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## **REPUBLIC OF GUINEA**

### **INTENDED NATIONALLY DETERMINED CONTRIBUTION (INDC) UNDER THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE (UNFCCC)**

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## LIST OF ACRONYMS AND ABBREVIATIONS

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CDM	Clean Development Mechanism
ECOWAS	Economic Community of West African States
FAO	Food and Agriculture Organization
GEF	Global Environment Facility
GHG	Greenhouse gas
INC	Initial National Communication of the Republic of Guinea
INDC	Intended Nationally Determined Contribution
LDC	Least Developed Country
LUCF	Land-Use Change and Forestry
MEEF	Guinean Ministry of the Environment, Water and Forestry
NAMA	Nationally Appropriate Mitigation Actions
NAPA	National Adaptation Plan of Action
PNC-COP21	<i>Plateforme Nationale de concertation COP21</i> (National Consultation Platform COP 21)
PRSP-III	2013-2015 Poverty Reduction Strategy Paper
REDD+	Reducing Emissions from Deforestation and Forest Degradation
RGPH	<i>Recensement Général de la Population et de l'Habitation</i> (General Census of Population and Housing)
SDAM	<i>Schéma directeur d'aménagement de la mangrove</i> (Mangrove management and development plan)
SE4All	Sustainable Energy for All
UNFCCC	United Nations Framework Convention on Climate Change

# SUMMARY

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**Background:**

- Population: 7.2 million (RGPH 1996)
- Demographic growth rate: 3.1%/p.a. (RGPH 1996)
- GHG emissions: 2.1 tonnes CO<sub>2</sub>eq/per capita in 1994
- Guinea's share of global emissions: less than 0.1%
- GDP growth: 3.9% in 2012 (PRSP-III)
- Share of agriculture in GDP: 20.1% in 2014 (World Bank)
- Poverty rate: 55.2% in 2012 (PRSP-III)

**Year of reference:** 1994

**Commitment period:** 2016-2030

Contribution conditional upon international support.

**Sectors concerned:** Agriculture, forestry, energy, water resources, coastal zone, livestock, fisheries and mines

**Estimated level of mitigation:** -13% greenhouse gas (GHG) emissions in 2030 as compared to 1994 (Initial National Communication of the Republic of Guinea), excluding Land-Use Change and Forestry (LUCF)

**Estimated funding needs:**

- Adaptation: up to US\$1.7 billion over the period
- Mitigation: at least US\$6.5 billion over the period for the energy sector alone

## 1. NATIONAL CONTEXT

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### NATIONAL DEVELOPMENT GOALS AND SUSTAINABLE DEVELOPMENT STRATEGY PRIORITIES

Coming 178th (out of 187 countries) on the Human Development Index, the Republic of Guinea suffers from severe structural vulnerabilities, despite recent progress. The national poverty rate stood at 55.2% in 2012, meaning that 6.2 million Guineans were living below the poverty line. Around one child in every three was suffering from malnutrition in 2012. In short, few Millennium Development Goals (MDGs) are likely to be reached in 2015. Nevertheless, against a background of strong demographic growth (with the population doubling every 25 years), there is an urgent need to speed up and diversify economic growth to meet the present social challenges whilst not placing undue constraints on future generations.

Sustainable development is therefore still a priority if the vital needs of the Guinean population are to be addressed. Moreover, the greenhouse gas (GHG) emissions of the Republic of Guinea are well below the global average.

### OBJECTIVE OF THE INDC OF THE REPUBLIC OF GUINEA

The Republic of Guinea ratified the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol in 1993 and 2005 respectively. Since then, it has worked out strategies to combat climate change, including its Initial National Communication, on the basis of an inventory of greenhouse gases (GHG) taken in 2001 (based on emissions in 1994). A second inventory was taken in 2011 (emissions in 2000), but has not yet led to the submission of a new National Communication. Finally, the Republic of Guinea prepared its National Adaptation Plan of Action (NAPA) in 2007 and undertook several projects to implement the plan.

Guinea must now face up to two major challenges: lifting its people out of poverty and ensuring the country's food security – with a population growing at 3% per year and expected to reach 18 – 20 million in 2030. Its ambition is also to move from the status of Least Developed Country (LDC) to that of Emerging Country by 2030, which means that GDP must grow by 5-7% per year. Bearing in mind these aims and population growth, Guinea's energy needs may well double in the space of 20 years. Consequently, **assuming that practices and**

**systems remain unchanged, the estimated annual emissions growth rate is +4.4%**, i.e. slightly more than doubling every 20 years.

Guinea has particularly abundant natural resources, especially forests, meaning that it is considered as a carbon sink (Initial National Communication, 1994). In addition, more than 1000 watercourses and four of the major West African rivers rise in the country. These resources are under severe threat from the impact of climate change and regional population flows are likely to increase the pressure. Because of its geographical location, Guinea could become a refuge for people from neighbouring Sahelian countries to the north, especially pastoralists who are more seriously affected by drought and changes in rainfall patterns. Moreover, Guinea is of great significance to the aluminium industry in the world, as it holds more than one third of the planet's bauxite reserves.

