

# TECHNICAL & FINANCIAL FILE

## SUPPORT PROGRAM TO THE DEVELOPMENT OF THE FORESTRY SECTOR IN RWANDA (PAREF II)

### RWANDA

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THE BELGIAN  
DEVELOPMENT COOPERATION **.be**

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## Abbreviations

Abbreviations in English		Equivalent in French	
A0	Education level : university degree master	Niveau d'études : ingénieur, licence, ingénieur industriel, ingénieur des travaux (=BAC+4 ou BAC+5)	A0
A1	Education level : bachelor	Niveau d'études : graduat (=BAC+2 ou BAC+3)	A1
A2	Education level : Technician (end of secondary school)	Niveau d'études : enseignement secondaire supérieur professionnel (=BAC)	A2
AfDB	African Development Bank	Banque Africaine de Développement	BAD
APFH	Support to the Horticulture Sector of Rwanda	Appui à la Filière Horticole du Rwanda	APFH
BEST	Biomass Energy Strategy	Stratégie pour la biomasse-énergie	BEST
BTC	Belgian Technical Cooperation (Belgian Development Agency)	Coopération Technique Belge	CTB
CATALIST	Catalyze Accelerated Agricultural Intensification for Social and Environmental Stability	Catalyser et Accélérer l'Intensification Agricole pour la Stabilité et la Protection de l'Environnement	CATALIST
AICC	Agricultural Information and communication center	Centre d'Information et de Communication Agricole	CICA
	Agricultural Research for Development (France)	La recherche agronomique pour le développement (France)	CIRAD
CDF	Community Development Fund	Fonds Commun de Développement	FCD

Abbreviations in English		Equivalent in French	
CGF	Forest Tree Seed Center	Centrale des Graines Forestières	CGF
	Execution agreement	Convention de mise en oeuvre	CMO
CGIS	GIS Center, National University of Rwanda, Huye	Centre GIS, Université Nationale du Rwanda, Huye  (Centre de Recherche et de Formation en Système d'Information Géographique et Télédétection)	C-GIS
BTC	Belgian Development Agency	Agence Belge de Développement	CTB
TD	Tender document	Dossier d'Appel d'Offre	DAO
CD	Co-management delegate	Délégué à la Co-Gestion	DELCO
AFD	Administrative and Financial Director	Directeur Administratif et Financier	DAF
DDP	District Development Plan	Plan de Développement de District	PDD
DFD	District Forestry Fund	Fonds Forestier de District	FFD
DFMP	District Forest Management Plan	Plan d'Aménagement Forestier de District	PAFD
DFS	Deutsche Forstservice GmbH		
DG	Director General	Directeur Général	DG
ID	Intervention Director	Directeur d'Intervention	DI
EDPRS	Economic Development Poverty Reduction Strategy		
EVFO	Veterinary and Forestry School	Ecole Vétérinaire et Forestière	EVFO
EICV	Household Conditions Survey	Enquête sur les Conditions de Vie des	EICV

Abbreviations in English		Equivalent in French	
	Survey	Ménages	
EII	Employment Intensive Investment	Haute Intensité de Main-d'Oeuvre	HIMO
ENR SSP	Environment and Natural Resources Sector Strategic Planning		
EST	Sector and Thematic Expertise Unit at BTC	Expertise Sectorielle et Thématique (département CTB)	EST
EUEI PDF	European Union Energy Initiative – Partnership Dialogue Facility		
FAO	Food and Agriculture Organization of the United Nations	Organisation des Nations Unies pour l'Alimentation et l'Agriculture	FAO
FMG	Forest Management Group	Groupement de Gestion Forestière	GGF
GIS	Geographical Information System	Système d'Information Géographique	SIG
GDP	Gross Domestic Product	Produit Intérieur Brut	PIB
GM	Gender Mainstreaming		
GNP	Gross National Product	Produit National Brut	PNB
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit		
ICP	Indicative Cooperation Program	Programme Indicatif de Coopération	PIC
ICRAF	World Agro-forestry Centre	Centre International pour la Recherche en Agroforesterie	CIRAF
ICT	Information and Communication Technology		
IFAD	International Fund for Agricultural	Fonds International de Développement	FIDA

Abbreviations in English		Equivalent in French	
	Development	Agricole	
IFDC	International Center for Soil Fertility & agricultural Development		
IRST	Institute of Scientific and Technological Research	Institut de Recherche Scientifique et Technologique	IRST
ISAE	Higher Institute of Agriculture and Animal Husbandry	Institut Supérieur d'Agriculture et de l'Elevage	ISAE
ISAR	National Agricultural Research Institute	Institut des Sciences Agronomiques du Rwanda	ISAR
JAF	Forestry Joint Action	Joint Action Forestier	JAF
LAFRC	Lands and Forests Research Center (ISAR)	Centre de Recherche sur la Terre et la Foresterie	LAFRC
LPG	Liquefied Petroleum Gas	Gaz de Pétrole Liquéfié	GPL
MAI	Mean Annual Increment (m <sup>3</sup> /ha/year)	Accroissement Annuel Moyen	AAM
MARGE	Marketing and Management of the Environment	Marchéage et Gestion de l'Environnement	MARGE
m.d	man.day	homme.jour	h.j
M&E	Monitoring & Evaluation	Suivi et Evaluation	
MDG	Millennium Development Goals		
MIFOTRA	Ministry of Public Service and Labor	Ministère de la Fonction Publique et du Travail	MIFOTRA
MIG	Multisectorial Investment Group		
MIGEPROF	Ministry of Gender and Promotion of Family		

Abbreviations in English		Equivalent in French	
MINAFFET	Ministry of Foreign Affairs and Cooperation	Ministère des Affaires Etrangères et de la Coopération	MINAFFET
MINAGRI	Ministry of Agriculture and Animal Resources	Ministère de l'Agriculture et des Ressources Animales	MINAGRI
MINALOC	Ministry of Local Government, Good Governance, Community Development and Social Affairs	Ministère de l'Administration Locale, de la Bonne Gouvernance, du Développement Communautaire et des Affaires Sociales	MINALOC
MINECOFIN	Ministry of Finance and Economic Planning	Ministère des Finances et de la Planification Economique	MINECOFIN
MINELA	Ministry of Environment and Land	Ministère de l'Environnement et des Terres	MINELA
MINICOM	Ministry of Trade, Industry, Investment Promotion, Tourism and Cooperatives	Ministère du Commerce, de l'Industrie, de la Promotion de l'Investissement, du Tourisme et des Coopératives	MINICOM
MINIFOM	Ministry of Forests and Mines	Ministère des Forêts et des Mines	MINIFOM
MININFRA	Ministry of Infrastructure, Energy and Telecommunications	Ministère des Infrastructures	MININFRA
MINIRENA	Ministry of Natural Resources (former ministry)	Ministère des Ressources Naturelles	MINIRENA
MINITERE	Ministry of Lands, Environment, Forestry, Water and Mines (former ministry)	Ministère des Terres, de l'Environnement, des Forêts, de l'Eau et des Mines	MINITERE



Abbreviations in English		Equivalent in French	
m.m	man.month	homme.mois	h.m
MSc	Master of Science	Maîtrise	
MTEF	Medium Term Expenditure Framework		
MTR	Mid-Term Review	Evaluation à mi-parcours	EMP
NAFA	National Forestry Authority	Office Rwandais de Gestion et de Promotion des Forêts	
NBR	National Bank of Rwanda	Banque Nationale du Rwanda	BNR
NFF	National Forestry Fund	Fonds Forestier National	FFN
NFP	National Forestry Plan	Plan Forestier National	PFN
NGO	Non-Governmental Organization	Organisation Non Gouvernementale	ONG
NGP	National Gender Policy		
NISR	National Institute of Statistics of Rwanda		
NLC	National Land Center	Office National de Conservation des Titres fonciers	
NUR	National University of Rwanda	Université Nationale du Rwanda	UNR
OECD	Organization for Economic Cooperation and Development	Organisation de Coopération et de Développement Economiques	OCDE
OGMR	Rwanda Geology & Mining Agency	Office de la Géologie et des Mines du Rwanda	OGMR
ORTPN	Rwandan Office of Tourism & National Parks (former office)	Office Rwandais du Tourisme et des Parcs Nationaux (anciennement)	ORTPN
PAFOR	Forest Management Support Project	Projet d'Appui à l'Aménagement des	PAFOR

Abbreviations in English		Equivalent in French	
	Support Project	Forêts du Rwanda	
PAREF	Support Program to the Reforestation in Rwanda	Programme d'Appui à la Reforestation au Rwanda	PAREF
PAREF.be or PAREF I	Support Program to the Reforestation in the Northern and Eastern Provinces of Rwanda	Programme d'Appui à la Reforestation dans les Provinces du Nord et de l'Est du Rwanda	PAREF.be ou PAREF I
PAREF.nl or PAREF II	Support Program to the Reforestation of 9 Districts of the Northern and Western Provinces of Rwanda	Programme d'Appui à la Reforestation de 9 districts des provinces Nord et Ouest du Rwanda	PAREF.nl ou PAREF II
PASNVA	Support Project to the National Agricultural Extension System	Projet d'Appui au Système National de Vulgarisation Agricole	PASNVA
PDRCIU		Projet de Développement des Ressources Communautaires et des Infrastructures de l'Umutara	PDRCIU
PSCBS	Public Sector Capacity Building Secretariat		
CIP	Cooperation, Indicative Programme	Programme Indicatif de Cooperation	PIC
PMU	Project/Program Management Unit	Unité de Gestion du Projet/Programme	UGP
PS	Permanent Secretary	Secrétaire Permanent	SP
RADA	Rwanda Agriculture Development Authority		
		Responsable Administratif et Financier	RAF
RDB	Rwanda Development Board		
REMA	Rwanda Environment Management Authority		

Abbreviations in English		Equivalent in French	
RESAPP	Regional Environmental & Sustainable Agricultural Productivity Program		
RHODA	Rwanda Horticulture Development Authority		
RIAM	Rwanda Institute of Administration and Management		
RPPA	Rwanda Public Procurement Authority		
RWF	Rwandan Franc	Franc Rwandais	FRW
SC	Steering Committee	Structure Mixte de Concertation Locale	SMCL
SCC	Swedish Cooperative Centre		
SIDA	Swedish International Development Agency		
SIEP	System of Information and Permanent Evaluation	Système d'Information et d'Evaluation Permanente	SIEP
SMP	Supply Master Plan	Schéma Directeur d'Approvisionnement	SDA
<i>sp</i>	Species	Espèce	<i>sp</i>
SPAT	Strategic Plan for Agricultural Transformation	Programme Stratégique de Transformation de l'Agriculture	PSTA
SPO	Simple Plan of Operations	Plan Simple de Gestion	
SWAp	Sector Wide Approach		
SWOT	Strengths, Weaknesses, Opportunities, Threats		
TA	Technical Advisor/Assistant		
ToR	Terms of Reference	Termes de Référence	TdR

Abbreviations in English		Equivalent in French	
TFF	Technical & Financial File	Document Technique et Financier	DTF
UNDP	United Nations Development Program	Programme des Nations Unies pour le Développement	PNUD
VAT	Value Added Tax	Taxe sur la Valeur Ajoutée	TVA
HIV	Human Immunisation Virus	Syndrome d'Immunodéficience Acquise	SIDA
WB	World Bank	Banque Mondiale	MB
WISDOM	Woodfuel Integrated Supply/Demand Overview Mapping	Analyse spatiale intégrée de la demande et de l'offre en combustibles ligneux	
WSMP	Wood Supply Master Plan		Plan directeur d'approvisionnement en bois

## Executive summary

This Technical and Financial File formulates a program which, in accordance with the terms of reference of the formulation and the debriefing in Kigali, is the second phase of the Support Program to the Reforestation in the Northern and Eastern Provinces of Rwanda implemented by BTC in the framework of the Belgo-Rwandan cooperation. Given the slightly wider scope of this new phase, it is proposed to give it a new name: Support Program to the Development of the Forestry Sector in Rwanda.

The formulation presents the program as an independent intervention, of which the actual relationship with other Belgian supported forestry interventions and the exact starting date in 2011 still need to be confirmed.

The program is implemented under MINIFOM and has a double anchorage: (i) at the central level it is part of the National Forestry Authority and aims at strengthening this structure which has been created fairly recently and is currently not yet fully operational; (ii) in 6 pilot districts it aims at promoting decentralized sustainable forest management, an action which is in the process of being launched.

The main principles of the intervention are (i) to build capacities in the forestry sector through action and (ii) to boost the development of this sector, which has for historical reasons been in a condition of serious decline for the last two decades.

Therefore, the specific objective of the program is:

“The bases of a system of sustainable management of the forest resources of Rwanda are established and needs of the country for forest products are increasingly met”.

The three results to reach this objective are:

Result 1 : "The availability of trained professional foresters is increased and technical capabilities of stakeholders in the forestry sector are strengthened".

Result 2 : "The institutional capacities to implement the national forest policy are reinforced from the central level to the decentralized level".

Result 3 : "Forest resources in the pilot districts (3 in the Northern Province and 3 in the Eastern Province) are increased and diversified and their management is improved".

The implementation of the program relies on the establishment of a light Program Management Unit embedded within NAFA. Given the volume of the activities of capacity building, this Program Management Unit includes two International Technical Assistants, one of whom is entirely dedicated to training.

