

REPUBLIC OF RWANDA



MINISTRY OF FORESTRY AND MINES

National Forestry Policy

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ACRONYMS

BEST	: Biomass Energy Strategy
COMIFAC	: Commission des forêts en Afrique Centrale (Commission of Forests in Central Africa)
EDPRS	: Economic Development and Poverty reduction strategy
FAO	: Food and Agriculture Organisation
GEF	: Global Environmental Fund
GoR	: Government of Rwanda
ICDPs	: Integrated Conservation and Development Programmes
MINAGRI	: Ministry of Agriculture and Livestock
MINEDUC	: Ministry of Education
MINICOFIN	: Ministry of Finance and Economic Planning
MINIFOM	: Ministry of forestry and Mines
MININFRA	: Ministry of Infrastructure
NAFA	: National Forestry Authority
NGOs	: Non Government Organisations
RADA	: Rwanda Agriculture Development Agency
UNCCD	: United Nations Convention to Combat Desertification
UNFCCC	: United Nations Framework Convention on Climate Change

FOREWORD

This forestry policy is enacted to render the forestry sector, its place in the economically and ecologically balanced development of Rwanda. Forest resources have been playing and are still playing important roles in supporting the livelihood of Rwandans even if these have not been always recognised or given due consideration. This led to a continuous degradation of forest resources resulting into forest cover attrition and surge in forest products demand.

The forestry sector is however actually benefiting from positive environment in which many national policies, programmes and projects, especially those dealing with environment, food security, energy, water, land management and soil conservation prioritise forestry as one of the key interventions. All this in the frame of the high level political good will committed to the development of the forestry sector.

*The forestry policy is rooted in the national constitution and it is related to the other national policies and strategies such the vision 2020, EDPRS, environment, population, Action Plan for Soil Conservation, energy, Water etc. As stated in the overall goal, the policy aims **at making the forestry sector, one of the bedrocks for sustainable development, thriving, developed, managed and utilised for sustainable benefits to all segments of society and the environment.***

This will be achieved if forest resources are no longer viewed only in the mirror of environment but also as resources that can contribute greatly to economic growth of Rwanda. This forestry policy provides then a roadmap for flourishing forestry business and the private sector is strongly encouraged to invest in the forest sector.

Lastly, forests are worldwide acknowledged as renewable resources, but this is so in case of best forest practices to ensure sustainable management. The government of Rwanda will continue to honour its commitments vis a vis International Community in regards to forest and its biodiversity conservation. Therefore, we urge Rwandan population to own this policy and the International Community to support its implementation.

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1. ISSUE

1.1. Needs for a new forestry policy

The Forestry sector is playing key roles in supporting the livelihood of all Rwandans especially by providing most of the energy consumed by the bulk population, controlling soil erosion and protecting water catchments and supplying other goods and ecological services. A partial study on charcoal trade between six towns and five wood producer districts carried out in 2008 showed that the commercialisation of charcoal alone contributed 2.6 billions of usd (BEST 2008) representing 5% of the GDP. This study did not cover all economy generated by wood used in building industry, firewood and timber. Despite all this, the forestry sector has not been given an opportunity to express its full economic potential, Rwanda is still importing all industrially processed forest products from abroad and in many areas, soil erosion constitutes still a real threat countrywide.

The Vision 2020 and EDPRS set clear target to increase national forest cover and for the forestry sector to play increasing role in national economy. However, due to high population density (387 inhabitants/km² in 2009), farming land per household is shrinking and there is a high competition for land between forestry, agriculture and other developmental activities. Moreover, national economic growth requires more energy leading sometimes to over exploitation of national forest resources. All these impact negatively on our pace towards orientation and targets set in the Vision 2020 and EDPRS and require revision of the 2004 national forestry policy for specifically addressing following issues:

- Increasing competition for land between forestry and other developmental activities
- Poor management of man made forest compromising a sustained yield
- Low private investment in the creation of forest resources, in value addition to forest products and in diversification of forest products.
- Existence of over mature and degraded forests
- High dependence on importation of industrially processed forest products.

2. CONTEXT

2.1. International and regional context

At international level, it is agreed that sustainable development relies on good conditions of natural resources, as this was emphasized at the Earth Summit of Rio de Janeiro (Brazil) in 1992. Indeed, governments gathered at this summit have highlighted importance to preserve forests at all costs, given multifaceted and important functions they fulfil. It is this objective FAO is trying to achieve through various regional forestry programmes aiming among others to fight the spread of the SAHARA desert in Sahel's countries for example.

Indeed forests hold a key position in environmental protection and are therefore among concerns of many international organizations and conventions such as GEF, UNCCC, UNCCD and which Rwanda has ratified.

The present policy addresses concerns of the international community since it stresses reforestation of every available land in order to reduce risks of desertification, erosion, climate change and degradation of water resources.

At regional level, there is risk that overexploitation of forests will lead to destruction of ecosystems and desertification in the near future. In reality, destruction of forests in a country has impact on the whole region; but in order to curtail such risks, the present policy provides for collaboration with neighbouring countries in protecting trans boundary forest ecosystems. Moreover, Rwanda is represented in various forums and regional organisations related to the development of forest resources, of which COMIFAC, EAC, and the Nile Basin Initiative.

2.2. National context

Natural forests and manmade forests cover a total area of 330,576 ha¹ of which 215,739 ha are natural forests and 114,837 ha represent forest plantations. In addition to these forest resources recognized as so according to FAO definition of forests; there are other forest resources composed of small wood lots (with an area of less than 0.5ha) and other trees outside forest (generally referred to as agroforestry trees) which are believed to represent countrywide an area of 222,520 ha equivalent² to conventional forests. Thus the total area of national forest cover is 553,098 ha representing 21% of total country area. While natural forests occur on 8% of total country area against 13% for manmade forest, any extractive utilisation of natural forests is prohibited and forest plantations cater for all needs of Rwandans.

