



Republic of Angola
Government of Angola

5th National Report on Biodiversity in Angola 2007-2012

March 2014

**5TH 2007-2012 NATIONAL REPORT ON THE IMPLEMENTATION OF THE
CONVENTION ON THE BIOLOGICAL DIVERSITY (CDB) IN ANGOLA**

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GLOSSARY, LIST OF ABBREVIATIONS AND ACRONYMS

CCD - Convention to Combat Desertification.

CBD - Convention on Biological Diversity.

CDI – Centre for Documentation and Information.

CITES - Convention on International Trade in Endangered Species of Wild Fauna and Flora.

CMA - Multi-sectoral Commission for the Environment.

CMS - Convention on Migratory Species of Wild Animals.

GEF - Global Environment Facility.

GEPE – Research, Planning and Statistics Office.

INBAC - National Institute of Biodiversity and Conservation Areas.

IDF - Forest Development Institute.

INE - National Statistics Institute.

INIP - National Fisheries Research Institute.

NEPAD New Partnership for Africa's Development.

NBSAP - National Biodiversity Strategies and Action Plan.

MDGs - Millennium Development Goals.

OGE - State Budget.

GMO - Genetically Modified Organisms.

UN - United Nations.

GDP - Gross Domestic Product

SADC - Southern African Development Community.

SAREP - Southern Africa Regional Environmental Programme

HIV/AIDS acquired immunodeficiency Syndrome.

EXECUTIVE SUMMARY

With a little more than 50% of its population living in rural areas, the Biodiversity components influence on the daily survival of each of them. Virtually all activities carried out in rural areas depend on Biodiversity: Agriculture, livestock, artisanal fisheries, livelihood, hunting, house construction etc. are activities that use the biodiversity components.

The national policy on biodiversity conservation is based on:

Environmental Sustainability, namely the use of Biological resources in the spirit of meeting the needs of the present population without imperiling the satisfaction of the needs of future generations;

Social Integration includes the participation of local communities in decision-making on the management of biodiversity resources;

Economic Development, promoting the economic viability of forests, flora and fauna as well as the conservation areas with a view to their contribution to the diversification of sources of state revenue and *Institutional Cooperation* in integrating decision-making stakeholders in the management of natural resources at all levels.

Biodiversity in Angola records a positive development given the political and social stability in the country, a factor that contributes significantly to the outlined programmes are implemented in support of their conservation and sustainable gestation.

The Network of Protected Areas increased as from 6.6% coverage to 12.5% of the total area of the country. One of the objectives of the new National Biodiversity Strategy is that all the country's biomes can be represented in the areas of conservation.

Designation	Until 2010	Data in 2012	Remarks
Surface of protected areas in Angola	- Six (6) National Parks; - A regional park; - Six (6) reserves; Total 82. 329,9 km2	- Nine (9) National Parks, - A natural park; - Four (4) Reserves; Total 156. 909,9 km2	Three new conservation areas were created with an area of 74.580 km2. (National Parks of Maiombe, Luengue-Mavinga and Luaina)
Percentage of the protected areas in Angola in relation to the surface of the country.	6,6%	12,58%	There was an increase of 100% in the surface of the protected areas in Angola

Table N.º 1: Evolution of the Surface of Conservation Areas in Angola.

The current situation of many species is unknown as result of the lack of updated data and studies and especially by the lack of national experts in this field and institutions with technical and human capacity to carry on with the scientific work of enhancement.

Through the information collected in the reports of the various sectors related to biodiversity, we can propose a "Red List" indicative of mammals in critical condition in Angola.

	Nome em Português	Nome científico	Estimativa actual de n.º de animais
1.	African Buffalo	<i>Syncerus caffer caffer</i>	Less than 100 in Cuando Cubango Province
2.	Chipanzee	<i>Pan troglodytes</i>	Less than 30 in Cabinda Province
3.	Cheetah	<i>Acinonyx jubatus</i>	Less than 100 countrywide
4.	Giraffes	<i>Giraffa camelopardalis</i>	Less than 50 countrywide
5.	Gorillas	<i>Gorilla gorilla</i>	Less than 30 in Cabinda Province
6.	Eland	<i>Taurotragus oryx</i>	Less than 100 countrywide
7.	Brown Hyenna	<i>Hyaena brunnea</i>	Less than 50 in National Park of Iona
8.	Spotted Hyenna	<i>Crocota crocuta</i>	Less than 100 countrywide
9.	Lion	<i>Panthera leo</i>	Less than 50 countrywide
10.	Leopard	<i>Panthera pardus</i>	Less than 100 countrywide
11.	African Wild Dog	<i>Lycaon pictus</i>	Less than 100 countrywide
12.	African Manatee	<i>Trichechus senegalensis</i>	Very rare in Rivers Kwanza, Dande and Chiloango, mouth of rivers Congo, Longa and Cunene
13.	Buffalo	<i>Syncerus caffer nanus</i>	Less than 100 countrywide
14.	Palanca Negra Gigante	<i>Hippotragus niger variani</i>	Less than 80 in National Park of Cangandala and in the Natural and Integral Reserve of Loando
15.	Sable Antelope	<i>Hippotragus niger niger</i>	Less than 100 in Cuando Cubango Province
16.	Black Rhinoceros	<i>Diceros bicornis</i>	Menos de 20 na Provincia do C. Cubango
17.	Mountain Zebra	<i>Equus zebra hartmannae</i>	Less than 20 in the National Park of Iona

Table n.º 2: "Red List of mammal species in critical state in Angola (Source: Summary of several Reports at national level, 2007-2012.)

This checklist excludes the elephant (African *Loxodonta*), seals (*Arctocephalus pusillus*), Hippos (*hipopotamus amphibius*) taking into account their populations are nationally considered stable.

As for flora, about 10 million people use the wood, coal as their energy source. The circuit of this product involves many people since, producers or manufacturers generally are rural inhabitants, then follows the wholesalers who buy and transport the goods to the consumption centres, where retailers and consumers purchase the product, it makes a good deal the rural population, and not only, find survival in this trade.

In relation to coastal and marine resources, Angola with a coastline of about 1650 km, the population living in coastal provinces, largely found in the fishing activity the survival of their families. The small scale fishing also involves a chain of workers, ranging from the fishermen passing by intermediaries who take the product to the final consumer. It is an activity that sustains many families.

The fishing of mackerel is the most concern of the sector, this species has suffered excessive fishing which greatly affects their biomass. To reverse this situation, the

Government annually decrees a four-month fishing ban. It is a positive decision with a view to sustainable management of the species and the results are very satisfactory.

There are five species of sea turtles in Angola, its presence in coastal waters occurs mainly during the spawning period ending in this rainy season from October to April.

The greatest threats to biodiversity in Angola can be classified into two categories: direct and indirect threats:

In direct threats include the deforestation to the itinerant livelihood agriculture, the uncontrolled cutting of trees for charcoal making, and other purposes; poaching; wild fires for itinerant agriculture and mineral exploration.

As indirect threats, we can mention the lack of undertaking activities aimed for forest management such as the inventory and planning of forests, as well as the poverty that affects much of the rural population, unemployment, and the weakness in the implementation of specific legislation in force, are threats that endanger biodiversity.

In Angola, there are few studies specifically dedicated to invasive species.

This category is included: Acacia Palida (*Leucaena leucocephala*); The Bamboos (*Bambusa sp*); the Cantoa (*Panicum repens*), the common reeds (*Phragmites australis*), the pigface (*edulis Carpobrutus*), the Chromolaena (*Chromolaena odorata*), the Eucalyptus (*Eucalyptus sp*), water hyacinths (*Eichhornia crassipes*), Hypnea or red seaweed water (*Hypnea musciformis*).

Since 2002 when the country achieved peace, it has registered more scenes of conflict between people and wildlife. The Elephant (*African Loxodonta*) is the most frequently cited species in the conflicts between humans and animals in Angola. Other species such as hippos (*Hippopotamus amphibius*) crocodiles (*Crocodililus niloticus*), seals (*Arctocephalus pusillus*), leopard (*Panthera pardus*) and wild boar (*Potamochoerus porcus*) are part of the list of animals that create conflict all over the country. The main causes of this conflict vary depending on the animal involved and the place where it occurs, but the main cause is habitat occupation of the animal by the man.

N.º	Name in English	Scientific Name	Conflict frequencies (1-5)
1.	Crocodiles	<i>Crocodylus nilocotus</i>	3
2.	Elephants	<i>Loxodonta africana</i>	5
3.	seals	<i>Arctocephalus pusilus</i>	4
4.	Hippos	<i>Hippopotamus amphibius</i>	3
5.	Wild boar	<i>Potamochoerus porcus</i>	1
6.	Lions	<i>Panthera leo</i>	2

Table N.º3: Animal species in conflict with humans
 Subtitle: 1: Less conflicting... 5: More conflicting

Cunene province is presented as one that enjoys reasonably minimal Ecosystem services, in contrary to the provinces of Uíge and Cuando Cubango, benefiting from excellent Ecosystem services given the good conditions of conservation of the different ecosystems.

At the country's point of view, Angola features and benefits from a good ecosystem service. However, it is necessary to pay greater attention to the degradation of

mangroves that are providing a very poor service; this is due to their degradation and destruction and in many cases replaced in infrastructures.

The State is called for the adoption of a National Biodiversity Strategy and its Action Plan, (NBSAP).

The objectives of this strategy are incorporated in the country's development policies and the Public Investment programmes implemented by sectors, efforts aimed for the conservation and sustainable use of biodiversity.

The implementation of the NBSAP (2007-2012) in Angola was reasonable, although many of the actions set out in the document were not implemented for various reasons, including a lack of funds.

The other challenge that was found in the implementation of this NBSAP in this period was the lack of harmonization in the structuring of the Environment Sector at the local level.

The environmental sector is not structured in the same way in all provinces. In many cases it is linked to the Departments of Agriculture, Fisheries, Urbanism and/or Spatial Planning. This fact makes the environment sector to be relegated to the background. Many actions of environmental Sector expertise locally, as studies Assessment of Environmental Impact of projects are relegated to the background or are simply ignored.

The NBSAP 2007-2012, being the first experience in Angola, fulfilled its purpose since only 28% of the action programmes and was not implemented. Education and awareness about the biodiversity conservation are the actions that were most of them carried out, which assures us that over this period the Biodiversity conservation message was transmitted. The use and biodiversity management as well as institutional reinforcement should be strengthened because it has not been carried out in this strategy the majority of the planned activities. The management of biodiversity in protected areas is actions that do not end at this time and continue with its execution.

NBSAP : National Biodiversity Strategy and Plan

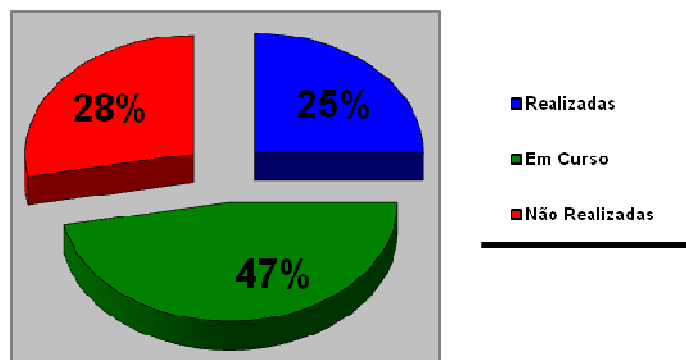


Figure 11: General Assessment of Actions foreseen in NBSAP 2007-2012

One of the lessons learnt in the implementation of our NBSAP was that many sectors are not identified with the strategy because they considered it a unique and exclusive document of the Ministry of Environment, despite this has been approved by the Cabinet Council.

In response to this lesson, the NBSAP 2014-2020 envisages the integration of all sectors relevant to biodiversity and identify its Biodiversity conservation actions within the framework of the activities and make adequate allocation to when drafting the proposal of its annual budget.

The Strategy will be prefaced by the Head of the Government or the President to be given due attention to all sectors of the country's active life to implement it because it will be the Government Strategy for Biodiversity.

Another lesson learnt in the last NBSAP is its weak capacity to create employment and participation in the fight against poverty. It was a strategy that focused more on the awareness and environmental education of the population and the development and updating of laws on biodiversity conservation.

The new strand of the NBSAP focuses its attention, in addition to its main mission, on the contribution to the biodiversity conservation, and also intends to participate in the reduction of unemployment and poverty, provided in its Action Plan to create jobs mechanisms.

For the coming years, *ten Strategic Goals* are set out in NBSAP (2014-2020):

1. *Promote the sustainable use of the biodiversity components;*
2. *Increase the representation of biomes and ecosystems of Angola in the areas of environmental protection;*
3. *Investigate and disseminate information on biodiversity;*
4. *Educate and raise awareness about the sustainable development;*
5. *Reinforce the Implementation of Conventions and International Agreements related to Biodiversity;*
6. *Strengthen the role of local communities in Biodiversity management;*
7. *Mobilize Funds for Biodiversity Conservation;*
8. *Strengthen the institutions linked to the environment;*
9. *Reinforce specific legislation and its implementation;*
10. *Manage, coordinate and monitor the actions for the Biodiversity Conservation (NBSAP).*

The chosen strategic goals led us to establish the National Objectives for Biodiversity that the country should achieve by the year 2020, taking into account the international synergies to achieve the Aichi Goals and the Millennium Development Goals.

i- Geographical Location and Demographic Profile

Angola is a country in the Atlantic Coast of Southern Africa, in the South Hemisphere, bordered to the north by the Republic of Congo and the Democratic Republic of the

Congo, the Democratic Republic of the Congo and Zambia to the east, Namibia to the south and the Atlantic Ocean to west. The country has an area of 1246700 km² with 18 provinces, maritime coastline of 1650 km with Atlantic Ocean and 4837 km of land border, with a population estimated (in 2008) at about 18 million inhabitants (*Secretariat of the Cabinet Council, 2012*), and the Capital Luanda consists of 21% population, thus being considered the major economic and demographic centre of the country.