The Belgian contribution is 6 million euros and the total duration of the program is 48 months, including 3 months of inception.

## Analytical record of the intervention

Title of the program	Support Program to the Development of the Forestry Sector in Rwanda (Second phase of the Support Program to the Reforestation in the Northern and Eastern Provinces of Rwanda)
N° of intervention DGCD	3008336
Navision code BTC	RWA 09 070 11
Partner institution	Ministry of Forestry and Mines (MINIFOM)
Duration of the intervention	48 months + 12 months
Planned implementation start	January 2011
Contribution of partner country	1,000,000 €
Belgian contribution	6,000,000 €
Sector (CAD code)	Sylviculture – Forest policy and management (CAD 31210)
Global objective	The implementation of the national forest policy contributes to poverty alleviation, economic growth and environment protection
Specific objective	The bases of a system of sustainable management of the forest resources of Rwanda are established and needs of the country for forest products are increasingly met
Expected results	<p>Result 1 : The availability of trained professional foresters is increased and technical capabilities of stakeholders in the forestry sector are strengthened</p> <p>Result 2 : The institutional capacities to implement the national forest policy are reinforced from the central level to the decentralized level</p> <p>Result 3 : Forest resources in the pilot districts (3 in the Northern Province and 3 in the Eastern Province) are increased and diversified and their management is improved</p>

# 1 Situation analysis

## 1.1 General framework of the development policy

### 1.1.1 Vision 2020

The Vision 2020 presents the framework of a long-term development policy so that Rwanda can become a country with intermediate income with a GDP per capita of 1000 US\$ by 2020. The pillars of the Vision 2020 are (i) political and economic good governance, (ii) the transformation of the rural economy, (iii) the development of industry and services, (iv) the development of human resources, (v) the development and the promotion of the private sector, (vi) regional and international economic integration and (vii) poverty reduction. The Vision 2020 has an ambition to bring back the demographic growth to 2,2%, to reduce to 50% the proportion of the population living off agriculture and to reduce poverty to 25% of the population in 2015.

The Government, through the Vision 2020, identifies the development of the forestry sector as a national priority. In that context, **the national forest areas must increase significantly and reach 30% of the national territory by 2020** (from an assumed 20% in 2007). At the same time, **the coverage of agro-forestry systems must increase to 85% of all croplands.**

### 1.1.2 Economic development & poverty reduction strategy

The National Poverty Reduction Strategy finalized in 2001 considers as first priority the transformation of agriculture and rural development. In September 2007, the Government adopted and published the new phase of the program focusing on economic development (Economic Development and Poverty Reduction Strategy, EDPRS) and the role played by the decentralized entities.

The logical framework of the EDPRS 2007-2011 attaches great importance not only to the conservation and sustainable rehabilitation of forestry and agro-forestry resources but also especially to **generating income from (agro-)forestry**, and to designing a policy and legislation which may reinforce the protection by the rational use of forest resources.

The present program lies mainly within the framework of the contribution of the forestry sector to the national economic development (GDP), the creation of jobs (sustainable employment for loggers, coalmen, afforestation technicians, forest managers), as well as the implication and capacity building of the private sector.

### 1.1.3 National Forest Policy

The National Forestry Policy was published in 2004 by the Directorate of Forests of the former Ministry of Lands, Environment, Forestry, Water and Mines (MINITERE, 2004). The global objective and the specific objectives of this policy are the following :

Objective 1: increase and diversification of the national forest resources

Objective 2: improvement of the management of the forest resources

Objective 3: improvement of forestry extension

- Objective 4: downstream processing of wood and non timber forest products
- Objective 5: development of research in forestry and agro-forestry
- Objective 6: saving of wood
- Objective 7: improvement of the capacities of the public forestry institutions
- Objective 8: evaluation of the contribution of goods and services provided by the forestry sector to the national economy
- Objective 9: reinforcement of the sub-regional and international cooperation in forestry
- Objective 10: integration of the gender dimension in forestry activities

The present program falls under the implementation of the Forestry Policy and will be a financial and technical contribution to objectives 1, 2 and 7, and to some extent to objectives 3, 4, 6, 9 and 10. The the National Forest Policy was the first concrete step of the Rwandan Government to set out the priorities of the National Poverty Reduction Strategy and EDPRS in the forestry sector. This important stage of the process of reform of the forestry sector has been recently complemented by the institutional reform of the ministry in charge of forestry(See under 1.3 creation of MINIFOM and NAFA).

#### **1.1.4 National Agricultural Policy and SPAT**

In order to meet the ambitions defined for the agriculture sector in the Vision 2020 and the Program of Poverty Reduction, the Government of Rwanda adopted in October 2004 a National Agricultural Policy which is oriented towards poverty reduction and the contribution to a sustainable food security through:

- a family agriculture which is modernized, innovating, professional and specialized, employment and income generating and market-oriented (national, sub-regional and international);
- an integrated, diversified agriculture, regionally specialized, which guarantees food security for the population and an equitable distribution of resources and incomes;
- an agriculture safeguarding the environment and natural resources.

To implement the National agricultural Policy, the Strategic Program for the Agriculture Transformation (SPAT) was adopted by the Rwandan Government in January 2005. The general objective of the SPAT is « to contribute in a sustainable way to the poverty reduction and to support the economic growth of Rwanda through the increase of the productivity of the production factors, the intensification of the use of the productions, the diversification of income opportunities, the protection and maintenance of the environmental natural resources ».

The SPAT recognizes the importance of farmer organizations in the strategy and considers capacity building as one of the conditions for success. The SPAT includes programs to support and increase their participation in the process of agriculture development.



There are countless interactions between the agriculture sector and the forestry sector, an important one being agro-forestry. Therefore the forestry sector, in some ways emergent, has to take into account the lessons from the strategy used in agriculture.

### **1.1.5 Decentralization**

There are four strategic objectives of decentralisation: (i) make people aware of their responsibilities and mobilize them in order to involve them in the development, the implementation and the monitoring of development programmes ; (ii) increase transparency at the level of local authorities in order to make them directly responsible vis-à-vis their communities ; (iii) support at national level a sensitivity to participative development and to enable local leadership to facilitate structures that give priority to the needs expressed by the population at the grass roots ; (iv) to develop a sustainable economic planning based on an efficient management of locally available resources.

#### **1.1.5.1 Reform of 2001**

The decentralization policy was concretised by the inaction of the laws and regulations which made it possible to establish in 2001 provinces and districts, the latter led by a Council and an Executive Committee elected for a mandate of 5 years.

Regarding forestry, the District Council is responsible for taking decisions, developing strategies and giving instructions relating to the development of district forest resources, while the Executive Committee is in charge of the implementation of the corresponding programs.

This process of decentralization was complemented by the development of complementary policies (Community Development Policy and Fiscal Decentralization Policy) and the creation of some tools such as the District Community Development Plans.

The major changes brought by the decentralization on the functioning of state institutions and the various development actors came from the definition and the sharing of roles and responsibilities between the central Government Ministries and the delegated entities (Provinces) and decentralized entities (Districts, Sectors, Cells).

Among other things, these changes were characterized by : (i) an increased transfer of responsibilities to Provinces and Districts in the coordination and implementation of development activities ; (ii) the transfer of responsibilities to collect some taxes ; (iii) the direct transfer of some budgets from the central government to local governments ; (iv) the possibility of signing partnerships directly with some donors ; (v) the district accountability in the management of project funds from bilateral and multilateral cooperation, etc.

However, the evaluations of the first phase of decentralization highlighted a number of shortcomings and weaknesses which have partly motivated the recent reform of the administration of the territory. These weaknesses were among other things :

- (i) poor performances in terms of quality and speed of the services provided by the Districts to the population;

- (ii) poor knowledge by the population of the roles of the various entities (central government and decentralized entities);
- (iii) limited financial viability of most districts.

### 1.1.5.2 Reform of 2006

The main elements of the new reform of the administration of the territory carried out at the beginning of the year 2006 are as follows :

- (i) A new division of the national territory comprising the city of Kigali, **4 provinces** (formerly 11), **30 districts** (formerly 106) (the towns are no longer considered as administrative entities but must rather support the development of the countryside) and **416 sectors** (formerly 1545).
- (ii) The *District*, as a decentralized entity, becomes the level of planning, development coordination and resource mobilization, while the *Sector* becomes the level of service delivery. On the other hand, the Province is reduced to a simple administrative entity representing the central government but without any real power in decision making or planning. It is thus devoid of resources and could disappear.
- (iii) Districts and sectors have got the following human resources : in addition to the Mayor, two Vice-Mayors and the Executive Secretary, each district has got at least 6 senior officers A0 for the technical units. Each sector has got 4 A0 or A1 officers.
- (iv) The organizational chart of the districts created by the 2006 reform has been adjusted at the end of 2009 and a new organizational chart has been issued in April 2010 which comprises 2 units : the Unit of Planning, Monitoring & Evaluation and the Unit of Finances and Administration. The Unit of Planning, Monitoring & Evaluation comprises 11 officers in charge of various departments including : Agriculture and Livestock Rearing, Cooperatives and business promotion, Land Management, Environment and Water, Forests and Education. This latest organizational chart of the districts and the one of the sectors is provided in **Annex 7.4**. The Executive Committee, which implements the decisions of the District Council, is made of the Mayor, the two Vice-mayors and the Executive Secretary.

### 1.1.6 National Gender Policy

The Ministry of Gender and the Promotion of the Family (MIGEPROF) formulated a National Gender Policy (NGP) that encloses guidelines to which sectoral policies and programs refer when integrating the gender issues in their respective planning and programming. Implementation of the NGP requires joint action of different actors, decision-makers, development workers and the entire population. The NGP is not meant to be prescriptive. Instead, it provides the overarching principles.

A strategic plan for the implementation of the National Gender Policy has been produced (MIGEPROF, 2009). Its mission is to provide an enabling environment for the promotion of gender equality in various sectors. The overall objective of the National Gender

Strategic Plan is the progressive elimination of gender disparities in all sectors as well as in management structures. The Specific Objectives are the following:

- To integrate gender issues into national, district and community programs and plans;
- To establish a legislative and institutional framework to initiate, coordinate, monitor and evaluate programs aimed at promoting gender equality at all levels ;
- To stimulate collective and concerted efforts, at all levels, to eliminate gender disparities and to facilitate gender equality in Rwanda.

The strategic plan for the implementation of the Gender Policy has 6 Strategic Objectives and 18 Policy Actions. Under the heading “Strategic Objective n° 3: “Improving the Rwandan men’s and women’s welfare”, policy action n° 13 strives to promote women’s participation in the management of environment and natural resources.

## 1.2 General framework of the forestry sector

### 1.2.1 Assessment of the status of forest resources

#### 1.2.1.1 Baseline data on the forest resources of Rwanda

The **forest resources** of Rwanda are made of natural forests/woodlands and artificial. The **natural forests** are mainly found in protected areas (National Parks : Volcanoes National Park, Nyungwe National Park and Akagera National Park; areas managed as reserves: Gishwati Forest). Natural forests within National Parks are managed by Tourism and Conservation, a department of MINICOM. Some natural woodlands exist outside protected areas but they are relicts and no longer pristine.

The **artificial woodlands**, established by plantation of exotic species, make the bulk of forest resources outside protected areas and they can be classified as follows :

Public woodlands:

Woodlands of the State: the typical example is the extensive woodlands created by afforestation projects;

Woodlands of the districts: usually of a smaller size than the State woodlands (medium-sized);

Woodlands of public institutions (ISAR e.g.);

Private woodlands:

Individual woodlands;

Woodlands of private institutions: churches, schools, etc.;

Other private woodlands: estates of tea factories, etc.;

Some sources mention another category of private woodlands called « community woodlands ». The existence of this category among private woodlands is arguable. It may actually refer to some woodlands of the districts.

The main tree species found in the artificial woodlands are Eucalyptus (*E. grandis*, *E.*

*saligna*, *E. maidenii*, etc., with common hybridation), pines (*Pinus patula*, *P. Kesiya*, *P. Caribaea*), *Grevillea robusta*, cypresses (*Cupressus lusitanica*), black wattle (*Acacia mearnsii*), *Acacia melanoxylon*, *Callitris sp.*, etc. The management of woodlands outside national parks is under the responsibility of MINIFOM.

There are some uncertainties regarding the figures concerning the area of total national forest cover, natural forests and artificial woodlands. As presented in the table below, estimates show an important variability according to the sources, even for the same periods.

**Table 1: Areas of total forest cover, natural forests and artificial woodlands in Rwanda**

Source :	<b>ISAR (2007)</b>	ISAR (2007)	ISAR (2007)	MARGE (2008), BEST, quoting ISAR (2007)	FAO (2005) / MINAGRI (2001)	ANONYMOUS (2007), draft 10-year National Forestry Plan
Situation :	Forest mapping of <b>2007</b>	Forest mapping of <b>1988</b>	Africover (2002) situation of 1999	2007	Situation of 2000	
Method :	(only areas $\geq 0,5$ ha)	(forest class of the topographical map)			(only areas $\geq 0,5$ ha)	
Natural forest	<b>125 910 ha</b>	140 044 ha	(333 301 ha)	206 523 ha	221 200 ha	221 300 ha
Artificial woodlands (plantations)	<b>114 836 ha</b>	125 270 ha	112 730 ha	240 708 ha	282 563 ha	310 960 ha
Total forest cover	<b>240 747 ha</b>	265 313 ha	(446 031 ha)	447 231 ha	503 763 ha	532 260 ha
% forest cover	10%	11%		19%	21%	22%
Total land area Rwanda	2383 500 ha					

Notes :

The columns with the different sources are presented from the lowest estimates to the left to the highest estimates to the right.