For all these reasons and with a view to making the most effective contribution possible to its own and its neighbours' sustainable development, Guinea seeks to become a stabilizing influence in the sub-region by 2030, as a result of:

- ⇒ preserving and enhancing its water resources;
- ⇒ striving to keep its status as a carbon sink;
- ⇒ exploiting its soil and sub-soil resources on a rational basis;
- ⇒ stimulating thinking at ECOWAS level with a view to greater consideration of climate change issues in the Regional Transhumance Plan.

There are several possible ways of achieving these aims, such as developing renewable energies, improving energy efficiency, reducing pressure on the forests through sustainable management of forestry resources and land, developing and improving farming and pastoral practices to cope with climate change, etc.

## **THE PROCESS OF PUTTING TOGETHER GUINEA'S INDC**

The National Environment Department of the Ministry of Environment, Water and Forestry (MEEF) is responsible for co-ordinating the implementation of government policy on combating climate change and also deals with GHG inventories.

The **National Consultation Platform** on COP21 (hereinafter PNC-COP21) was set up on the initiative of the MEEF to mobilize representatives of the State, technical departments, civil society and the private sector so that Guinea's voice could be heard, taking on board contributions from all relevant institutions and every level of society. Its objectives include the development of information and communication concerning COP 21 and raising the awareness of civil society and economic operators. It comprises a high-level (ministerial) segment and 11 thematic panels which helped to draw up the INDC.

## **2. ADAPTATION COMMITMENTS**

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### **JUSTIFICATION FOR THE INCLUSION OF ADAPTATION IN THE INDC**

Promoting sustainable economic development that takes account of adaptation to climate change is key to anticipating impacts and thus being able to reduce the expense and damage they can cause. In this regard, it is vital to include Guinea's main adaptation challenges in the INDC, in order to draw the attention of the international community to the massive efforts that the country needs to make to cope with the negative impacts of climate change, as well as to shoulder its responsibilities in relation to the vulnerability of the West African sub-region.

Guinea finalized its National Adaptation Plan of Action (NAPA) in 2007, having identified the following vulnerable sectors: crop and livestock farming; water; and the coastal and forest zone. The NAPA also helped to identify the groups most vulnerable to climate change in different regions of the country, including in particular poor communities in rural areas such as farmers and small producers (men and women) and people whose livelihood mainly depends on the use of natural resources (hunters, fishermen, salt producers, etc.).

Guinea has ratified the other two Rio conventions and put together national strategies to combat desertification and soil degradation, as well as conserve biodiversity. Implementation of these two strategies will also facilitate adaptation to climate change.

## **IMPACTS OF CLIMATE CHANGE**

With its present favourable climate for agriculture (average annual rainfall of 1200 mm in the North and North-East, 4000 mm in Conakry and up to 1800 mm in the mountains of Fouta-Djalon), Guinea is both exposed and sensitive to climate change and has very little capacity to adapt. The main impacts of climate change affecting the country include: i) an overall increase in average temperatures; ii) a drop in average annual rainfall especially in North-West and North-East Guinea, together with a change in the frequency and intra-year distribution of precipitations; and iii) the rising sea level (around 80 cm by 2100). These new climate conditions could therefore have negative consequences for many different sectors.

Nevertheless, even with altered rainfall patterns, Guinea should still continue to enjoy more favourable climatic conditions than its neighbours to the north and could become a more important transhumance destination for Sahelian herds than it is now, resulting in serious conflicts over land use.

## **CURRENT AND PLANNED COMMITMENTS**

Guinea is both sensitive and exposed to climate change. Located at the gates of the Sahel, one of the regions of the world most affected by climate change, Guinea must quickly reduce its vulnerability for the benefit of both its own people and its neighbours.

**In order to deal with the local consequences of climate change – for which it actually bears no historic responsibility – the Republic of Guinea hereby undertakes the following commitments:**

