Forestry Outlook Study for Africa (FOSA)

Angola

Please note that the views expressed in this paper reflect those of the authors and should not be attributed to any of the institutions of the partnership programme.

This paper has been minimally edited for clarity and style

2. Abbreviations and acronyms

AFWC	African Forest and Wildlife Commission
ATO	African Timber Organisation
CBD	Convention of Biodiversity
CCD	Convention on Combat against Desertification
CITES	International Convention on Trade of Endangered Species
C&I	Criteria and Indicators
CFB	Benguela Railway Company
CFL	Luanda Railway Company
CTB	Current Transactions Balance
DNACO	National Directorate of Conservation
DNAF	National Directorate of Agriculture and Forests
EC	European Commission
FAD	Arab Fund of Development
FAO	United Nation for Food and Agriculture
FOSA	Forestry Outlook Study for Africa
GDP	Gross Domestic Product
IIA	Institute of Agronomy Research
IDF	Institute for Forestry Development
IFF	Intergovernmental Forum on Forests
INE	National Institute of Statistics
ITTO	International Trade and Timber Organisation
IPF	Intergovernmental Panel on Forests
IUCN	International Union for Natural Conservation
Kz	Angola Unit Currency
MINADER	Ministry of Agriculture and Rural Development
NGOs	Non-Government Organisations
PRE	Economics Rehabilitation Programme
SADC	Southern African Development Community
SGE	Sociedade de Gestão Empresarial, Limitada
UNEP	United Nation for Environment Programme
US$	United State Dollar
WFP	World Food Programme

3. Introduction

The Angola forestry outlook study is a tool reflecting the general guidelines of the sustainable development of the national forestry sector in a frame period of 20 years from 2000. This study tries to look at carefully all possible factors being internal and external influencing positive and negatively to the development of the sector in the new millennium. The purpose is certainly to assess the implications, draw up scenarios and formulate a national vision for the sector.

The present exercise was carried out through a participatory approach process in which various partners, i.e. government institutions, private sector, NGOs and individual corps direct or indirectly linked to the development forestry sector, gave their contributions to the elaboration of this study.

It is very much expected the Angola forestry outlook study be in line with the Southern Africa forestry outlook study since harmonisation of regional forestry sector and policies are concerned and in turn, contributes as valuable input to the Forestry outlook study for Africa. Taking into account the main objective of the FOSA, it is evident the analysis focuses on the potential of the forestry sector to contribute to the welfare of the local and African population enhancing their economic, social and environmental functions as well as providing good services for their survival. It analyses the status, trends and driving forces shaping African forestry.

FOSA is a request of African countries through the African Forest and Wildlife Commission (AFWC) at their 11th meeting held in Dakar, Senegal in April 1998, and it has and continues to have the support of FAO. Moreover, FAO is working in collaboration with African Development Bank and European Commission in the development of FOSA. However FAO has been supporting by World Bank, IGAD, SADC, NGOs, communities as whole and private sector in the implementation of this study in the context of the African continent.

In this context it is expected to have the full support of the recipient country in order to successfully conducting the present study and to achieve encouraging results enabling a smooth and sustainable development of the forest sector until 2020. In other words, Angola government as main beneficiary of the output of the this exercise are called to contribute with all available resources, such qualified professional and technical personnel and other means required for undertaking this kind of task.

3.1. Objectives

The primary objective of FOSA is to serve the forestry sector development needs of African countries, and help the incorporation of a long-term vision into their planning horizons, put national information into a regional context, place forestry into a larger economic and social context, and also provide a better investment opportunities for the forestry sector.

Besides providing a framework for the countries of the region to shape their own national programmes, FOSA will form a basis for the review of forestry portfolios of lending institutions, investors, development partners and private sectors.

3.2. Background

Angola is located in the western Africa with 1 600 km of coastline between parallels $4^{o}22'$ and $18^{o}02'S$ and longitudes $11^{o}41'$ and $24^{o}05'E$, with a land area equivalent to 1 246 700 km^2 and makes a large country within the SADC region, with a total population estimated about 13.400.000 inhabitants in 2000, while life expectancy is estimated at about at about 43 years. (INE 1996). The country is divided into eighteen (18) administrative provinces.

In January of 1996 the population of Angola was estimated at about 12 789 000 inhabitants, with 9.8 of density, with a rate of 42% for urban inhabitants against 58% for rural. According to non-official source of information, there are almost 4 millions of the population living in the capital city of Luanda. These figures appear to be high, but it is true that the country is facing a permanent unrest. The trend is that rural people are constantly seeking refuge to the urban area where the safe is secured by the government. Female population represents 55,6% and 44,4% for male. The major part of the population is concentrated to the coastal zone of the country. This old and long traditional tendency is nowadays accented by the civil war still taking place in the country.

Fifty-three (53) million hectares are classified as land in Angola. about 43% of the total land area), and 18% or 2.2 million hectares is the current productive forest area. Humid forest comprise 24 000 00 ha, mainly concentrated in the northern part of the country. The forests classified as production cover 23 730 00 ha in the northern with the capacity to produce 326 000 m^3 of roundwood per year. The estimates on annual deforestation vary between 0.4 and 1.0%, reaching 40 000 ha/year (FAO/UNEP, 1981). The country presents about 140 000 ha of plantations mainly composed by Eucalyptus and Pinus species, established by private sector during the colonial times with the purpose of pulpwood and woodfuel production for locomotive machines. After the independence the plantations linkage to industry has became very weak as far as the pulp and paper industry has closed, and today the locomotives use other type of energy.

The conservation state of these resources, i.e. natural and man-made forests is very critical and their management as well. These resources are theoretically under forest reserves and national parks, unfortunately non-recognised by international conventions and programmes, occupying about 8 106 000 ha, representing around 6.6% of the national territory, generally located in difficult areas in terms of access due to the unrest situation still devastating the country. These figures are mostly estimates and somehow very conservative since for many decades back, no inventory nor substantial field works have taken place in order to assess the current status of forest resources of parks and reserves.

For the institutional point of view, the forest sector is within the Ministry of Agriculture and Rural Development and especially under the Institute for Forestry Development responsibility, fully represented in all 18 administrative provinces of the country. Apart from IDF there is the National Directorate of Agriculture and Forest, DNAF with double components, i.e. agriculture and forest with special function of policy formulation and guidance. The Ministry of Fisheries and Environment is another government institution taking part to the process of conservation of natural resources with certain links with IDF.

The IDF although very well and broadly represented, this vast and very important sector could contribute significantly to the national economy of the country and welfare of its few people in an immense country still facing a lot of socio-economic problems.
There is an acute scarcity of all kind of resources such administrative and professional personnel to ensure the optimal management and planning and organisational aspects of the sector, poorly staffed in field personnel, scarcity of material and equipment means and constraints related to funding as well, to enable the implementation of programmes and projects already identified. There is a large dependency of the sector vis à vis the government budget, insufficient to ensure its smooth operation, serving just for wages and symbolic salaries, far away to satisfy their basic needs of workers along the month.

Angola is probably the only African country where Forest Law is still non-existent and certainly in the regional context of the SADC. The sector is still using the Forest Ordinance established during the colonial era so-called *Decreto nº 44 531 of 21.06.1962,* still remains the only judicial instrument, including forest, wildlife and inland fisheries, regulating the forestry activities at national level. This instrument was twice submitted to the revision in 1981-82 and in 1989 respectively, but still does not reflect to the reality on the ground. Since last year the regime since independence the forestry sector us committed to the review of all judicial instruments and the activity is still on going process.