Figure 1: Map of Angola

In general, Angola is a sparsely populated country with a young population, with over 50% in the economically active age, 73.3% under 30 years, with high population growth rate of approximately 3% per year. Urban centres grow at a rate of 4% per year confirming a trend of urban concentration at the expense of rural areas.

The latitude of Angola and its location to the south hemisphere endows it with an arid or desert climate and an atmosphere of warm and dry temperate winter. Angola is mainly composed of a massive highlands, bordered by a narrow plain band whose altitude varies between = and 200 meters. At the top of the 200 meters, there are mountains and plateaus. The peak altitude is the Moco Hill in Huambo Province that reaches approximately 2620 meters.

The Angolan territory has a forest area of about 53 million hectares (43% of the total area) and a hydrographic network of 47 basins, with a hydroelectric potential estimated at 140 billion cubic meters.

ii- CONTEXT

This report was produced based on the guidelines of the Convention Article 26 on Biological Diversity and Decision X/10 of the Conference of the Parties.

The National Report is an essential tool that reports on action and results on biodiversity of the country and allows the Conference of the Parties to have the control of the implementation of Convention and promote a primary material for the Global Vision of the World Biodiversity.

The 5th National Report on Biological Diversity provides information on how the National Biodiversity Strategy and Action Plan (NBSAP) was implemented in the country between 2007 and 2012.

It is also an instrument of Biodiversity assessment and planning at the national level through the information and data provided by monitoring and analysis made during the implementation of the NBSAP 2007-2012.

iii- METHODOLOGY

This report was prepared by a Technical Multi-sectoral Commission created by the Environment Minister, under the implementation of the CBD, to answer the following questions:

1. Why is biodiversity important for the country?
2. What are the major changes and Biodiversity trends that have occurred in your country?
3. What are the biggest threats to biodiversity in your country?
4. What are the impacts of changes on biodiversity in the ecosystem and socio-ecosystem services and their implications in the people's welfare?
5. What are the goals for Biological Diversity in your country?
6. What is the assessment made of the implementation of your National Biodiversity Strategy and Action Plan?
7. What are the actions that have been taken to implement the CBD since the fourth report and what have the results of these actions been?
8. What is the relevance that has to biodiversity with a view to its incorporation in the strategies, sectoral plans and programs of your country?
9. How was the National Biodiversity Strategy and Action Plan implemented in your country?
10. What are the progress that has been made by your country to implement the Biodiversity Strategic Plan 2011-2020 and the Aichi Targets?
11. What were the contributions of your country to achieve the 2015 targets under the Millennium Development Goals?
12. What is the lesson to be learnt in the implementation of the Convention and the NBSAP in your country?

In this context, to answer this questionnaire, a detailed analysis of sectoral reports available on the theme in question was made and also collected private opinions on the state of biodiversity in Angola in specific theme a wide debate was promoted through interviews with stakeholders of key institutions.

Other activities included conducting of workshops of launch, gathering of contributions in some provinces and validation with the participation of private institutions, academic, non-governmental organizations to obtain the information necessary to prepare the Report.

It was made a qualitative and quantitative assessment of the National Strategy and its Action Plan in force from the years 2007 until 2012.

An important focus of analysis was made on the development of Biodiversity indicators programmed when preparing the NBSAP 2007-2012, the Aichi Targets 2020 on Biodiversity, as well as with the Millennium Development Goals by 2015 by Angola.

Chapter I: ANGOLAN BIODIVERSITY, CURRENT SITUATION, THREATS, TRENDS AND IMPLICATIONS IN YOUR PEOPLE'S WELFARE

I.1: Importance of the Biodiversity in Angola

Biodiversity is the variety of all life forms that is of vital importance for the people and country.

With over 50% of its population living in rural areas, the Biodiversity components influence the daily survival of each of them. Virtually all activities carried out in rural areas depend on Biodiversity: Agriculture, livestock, fisheries, subsistence, hunting, house construction etc. are activities that use the biodiversity components.

A lot of vital services are provided by Biodiversity that we all directly or indirectly benefit such as the case of supply of oxygen, carbon retention, recycling of toxic gases, stabilization of local climate, the retention of floods and storms, as well as with provision of several fruits and microorganisms that serve as a supply source of protein and traditional medicines for many human populations.

I.2: Biodiversity status in Angola

I.2.1: Legal Framework

The Environmental policy of the country is based on the following legal framework: The Angolan Constitution of Angola in its Article 39 says:

1: Everyone has the right to live in a healthy and unpolluted environment, as well as the duty to defend and preserve it;

2: The State shall take necessary measures to protect the environment and species of flora and fauna throughout the national territory, maintaining ecological balance, exploitation and rational use of all natural resources within the framework of sustainable development and respect for rights of future generations and the preservation of different species:

3: The law punishes acts that endanger or tarnish preserving of the environment.

Other diplomas also provide support for environmental policy in Angola, such as:

- Environmental Framework Law, Law 5/98
- National Forest Policy, Wild Fauna and Conservation Areas
- National Strategy for Combating poverty, food and nutrition Security.
- Aquatic Biological Resources Law, Land on Lands, Water Law, Law on Territory Planning and Urbanism, Law on Environmental Protection associations
- Convention on Biological Diversity of which Angola is a state party (CBD, CMS, CITES and CCD)

I.2.2: Institutional Framework

As the environment is a cross border matter and mainly the Biodiversity conservation actions are comprehensive to all sectors of the active life, it enables for the implementation of the NBSAP to be part of the framework of the integration of biodiversity conservation policies in the sectoral programmes.

In the country, there are several public and private institutions and non-governmental organizations that daily work on issues related to environment and Biodiversity.

The institutions includes the Ministry of Environment, which is the executive body that prepares and coordinates Biodiversity conservation and management policies; the National Institute of Biodiversity and Conservation Areas (INBAC) responsible for implementing the policies of Biodiversity and Conservation Areas management; the Forest Development Institute (IDF) and the National Forest Bureau both from the Ministry of Agriculture which draft the implementation of forest resource management policies; the National Institute of Fisheries Research (INIP), the Faculty of Sciences at Agostinho Neto University; Tropical Ecology Centre; the Maiombe network that includes the non-governmental environment organizations and other public and private partners of the sector, through their direct and indirect actions have contributed to Biodiversity conservation in Angola.

There is also the Multi-Sectoral Commission for the Environment (CMA) coordinated by the Ministry of Environment that integrates various governmental institutions and the Environment Protection Associations is the body that oversees the implementation of the Strategy in order to report to government the degree of compliance with agreed measures.

I.2.3: National Policy on Biodiversity and Conservation Areas

The national policy on Biodiversity conservation is based on the framework of the National Policy on Forest, Wildlife and Conservation Areas and bases its view on four pillars:

- **Environmental Sustainability:** Use of Biological resources in order to meet the needs of the current populations without jeopardizing the future generations.
- **Social Integration:** Promote the participation of local communities in the decision-making on the management of Biodiversity resources.
- **Economic Development:** Promote economic profitability of forests, flora and fauna, as well as the Conservation Areas so as to contribute to the diversification of revenue sources for the state.
- **Institutional Cooperation:** Integration of decision-making of stakeholders in the management of natural resources at all levels, both at Central and Local levels.

I.3: Biodiversity Trends in Angola

Biodiversity in Angola during this period records a positive development given the political and social stability in the country, a factor that contributes significantly to the implementation of outlined programmes in favor of Biodiversity.

The Growth of Protected Areas Network, the elaboration and adoption of applied legislation and the implementation of related programmes reflect on the positive trend that biodiversity is recording in Angola.

Table N.º I.1: Evolution of Surface of Conservation Areas in Angola.

Designation	Until 2010	Data in 2012	Remarks
Surface of protected areas in Angola	- Six (6) National Parks; - A regional park; - Six (6) reserves; Total 82. 329,9 km2	- Nine (9) National Parks, - A natural park; - Four (4) Reserves; Total 156. 909,9 km2	Three new conservation areas were created with an area of 74.580 km2. (National Parks of Maiombe, Luengue-Mavinga and Luaina)
Percentage of the protected areas in Angola in relation to the surface of the country.	6,6%	12,58%	There was an increase of 100% in the surface of the protected areas in Angola

I.3.1: Protected Areas Network

Table n.º I.2: Conservation Areas in Angola

N.º	Designation	Province	Category	Surface (km2)	Founding date	Conservation Objective
1.	Quiçama	Luanda	National Park	9 960	1957	Protection and conservation of large mammals such as elephants, antelopes, red buffalo, hippos
2.	Cangandala	Malanje	National Park	630	1970	Protection of Palanca Negra Gigante and other mammals
3.	Cameia	Moxico	National Park	14.450	1957	Protection and preservation of big cats such as lion, Cheetah and other mammals such as spotted hyena.
4.	Bicuar	Huíla	National Park	7 900	1964	Protection of Elephants, palancas, Plains zebras and others
5.	Mupa	Cunene	National Park	6.600	1964	Protection of Giraffe, leopard and others
6.	Iona	Namibe	National Park	15 150	1957	Protection of desert species such as Oryx, mountain Zebras, impalas, etc.
7.	Mavinga	Kuando Kubango	National Park	46 072	2011	Conservation of fauna and flora, rivers and ecosystems biological diversity in general
8.	Luenge - Luiana	Kuando Kubango	National Park	22 610	2011	Protection of eco – Southeast regions of Angola
9.	Maiombe	Cabinda	National Park	1930	2011	Protection and preservation of diversity of humid tropical forest of Maiombe, particularly Gorilla and Chimpanze
10.	Luando	Malanje/Bié	Natural and Integral Reserve	8. 280	1957	Protection and conservation of Palanca Negra Gigante
11.	Ilhéu dos pássaros	Luanda	Integral Reserve	2	1973	Protection of migratory birds

12.	Reserva do Namibe	Namibe	Partial Reserve	4 450	1963	Buffer zone to the National Park of Iona
13.	Búfalo	Benguela	Partial Reserve	400	1971	Protection of Buffalos
14.	Chimaravela	Benguela	Regional Natural Park	150	To Complete	Pottection of Springbok, zebras, baboon, etc.

Conservation areas shown in the table cover almost all the national territory, but these do not represent all types of biomes in the country.

It is one of the objectives of the new National Biodiversity Strategy in which all the country's biomes can be represented in the conservation areas. So there is a need to also create other conservation areas in potential areas shown in the map of figure No. 2.

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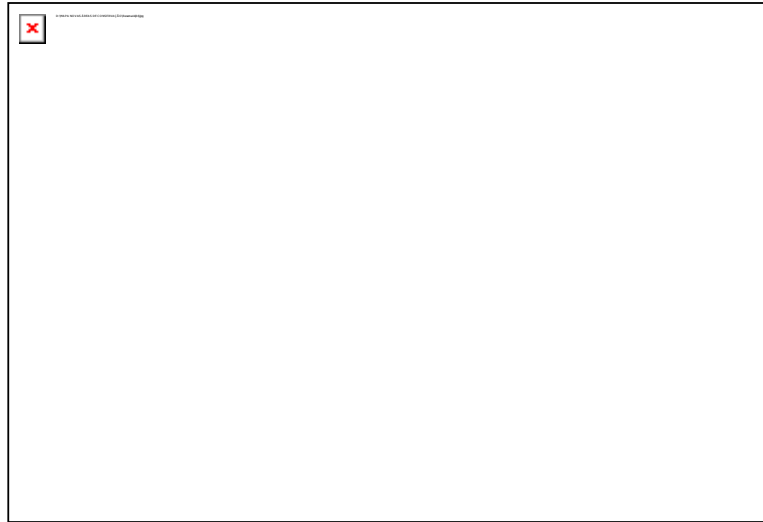


Figura 2: Mapa de extensão de potenciais áreas de Conservação

Figure 2: Map of extension of potential Conservation potentials

I.3.2: Fauna

I.3.2.1- Current situation of some species in Angola

According to several studies, the diversity of mammals, birds, reptiles, amphibians insects is huge in Angola. As for the mammals for example, which features the famous Palanca Negra Gigante (*Hippotragus niger variani*), endemic species, buffalo (*African forest buffalo*), savannah and forests elephants (African African *Loxodonta* and African *Loxodonta cyclotis*), the Gorilla (*Gorilla gorilla*), the chimpanzee (*Pan troglodytes*), the African manatee (*Trichechus senegalensis*) gemsbuck (*Oryx gazella*) and others.

However, the current situation of many of these species is unknown as result of the lack of updated data and especially of national experts in this field and institutions with technical and human capacity to carry on the scientific work.

The little that is done is from foreign experts in partnership with local institutions that aim to contribute to the knowledge of the Angolan biodiversity.

Through the information gathered in the reports of the various sectors related to biodiversity, it can be proposed here a "Red List" indicative of mammals in critical condition in Angola.

However, it can be improved with individual investigations for each species that can guide its stay or departure and the introduction of new species on this list based on the information or scientific research data revealing its state of conservation on an ecosystem approach, taking into account the reproduction, habitat conservation status and its temporary pressure.

This checklist excludes the elephant (*African Loxodonta*), seals (*Arctocephalus pusillus*), Hippos (*hipopotamus amphibius*), taking into account their populations nationally considered stable.

Table n.º I.3: "Red List" indicative of mammals in critical condition in Angola.
(Source: Summary of several Reports at national level, 2007-2012.)