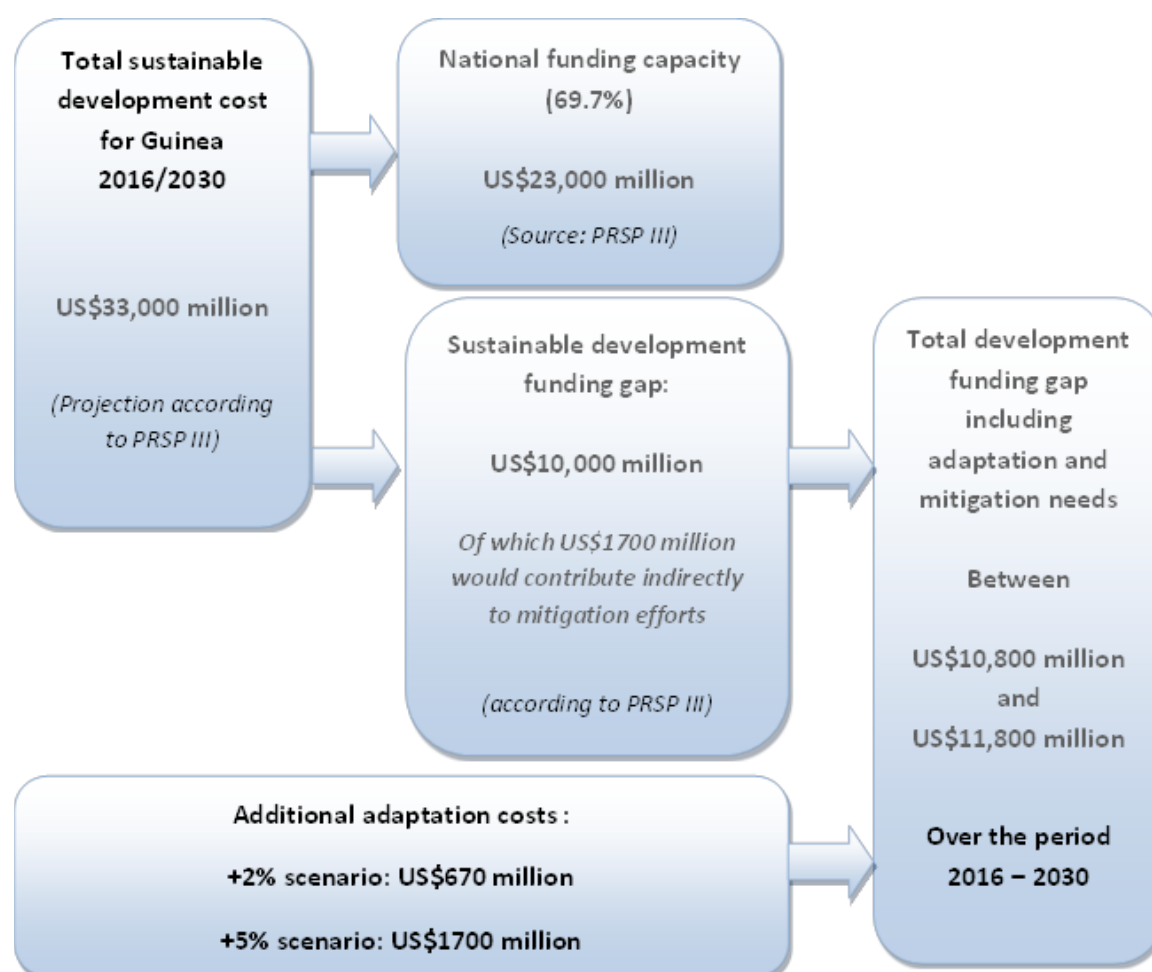
Commitment	Context and description of the commitment	Actions
<p><b>Preserve the quality and quantity of water resources, for the benefit of the people of Guinea and the West African region</b></p>	<p>Guinea is considered as the "water tower of West Africa". Four catchment basins of key importance to the sub-region, particularly due to their potential in terms of economic development and maintenance of biodiversity, have their source in Guinea. As a result of climate change, the flow rate of watercourses will be reduced, possibly by as much as 50% of the current daily average by 2100. For example, the flow of the Niger River is likely to reduce everywhere by between 16 and 28% (sensitivity 2.5°C) and up to 23-54% (sensitivity 4.5°C). Given Guinea's strategic location upstream of the main West African catchment basins, choices in respect of water resource management will inevitably have impacts downstream, beyond the borders of Guinea. These international implications mean that Guinea has an even greater responsibility to manage its resources appropriately in the face of climate change.</p>	<p>Priority Actions:</p> <ul style="list-style-type: none"> <li>- Preserve and restore the riparian forests at the spring heads and along the banks, in particular on cross-border watercourses;</li> <li>- Ensure the preservation of the banks and beds of national and transnational watercourses.</li> <li>- Seek alternatives to uses and offtake that are detrimental to water quality (brickmaking, dredging of riverbeds to obtain minerals, etc.);</li> <li>- Ensure that the climate change dimension is taken on board in the institutional and legal frameworks and by the organizations responsible for managing and developing cross-border catchment areas;</li> <li>- Set up a system of hydro-ecological monitoring of international rivers.</li> </ul>
<p><b>Put in place the measures needed to protect, conserve and manage ecosystems, revive economic activities and boost the resilience of communities in its coastal zone</b></p>	<p>The coastal zone is of strategic importance to Guinea. It is the country's leading economic area and holds around 38% of its population. It also plays a key role for the agricultural and energy sectors and accounts for 24% of national rice production. Potentially arable land on the coast amounts to 1.3 million hectares, including 380,000 ha under cultivation every year. Various cereal, fruit and vegetable crops and tubers are grown in the mangrove hinterland. More than 140,000 ha of the 385,000 ha of mangroves currently in existence have been converted into rice paddies. As regards energy, the mangroves in the zone provide 60% of domestic energy for the capital and the main coastal towns.</p> <p>The coastal zone is particularly vulnerable to climate change due to the rising sea level and intensified coastal erosion, leading to adverse effects on fishery resources, the destruction of infrastructure in coastal towns and villages and the disappearance or salinization of the rice paddies.</p> <p>All these factors mean that the coastal zone is under extreme pressure from the economic activities being undertaken there; the anarchic urbanization that arises from the lack of a Coast Code and non-compliance with the Land Code; and the impacts of climate change.</p>	<ul style="list-style-type: none"> <li>- Update the Mangrove Management and Development Plan (SDAM) ;</li> <li>- Reduce the sources of mangrove degradation;</li> <li>- Include adaptation in local development plans and spatial planning tools;</li> <li>- Enhance scientific knowledge of the coast as a whole;</li> <li>- Develop rice production by improving yields through use of varieties better able to cope with the impact of climate change (particularly ingress of salt water).</li> <li>- Extend the pilot initiatives already launched, especially the Increased Resilience and Adaptation to Adverse Impacts of Climate Change in Guinea's Vulnerable Coastal Zones (RAZC) project, to all the municipalities on the coast.</li> </ul>
<p><b>Support the adaptation efforts of rural communities to develop agro-sylvo-pastoral techniques enabling them both to continue their activities and preserve the</b></p>	<p>Food security is not currently guaranteed in Guinea. The priority is therefore to increase production, despite the risk of falling yields as a result of the impact of climate change.</p> <p>Farming practices capable of ensuring sustainable management of land and water resources and limiting GHG emissions are to be encouraged.</p>	<ul style="list-style-type: none"> <li>• Diversification of agricultural production;</li> <li>• Development of agro-ecological fish-farming techniques;</li> <li>• Low-input varieties and cropping techniques suited to a drier climate;</li> <li>• Controlled irrigation;</li> <li>• Inclusion of the climate change dimension in budgeting and development plans, programmes and projects;</li> <li>• Development of hydro-agricultural schemes;</li> </ul>