4. The Change Drivers

4.1. Socio-economic changes

As mentioned before, the major part of Angolan population is more concentrated along the coastal zone, recognised for its development as a consequence of colonial policy. This long traditional trend is nowadays aggravated by the civil war faced by the country. The coastal zone is characterised by scarcity of vegetation cover despite of the scattered tree species such as *Brachystegia, Julbernardia* and *Isoberlinia* commonly found especially in the plateau. There is also an important presence of Hiphaene spp., Adansonia digitata associated to *Coleosperma mopane, Spirostachys africana* and various leguminosaceae such as *Acacia spp., Burkea, Faidherbia albida* among others.

The pressure made on forestland cover is intense and extensive due to population living in the coast to satisfy their basic needs. Therefore, forest constitutes the main source of income for many families living in rural areas, specially undertaking charcoal production activities. Another fact no less important is the expansion of shifting agriculture, responsible of large devastated land cover areas per year, very difficult to assess in terms of extension.

The degradation caused by urban inhabitants is more noted around the main cities and towns for energy supply and at some extent for agricultural practices, undertaking small-scale farm activities. An important number of these inhabitants are war displaced coming from rural areas. Fuelwood and logs for different purposes are certainly the main forest products more needed by the population. This fact is alarming in the coastal zone according to *Angola Environment Status Quo Assessment Report* carried out in 1992 by IUCN. In the inland part of the country the tendency seems to be favourable for the single fact that the interior population is lower comparing the occupied area and the access to the forest resources is almost difficult due to the lack of security. Therefore the conservation of forestry resources could be optimal if pressure on it were not relevant. However, the lack of study assessment may not allow to absolutely confirming the fact.

4.2. Overall economic performance

In search of definitive peace lasting four years and UNITA's statement-movement in armed conflict and the formation of a national reconciliation government in April 1991, entrusted to unleash the last peace process phase signed in Lusaka in November 1994, with the MPLA government, Angola has again entered in civil war.

4.2.1. Economic growth

On perspectives of petroleum and diamond sectors growth, it is foreseen, in the first case, that the growth in volume production reach 43% in 1991, (vouching a million of barrels in 2000).

On the basis of presupposed presented, the government admits that there can an increase for the Angolan economy during the programme's observance at a medium rate of 10%.

On the optics search, the public investment growth at a pearly medium rate of 13,2%, should directly be associated with the economic infra-structures recovery efforts. The private investment should also have a fundamental increase about 6% per year.

Finally, it is estimated that imports increase in a low rhythm compared to GDP on a flexibility basis, varying in 0.3-0.5 intervals. It is foreseen that imports reach about US$ 3 200 million in 1998, and about US$ 3 800 million in year 2000. Taking into account the chosen strategy the external debt paying off, there is a tendency towards actually decreasing in financial needs at about US$ 1 159 millions in 1998. This is due to the following reasons: a reduction of public current transfers, of which should be re-orientated to emergency help for the support to investment. On these conditions, it is hoped a net project of US$ 116 million in 1998 and of US$ 94 million in 2000. In relation to prior tendencies, a gradual increase is anticipated of official donations and of commission credits, without considering the PRC actions (community rehabilitation programme), which will develop prom US$ 130 million in 1998 to US$ 195 million of in 2000. The direct foreign investment will be very important in terms of external capital resources, with about US$ 530 million in 1998, progressively increasing to US$ 636 million in 2000.

4.2.2. Public investments programme

The total donation available applied in the GDP scope related to 1998 reached US$ 632 millions, corresponding to donations of general State - Budget - general incomes in US$ 216 millions value and external sources (FAD, Portugal and Brazil credit livers, of about 356 millions of dollars). On relation to FAD (Arab Fund of Development) including the donations affected to non - utilised sectors in 1991 totalled US$ 150 million. The budget attribution by sectors was confronted by a limitation factor well identified, which circumscribe to the fact that the credit lines with Brazil and Portugal are essentially linked to big projects, namely of Capanda, water supply to Southeast of Luanda and the country's political administrative centre.

On the field of social sectors, it is to note the donation of about US$ 40 million with the objective to expand the proportional basis to qualitative improvement of the ministered teaching and in about US$ 42 million for health, to rehabilitate and improve the country's various structures.

The investment related to Agriculture involved US$ 14 million directed to developing actions and the rehabilitation of infrastructures. However, the transforming industry sector for the three years, 1998-2000 depends to the adaptation of a private sector programme, specially of micro, small and medium enterprises, creation of conditions for the re-industrialisation, implementation of imports substitution programmes and exports promotion.

4.2.3. The macro-economic evolution

Limits exist for the inflation rate, according to a decreasing tendency of from 32% in 1998, to 20% in 1999, and 15% in 2000. There is a programme reduction of public deficit comparing to GDP, estimating it to 14.0 in 1998 , 9.5 in 1999 and -2.8 in 2000 respectively. These limits are based on progressive reduction of the needs of the public sector financing.

There is a programme reduction of external deficit measured by the CTB Current Transactions Balance comparing to GDP. Consequently, and taking into account the strategy for the foreign debt paying off, it is foreseen a decreasing tendency in the needs of the economic financing of about US$ 1,159 million in 1998.

The estimate of these financing needs are based on the set of presupposed explained as follows:

A traditional reduction of current public transports of which will be re-oriented to the emergency aid for investment support. On these conditions it was expected to a US$ 116 million net profit entrance in 1998, and of US$ 94 million in 2000.

With regard to the former tendency, it is anticipated a gradual growing of official donations and commercial credits without considering the PRE-Economics Rehabilitation Programme actions which should develop an increase from US$ 130 million in 1998 and US$ 195 million in 2000.

The direct foreign investment should fulfil a very important share in the active of foreign capital resources with about US$ 530 million in 1998, progressively increasing to US$ 636 million in 2000.

4.2.4. The investment plan 1997-2000

The general objectives of the Investments Programme for the Basic Network are as follows:

the technological digitalisation;
the service quality improvement;
the telephone density increase and imbalance reduction between region;
the after diversity; and

the resources reduction and the creation of alternatives.

The concentration areas of the investment programme are as follows :

access network (terminal network);
projects with high operational leverage;
potential projects of service quality; and
cost of outwork projects.

The investment programme has subjacent of the access universal policy to telephone and that is why not only follows a telephone density objective as well as a telephone penetration objective (quality of served municipalities). For the materialisation of enunciated objectives, an investment effort is required until the year 2000 as of 45 million of dollars per year of which above 70% in foreign currency.

More important aims:

Reach telephone curative with a penetration of 500 served localities in the year 2000, reducing the actual in balances between Luanda and Provinces.

Reach a digitalisation degree of the basic network of 90% in the year 2000 and of 100% in the year 2002;

Ensure a minimum profit of 8% in investment capitals, with an indebted tax not higher than 50%;

Reach the number of 20 for the active workers ratio for 100 lines in service in the year 2000 and a number of 200 lines in the year 2003; and

Have a quality level of 80% of the international standard in the year 2000 and of 95% in the next year.

On quality and service terms, the programme objectives are to significantly increase the rate of telephone communications efficiency, such as in local system, long distance and international. The number of claims for 100 telephones will also significantly come down, as well as the medium period of break down recovery.

4.2.5. Foreign trade

In 1991 imports totalled US$ 1.6 billion and annual exports US$ 3.4 billion. The chief imports were textiles, foodstuffs, heavy machinery, and iron and steel. Petroleum accounted for some 90 percent of the exports, which have traditionally included coffee, diamond, sisal, fish and palm oil. Since Angola's independence, Portugal has been replaced by the United States of America as the country leading destination for exports. Other export destinations are Germany, Brazil, the Netherlands, Great Britain and Belgium and Luxembourg which conduct their foreign trade as a single entity. Portugal remains the leading source for imports, followed by the United States of America, Brazil, the Netherlands

Evolution of main product exports

	Value, US$ million					
	1994	1995	1996	1997*		1998**
Crude oil	2 817	3 416	4 645	4 493	1 095	767
Diamond	57	75	148	128	32	115
Coffee	0,8	5,3	5,2	4,7	2,0	1,2
Total export	2 875	3 496	4 798	4 493	1 129	883

INE 1998

* *II^nd Semester of 1997*
** *II^nd Semester of 1998*

4.3. Policy and institutional changes

The Forestry sector represented by the Institute for Forestry Development is administratively under the Ministry of Agriculture and Rural Development, with administrative and financial autonomy. The IDF is broadly represented in all 18 provinces of the country. According to its mandate, the IDF is responsible for guiding, managing, defining, monitoring and controlling normative procedures with regard to the sustainable development, utilisation and conservation of forest state in order to fulfil the basic needs of the population and contributing to the socio-economic aspects of the country and to the welfare of its inhabitants as well.