	Nome em Português	Nome científico	Estimativa actual de n.º de animais
1.	African Buffalo	<i>Syncerus caffer caffer</i>	Less than 100 in Cuando Cubango Province
2.	Chimpanzee	<i>Pan troglodytes</i>	Less than 30 in Cabinda Province
3.	Cheetah	<i>Acinonyx jubatus</i>	Less than 100 countrywide
4.	Giraffes	<i>Giraffa camelopardalis</i>	Less than 50 countrywide
5.	Gorillas	<i>Gorilla gorilla</i>	Less than 30 in Cabinda Province
6.	Eland	<i>Taurotragus oryx</i>	Less than 100 countrywide
7.	Brown Hyenna	<i>Hyaena brunnea</i>	Less than 50 in National Park of Iona
8.	Spotted Hyenna	<i>Crocuta crocuta</i>	Less than 100 countrywide
9.	Lion	<i>Panthera leo</i>	Less than 50 countrywide
10.	Leopard	<i>Panthera pardus</i>	Less than 100 countrywide
11.	African Wild Dog	<i>Lycaon pictus</i>	Less than 100 countrywide
12.	African Manatee	<i>Trichechus senegalensis</i>	Very rare in Rivers Kwanza, Dande and Chiloango, mouth of rivers Congo, Longa and Cunene
13.	Buffalo	<i>Syncerus caffer nanus</i>	Less than 100 countrywide
14.	Palanca Negra Gigante	<i>Hippotragus niger variati</i>	Less than 80 in National Park of Cangandala and in the Natural and Integral Reserve of Loando
15.	Sable Antelope	<i>Hippotragus niger niger</i>	Less than 100 in Cuando Cubango Province
16.	Black Rhinoceros	<i>Diceros bicornis</i>	Menos de 20 na Provincia do C. Cubango
17.	Mountain Zebra	<i>Equus zebra hartmannae</i>	Less than 20 in the National Park of Iona

Table n.ºI.4: – Current situation of soem endemic birds in Angola

N.º	Scientific Name	Name in English	Place or Province	Conservation State
1.	<i>Pternistis griseostriatus</i>	Grey-striped francolin	Zaire, Bengo, Luanda and Kwanza- Sul	Vulnerable but abundant
2.	<i>Pternistis hartlaudi</i>	Hartlaub's spurfowl	Iona-Namibe	Rare
3.	<i>Pternistis swierstrai</i>	Swierstra's francolin	Mountains of Huambo and	Vulnerable and very rare

			Huíla	
4.	<i>Eupodotis rueppellii</i>	Rüppell's korhaan	Iona-Namibe	Frequent
5.	<i>Tauraco erythrolophus</i>	Red-crested turaco	Forests of K. Norte, Uíge and Zaíre	Common but its habitat is hit by deforestation
6.	<i>Colius catanotus</i>	red-backed mousebird	Zaire, Bengo, K. Sul and Benguela	Common
7.	<i>Phoeniculus damarensis</i>	Violet Wood Hoopoe	Namibe	Common
8.	<i>Tockus monteiri</i>	Monteiro's Hornbill	Namibe	Common
9.	<i>Certhilauda benguelensis</i>	-----	Benguela and Namibe	Common
10.	<i>Parus carpi</i>	Carp's black tit	Benguela, K.Sul and Namibe	Common
11.	<i>Turdoides gymnogenys</i>	Bare-cheeked babbler	Benguela-Namibe	Rare
12.	<i>Xenocopsychus ansorgei</i>	-----	Luanda, K.Sul and Benguela	Common
13.	<i>Namiborn herero</i>	-----	Iona-Namibe	Common
14.	<i>Achaetops pycnopygius</i>	-----	Benguela and Namibe	Common
15.	<i>Cisticola buliensis</i>	Boita	From Cabinda coastline to Benguela	Rare
16.	<i>Macrosphenus pulitzeri</i>	-----	Benguela, Huambo and Huíla	Threatened and very rare
17.	<i>Dioptronis brunneus</i>	-----	Luanda, Bengo and K.Sul	Unknown
18.	<i>Batis minula</i>	Angolan Batis	Uíge, Malanje, K.Sul, Benguela, Huambo	Common
19.	<i>Lanioturdus torquatus</i>	Batis minor	Namibe, Cunene, K.Sul, Benguela and Huila	Common
20.	<i>Platysteira albifrons</i>	White-fronted wattle-eye	From the coastline of Cabinda to K.Sul	Common
21.	<i>Prionops gabela</i>	-----	Gabela-Kuanza Sul	Threatened
22.	<i>Nectarinia bocagei</i>	Bocage's Sunbird	Bié and Huambo	Rare
23.	<i>Cinnyris ludovicensis</i>	Ludwig's double-collared sunbird	Huíla, Namibe and Benguela	Frequent
24.	<i>Eushistospiiza cinereovinacea</i>	-----	Luanda and Bengo	Rare
25.	<i>Estrild thomensis</i>	-----	Central and Southern of Angola	Common

Source: Dean, WRJ, (2000): The Birds of Angola an annotated Checklist.

Sinclair I. E Ryan P. (2003): Birds of Africa - South of the Sahara

I.3.2.2- Microfauna

In post independence Angola, there are almost no studies conducted for species such as insects, frogs, shellfish and other linked to microfauna. So it is quite difficult to assess the current situation of their populations.

These species in some cases suffer from a very high human pressure as some serve as the food for the populations and they are the result of a very intense trade such as caterpillars, butterflies larvae.

On the other hand, deforestation, fires are major threat to wildlife for this kind of fauna because they degrade or eliminate their habitat. (Photo).

I.3.3: Flora

It is estimated that about 10 million people live in rural areas. This population is in wood, charcoal, bush meat, honey, insects, wild leaves and fruit and fish of inland and coastal waters of their main sources of livelihood and income. Products derived from biodiversity are still the main raw material of construction for most of the rural population.

The welfare of these populations and their food security is influenced by the Biodiversity state to which they depend on because any change in its components has an influence on their lives.

As an example, the domestic consumption of firewood and charcoal is about 56.8% of the total energy consumption. This trade has a circuit that involves many people, including producers or manufacturers, are generally rural habitats, then follows the wholesalers to help truckers and shippers, buy and transport the goods to the consumption centres, where retailers and final consumers buy the product. This causes much of the rural population, among others, find survival in this trade.

I.3.4: Marine Resources

With a coastline of about 1650 km, the population living in coastal provinces largely found in the fishing activity the survival of their families. The small scale fishing is an activity that sustains many families and involves a chain of workers, ranging from fishermen, passing through fish scalers, middlemen who bring the product to the final consumer. The most fished species are: *Dentex macrophthalmus*, croaker, sole, grouper, mackerel and sardines.

Other important marine species for fishing activity for local people are crabs, lobsters, mussels, clams and shrimp.

Fishing of mackerel (*Trachurus trecae*) strongly worries the fisheries sector. This species has suffered excessive fishing which greatly affects their biomass. To reverse this situation, the Government decrees a four-month fishing ban per year. It is a positive decision with a view to sustainable management of the species and its results are very satisfactory.

There is a relatively large population of sea turtles distributed along the coast. There are five species of sea turtles in Angola.

All species of turtles increase their presence in coastal waters during the spawning period ending in this rainy season from October to April.

Table I. 5: Species of sea turtles in Angola

Common Name	Scientific Name	Zona de frequência
Green sea turtle	<i>Chelonia mydas</i>	Coastal waters from south of Cabinda onward the north and south to Benguela
Loggerhead sea turtle		Coastal waters in the north of Angola
Hawksbill sea turtle	<i>Eretmochelys imbricata</i>	Total of coastal waters of Angola
Olive ridley sea	<i>Lepidochelys olivacea</i>	Total of coastal waters of Angola

turtle			
Leatherback	sea	<i>Dermochelys coriacea</i>	From Luanda to Benguela
turtle			

Source: Kitabanga Project of UAN Science Faculty

In relation to cetaceans, their distribution, seasonality, abundance and feeding sites, reproduction and breeding areas is scarce. It is known that many species of whales and dolphins live and migrate along the coastal waters of Angola. But many species of whales appear beached and dead along the coast for reasons still unknown.

(Photo)

I.3.4: Freshwater Resources

The **Catfish** (,,,) and **Tilapia** are the main freshwater fish species most caught and consumed in the country. There are several species of tilapia that can be found naturally in some ponds and rivers Bengo, Luanda, Kwanza Sul and Kwanza Norte, but are also raised in ponds, given their growth characteristics, proliferation, rusticity, food and the quality of their flesh.

Depending on the demand for the product and its quality, the introduction of alien species of tilapia is likely because at this time, the creators seek to acquire fast-growing species.

I.4: Threats to Biodiversity

From the *Table* N°5, the major threats to biodiversity in Angola can be classified into two categories: direct and indirect threats:

Direct threats includes deforestation to the livelihood itinerant agriculture, uncontrolled cutting of trees for charcoal and other purposes; poaching for commercial character; wild fires for itinerant agriculture, mainly mining and prospecting.

Quadro N.º I.5: Principais ameaças à Biodiversidade em Angola

	Provinces	Bengo	Benguela	Bié	Cabinda	Cunene	Huambo	Huíla	K. Norte	K. Sul	K. Kubango	Lunda Norte	Lunda Sul	Luanda	Malanje	Moxico	Namibe	Uíge	Zaire	ANGOLA
	Ameaças																			
1.	Deforestation	15	10	8	10	12	10	11	15	15	10	14	17	15	10	10	8	10	10	12.2
2.	Poaching	18	10	10	10	10	10	10	17	10	18	16	16	18	15	15	10	17	10	13.9
3.	Exploration of Mining and granular material	15	10	12	10	5	10	15	10	10	5	18	18	15	15	15	5	10	5	11.3
4.	Fires	11	7	15	8	10	15	10	15	15	10	16	16	1	16	16	2	15	15	7.3
5.	Illegal fishing	10	15	5	10	2	5	2	1	10	5	1	1	10	5	5	15	2	10	6.9
6.	Drought and Floods	5	8	1	1	18	8	10	1	1	2	1	1	8	2	10	10	1	2	5.0
7.	Atmospheric Pollution	10	2	1	15	10	1	2	1	5	1	2	2	10	1	1	5	1	10	4.4
8.	Oil spill	9	5	0	18	0	0	0	0	1	0	0	0	5	0	0	2	0	10	7.1
9.	Man and animal Conflict	11	5	10	12	5	10	10	10	10	15	5	5	10	5	10	15	5	6	9.3
10.	Impact n the Forest Resettlement	10	10	10	10	10	10	8	10	10	10	10	10	10	10	10	15	10	10	10.2
11.	Impact of planting trees in Cities	10	10	10	8	10	5	8	8	10	10	10	10	18	10	10	15	10	10	10.5
12.	Lack of Forest Planning	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18.0
13.	Mangrove Degradation	5	15	0	15	0	0	0	0	0	0	0	0	10	0	0	0	0	15	12.0
14.	Invasive Species	8	1	5	10	5	8	8	10	8	8	8	8	2	8	5	1	10	10	7.4
15.	Population Density	5	12	10	8	8	10	12	8	8	2	5	5	18	8	2	5	10	5	7.8
16.	General Threats to Biodiversity	10.8	9.1	8.3	10.8	8.2	8.6	8.9	8.9	8.7	8.3	8.3	8.5	11.9	8.9	8.5	8.4	8.6	9.7	9.5

Subtitle: Threats to Biodiversity in Angola: 0-5: Inexistent or Weak; 5-10: Moderate; 10-15: High 15-20: Very High

It is usual in Angola, people to deforest and burn the forests and not only as land preparation method for cultivation. It is estimated that about 10.000 to 24.000 hectares of vegetation is cleared for itinerant agriculture in Cabinda every year (Silva et al. 2011).

This practice has the effect:

- Loss, change and fragmentation of habitat;
- Loss of plant species of conservation or commercial value;
- Move and disturbance of wildlife;
- Increase of poaching due to improved access.

The vegetation cleaning can facilitate recolonization by species that are adapted to open areas, but lit with greater exposure to wind, higher temperatures and humidity levels. These areas can be invaded by exotic species, mainly chromolena (*Chromolaena odorata*) as it happens in the provinces with rainforests in the case of Cabinda, Uige, Kwanza Norte and Bengo.

(PHOTO)

It is also verified deforestation for the construction of infrastructures, but through environmental impact assessment, mitigation measures and restoration of vegetation cover are recommended.

The sale of game meat is notorious on the main roads of the country. This unsupported practice has negative consequences in animal populations mainly in large mammals.

Prospecting and exploration of artisanal mining of diamonds and other minerals devastate several areas and degrade important habitat to many endemic species.

The country has already created and published several laws and policies aimed at protecting biodiversity and the environment in general, but their implementation and enforcement is still lagging behind.

As indirect threats, we can mention the lack of undertaking activities aimed for forest management such as the inventory and planning of forests, as well as the poverty that affects much of the rural population, unemployment, and the weakness in the implementation of specific legislation in force, are threats that endanger biodiversity.

Angola has not yet made the planning of its forests, ie the interventions in the forests have no guidance. Any trees can be cut, neglecting the consequences.

On the other hand, poverty can be translated into a weak financial power of an individual, it is a concern for biodiversity conservation because when the individual is poor, is more concerned to meet his urgent needs without considering the consequences of actions in relation to the Biodiversity resources.

Table N°I 6: Species of the animals victims of poaching in Angola

N.º	Common Name	Scientific Name	Interest	Intensity of poaching (1-10)
1.	Common duiker	<i>Sylvicapra grimmia</i>	Meat	8
2.	Elephant	<i>Loxodonta africana</i>	Ivory	4
3.	Deer	<i>Tragelaphus scriptus</i>	Meat	8
4.	Boa constructor		Meat, skin and fat	1
5.	Wild boar	<i>Potamochoerus porcus</i>	Meat	6
6.	Leopard	<i>Panthera Pardus</i>	Skin	4
7.	Red-tailed monkey	<i>Cercopithecus ascanius</i>	Meat	5
8.	Griveto	<i>Cercopithecus aethiops</i>	Meat and stimulation	4
9.	Buffalo	<i>Syncerus caffer nanus</i>	Meat	8
10.	Common cane mouse	<i>Thrinomys swiderianus</i>	Meat	8
11.	Palanca Negra Gigante	<i>Hippotragus niger variani</i>	Meat	6
12..	Blue duiker	<i>Cephalophus monticola</i>	Meat	8
13.	Hedgehog	<i>Hystrix Athenuns</i>	Meat	5

Scale: 1: Hunted with less intensity; 10: Hunted with more intensity

Source: Summary of different Reports 2010-2012

I.4.6: Alien and invasive species

In Angola, there are few studies specifically dedicated to invasive species.