2.3. Utilisation of national forest resources

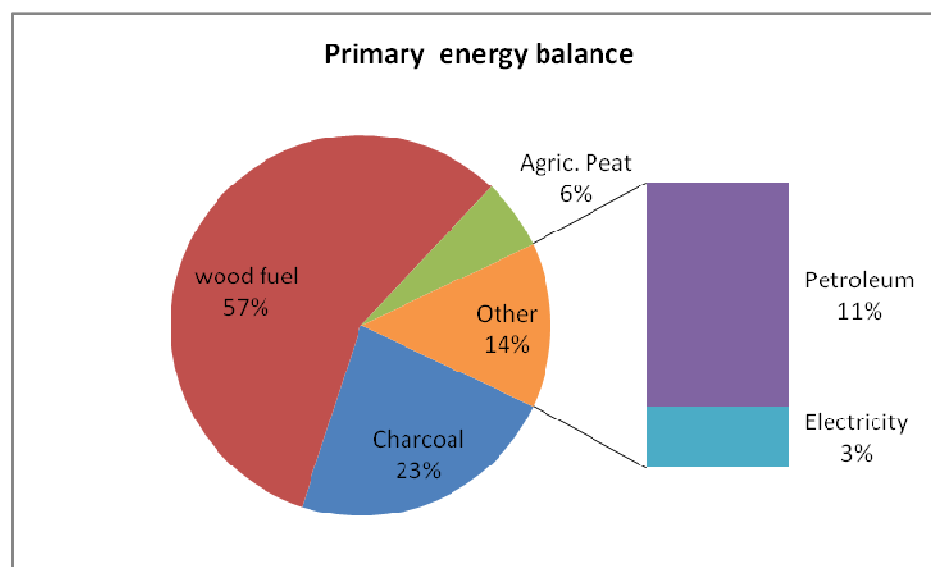
Forests are a key component of the life-support system in view of both the products and services they provide. This is particularly so in Rwanda where forests protect watersheds, thus making agriculture viable, and meet the energy needs of the bulk of the population. Furthermore, forests generate direct monetary income (revenues) for households, public entities and the country in general.

¹ This area is different from what is indicated in "Cartographie des forêts du Rwanda, 2007" because on page 51 of the aforementioned report on cartography of Rwandan forests, area of Akagera National Park was underestimated to 1276 ha while we estimate Akagera National Park area to be at least 90,000ha

² The conversion factor is a number of 1600 trees counted in agricultural land or in other places such as towns and pastures; that number represents 1 ha of a classic forest..

Forests contributed up to 80% of total energy needed in 2007 as illustrated in figure 1:

Figure 1: Primary energy balance



Source: Mission estimates , MININFRA 2007

In addition to wood fuel, Rwandans use woods as building material or raw material for furniture, it is assumed that each Rwandan consumes annually 1.1 m³ of local forest products (MINITERE 2004). We note also that fire wood, trees for others uses are harvested from man-made forests, whereas all natural forests are protected, they host a rich biodiversity, serve as the backbone of our tourism industry and support invaluable ecological functions such as water and soil protection.

2.4. Forestry contribution to vision 2020

This policy is put in place in order to enhance achievement of objectives and targets of the Vision 2020. This is broadly, about improvement of livelihoods of Rwandans through job employment creation, increased forest revenues, value addition, more balanced ecological benefits and a sustained yield.

Specifically , this policy aims at ensuring that present forest cover is first over all maintained, well managed and increased to 30% of country total area in 2020.

3. VISION AND OBJECTIVES

3.1. Vision

Through sound management, our forest resources will play increased roles in our economy and biodiversity conservation; current benefits from forests enjoyed by actual generations will be enhanced to ensure that the well being of future generations is not compromised. Increase of forest cover, high value addition to forest products and rational utilisation of forests will contribute to a balanced development through economic growth and promotion of ecological values.

3.2. Objectives

The overall goal of this policy is to make the forestry sector one of the bedrocks of economy and national ecological balance for sustainable benefits to all segments of the society.

The specific objectives of this forestry policy are to:

- Encourage the participation of private sector to invest in the forest sector for poverty reduction, employment creation and improvement of livelihood through sustainable use, conservation and management of forests and trees;
- Contribute to sustainable land use through soil, water and biodiversity conservation, and tree planting through the sustainable management of forests and trees;
- Strengthen the participation of communities and other stakeholders in forest management to conserve water catchment areas, forest biodiversity and ensure sustainability of the forest sector;
- Promote farm forestry to produce timber, wood fuel and to supply wood and non-wood forest products;
- Promote forest extension to enable farmers and other forest stakeholders to benefit from forest management approaches and technologies; and
- Promote forest research, training and education to ensure a vibrant forest sector.

3.3. Targets

This forestry policy will facilitate achievement of targets set respectively in EDPRS and the Vision 2020 in terms of increased forest cover. According to EDPRS national forest cover will increase up to 23,5% of national total area in 2012 representing 616,309 ha, whereas that forest cover will be brought to 30% of total area equivalent to 790,140 ha of forests in year 2020. Beside this, the policy intends to create a favourable environment for flourishing forestry business based wood industry, consequently, targets may be also expressed in terms of forest generated incomes.

Those targets are indicated annually in the table below:

Table 1: Targets of forestry policy

Indicators	Value of indicators per year						
	2010	2011	2012	2014	2016	2018	2020
Tree seedlings ³ x 1000	25,752	34,931	60,683	83,439	83,439	83,439	83,439
Area of new forests created in ha	19,160	12,445	31,606	43,458	43,458	43,458	43,457
Forest generated net incomes in billions RWF ⁴	1,782.5	1,982.75	1,053.33	2,610	3,159	3,821	8,463

From 2010, an average of 23700 ha of forests will be created each year for hitting the target in 2020. However this target seems quite ambitious in the context of land scarcity unless out farm jobs are created to leave enough land devoted to reforestation.

³ The number of required seedlings has been increased by 20% for taking into account replacement of harvested non coppicing tree species.

⁴ In 2008 the survey carried out in framework of BEST revealed that forest income generated was estimated at 2,6 billions usd, Table1 assumes a forest income growth rate of 6% applied to the 2,6 billions usd from 2008 up to 2011, and a growth rate of 10% up to 2020. Exchange rate is 1 usd for 575 Rwf

4. BACKGROUND TO FORESTRY POLICY

4.1. Implementation of the 2004 national policy

The first national forestry policy was put in place in 2004 after 16 years of existence of the forestry law. This led to a confusing and unusual situation whereby in one way or another, the forestry policy was influenced by an odd law given the socio-economic and politico changes, Rwanda has undergone since 1988 and as a result of such impasse, none of the two tools did perform as expected. Despite the existence of the forestry policy, the gap between wood supply and wood demand steadily widened from a wood deficit of – 7 million cubic metres in 2002 to - 12 million cubic meters in 2009⁵. In addition to this, since 2004, new events occurred in the economic and political landscape at national, regional and international levels. At national level, this policy needed revision to accommodate EDPRS 2008-2012 targets related to forestry sector. EDPRS provides that the forestry sector will require interventions that include designing and implementing a reforestation strategy with diverse species, as well as inventorying and mapping national forest resources to provide the basis for a 10-year national forestry plan. A joint strategy with MINAGRI will be developed to promote agroforestry for non wood uses (medicinal plants, honey production, wild foods, and handicraft production⁶).

At regional level, Rwanda joined the COMIFAC, a regional organisation in the central Africa organisation aiming at promoting cooperation among ten country members for a sound management of their forest resources. Through the admission Rwanda committed itself for rational utilisation of its resources in the line of objectives of COMIFAC. In 2007, Rwanda was admitted in EAC, a sub regional with an economic and political agenda aiming at the integration of Eastern African countries offering greater opportunities of our forestry sector to play increased role in our economic growth.