In parallel to IDF, there is the Directorate of Agriculture and Forests. This organ created early 90, poorly represented in the national sphere is only operating at the head quarter in Luanda. As main tasks, this institution is called to formulate policy and guidance for both components, i.e. in agriculture and forest fields.

4.3.1. Participation of other government organs

The other government organ to whom responsibility lays on to secure the implementation of the policy capable to ensure the conservation and protection of natural resources is the Secretariat of Environment created in the beginning of 90 before to become effectively Ministry of Fisheries and Environment in 1998. This very important partner of the Ministry of Agriculture is at embroidery phase. Its association to fishery can be a negative aspect for developing a sound environmental policy, however its existence is a very positive asset.

Apart from these there is a lot of government institutions with linkage to the forestry sector such as the Ministry of Energy and water, Ministry of Planning, Ministry of Industry just to mention a few, able to contribute enormously to the development of the sector, and everyone has a particular role to play in the overall context.

4.3.2. Participation of the private sector

The participation of other sectors to the development of the forestry sector continues to be a great challenge for the institution in charge of the forest. Private sector is considered to be as one of the key factor to enhance the production of wood, non-forestry products and non-wood products for local consumption and export. However its participation is hampered by various factors such as the unrest, being the main cause for access to the forest and the inadequate policy still in place with regard to land tenure among others.

4.3.3. Participation of the civil society

The civil society plays an important role in the development of the forest sector. It is important to take into consideration the needs of different interest groups in the society, and to define the roles of which each major group should play for the development of the sector. The participation of the rural communities which constitute one of the marginalised groups of the society will require major attention due to its important contribution to the sustainable management of the forest resources.

4.3.4. Participation of NGOs

The national NGOs are big in number, but still very limited in field actions In relation to forestry sector, there is a good impact from the society together with international NGOs operating in the country, though mainly in social sectors. The expectation is that after the unrest their contribution will be valuable for the sustainable development of the forestry sector, by assisting it to carry out field programmes and projects identified through previous studies already finalised, specially with regard to the management of the forest resources.

4.4. Development in agriculture sector and their implications on forestry

Soon after the independence the country opted to centralised economic system for its development. This system implanted in the country took almost fifteen (15) years until the beginning of years 90, when Angola shifted from centralised economic system to free market system. During the fifteen years period, the government made a statement declaring the *industry* as decisive factor for development and *agriculture* as a basic factor. Unfortunately the system did not work as expected. However, the results achieved brought with big concerns still weighing for redressing the situation of the agriculture and industry sectors. As a consequence, good infrastructures have been lost, distorted many potential investors left the ground leaving the country.

Large agriculture land areas were nationalised and government units have been created and at some extent, given to the people without adequate production means to implement government policy.

As a consequence, production drastically decreased, capital investment in agriculture became a critical issue, productive units were abandoned and the war situation took a great magnitude over the country.

The beginning of ninety brought minor changes on ground with the introduction of agricultural reforms, but there is still too much to do in terms of investment policy, since the country continues to do not absorb significant foreign investments in agriculture activities field. However, extensive agriculture activities have a negative impact toward the forest, large areas are substituted by crop production. This trend is still not relevant in the country for the fact that the agriculture so far in place are still very weak, mostly practised by small-scale farmers. Even the land tenure is not a real serious problem in Angola, the lack of adequate land classification is bringing with some constraints, forcing rural people to opt to marginal lands to satisfy their domestic needs in terms of production crop and monetary income.

Land is for many rural inhabitants in Angola and Africa as well, the basic mean providing food, services and income for sustaining their lives. It is reported that actually around 60% of the population of the country lives in rural areas. Also to note that the unrest is the major cause contributing negatively to the self-reliance of the population in terms of food production. A very important number of its inhabitants, especially the war refugees relay on United Nations donations with emphasis to World Food Programme, WFP while during the colonial era the country was a self-sufficient in food production.

Angola with its immense natural resources and in a peace atmosphere associated with good policy of investment could be able to produce enough food for its inhabitants and ensure exports toward other countries in the SADC region and at some extent outside of the SADC community.

However the development of agriculture may also bring negative impacts if corrective measures are not observed. Agriculture so far carried out is intensive, requiring big areas for crop and livestock production activities. Therefore, the degradation of forest resources and the loss of important biodiversity in terms of quantity and quality could be another problems and being so, the forestry sector and other stakeholders are called to look at critically there aspects.

4.5. Industrial development and its direct and indirect implications in forestry

The industrial sector similarly to the agriculture still presents the same picture. The country has became after the independence a major dependent vis à vis to the external market in goods and services. The industrial sector continues operating under its full capacity. Most of the units are closed and abandoned. The new policy to recuperate the industrial park is still in a grass root phase, and is not operating accordingly for the same reasons related to security problems. Efforts are made in order to bring foreign investors in this important sector of the national economy. However, there is a need to elaborate more on issues concerning the investment policy and to the other hand, peace will continue to be a decisive factor to guaranty the successful of the industry development, specially for the forest industry almost paralysed and other vital economical sectors of the country.

There is no doubt that the development of industry brings with deep changes in the ecosystems. In one hand it can be favourable for the forestry sector development and in particular with the forestry industry because it is expected that all industrial sector will tend to grow. However a suitable and adequate environmental policy must be put in place and be applied accordingly. In this context the country should be able to adhere and implement appropriate regional and international conventions and treaties among which CITES, CBD, ITTA just to mention a few.

4.6. Development in the services and other sectors and their potential impacts

Forests generate many services for the development of almost all sectors in Angola. Multiple functions derived from the forests constitute a good reason to value the forest as far as almost 80 percent of the population of the country depends to forest resources. Therefore, there is a range of functions fulfilled by forest largely present in Angola such the productive function, providing divers forest products, i.e. wood products and non-wood forest products for different purposes, wood fuels and biomass energy, crop production and grazing; protective functions such as conservation of ecosystems (soil, fauna and water); ecotourism and recreational functions.

4.7. Developments in infrastructure and communications.

As for the public works (including housing) there should be put at disposal about US$ 65 million for the rehabilitation of communication means. The beginning of the infra-structures rehabilitation of the electrical energy and water supply suggestions can absorb about US$ 103 million, including the donations corresponding to Capanda and to the new water supply project to Southeast of Luanda. The donation for the recovery of harbour, highway and import infra-structures, including budgets for the transportation means, is estimated at about US$ 42 million while for mail and telecommunications sectors the amount reaches US$ 16 million.

Angola's road system consists of about 72,600 km of roads, of which 11 percent are paved. The road network is inadequate for such a large area and is supplemented by a relatively well-developed internal air service, provided by the country's national airline. The total operated railroad track is about 2 950 km. The principal line, the Benguela Railroad, links mineral-rich Zambia and Katanga of RDC with the Atlantic port of Lobito. Because of instability, it was closed to international traffic from 1975 and has since operated sporadically. The country's chief ports are the cities of Lobito, Luanda and Namibia.