resources on which they rely		<ul style="list-style-type: none"> <li>• Development of techniques to conserve and process agricultural, forestry and fish-farming products;</li> <li>• Better management of pastoralism, especially transnational pastoralism, so as to limit degradation of grazing and soil and reduce the risks of usage conflicts.</li> </ul>
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## GAPS, BARRIERS AND NEEDS

The Republic of Guinea faces considerable socio-economic challenges in addition to the current and future impacts of climate change. Four main barriers to meeting these adaptation needs have been identified:

1. The huge costs of adaptation, coming on top of the funding gap in respect of vital development and poverty reduction needs (source: Poverty Reduction Strategy Paper 2013-2015 – DRSP-III). Funding needs for adaptation (in addition to development funding needs) are estimated at between US\$670 million and US\$1700 million. The success of international efforts to keep global warming below +2°C would of course help to reduce the impacts and related costs.



By way of example, the total cost of the "Mano River Union Ecosystem Conservation and International Water Resources Management" project amounts to US\$31 million over five years. Funding needs for the water resources commitment alone could therefore amount to around US\$300 million for the three international catchment basins over the period 2015-2030.

2. Gaps in terms of reliable, robust climate data as well as all statistical data relating to natural resource management;
3. Inadequate integration via government institutions and local authorities of the adaptation dimension in development planning;



4. Obsolescence of, and failure to comply with, spatial planning schemes.

### 3. MITIGATION COMMITMENTS

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#### JUSTIFICATION FOR THE REFERENCE YEAR, COMMITMENT PERIOD AND SECTORS COVERED

Guinea issued its Initial National Communication to the UNFCCC on the basis of data from 1994. That year was therefore considered as a benchmark and all the GHG emission results have been extracted or extrapolated from the data in that document.

Furthermore, for the energy sector, full use has been made of the data for the years 2011 – 2014 produced by the *Sustainable Energy for All* (SE4ALL, 2014) programme, which sets targets for 2030.

For the sake of simplicity and clarity and in line with the objectives of the PRSP III, emissions avoided by means of SE4ALL activities have been assessed over the period 2015-2030.

The inventory of greenhouse gases made for the Initial National Communication (based on emissions for 1994) shows that the **energy, land-use change and forestry (LUCF)** and **agriculture** sectors are the main emitters. As they therefore represent a strategic priority for Guinea in terms of mitigation, they have been included in the INDC.

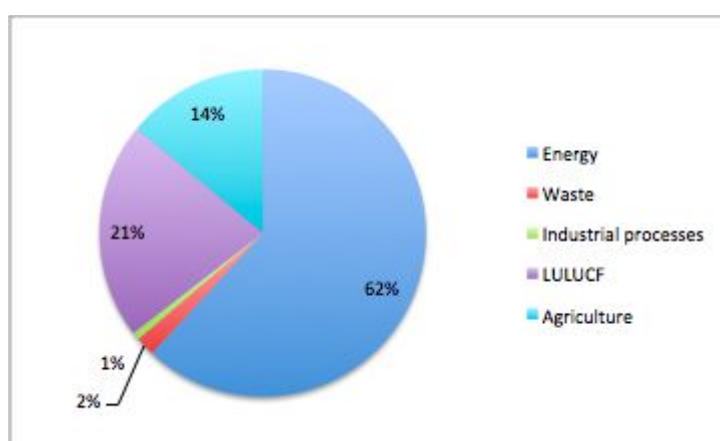


Figure: GHG emissions balance sheet according to the INC, excluding GHG sequestration (1994 data)

The absence from this INDC of commitments relating to the "industrial processes" and "waste" items is due to the fact that:

- these sectors have, according to the assessments made (Initial National Communication, work on the Second National Communication), **much lower emissions than the others**, bearing in mind emission calculation methodologies and the unstructured nature of these sectors;
- collection and treatment of rubbish and wastewater is still very limited, despite the importance to the population of this sector in terms of environmental preservation, quality of life and health. Nevertheless, in view of projected demographic growth which will affect the level of emissions from the waste sector, Guinea's national contribution could, when next revised, include this sector on the basis of better knowledge of the respective emissions through the establishment of appropriate facilities and management procedures.