Worldwide, global warming caused by green house gases and the important role of forests as carbon sink, call for new interests in forest roles as opposed to traditional ones. Some stakeholders emphasize environmental roles whereas others look at forest resources as a way of fostering economic growth. To reconcile views and needs of all stakeholders, the 2004 forestry policy needed revision to give appropriate orientations. It was felt urgent to outline, agree and approve national objectives for the sector and define strategies needed to achieve these objectives to enable both the public and private sectors to re-channel and increase resources and investments in sustainable forest management.

4.2. Forests and Livelihoods

The socio-economy of Rwanda is dominated by traditional subsistence farming. Due to high population densities (387 inhabitants / km² in 2009), farming land per household is decreasing and most of the soils have been exhausted. As a result, cultivation is foraying into marginal areas, particularly in steep slopes, leading to widespread landslides, soil erosion and siltation of water bodies. These negative tendencies within the natural resources domain are putting severe pressure on the life-support systems of the country.

⁵ As illustrated in table 2 and figure 2

⁶ EDPRS2008-2012,P.70

Forests are a key component of the life-support system in view of both the products and services they provide. This is particularly so in Rwanda where forests protect watersheds, thus making agriculture viable, and meet the energy needs of the bulk of population. Furthermore, forests generate direct monetary income (revenues) for households, public entities and the country in general.

Natural forests areas declined by 65% during the 1960 – 2007 period; currently a number of tree species are on the verge of extinction. Efforts to create man made forests neither offset the cumulative loss of forest cover nor cater for the needs of a geometrically growing population as illustrated in table 2 and figure 1. Dramatic and rapid decrease of forest cover in Rwanda, occurred as a consequence of the mayhem genocide, state collapse and breakdown of law-and-order of 1994. This led to a dramatic reduction of forest cover due to a sky-rocketing demand for wood for reconstructing the country.

Table 2: Needs and Sustained Yield of Wood during 1960-2009

	Years										
	1960	1970	1980	1990	1996	1999	2000	2002	2007	2008	2009
Natural forests areas (ha)X1000	634	591.8	513.6	451.16	383.66	221.2	221.2	221.2	22.2	221.2	221.2
Total population	2694990	3763259	4831527	7157551	6167500	7165108	7497644	8162715	9238626	9515785	9801258
Pop. Growth rate (%)		3.8	3.8	3.1	3.1	3.1	3.1	3.0	3.0	3.0	3.0
Man-made forests (ha) x1000	24.5	27.16	80	247.5	232.5	252	282.563	112.73	125.27	144.849	153.5
⁷ Sustained Yield (1000 m ³)	368	407	1200	3713	2790	2268	2261	902	1021	1159	1228
⁸ Needs (1000m ³)	2695	3763	4832	7158	6784	7882	8247	8979	9900	10467	10781
Balance (1000m ³)	-2327	-3356	-3632	-3445	-3994	-5614	-5987	-6719	-7879	-9308	-9553

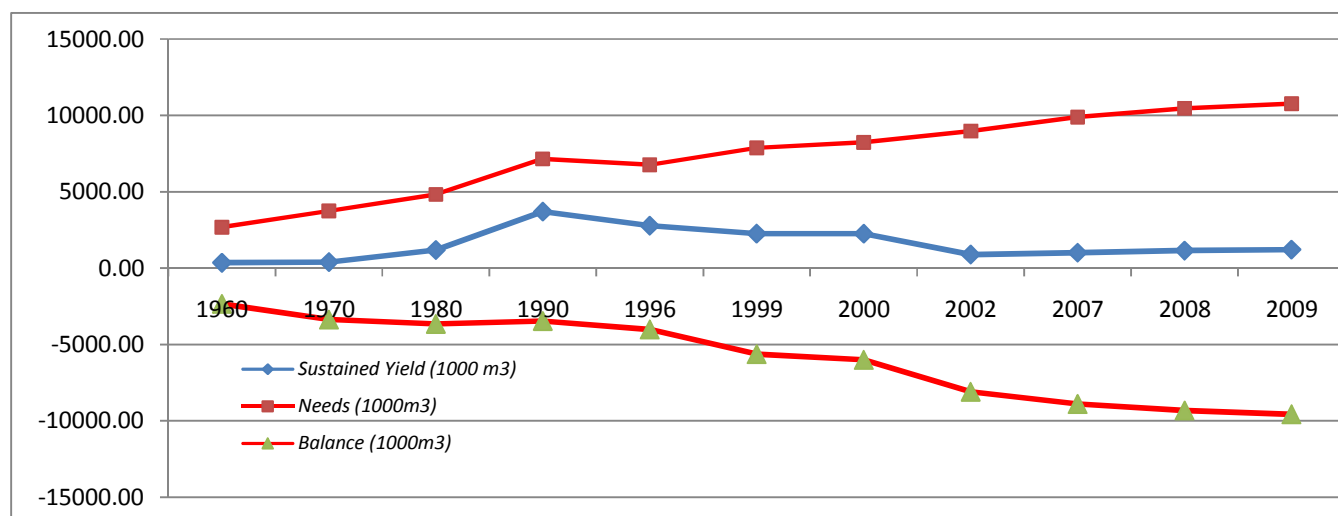
Our forest resources are capable of supplying annually around a sustainable yield⁹ of round wood much inferior to population needs. The gap between wood supply and wood demand widens each year. This occurs as a result of land scarcity that can't allow increasing forest area according to the population growth.

⁷ Based on average sustained harvest\ per hectare that varies from 15m³ (before 1996) to 8m³ (after 1996)

⁸ According to a survey carried out by the MINAGRI in 1981/1982, a medium Rwandan consumer uses 1 m³ of wood per year. However, this figure needs readjustment and must take into account new realities of emerging needs after 1982, especially the development of new lifestyles and more inputs required for the construction sector in urban areas. Hence it will be re-evaluated at 1.1m³ (imports of timber products excluded).

⁹ This refers to wood that can be harvested without degrading the forest cover, such harvesting gives sufficient time for a forest to regenerate.

Figure 2: *Imbalance between needs and sustained yield of wood in Rwanda, from 1960 to 2009*



Wood deficit is continuously increasing with population growth, since forests remain the main source of energy and others products for the bulk of population.

4.3. Opportunities and constraints in the Forestry Sector in Rwanda

4.3.1. Opportunities

There are positive features that favour development of all-round vibrant, productive and profitable forestry. These include the following:

- Environmental protection has been ranked among national priorities;
- Existence of decentralised civil governance structures;
- Existence of the National Forestry Fund (NFF);
- High level political good will illustrated by putting in a place Institutions with a clear mission for developing the forest sector;
- Many national policies, programmes and projects, especially those dealing with environment, food security, energy, water, land management and soil conservation prioritise forestry as one of the key interventions;
- Existence of international conventions and agreements on forests; and
- Existence of a forum for private sector engagement with the Government of Rwanda.
- International Community increasing interests in forests seen as a major contributor to carbon sequestration for reducing global warming.