4.8. Trade liberalisation

The beginning of the 90s was characterised by policy change to entire life of the country. Therefore the state has given up to centralised economic system trade to adhere to free market economy for the development. Despite of the war situation, the country has been achieving some good results in various areas. However, many things must be done in order to bring adequate and sustainable investments. Legal instruments in use should be in accordance with investors policy. The adhesion of the country to regional, such as COMESA and international trade conventions as well as their application to the ground is likely desired and encouraged. Therefore suitable mechanisms for their development and implementation remain a major task of which is expected to the state as vanguard to play a capital and decisive role. A trade liberalisation of important economic domains will in a certain way, bring substantial changes in the development of the economic sector of the country.

4.9. Policy changes in the forestry sector

Changes operated within the forestry sector at the beginning of the last decade brought some improvements by separating the production and normative role of the government. The two government institutions leading the forest sector have a clear role to play for the development of the forestry sector. The National Directorate of Agriculture and Forest is responsible of normative issues while to the Institute for Forestry Development corresponds the implementation of policies. Private sector has a productive mission, communities and other classes have specific mission to fulfil in the process. Therefore participation approach is one of the important tool to be achieved by the sector.

4.10. Technological changes in the forestry and allied sectors

The forestry sector has as a mandate to satisfy the basic needs of the population in terms of wood, forest products and services in order to contribute to the socio-economic life of the Nation. However there is a set of tools required to fulfil this purpose. Research is without doubt an important element to bring change in field actions undertaken by the sector as a whole. In this context, the private sector will have a great role to play by bringing biotechnology in country, despite of the interest shown by the Ministry of Science and Technology.

4.11. Trends in investment in the forestry sector

4.11.1. Regulatory Existing Instruments

According to Law No 13/88 of 16 July, the Council of Ministers authorises foreign investments, but may delegate the power to authorise, depending on its nature and size to the Ministry of Planning, Ministry of Finance and Ministry in charge of the branch of the activity to which the project relates.

There are three investment regimes:

Prior declaration, for investments between US$ 250,000 and US$ 5 million.
Prior approval, for investments between US$ 5 million and US$ 50 million.
Contractual for investment exceeding US$ 50 million.

Timber extraction and wood processing industry which involve the granting of concession falls under the contractual regime and must be specifically negotiated.

In special cases and depending on the importance of the investment to the national economy, bodies may be granted the following:

Exemption from, or reduction of income tax for set periods.
Exemption from, or one or more occasions and for set periods, of customs duties on imports of capital goods, accessories or spare parts, as well as on raw materials or other materials which do not exist in the country.

Exemption from, or reduction on one or more occasions of customs duties on exports.

The Ministry of Finance must authorise the transfer of net profits. Annual transfer of profits and dividends may be phased over the time if, by virtue of their size, they are likely to worsen balance of payments difficulties.

4.11. Tree outside forest

Trees planted outside of forests and natural scattered trees are almost everywhere in the country, specially where the ecological factors are favourable. Bringing together all trees outside forest in a country like Angola, it is evident that it will represent a very significant forestland area, able to fulfil the basic needs of many inhabitants in the country, apart from the plantations and natural forests. There is a will among many farmers to create forest in their individual farms. This trend is incessantly increasing in the country and it is expected that for the forthcoming years considerable forested areas be established in Angola. The only constraint for the time being is that there is no means to assess the extend, of TOF and at some extent its real value in the national economy as contribution.

4.12. Land ownership

The Constitution of 1992 approved the Law 21-C/92 the Law of Concession or so-called "Land Law". There is a clearly stated principle that local community land rights will be protected in the preamble of the Land Law; it recognises different forms of land access, including acquired by previous owners. These aspects are positive, however this law is based on the old concepts and reflects the old ideals of State following central planning principles.

This Law does not cover all national territory, excluding areas of public domains such as National Parks and Forestry Reserves, urban areas, airports, coastline, military and other public areas, just to mention a few. And to stress also, the same fails to cover in any but the most tangential way, the systems which regulate land access and rights for at least 95% of all units in the country.

4.12.1. Land use potential

The country represents immense land and forest resources and conflicts for land use are not a constraint since territorial area is relatively bigger comparing to the population size of the country. Arable land is estimated at about 8 million ha, forestland 54 million ha, permanent pasture land 33 million ha, mountain and shrubland 28 million ha, and others 4.9 million ha. During a large period, land and forest were in a very few proportion submitted to ownership for work according to the ideals of the State, but this trend did not work and new policy on Land tenure was necessary to be put in place and the equitable right of land concession as well.

Conflicts between different interest groups are inevitable in the future unless an appropriate political frame be found in order to accommodate possible conflicts raised. Indeed, Angola is a very large country but the best land will quickly disappear as it acquires new value as a productive asset after a good political atmosphere be established in the country.

4.13. Major issues affecting the people

As mains people's issues almost affecting the entire country aspects follow are mentioned:

Food security threatened as production shortfalls are translated into shortage in consumption;
Poverty, malnutrition, high proliferation of diseases and like malaria, tuberculosis AIDS even in few proportion;
Shortage of fuelwood supply as for as most of inhabitants depends on wood energy and in many areas they cannot afford it enough to fulfil their basic requirements;
Shortage of wood for multiple use
Scarcity of suitable productive land for crop and pasture production;
Weak support from the government institutions responsible for addressing people's issues;
Decreased urbanisation of most inhabitants;
Displaced and re-settlement of rural people largely affected by the war.
Permanent political instability; and

4.14. Gender issues

Special attention will be given to the support of women in the promotion of forest management, training of professional and technical forestry personnel, forest conservation through participation approaches and funding of small-scale farm forestry. Linkages between established women's groups and forestry extension should be vigorously promoted and developed.

5. Forestry sector in 2020

5.1. State of forests and plantations

Angola is one of the African countries with a large planted area mainly with Eucalyptus and Pinus species, established in years 30 and enlarged between 60 and 70, mostly located in the central plateau. According to forestry sector source of information there is about 140 000 ha of planted area belonging to private sectors, specially the Benguela Railway (CFB) the Pulpwood Company of Alto Catumbela and Luanda Railway Company (CFL).

It is difficult to describe with accuracy the current state of forest plantations of Angola. There is no relevant studies predicting its status apart from the Final Report of FAO TCP/ANG/0051 of Jorge Malleux prepared in 1991. The visual study undertaken in some plantation plots states that 40 to 50% of plantations are in advanced critical state of degradation generally caused by illegal cutting of neighbouring populations and the lack of silviculture treatment and management.

5.2. State of forestry industries

A report of the Ministry of Agriculture stated that in 1980 a total of 104 sawmills and other wood-based factories, among which 27 under the control of this Ministry and the rest under other government and private sectors were still operational from 1976 to almost 1986. Early 90 only 26 units were still operating in the whole country, with a very low production capacity. Most of them are old and obsolete. It is reported that from 1976 to 1986 the production of saw wood decreased from 10 045 m^3 to 5 372 m^3 per year. The whole forestry industry in the country was operating under 20% of its productive capacity.

Forestry industry is practically paralysed. According to forest sector reports consulted, the annual roundwood production is in most cases under 20% of its annual extraction capacity. This is since the independence until now and the trend continues to be the same even with the privatisation of the forest industrial sector, started in the beginning of 1991.

The main wood industries in the country located in northern part of Angola in Cabinda and in Luanda present the following picture:

Sawmill of Cabinda with a capacity of 100 - 120 m^3 of saw wood of production per day is paralysed

Two plywood and sawmills in Luanda, SGE-Sociedade de Gestäo Empresarial, Limitada and in Cabinda, respectively with a productive capacity of 5 000 m^3 of lumbers per year and 30-40m^3 of sawn wood are operating irregularly. The Cabinda sawmill has an annual export capacity of 10 000 m^3 with the possibilities to enlarge its production capacity to 20-30 000 m^3 per year also faces a range of problems.