The 1994 INC takes account of the following trends (continuing through to 2030):

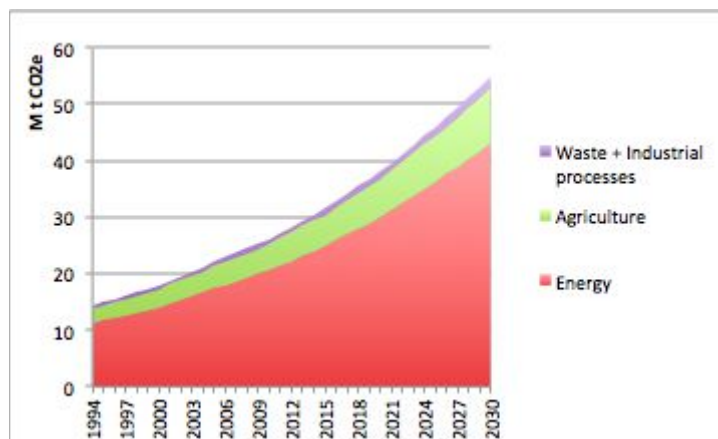


Figure: Guinea's projected emissions (excluding LUCF) (source: according to 1994 INC)

The emissions growth rate is taken as 4.4% per year over the period, with emissions rising from 2.1 to 2.7 tonnes CO<sub>2</sub>eq per capita. In total, that would mean a doubling over 20 years and emissions of some 55m tonnes CO<sub>2</sub>eq in 2030.

## MITIGATION COMMITMENTS AND POTENTIAL

With a view to joining in global efforts to decarbonize economies, the Republic of Guinea hereby undertakes the following commitments:

Commitment	Context and description of the commitment	Objectives	Expected emission reductions <sup>1</sup>
<b>Produce 30% of its energy (excluding wood-energy) from renewable energy sources (SE4ALL)</b>	<p>The four energy sources making up the Guinean energy mix (in 2011) are: biomass (77%); imported hydrocarbons (22%); hydroelectricity (around 1%); and new and renewable sources such as solar, wind and biogas (about 0.02%).</p> <p>Guinea has a structural and growing electricity production deficit due to a combination of rapidly strengthening demand (which is likely to rise further in coming years, especially with the expected development of major mining sites) and slowly increasing supply due to lack of investment and the gradual deterioration of production facilities. The government's aim is nevertheless to make electricity available to 100% of its population by 2030 (as against 18.1% in 2011).</p>	<p>In line with the work undertaken as part of the SE4ALL programme, Guinea aims between now and 2030 to:</p> <ul style="list-style-type: none"> <li>• Commission hydro-power stations producing 1650 MW (127MW in 2011);</li> <li>• Install an additional 47MW (3MW in 2011) of solar and wind power;</li> <li>• Increase the supply of biofuels and other modern energies (40k toe of butane and biogas, 3000 kWc of biofuels).</li> </ul>	<p>The mitigation potential of this commitment is calculated as a <b>total of 34m tonnes CO<sub>2</sub>eq over the next 15 years.</b></p>
<b>Support the dissemination of technologies and practices that are energy-efficient or use alternatives</b>	<p>Biomass energy (essentially firewood and charcoal) accounted for 77% of gross primary consumption in 2011 and is used as their main energy source by more than 85% of households. This situation is reflected in gradual loss of forest cover in the urban supply areas and environmental degradation (especially affecting the soils).</p> <p>The efficiency of traditional fuels is very low</p>	<p>Consequently, Guinea aims between now and 2030 to reduce final demand for firewood and charcoal by 50% per capita (in urban and rural areas) as compared to 2011, particularly through:</p> <ul style="list-style-type: none"> <li>• organization of local industrial supply chains to enable the introduction of at least 1</li> </ul>	<p>The mitigation potential of this commitment is calculated as a <b>total of 23m tonnes CO<sub>2</sub>eq over the next 15 years.</b></p>

<sup>1</sup>The expected emission reductions take account of "suppressed demand" according to a population growth scenario of +3% per year and GDP growth of +5% per annum.