The main invasive species in Angola are:

- **Water Hyacinth (*Eichhornia crassipes*)** It is an aquatic plant, native floating in the Amazon. Colonizes lakes, rivers, irrigation canals, ponds and other wetlands, presenting a great ability to reproduce and spread, obstruct the areas where it develops causing serious economic and quality of life losses for the people who live near these areas, making it difficult to supply water, fishing and navigation.

From an ecological point of view, the fact of covering the surface of water, it prevents the penetration of sunlight which hinders the development of underwater species.

Geographical Distribution: The water hyacinth is distributed virtually throughout the country, especially along the Kwanza River.

- **Eucalyptus (*Eucalyptus* sp)**

Geographic distribution: In Angola the eucalyptus area is estimated at 100,000 ha, focusing its majority on the central highlands and south coast which once provided raw material for the pulp plant and wood factory as fuel to the trains of Benguela Railways. Although this area may not correspond with the current situation, it must be taken into account some plantations in other regions used for various purposes.

Eucalyptus is classified as an invasive plant as it is an opportunistic species in the soil water consumption by eliminating its competitors around.

Despite its economic interest, eucalyptus does not present major ecological advantages, this because the exotic eucalyptus plantations are generally poor in terms of biological diversity due to elimination other species.

➤ **Chromolena- Chromolaena odorata.**

This species dominates in gaps from the rainforests of Angola, which is in Maiombe in Cabinda, in the forests of Uíge, Kwanza Norte, Bengo and Zaire. It occupies large extensions of areas abandoned by peasants, which eliminates or advantageously competes with the native.

Table N° I.7: Alien invasive Species in Angola

N.º	Name in English	Scientific Name	Distribution Area in Angola
1.	Acacia Palida;	<i>Leucaena leucocephala</i>	Unknown
2.	Bamboos	<i>Bambusa sp</i>	Unknown
3.	Panicum repens	<i>Panicum repens</i>	Unknown
4.	Reed:	<i>Phragmites australis</i>	Countrywide
5.	Pigface	<i>Carpobrotus edulis</i>	Along the coastline
6.	Chromolena	<i>Chromolaena odorata</i>	Bengo, Cabinda, Kuanza Norte, Uíge and Zaire
7.	Eucalyptus	<i>Eucalyptus sp</i>	Countrywide
9.	Water Hyacinth	<i>Eichhornia crassipes</i>	Countrywide
10.	Hypnea: water red seaweed	<i>Hypnea musciformis</i>	unknown

I.4.7: Conflict between man and animal

Since 2002 when the country achieved peace, it has recorded more scenes of conflict between people and wildlife.

Over the years, assessment visits were paid to the provinces with human- wild animal conflict, reports analysis of the Provincial Directorate of Environment and the information conveyed by the media through the complaints of the people victims of this conflict.

The forest Elephant (*African Loxodonta cyclotis*) is the most frequently cited species in the conflicts between humans and animals in Angola. Other species such as hippos (*Hippopotamus amphibius*) crocodiles (*Crocodilus niloticus*), seals (*Arctocephalus pusillus*), leopard (*Panthera pardus*) and wild boar (*Phacochoerus porcus*) are part of the checklist of animals that create conflict all over the country.

Table Nº1.8: Animal Species in conflict with humans

N.º	Name in English	Scientific Name	Conflict frequencies (1-5)
1.	Crocodiles	<i>Crocodylus nilocotus</i>	3
2.	Elephants	<i>Loxodonta africana</i>	5
3.	seals	<i>Arctocephalus pusilus</i>	4
4.	Hippos	<i>Hipopotamus amphibius</i>	3
5.	Wild boar	<i>Potamochoerus porcus</i>	1
6.	Lions	<i>Panthera leo</i>	2

Subtitle: 1: Less conflicting... 5: More conflicting

The main causes of this conflict vary depending on the animal involved and the place where it occurs, but the main cause is habitat occupation of the animal by the man.

On the other hand, the peace that the country is experiencing since 2002 provides greater movement of human populations and wildlife in places where previously was inaccessible, the collection of firearms by the Government contributed to a likely growth of the herd of large wild animals because many of these weapons were used for poaching.

Furthermore, ecological imbalance, especially in the food chain of these animals (lack of natural predators), is also a very strong reason because of man and wild animals conflict, such as the seal in the absence of the white shark () that controls the population adult in Namibe seas and brown hyena () that feeds the offspring of seals, contributes to growth without population control of seals, besides the habitat change. Baía dos Tigres that in the fifties was actually a bay, today it has become an island where access by land is almost impossible, hence the non-presence of the brown hyena and other predators on this site.

However, from a conservation point of view, you can also retain some lessons from this increased conflict between humans and wildlife. In this case we consider that there is still in our country species of animals that were to be extinct and that their population has grown steadily.

1.4.8: Vitality of Key Ecosystem Services in Angola

Analyzing the table showing the vitality of the main Ecosystem services in Angola, we note that Cunene province is presented as benefiting from a fairly minimal ecosystem service. This is because this region often suffers from prolonged climate change impact phenomena such as drought and flooding. This problem is compounded by excessive cattle in the area that causes the over-grazing in the province as a result the population faces food and water shortages a for people and their livestock, causing high mortality among the animals.

Angola, as a tropical country, has a low agro-forestry service that is still reasonable, but in the long term, with the usual practice of itinerant agriculture and excessive cutting of trees and forests can contribute to the reduction of this type of service nationwide. As a result of this degradation, it may also lead to the transformation of natural rainforests into secondary forests with a possible intrusion of invasive species such as Chromolena - Chromolaena odorata phenomenon that has begun to happen in the provinces of Cabinda, Uíge, Bengo and Kwnza -Norte.

Many country's provinces, especially in the east, are hit by ravines in the towns and cities which endanger many infrastructures, such as public buildings and traffic routes, hindering the movement of means of transports.

Ravines in many cases are excessive deforestation consequences aggravated by the heavy rainfall that occur in these places.

Table N.ºI. 9: Vitality of Main Ecosystems Services in Angola: 0-1: Unknown; 1-5: Very Weak; 5-10: Reasonable; 10-15: Good; 15-120: Excellent

	Provincias	Bengo	Benguela	Bié	Cabinda	Cunene	Huambo	Huíla	K. Norte	K. Sul	K. Kubang	Lunda Norte	Lunda Sul	Luanda	Malanje	Moxico	Namibe	Uíge	Zaire	ANGOLA
1.	As source of firewood products	10	10	10	18	10	10	10	15	15	18	14	14	10	15	15	05	18	18	13.1
2.	As source of animal protein	15	18	08	18	05	10	10	17	15	18	16	16	15	10	15	18	18	18	15.3
3.	Use of leaves, roots etc	10	00	12	18	05	10	15	15	10	18	15	15	10	15	15	10	18	18	12.7
4.	Source of non firewood Products	15	10	10	15	05	10	10	15	10	15	16	16	05	15	16	05	15	15	12.1
5.	Protection of hydrographic basins	18	10	10	18	05	15	15	18	15	18	10	10	10	15	18	10	18	18	13.9
6.	Source of medicinal plants	15	10	10	15	05	08	10	15	10	15	15	15	10	10	10	10	15	15	11.8
7.	Agroforests	10	05	05	15	05	05	05	18	05	10	05	05	05	10	10	02	18	18	08.7
8.	Wild food plants	10	00	00	18	05	05	10	12	10	15	10	10	05	10	10	05	15	15	09.2
9.	Source of ornamental plants	10	00	00	15	00	10	05	10	05	10	05	05	05	05	05	05	10	05	06.1
10.	Regulation of Micro-climate	15	10	10	15	10	15	15	15	10	15	15	15	10	10	10	15	15	15	13.1
11.	CO2 Sequestration	00	00	00	10	00	00	00	10	00	10	00	00	00	10	10	00	10	10	10.5
12.	Mangrooves	15	05	00	05	00	00	00	00	05	00	00	00	10	00	00	00	00	10	03.9
13.	wetlands	15	10	10	10	05	10	15	15	15	18	15	15	05	15	15	15	18	15	15.8
14.	Rivers	18	10	15	10	10	18	08	18	15	18	10	10	10	15	18	10	18	18	13.8
15.	Ravines Prevention	18	10	8	15	08	15	15	15	12	15	10	10	10	15	12	10	15	15	12.7
16.	Qualidade de serviços ecossistémicos	13,8	09.8	09.8	14.3	06.5	10.8	10.4	14.9	10.9	15.2	12.0	12.0	08.6	12.1	12.9	09.2	15.8	14.9	11.9

Chapter II: IMPLEMENTATION OF NATIONAL BIODIVERSITY STRATEGY AND ACTION PLAN (2007-2012)

II.1: Brief description of the Angolan NBSAP

Combined with climatic diversity, Angola is home to a rich biodiversity, which leads the government to take measures to adjust to their sustainable management. One of the measures is the adoption of a National Biodiversity Strategy and its Action Plan.

Objectives of the strategy are to incorporate in the country's development policies and Public Investment programmes implemented by sectors, efforts aimed for the conservation and sustainable use of biodiversity.

Ten *Strategic Goals* are defined to achieve the Global Goal:

Strategic Goal 1: Promote the sustainable use of the biodiversity components;

Strategic Goal 2: Increase the representation of biomes and ecosystems of Angola in the areas of environmental protection;

Strategic Goal 3: Investigate and disseminate information on biodiversity;

Strategic Goal 4: Educate and raise awareness of sustainable development;

Strategic Goal 5: Strengthening Implementation of International Conventions and Agreements related to biodiversity;

Strategic Goal 6: Strengthening the role of local communities in biodiversity management;

Strategic Goal 7: Mobilizing Funds for Biodiversity Conservation;

Strategic Goal 8: Strengthen the institutions connected to the environment;

Strategic Goal 9: Strengthen specific legislation and its implementation;

Strategic Goal 10: Manage, coordinate and monitor the Actions envisaged in (NBSAP) for Biodiversity Conservation.

- **Strategic Goal 1:** Promote the sustainable use of the biodiversity components;
- **Strategic Goal 2:** Increase the representation of biomes and ecosystems of Angola in the areas of environmental protection;
- **Strategic Goal 3:** Investigate and disseminate information on biodiversity;
- **Strategic Goal 4:** Educate and raise awareness of sustainable development;
- **Strategic Goal 5:** Reinforce the Implementation of International Conventions and Agreements on Biodiversity;
- **Strategic Goal 6:** Strengthening the role of local communities in biodiversity management;
- **Strategic Goal 7:** Mobilizing Funds for Biodiversity Conservation;
- **Strategic Goal 8:** Strengthen the institutions connected to the environment;
- **Strategic Goal 9:** Strengthen specific legislation and its implementation;
- **Strategic Goal 10:** Manage, coordinate and monitor the Actions envisaged in (NBSAP) for Biodiversity Conservation.

The chosen Strategic Goals led us to establish the National Objectives for Biodiversity that the country should achieve by the year 2020, taking into account the international synergies to achieve the Aichi targets and the Millennium Development Goals.

Strategic Goal 1: Promoting Sustainable Use of Biodiversity Components.

About 87.5% of the total area of Angola is located outside of the environmental protection areas. As a result, biodiversity conservation will depend on implementing measures relating to the sustainable use of natural resources in these areas.

The land use and biodiversity resources outside of protected areas include activities such as:

- Agriculture;
- Timber extraction;
- Exploitation of marine and aquatic resources;
- Mining extraction;
- Oil Exploration;
- Industrial activity;
- Tourist and Construction activity

Regarding this strategic area, it was defined the following objectives:

National Objective 1.1: Create by 2020, technical and human conditions so that all major projects in the country may conduct Environmental Impact Studies and are monitored through regular Environmental Audits;

National Objective 1.2: Create by 2020 technical and scientific skills so that farmers, fishermen and forest explorers may implement sustainable practices that support biodiversity conservation;

National Objective 1.3: Develop by 2020 methods and practices that promote and guarantee the natural regeneration of forests;

National Objective 1.4: Create by 2020 promote the reunification of human settlements or villages and towns that are in conservation areas, outside these ones.

National Objective 1.5: Create by 2020 the technical conditions to provide to population alternatives non-vegetable energy sources.

Strategic Goal 2: Reinforce the representation of Biomes and Ecosystems of Angola in the environmental Protection area.

Until the present, Angola has 14 conservation areas: Nine National Parks, one Natural Park and four reserves (see Annex). These areas still require effective management.

Much of the major biomes of the country (), some ecosystems, habitats and rare or endangered species are not yet covered by the existing protected areas system.

As goals, it was fixed the following objectives:

National Objective 2.1: Re-evaluate by 2020 the current state of the existing conservation areas and their infrastructures through surveys and ecological inventories. So as to avoid land use conflicts, as many of them are invaded by people and other people's activities on biodiversity conservation.

***National Objective 2.2:** Propose by 2020 the creation of protected areas to include biomes, ecosystems, habitats and rare or endangered species that are not properly protected, especially in the provinces of Uíge, Zaire, Kwanza Norte, Huambo, Bengo, Lunda Norte and Lunda Sul, elevating the surface of 12.5% of Protected Areas to 15% of the country's surface.*

***National Objective 2.3:** Conduct by 2020 studies that lead to the creation of Marine Biodiversity Conservation Areas.*

***National Objective 2.4:** Rehabilitate or build by 2020 conservation areas of infrastructures to allow the conducting the scientific research activities of Biodiversity, Eco-tourism, education and environmental awareness.*

***National Objective 2.5:** Create by 2020 the attractive conditions, whether public or private, for the installation of at least two (2) Zoos and Botanical Zoos in the country for ex-situ Biodiversity Conservation.*

Strategic Goal 3: Investigate and Disseminate Information on Biodiversity.

The current conservation or degradation state of the country's Biodiversity is little known. The use of the existing knowledge within the members of the rural community also has not been adequately explored.

As specified in Article 7 of the Convention on Biological Diversity, there is need for basic information for the implementation of appropriate measures for the conservation and sustainable use of biodiversity.