The data of the 6th column (FAO, 2005) come from a compilation of existing data from MINITERE, ORTPN and ISAR. This source reminds that these figures are mere estimates.

The results of the fourth column (Africover, 2002) are thought to overestimate the area of natural forests due to an overestimation of the forests of the eastern savannas (ISAR, 2007).

The data of the third column (forest mapping of 1988) are supposed to be fairly reliable as they are based on the topographic maps.

The data of the second column come from the mapping of the forests of Rwanda in 2007 based on the interpretation of satellite images.

Rwanda is a densely settled country (about 10 million inhabitants, 75% rural based, population density about 400 inhabitants / km<sup>2</sup>, with an increase of about 3%/year). For this reason, land is scarce and among the various estimates of the table above, the actual areas of forest cover are likely to be on the lower side. However, in spite of this acute land scarcity, trees are very present in the landscape : two additional contributions to the woody resources need to be mentioned :

(i) Woodlots smaller than 0.5ha. No accurate data exist on this component of the resources, but it is believed to be significant ;

(ii) Trees on farms. Beside the existence of natural forests and artificial woodlands, for a very long time Rwandans have shaped landscapes into a mosaic of wooded fields and gardens. The result is that agro-forestry has become a very common land use practice. Even when trees are planted at a low density inside the fields and across the landscape, it is known from surveys in other countries that it usually represents an important contribution to the national wood supply because the areas concerned are vast.

Given the steep relief in large parts of the country, all the forest resources play a major role in the protection of watersheds, beside the role of wood production.

### **1.2.1.2 Brief history of the evolution of forest resources and policy**

In order to better understand the nature and condition of the forest resources available today, a brief history of the forestry sector is presented hereafter. Three main phases have been recognized.

#### **1.2.1.2.1 Colonial times**

At first, colonial authorities put the emphasis on the conservation of natural forests, before launching afforestation programs. Between 1924 and 1962, 20,000 ha of plantations were created. The main events of this period are the creation of national parks and the launching of a campaign to promote afforestation.

#### **1.2.1.2.2 From 1967 to 1990**

This period was marked by large-scale programs of afforestation and agro-forestry promotion. This was done with the intense financial and technical support of many multilateral and bilateral donors. Again, accurate estimates are not available but in two decades ('70s and '80s) the area of artificial woodlands increased drastically (at least 100,000 ha to more than 200,000 ha according to the sources), and agro-forestry resources increased in the same proportions. One of the first objectives was to protect bare hills.

As regards institutional developments, this period was marked by the creation of the Directorate General of Forests within MINAGRI, the preparation of a 10-year National Forestry Plan (1987-1997) and the creation of the National Forestry Fund in 1989.

#### 1.2.1.2.3 After the war and genocide of 1990-1994

As can be easily understood, the events of 1990-1994 and their aftermath completely broke the momentum of the forestry sector. Protected forest resources inside national parks incurred relatively limited losses, while a large proportion of the Gishwati natural forest was cleared. As regards the rest of the territory, the resources of artificial plantations had to sustain an increased pressure, as is often the case in troubled periods.

During the decade of the '90s, forestry activities were led with no real policy, through operational directives. The period between 1991 and 1996 was marked by some illicit appropriation of woodlands, irregular cuttings, the clearing of some public woodlands. All forestry projects were stopped and international donors withdrew. The Directorate of Forestry was temporarily removed and the departments in charge of forestry were scattered among the other directorates of MINAGRI between 1997 and 2000.

2002-2003 was again a difficult time (socio-economic difficulties), but it is in that context that the first new large forestry project started in 2002, PAFOR (Projet d'Appui à l'Aménagement Forestier) funded by the African Development Bank. At the same time, a new National Forestry Policy was prepared and adopted in 2004. This policy gives the broad orientations but until today it has not got an implementation plan with details and figures. Until 2008, PAFOR has been the only large forestry project in Rwanda.

An important consequence of this **stagnation of the forestry sector for most of the last two decades** is a significant **gap and imbalance in the forest resources available today**. As it will be further discussed below, this gap/imbalance concerns both the total amounts of wood that can be produced and the structure of the resource (age classes in particular). Moreover, this weakened resource base has to be considered together with the still very weak institutional framework of the sector which is taking off only now, both being a consequence of the historical events.

In conclusion, the main aspects to remember about point 1.2.1.2 are:

Most of the forest resources available for harvesting of wood in Rwanda are made of the extensive artificial plantations that were made during the two decades '70s and '80s;

these efforts in forestry were then interrupted due to the war and genocide practically for the last two decades: the sector needs to be set in motion again.

#### 1.2.1.3 Importance of the forestry sector for the energy sector

The predominant forest product is fuelwood, either for direct burning or conversion to charcoal. This accounts for well over 90% of all wood consumed in Rwanda. Related to that, the contribution of the woody biomass to the national energy balance remains high : around 80% (MARGE, 2008a).

There are at least 4 reasons why fuelwood (including charcoal) is a vital source of energy for the country, not only vital but also appropriate (MARGE, 2008a) :

it is an affordable source of energy for the Rwandan population. All convenient alternatives (electricity, LPG, etc.) and possible alternatives (methane from lake Kivu) are (much) more expensive;

it does not depend so much on external influences or foreign exchange;

it is a “green” source of energy, because most of all it is renewable, neutral to climate change issues;

it generates an important source of income and labour. The value of firewood and charcoal in 2007 was about 122 million US\$, or 5% of the GDP. Some 50% of this value remains in rural areas and as such it is a true engine of rural development.

Analyses show that Rwanda would face serious problems if there were no more or very limited charcoal in the country. There is indeed certainly no clear alternative that could provide the same service for a similar price. It is besides important to stress that virtually all charcoal in Rwanda is now made from planted trees, a unique situation in Africa. Almost every farmer in the country has set aside a small part of his land for *Eucalyptus trees*. This serves for his own energy needs, but also for the sale of stakes, poles, firewood, wood for charcoal making, and charcoal. Trees are simply just another crop from which farmers earn part of their income, just like they do with other crops like food crops. If there is a shortage of wood, prices will rise and farmers will be willing to plant more trees (MARGE, 2008a).

As regards the evolution of the fuelwood sector, BEST surveys have studied the evolution of the price of charcoal from 1975 to 2008 in constant terms (RWF 2003). It reveals that the price remained roughly constant from 1975 to 2003 then doubled suddenly between 2003 and 2008. The explanation is believed to be that during the first period charcoal was mainly coming from deforestation in some regions, and the cost of the wood resource itself was not internalised. During the second period, deforestation had been brought under control (and at the same time the resource had become more limited) : from then onwards all production of fuelwood comes from plantations, and coalmen have to buy the wood to be cut (MARGE, 2008b).

BEST surveys in 2007 reveal a distinct evolution of the fuelwood sector in the latest years. The current trends result from a reduction of the availability of the resource and/or the access to the resource (legal restrictions), combined to a general increase of the prices of all types of energy. These observed trends are the following (MARGE, 2008e) :

- 1 Regions harbouring large consumers of wood, like tea factories, face increased difficulties of wood supply. On the other hand these factories have significantly intensified the management of their wood plantation estates or they are adapting their equipment and start using other energy sources.
- 2 Other important consumers like the producers of bricks and tiles are no longer allowed to use firewood and are using other energy sources (among them waste engine oil, with bad environmental consequences).
- 3 The cost of transport of wood or charcoal is increasing.



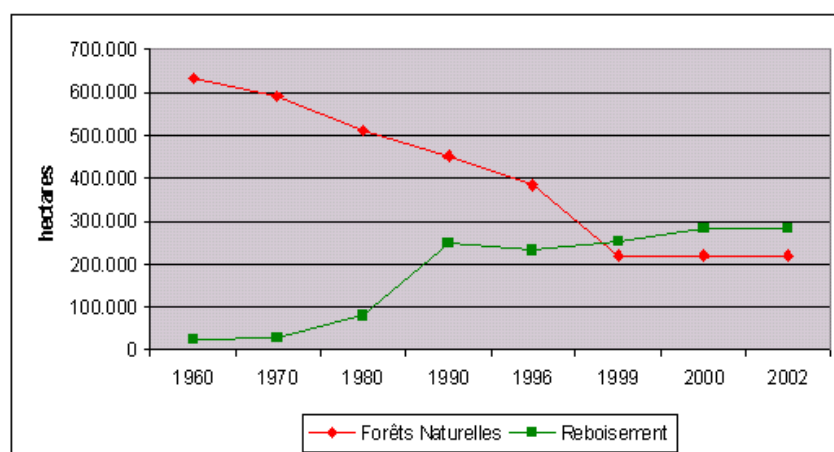
- 4 Coalmen face increased difficulties to find the resource and get authorizations, and they tend to increase the price of the charcoal they sell.
- 5 Households, especially the low-income ones, adapt their cooking habits (choice of food cooking faster, use of improved stoves, etc.).
- 6 In general, forestry and agro-forestry production still receives little investment given the relatively long period of return on the investments. Nevertheless, the demand for *Eucalyptus* is high among the population because with these species the problem of the slow return is less severe. In some places private nurseries have emerged.

These last trends reveal that the access to wood is becoming more difficult, which has some negative effects (harder life, development of some bad practices for the environment) and some positive effects (development of some good practices on the other hand). This confirms the need to increase the production, to improve charcoal making and to introduce incentive measures to stimulate the required investments.

#### 1.2.1.4 Analysis of wood production versus wood consumption

The figure below, however based on dated figures (the absolute numbers are uncertain but the trend is likely to be properly represented), shows that in 40 years, the afforestation rate was not able to compensate the rate of reduction of the natural forest. FAO standards « estimate that the optimal area required to guarantee a sustainable ecological balance and satisfy the needs for wood of mankind is 1 hectare / inhabitant ». In comparison, these standards « are far from being met as in Rwanda this area is only of 0,059 ha / inhabitant » (MINITERE, 2004).

Evolution of the deforestation and afforestation from 1960 to 2002



- ◆ Area of natural forests (ha)
- Area of plantations (ha)

The reasons of this situation are multiple as outlined by the document of National Forestry Policy : « the major problem as regards the environment in Rwanda is the imbalance between the population and the natural resources which have been degraded for decades. »

Several calculations of the production deficit in Rwanda have been produced since the '70s. The principle of such calculations is that according to several previous studies in Africa the indicative annual fuelwood consumption is around  $1 \text{ m}^3 / \text{inhabitant} / \text{year}$ . For Rwanda, it would mean a demand of 10 million  $\text{m}^3 / \text{year}$ . On the supply side, the mapping of the national forest cover in 2007 found about 115,000 ha of plantations greater than 0.5 ha, taking into account the fact that natural forests cannot be harvested. Even if a high mean annual increment was assumed, like  $20 \text{ m}^3 / \text{ha} / \text{year}$  for example, the level of sustainable supply seems far from meeting the demand (many plantations in Rwanda are not in good condition as will be discussed below, and the average yield is certainly less or far less than  $20 \text{ m}^3 / \text{ha} / \text{year}$ ). All calculations of this kind have given the same apparent result of important deficit.

The question is then where does the difference between production and consumption come from, how is the gap between supply and demand filled? A first series of possible answers is the following :

Consumption levels must be lower than the classic  $1 \text{ m}^3 / \text{inhabitant} / \text{year}$ . Besides, other studies in Africa have shown that consumption levels are highly influenced by wood availability: where there is pronounced wood scarcity, the consumption can be significantly smaller than that level.

Some firewood may be illegally collected in protected areas, but this is surely marginal as national parks are known to be well protected. Likewise, no firewood is imported from neighbouring countries.

The area of artificial woodlands larger than 0.5ha mapped in 2007 might be underestimated, but there is at this stage no evidence that it is the case.

Plantations smaller than 0.5 ha and trees on farms (agro-forestry resources) are likely to bring an important contribution to the wood supply, but no reliable estimates are available.

Still, this first series of possible answers fails to explain sufficiently how the wood deficit is filled. A second series of possible answers is the following :

The use of crop residues as cooking fuel in rural areas is increasing, with a negative effect on soil fertility (loss of organic matter and nitrogen).

The use of tree residues (bark, twigs, small branches, even dried leaves) as cooking fuel instead of proper logs in rural areas is increasing, with a similar negative effect on soil fertility.

Unsustainable harvesting, that is to say overharvesting, of plantations may be ongoing (and possibly, to a smaller extent, of remaining natural woodlands and other woody vegetations).

The hypothesis that artificial woodlands are actually being overharvested (the rate of cutting is higher than the growth of the trees) is likely to be true, as indicated by a number of tangible signs : (i) the degradation of many plantations which gradually become more open and (ii) the increase of the proportion of young coppice in the wooded landscape.

In conclusion, the level of inaccuracy of the figures available cannot explain the level of the deficit revealed by the calculations. The deficit that is likely to be already a reality will furthermore be increased due to the demographic growth. For this reason, it is recognized that **Rwanda is facing an impending wood supply crisis** (HARDCASTLE, 2010).