4.3.2. Constraints in the forest sector

Problems related to forestry in Rwanda centre on land scarcity in general and severe poverty of the people. The core problems include:

- **Excessive and indiscriminate cutting of forests:**
Wood is the main source of energy for most Rwandans (96%) and industries. Demand is increasing in concert with growing human population. Forest harvesting is poorly done and law enforcement is more of an exception than the rule. The two features lead to over-exploitation, resulting in excessive soil erosion. It is estimated that Rwanda loses 945, 200 tonnes of organic material, 41, 210 tonnes of nitrogen, 280 tonnes of phosphorus and 3. 055 tonnes of potassium each year through soil erosion, which lowers agricultural productivity and is a threat to food security;
- **Uneven distribution of forest resources over the country:**
Most of the Classified Forests are located along the Congo-Nile Ridge. The rest of the country has a wood deficit. The situation is critical in Bugesera and Umutara. Bugesera has particularly experienced intense charcoal making and massive human population immigration in search of agricultural land;
- **Low productivity of existing man made forests and poor quality of forest genetic material;**

Existing forest plantation have been created in the last century, most of them underwent a coppicing regime. Short harvesting rotations have exhausted stumps, mean annual increment dropped from 15 m³ per ha in 1988 to 8m³per ha to date.

There are no seed orchards to provide quality seeds to forest growers, seeds are collected from the impressive arboretum established during the 1930s' in Huye. A rapid assessment concluded to high hybridisation of Eucalyptus species leading to inbreeding and hence degraded genetic material. Biotechnology for multiplying highly productive clones of Eucalyptus is not yet utilised for availing improved seedlings to forest growers.

- **Low afforestation rate:** At 0.029ha per capita, the FAO standard of 1ha per person to simultaneously meet ecological balance and wood demand is not being achieved;
- **Wasteful conversion:** The bulk of tree conversion for timber is by pit-sawing, a practice that has severe technical limitations as it can only convert logs of a specific diameter and form and has low volume recovery from a felled tree. Also, the bulk of woodfuel is consumed in its primary form and despite development of woodfuel saving technologies, most people have not adopted them;
- **Insufficiency of data on the forestry sector:** Knowledge of the Extent of forest resources in the country is limited. Forestry inventory and data collection of utilisation of forest resources are irregular. These complicate sound management and do not incite private investment in the forestry sector.

- **Dominance by one species:** More than 80% of the species utilised in reforestation and afforestation is comprised of various species of Eucalyptus. Relying on monoculture constitutes a real threat to the sustainability of our forestry sector, in case of outbreak of diseases or pests. There is dire need for species diversification if farm forestry to be successful;
- **Failure to use existing forest plantations:** Since the 1970s, the Government of Rwanda (GoR) has received considerable support for afforestation and has established forests plantations around Nyungwe natural forest, in Gitarama, Gisenyi and Byumba. Today, these forests are mature and some of them were ready for harvesting since 1998. Meanwhile, many trees are beginning to suffer heart-rot and are easily wind-thrown due to old age and lack of proper management, and efforts to put them to use are just beginning;
- **Under-estimation of the economical importance of forestry:** It is very difficult to assign realistic value to forest products and services due to the broad structure of the economy of Rwanda (dominated by peasant subsistence farmers and small-scale informal business), lack of technical capacity and the fact that the bulk of wood is consumed as a primary product, outside the formal market place, making data capture almost impossible;
- **Land for reforestation and afforestation:** It is estimated that in order to fill the gap between demand and supply of wood, it will require planting additional more than 400,000ha and increasing the forest productivity up to an average of 15m³/ha/year. Such land is not available in Rwanda and productivity is very low; according to EDPRS 2008-2012, more than 60 % of households owned less than 0.7 ha of land and more than 15% of households cultivated less than 0.2 ha of land in 2006.
- **Inadequate extension services:** The success of forestry requires steady and competent extension. The country lacks competent personnel and budget allocation for the purpose is inadequate; It should not be overlooked that Rwandan farmers, in common with farmers elsewhere in Africa, have all the necessary skills to grow good tree crops. They need to be given advice, shown how to perform critical activities and given access to the right equipment, the success of forestry requires steady and competent extension services to ensure constant education, monitoring and evaluation of the achievements at grass-root level. Insufficiency and absence of well-trained technicians (foresters) will not permit this to happen, at least in the near future. The forestry sector experiences shortage of professional foresters; with only 27 professionals out of 150 foresters needed in the country, there is an urgent need to train more people in forestry.

5. GUIDING PRINCIPLES FOR THE FOREST POLICY

The following principles shall guide enunciation of the forestry policy and its subsequent implementation. They build on government political and development priorities, especially the Constitution of Rwanda and the EDPRS.

- **Sustainable Forest Management (SFM):** All forest and tree resources in Rwanda shall be managed to yield sustainable streams of social, economic and ecological goods and services. to enable the sector to meet the forestry needs of the current generation without compromising similar rights of future generations;
- **Commercialisation of Forestry Activities:** Forestry operations shall be undertaken in a business-manner, with a sharp focus on result-based management. In this context, the government will invite the private sector to invest in wood processing and value-addition in all mature plantations
- **Species diversification:** Tree farming shall endeavour to use a wide range of species on the basis of species matching;
- **Agroforestry technologies:** In view of the land shortage in Rwanda for extensive forest plantations, farm forestry using multi-purpose nitrogen-fixing species shall be pursued vigorously;
- **Ecologically and physically fragile areas:** Special care shall be taken to conserve ecologically fragile areas in order to conserve the biodiversity therein and to protect areas prone to soil erosion and landslides;
- **Forestry research:** To the extent practicable, key decisions on forest management shall be informed by fundamentals of forestry science, buttressed by appropriate knowledge emanating from research;
- **Stakeholder involvement and partnerships:** All key stake-holders in forestry at various levels (national, provincial, district and community) shall be involved in decision-making that are relevant and affect them;
- **Forest management planning:** To achieve the broad intentions of the forestry policy, management of forests shall be in accordance with approved management plans to achieve objectives stated therein, irrespective of ownership;
- **Private sector involvement:** There will be a systematic phasing in of the private sector to play the dominant role especially in forest management and forest products processing, the public sector retaining only the regulatory function, research and quality assurance;

- **Decentralised governance:** Classified forests shall be managed in accordance with decentralised governance prevailing in Rwanda through the “Performance Contract” modality;
- **Public good:** In view of the multiple roles played by forests, all forests shall be taken to serve a common good interest irrespective of ownership. This implies that any action taken in any forest shall be regulated to safeguard public interest;
- **Livelihoods enhancement:** Improvement of livelihoods and fighting poverty shall be a major goal in all strategies and actions in the forest sector;
- **Gender and equity:** affirmative action to redress gender inequalities and disadvantaged groups shall be integrated in all forest management plans; and
- **International obligations:** All strategies and actions in the forest sector shall internalise forest-related current and future international conventions, agreements and protocols.