With this strategic area, it was defined the following objectives:

***National Objective 3.1:** Spread by 2020 scientific studies on the Angolan biodiversity in its various components;*

***National Objective 3.2:** Study by 2020 the current situation of the alien species in the country and publish a checklist of the main Alien and or Invasive species in Angola;*

***National Objective 3.4:** Study by 2020 the current situation of endangered or threatened species and publish the country's Red List relatively the endangered species of flora and fauna;*

Strategic Goal 4: Educate and Raise Awareness about Sustainable Development;

The success of conservation efforts depends on the understanding of all Angolans.

It is important that the various institutions involved in research, in schools and in community work actively participate in the dissemination of information and public awareness about the conservation and sustainable use of Biodiversity.

A great effort has been made internationally to improve the degree of responsibility towards sustainable development. As a result, the United Nations declared 2011-2020 as the Decade of Biodiversity. "**Living in Harmony with Nature**", this will depend on the actions to be undertaken in various fields, which will require changes in ways of thinking, living and working, and the values and lifestyles.

Through teamwork, social groups learn from each other.

The Acting Strategy of to this goal is the following:

National Objective 4.1: *Conduct by 2020 massive education activities and environmental awareness for sustainable development at all levels: population, policy makers and implementers, taking the opportunity of environmental dates.*

National Objective 4.2: *Disseminate by 2020 knowledge and information on biodiversity that lead to taking attitudes and sustainable practices for the conservation and sustainable use of biological resources in Angola.*

Strategic Goal 5: Reinforce the Implementation of International Conventions and Agreements on Biodiversity

International Conventions Agreements to which Angola is a state party should be implemented to support themselves with scientific information collected nationally through investigations made in various specialties.

The Acting Strategy related to this goal is the following:

National Objective 5.1: *Create by 2015 the National Scientific Council for Biodiversity (CCNB) in specialties (Mammals, Reptiles, Birds, Insects, fish, wild plants and crops) that will give your opinion or advice on issues of Biodiversity.*

National Objective 5.2: *Create by 2015 technical and financial capacity to implement the principles of the Convention, Protocol and international agreements to which Angola is a signatory.*

Strategic Goal 6: Strengthening the Role of Local Communities in Biodiversity Management;

It is estimated that approximately a little more than 50% of the Angolan population lives in rural areas, depending entirely on the Biodiversity resources for their very subsistence-oriented economy. Consequently local communities are important guardian of Biodiversity. It is therefore very important for the conservation and sustainable use of biodiversity to involve these communities in all decisions related to land use and natural resources with incentives for them to be integrated into the implementation.

National Objective 6.1: Strengthen by 2020 the integration of local people in decision-making on conservation projects in their areas of residence;

National Objective 6.2: Provide by 2020 to local communities through agricultural extension programmes, technical or sustainable practices in the handling of Biodiversity components and the fair and equitable sharing of benefits arising from the utilization of genetic resources from their area of jurisdiction.

National Objective 6.1: *Strengthen by 2020 the integration of local people in decision-making on conservation projects in their areas of residence;*

National Objective 6.2: *Provide by 2020 to local communities through agricultural extension programmes, technical or sustainable practices in the handling of Biodiversity components and the fair and equitable sharing of benefits arising from the utilization of genetic resources from their area of jurisdiction.*

Strategic Goal 7: Mobilizing Funds for Biodiversity Conservation

The Biodiversity conservation issue is not only a direct responsibility of the Ministry of Environment, but it should be regarded as a responsibility of all sectors of the active life of a country.

Each sector within the framework of its activities must integrate and conduct in its programmes, actions that favour the Biodiversity conservation.

So, combined effort of all must be reflected on the state of Biodiversity.

Private institutions as part of their social responsibilities can and should provide agreements or partnerships to finance projects and actions for Biodiversity conservation.

The acting strategy in this field is the following:

National Objective 7.1: *It must be integrated as from 2014 actions for the Biodiversity conservation in Sectoral Programmes. Public institutions and the Provincial Governments shall annually include their actions in the National Biodiversity Action Plan (NBSAP 2014-2020) in their respective programmes to be allocated in the State Budget (OGE).*

National Objective 7.2: *As from 2014, raise additional funds for Biodiversity. Public and private companies with financial capacity, as part of their social responsibilities, should enter into agreements or protocols with scientific research or conservation institutions and finance projects or programmes related to Biodiversity conservation.*

National Objective 7.3: *As from 2014; raise funds for Biodiversity. Under the National Environmental Fund, promoting the fees and taxes on the sale of products related to biological resources and fines for offenders of environmental legislation.*

National Objective 7.4: *As from 15; create administrative measures to streamline the internal bureaucratic process of access to external funds, such as those provided to Angola by international organizations.*

Strategic Goal 8: Strengthen the institutions connected to the environment

A wide range of actions need to be implemented for the biodiversity conservation in Angola. Institutional capacity in Angola is often weak in terms of human and financial resources. The implementation of these measures therefore depends on the capacity of individuals and institutions, so that it can work effectively.

The capacity building should include aspects related to technical and vocational training in various environmental fields relevant to biodiversity conservation. The modernization of equipment and infrastructures and better intra-institutional coordination can ensure good results in biodiversity management.

Institutional reinforcement also includes training of managers of natural resources, including forest rangers, poaching inspectors, rural extensionists etc.

The objectives related to Strategic Area G are as it follows:

National Objective 8.1: *It must be developed until 2020 capacity building and professional training of Angolan cadres in various areas of Biodiversity.*

National Objective 8.2: *It must be strengthened until 2020 the institutional capacity at local level to improve the sustainable management of biodiversity.*

Strategic goal 9: Strengthening Specific Legislation and its Implementation;

Despite the failure of some legislation and the lack of another, the weak point in this regard has been the lack of technical, financial and qualified human resources to monitor at all levels the enforcement of the national legislation on Biodiversity.

National Objective 9.1: *It must be created until 2017 technical conditions for strengthening human resources capacity in order to monitor the compliance with the laws in force;*

Strategic Goal 10: Manage, coordinate and monitor the actions for the Biodiversity Conservation.

The actions contained in this document will be implemented by various stakeholders, including government institutions, environmental protection associations, research institutes, educational institutions, private sector, etc. So it is up to the Government, through the Multi-sectoral Environment Committee (CMA) and the Ministry of Environment to ensure the management, coordination and monitoring of the implementation activities of the NBSAP.

In order to ensure that the actions contained in the Strategy for Biodiversity is an integral part of sectoral programmes of governance and donor institutions Studies, Planning and Statistics Offices (GEPE) of all sectors of the country should serve as NBSAP Contact Points so as to include in their programmes, at the time the sectoral programmes are being elaborated, actions for the Biodiversity conservation.

National Objective 10.1: *As from 2015, ensure that the governance of sectors can include in their programmes actions for the Biodiversity conservation.*

National Objective 10.2: *It must be created until 2015 a Technical Coordination and Monitoring Unit of NBSAP Implementation tasked to annually assess the State of Biodiversity in Angola through its Report.*

II. 2: NBSAP Implementation

The NBSAP implementation in Angola was reasonable, although many of the actions set out in the document were not implemented for various reasons, including a lack of funds.

Another challenge that was verified in the implementation of NBSAP was the lack of harmonization in the structuring of the Environment Sector at the local level.

The environmental sector is not structured in the same way in all provinces. In many cases it is linked to the Departments of Agriculture, Fisheries, Urbanism and/or Spatial Planning. This fact makes the environment sector to be to the background.

In Luanda Province for example, there is no sector that deals specifically with the environment, this activity is implied by the Community Services Sector.

With this structural situation of the Environment Sector at the local level, in many cases environmental issues are not relevant in decision-making, because they are issues seen as an obstacle in the development of the province, since its head (Head of Department or Section) does not participate in the decision-making forum which is the Board of the Province. Therefore, it cannot be exercised at this level the needed environmental advocacy environmental. With this positioning of the structure in the province's environment sector, indirectly affects biodiversity conservation because many actions and decisions are made and taken without having into account the Biodiversity conservation.

Muitas acções da competência do Sector do ambiente a nível local, como Avaliação de Estudos de Impactes Ambientais dos projectos, são relegadas no segundo plano ou simplesmente são ignoradas.

Many actions of environmental Sector expertise locally, as Assessment of Environmental Impact Studies on projects, are relegated to the background or are simply ignored.

Since the preparation of the 4th Report on Biodiversity, the following actions were taken:

During this period, the National Parks have benefited from the construction of infrastructures access, management and supervision, as well as training of staff for the management and supervision of these areas.

In Cangandala National Park and Integral and Natural Reserve of Loando, natural habitat of the Palanca Negra Gigante (*Hippotragus niger variani*) is implementing the Public-Private Partnership Projecte to the recovery and conservation of this species one of the national symbols.

So, in 2009, it was created a sanctuary of about 3000 of the referred antelope in Cangandala National Park.

Then catch operation of females and males of this species were carried out and brought to the sanctuary. And as expected in 2010, there was the birth of the first young.

In 2011, it was held the second operations of catches of Palancas Negras in the Integral Reserve of Loando and its transfer into the sanctuary in Cangandala National Park, with the capture of two males and six relatively young females.

Currently, from the beginning of these catches, there was the birth of four young of Palancas Negra, on average per year, totaling 21 individuals in the sanctuary. This number seems poor because the reproductive capital is about 10 females, but the heavy past of these animals due to the lack of pure males sable, may be the cause of poor female fertility. Just to recall that in 2009 it was observed the casual and natural hybridization between females of Palanca Negra with males of the roan Antelope (Palanca vermelha).

- There was also the creation of three National Parks: National Parks of Maiombe, Luiana and Mavinga, a distance of 86.000 km² and rehabilitation of the Regional Park of Chimaravela with management and supervision infrastructures.

Parks created in 2011, in a resolution of the National Assembly, are of the utmost importance because they got integrated in the network of ecologically important regions of conservation areas as in the Maiombe Forest, part of an ecosystem of tropical rainforest in the Congo Basin and the prospect of Cross Border Conservation Areas under a tripartite agreement signed in 2009 between the Governments of Angola, Congo Brazzaville and DR Congo and under the creation of Maiombe Biosphere Reserve.

II. 3: Outcomes on the implementation of NBSAP 2007-2012

To represent the statutes of the actions foreseen in the implementation of the NBSAP 2007-2012, it was used the following symbols:

- **Conducted Action:** (↑)
- **Action in progress:** (→)
- **Non-conducted Action:** (X)

II.3.1: Strategic Goal A: Investigação e divulgação de informação

Table n.ºII.1: Strategic Goal A: Investigation and dissemination of information.

Objective	Expected Actions	Outcomes
A1.1.	Formulate research programmes (including activities, schedule and budget) on Biodiversity in Angola.	→
A12	Conduct a survey of the existing institutions and professionals and develop a rationalization programme of the means of improving capacity, training and physical equipping and financial support	→
A1.3	Conduct detailed studies on the current situation of endemic species and or endangered species specifically:	
	a)-Studies on the condition of African Manatee - <i>Trichechus senegalensis</i>)	↑
	b)- Studies on sea turtles	↑
	c)- Studies on Palanca Negra Gigante – <i>Hippotragus niger variani</i>	↑
	d)- Study on distribution of avifauna	X?

	e)- Studies on primates Gorillas, <i>Gorilla gorilla</i> and Chimpanze-Pan	→
A.1.4	Conduct studies on species less known and or documented as reptiles, amphibians, insects and micro-organisms	→
A1.5	Conduct and disseminate widely studies on habitats and terrestrial and coastal ecosystems with biological values, namely;	
	a). Gallery forests in valleys of Cuango, Luachimo and cassai in Luanda Norte Province.	→
	b)- Tropical forests (Maiombe Forest) inland the Cabinda Province	→
	c). African mountain forests in the provinces of Huambo, Benguela, Kwanza Sul and Huíla and specifically the forests in Moco Hill	X
A1.6	Conduct studies to document and disseminate the biological characteristics of marine and coastal species to determine the current situation and identify threats and forms of protection.	→
A 1.7	Determine the conditions of mangrove formations and in particular the mangrove-cause mortality in estuaries located amongst rivers Chiloango, Congo and Bengo.	→
A1.8	Undertake a mapping and zoning of ecological sensitivity of coastal and marine areas.	↑
A1.9	Conduct and disseminate studies on biodiversity of inland wetlands and related ecosystems for assessment of their current state, threats and ways of preserving especially watersheds in the country.	→
A2.1	Assess deforestation rates of indigenous forests and erosion of local soils to be selected based on criteria to be determined.	X
A2.2	Conduct studies in agriculture, livestock and forests so that these activities are less harmful to the environment to avoid environmental risks such as soil erosion, pollution and loss of biological and genetic heritage.	X
A2.3	Study and monitor urban environmental problems, providing support for the definition of harmonious urban development strategies	X
A2.4	Inventory situations prevalent on the coast, and evaluate current and potential threats (including oil spills) taking into account the conducted study of mapping and zoning sensitivity of coastal areas.	→
A2.5	Conduct studies on the impact of fishing activities that are being practiced in the coastal waters of Angola, with particular focus on those involving accidental catch of turtles, dolphins and seabirds.	X
A2.6	Through research, identify new sustainable fishing practices to avoid by-catches Conduct studies on traditional practices of rural communities and their knowledge which can contribute to better management of biological resources.	X?
A2.7	Conduct studies on traditional practices of rural communities and their knowledge which can contribute to better management of biological resources.	X?
A2.8	Conduct studies of existing environmental effects and potential population movements as a result of the end of the war with particular implications in the settlement areas.	→
A2.9	Conduct studies to determine the current situation and the potential risks and benefits with regard to invasive and alien species in Angola and measures to eradicate or use them.	X
A2.10	Conduct taxonomic studies of ethno-botanical and ethno-zoology of Angola to preserve their scientific heritage	X
A3.1	Prepare a plan for the creation of a Centre for documentation and information (CDI). Maintain a documentation and functional information Centre.	→
A3.2	Maintain a documentation and functional information Centre.	↑
A3.3	Create an information network at national level, to share resources and exchange information so that all provinces and municipalities have access to information.	X
A3.4	Create an editorial area for compiling, reviewing, editing and publishing information on Biodiversity in Angola	X