### 1.2.2 Constraints and weaknesses concerning forest resources

The development of forestry in Rwanda has to take into account a number of general constraints which are (HARDCASTLE, 2010) :

Land scarcity. The forest resources, especially artificial woodlands, are very much divided up in a large number of small plots because of the dense settlement. Large forest blocks easy to manage are very few. For the same reason, in part of the country, roughly the western and northwestern half of the country, bare land that would be available for afforestation is difficult to find. In the other eastern half where bare land is common, constraints of drier climate (and other factors) increase the difficulties to plant and reduce significantly the growth potential.

Constraints of limited soil fertility. Apart from certain areas with volcanic soils, on most lands allocated to forestry soils are of relatively poor quality: poor, acid, infertile, sometimes shallow and rocky. The use of fertilizers to improve tree plantations does not seem to be a solution, given their cost and the energy needed to produce them.

In many regions, again roughly the western and northwestern half of the country, the relief is very steep which introduces a constraint of access. It can induce higher costs for timber extraction, plantation on very steep slopes, road construction and maintenance.

Because of the small size of forest management units, there is no large forest-based industry and it is unlikely that there will be any for some years.

In spite of the important work of reforestation done in Rwanda for many years, and undoubtedly the valuable nature of the heritage of artificial woodlands across the country, generally speaking the plantation resource is affected by important weaknesses which are (HARDCASTLE, 2010) :

In many cases there does not seem to have been a rationale for species selection: many species are totally off-site, and often there seems to be no awareness of the need for **site - species matching**.

The vast majority of plantations have been established from seeds of **bad genetic quality**. First, the phenomenon of undesired hybridisation is widespread among *Eucalyptus* species, in this case with bad consequences for the production. On the other hand, there is often an inbreeding depression caused by widespread planting based on seeds from an originally small number of parent trees for many generations. In particular for *Eucalyptus* species, the yields measurements available suggest that they are much lower than productivity levels obtained on similar soils in neighbouring countries.

**Poor nursery standards** are observed nowadays countrywide.

**Post-planting tending** is largely non-existent; coppicing is badly done, using inappropriate tools prejudicing good regrowth.

Established **plantations are unattended**: on the one hand there are no regular thinnings, on the other hand many plantations are degraded by irregular cuttings and mortalities. As a consequence, many plantations are degraded and have become open or senile.

According to the national forest inventory of 2007 (ISAR, 2007), one third of the artificial woodlands of the country are young plantations or young coppice. There may be three problems of **imbalanced structure** (age classes) of the resource. First, in case of increased pressure and overharvesting, the rotation will become shorter, with a possible loss of production (stands are cut before they have reached the maximum of the mean annual increment). There is also a risk to affect soil fertility. Secondly, a number of young coppices are actually old stands that were planted a very long time ago and have been harvested many times, so their actual productivity drops sharply. Finally, if the structure of the resource becomes too irregular, with too many young stands or too many very old stands, the regular supply of wood of normal dimensions and quality is impaired.

In other words, on established and new plantations, poor field practices or poor material lead to an important loss of production compared to what could be obtained on the same area. Overall, this reduced productivity is due to a combination of four factors, species-site relation not adequate, bad genetic quality of the reproduction material, soil not properly occupied (mortalities at the plantation or later, gaps in the stands) and overabundance of slow-growing age classes (very young or very old).

### 1.2.3 Analysis of the recent institutional developments in the forestry sector

Since 2007, the institutional framework of the forestry sector has been in a process of radical transformation. This process is still on-going.

### 1.2.4 The creation of NAFA

#### 1.2.4.1 The role of NAFA

The law 17/2008 creating a national Authority for the management and development of forestry, known as the National Forestry Authority (NAFA), was gazetted in June 2008.

According to this law, NAFA is the Authority in Rwanda in charge of supervision, following up and ensuring that issues relating to forestry receive attention in all national development plans. In particular, NAFA has the following responsibilities:

1. To implement Government forestry policy as well as to promote agro-forestry;
2. To advise the Government on policies, strategies and legislation related to the forestry management as well as the implementation of forestry related international conventions and protect natural resources such as land, water and forest biodiversity;
3. Support organs that are in charge of fighting soil erosion with the aim of safeguarding forestry.

4. Prepare national programs in matters of afforestation and forests management and help districts to prepare their own forest management and processing and supervise the implementation of such programs;
5. To make and update the list of tree species to be planted and their respective suitable areas according to the type of soil and the expected usage of such trees and provide advise with regard to related products to be imported,
6. To undertake research, investigations, studies and other relevant activities with regard to the importance of forestry in the national economy and to the exploitation of forestry related products and disseminate the findings,
7. To disseminate the research findings on the technology in the field of planting trees in land for cultivation and in pastures and in specific afforestation, good maintenance of the forests an utilization of such resource to income generation, rational utilization of the forests and related products and in collecting all the data on forestry and related products,
- 8°To prepare technical norms for activities relate d to afforestation, protection and rational utilization of forests as well as adding value to forestry products,
9. To ensure adequate monitoring and evaluate development programs in order to adhere to the standards in the management and rational utilization of forests in the planning and implementation of all development projects, as well as those already in existence, and which are likely to have a negative impact on the environment,
10. Efficient management and utilization of resources from the National Forestry Fund<sup>1</sup>,
11. Work closely with other institutions, projects for developing agricultural and livestock products, environment protection and tourism promotion in the country,
12. Collaborate with other national and international institutions and organizations.

In order to enable it to pursue its mission, described in this law and in the framework of protection, preservation and **tracking of all those who abuse forestry resources** yet without interfering with the provisions on environment, NAFA has been invested with the following **powers**:

1. The Minister in charge of Justice may give the employees of NAFA the same powers as those of criminal investigators;
2. NAFA may order suspension of activities which do not respect the provisions of organic law determining the modalities of afforestation and commercialisation of forestry products ;
3. **Give to districts, to public institutions, associations, and to the private sector, relevant instructions concerning forestry.**

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<sup>1</sup> See point 1.3.4.2.

#### **1.2.4.2 Relationship between NAFA and the decentralized authorities**

According to the law creating NAFA, interactions between NAFA and local authorities are limited to the following:

1. The local authorities ensure the daily supervision of all programs of nurseries, afforestation, care taking and of harvest of forests and report to the management of NAFA,
2. The local authorities ensure the supervision of every activity in connection with the good utilization of forestry products adhering to existing provisions according to the nature of the use and needs,
3. **NAFA supports local authorities in the implementation of all programs related to afforestation, to the management and the promotion of forestry,**
4. NAFA provides technical advises lest the decisions of the Executive committee in terms of instructions on environment interfere with the good management of forests.

#### **1.2.4.3 Institutional position and supervision of NAFA**

NAFA is supervised by the Ministry in charge of forestry. A contract of performance is concluded relating to a plan of action indicating powers, rights and responsibilities of each party in fulfilling the responsibilities of NAFA.

After the creation of NAFA, the ministry in charge of forestry was MINIRENA. Since December 2009 it is MINIFOM : see below point 1.3.2.1.

The ordinary budget of NAFA (exclusive of contributions from international donors) has amounted to around 500,000 euros per year in 2009.

#### 1.2.4.4 Composition and organization of NAFA

NAFA is comprised of 2 organs, the Board of Directors and the Directorate.

The Board of Directors of NAFA is the authority which directs NAFA and which is responsible for taking decisions.

The daily management of NAFA is entrusted to its Director who is appointed by the order of the Prime Minister. The Director of NAFA is entrusted with executive powers. He or she coordinates and directs the daily activities of NAFA and is answerable to the Board of Directors on how its decisions are implemented.

The organizational chart of NAFA is presented below.

NAFA is made of 3 units :

The Finance Unit

The Forestry Research and Planning Unit

The Forestry Field Programs Unit: this unit is made of 2 services, the Forest Extension & Agro-forestry Service and the Forest Management Service.

**Since it was established, NAFA has been facing difficulties of understaffing. In May 2010, out of 33 officers planned at the central level in the organizational structure, only 8 have been appointed**, namely the Director General (appointed in May 2007), a Director of Forestry Programs (temporary position), an officer in charge of the budget (appointed in June 2008) and 5 professionals with a university degree A0 (appointed in March 2009).

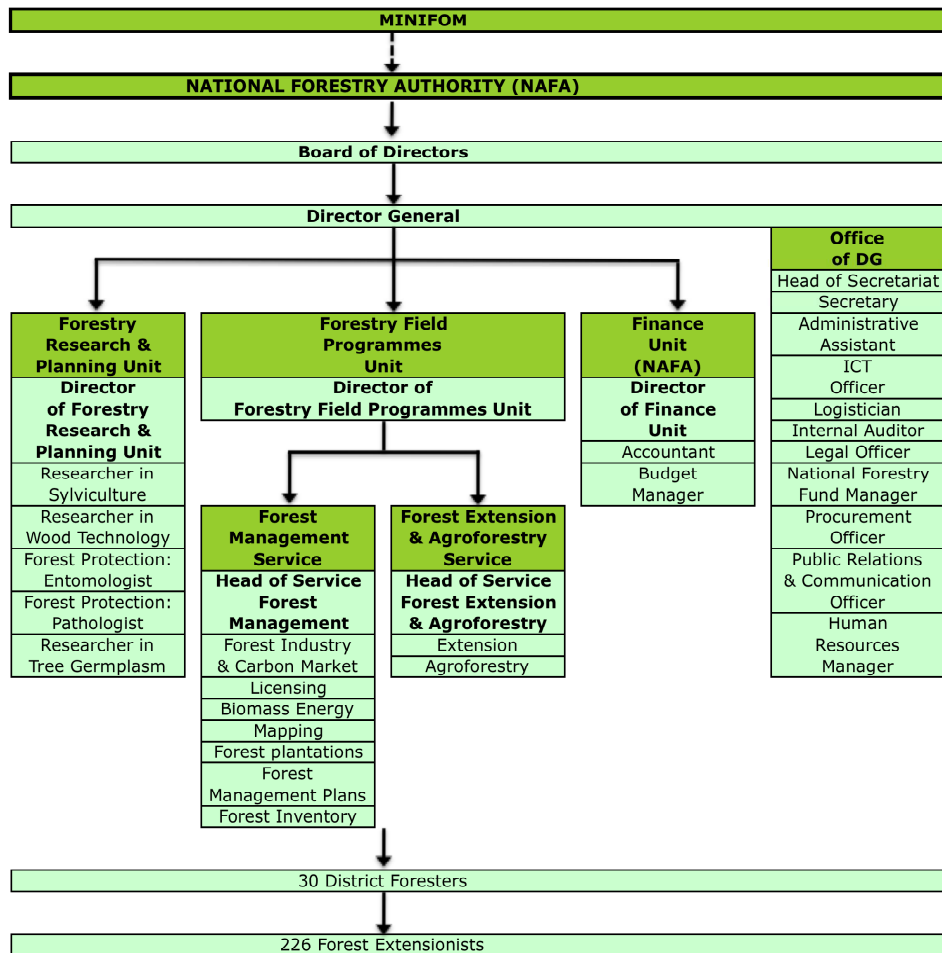
It is planned that in the coming months (beginning of the second half year of 2010) all 33 positions of the organizational chart of NAFA at the central level will be filled. In that process, some of the current staff may be replaced.

At the decentralized level, the Environment Officer of the districts was in charge of forestry activities until November 2009 when the organization of districts was adjusted. This responsibility was transferred to **the District Forester who is now a NAFA officer working for the districts**. Indeed, 30 District Foresters of A1 or A2 level have been recruited by NAFA and deployed in February 2010. Although it is not always explicitly stated, these officers have a technical role and a role of control.

Furthermore, 226 « Forest Extension workers » are employed at the sector level, 1 Extension worker for 2 sectors, and are currently under the responsibility of NAFA. Nevertheless, this staff are former forest guards who were originally recruited by the Service of Forest Protection of MINITERE in 2004. As they were recruited simply to watch the woodlands, they have no qualifications as real extension workers. Therefore, NAFA envisages replacing them by qualified A2 foresters at the end of June 2010.

As a conclusion, NAFA is the institution which is responsible for the implementation of the forestry programs funded by the international donors, but unlike in the agriculture sector, there is at this stage no real Sector Wide Approach with basket funding, as the institution is being built.