6. PREFERRED OPTIONS

In aggregate, preferred options constitute a rational national agenda that traverses political and ideological realities currently prevailing in Rwanda. They map out pillar on which development of the forestry sector in the country will hinge. The preferred options are proposed on the basis of deep analysis and they contribute to attain the sectoral vision as outlined in Vision 2020. Each option represents a strategic direction that encapsulates the minimum set of investments needed to implement the forestry policy.

6.1. Permanent forest estate keeping

Forests are a key component of the life-support system in view of both the products and services they provide. This is particularly so in Rwanda where forests protect watersheds, thus making agriculture viable, and meet the energy needs of the bulk of the population. This requires also that all forest and tree resources in Rwanda shall be managed to yield sustainable streams of social, economic and ecological goods and services. to enable the sector to meet the forestry needs of the current generation without compromising similar rights of future generations. To ensure forest permanence of forests in Rwanda strategic options will emphasise on the following:

- Re-surveying all Classified Forests with a view of rationalising boundaries;
- Undertaking afforestation and reforestation initiatives to expand the country's forest cover;
- Supporting the local authorities to manage forests as provided for under the law;
- Developing management plans for all Classified Forests;
- Undertaking scientific research for promotion of innovation, maintenance of sustainability and competitiveness and ensuring progressive improvement in forestry policy and practice;
- Monitoring and assessing forest health and factors affecting it as a basis for strategic responses to any potential threats to sustainability;
- Improve management of the National Forestry Fund;

6.2. Forest-based industries promotion

There is a room for developing a forest based industry in Rwanda since the country relies a hundred percent on importation of industrially processed wood products. Internal market for those products is continuously increasing as the country economically develops. Since a forestry based industry is new in the country, there is a necessity of special approach for encouraging private investments in the sector. A forest –based industry will have decisive effect on the maintenance of forest cover and will encourage people to plant more trees. In the beginning, public forests will provide raw material for new coming industry. This will require the government to carry out a good marketing of public forests and provision of incentives to economic operators in terms of accurate information, appropriate forest legislation. In this context, the government will invite the private sector to invest in wood processing and value-addition in all mature plantations. Following strategic options or activities may encourage economic operators to invest in wood industries

- Undertaking regular biological and biometric inventories
- Establishing forest fees on basis of market forces and collecting revenue expeditiously
- Reviewing forest and tree tenure rules with a view of privatising industrial plantation development
- Promoting development of viable and efficient forest-based industries, particularly in secondary and tertiary processing, so as to fully utilise forest products, reduce excessive waste and satisfy domestic and export demand through appropriate incentives;
- Awarding licences to on a competitive basis in order to foster transparency and freedom of market forces; and
- Undertaking skills training and apprenticeship for wood processors to reduce waste and improve quality and productivity.

6.3. Capacity building in the forestry sector, including strengthening institutions, forestry research and enhancement of forestry training

Forestry sector in Rwanda will always depend on human resources availability to carry out research, policy implementation and planning activities.

Challenges facing the forestry sector are either structural or temporary. Low capacity is one of those temporary challenges that may be addressed in the medium and long run. The government has already undertaken actions aiming at building forest institutions. Forestry institutions must be supported and continuously strengthened in order to accomplish their mission. Not only government institutions are involved in the forestry sector but also the private sector, the civil society and the decentralised entities. At all levels these institutions need capacity building, and following options are suitable for addressing such issues:

- Establishing training facilities for Forest Rangers and forest workers;
- Liaising with Universities in East Africa and elsewhere for training forestry professionals; and
- Relocating the research function from ISAR to the proposed National Forestry Authority (NAFA) to reduce transaction costs in the research-application pathway.
- Increase budget allocated at forestry research activities;
- Continuous assessment of professional and technical capacity needs and design an appropriate capacity development plan for performance and achievement of objectives of this policy;
- Reviewing mandates of institutions involved in the forest sector with a view to strengthening coordination, facilitating integration of sectoral concerns and strategies and avoiding duplication, competition, resource wastage and conflict;
- Reorganising the forestry sector through rationalising, divestiture and semi-autonomous functioning;
- Supporting districts, sectors, villages and civil society groups to develop and implement forestry activities
- Create harmony with policies and laws of related sectors to avoid perverse incentives

6.4. Urban and Peri-urban Forests development:

Towns are small and less populated except Kigali City that counts about one million inhabitants, a population that is dense given the small size of the city. But countrywide, towns are growing and urban dwellers increasing. In the context of Rwanda that is experiencing shortage of land where

its population is exponentially increasing; risks of forgetting practising urban forestry are high. But as alluded earlier, urban forests are not a luxury, they constitute an important component of urban environment for the livelihood of urban population. Urban forestry must then be developed more than before, using following strategies:

- Promoting the creation of mandatory boulevards in all trading centres, towns, municipalities and cities;
- Including urban forestry in urban planning;
- Identifying potential urban forestry service providers and agreeing on roles and responsibilities;
- Developing guidelines for urban and peri-urban tree planting;
- Developing a programme for urban forestry based on improved understanding of needs, institutional roles and capacities and best practices to support service delivery;
- Creating awareness on value of urban and peri-urban trees; and
- Supporting urban authorities with technical support on tree nurseries and tree husbandry and in locating and developing sites in urban and peri-urban areas for tree growing;
- Involving the private sector in managing urban and peri urban forests for leisure and recreation purposes.