II.3.2: Strategic Area B: Education for Sustainable development

- **Conducted Action** = (↑)
- **Action in progress**: (→)
- **Non-conducted Action** (X)

Table n.ºII.2: Strategic Area B: Education for Sustainable development

Objective	Expected Actions	Outcomes
B1.1	Formulate a strategy for education on sustainable development (formal and informal) to create civic awareness and to promote conservation and sustainable use of biodiversity	→
B1.2	Formulate proposals to supplement and improve the environmental and Biodiversity in the primary and secondary school curricula	↑
B1.3	Implement education programmes for sustainable development and awareness campaigns at all levels through lectures, debates and radio and television programmes using vernacular languages on the importance of conserving and using biological resources in sustainably.	↑
B1.4	Participate actively in the United Nations Decade of Education for Sustainable Development with a view to achieving the Millennium Development Goals.	↑
B1.5	Introduce in all projects of biodiversity conservation and management the education component for sustainable development in terms of training and production and dissemination of materials.	↑
B1.6	Developing and implementing new methodologies and approaches to implement the processes of education for sustainable development in all aspects of environmental education.	→
B2.1	Disclose the Framework of the Environmental Law and other environmental legislation.	↑
B2.2	Disseminate knowledge and information about the importance of biodiversity conservation broadly and at all levels, with particular emphasis on rural communities, opinion makers, leaders and educators.	→
B2.3	Develop short and medium-term training programmes for people working directly with communities using for manual effect of environmental education to ensure the multiplier effect.	↑

II.3.3: Strategic Area C: Biodiversity Management within environmental Protected Areas

- *Conducted Action* = (↑)
- *Action in progress*: (→)
- *Non-conducted Action* (X)

Objective	Expected Actions	Outcomes
C1.1	Assess the biodiversity of the current situation in parks in conservation areas in order to confirm that the number and location of existing areas of environmental protection and their boundaries and current configuration correspond to the present needs of the country.	→
C1.2	Redefine, if necessary, the ecological limits of the existing protected areas and propose the creation of environmental protected areas.	→
C2.1	Identify and create protected areas to include examples of ecosystems, habitats and important species not yet covered in conservation processes.	→
C3.1	Rehabilitate the existing environmental protected areas	→
C3.2	Formulate management plans aimed for their rehabilitation and consolidation and improvement of environmental protected areas	→
C3.3	Study in detail and attention to the situation of communities that were living inside and adjacent areas of environmental protected areas, formulating for each case the most appropriate handling.	→
C4.1	Increase the number of staff employed as forest tax and hunting, provide proper training and establish their career with working conditions conducive to the effective control of poaching and forest destruction, prioritizing local people.	→
C4.2	Implement a moratorium ban for hunting activities of large and medium-sized mammals and other species in danger of extinction until the animal populations are sufficiently recovered.	→
C4.3	Implement a permanent ban on the hunting of endangered species and comply with the guidelines set out in national and international red lists for plants and animals	X
C4.4	Create incentives for investment in the rehabilitation of infrastructures of main areas of environmental protection for the development of ecotourism.	→

Table n.ºII.3: Strategic Area C: Biodiversity Management within environmental Protected Areas

II.3.4: Strategic Area D: Sustainable use of Biodiversity components

- *Conducted Action* = (↑)
- *Action in progress*: (→)
- *Non-conducted Action* (X)

Table n.ºII.4: Strategic Area D: Sustainable use of Biodiversity components

Objective	Expected Actions	Outcome
D1.1	Prepare integrated plans for land use and exploitation of biological resources embodying economic and social aspects in order to conserve the biodiversity in Angola.	X
D1.2	Create incentive mechanisms for the adoption of sustainable agricultural systems, including practices which enrich the soil organic matter, crop rotation and improved fallow ground through pilot projects.	X
D1.3	Create mechanisms and incentives to discourage the use of agricultural systems and livestock along the river banks harmful to the environment and public health and test these mechanisms through pilot projects.	X
D1.4	Implement pilot projects to reduce cattle overgrazing in selected areas including measures such as creating more watering points, improved management of pastures and improvement of livestock trading system.	X
D1.5	Reviewing and implementing regulation on the use of pesticides, herbicides and defoliants in the agricultural sector.	X
D2.1	Implement pilot projects to minimize the pressure on forests by replacing wood and coal by alternative energy sources.	→

D2.2	Implementing pilot projects for the creation of community forest perimeters to meet the needs of populations in firewood and charcoal.	X
D2.3	Create local nurseries to facilitate afforestation and planting of community forests as a way to combat deforestation.	→
D2.4	Create forest polygons and revitalize existing ones around and within the urban centres.	X
D3.1	Implement appropriate control measures for fishing activities such as patrolling territorial waters and along the coast to control illegal fishing.	→
D3.2	Ensure that the fishing quotas set by the Ministry of Fisheries are met through a monitoring, improved surveillance and equipping of technical means.	→
D3.3	Implement the introduction of new practices and fishing incentives in Angola through pilot projects in order to avoid the incidental catch of endangered species such as turtles, dolphins and seabirds.	X
D3.4	Conduct the scientific monitoring of aquaculture as regards the evolution of habitats and possible impacts on biodiversity	X?
D4.1	Ensure that environmental impact assessment to be carried out for projects likely to have an adverse effect on biodiversity	↑
D4.2	Ensure that diamonds exploration dealers and oil by-products are required to formulate and implement Environmental Management Plans to mitigate negative impacts and foresee the rehabilitation of disturbed areas according to the Decree on Environmental Impact Assessment	→
D4.3	Regulate, plan and supervise the exploration of construction materials from mining source.	→
D4.4	Establish rehabilitation programmes for troubled coastal ecosystems due to human activity, especially in salt marshes and bays in the vicinity of urban cities.	→
D4.5	Formulate a plan for the installation of sewage handling networks or industrial effluents in risk areas along the coastal zone and the use of domestic sludge for agriculture.	X?
D5.1	Implement a moratorium on large and medium sized mammals hunting (outside the areas of environmental protection) and other species in danger of extinction until the animal populations are sufficiently recovered.	↑
D5.2	Implement a permanent ban on the hunting of endangered species (outside the areas of environmental protection) and constant national and international red lists such as the palanca negra gigante, gorilla, elephant and chimpanzee.	↑
D5.3	Control the exploitation of endemic plant species, rare or endangered species and constant national and international red lists through the improved inspection.	X
D6.1	Formulate and implement projects and measures for the conservation and sustainable use of endangered biodiversity.	→
D6.2	Formulate and implement sustainable management of projects in the terrestrial habitats and ecosystems, particularly the creation of botanical zoos and sanctuaries for species of high value for the Biodiversity.	→
D6.3	Formulate and implement projects for mangrove conservation specifically mangroves in the estuaries of rivers Chiloango, Congo, Bengo and Kwanza.	X
D7.1	Formulate and implement programmes for the control, prevention and eradication of invasive species in Angola.	→
D8.1	Promote conservation activities and sustainable use of agro-biodiversity.	→

II.3.5: Strategic Area E: The role of communities in the Biodiversity management

- *Conducted Action* = (↑); *Action in progress*: (→); *Non-conducted Action* (X)

Table n.ºII.5: Strategic Area E: The role of the communities in Biodiversity management

Objective	Expected Actions	Outcome
E1.	Implement awareness programmes to ensure greater involvement of communities and local authorities in decision-making regarding the management of biological resources and environment conservation.	→
E2.	Ensure through organ of training and recognition of the rights of communities, already enshrined in specific legislation as a way of Biodiversity management.	↑
E3.	Implement communication programmes (workshops) in order to strengthen the knowledge and use of biodiversity and the role of traditional healers in conservation and management thereof.	↑
E4.	Ensure compliance with the legislation regarding the prior consultation of local communities before approving any project with predictable impact on its environment.	↑photo
E5.	Ensure that the rights of farmers to plant, save, use, exchange and sell their local varieties of cultivated plants are guaranteed in accordance with the existing legal mechanisms.	↑
E6.	Conduct a thorough study countrywide in order to document the existing knowledge and traditional practices related to biodiversity management.	→
E7.	Conduct studies to document traditional practices "positive and negative" for biodiversity management, distinguishing the economic, social and cultural aspects and conduct debate workshops with the population.	→
E8.	Study the resources and traditional medical practices in order to integrate positive practices in the national health system and safeguard its trading, preserve local knowledge and patent, if it proves legitimate and necessary, therapies and medicines.	→
E9.	Study and prepare the necessary requirements to ensure the protection to communities regarding the biodiversity and the fair and equitable sharing of benefits arising from their traditional knowledge, such as the medicinal plants.	↑photo
E10.	Study the mechanisms of community participation in biodiversity management	↑
E11.	Study the articulation of ways of biodiversity management by communities with forms of state management and sustainable use of biological resources	→
E12.	Promote the integration of species related to sustainable use of biological resources into development programmes.	X

II.3.6: Strategic Area F: Institutional Reinforcement

- *Conducted Acton* = (↑)
 ➤ *Action in progress*: (→)
 ➤ *Non-conducted Action* (X)

Table n.º II.6: Strategic Area F: Institutional Reinforcement

Objective	Expected Actions	Outcome
F1.1	Draw up a scientific training programme for experts in biodiversity studies related to museums, universities, environmental organizations and other institutions.	→
F1.2	Provide basic training and relevant professional to strengthen technical capacity in order to ensure improved management of biodiversity.	↑

F1.3	Train national consultants in the assessment of Biodiversity, socio-economic and environmental impact.	↑
F2.1	Develop programmes for the modernization of infrastructures and basic equipment in order to make them fit to the needs required in the field of Biodiversity.	→
F2.2	Develop foreign technical assistance and cooperation programme subject to precise rules to contribute to the development of scientific potential of Angola. (Pond carumbo, SAREP)	↑
F2.3	Create infrastructural, human, technical and financial capacity for normal operation of the centre for documentation and information (CDI) to deposit all the information on biodiversity in Angola.	→
F2.4	Create infrastructural, human and technical capacities in provinces and municipalities in order to facilitate coordination among sectors.	X
F2.5	Establish and train a national cadre on Biosafety to supervise and control the entry in the country using genetically modified organisms (GMOs).	X
F2.6	Strengthen the institutional and technical capacity of the agencies responsible for collecting, processing, analysis and publication of demographic and statistical data with priority to National Statistics Institute (INE).	X
F2.7	Develop and distribute guidelines to national consultants with training and experience in the area of biodiversity and other key areas of expertise.	X
F2.8	Create a coordination and operation of national focal points system for the provision of sectoral information on Biodiversity in order to update the environmental information database and facilitate the reporting process on the environment.	X

II.3.7: Strategic Area G: Legislation and its Implementation (See Legal Office)

- *Conducted Action* = (↑)
- *Action in progress*: (→)
- *Non-conducted Action* (X)

Table n.ºII.7: Strategic Area G: Legislation and its Implementation

Objective	Expected Actions	Outcome
G1.1	Reinforce the enforcement of the Law and regulations on conducting environmental impact studies especially in the fields of oil and diamonds exploration to ensure the taking of adequate measures on environmental management.	↑
G1.2	Review the sectoral legislation in order to integrate and articulate the biodiversity component in the different economic sectors.	↑
G1.3	Approve the legislation in preparation relating to parks, reserves and other areas of environmental protection.	→
G1.4	Approve the Law of Environmental Crimes, currently under preparation and other legislation on environmental accountability.	→
G1.5	Strengthen the institutions to which it is upto the determination of civil, administrative and criminal environment accountability, including the study and implementation of forms of participation of the population in supporting the work of these institutions.	→
G1.6	Create mechanisms for the implementation of the regulatory legislation on the ban on imports of genetically modified organisms and approval of legislation on access to genetic resources and associated traditional knowledge.	→
G1.7	Review and if necessary reformulate the legislation and measures with regard to the control of entry in the country of alien species that may become invasive to detriment of local species.	→
G1.8	Adopting legislation and measures with regard to the control of exit of the country of species and genetic resources.	→
G2.1	Strengthen the implementation mechanisms of the recommendations of the Conventions and Protocols (CBD, CITES, CMS, Ramsar, Cartagena) through the training of department chiefs of ports, airports and land borders.	→
G2.2	Approve and ratify the Convention on Wetlands of international importance, especially	↑

	as habitats for aquatic birds (Ramsar Convention).	
G2.3	Ratify CITES and the Cartagena Protocol on Biosafety and deposit the ratification instruments to the CMS.	↑
G2.4	Review the possibility of accession to the following conventions and agreements concerning African Biological Diversity: Algiers Convention, 1968 Luzaka-1994 agreement, Bamako-1997 and Aarhus-1998.	→
G3.1	Ensure the participation of Angola in the conference of the parties of environmental multilateral agreements of which it is part to exchange experience.	↑
G3.2	Reinforce the participation of Angola in regional and international initiatives related to biodiversity within the framework of SADC, NEPAD and MDGs. Establish and maintain stable focal points to fulfill the commitments of Angola as well as follow-up of regional and international negotiations.	↑
G3.3	Establish and maintain stable focal points to fulfill the commitments of Angola as well as follow-up of regional and international negotiations.	↑

II.3.8: Strategic Area H: Management, Coordination and Monitoring

- *Conducted Action* = (↑)
- *Action in progress*: (→)
- *Non-conducted Action* (X)

Table n.º II.8: Strategic Area H: Management, Coordination and Monitoring

Objective	Expected Actions	Outcome
H1.1	Identify offices and unit structures as well as mobilize financial resources for the normal functioning of the Unit for management and coordination of strategy	(X)
H1.2	Identify and recruit human resources for normal functioning of the unit for management and coordination of NBSAP	(X)
H1.3	Define Terms of Reference, elaborate project proposals based on the activities identified in the NBSAP and implement them.	→
H1.4	Elaborate the terms of reference for the identification of partners and coordinate monitoring and assessing activities of the implementation of the NBSAP process.	→
H2.1	Elaborate information brochures, publish books on biodiversity in Angola and conduct actions for dissemination of results of the implementation activities of the NBSAP.	→
H2.2	Elaborate annual reports on the progress of implementation of NBSAP and its wide distribution nationwide.	→

II.4: General Assessment CBD Convention Implementation in Angola

From the general framework of the implementation of the NBSAP 2007-2012, and according to the results obtained in each established goal we can understand the following.