<p><b>to wood-energy and charcoal</b></p> <p><b>(SE4ALL and Biodiversity Strategy)</b></p>	<p>(between 5% and 15% energy yield depending on the technology used). Biomass energy supply chains cover several important areas where technologies and know-how can be applied to improve energy efficiency (production and consumption).</p> <p>Several programmes to disseminate improved stoves have therefore been put together and implemented since 1985, together with sustainable biomass management policies. In 1998, the Guinean government adopted a sector-based policy to manage traditional energies. One of the components is aimed at improving carbonization equipment for charcoal production. As a result of these policies, 256,711 stoves have been disseminated, saving 506,253 tonnes of wood-energy and thereby safeguarding 6575 ha of forest cover. The Integrated Programme of Access to Modern Energy Services (PRONIASE) plans to disseminate 10,000 improved wood- and charcoal-fired stoves and 2000 improved charcoal production kilns in 2015. Another programme aims to develop efficient wood-fired stoves for rural areas.</p>	<p>million improved stoves;</p> <ul style="list-style-type: none"> <li>• establishment of 5000 wood carbonization units giving a better charcoal yield;</li> <li>• replacement with butane (40k toe);</li> <li>• extension of pilot initiatives to disseminate improved smokehouses and stabilized earth blocks.</li> </ul>	
<p><b>Improve the energy performance of the Guinean economy</b></p> <p><b>(SE4ALL)</b></p>	<p>There is significant energy-saving potential in all the national energy supply chains operational in Guinea and the various economic sectors. The energy intensity of the Gross Domestic Product (GDP) has been assessed at 0.55 koe /US\$1 produced.</p> <p>The overall efficiency of Guinea's energy system in 2011, measured through the "useful energy to gross energy consumption" ratio, is around 19%.</p>	<p>The objective is to double this ratio between now and 2030, particularly through:</p> <ul style="list-style-type: none"> <li>• A 50% improvement in electricity yields in relation to the baseline situation (2011);</li> <li>• A reduction in the specific consumption of the transport, residential and public administration sectors brought about by improving the quality of the transport fleet; promoting public transport; disseminating solar streetlamps and low-energy lamps and electrical appliances; and implementing efficiency standards in building design.</li> </ul>	<p><b>The available data cannot currently support an assessment of the mitigation potential of this commitment.</b></p>

## GAPS, BARRIERS AND NEEDS

The investment needed to meet the SE4ALL targets in Guinea is calculated at US\$8179 million in current value over 20 years (2011-2030). This equates to around US\$409 million annual investment over 20 years, including activities ongoing since 2011.

At present, only 20% of the funds for this investment plan have actually been raised by the government of Guinea. **The funding needs for the rollout of renewable energies and energy efficiency alone are therefore calculated at more than US\$6.5 billion.**

<p><b>Make the exploitation of mineral resources climate-compatible</b></p>	<p><b>The development of the mining sector</b> represents one of the major economic challenges for Guinea, given its potential in terms of jobs and tax revenue. As the mining sector is destined to become one of the pillars of the Guinean economy, there is an opportunity to make it a <b>model for the integration of climate issues</b> (mitigation/adaptation) throughout the value chain.</p> <p>Mines currently in operation account for</p>	<ul style="list-style-type: none"> <li>• Strengthen enforcement of the 2013 Mining Code, one of the pillars of which is respect for the environment and compliance with the Environment Code (and its implementing provisions);</li> <li>• Insist that the impacts of climate change are taken into account by all traditional or modern mining projects in their Environmental and Social</li> </ul>	<p>The mitigation potential of this commitment (energy efficiency component) could be up to a <b>total of 9m tonnes CO2eq over the next 15 years.</b></p>
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	<p>around 25% of State revenue. The country's main mineral resources are bauxite (more than 30% of world reserves), iron ore (9 billion tonnes), diamonds, gold, etc. They are worked by multinationals, some of which have been active in Guinea since the 1960s. Small-scale (especially gold and diamond) mining is also expanding and directly or indirectly occupies more than 100,000 people.</p> <p>The industrial mining sector is the leading consumer of conventional energy (electricity and hydrocarbons) in Guinea. It comprises self-producers of power who consume almost half (47%) of the conventional primary energy available.</p>	<p>Management Plans;</p> <ul style="list-style-type: none"> <li>• Evaluate the feasibility of establishing and operating a financial mechanism for the mining sector to fund the contribution to the fight against climate change;</li> <li>• Boost the sector's energy efficiency (the potential for improving energy efficiency has been assessed at 51,016 toe/year);</li> <li>• Supply this sector with electricity from renewable sources as far as possible. Predicted future power demand from the mining sector alone, in a high-growth scenario (with two aluminium foundries and one steelworks), could absorb more than 80% of the hydroelectric potential (6000 MW) identified to date.</li> </ul>	
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## GAPS, BARRIERS AND NEEDS

The major mining companies are partially applying the new requirements of the 2013 Mining Code with regard to carrying out environmental and social impact studies prior to any damaging intervention, compulsory compensation and rehabilitation of former mines. This Social and Environmental Responsibility (SER) commitment could be backed up with the inclusion of risks related to climate change and a requirement to reduce the carbon footprint of mining throughout the value chain.

Traditional mine-working, on the other hand, is more difficult to regulate; making people aware of legal provisions and raising their awareness of environmental issues could offer ways forward.

The Environment Code and 2013 Mining Code provide for a certain number of taxes and royalties. The explosive growth of the sector, as anticipated by the Guinean administration, could therefore generate significant revenue. It might be appropriate to use some of this revenue, or establish a new tax, to fund the fight against climate change.

