with the remaining 20% covered by gas and other renewable energies. The CDN presents a number of projects to be carried out in the energy sector, as does Gabon's energy policy 2016-2025 (Direction Générale de l'Energie, 2017). While climate finance should not concern investments in gas-fired power stations, it could concern, in addition to hydroelectric projects, investments in renewable energies, particularly for the electrification of isolated rural areas. The total financing required in this sector would amount to around USD 4,256 million.

The **FAT sector** receives substantial support from CAFI (Central African Forest Initiative), which is funding the drafting of the National Land Allocation Plan (PNAT) and the National System for the Observation of Natural and Forest Resources (SNORNF) to the tune of USD 18 million to improve knowledge of the resource. In 2021, two programmes will be launched, one to increase the number of protected areas and develop agriculture (USD 5 million) and the other to support forest certification with a view to reducing greenhouse gas emissions (USD 7 million). The third phase of CAFI takes the form of a results-based payment system. This will provide Gabon with the financial resources to continue implementing activities relating to sustainable forest management and conservation. The partnership, worth up to $150 million, provides Gabon with an incentive to reduce GHGs by setting a carbon floor price of $5 per tonne and $10 per certified tonne. The first payment for results was made in June 2021, for an amount of USD 17 million, corresponding to 3.4 million tCO2eq stored. The advantage of this mechanism is that it does not generate double counting (accounting for emission reductions by the host country and by the buyer), since Norway, which initiated the payment, does not use the credits to offset its own emissions. Emission reductions remain attributable to Gabon. Part of the CAFI funding will be used to finance the mitigation efforts presented in this second NDC.

[19] UNDP, 2021, Mapping and roadmap for the establishment of a National Integrated Financing Framework

The World Bank's Forest Carbon Partnership Facility (FCPF) is funding a programme to support the implementation of a strategy to reduce emissions from logging, implemented by the National Parks Agency (ANPN) (USD 1.95 million).

The **agricultural sector** is currently in full development in Gabon and is a political priority, with support for small producers via the GRAINE programme and the development of industrial agriculture (oil palms, rubber trees, etc.) through the allocation of large-scale agricultural concessions to companies such as OLAM and SIAT. It has been estimated that the main climate-related investment and project opportunities for the FVC in Gabon's agricultural sector would require $116.1 million.

In terms of **water resource management**, several programmes are already under consideration: a project to build 5 catchment basins in Greater Libreville (IDB funding), the Integrated Programme for Drinking Water Supply and Sanitation in Libreville (PIAEPAL, ADB funding), the PASBMIR project to rehabilitate 27 boreholes (World Bank funding, USD 60 million), the project to recover rainwater for agriculture (FAO funding) and the project to build the capacity of water and sanitation stakeholders (UNESCO, approximately USD 140,000) [20] . Finally, Gabon has received USD 110 million and USD 344 million respectively from [AFD21] to combat **flooding** in Libreville and promote the development of rainwater drainage basins. To improve **climate data,** on the other hand, international funding is needed to fill the gaps. Membership of institutions such as the IHO (International Hydrographic Organisation) is one way of obtaining funding, particularly for capacity building.

4.2. Technology development, transfer and capacity needs

A technology needs assessment and a capacity-building needs assessment have yet to be carried out in Gabon. This will clearly define the specific needs of the sectors identified. Without the necessary technology, capacity and enabling conditions that stimulate sustainable economic and societal innovation, Gabon will not have the capacity to fully implement its NDC. Gabon will therefore seek international partnerships (both public and private) to take advantage of opportunities for the development and transfer of technology and the continuous improvement of skills, particularly in the key sectors of the NDC.

5. Improvements to Gabon's CDN

Various improvements to our CDN commitments are either already underway or are necessary:

- Improving all our methods and systems for inventorying and monitoring GHGs and deforestation (stocks, emissions and sequestration) in all sectors, including the monitoring of non-carbon GHGs (such as methane emissions from gas pipelines);
- Creation of climate change models that take into account the complex climate system of the western Congo Basin and increase knowledge of the links between the forest ecosystems of Gabon and the Greater Congo Basin and the surrounding regions (water supply, influence on rainfall and weather patterns, etc.);
- Finalisation of the national plan for adaptation to climate change ;
- Gabon is currently working to understand the impacts of human activities, particularly bottom trawling, on marine ecosystems and their carbon emissions and absorptions. The country is developing a set of data-driven reforms to fishing techniques and methods, and will achieve 30% protection of marine ecosystems by 2030 (currently 27%), in order to reduce emissions and increase sequestration in the country's territorial waters and Exclusive Economic Zone. Other measures aimed at increasing carbon storage in the oceans, such as the protection of whales and sharks (the large predator that plays a key role in maintaining the balance of the world's oceans and seas), will also be taken into account.

[20] UNDP, 2021, Diagnostic du secteur de l'eau et argumentaire succinct pour un plaidoyer sur la prise en compte du secteur eau dans la CDN.

[21] UNDP, 2021, Mapping and roadmap for the establishment of a National Integrated Financing Framework

marine ecosystems, which maintains and promotes carbon capture) will also be implemented as scientific knowledge becomes available.

6. Summary of commitments

Depending on the national context and circumstances, Gabon undertakes to provide the following **NDC** under the Paris Agreement:

- Unconditionally remaining carbon neutral until 2050; and maintaining net carbon absorption above 100 million tonnes per year in 2025, 2030 and beyond,
- **Subject to the** following requirements and conditions, which must be met for Gabon to be able to finance its sustainable development and exit from the oil and gas economy:

    1. **Climate finance**: Gabon must be able to access international climate finance in the form of performance-based payments under the Paris Agreement for its existing forest and environmental carbon stocks and associated ecosystem services (i.e. climate and weather regulation).

    2. **Carbon finance**: Gabon must be able to access international carbon finance within the framework of the Paris Agreement and voluntary markets that recognise Gabon's historic and ongoing contribution to mitigating climate and environmental crises.

    3. **Agriculture and forestry**: Gabon must be able to benefit from the sustainable development of its agricultural and forestry sectors, which means that international markets must remain open to Gabon's timber and agricultural products from sustainable, carbon-neutral sources until 2050; and.

    4. **Technical support and technology transfer**: Gabon needs support to further improve its forest and land sector inventory and reporting systems and its climate change modelling capacity, including but not limited to additional research and assessment sites, modelling, remote sensing and support for the development of a national system.