The pulpwood industry of Alto Catumbela in the central zone of the country with a planted area above 50 000 ha, with a production capacity of 15 000 tons per year has been closed since 1985 due to the unrest situation.

Apart from these, 15 small-scale forestry production units have been reported in Luanda in 1994 working with antique and obsolete machinery and equipment. This number has increased, and but difficulties encountered for their functioning are more evident. However in the south of the country, intensive logging activities are reported mainly in Cunene province where three small sawmill are implanted, among which two have the capacity production of 46 m^3 per day and one with 20 m^3 per day. Namibia and South Africa are the main users of the output of processed wood of the Cunene and Kuando Kubango provinces. This last one is a supplier of roundwood.

Generally speaking, the current installed capacity of sawmills in Angola is estimated in 350 - 400 m^3 per day or 85000 100 000 m^3 per year. It is to stress that a very few capacity of the industrial forest sector has been explored. In terms of revenue, the sector could contribute with USD 100-150 million to the national economic y the sector forest industrial worked accordingly.

5.3. Wood demand and supply

There are no relevant studies with regard to wood demand and supply, however among the main wood products having direct impact to the population; wood and firewood are eventually mentioned. NWFP has at some extent a significant importance mainly in the rural areas, where major part of the population make use of it for food for their daily diet such as leaves, roots, fruits among other. A valuable contribution of NWFP is also largely recognised in medicine supply. According to FAO estimations, 9 000 000 m^3 are needed to produce charcoal, and wood directly used as firewood is not really known. If wood and its by-products are not fully accountable to the national economy due its complexity, it is evident that NWFP be another component forgotten when it comes to value the contribution of forest products to the national GDP.

The lack of statistical data and availability of information with regard to forest products has been a major constraint for the sector. No inventory on forest resources took place at national level as well as regional level; especially where forest exploitation has a major impact is among the problems faced by the sector. The movement of forest products at local level and export and import forest products is not available in figure for the sector. This fact is due to the limitation of the sector in the terms of qualified personnel and necessary means as well. Also to mention the weak links between the sector and its partners or in single word, weak institutional co-operation. Finally, the negative attitude of private sectors to collaborate with the government institution in terms of data and information regarding their activities.

5.4. Social and economic implications

5.4.1. Contribution of forestry to income and employment

The rural population is one of the main and direct beneficiary of forest and forest resources as part of their lives has a long and vital link to the forest. Tough the rural population of Angola has lastly characterised by constant movement of change; i.e. leaving their original land to other for security reasons, their connection to forest is still evident. There is a set of non-forest products and non-wood products issued from the forest, largely consumed by rural and urban inhabitant's tough difficult to account. Apart from crop production, forest is one of the main income resources for a number of rural and peri-urban inhabitants. In Angola there are many small-scale wood farmers undertaking charcoal processing activities and also contributing significantly to logging processes when recruited by forest exploiters. Also, from the forest they collect innumerable products they trade for monetary income.

Forests are the source of employment for almost all the population of rural areas in Angola. This is a great potential non-formal employment market, it absorbs a significant number of inhabitants, at some extent much more comparing to formal employment market. Unfortunately there is no mechanisms found so far to assess this non-formal sector as well as their contribution and value to the socio-economic life of the country.

5.4.2. Role of forest vis à vis to other sectors

If all sectors are linked or not to the forest sector, but it is true that they are direct or indirectly dependent to the forest resources. It is obvious to think about wood products that all sectors may need, but very far away to think about other services offered by the forest such environmental functions, and other related. Private sector being the key element of the industrial sector is also one of the major beneficiary of forest as far as raw material is concerned.

5.5. Forestry and environment

Angola is signatory of CCD and CBD and took part of IFP and IPF processes. Efforts are made in order to adhere to CITES and the country is maintaining good relationships with IUCN at least at regional level. Despite various constraints faced by the sector, the country is trying to observe and implement international conventions and treaties related to the preservation of forest resources and environment as a whole. It is recognisable that the implementation of conventions and treaties is possible if they are translated into realistic action programmes. However, the limitation of funds drastically affecting the sector is a hampering factor influencing negatively for the success of these resolutions when it comes to their ground application. This is a major problem faced by most of developing countries.

5.5.1. Conservation of biodiversity

There is a wide range of species, including some 8 000 species of plants, of which 1 260 are endemic, 275 species of mammals, 20 species of endemic amphibians; and 900 species of birds. During several decades flora and fauna and their habitat have suffered from human impact with special emphasis to military disturbance. The lack of conservation programmes to ensure their preservation is one of the main concerns, also to emphasise that all conservative areas despite of their critical status of conservation are located in the Miombo area. Avifauna represents varied 872 species (Stuart et al. 1990) Angola forest is particularly rich in terms of bird species.

It is reported that there are valuable tree and animal species in the northern part of the country such the elephant and gorilla, especially in the Mayombe forest. Unfortunately no conservative areas have been established to ensure the preservation of that particular regional flora and flora, very important as biological reserve and also for the social and economical life of the local inhabitants in the context of eco-tourism development.

5.5.2. Other protective values of forests

Basic principles of conservation is to ensure the integration of existing protected areas and including other sites which biological diversity is noticeable. This includes watershed, eroded areas due to loss and degradation of soil cover, sequestration carbon and others. In this context an active political support from the government is required. However the institution responsible requires qualified personnel at all levels and adequate means and necessary equipment as well, to secure the implementation of integrated programmes and projects identified by the sector.

5.5.2.1. Institutional framework for forestry

Within the Chart of the Institute for Forestry Development there is a lack of relevant components. Despite of having a large of departments, aspects related to training and forestry extension are not among its main tasks. However, seems to be very difficult to the institution to sought of issues related to training and forestry extension if they are not present in the structure.

Among main institutional constraints affecting the sector, following aspects are underlined:

Lack of appropriate Forest Law regulating the administrative and sustainable management of Forestry sector and forest resources;
Funds limitation to enabling the sector to implement development programmes already identified by the sector;
Forestry sector poorly staffed and lack of professional cadres at all levels;
Lack of operational forest management plan;
Weak co-operation at internal level among institutions dealing with the administration and management of natural resources and the society as well; and
Permanent political instability affecting the development of vital economic sectors of the country.

5.5.3. Structure and functions of the forestry sector

The forestry sector is responsible for three main components, i.e. the forest, wildlife and inland fisheries. IDF is responsible for implementing government policies theoretically issued by DNAF, with a structure technical and administrative. These are Department of Study and Planning, Department of Forest, Department of Wildlife, Department of Inspection and Control, Department of Budget and Accounting and Department of Human Resources respectively. This central structure has a repercussion at provincial level, headed by a Provincial Director. Therefore, the Department at provincial level has the designation of sectors, and under these are more sections.

Moreover beside the IDF there is within the Ministry of Agriculture the National Directorate of Agriculture and Forest which policy formulation and guidance are the main task. This last one poorly represented at the national sphere is still facing to various institutional problems and as a consequence, overlapping and duplication of functions are two major issues characterising both government institutions. Out of the Ministry of Agriculture there is the Ministry of Fisheries and Environment which constitutes a serious institutional threat for some implementing institutions, mainly to the forest sector, due to its interference policy ignoring its environmental role.

5.5.4. Roles of private sector and local communities in forest management

Concept of management and collaborative management should be carried out in Angola, but require to be first of all understood by decision-makers and lastly by all key partners. Community and private participation to the management of forest is still weak in the country. The lack of participant programmes encouraged and supported by the government will maintain the sector at the same level. Therefore corrective measures should be taken to reverse this trend. Private sector is more or less active in logging and at some extent in processing rather in management. Communities are trying to the respond positively to government appeal when it comes to tree planting activities, whenever management aspects are relatively forgotten by the responsible institution.