NAFA organizational chart



## 1.2.5 Evolution at ministry level

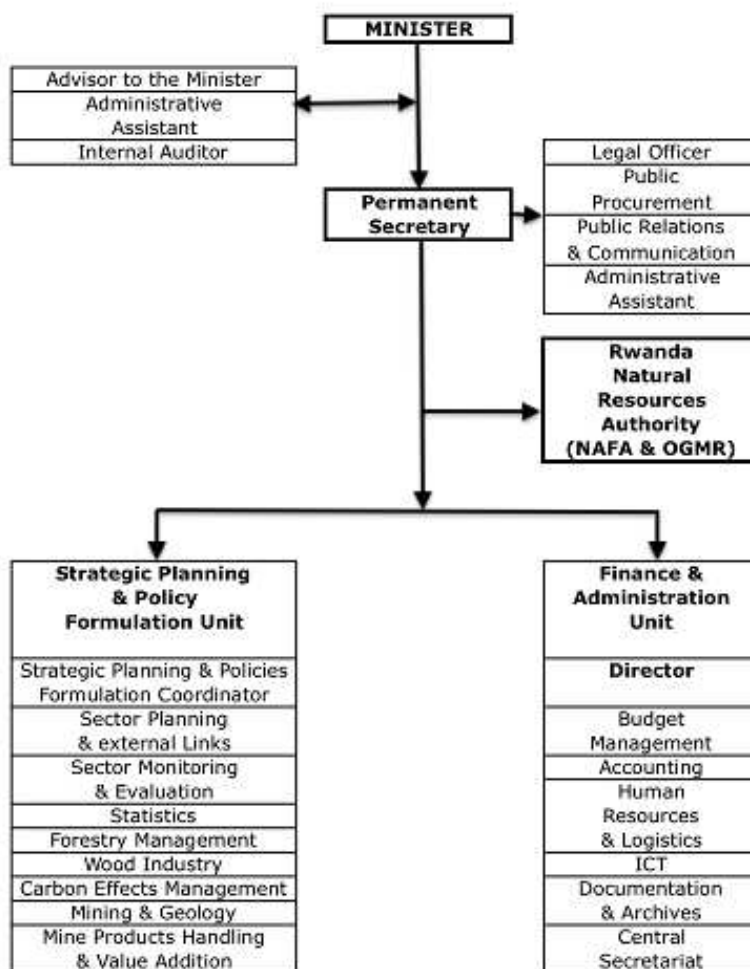
### 1.2.5.1 The creation of MINIFOM

In December 2009 MINIRENA was split into two new ministries : (i) the Ministry of Environment and Land (MINELA), comprising the Rwanda Environment Management Authority (REMA) and the National Land Center (NLC) ; and (ii) the Ministry of Forests and Mines (MINIFOM), comprising NAFA and the Rwanda Geology & Mining Agency (OGMR). This is an indication of the importance attached to the forestry sector by the Government of Rwanda. The organizational chart of MINIFOM is presented below.

Further restructuring in the near future is envisaged.



**MINIFOM proposed organizational chart**

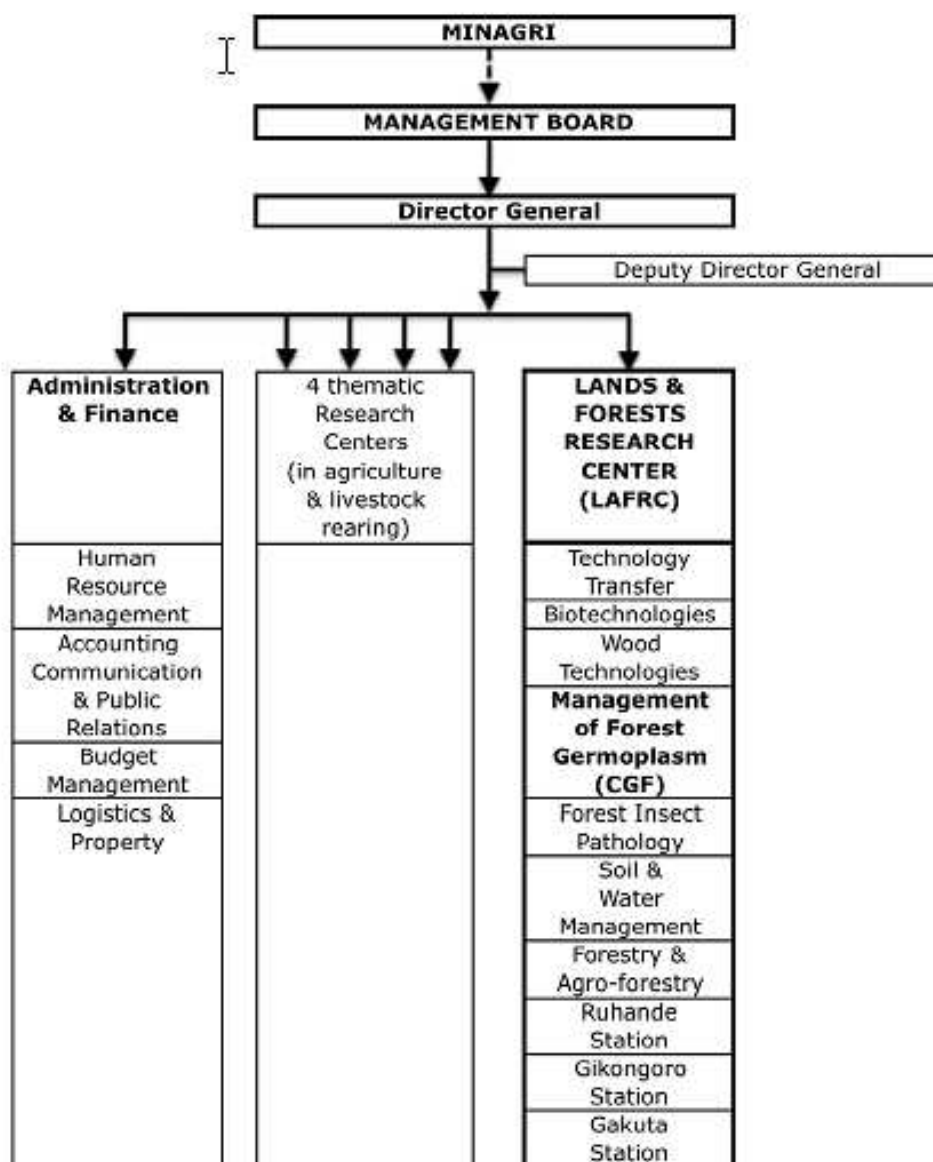


### 1.2.5.2 Remark on forest research

Research in forestry and agro-forestry is still mainly entrusted to ISAR, a department of MINAGRI. The organizational chart of ISAR is presented below. Within ISAR, the Land & Forestry Research Center includes the following departments: Forestry and Agro-forestry, the Forest Tree Seed Center (CGF), Forest Insect Pathology, Wood Technology, Soil and Water Management. The headquarters of the Research Center and CGF are located in Ruhande Arboretum in Huye District. In addition to the main research station (Ruhande), the Research Center also maintains two field stations (Gikongoro and Gakuta).

The Forest Tree Seed Center has received the monopoly to supply tree seeds for all afforestation programs in Rwanda. To this end, it operates a laboratory and manages a network of currently 98 seed stands distributed all over the country. The staff of the seed center comprises 1 researcher (engineer), 2 technicians and some additional technicians on temporary contract.

**Simple organizational chart of ISAR**



### 1.2.6 Recent strategic documents concerning the sector

The five-year strategic plan 2009-2013 of MINIRENA for the Environment and Natural Resources Sector (ENR SSP) was approved in June 2009.

NAFA is in the process of finalizing its three-year strategic plan 2009-2012, based on the strategic plan of MINIRENA.

A Biomass Energy Strategy for Rwanda (BEST) was produced in 2008 by MININFRA with

the support of GTZ (MARGE, 2008a-e).

A consultation has been launched recently by the first phase of "PAREF.be" in order to conduct a baseline study on the status of gender in the forestry sector and propose an action plan. This document is not yet ready and baseline data readily available on gender issues in the forestry sector are very few.

## **1.2.7 On-going reflections and activities to develop the sector**

### **1.2.7.1 A new forest law being prepared**

The regulation of forests and woodlands in Rwanda is still organized by the decree of 1930 concerning the cutting and sale of wood, by the Rwandan penal code of 1977 concerning penalties incurred by those who destroy or degrade harvests or trees, and especially by the law nr 47/1988 organizing the forest stewardship/regime, and its application measures.

A number of measures that were proposed by this law have not been applied because of the troubled period that followed its inaction. Furthermore, this legislation is no longer consistent with more recent regulations such as the decentralization. It is commonly agreed that the current law is no longer appropriate in particular because it assumes that wood comes from natural forests and it does not envisage that it can come from plantations belonging to private owners.

It is felt that the current legislation in some common instances acts rather as a deterrent to good forestry practices. In the current system to deliver cutting authorizations and levy taxes on the wood products, private owners encounter difficulties to market the trees they have planted and in turn become reluctant to maintain their trees or plant more trees. The way these authorizations are delivered and those taxes levied are also deemed not to be transparent enough. The development of underground activities of wood extraction, processing and transport becomes a threat, with the consequence that efficient transformation techniques are not applied (improved charcoal making techniques unused, increase of charcoal making out of green wood).

For these reasons, a draft new law has been prepared by MINIRENA followed by MINIFOM with the support/participation of PAFOR, PAREF, FAO, MININFRA, etc. This draft has been transmitted in 2010 to the Ministry of Justice for adjustments, after which it will be examined by the Council of Ministers. After that, the new law will have to be transmitted to the Parliament in order to be enacted. The application decrees and bylaws have already been prepared and will be examined at the same time as the new law. This new legislation could be enacted before the end of 2010.

### **1.2.7.2 Funding mechanisms of forestry activities**

The National Forestry Fund was instituted by the forest law currently in force as a channel to fund the forestry activities nationwide and as a means to increase the funding for these activities. As the national forest legislation is currently being revised, in the same way reflections are on going to restructure the National Forestry Fund.

When the decentralization came into existence, the idea of establishing District Forestry Funds appeared, but this is also currently subject to reflection and analysis. In the framework of the implementation of District Forest Management Plans (see next point), some operations of forest management generate income (harvest of stands namely) while other ones are costly (regeneration, maintenance e.g.). It is important that an efficient, safe and balanced system to channel these movements of money be established to guarantee both the investments required to maintain the district forest resources and the generation of a net income for the owner (the districts) whenever possible.

In conclusion on this paragraph, in order to develop the sustainable decentralized management of woodlands, a formal framework to channel the funds originating from management operations or from external funding sources (subsidies to support investments) needs to be set up in parallel. This framework is currently not operational (frozen), but it is because the government with its partners such as "PAREF.be" works to design its modalities (see point 3.4.2, Activity 2.1).

### **1.2.7.3 National Forestry Plan and District Forest Management Plans**

29 District Forest Management Plans have been produced since 2007, in accordance with the forest law of 1988. It represents a good step forward, in particular because the results of the surveys conducted to prepare the plans provide better data on the position of existing forest blocks, on areas available for afforestation and on the evaluation of standing volumes. On the other hand, these surveys have confirmed the bad condition and the lack of management of the majority of the plantations in the country. However, these documents present some weaknesses :

the set of plans is rather heterogeneous in terms of methods. This is because they were produced with the support of various agencies, the Netherlands, UNDP, FAO, PAFOR, PAREF, while the National Forestry Plan which should be the common framework and define orientations is not yet ready ;

some estimates used to build the plans are not accurate or reliable enough. For example, the lack of good data on mean annual increments has been a recurrent constraint. The public forest resources are also very difficult to evaluate due to insufficient information on public land ownership. On the other hand, the concept of management unit is not properly defined and needs clarification. In addition to that, a common problem encountered is that from the beginning the production objectives are rarely defined ;

there is a lack of long-term vision in the plans which are confined to a 5-year timeframe while the real cycle of plantations could be 25 or 30 years (4 rotations of 7 years for coppice e.g.: for an illustration, see typical examples of silvicultural intervention schedules in *Annex 7.7*). Still more importantly, the evaluations of the profitability of the forestry operations are not valid because often truncated. As a consequence, action plans proposed in the DFMPs are not always realistic from the technical and financial point of view. Many propose to massively harvest woodlands during the first 5 years, which would generate a sudden income (which would be

artificial and could not be sustained beyond this period) and to massively convert (replant) the woodlands during these 5 years (which could not be achieved in such a short time) ;

finally, the validation of the plans has been a bottleneck because of the limited availability of competent staff to evaluate them. Beyond that, the implementation of the plans is difficult for all these reasons including the lack of standards of silvicultural management. The revision of the plans through the preparation of Simple Plans of Operations is a necessary step for their implementation. The first phase of "PAREF.be" has started to work on this, and the program (second phase) will continue to bring the necessary remedies.

In the meantime, 4 baseline studies on the forestry sector have been launched by NAFA to prepare the new National Forestry Plan : the first one on wood supply and demand to better work out this question, the second one on business in forest products, the third one on capacity needs and the fourth one on governance. The object of the aide-memoire of HARDCASTLE (2010) is to document and explain the strategic approach adopted to provide an overarching basis for the four baseline studies.

#### **1.2.7.4 Forest cadastre**

The process of creation of a cadastre (land register) has started in Rwanda, under the responsibility of the National Land Center. In that context and in a simultaneous way, the need to prepare a forest cadastre (register of the exact location and owner of all woodland plots in the country) is being felt urgently. As mentioned above, the need for such a register is especially important for public woodlands given the prevailing very unclear situation as far as they are concerned, which currently represents a severe risk and a real management constraint. Indeed, given the context of pressure on the land resources (promotion of agricultural cash crops e.g.), the status of public woodlands is currently not safe. The demarcation of public woodlands has been declared a priority by MINIFOM.

#### **1.2.7.5 Mapping of the resources**

An important exercise of mapping and forest inventory of all forest resources of Rwanda was conducted from 2005 to 2007 with funding from the Netherlands Embassy (ISAR, 2007). It was initiated in the context of the preparation of the new National Forestry Plan and carried out jointly by ISAR and the GIS Center of the National University of Rwanda. It was based on LANDSAT, SPOT and ASTER satellite images from the period 2003-2006. Given the resolution of those images, the mapping concerns all forest areas larger than 0.5 ha. The detailed results can be found in the three volumes of the final report.