6.5. Farm forestry enhancement

Due to the scarcity of land , industrial forest plantation can't be considered as an option in Rwanda. We however recognise that trees and forests constitute the pillar of our economy and our ecological balance. Since Rwandans' livelihood hinges still in various ways on forest products; woodlots created on private land emerge as a serious alternative. Again choosing between agriculture and forestry won't be an easy exercise for small farmers. Tangible results in this area will be achieved if a strong forestry extension service is put in place and run efficiently. This will require to adopt and to opt for operational strategies as follows:

- Promoting and supporting creation of cooperatives of forest growers;
- Supporting writing up and implementation of forest management plan of private forests;
- Mainstreaming farm forestry in agricultural policies and strategies;
- Disseminating *best practices* in farm forestry in all farming systems in Rwanda;
- Enacting and enforcing agricultural bye-laws designed to conserve the life support systems and protect agricultural biodiversity;
- Building capacity of farmers and private sector in favour of farm forestry;
- Intensifying research into suitable farm forestry technologies, niches and tree species for various agro-ecological zones;
- Promoting growing and/or husbandry of multi-purpose trees in all farming systems;
- Re-orienting frontline agricultural extensionists into farm forestry;
- Developing and amplifying farm forestry content in extension packages and integrating these into a unified extension system for all farming systems in the country;
- Supporting farmer groups to establish and manage tree nurseries for commercial purposes;

- Encouraging schools and other youths organisations to grow and conserve trees;
- Including agroforestry into primary school curriculum
- Developing training programmes and field manuals for front-extension agents
- Training, re-training and disseminating information to farming households

6.6. Promotion of profitable and productive forest plantation business

It is certain that forestry contributes greatly to the national economy. This economic value though not known but translated into tangible assets like wood consumptions (construction, sawing, domestic and industrial energy), fruits sales, erosion control, etc. and into intangible terms such as climate, quality of landscape, tourism, etc. is underestimated. Yet, if this contribution cannot be valued, interest for the forestry sector will remain low and may simply be regarded as low priority.

The promotion of true and formal forestry business will pass by:

- Establishing legal mechanisms to enable the private sector to invest and manage public forests;
- Promoting innovative financing mechanism through the National Fund for Forestry;
- Availing improved seed and other gemplasm;
- Providing advisory services; and
- Reviewing forest and tree tenure rules
- To promote investment in non-timber forest products (NTFP) industry
- To set up incentive measures to the benefit of potential private operators involved in wood transformation
- Local businesses, communities and public agencies should utilize the
- opportunities offered by international climate agreements to reduce their carbon
- Footprints and acquire sellable credits and financial opportunities of carbon market.
- Boosting wood fuel supply and using available resources efficiently since this is the principal source of energy in the country;
- Supporting the lead agency on energy to mainstream wood fuel in the national energy policy;
- Regulating use and trade of all forest products and;
- Collecting and analysing national forest products related

6.7. Establishment, rehabilitation and conservation of watershed protection forests

Watershed degradation is mainly due to the erosion caused by non concerted resources utilization that does not take into consideration the protection of ecosystems in place. To reverse the trend, it is necessary to undertake the following strategic actions:

- Identifying, mapping and assessing the condition and status of major watersheds in Rwanda;
- Rehabilitating degraded forests in the watersheds;
- Developing regulations and guidelines for management of lakeshore and riverbank forests; and
- Developing educational material and mobilising the population to protect watersheds by tree planting.

- Supporting bordering communities in developing community management and/ or utilization approach of soil, water and forests resources, to learn lessons and promote succeed experiences elsewhere.

6.8. Supply of improved high quality tree seed and other germplasm

In order to improve the yield of planting, it is needed to increase the quality of seeds and promote the mechanisms of distribution to the farmers and other stakeholders. Biotechnology development will permit the possibility of rapid multiplication of seedlings that can be used instead of seeds. Implementation strategies shall include:

- Determining national tree seed demand and supply;
- Establishing and managing tree seed and other germplasm sources for all agro-ecological zones of Rwanda;
- Producing, marketing and promoting use of high quality tree seed and other germplasm;
- Establishing standards and guidelines for seed collection, handling and distribution for quality control;
- Building the capacity of the private sector for tree nursery management; and
- Establish ex-situ for conservation and preservation of tree seed.
- Using biotechnologies to speed up maturity of trees to reduce unproductive period, the long time forests take to generate income and to multiply the needed quantity of seedlings to be directly planted.

6.9. Conservation and wisely use of forest biodiversity

In the context of Rwanda, conservation of forest biodiversity may be at stake, however following options aiming at enhancing alternatives economic activities around natural forests and better managements will ensure rational sustainable utilization.

- Promoting and supporting innovative financing mechanisms, such as cess, trusts, ecotaxes, service licenses and payments for environmental services, in order to ensure sustainable sources of operational funds.
- Management of existing protected forests and other natural forests
- Establishing buffer-zone plantations protected forests and other natural forests
- Creating partnerships and informed participation of stakeholders with sanctioned authority
- Implementing *integrated conservation and development programmes* (ICDPs) among local communities neighbouring
- Promoting collaboration between relevant sectoral institutions
- Promoting ex-situ and in-situ conservation of genetic resources

6. STAKEHOLDER VIEWS

A good set of stakeholders was consulted through individual contact and a validation workshop. Contacted stakeholders comprise among others, government institutions at central and decentralised levels, NGOs, international organisations, donors and representatives from the private sector.

They all welcomed the policy intent of encouraging the private sector to be more engaged in the forestry sector. They believed that private investment in the forestry sector will contribute to job creation, generate more monetary incomes and increase forest production on sustainable basis. Creation of wood processing plants will encourage farmers to plant more trees and this may result in more ecological benefits for the whole country.

They agreed that farm forestry constituted a strong option for increasing national forest cover. Incentives proposed in terms of strategic options would also encourage in creating woodlots and in practising agroforestry. Stakeholders appreciated the way farm forestry would be promoted since land for industrial forest plantations was becoming scarce. They recommended that MINIFOM through its implementing agency NAFA and MINAGRI through its agency RADA should work together to promote agroforestry systems.

Stakeholders recognised also that the forestry sector was understaffed, and its extension service very weak. They acknowledged options proposed for training the forest personnel and for strengthening the forestry extension service. These would address adequately most of the challenges facing the forest sector. They appreciated the fact that all these would be supported by a well organised forestry research.

7. IMPLEMENTATION PLAN

To implement this policy, the government will place particular emphasis on the use of market mechanisms and incentives, to elicit realistic product prices and to stimulate specialisation and efficiency in forest resource utilisation. Critical to this will be the commitment and genuine involvement of all stakeholders in decisions that potentially affect them, their work and/or mandate. Also, while the private sector shall occupy centre stage, the government will not abdicate its responsibility as a guarantor and custodian of public good.

This is especially relevant to protection of forests which are unlikely to attract much interest from the private sector and in view of the fact that the private sector corporate culture in Rwanda is still in its infancy. Progress in the sector, therefore, will continue to rely on substantial government involvement. As illustrated in annex 1, some stakeholders or partners will be responsible for particular activities in the implementation of this policy.

8. FINANCIAL IMPLICATION

This policy will have financial implications in terms of budget needed for investing in different programs, the principal provider of such funds will be generally the government on one hand, on another hand this policy is providing greater opportunities to private economic operators to invest in forestry sector since this policy strongly supports the running of the forestry sector in business manner. The forest sector may generate incomes from sale of public mature forests and may benefit as well from private investment in wood processing and creation of industrial forest plantations. Annex 2 is basically showing both private and public investments needed for creating and managing forest resources and it is indicating origin of different funds.