5.5.5. New arrangements in forestry education and research

There is no training institution delivering forest education in the entire country. The only related training so far conducted after the independence is on agriculture and wildlife sciences. At the end of the 80s the government of Angola introduced the programme of silviculture in the Institute of Agronomic in Huambo, producing around twenty Diploma holders in forest science. Due to financial and skilled personnel constraints to secure the on going of the programme, the government has decided to its discontinuity. Therefore, the course of silviculture ceased, as well as the Department of Forest Studies from the Institute of Agronomic Research (IIA).

The country could benefit within the frame of regional co-operation a national training project on establishing a forestry college in Angola at diploma and certificate levels. The project financed by the Finnish government starting in 1989 and ending in 2001 did not take part to the country due to the war situation. However the country continue benefiting from the project attending short courses duration and seminars.

Forest research undergone in the Central South of the country in Huambo province, connected to the Faculty Agronomy and Silviculture. Some, though less intensive phitosociological studies were carried out in plantation, the work carried out in Angola was of high technical quality and the resources available at Huambo were among the best possible including pilot units for sawmilling, wood preservation, production of plywood, pulp and paper; as well as resources for chemical, anatomical and mechanical analysis of wood. With the country's independence in 1975, there was an exodus of skilled personnel generating a lack of staff for carrying out the forest research at university level.

With the paralysing of the above-mentioned institutions, the forest research in the country became almost non-existent. The Institute of Agronomic Research continued, concentrating its scarce resources in the agrarian research and tried only to preserve the forest research facilities established during the colonial period, unfortunately with the restarting of the unrest in 1992, all infrastructures and means were lost and that was the end of forest research in Angola. However the IDF is trying to work side by side with the Institute of Agronomic Research in Luanda in order to incorporate forest research in their programme.

6. Change facilitaion: what needs to be done?

6.1. Critical factors

There is a range of factors hindering the development of the sector and among the, internal and external should be considered in view to addressing major problems faced by the sector as a whole.

6.1.1. Internal factors

Among internal factors depending on the government efforts to bring changes in the forestry sector are as follow:

In socio-political context

Formulation of policy forestry sector and revision of judicial instruments guiding the sector activities;
Development and strengthen of links of co-operation between institutions direct and/or indirectly involved to the management and administration of forest/natural resources, e.g. government, private sector, NGOs and Community at national level; and
End of the unrest and insaturation of total peace in all territory of the country.

Economical context

Establishment forest development funds enabling the sector to carry out the implementation of micro-projects and routine activities; and
Creating good atmosphere in order to absorb local investments by developing mechanisms of incentives and ensure their application.

6.1.2. External factors

It is more expected that national programmes be supported by external institutions, however the government has called to develop effort in order to attract external funds. Most of developing countries are non-experienced with regard to negotiation process for getting funds, therefore there are imposition and domination of donors, and among issues to be look at carefully and addressed in order to avoid undesirable outcomes are:

Development concepts and principles, therefore priorities of national sector, generally are not compatible to the donors policy;

Donors lay on their priorities rather national ones;
Conditionals to establish development of co-operation;
Imposition of environment programmes instead of development programmes still needed by the majority of developing countries;
Administrative mechanisms set donors are very complex for developing countries;
Donors are very strict in following their procedures; and
Financing mechanisms are too much difficult to be fulfilled by developing countries;

6.2. Kind of changes

6.2.1. Policy and institutional changes

The forestry sector of Angola has emerged in the beginning of 90 to a political change by creating a new institution called DNAF and the former National Directorate of Conservation; DNACO became the Institute for Forestry Development with a broader mission. A new structure more or less flexible was developed within the IDF and review of judicial instruments regulating the activities of the sector are taking part. These changes will certainly be decisive and contribute positively to guide the sector toward sustainable development in the future.

Planning of the sector is an aspect to be considered when it comes to value and access the potential of the sector. There is a gap concerning the gathering of information. The sector lays on information and data provided by international bodies, however it is recognised that most information from these institutions are estimates derived from calculation and comparison of different aspects under various criteria. Therefore, it will be a hardship task to plan for the sector when basic information are not secured and as a consequence, it will be very difficult to persuade decision-makers to pay attention to the forest sector. There is an urgent need to develop a forest data bank for the sector, and this aspect should be a priority.

The formulation of new policy guiding the sector is of paramount importance. The sector is still making use of outdated judicial instruments as heritage of colonial system. This policy is not adjusted to the current socio-economic situation of the country.

6.2.2. Investment in forestry

The forestry sector is fully dependent to the government budget and this trend needs to be reversed, i.e. new flexible and adequate mechanisms inviting and encouraging internal and external sources of finance to the development of the forestry sector are required. This will facilitate the government to implement programme actions already identified by the sector and routine activities undertaken as well.

Investment actions carried out by other sectors such oil, fisheries and diamond sectors could be a good example to bring to the forestry sector due to its immense resources taking into account the economic value of this sector and the contribution generally ignored able to bring to the large sectors of the Angolan society.

To the other hand, the revenues of important sectors above mentioned could be used to assist to the development of the forestry sector and other with relative few incomes.

6.2.3. Technological changes

Modern technologies are pursued as a valuable tool for the development of the sector. This aspect is very linked to the level of development of the country. In a country like Angola, where backward technology is still used, it is evident that if the sector wants to achieve successes, the adherence to biotechnology should be a way to forward in order to ensure the future development within the forestry sector. Therefore, the government has a major role to play in this respect especially in formulation of policy enabling the private sector to move onto a sustainable development.

6.3. Feasibility of the changes and how to strengthen the positive factors and mitigate the negative factors

The government through the forestry sector has a hardship mission to accomplish vis à vis to the welfare of the society and to international commitments. It is more expected the government through the sector plays its role as policy-maker and ensure the participation of all important stakeholders to the development strategic programme of the sector and to ensure that each component is a part of the process with specific role and task.
Another aspect no less important is the definition of applicable forestry development policy accepted and supported by all intervened in which they have to take active part during its formulation, such as development of funds mechanisms and application of stimulating incentives attracting potential investors and identification and development of programmes.

Lastly, the sector by identifying and designing feasible integrated forestry development programmes, ensuring their implementation, taking into consideration the specificity of the country, capable to address the immense problems and constraints raised by the society in order to satisfy their basic needs and fully contribute to the national economy.

6.4. Roles and responsibilities of various agencies

The interaction between the forestry sector and other sectors, including the decisions related to theses sectors have a major impact on the sustainable development and preservation of forest resources.

The development process and contribution of forestry sector to the national economy require the participation of various partners direct or indirectly involved in the administration and management of forest and natural resources. Each one has a role to play as well as responsibility for sustainable development of the forestry sector. Among them they are:

Local communities and farmers are under the government guidance, responsible for the management of their surrounding natural forest and establish woodlots in cultivated areas;

Non-Governmental Organisations should assist in capacitating local communities and farmers to ensure the sustainable management of forest resources and creating micro-projects plantation for multiple uses and ensure environmental education to the society as a whole;

Private sector should concentrate their efforts by creating commercial plantations and establishing and reactivating the forestry processing industry, and assist small-scale farmers involved in forestry activities and communities to obtain what is needed to undertake their productive activities and creating incentives for the development of ecotourism and recreation;

International community has a crucial role to play in the whole forestry development process. It is expected from it funds allocation and to assist the government to implement identified programmes as well as the implementation of international Treaties and Conventions; and

Government is the main actor of the whole process and on it lays on the responsibility of creating appropriate mechanisms to attract investments, to promote the enrolment of all partners in the process for the development programmes leaded by the State, formulating policy and rules, law enforcement ensuring the sustainable use and preservation of forest resources and the planning of the sector.