A new project was launched in 2007 : Rwanda Land Use & Development Master Plan. The project is implemented by the National Land Center collaborating with the Swedish state-owned company Swedesurvey for a period of 3 years (2008-2010). The primary output of the project was to take low altitude digital aerial photographs in 2008-2009. These cover practically the whole country, apart from very limited cloudy areas (4%).

From these, a complete coverage of digital orthophotos with a resolution of 0.25 m has been produced for Rwanda. This data is available to all national projects related to land use, like the upcoming National Land Registration Project (see point 1.3.4.4. above). Given the intense need for reliable and accurate baseline data on the forestry sector, it is planned to take advantage of these valuable orthophotos, before they become out-of-date, for the following related activities :

- to up-date the mapping and forest inventory of the forest resources of Rwanda, in particular to determine for the first time the real important contribution of the woodlots smaller than 0.5 ha and the trees on farms ;

- to prepare the above-mentioned forestland register.

## 1.2.8 Analysis of the institutional capacities in the forestry sector

### 1.2.8.1 Insufficient qualified human resources

Beside the important constraints of the forestry sector that we have already exposed, namely the weaknesses related to the resource (bad condition and poor management of the plantations), the lack of reliable data allowing efficient decision-making, the absence of legal incentive for private investing in forestry and the risk of unsustainable harvest of the public woodlands, the main and primary weakness is the **very low availability of forestry staff effectively operational, at all levels.**

#### 1.2.8.1.1 Capacities of human resources at the different levels

At the central level, MINIFOM has recently organized the recruitment of 3 forestry experts to staff its Strategic Planning & Policy Formulation Unit and has encountered serious difficulties to find the required profiles (MINIFOM, 2010). The staff of NAFA is still very limited in numbers, the 5 professionals are under temporary contract and some of these officers have limited professional experience. Whether in the upcoming recruitment to fill all technical positions planned in the organizational chart it will be possible to find in each case the required profile (relevant forestry experience) remains a question.

The Lands & Forests Research Center of ISAR, a much older institution than NAFA, also needs reinforcements to fulfill its mission, especially to face the challenge of the thorough rehabilitation and increase of the woodland resources of Rwanda. Only one engineer is available to launch a program of seed improvement (tree breeding) and organize the supply of improved seeds to all afforestation schemes.

In the same way, the few forestry projects with funds from outside donors, like PAREF, encounter serious difficulties to recruit staff with forestry education and experience. Actually recruiting national forest engineers with forestry experience has now become practically impossible for senior positions, very difficult for junior positions. These projects subcontract many technical activities to free lance foresters or private forestry engineering companies, but these are only a handful (less than 10 in total). Given the amount of studies and services that need to be carried out in the forestry sector these days, these few experts and consulting companies are « overemployed » and find it

difficult to respect contract deadlines : this has become another bottleneck. Moreover, most of these freelance forestry experts are very senior and there is a fear that young generations of foresters are not available to replace them when the time comes.

At the decentralized level, 30 District Foresters have been recently deployed by NAFA. This is an important step. However, if some of them have real previous experience in forestry and are already operational, a number of them have little experience and need to be trained to fulfill their tasks. On the other hand, districts are large territories in which forestry interventions cannot be covered by one individual, even equipped with a motorbike. All experts on the Rwandan forestry sector agree to say that there is a strong need for **a large and effective extension service in forestry and agro-forestry**, which currently does not exist (HARCASTLE, 2010 ; NAFA, 2010). As explained above, the 226 « Forest Extension worker » currently employed in the administrative sectors by NAFA are mere woodland warden with no technical roles, it has been found that they should be replaced.

As regards the deployment of human resources, one difficulty that is reported is that the recruitment in public institutions is often carried out through private recruiting companies according to the national procedures, private companies who have got no references in the forestry sector and are not qualified to select forestry staff.

Another difficulty encountered is that in this context of scarcity of expertise, salary costs in specialized disciplines are particularly high. Institutions like NAFA do not currently offer employment conditions that are found attractive (stability, salaries). The few experts with specific skills (GIS e.g.) would avoid working for those institutions.

Finally, although this is less institutional, in the private sector and civil society, private companies implementing contracts of forestry works (nurseries, plantations e.g.) are unanimously recognized to have no professional qualifications in forestry in most cases (senior management with no forestry background, employing junior rural development technicians). National NGOs competent in forestry are again very few. Structured and professional cooperatives active in forestry are very rare. Private professional nurseries are very few. Wood processing industries are small scale and need strengthening.

To summarize, the problems of staffing frequently met in the forestry sector are : insufficient numbers, background outside forestry (other rural development fields or further outside : civil engineering, etc.) or limited experience.

#### 1.2.8.1.2 The Rwandan institutions training new foresters

New generations of foresters (or agro-foresters) receive their education in the institutions listed in the following table.

**Table 2 : Forestry education institutions in Rwanda**

Institution	Level / diplomas delivered
Higher Institute of Agriculture and Animal Husbandry (ISAE) Busogo	2004-2008 situation: A1 bachelors in Agro-Forestry 2009-2011 situation: A1 bachelors in Agro-Forestry; A0 Agro-Forestry engineers 2012-2013 situation: A1 bachelors in Forestry; A0 Agro-Forestry engineers; From 2014 onwards: A1 bachelors in Forestry; A0 Agro-Forestry engineers; A0 Forestry engineers
Veterinary and Forestry School (EVFO) Kibisabo	A2 forest technicians (secondary school)
Gisovu School Group	A2 forest technicians (secondary school)
National University of Rwanda	Master's curriculum in Agro-Forestry

The Higher Institute of Agriculture and Animal Husbandry (ISAE) in Busogo:

The summarized organizational chart of the institute is presented below. The institute comprises 3 faculties. Within the Faculty of Agriculture and Rural Development, the Department of Agro-Forestry was created in 2004, to train A1 bachelors in Agro-Forestry (3 years cycle after the secondary school). Since 2008, a new cycle of 2 years has been opened to train A0 Agro-Forestry engineers (the 2 years of A0 cycle follow the 3 years of A1 cycle, making a total of 5 years after the secondary school for this curriculum).

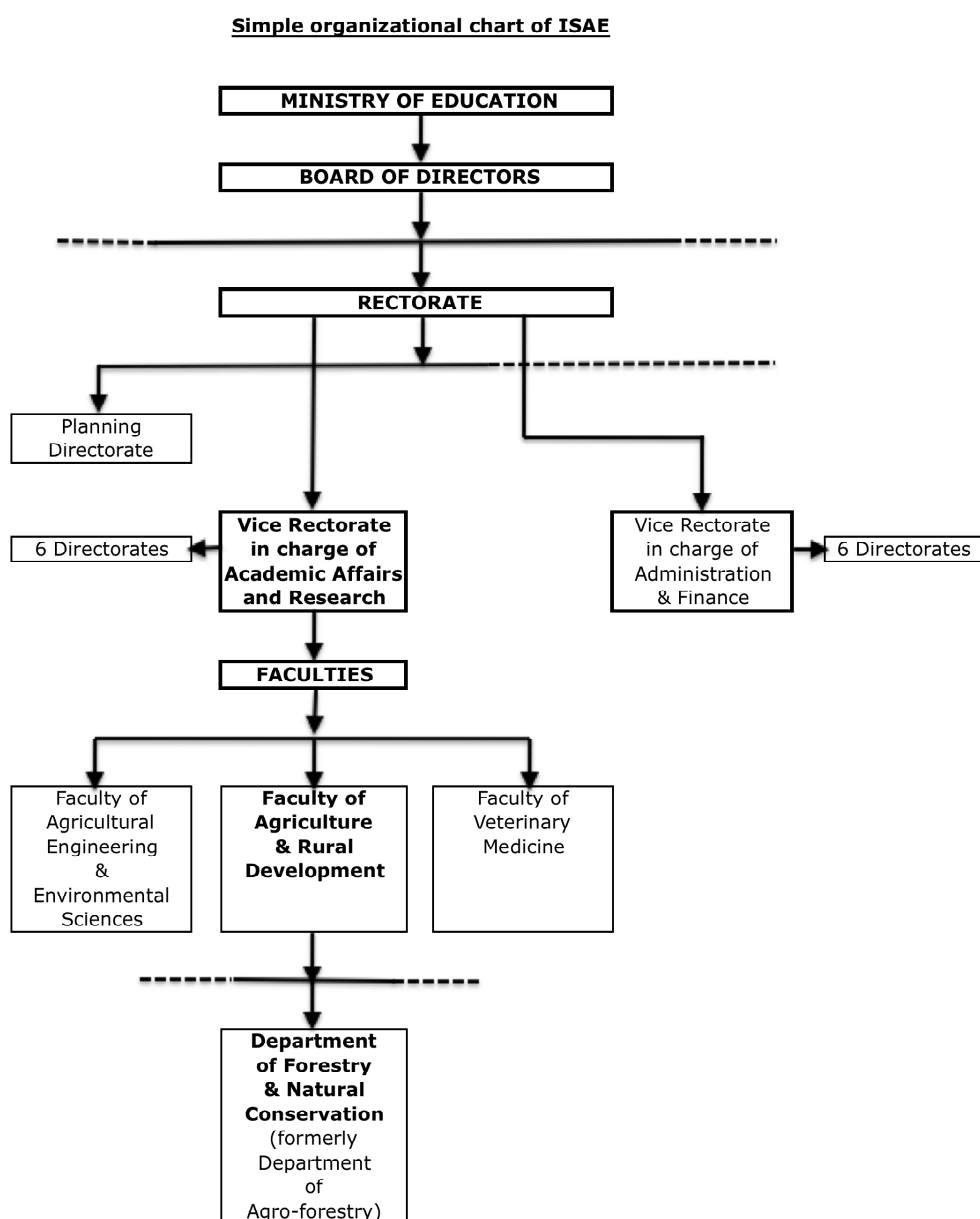
In 2009, the project to convert the Agro-Forestry Department into a full « Department of Forestry and Natural Conservation » has been designed in order to address the concrete needs for personnel of the forestry sector in the country. With this restructuring, the following diplomas will be delivered : A1 forestry, A0 forestry, A0 agro-forestry and A0 natural conservation (the latter section not yet operational). A budget of about 740,000 US\$ has been calculated to start off the new department and train the first class of 50 students for 3 years (A1), including teaching staff salaries and 600,000 US\$ to build laboratories (SENYANZOBE, 2010).

The first A1 foresters will graduate in mid 2012 and the first A0 foresters will graduate in



mid 2014. Every year, about 60 to 80 A1 ((agro-))forestry students graduate, and among them 30 candidates are admitted to the A0 curriculum. The students spend an internship of 2 months in a professional environment during the third year of the A1 cycle and another internship of 2 months during the second year (year 5) of the A0 cycle. Compared to a master's degree, the studies at ISAE are oriented towards technical and practical aspects.

The weaknesses mentioned at ISAE concern the difficulties to maintain the level of the education (difficulties to find good professors in sufficient numbers), among other things. Other sources confirm the need to strengthen the training (HARDCASTLE, 2010).



#### Veterinary and Forestry School in Kibisabo and Forestry School in Gisovo.

The Veterinary and Forestry School in Kibisabo (EVFO) is a secondary school of the Ministry of Education that was created in 1984 in the context of a large forestry project implemented at that time. The 6 years of secondary school are divided into 3 first years of common courses (about 300 pupils) followed by 3 years where 2 sections are available : the veterinary section (about 100 students) and the forestry section (about 100 students). Every year, between 25 and 45 A2 forest technicians pass the national examination of the end of secondary school (21% are girls).

Among the 21 teachers of the school, 10 have an A2 level and 11 an A1 level from ISAE-Busogo. 6 of these teachers teach in the forestry section. The students spend an internship of 2 months in a professional environment during the sixth year.

The weaknesses felt concern the need to strengthen the teachers, the lack of training materials (manuals, technical books, etc.) and the lack of field equipment for practicing.

A second technical secondary school training foresters has appeared when the Gisovu School Group (Groupe Scolaire de Gisovu), a private subsidized school, opened a forestry section 2 years ago. The first A2 forestry technicians from this school will pass their examination in 2011.

#### The National University of Rwanda

A master's curriculum in Agro-Forestry is functional at the National University of Rwanda.

As a conclusion, the forestry education institutions that most need strengthening are the secondary schools (because of their difficulties and the essential need for good field technicians) and ISAE (because of the fragile process of creating a new forestry department with a new engineer curriculum).

#### 1.2.8.2 Budget allocation to the forestry sector

As indicated by the figures of the table below, the ordinary budget of the forestry sector in Rwanda has been on the increase in the last 10 years, especially since 2005. It was equivalent to about 100,000 €/year from 2000 to 2004 and about 500,000 €/year from 2005 to 2009.

**Table 3: Comparison of ordinary budget allocation for Agriculture and Forestry (2000-2009)**

Year	Agriculture (x 1000 RWF)	Forestry (x 1000 RWF)	% of forestry budget vs agriculture budget
2000	1,433,704	30,596	2%
2001	1,706,389	26,877	2%
2002	2,112,109	120,388	6%
2003	2 369 006	99 400	4%

2004	2,042,073	84,906	4%
2005	3,129,142	310,124	10%
2006	4 607 835	802 709	17%
2007	2,058,837	204,107	10%
2008	3,109,033	415,761	13%
2009/2010	4,212,457	324,418	8%

Source : Official Gazette of the Republic of Rwanda (2000-2009).