<b>Manage its forests sustainably</b>	<p>Guinea has a wealth of biodiversity, with dense humid forests in the south-east, dry forests in the north, dense mesophilous forests between Boké, Kindia and Mamou, and mangrove forests. These are special places for the conservation of large mammals, birds, batrachians, many families of invertebrates, etc. Various endemic species are found in the forests.</p> <p>In 1994, according to the Initial National Communication, its forests meant that Guinea was a carbon sink.</p> <p>In the absence of available forest inventories (the last dates back more than 20 years), it is difficult to get a precise idea of how far deforestation has gone in Guinea. However, there is no doubt that it is rapid due to human pressure (i.e. firewood collection, urbanization and farming). AGRYHMET spoke in 2005 of a 10.3% reduction in the area of mangroves and a 33% shrinkage of the whole forest area over the period 1972-2000.</p>	<ul style="list-style-type: none"> <li>• Stabilize the area of mangroves between now and 2030 (peak deforestation in 2020; more systematic replanting measures will have been introduced by then, together with measures in respect of technological alternatives to limit wood-energy consumption and measures to intensify rice production);</li> <li>• Run reforestation programmes throughout the country, covering 10,000 ha per year, and ensure sustainable management of replanted areas;</li> <li>• Ensure effective conservation of classified forests and protected areas by means of strengthening supervisory arrangements (Guinean Parks and Nature Reserves Office and nature conservators); awareness-raising; participatory management; and enforcement of the criminal sanctions set out in the Forest Code.</li> </ul>	<p><b>The available data cannot currently support an assessment of the mitigation potential of this commitment.</b></p> <p>The INC nevertheless estimated that the LUCF sector <b>stocked 21m tonnes CO2eq in 1994.</b></p>
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## GAPS, BARRIERS AND NEEDS

The main constraints on this commitment stem from the inadequacy of financial and human resources, the gaps in scientific knowledge concerning the pace of forest degradation and the low level of local community involvement in sustainable forest management.

Priority must be given to robust enforcement of regulations (the 1999 Forest Code and the Environment Code) and a review of the mangrove management and development plan (SDAM).

The National Forest Fund and Environmental Protection Fund have nowhere near enough additional resources to fulfil these commitments, especially as regards reforestation programmes and sustainable management of replanted areas. A more detailed assessment of the arrangements for topping up funds is required, especially to cover needs relating to the protection and enhancement of forest resources.

## 4. EQUITY AND AMBITION

The Republic of Guinea, classed amongst the Least Developed Countries, faces considerable socio-economic challenges.

The **GHG emissions of the Republic of Guinea are very low** in relation to the global average; the country was even considered by the INC to be a carbon sink<sup>2</sup>. **Guinea's share of global GHG emissions was well below 0.1% in 2010.**

Despite this, the Republic of Guinea is planning to implement mitigation measures which will mean **a deviation of around -13% from the 'business as usual' scenario by 2030, not counting its storage capacity through land use and forestry (excluding LUCF).**

## 5. PROCESS OF PLANNING, IMPLEMENTING AND MONITORING THE INDC

### CROSS-CUTTING ACTIVITIES NEEDED TO PUT THE INDC INTO PRACTICE

If the INDC commitments are to be fulfilled, four urgent cross-sector measures must be implemented with support from the international community:

- Meet the significant needs for robust, accessible data, cross-sector medium-term strategic planning documents and monitoring of natural resources (gathering data on water and forest resources, together with meteorological data); these needs can be partially covered through bilateral agreements with some regional-scale organizations;
- Promote the inclusion of climate change issues, especially regarding adaptation, in planning and budgeting at local, sectoral and national level;
- Take account of gender issues in all development programmes and projects;
- Make information on environmental law and the causes and impacts of climate change widely available and accessible so as to raise public awareness and educate the Guinean population as a whole.

### SPECIFIC ACTIVITIES TO IMPLEMENT THE INDC

<b>Legislative and regulatory framework</b>	Preparation and enactment of legislation governing the implementation and monitoring/evaluation of the INDC and the decisions and resolutions of the UNFCCC, along the lines of a framework law on the environment and climate change.
	Preparation and enactment of sectoral legislation governing the implementation of the INDC.
<b>Institutional framework</b>	Maintenance of the National consultative platform on policy to combat climate change (PNC-COP21), tasked with monitoring and evaluating INDC implementation, as a consultative body.
	Appointment of climate correspondents within each Ministry receiving regular training concerning the integration of climate issues.

<sup>2</sup>The absence of recent data, particularly in terms of forest inventory, makes it impossible to establish whether this situation still persists: *a priori*, the increases in population and economic activity since 1994 will have put greater pressure on the carbon sinks.