Objective A: Investigation and Dissemination of Information

Investigation and Dissemination of Information

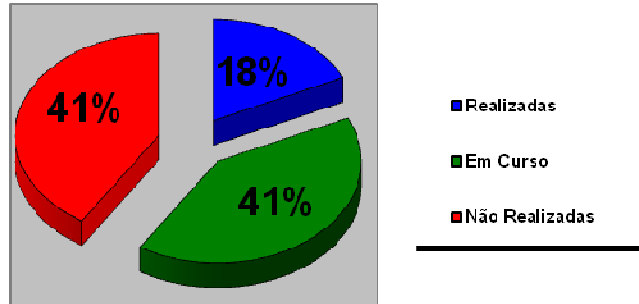


Figure 3: Actions expected in the Investigation and Dissemination of Information

Note that the investigation and the dissemination of information in Angola is not yet comprehensive. The activities planned for this goal were conducted only at 18%.

Objective B: Education for Sustainable Development

Education for Sustainable Development

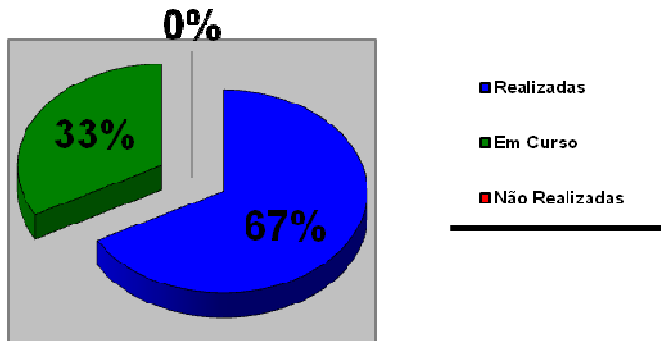


Figure 4: Actions expected in Education for Sustainable Development

Under this context, the vast majority of planned activities was conducted or is in progress.

As education and awareness are important factors in raising awareness on biodiversity conservation, it is considered that the results of this goal were satisfactory.

Objective C: Biodiversity Management in the Protected Areas

Biodiversity management in the Environmental Protected Areas

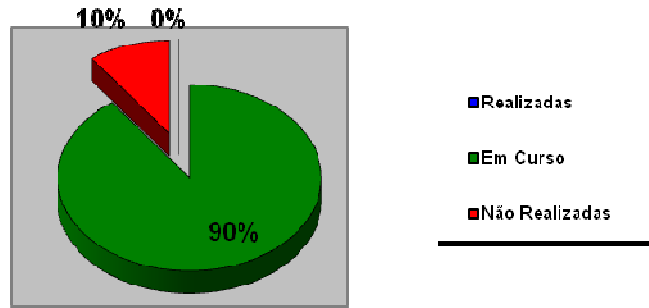


Figure 5: Actions expected in the Biodiversity Management in the Protected Areas

The post armed conflict situation that degraded infrastructures of conservation areas shows that they are huge the challenges for their reconstruction. Thus the activities foreseen under this context are mostly being implemented; only 10% was not conducted because many of them have their start dependent on the completion of others, such as the preparation of the National Parks Management Plans that will be made after the completion of inventories in their respective conservation areas.

Objective D: Sustainable Use of Biodiversity Components

Uso Sustentável das Componentes da Biodiversidade

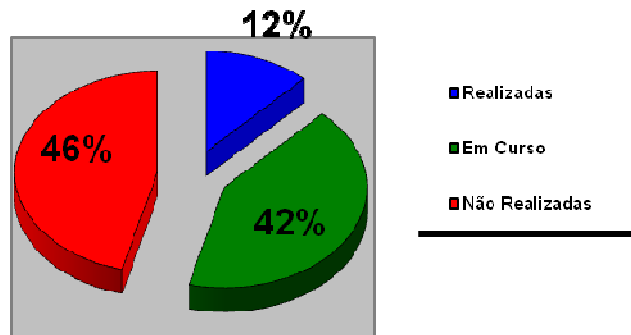


Figure 6: Actions expected in the Sustainable Use of Biodiversity Components

Having into account that scientific research on Biodiversity components is very rare in Angola, this alone shows that this area was not possible to carry out the activities under this context because many of them depend on the conducting of others. This is the case of the Inventory on Forests that is progress and whose results will contribute to the management and sustainable use of forests.

Objective E: The Role of the Communities in the Biodiversity Management

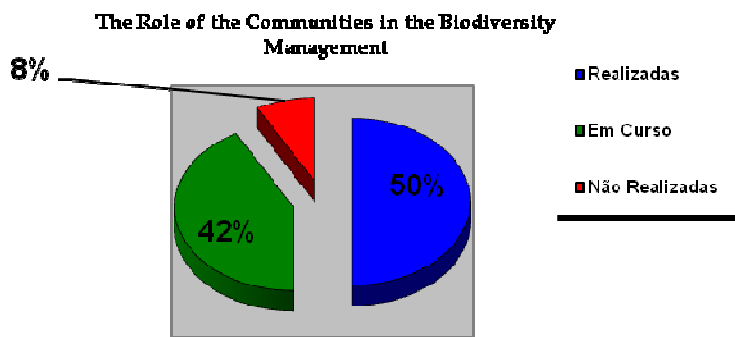


Figure 7: Actions expected in the promotion of the role of the communities in the Biodiversity Management

Local communities were involved or taken into account in the management and decision-making on biodiversity, which is why these activities were conducted at 50%. The sharing of benefits is also reflected on the Poverty Alleviation Strategy in which the exploitation of natural resources ensures communities local employment rights and the conducting of social project as the construction of schools, health centres and drinking water supply.

Objective F: Institutional Reinforcement

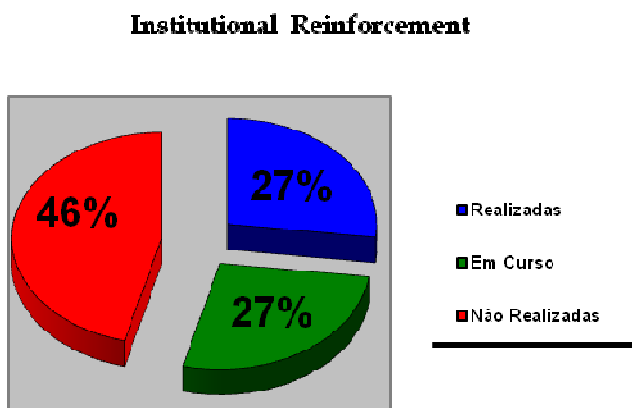


Figure 8: Actions expected in the Institutional Reinforcement

The vast majority of actions planned under this context is the formation and personnel framework of biodiversity monitoring and management. On the other hand, the framework of the staff has not been expected because the process also lacks a sieve of other institutions that should ensure their sustainability.

The construction of supervising infrastructures such as bites, checkpoints are among the actions that are underway.

Objective G: Legislation and its implementation

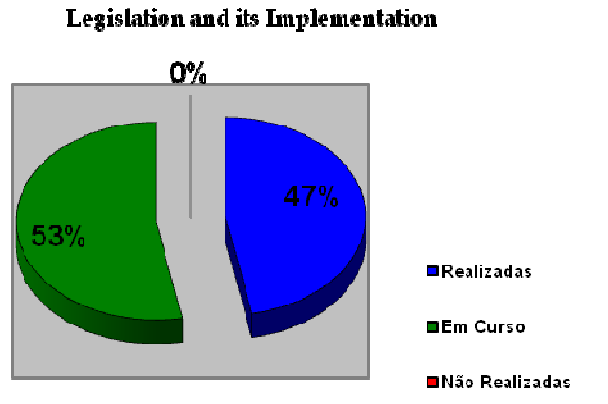


Figure 9: Actions expected in the elaboration of the Legislation and its Implementation

It was conducted only 47% of these actions because many of them are underway, such as elaboration, review and approval of the legislation of the sector that entail a lot of proceedings to follow until they are approved and implemented.

Objective H: Management, Coordination and Monitoring

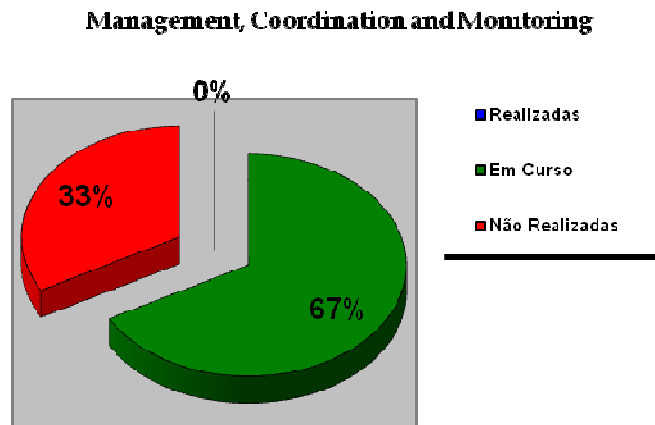


Figure 10: Actions expected in the Management, Coordination and Monitoring of NBSAP

In this section, no action was complete while most of them are to be executed. An autonomous body is not designed to manage, coordinate and monitor the implementation of the NBSAP. Consequently, they were not prepared periodic report on the strategy implementation. This was actually one of the lessons learnt in the implementation of the NBSAP the need for the creation of an independent body that could serve as a moderator in Biodiversity management elaborating alert periodic report any situation that endangers biodiversity in Angola.

TABLE N.º II. 9: SUMMARY OF THE ASSESSMENT OF NBSAP 2007-2012

Strategic Objectives	N.º of Expected Actions	Conducted Action		Actions in progress		Non-conducted Actions	
		N.º	%	N.º	%	N.º	%
A	29	5	18	12	41	12	41
B	9	6	67	3	33	0	0
C	10	0	0	9	90	1	10
D	26	3	12	11	42	12	46
E	12	6	50	5	42	1	8
F	11	3	27	3	27	5	46
G	15	7	47	8	53	0	0
H	6	0	0	4	67	2	33
NBSAP	118	30	25%	55	47%	33	28%

NBSAP : National Biodiversity Strategy and Action Plan

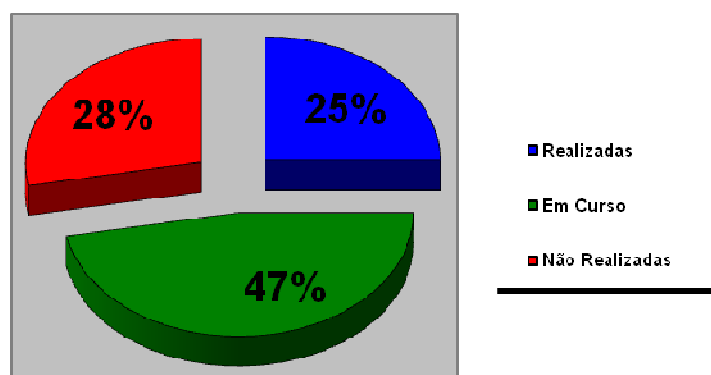


Figure 11: General Assessment of Actions foreseen in NBSAP 2007-2012

II.5: Effectiveness of NBSAP 2007-2012

The NBSAP 2007-2012, as it is the first experience in Angola, fulfilled its purpose provided that only 28% of the action programmes has not been implemented. Education and awareness about biodiversity conservation were the actions that were carried out mostly, which assures us that over this period the Biodiversity conservation message was conveyed. The biodiversity use and management as well as institutional reinforcement should be strengthened because it was not conducted most of the planned activities in this strategy. The biodiversity management in protected has endless actions at this time and its execution continues. (See Table II.9).

II-6. Lessons learnt in the implementation of NBSAP 2007-2012

4.1. Who owns the NBSAP?

One of the lessons learnt in the implementation of our NBSAP was that many sectors are not identified with the strategy, because they considered it as unique and exclusive document of the Ministry of Environment, despite this was approved by the Cabinet Council.

In response to this lesson, the NBSAP 2014-2020, envisages integrating all sectors relevant to biodiversity and identify their Biodiversity conservation actions within the framework of their activities and make adequate allocation to when drafting the proposal of their annual budget .

The Strategy will be prefaced by the Head of the Government or the President to be given due attention, all the country's active life sectors should implement it because it will be the Strategy of the Government for Biodiversity.

4.1. Social contribution of NBSAP:

Another lesson learnt in the last NBSAP is its weak capacity to create employment and participation in the fight against poverty. It was a strategy that focused more on the awareness and environmental education of the population and the development and updating of laws on biodiversity conservation.

The new strand of the NBSAP focus its attention, in addition to its mission on the contribution to the Biodiversity, also intends to participate in the reduction of unemployment and poverty, provided in its Action Plan to create jobs mechanisms.

4.1. Capacity Building:

Capacity building and training at various levels for conservation was one of the weaknesses of the NBSAP. Therefore, it placed great importance on training and capacity building of individuals who are managers and decision-makers on issues of local government.

Locally, managers and other stakeholders should be a target to achieve in their training on Biodiversity resource management.

The release of the previous NBSAP was very weak or almost non-existent, the company did not realize the existence of a Biodiversity Strategy. This weakness has taught us that the NBSAP should provide and create mechanisms for dissemination to all levels and in various forms.

4.2. Vulgarization:

The dissemination of the previous NBSAP was very poor or almost non-existent, the society did not realize the existence of a Biodiversity Strategy. This weakness has taught us that the NBSAP should provide and create mechanisms for dissemination to all levels and in various ways.

II.7: Challenges for integration of Biodiversity in other Sectors

All relevant sectors for biodiversity in Angola have the responsibility under the NBSAP to incorporate in their programmes activities aimed for the Biodiversity conservation. This was the orientation of the NBSAP 2007-2012 Action Plan.

However challenges remain, as the results obtained so far are not yet expected. This process continues in the new NBSAP 2014-2020 and is the National Objective 7.1: "Integrate actions for Biodiversity conservation in Sectoral Programmes. The Public Institutions and Provincial Governments shall annually include their shares in the National Biodiversity Action Plan (NBSAP 2014-2020) in their respective programmes to be allocated by the State Budget (OGE)".