9. LEGAL IMPLICATIONS

Statement of preferred options is an outline of key elements of support for the implementation of the Forestry Policy. These will be further elaborated in development and update of the National Forestry Plan (NFP) and will be the means by which the policy will be kept alive and adequately responsive to national needs, while translation of this policy into action shall be by means of a law on forestry, which is needed in order to codify the policy objectives, including:

- Casting the sectoral law within the mould of the Constitution and other relevant laws, especially those relating wildlife, environment, land, agriculture and decentralisation, to create harmony, elicit synergies and facilitate smooth forest management;
- Internalising international conventions, protocols, norms and standards relevant to the sector so as to manage and regulate the sector in the wider interest;
- Providing for local interests and dynamics;
- Providing a legal basis for declaring Classified Forests and competitive licensing;
- Establishing new institutional arrangements;
- Elucidating the role of sub-national decentralised structures in forest management;
- Specifying incentives for managing existing resources and creating new tree stocks on agricultural and other suitable land; and
- Providing for issuing of Regulations, Guidelines and Instructions.

The law is an absolute necessity not only because it is a direct mechanism for policy implementation but also because it provides stability against too rapid policy changes that could be inspired by short-term considerations.

10. IMPACT ON BUSINESS

This policy will boost and modernise the way of running forest business in Rwanda. The government will privatise the management of its forests on a competitive basis. The private sector will be invited to buy and manage public forests on the basis of established forest management plans. Implementation of those forest management plans will ensure sustained yield and consequently sustained job creation in establishing manmade forests and in exploiting them. Wood processing plant will be created, and Rwandan forest products with a higher value addition will be put on national and regional market. Establishment of wood processing plants in remote areas will favour creation of development attraction centres and many other small businesses will emerge in the nearby surrounding. Farmers will be also encouraged to plant more trees because the market will be ensured. In 2008 a partial study concerning the charcoal business alone revealed that 20,000 people were employed , and that the same business generated annually 2.6 billions usd. It is envisaged that this policy will allow to increase job creation by 200% and by 170% income generated by the forest business. It is expected that exploitation of public forests will annually generate more 700 millions Rwfs, whereas the private forestry business is expected to increase up to 3 billions usd.

11. IMPACT ON EQUALITY, UNITY AND RECONCILIATIONS

This policy takes into account gender related issues and is keen to promote them. Affirmative action to redress gender inequalities and disadvantaged groups shall be integrated in all forest management plans. Indeed forests and trees provide the bulk of energy used by most households in Rwanda. Collection of woodfuel is normally the responsibility of women and children. Easy access to forests/trees will improve the well-being and nutrition of those groups.

Unity and reconciliation are key pillars for durable development. As the main objective of this policy is to enhance the running of forestry in business manner, cooperatives of forest growers, cooperatives of forest products' traders and cooperatives of forest products' users will be encouraged and this will cement unity and reconciliations among Rwandans as different human groups will have positive interests to share in common.

12. HANDLING PLAN

The National forestry authority (NAFA) will take the lead in disseminating this policy to grassroots. It will multiply the policy document and distribute it to the Sector level, in addition to this, broadcasted debates and sensitisations workshop will be organised in order to inform the maximum of citizens in different interested groups. NAFA extension group will play key roles in bringing this policy to the grassroots; front-line extentionists will organise several meetings with farmers in order to explain them this forestry policy.

ANNEX 1: ROLES OF KEY PLAYERS IN THE FORESTRY SECTOR

Central government

For effective and coordinated implementation of this policy, the institutional framework will have to change, based on (i) current roles of the central and local governments, (ii) need to engage the private sector more intensely and (iii) requirement to equip new institutions with adequate flexibility in decision making and use of financial resources while remaining adequately accountable to the public. In this regard, the central government shall the responsibility for:

- Coordinating inter-ministerial issues in the sector;
- International forestry-related processes;
- Engagement with local governments through the District Forestry Service ;
- Maintaining oversight for sector planning;
- Developing, reviewing and ensuring that this policy is implemented;
- Legislation;
- Regulating the sector;
- Issuing standards;
- Providing extension services;
- Monitoring performance; and
- Providing and/or leveraging financial resources for implementation of this policy;
- Privatising the management of its forest assets.
- Create a national institution in charge of forestry.

Local government

The local government will ensure that orientations and guidance from central government are well internalized, it will specifically contribute to:

- Forestry law enforcement;
- Facilitate the participation of local communities;
- Liaison with private sector to facilitate investment;
- Control over land use and land allocation;
- Support decentralized forestry extension services; and
- Facilitate interventions of NGOs in the forestry sector

Private sector

The private sector will be more involved than it has been to date. It will play key roles in value addition to wood products and in increasing the forest cover. The private sector will in charge of:

- Creating wood based industries;
- Acquiring management and harvesting licenses for public forests;
- Establishing industrial forest plantations;

- Boosting internal trade of forest products; and
- Supporting small forest out growers

Communities

Communities are also expected to play a vital role in the implementation of this policy. they will carry out following activities:

- Implement forestry legislations
- Create woodlots on their land
- Adopt and implement agroforestry technologies
- Work with forest extensionists
- Work closely with NGOs to increase forest cover
- Participate in forest conservation and protection
- Allow forest investments on their land
- Utilize efficiently forests products

NGOs,

Roles of environmental and forest NGOs will consist of : owing roles:

- Contributing to the development of policies and plans vibrant forest sector
- Assisting the government, private sector and communities in implementing, monitoring and evaluating sustainable forest management
- Attracting funds from donor agencies to develop forest projects in rural areas
- Assisting communities and community groups in organising themselves, preparing themselves for forests and trees management
- Assisting the government in conducting forestry awareness programmes among communities
- Liaising between the private sector and communities to generate more community involvement in the forest sector and stronger private sector commitment
- Delivering education, training and bridging courses to local communities

The media

Areas of participation and involvement by the local media in implementing the forestry policy include:

- Awareness programmes to the population at large
- Press coverage and special forest campaigns and special forest events such as National week trees
- Disseminate by air or by news papers forestry policies and laws
- Collect and disseminate information on wood market and trade at national and internal levels

Financial institutions and development partners

Financial institutions have a critical role to play in the forestry sector, by enabling investors and entrepreneurs to access funding to start and expand their businesses. They are expected to play the following roles:

- Provide access to finance to forest investors;
- Require reasonable guarantees on loans, and provide flexibility for new entrants into the market;
- Provide reasonable and low interest loans where returns on investment take time to generate;
- Provide preference in credit to investors with a good approach since forestry business takes long to generate returns.