7. Summary and conclusions

Angola is indeed a potential forest country within the SADC Community and apart from this, has immense natural resources able to contribute to the development of other sectors, e.g. forestry sector. It is recognised that with a good policy and attribution of value to sector and operating accordingly, this would be capable to contribute at least with US$ 150 million per year to the economy of the country, independently to other important functions fulfilled by the sector, but unfortunately almost or completely ignored to the economy country's ranking.

The forestry sector is operating under its full capacity due to a range of problems, being naturally internal and external, affecting all the vital economic sectors of the country. There is a great need to reverse this trend by identifying adequate and sustainable short, medium and long terms solutions enabling the country to create good atmosphere with regard to the future of this very important sector in many aspects considered vital to the development of the sector, specially to with regard policy and socio-economic areas.

The development and operation of the forestry sector is almost left to the government. However, lastly the participation of other sectors is becoming an important fact, despite of limitations in most cases imposed by the government. Therefore, there is a need to open to all partners direct or indirectly involved to the development of the forestry sector, specially the private sector for attracting investments and the community to ensuring the management of the sector. International Community has a crucial role to play to the overall process, therefore the government must be aware of it and place should lelft to this important partner. With this regard, good and realistic policy needs to be established as well as the development and application of incentives for specific groups contributing to the sustainable development of the forest.

The instability is of course the major handicap hindering the development of the country as whole. It is a hardship to visualise the forestry sector toward year 2020 when the move to the development is absolutely linked to peace/war factor. The perspective of sector requires to be seen in two scenarios, i.e. in the peace atmosphere and in the current instability atmosphere. However in the first case, the need of development policy addressing all negative factors should be put in place and for the second scenario, a development of policy maintaining the functioning of the sector taking in account the war factor will be required.

8. Annexes

Table 1. Distribution of population by province (projection)

PROVINCE / YEARS	1990	1995	2000	2005	2010
Bengo & Luanda	1545	2002	2276	2644	3072
Benguela	628	702	808	939	1091
Bié	1093	1246	1441	1674	1944
Cabinda	156	185	224	260	302
Cunene	230	245	287	333	387
Huambo	1484	1687	1948	2262	2628
Huila	860	948	1074	1248	1449
Kuando Kubango	128	137	156	182	211
Kwanza Norte	370	412	495	575	668
Kwanza Sul	642	688	799	928	1079
Lunda Norte	287	311	360	418	486
Lunda Sul	154	160	186	216	251
Malange	872	975	1148	1334	1549
Moxico	308	349	405	471	547
Namibe	110	135	173	201	234
Uige	812	948	1109	1288	1496
Zaire	179	247	295	343	398
TOTAL	10 020	11 558	13 400	15 566	18 082

Table 2. Population Estimation by sex (1000 inhabitants)

Specification	1994	1995	1996	1997	1998	1999	2000
Both sex	11 233	11 395	11 557	11 719	11 881	12 043	12 205
Males	5 504	5 659	5 814	5 969	6 124	6 279	6 434
Females	5,729	5 891	6 033	6 215	6 377	6 539	6 701

Table 3. Population country projection according to class age

Years	1990	1995	2000	2005	2010
Total	10020	11558	13400	15566	18082
Age					
0 4	1834	2127	2466	2864	3327
5 9	1403	1618	1876	2179	2531
10 14	1273	1456	1688	1961	2278
15 19	982	1133	1313	1525	1772
20 24	892	1017	1179	1370	1591
25 29	691	798	925	1074	1248
30 34	561	647	750	872	1013
35 39	501	578	670	778	904
40 44	451	520	603	700	814
45 49	355	405	469	545	633
50 54	271	324	375	463	506
55 59	261	301	348	405	470
60 64	261	289	335	389	452
< 65	301	347	402	467	542

Source: INE - 1998

Table 4. Estimate of GDP by activity branch

Activity branch	Period					
	1995	1996	1997	1998	1999	2000
Thousand Kwanzas						
Agriculture, Silviculture and	999	58709	157	329 833	1 076 428	3415792
Fisheries	8 026	511 627	696	1 031 961	9 972 116	37 380 839
Extractive industry	7.657	483 997	903 349	955 894	9 539 835	36 733 991
Raw oil and gas	369	369	66 111	76 067	432 281	646 848
Others	548	548	76 700	159 977	553 935	1 862 651
Processing industry	6	6	828	1 883	5702	19 467
Electrical energy	473	473	71 344	156 041	554 584	1 910841
Construction	2 409	2409	282 933	489 398	1 375 049	5 398 226
Marketing services	1 004	1004	205 805	267 433	1 102 469	6 225 808
Non-Marketing services	198	198	41 422	35 251	37 013	864
Import right	13 662	13 662	1 745 078	2 471 776	14 677	56 252 487
GDP/Market pricing					295	

Source: INE - 1998

Table 5. Percentage structure

Activity branch	Period					
	1995	1996	1997	1998	1999	2000
Thousand Kwanzas						
Agriculture, Silviculture and Fisheries	7.3	7.0	9.0	13.3	7.3	6.1
Extractive industry	58.7	61.2	52.1	41.7	67.9	66.5
Raw oil and gas	56.0	57.9	48.3	38.7	65.0	65.3
Others	2.7	3.3	3.8	3.1	2.9	1.1
Processing industry	4.0	3.4	4.4	6.5	3.8	3.3
Electrical energy	0.0	0.0	0.0	0.1	0.0	0.0
Construction	3.5	3.1	4.1	6.3	3.8	3.4
Marketing services	17.6	15.0	16.2	19.8	9.4	9.6
Non-Marketing	7.3	8.2	11.8	10.8	7.5	11.1
Import right	1.5	1.9	2.4	1.4	0.3	0.1
GDP/Market pricing	100.0	100.0	100.0	100.0	100.0	100.0

Source: INE - 1998

Table 6. Estimate of GDP by economic branch activity

Activity branch	Prevision					
	1995	1996	1997	1998	1999	2000
Thousand Kwanzas						
Agriculture, Silviculture and Fisheries	50	1 146	64 700	165 885	333 158	1 090
Extractive industry	407	9 002	550 491	939 048	1 065 111	10 307 186
Raw oil and gas	393	8 454	506 632	871 441	981 919	9 775 586
Others	14	548	43 859	67 607	76 192	531 600
Processing industry	27	562	31 469	80 558	171 444	594 657
Electrical energy	0	6	340	947	1 765	6 215
Construction	23	506	29 271	78 479	171 645	610 042
Marketing services	120	2 500	137 234	296 961	512 652	1 443 684
Non-Marketing services	47	1 204	72 522	205 805	247 375	1 119 006
Import right	10	268	16 728	28 996	31 726	37 013
GDP/Market pricing	684	15 194	902 755	1 196 580	2 534 876	15 208 305

Source: INE - 1998

Table 7. Annual variation

Annual variation percentage rate

Agriculture, Silviculture and Fisheries	21.9	14.7	10.2	5.2	1.0	1.3
Extractive industry	12.0	11.5	6.7	3.4	3.3	3.6
Raw oil and gas	12.0	10.4	4.7	3.5	3.5	2.5
Others	11.5	48.7	58.7	2.3	0.2	23.0
Processing industry	(11.4)	2.6	9.3	4.9	7.2	7.4
Electrical energy	10.1	0.1	9.5	14.3	(6.3)	9.0
Construction	10.0	7.0	13.0	10.0	10.0	10.0
Marketing services	7.2	3.8	9.4	5.0	4.8	5.0
Non-Marketing services	15.0	20.0	5.5	0.0	(7.5)	1.5
Import right	(10.0)	35.0	5.0	(30.0)	(10.0)	0.0
GDP/Market pricing	10.3	11.3	7.8	3.2	2.3	3.8