	Creation of a steering committee within the National Council for the Environment and Sustainable Development, comprising experts from research institutes, the National Environment Department, Water and Forestry Department, Impact Studies Department and climate correspondents, to monitor and evaluate public policy on combating climate change. This committee should have its own funds to ensure that it can fulfil its functions.
	Enhancement of the resources allocated to the inclusion of climate issues in the Local Development Plans (Ministry of Spatial Planning and Decentralization) and Urban Development Plans.
	The Republic of Guinea has ratified the three main United Nations Conventions: CBD (1993), UNCCD (1997) and UNFCCC (1993). In this regard, better co-ordination of the focal points for each of these conventions could help to create synergies.
<b>Putting the INDC into operation</b>	Completion, on an urgent basis, of: <ul style="list-style-type: none"> <li>- The 2nd National Communication on climate change;</li> <li>- Registration of the NAMA proposal with the UNFCCC;</li> <li>- The prospective studies Guinea Vision 2035 and Guinea Vision 2040.</li> </ul>
	Carrying out complementary studies in the short term: <ul style="list-style-type: none"> <li>- 3rd national GHG inventory;</li> <li>- Forest inventory, particularly with a view to a potential REDD+ strategy proposal;</li> <li>- Urgent review from the climate change perspective of the Land Code; Forest Code; Environment Code; Conakry Planning Scheme and Urban Development Programme; and the SDAM;</li> <li>- Refine the study of methods for funding the INDC commitments, including through involvement of the carbon markets and private investment.</li> </ul>
	Integrate the activities necessary for INDC implementation in the 2016-2020 five-year plan (under preparation) and corresponding budget.
	Boost the resources available to the Guinean administration for: <ul style="list-style-type: none"> <li>- Collection and processing of climatological and hydrological data;</li> <li>- Collection and processing of maregraphic data;</li> <li>- Collection and processing of data on forests (mapping and remote sensing).</li> </ul>
	Translate the INDC into operational sectoral programmes.
<b>Updating/revision</b>	Revision following COP21, if necessary. Then revision following delivery of the 2nd National Communication. Followed by review every five years by the steering committee on monitoring/evaluation.

## 6. MEANS OF IMPLEMENTATION

The Republic of Guinea plans to employ the following means to implement its INDC:

<b>National Budget</b>	The National Development Budget is the primary potential resource for fulfilling the INDC commitments.  A National Forestry Fund and an Environmental Protection Fund were set up in 1985 and 1987 respectively, but struggle to collect the revenue deriving from environmental taxes and royalties. Some studies put a figure of around US\$40 million per year on this loss of income.  Feasibility study on the establishment of a National Climate Fund.
<b>Regional integration</b>	Sub-regional integration of electricity production could help Guinea to move further towards exploiting its hydroelectric potential, whilst ensuring cost sharing.  This remark also applies to management of cross-border catchment basins.
<b>International donors</b>	Budget support required for the operation of the bodies responsible for monitoring/evaluation of public policies to combat climate change.  The GEF funds several projects to combat climate change in Guinea; it is assisted by UNDP. A project to conserve the ecosystems of the Mano River Union and manage international water resources is co-funded by the GEF. It is hoped that this support will be continued and enhanced.  The World Bank is currently funding a programme of support to governance in the mining sector, including an environmental component. Discussions have begun with the French Development Agency (AFD) on strengthening enforcement of the Mining Code as regards compensation for environmental degradation caused by mining activities. Such support is

	<p>keenly awaited for the fulfilment of the INDC commitment concerning mining.</p> <p>Institutional support will be sought for capacity-building to enable Guinea to appoint and seek accreditation of a national implementing entity, thereby gaining direct access to the Green Fund.</p> <p>As an LDC, Guinea needs strong support from the Green Fund particularly for programmes relating to food security and energy efficiency.</p>
<b>Carbon markets</b>	<p>Guinea is a Non-Annex I country under the United Nations Framework Convention on Climate Change (UNFCCC) and classed as a Least Developed Country (LDC). It supports the inclusion of the international carbon markets, such as the Clean Development Mechanism (CDM), in a post-2020 agreement on climate and proposes that such an instrument, coupled with an appropriate accounting system (Measuring, Reporting and Verification – MRV), should be used to help fund certain investments in low-carbon, climate change resilient infrastructure. Guinea considers that some of the low-carbon development options contained in this INDC, or additional activities, could be funded wholly or in part through the international transfer of carbon assets, whilst taking considerations of environmental integrity and transparency into account.</p> <p>Nevertheless, as no CDM project has been validated so far in Guinea, capacity-building would be essential.</p> <p>Furthermore, the Republic of Guinea has not yet formulated a REDD+ strategy, although it is in contact with the FAO to assess the country's needs in this connection.</p>
<b>Private funding</b>	<p>The Republic of Guinea is particularly short of resources to meet the investment needs of its national budget. Increased resort to private finance could, in this connection, help to step up fulfilment of the commitments. Efforts made to improve the business climate (Guinea's progress in the World Bank <i>Doing Business</i> ranking bears witness to this) are likely to increase the investment propensities of private operators.</p> <p>In this regard, it can be seen that the social and environmental framing of private investment is somewhat uneven. Relatively exemplary in the case of the mining sector, regulation is less restrictive in other sectors (e.g. forests). Use of public-private partnerships should therefore be preceded by in-depth evaluation.</p> <p>Finally, the Guinean diaspora could make a more active contribution to the country's low-carbon, climate change resilient development, namely by redirecting its financial flows (around US\$150 million per year) towards the formal sector.</p>