Note: exchange rate in MAY 2010 : 1 € ≈ 760 RWF

**In spite of this important increase, this level of ordinary funding cannot meet the needs in investments to renew the forestry sector and up-grade the resource to the required extent.**

Simple calculations to evaluate the task are presented hereafter, as benchmarks :

Assumption 1 : Total area of woodland plantations found by the mapping of 2007 (ISAR, 2007a) : ≈ 115,000 ha (only plots ≥0,5ha are included) ;

Assumption 2 : area to (re)plant to (i) improve the productivity of existing plantations and (ii) increase the national woodland area of the country ≈ 1.5 x 115,000 ha (all plantations do not need to be replanted, but conversely 115,000 ha would underestimate the total area of existing plantations in the country) ;

Assumption 3 : period of time to (re)plant the area calculated with assumption 2 = 20 or 30 years ;

Assumption 4 : cost to plant ≈ 250 to 650 €/ha, according to the type of intervention (type of site, need to maintain forest roads or not, etc.), average 400 €/ha ;

Result 1 : ≈ 6000 to 8000 ha to (re)plant per year, respectively for 30 or 20 years, which from the material point of view is in fact a massive effort ;

Result 2 : annual cost of this (re)planting : ≈ 2,400,000 to 3,200,000 €/year.

### **1.2.8.3 Relationship between public procedures and forestry activities**

The application of public procedures in recruitment, procurement, financial management through centralized and decentralized levels represents a challenge to implement without failing large scale field programs which are season-bound (need to have nurseries ready in time, plantation operations ready in time, field trials ready in time, etc.).

## 1.3 Synthesis on the strengths and weaknesses of the forestry sector

### 1.3.1 SWOT analysis

The following table presents a synthesis of the strengths, weaknesses, opportunities and threats related to the forestry sector in Rwanda. The weaknesses and threats are a summary of the ones identified and discussed in the previous chapters: weaknesses associated to the resources and forestry practices (see point 1.2) and weaknesses associated to the forestry institutions (see point 1.3). Strengths and opportunities are discussed in the next paragraph (point 1.4.2). The critical weaknesses are extracted in point 1.4.3.

Strengths	Weaknesses
<p>Important capital of existing artificial woodlands (strong resource base (nucleus) and evidence of the potential for achievements);</p> <p>Tradition of agro-forestry (substantial / effective resource);</p> <p>Fuelwood is a very appropriate energy source;</p> <p>Availability of Eucalyptus species;</p> <p>Absence of deforestation, inducing a sound fuelwood economy;</p> <p>Great workforce.</p>	<p>Weaknesses associated to the resource or forestry practices:</p> <p>Divided up resources (land scarcity), and low productivity in the few regions where land is more available;</p> <p>Difficult access due to steep relief;</p> <p>Poor site-species matching;</p> <p>Poor genetic quality;</p> <p>Poor nursery standards;</p> <p>Poor post-plantation tending;</p> <p>Unmanaged / unattended plantations;</p> <p>Gap and imbalance in the structure of woodland resources;</p> <p>No large forest-based industry.</p> <p>Weaknesses associated to the forestry institutions:</p> <p>Severe decline of the forestry sector after the war and genocide;</p> <p>Obsolete forest law (deterrent to good practices);</p> <p>Funding mechanisms of sustainable decentralized forest management not defined;</p> <p>Unclear situation of land tenure of public woodlands (management constraint);</p> <p>Wooded areas poorly known;</p> <p>Unreliable statistics on the forestry sector;</p> <p>Scarcity of standards of silvicultural management;</p> <p>Very low availability of proficient forestry staff, at all levels;</p> <p>NAFA severely understaffed;</p> <p>No real (agro-)forestry extension staff;</p> <p>Weak capacities of the tree seed center of ISAR;</p>

	Limited capacities of forestry education institutions; Insufficient ordinary budget of public forestry institutions; Weak private sector of forestry.
Opportunities	Threats
Political will; Creation of NAFA; Development of the forest cadastre made a priority; Very dynamic institutional context (opportunity as long as the changes are not too fast).	Impending fuelwood supply crisis (this would lead to overharvesting and shortage and to the use of secondary biomass fuels inducing soil depletion); Increasing supply needs due to the demographic growth; Unsafe land tenure status of public woodlands (risk); Weaknesses of the current District Forest Management Plans; Slow public procedures with regard to the season-bound forestry activities.

### 1.3.2 Explanation of the strengths and opportunities

In spite of the many weaknesses and challenges discussed in the previous paragraphs, the forestry sector of Rwanda presents strong assets that are listed hereafter.

#### 1.3.2.1 Political will

Examples of this strong political will have been given, like the many institutional developments in particular in the last 4 years and the significant increase of the ordinary budget allocated to the sector.

#### 1.3.2.2 Agro-forestry tradition

Despite the scarcity of land for agriculture, trees are very present in the fields to the extent that trees on farms are a significant wood resource.

#### 1.3.2.3 Existence of great workforce in rural areas

This somehow compensates the constraints of access, steep slopes and disaggregated nature of the woodland resource. It is also essential to guarantee the feasibility of large-scale afforestation programs.

#### 1.3.2.4 Availability of Eucalyptus species

*Eucalyptus* species have been repeatedly criticized because allegedly they are responsible for a rapid soil depletion and unsustainable water consumption. To this date, no conclusive evidence has been presented of such negative effects in the context of Rwanda, at least when the species for a plantation on a particular site is chosen in an appropriate way among the many *Eucalyptus* species.

Moreover, many experts confirm that *Eucalyptus* trees are the ones that have made it possible to reduce the deficit in fuelwood and service wood, a deficit that would be far worse if they had not been planted. In other words, they state that there is simply no clear alternative to the wide use of *Eucalyptus* species (under the condition that the precise species is properly chosen), in the same way as there is no alternative to the main use of fuelwood for the household energy supply of Rwanda in the medium term future (MARGE, 2008a ; HARDCASTLE, 2010).

As the farmers themselves point it out, the irreplaceable advantages of Eucalyptus trees are their high capacity to coppice, their fast growth allowing an important production and income in a short time, and the high density of their wood (unsurpassable productivity of energy). The type of roots of these trees is also excellent to fix soils on steep slopes.

#### **1.3.2.5 Good protection of natural forests**

Rwanda is one of the very few African countries where natural forests are effectively well protected. For almost 10 years now, their area has been stable and they are safe (see political will above). Charcoal comes from plantations and therefore coalmen pay for the wood. In most other countries charcoal comes from deforestation and therefore the price of the wood itself is nil (the price of charcoal includes only the value of the work to fell the trees and prepare the charcoal). In those countries, efforts to develop a sustainable forestry, taking into account the investments needed to produce the wood, are doomed because fuelwood from well managed woodlands cannot compete with the cheaper fuelwood unsustainably produced by deforestation. This unique situation in Rwanda is a *major asset* to develop a viable, profitable and sustainable forestry sector (MARGE, 200b).

### **1.3.3 Summary of key weaknesses**

The vision 2020 and the results of all comparisons of supply and demand recommend to increase wooded areas and the coverage of agro-forestry systems. Indeed, at the same time, recent studies have confirmed:

- the central role of wood in the energy supply of Rwanda in the foreseeable future;
- the appropriateness of wood as an energy source (renewable, significantly contributing to reduce poverty) provided it is used with efficient methods;
- the real potential to reach a balance between wood supply and demand should the management of forest resources be improved and the genetic quality of stands be improved.

Nevertheless, despite the need to increase woodland area immediately and to intensify the management of existing wooded areas, a series of *key weaknesses* hamper the immediate implementation of these actions and the development of the forestry sector as a whole. These key weaknesses are summarized in the table that follows.

**Table 4 : Summary of the key weaknesses to solve to develop the forestry sector**

Constraints to lift	especially for	for the afforestation on public land	for afforestation on private land or the agro-forestry	for the management of forest resources	for the efficient downstream processing and trade of forest products
(1) Very low availability of effectively operational forestry staff, at all levels	all actions	√	√	√	√
(2) Forestry cadastre not available yet	afforestation on public land	√		√	
(3) New legislation on forest resources not available yet	afforestation / agro-forestry on private land	√	√	√	√
(4) Tree seeds of sufficient genetic quality not available yet	all actions	√	√	√	√
(5) Sylviculture models not available yet	all actions (especially in Eastern Province)	√	√	√	√

As a consequence of these weaknesses, the development of the forestry sector is facing a number of vicious circles that need to be broken in the first place.

## 1.4 Description of the support from Belgium, the Netherlands and other agencies in the sector

### 1.4.1 Belgian cooperation

#### 1.4.1.1 Framework of the Belgo-Rwandan Cooperation

Under the current Indicative Cooperation Program the Belgian Cooperation is active in five sectors in Rwanda, including the important and comprehensive sector of rural development. This large sector comprises the development of agriculture and livestock rearing, forestry, and the development of rural infrastructure (electricity and water adduction). It is in that framework that the Support Program to the Reforestation in the Northern and Eastern Provinces of Rwanda (PAREF.be) is implemented as described in the next paragraph.

Very recently, discussions have taken place and are still on-going on the orientations of the next Indicative Cooperation Program (2011-2014). According to these new orientations, there will be a concentration of the sectors where the Belgian cooperation will be active: the sectors of health, energy (development of renewable energy sources e.g. forestry for production of woodfuel) and decentralisation would be retained. It also means a withdrawal from an important sector such as agriculture.

#### 1.4.1.2 “PAREF.be” first phase

The Support Program to the Reforestation in the Northern and Eastern Provinces of Rwanda (known as “PAREF.be” first phase or « PAREF I ») is being implemented by the Belgian Development Agency BTC in co-management with MINIFOM in the framework of the bilateral cooperation between Rwanda and Belgium.

The funding from Belgium amounts to 3 million euros and the Rwandan counterpart contribution is estimated at more than 125,000 euros. It started in April 2008 and will last until June 2011 (39 months). The Program Management Unit is based in Kigali at NAFA headquarters. The specific objective and three results of the first phase are :

Specific objective : Quantitative and qualitative degradation of the forest resources is brought under control and the needs of Rwanda for forest products are increasingly met.

Result 1 : Institutional capacities from the central level to the decentralized level are strengthened.

Sub-result 1.1: NAFA/MINIFOM has got decision-making tools for the sustainable and decentralized management of natural resources;

Sub-result 1.2: NAFA/MINIFOM has got efficient and reliable communication tools;

Sub-result 1.3: the capacities of the human resources have been strengthened at the central and decentralized level and operation means have been provided so that NAFA can accomplish its tasks;

Result 2 : Forest resources in pilot districts (3 in the Northern Province and 3 in the



Eastern Province) are increased and diversified and their management is improved.

Result 3 : Actions of wood downstream processing and energy saving are promoted.

As indicated, the program is balanced between (i) objectives/actions of institutional strengthening at the national level and (ii) operational objectives/actions (physical field achievements) in the following 6 pilot districts : Rulindo, Gakenke, Gicumbi (Northern Province) and Bugesera, Ngoma, Kirehe (Eastern Province).

The present Technical and Financial File concerns the second phase of this program.

## 1.4.2 Dutch cooperation

### 1.4.2.1 PAREF.nl

The Support Program to the Reforestation of 9 Districts of the Northern and Western Provinces of Rwanda (known as “PAREF.nl” or “PAREF II”) is a program in the framework of the bilateral cooperation between Rwanda and the Netherlands that presents some similarities with the first phase of “PAREF.be”. Given these similarities, PAREF.nl is being implemented by MINIFOM and the Belgian Development Agency BTC with a single Project Management Unit for the two PAREF programs.

The funding of PAREF.nl from the Netherlands amounts to 10 million euros and the Rwandan counterpart contribution is estimated at more than 200,000 euros. It started in January 2009 and will last until June 2012 (42 months in total, comprising 36 months of implementation and 6 months of closure). It covers the Western Province of Rwanda and the other districts of the Northern Province (total 9 districts). The specific objective and three results of “PAREF.nl” are :

Specific objective : same as “PAREF.be” first phase.

Result 1 : Institutional capacities at the decentralized level are strengthened as regards afforestation and forest resource management.

Result 2 : Forest resources in the 9 districts selected (2 in the Northern Province and 7 in the Western Province) are increased and the necessary systems for their rational management are established.

Result 3 : The downstream processing of fuelwood is improved.

The comparison of the actions and approaches of “PAREF.be” (first phase) and PAREF.nl is summarized in the following table.

**Table 5 : Compared actions and approaches of “PAREF.be” and “PAREF.nl”**

Type of actions	PAREF.be	PAREF.nl
Institutional strengthening		
Geographical coverage	At national level	

	& in 6 districts at decentralized level	In 9 districts at decentralized level
<b>Field interventions</b>		
Geographical coverage	6 districts	9 districts
Plantations : land ownership	On public land & on private land (agro-forestry)	On public land only
Plantations : objective	For fuelwood or other uses (multi-purpose)	For fuelwood only
Plantation on public land : approach	Selection of contractors in the framework of the contract PAREF-District covering the field activities.  Contracts of works	EII approach ("HIMO").  Small number of large contractors selected by RPPA.  Contracts of services (to supervise the HIMO workforce mobilized by the district).  (Contract PAREF-Operator + contract PAREF-District)
Forest management	Implementation of DFMP	Establishment of Management plans of the plantations that have been made

#### 1.4.2.2 "CATALIST" project

The project « Sustainable Energy Production through Woodlots and Agro-forestry in the Albertine Rift, first phase », also funded by the Netherlands, is a regional project. Its Rwandan component complements PAREF.nl because it carries out afforestation on private land, although not necessarily in the same districts. It started in January 2009 for a period of 3 years. The budget is 20 million euros for three countries.