Source: INE - 1998

Table 8. Implicit deflectors

Implicit deflectors						
Agriculture, Silviculture and Fisheries	2 016 .8	5 123.7	243.7	198.8	323.1	313.2
Extractive industry	1 673.5	5 683.3	165.0	109.9	936.3	362.7
Raw oil and gas	1 949.2	5 725.1	166.2	109.7	964.7	375.8
Others	2 665.5	5 038.4	150.7	112.5	567.4	121.7
Processing industry	2 016.8	5 123.7	243.7	198.8	323.1	313.2
Electrical energy	2 016.8	5 123.7	243.7	198.8	323.1	313.2
Construction	2 016.8	5 123.7	243.7	198.8	323.1	313.2
Marketing services	2 004.9	5 018.9	206.2	164.8	268.2	373.9
Non-Marketing services	2 150.3	5 707.9	283.8	129.9	445.7	556.4
Import right	2 018.2	5 951.7	247.6	121.6	116.7	105.0
GDP/Market pricing	1 998.1	5 498.9	193.3	137.6	579.0	369.9

Source: INE - 1998

Table 9. Estimate of GDP by economic branch activity

Activity branch	Prevision					
	1995	1996	1997	1998	1999	2000
Annual variation percentage rate						
Agriculture, Silviculture and Fisheries	21.9	14.7	10.2	5.2	1.0	1.3
Extractive industry	12.0	11.5	6.7	3.4	3.3	3.6
Raw oil and gas	12.0	10.4	4.7	3.5	3.5	2.5
Others	11.5	48.7	58.7	2.3	0.2	23.0
Processing industry	(11.4)	2.6	9.3	4.9	7.2	7.4
Electrical energy	10.1	0.1	9.5	14.3	(6.3)	9.0
Construction	10.0	7.0	13.0	10.0	10.0	10.0
Marketing services	7.2	3.8	9.4	5.0	4.8	5.0
Non-Marketing	15.0	20.0	5.5	0.0	(7.5)	1.5
Import right	(10.0)	35.0	5.0	(30.0)	(10.0)	0.0
GDP/Market pricing	10.7	11.3	7.8	3.2	2.3	3.8

Source: INE - 1998

Table 10. Index

Index (1992 = 100)						
Agriculture, Silviculture and Fisheries	70.6	80.9	89.2	3.8	94.8	96.0
Extractive industry	107.5	119.8	127.8	132.2	136.5	141.4
Raw oil and gas	112.0	123.6	129.4	133.9	138.5	141.9
Others	44.9	66.8	106.0	108.4	108.5	133.5
Processing industry	91.9	94.3	103.0	108.1	115.8	124.4
Electrical energy	106.4	106.5	116.7	133.4	125.1	136.3
Construction	73.7	78.9	89.1	96.1	107.9	118.7
Marketing services	89.8	93.2	101.9	107.0	112.0	117.6
Non-Marketing	56.4	67.6	71.3	71.3	66.0	67.0
Import right	38.1	51.4	53.9	37.8	34.0	34.0
GDP/Market pricing	85.3	102.3	102.3	105.6	108.0	112.1

Source: INE - 1998

Table 11. Expenditures to GDPurrent pricing

	PREVISION				
EXPENDITURES	1995	1996	1997	1998	1999
Thousand Kwanzas					
Final consumption	9 458	524 916	1 374 372	2 188 481	10 407 821
Public services	3 755	160 861	545 609	782 627	4 916 095
Family	5 703	364 055	828 764	1 405 854	5 491 725
Formation of raw capital	3 926	247 180	501 021	700 792	4 846 728
Public	1 043	73 716	185 184	184 970	887 074
Others	2 883	173 464	315 837	515 822	3 959 654
Export of goods services	10 069	637 855	1 143 606	1 382 687	14 642 245
Import of goods and services	9 792	574 459	1 273 921	1 800 183	15 219 498
GDP/Market pricing	13 662	835 492	1 745 078	2 471 776	14 677 295

Source: INE - 1998

Table 12. Percentage structure

Final Consumption	69.2	62.8	78.8	88.5	70.9
Public services	27.5	19.3	31.3	31.7	33.5
Family	41.7	43.6	47.5	56.9	37.4
Formation of raw capital	28.7	29.6	28.7	28.4	33.0
Public	7.6	8.8	10.6	7.5	6.0
Others	21.1	20.8	18.1	20.9	27.0
Export of goods out services	73.7	76.3	65.5	55.9	99.8
Import of goods and services	71.7	68.8	73.0	72.8	103.7
GDP/Market pricing	100.0	100.0	100.0	100.0	100.0
Discrepancy	(0)	(0)	0	(0)	0 (26 407 737)

Source: INE - 1998

Table 13. Distribution of forest land cover and population by province

Province	Population		Forest area		Growing Stock		MAI	
	Inhabitant	Density Inh/km^2	1000 ha	%	Volume mill. ton.	%	Volume mill. Ton	%
Bengo & Luanda	*		33,800	2.71	107.84	2.3	3.48	2.4
Benguela	1,386,800	43.6	39,200	3.14	87.39	1.9	2.65	1.8
Bié	818,360	11.6	71,900	5.77	382.72	8.1	11.76	8.2
Cabinda	71,850	9.9	7,100	0.57	14.22	0.3	0.40	0.3
Cunene	379.910	4.3	77.100	6.18	141.83	4.8	4.03	4.8
Huambo	1,259,200	36.7	33,300	2.67	141.83	3.0	4.03	2.8
Huila	1,177,500	15.7	79,600	6.38	398.51	8.4	12.36	8.6
Kuando Kubango	443,600	2.2	199,100	15.97	745.96	15.8	23.24	16.1
Kwanza Norte	352,850	14.6	28,199	2.26	87.23	1.9	2.58	1.8
Kwanza Sul	826,650	14.9	58,700	4.71	158.60	3.4	4.56	3.2
Lunda Norte	329,560	3.2	103,300	8.29	565.96	12.0	17.44	12.1
Lunda Sul	195,370	4.3	70,900	5.69	261.73	5.6	7.68	5.3
Malange	746,260	7.6	88,900	7.13	356.60	7.6	10.55	7.3
Moxico	334,010	1.5	201,700	16.18	715.77	15.2	22.17	15.4
Namibe	155,220	2.7	57,000	4.57	57.39	1.2	1.96	1.4
Uige	823,220	14.0	59,300	4.76	296.20	6.2	9.08	6.3
Zaire	236,180	5.9	37,600	3.01	109.07	2.3	3.99	2.2
TOTAL	12,278,000**	9.8,,	1,246,698		4,713.05		144.46	

Source: Biomass Assessment in the SADC region-1989

Table 14. Protected areas of Angola

	Area, ha	Code
National Parks		
Bikuar Iona Kameia Kangandala Kissama Mupa	790 000 1 515 000 1 445 000 63 000 996 000 660 000	1 2 3 4 5 6
Integreaed Natural Reserves		
Ilheu dos Pássaros Luando	200 828 000	7 8
Partial Reserves		
Bufalo Luiana Mavinga Namibe	40 000 840 000 595 000 468 400	9 10 11 12
Special Reserves		
Milando	n.a	13
Regional Natural Parks		
Chimalavera	15 000	14
Controlled Hunting Areas		
Cuando Cubango	n.a	-
TOTAL	8 255 600	

(Source: IUCN 1997)

Table 15. Some forestry statistic data

Period	Land area, 1000 (ha)	Forest area, (ha)	Productive forests, (ha)	Forest products, m^3				
				Logs	Sawnwood	Veneers	Plywood	Others
1994	124 670	140 000	8 700 000	33 885	n.a	n.a	n.a	-
1995	-	-	-	42 000	n.a	n.a	n.a	-
1996	-	-	-	25 155	n.a	n.a	n.a	-
1997	-	-	-	18 050	n.a	n.a	n.a	-
1998	-	-	-	16 900	n.a	n.a	n.a	-
1999	-	-	-	19 900	n.a	n.a	n.a	-

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