Training institutions

Training institutions have a key role in capacity building for the forestry sector. To reach such objectives, training institutions should stress on the following issues:

- adapt curricula to peculiar features of our forestry sector
- Ensure quality training from forest professionals to forest workers
- Be responsive to the needs of the private sector in the recruitment of staff, development of course material, design of internships in industry, and in the skills transferred to students;
- Development of library and reference resources;
- Provide assistance to students in their search for employment following graduation;

ANNEXE 2: DETAILED IMPLEMENTATION FRAMEWORK

This implementation framework gives a tentative budget and responsible institutions. The major fundraisers will be the Government through its ordinary and development budgets. However the private sector let say investors in this case and NGOs will play key roles in providing necessary additional funds. Public man made forests will generate incomes that will be reinvested if the forestry sector; the selling of forest plantations alone around Nyungwe national Park are expected to generate around 50 millions usd. Funds expected in the near future from donors are estimated to 21 millions usd¹⁰.

Programs	Activities	Responsible	Budget x1,000,000 RWF	Time frame				
				2010	2011	2012	2013	2014
A permanent forest estate under Government of Rwanda trusteeship shall be maintained through a system of public and private forests.	To re-survey all Classified Forests with a view of rationalising boundaries	NAFA	575	█				
	To undertake afforestation and reforestation initiatives to expand the country's forest cover	NAFA, private sector, NGOs	2300	█	█	█	█	█
	To support the local authorities to manage forests as provided for under the law	NAFA, Districts, NGOs	2875	█	█	█	█	█
	To Develop management plans for all Classified Forests	NAFA	57.5	█				

¹⁰ the Kingdom of Belgium (6Euros), and Netherlands (10millions Euros) and Congo basin forest fund (5millions euros) are the main donors, and a part of their funds is already available

	To undertake scientific research for promotion of innovation, maintenance of sustainability and competitiveness and ensuring progressive improvement in forestry policy and practice;	NAFA, Forestry research	115					
	To monitor and assess forest health and factors affecting it as a basis for strategic responses to any potential threats to sustainability	NAFA, Forestry research	172.5					
	To improve management of the National Forestry Fund	NAFA/MINIC OFIN	11.5					
A modern, competitive, efficient and value-adding forest-based industry shall be promoted.	To undertake regular biological and biometric inventories	NAFA, Forestry research	287.5					
	To review forest and tree tenure rules with a view of privatising industrial plantation development	NAFA	23					
	To promote development of viable and efficient forest-based industries, particularly in secondary and tertiary processing, so as to fully utilise forest products, reduce excessive waste and satisfy domestic and export demand through appropriate incentives;	NAFA, RDB, private sector	115					
	To award licences to on a competitive basis in order to foster transparency and freedom of market forces	NAFA	0.575					

	To undertaking skills training and apprenticeship for wood processors to reduce waste and improve quality and productivity	NAFA, MINEDUC	575					
Capacity at all levels of forest governance to develop and manage forest resources shall be enhanced	To assess professional and technical capacity needs and to design an appropriate capacity development plan for performance and achievement of objectives of this policy	NAFA	0.575					
	To review mandates of institutions involved in the forest sector with a view to strengthening coordination, facilitating integration of sectoral concerns and strategies and avoiding duplication, competition, resource wastage and conflict	NAFA	0.575					
	To reorganise the forestry sector through rationalising, divestiture and semi-autonomous functioning	NAFA	0.575					
	To support districts, sectors, villages and civil society groups to develop and implement forestry activities	NAFA, NGOs	2875					
Urban and peri-urban forestry shall be promoted throughout Rwanda to secure aesthetic, economic, environmental and social benefits for dwellers	To create awareness on value of urban and peri-urban trees	NAFA	0.575					
	To support urban authorities with technical support on tree nurseries and tree husbandry and in locating and developing sites in urban and peri-urban areas for tree growing	NAFA	57.5					

Tree-growing shall be promoted in all farming systems to boost land productivity, increase income and improve food security and a responsive forestry extension service developed	To disseminate <i>best practices</i> in farm forestry in all farming systems in Rwanda;	NAFA	287.5					
	To build capacity of farmers and private sector in favour of farm forestry	NAFA	575					
	To intensify research into suitable farm forestry technologies, niches and tree species for various agro-ecological zones	NAFA, Forestry research	575					
	To promote growing and/or husbandry of multi-purpose trees in all farming systems	NAFA	1150					
	To re-orienting frontline agricultural extensionists into farm forestry;	NAFA	5.75					
	To develop and amplify farm forestry content in extension packages and integrate these into a unified extension system for all farming systems in the country	NAFA	172.5					
	To Support farmer groups to establish and manage tree nurseries for commercial purposes	NAFA	287.5					
	To encourage schools and other youths organisations to grow and conserve trees	NAFA	172.5					
	To develop training programmes and field manuals for front-line extension agents	NAFA	5.75					

	To train, re-train and disseminate information to farming households.	NAFA	460					
Profitable and productive forest plantation businesses shall be promoted for timber, fuelwood and carbon sequestration	To promote and support innovative financing mechanisms, such as trusts, ecotaxes, service licenses and payments for environmental services, carbon trade, in order to ensure sustainable sources of operational funds.	NAFA	23					
	To boost wood fuel supply and using available resources efficiently since this is the principal source of energy in the country	NAFA	575					
	To establish legal mechanisms to enable the private sector to invest and manage classified forests	NAFA	11.5					
	To promote innovative financing mechanism through the National Fund for Forestry	NAFA	11.5					
	To avail improved seed and other germplasm	NAFA, Forestry research	287.5					
Watershed protection forests shall be established, rehabilitated and conserved to protect soil fertility and water quantity and quality	To rehabilitate degraded forests in the watersheds	NAFA	575					
	To develop educational material and mobilise the population to protect watershed forests	NAFA	230					

Forestry training shall be established in the country and forestry research reorganised	To establishing training facilities for forest workers	NAFA	287.5					
	To carry out training for forestry professionals in East Africa University and Elsewhere	NAFA, MINEDUC	287.5					
Supply of improved high quality tree seed and other germplasm shall be improved to meet increased national demand	To establish and managing tree seed orchard and other germplasm sources for all agro-ecological zones of Rwanda	NAFA, Forestry research	287.5					
	To produce, market and promote use of high quality tree seed and other germplasm	Forestry research	172.5					
	To establishing standards and guidelines for seed collection, handling and distribution for quality control	NAFA, Forestry	17.25					
Rwanda's forest biodiversity shall be conserved and used wisely in support of local and national socio-economic development and international environmental obligations	Management of existing protected forests	NAFA	287.5					
	To establish buffer-zone plantations around Protected forests;	NAFA	2300					
	To implement integrated conservation and development programmes (ICDPs) among local communities neighbouring natural forests	NAFA	1150					
	To promote ex-situ and in-situ conservation of genetic resources	NAFA, Forestry research	172.5					
TOTAL BUDGET			20,409.63					