Chapter III: ANGOLA AND PROGRESS MADE FOR THE ACHIEVEMENT OF AICHI TARGETS, 2020 AND DEVELOPMENT MILLENNIUM GOALS, 2015.

III.1: Progress made by Angola to achieve the Aichi Targets, 2020.

3.1.1: Implementation of Aichi Target 2020 in Angola

The implementation of the Aichi targets 2020 in Angola has started with some of these goals almost already achieved or in progress. The following goals stand out whose actions aim to achieve them:

- **Goal n.º 1: Population's awareness about Biodiversity values, sustainable use and conservation.**

In Angola, with increasing of students, the integration of environmental issues in the school curriculum of elementary education, the Strategy to Fight against Poverty and job creation, the Government and its partners make a great effort for everyone to raise environmental awareness, awakening the mind of each one on the importance of preserving the Biodiversity components.

Today it is common to hear and read in the press the people's complaints about the damage to the environment and the need for its preservation.

Goal n 2: Integrating Biodiversity values in Development programmes

This objective is being worked in the sense that the government adopted a sustainability strategy development in all sectors in conducting its activities to include conservation measures and sustainable use of biodiversity.

For example Decree 51/04 of 23 July on the Environmental Impact Assessment is a tool that has ensured the integration of environmental values in development. The mandatory conducting of environmental impact studies for all projects is an essential aspect to achieve this goal.

In the light of this Decree, all projects need prior environmental license, that is before all other licenses. The same is obtained at the end of a process of study and assessment of possible negative consequences for biodiversity and the related mitigation measures, as well as the consultation of local communities involved in the project.

On the other hand, for projects that are already installed or already operating, for these ones Environmental Audits are conducted to verify that the recommendations of the Study and Environmental Impact Assessment are being fulfilled. And here it also arises another environmental license of operation or management.

- **Goal 3: The harmful incentives for Biodiversity conservation are eliminated to minimize or avoid negative impacts and encourage positive incentives for Biodiversity conservation in view of the socio-economic situation of the country.**

The distribution of larger mesh fishing nets is an executive action by example in the fight against harmful initiatives for Biodiversity.

The voluntary hand-over and seizure programme of firearms is also an action of the executive that has begun to show fruit towards Biodiversity conservation in which many of these weapons were used for poaching of big animals.

- **Goal 4: All the living forces carry out actions to minimize the impact on the use of natural resources and ensure the ecological boundaries to Biodiversity.**

Many sectors such as fisheries and water integrate Biodiversity conservation principles in their business plans. In fisheries, for example, it is predicted a ban period of one certain species of fish (mackerel) which ensures the recovery of the biomass species.

A similar case of hydroelectric dams where during the construction phase it is expected to maintain an ecological minimum flow and the corridors of aquatic species migrations.

- **Goal n 5: Boundary or reduce the loss and degradation of forests and other natural habitats close to zero.**

An effort is being made in the inventory of forest resources of the country. This may result in the emergence of a forest management tool to know their dynamics, their potential as well as their current situation. It will allow identifying the main activities in forests and their impact on these resources.

- **Goal 6: Stocks or biomass of fish and other aquatic resources are preserved and in sustainable ecological boundaries.**

In Angola aquatic biological resources are subject to a specific legislation, the Law on Aquatic Biological Resources. It ensures measures for sustainable management of these resources.

On the other hand, the Ministry of Fisheries is the executive body that outlines the management policies of this important resource for the country.

- **Goal 7: Agricultural areas are managed sustainably to ensure the Biodiversity conservation.**

For the new NBSAP 2014-2020, it is expected in its action plan that farmers should devote 1% of their surfaces for the production of trees.

Forestry is a perfectly legal practice in Angola, hence all the needs in timber, charcoal, firewood and other woody materials are satisfied by the natural forests.

With the implementation of this policy, it is expected that at least 1% of cultivated areas become in the medium term woody material source in the country.

• Goal 8: Pollution levels (including excess of sediments) are brought to levels that do not influence on the workings of ecosystems:

• Goal 9: Invasive species are identified and controlled or eradicated and measures are taken for their prevention.

In this area the main invasive species are known and the measurements of to combat them are disclosed and being implemented. (Table I.7).

• Goal 10: By 2015, the multiple anthropogenic pressures on coral is reduced the impact of climate change on vulnerable ecosystems are minimized to preserve their integrity and function.

• Goal 11: At least 17% of terrestrial areas and 10% of coastal and marine areas especially as areas of particular importance to biodiversity are included in the network of protected and well-managed areas.

Angola has made great efforts to extend the surface of protected areas from 6.6% in 2010 to 12.58% to the present date and considering the possibility of creating short-term marine conservation areas and including other ecosystems and biomes of the country between conservation areas for a target of 15% representing the total area of conservation areas in Angola by 2017.

• Goal 12: The known endangered species are prevented and those which are threatened are recovered.

Many endangered species rescue projects are underway such as the Palanca Negra Gigante Project, which since 2009 has been trying to save this endemic and emblematic species and one of the national symbols of Angola. (images)

The project "Quitabanga" on the conservation of sea turtles nesting sites identifies, protects the nests and sensitizes local human populations to the need of protecting the nesting sites of the turtles. (images)

Rehabilitation of Iona National Park (Project GEF4/UNDP) for the conservation of many species in this park which are threatened with extinction in Angola as the Mountain Zebra (*Equus zebra hartmannae*) and brown hyena (*Hyaena brunnea*).

The creation of Maiombe National Park in Cabinda Province to among other species the conservation of gorillas and chimpanzees and habitat.

Goal 13: Genetic diversity of species of cultivated plants and pet animals and their wild counterparts are preserved and strategies are designed to minimize genetic erosion to safeguard genetic diversity.

The National Strategy for Food and Nutrition Security is a document that foresees measures for the conservation of genetic resources of cultivating and breeding species, which are adapted to the country.

• **Goal 14: The ecosystems that provide essential services of water, health, livelihoods and well-being are restored and safeguarded taking into account the needs of women, indigenous people, local community, the poor and the vulnerable people**

There is special attention being given by the Government to the Khoisan or Bushman Communities in the provinces of Cuando Cubango and Cunene in order to integrate them in society, grouping them in villages providing the tool for agriculture and creating the conditions so that their children may have social benefits like public schools and health.

• **Goal 15: The Resistance of ecosystems and their contribution to carbon sequestration has been increased through conservation and restoration, including restoration of at least 15% of degraded ecosystems to climate change mitigation and the fight against desertification.**

• **Goal 16: By 2015, the Nagoya Protocol on fair and equitable access and sharing of benefits arising from the utilization of genetic resources is implemented in accordance with national legislation.**

• **Goal 17: By 2015 each Party has developed, adopted and implemented policies and participatory tools and updated the National Biodiversity Strategy and Action Plan.**

Angola is to review its NBSAP which ran from 2007 to 2012. The new version of this document strengthens the weaknesses identified in the last NBSA and incorporates new aspects that ensure better management of Biodiversity.

• **Goal 18: The traditional knowledge, relevant innovative practices of indigenous and local communities for the conservation and sustainable use of biodiversity are respected and subject to national legislation and relevant international obligations and reflected on the implementation of the Convention.**

• **Goal 19: Scientific and technological knowledge relating to biodiversity and its values, functions, status and trends and the impact of losses are shared, transferred and applied.**

The country regularly hosts events like: **Traditional Medicine Forum, Rural Women's Forum and the Farmers Trade Fair** that provide exchange of experiences and each other in the use of biodiversity resources. (photo).

- **Goal 20: at least the mobilization of financial resources for the implementation of the Strategic Plan 2011-2020 from all sources must be increased sustainably from the current levels.**

In Angola, the public-private partnership has worked out with regard to Biodiversity conservation. Many companies operating in the country fund conservation actions of endangered species such as the Palanca Project and Kitabanga Project.

There is a lot of sensitivities of the companies on this situation.

III.2: Progressos feitos por Angola para a concretização dos ODM

XIII.2: Progress made by Angola to achieve the MDGs

The Millennium Development Goals (MDGs) arise from the United Nations Millennium Declaration, adopted in September 2000 by the 191 member states.

End extreme poverty and hunger, promote equality between gender, eradicate diseases that kill millions of people and promote new bases for sustainable development of peoples are some of the eight UN MDGs presented in the Millennium Declaration and want to reach up 2015.

The MDGs are:

- 1: Eradicate extreme poverty and hunger;
- 2: Achieve the universal Basic school;
- 3: Promote equality between genders and women's autonomy;
- 4: Reduce Child Mortality;
- 5: Improve maternal health;
- 6: Combat HIV/AIDS, malaria and other disease;
- 7: Guarantee the environmental sustainability;
- 8: Establish a world partnership for the Development

Angola, as part of the members that adopted the Millennium Declaration, does its best within the agreed deadlines, achieves these objects or at least be close to them one by one or in its entirety.

So, with the achievement of peace in April 2002, Angola saw its task as easy as it can implement all designed development programmes.

With this favourable political context, we highlight some processes that will give great contribution to achieving the MDGs, 2015:

a) - The holding of Periodic General Elections;

After 2002, the country already held two general elections in 2008 and 2012, enabling the Party winner, to form Government, work and implement its programme with all legitimacy and tranquility. Only with this environment of peace and political stability, Angola has made significant efforts towards the achievement of the MDGs.

b) - The approval of the Angolan Constitution;

Angola since its independence on November 11, 1975 never had a constitution as such. The country was run on the basis of a Constitutional Law, which governed all legal procedures it needed.

However, in 2010, it was approved by the MPs of the National Assembly as result of the first elections after peace, the Constitution of the Republic, which like all documents of its nature, lays out the democratic rules and boundaries on how the country should be managed.

c) - The preparation of the National Development Plan - Angola in 2025;

The National Development Plan, PND-2025, is a national consensus document which contains all the essential and priority tasks to lead the country to development. The MDGs are contained implicitly in this Plan, which makes their implementation contributes to the achievement of the millennium goals.

Here are some highlights of tasks that have been completed or are underway within the framework of this Plan:

c1) - Construction and rehabilitation of inter-provincial, district and communal roads;

It was rehabilitated or built approximately 12,000 kilometers of roads nationwide that allow the movement of people and goods throughout the country. This contributes to the producers and farmers to sell their products to the major consumption centres, which also contributes to the reduction of hunger and poverty.

c2) - Rehabilitation of Railways;

The country has three Railway Companies that depart from the Atlantic coast to the interior and east. The rehabilitation and modernization of Railways is in its final phase with the restitution of 2.722 km of the three main sections of the railway network of the country.

The train is a means of transport available for many people from the point of view of coastal regions, which permits to carry large amounts of cargo, allowing the trade to be affordable.

c3) - Increase student population at all levels;

Six Regional Public Universities that group three provinces at national level were created. With this reality, the student population in higher education increased from about 88,000 in 2008 to about 140,000 in 2011 (Secretariat of the Cabinet Council, 2012), who attended the public and private universities.

The general education has also recorded significant progress in recent years, which led the increase in student population at around 300% since 2002 in Angola and today the literacy rate is around 70% of the population. (*Secretariat of the Cabinet Council, 2012*).

c4)- Construction of hospitals and fight big endemic diseases

The government has built in all municipalities and communes hospitals and medical centres that provide health and medical assistance to the population.

The fight against pandemics such as malaria, HIV AIDS, TB etc. is a commitment of the Government and with great results in recent years:

- Mortality from malaria dropped from 29,000 per year in 2000 to about 15,000 per year in 2012;
- The prevalence of HIV-AIDS in Angola is about 5%;
- The infant and maternal mortality also dropped from 600 % to 200 % year during this period.

Angola currently has a national doctor for 10,000 inhabitants, this also given a positive evolution over the period before 2002. The number of nursing staff and other carers has increased considerably during this period.

International cooperation in this field is considerable, with the presence of foreign doctors.

c5) - Increase contributions of non-oil sectors in the GDP structure;

The oil sector for several years has dominated state revenues and contributing to the GDP of around ninety percent. A situation that tends to change with the rise of the industry activities, construction, agriculture, mining and trade services. The contribution to GDP of the oil sector fell significantly to about 60%, (Secretariat of the Cabinet Council, 2012), giving way to other sector.

The extraction of oil is a very technical and highly skilled activity, employs few human resources, on the contrary, the diversification of the economy facilitates the creation of employment and income generation to the population thereby reducing hunger and poverty.

c6) – Five-year motor vehicle entry;

Angola banned since 2010 the entry to the country of motor vehicles older than three years for light cars and five years for heavy vehicles. With this measure, the country got rid of the scrap entry and potential sources of air pollution, thus contributing to the protection of the ozone layer and especially the elimination of gases to the greenhouse gases that contribute to global warming and climate change.

c7) - Construction of new cities (Centralities);

New cities with a total of about 400,000 houses or apartments are being built all over the country providing shelter to about three million inhabitants, an effort of the Government in the promotion of housing for citizens, especially the young people.

These cities integrate all basic services such as schools, kindergartens, hospitals, police stations, fire services, parks, etc., offering a better quality of life for its inhabitants, in a spirit to fight against poverty and the promotion of a middle class in the country.
(Photo)

c8) - Periodic holding of the international environmental technologies fair;

In order to promote sustainable development, the government has annually organized the Environmental Technology Fair, aimed to exhibit different goods and services with the latest clean technology.

The integration of these technologies in the development process is the object that is being pursued for all sectors with a view to sustainable use of natural resources and ensuring a better life for present and future generations.

d) - Creation of the Ministry of Family and Women Promotion;

The Ministry of Family and Women Promotion is the Government Sector that is tasked to oversee policies related to family, women and gender equality.

It is an institution that has proved mere importance insofar as the education of society begins in the family as well as the awareness of women to conquer their rights on equal levels with other members of society.

APPENDIX I:

CASE STUDY: KITABANGA PROJECT ON CONSERVATION OF SEA TURTLES IN ANGOLAN COASTLINE

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