It is implemented by IFDC and is grafted on the CATALIST project that started in 2006 and deals with agricultural intensification. The original idea, provided the actions are on the same sites, is to reduce competition for land use between energy and agricultural production by increasing at the same time wood production and agricultural productivity.

The project of Sustainable Energy Production works on two strategies. The first one is to promote the development of the fuelwood and charcoal value chain. The second one is afforestation on private land according to two systems, woodlots and agro-forestry. As regards this second component, plantations will start in 2010 and will be sub-contracted

to two operators :

MIG in 4 districts including Bugesera (3000 ha of woodlots and 1500 ha of agro-forestry to plant over the phase) ;

Duhamic Adri in 2 districts including Rulindo (1000 ha of woodlots and 500 ha of agro-forestry to plant over the phase).

The approach used to plant on private land is that the production of seedlings is paid by the project as well as 80% of the cost of the plantation work. This approach is different from the one used by “PAREF.be” (first phase) where only the cost of the production of seedlings in nurseries is paid by the project, while the owners of the land support the cost / investment effort of the plantation.

### 1.4.3 Results of the mid-term review of “PAREF.be” 1<sup>st</sup> phase

#### 1.4.3.1 Findings

The recent mid-term review of the progress and achievements of the first phase has noted the following main points (BLOESCH and NGIRABANZI, 2010) :

The collaboration between NAFA and PAREF needs improvements: mutual consulting, common implementation of some activities, information sharing.

The planning of the activities is too ambitious in the timeframe of the first phase, because human resources qualified in forestry are very limited at all levels. Delays have been observed in several processes influencing the progress of the program.

The involvement of the local population in the implementation of the activities through Forest Management Groups or local contractors is too weak. If this is not improved, the beneficiaries will not take sufficient ownership of the sustainable forestry activities and the positive impact of the program to reduce poverty will be too small.

Because of the lack of human resources qualified in forestry the quality of the afforestation works has not been sufficient (mid-term assessment).

#### 1.4.3.2 Recommendations to improve the first phase

The main recommendations of the mid-term review to improve the next actions of the first phase are as follows :

Increase the involvement of the local population in the implementation of the afforestation and forest management activities, so that the beneficiaries take ownership of the sustainable management of forest resources. Train **Forest Management Groups** to involve them in the activities on public woodlands through forest management contracts. Encourage the allocation of the contracts of afforestation works to operators coming from the same district. Promote the involvement of Forest Management Groups or cooperatives in forestry activities on private land.

Intensify the actions in **agro-forestry**.

Make adjustments to the Direction of the program and increase the technical assistance of the two combined PAREF programs in order to increase technical support and **training**.

Set up a formal framework of mutual consultation between PAREF and NAFA.

Increase the monitoring and evaluation of the achievements and the supervision of the activities in order to increase the quality of the accomplishments.

Stimulate a consultation framework between MINIFOM (including NAFA and PAREF), MINAGRI (agro-forestry), MININFRA (energy) and MINELA (climate change, land use).

### **1.4.3.3 Recommendations for the second phase**

The additional recommendations of the mid-term review towards the second phase of the program are the following :

Strengthen the accomplishments before envisaging extensions.

Organize the training of A2 forest technicians as a priority.

## **1.4.4 Other interventions in the sector**

### **1.4.4.1 Forest Management Support Project (PAFOR)**

The project is funded by the African Development Bank, and is under the supervision of MINIFOM. It is a 5-year project that effectively started in mid 2003, with a budget of 13.5 million US\$. Since 2009 it is in its closing phase (it focuses on maintenance activities) and it will end in June 2010. No new phase is formally planned, although a new AfDB intervention in the forestry sector is possible. It has a central office in Kigali in the same premises as NAFA and PAREF and has 3 field offices with activities covering the following former provinces : Kigali, Gitarama, Gikongoro (especially in the Buffer Zone of Nyungwe National Park), Gisenyi (especially in and around Gishwati forest), Umutara. The main branches of activities of the project are :

Afforestation on public land, reforestation of sensitive areas: bare lands, steep areas, watersheds around lakes, buffer zone of natural forests, rehabilitation of natural forest (enrichment), roadside planting. Afforestation works are implemented by contracting local associations through the district tender board.

Management of woodlands: works of rehabilitation/maintenance, mapping and inventory (Nyungwe Buffer Zone), maintenance of forest roads, support to the preparation of 20 District Forest Management Plans.

Promotion of agro-forestry: the project organizes the production of seedlings and distributes them to the beneficiaries.

Promotion of improved stoves.

Mobilization of a revolving fund to support decentralized forestry.

Training of staff of institutions and training of afforestation cooperatives.

Operational support to NAFA (equipment, awareness raising campaigns).

### **1.4.4.2 Vi Agroforestry & Swedish Cooperative Centre**

These two Swedish NGOs implement together the « Lake Victoria Regional

Environmental and Sustainable Agricultural Productivity Programme » (RESAPP). It is funded by the Swedish International Development Agency (SIDA). It is a regional program working in Rwanda, Kenya, Tanzania and Uganda for the period 2009 - 2011. In Rwanda it started in 2005 and covers three districts : Gasabo District (in 6 sectors) in Kigali ; Rulindo District (in 6 sectors) and Gicumbi District (in 12 sectors) in the Northern Province. The annual budget is about 500,000 euros per year.

The core activity is the improvement of the agricultural production through agro-forestry. Complementary activities are the building of terraces, the promotion of improved stoves, rainwater harvesting and fruit tree production. The other important activity is the provision of advisory services to the farmers (Farm Enterprise Development).

Small farmers are targeted as beneficiaries. Direct extension is implemented, with 1 extension worker for 1 sector, who trains individual farmers or groups of farmers. As regards agro-forestry, the seedling production and the outcomes of plantations are monitored by the extension workers.

#### **1.4.4.3 Support Project to the Strategic Plan for Agricultural Transformation**

The Support Project to SPAT is under the supervision of MINAGRI. The funding of IFAD is 11.48 million US\$ covering a period of 7 years (2007-2014). The actions are :

Component 1: institutional strengthening;

Sub-component 1.1.: Support to the coordination of SPAT;

Sub-component 1.2.: Strengthening of capacities at decentralized level;

Sub-component 1.3.: Support to the development of a System of Management of Information and Communication;

Component 2: pilot innovative actions: including erosion control and agro-forestry.

Sub-component 2.1.: Integration of trees to the landscape and erosion control;

Sub-component 2.2.: Integration of livestock rearing to agriculture and intensification of the production;

Sub-component 2.3.: Development and intensification of marshlands;

Sub-component 2.4.: Research-action and support to family farming.

#### **1.4.4.4 CARE**

CARE implements a project of promotion of improved stoves in the district of Nyamagabe.

#### **1.4.4.5 ICRAF**

The World Agro-forestry Center (ICRAF) conducts projects of research and development in agro-forestry concerning the whole country. It has recently signed a cooperation

agreement with IRST.

Some other NGOs exist in the country who carry out smaller scale interventions in the forestry or agro-forestry sector.

## 2 Strategic orientations

### 2.1 Main orientations

#### 2.1.1 A program to support the implementation of the national forestry policy

Given the need to rebuild the forestry sector, the present program aims at supporting the implementation of the National Forestry Policy. At least, its ambition is to work on the *urgent* subjects concerning the development of forestry in Rwanda, with a comprehensive vision. It is for this reason that it is proposed to change the name of the program from « Support Program to the Reforestation in the Northern and Eastern Provinces of Rwanda » (first phase) to « Support Program to the Development of the Forestry Sector in Rwanda » (second phase).

#### 2.1.2 Break the vicious circles

Forestry projects in Rwanda are urged to dedicate large efforts to afforestation, and afforestation tends to be presented as the top priority. This is basically correct, but there are two reservations regarding this assertion.

First, the only viable option for the country is to carry out additional afforestation *and* improve the condition and management of existing woodlands.

Secondly, as a consequence of the constraints exposed in the first chapter (see point 1.4.3), afforestation, and more generally the development of the forestry sector, are facing a number of vicious circles that need to be broken in the first place. In order to plant new trees and better manage resources, important tools are necessary. In turn, to develop these tools, sufficient human resources are needed.

In other words, two recurrent fundamental problems need to be addressed and should not be perpetuated : the scarcity of operational human resources and the lack of good seed resources. Otherwise, simply planting more trees of low quality and low viability would be a waste (“putting the cart before the horse”).

In order to tackle as soon as possible the root causes of the problems and to lift the main constraints first, **building national capacities in forestry becomes the first result** to achieve in the proposed intervention.

**Developing the good reproduction material and management tools becomes the second result** to achieve.

Finally, **the implementation of concrete activities of afforestation and forest management becomes the third result** to achieve.

### 2.1.3 Training through action

In spite of what has been explained above regarding the priority of the three results, the present program will **lead these main actions in parallel**, because none can be left pending. Indeed, the implementation of concrete activities of afforestation and forest management are excellent field conditions to organize training activities and validate management tools. The development of management tools represents also an excellent opportunity for training of human resources.

## 2.2 Implementation principles

### 2.2.1 Types of interventions and intervention zone

The program is a balanced combination between two types of objectives:

objectives of capacity building for the forestry sector: training, development of legislation tools, development of decision making tools, development of communication tools, strengthening of the capacities of the forestry institutions;

operational objectives (physical achievements): forest management, afforestation and development of agro-forestry.

A lot of emphasis will be put on the development of new and efficient methods and systems. There will be intensive technical input in all activities, even to plant trees. Indeed, contrary to what is often believed, plantations can be tricky to carry out and there have been countless examples of failures of large-scale forestry plantation projects worldwide.

Note: the support of real scientific research is not part of the program, except, when it is required, to develop the urgently needed program of genetic improvement of forest seeds (tree breeding). It is well recognized that the development of the forestry sector would need a component of applied forest research. However, in the context of this program it is evaluated that the training of forestry professionals is the priority and that research comes at a later stage, precisely because it needs particularly strong human resources. Of course, the program will continue to conduct technical studies and activities of « research-action » to solve the urgent and fundamental technical problems.

The intervention zone is the same as the one of the first phase of "PAREF.be". The first and the second result of the intervention (objectives of capacity building of the forestry institutions) concern the whole country. They take place at least at central level. The third result concerns 6 pilot districts (Rulindo, Gakenke, Gicumbi in the Northern Province and Bugesera, Ngoma, Kirehe in the Eastern Province). The types of actions and their geographical coverage are summarized in the following table:

Intervention zone for the main intervention types



Type of intervention	Central / national level	6 pilot districts
Result 1: Training of central staff of institutions: Training of decentralized staff of institutions: Training of private operators:	X	X X
Result 2: Development of legislation, decision making and communication tools: Application of the tools at decentralized level: Strengthening of operational capacities at central level: Strengthening of operational capacities at decentralized level:	X  X	X X
Result 3: Forest management, afforestation, agro-forestry:		X

An extension of the program to two districts (Kayonza, Gatsibo) of the Eastern Province will be considered by the program's steering committee. The program will first assess the availability of public land in the proposed 6 district, and if it is found that the required area is not sufficient, the Steering Committee will approve the extension to Gatsibo and Kayonza.

The first phase of "PAREF.be" has experienced important difficulties. It is deemed important to strengthen the accomplishments in the second phase, and more importantly to strengthen the operational capacity of the program before any extension. Other considerations include first the fact that it is not necessary to extend the zone of intervention to find enough areas to plant in the timeframe of the phase. Secondly, the four districts concerned by such an extension (Rwamagana, Kayonza, Gatsibo and Nyagatare) are significantly larger than other districts. Moreover, these districts have strong particularities compared to the rest of Rwanda, in terms of climate, ecology, land use and land tenure. Forestry operations are more difficult to conduct because of the drier climate and it would not be true to say that there are no constraints of land availability there (CIRAD Forêt, 2004). For all these reasons, forestry interventions in those districts, however needed, would almost require a specific project. It is anyway recommended to carry out a feasibility study before preparing any extension.

## 2.2.2 Double anchorage of the program & intervention through institutional channels

The program will continue to work at both central level and decentralized level. In that sense, the 6 pilot districts are the territory where new systems of management and development of forest resources are developed and tested in *real* conditions.

The two levels of intervention benefit each other. The design of policies, strategies, methods and tools at central level supports the forestry actions of the decentralized entities, while these provide feedback on what works and does not work, allowing regular adjustments and progress.

The program will continue working through institutional channels to increase the chances of durability of the actions. One of the main rationales of the program will be to strengthen institutional development by improving the capacities of institutional actors to play their role. The choice is to favour the establishment of operational systems embedded in the national structures instead of temporarily implementing « industrial » and somewhat artificial actions of afforestation.

To summarize, the program will maintain the following partnerships :

- with NAFA, ISAR, education institutions (central level). The partnership with NAFA will be particular as the program will be overseen by NAFA (and also because of its decentralized implications through the district and sector foresters);

- with the districts and their sectors (decentralized level).

The program, in collaboration with NAFA, will maintain close working relationships with the institutions of neighbouring sectors MININFRA (energy sector), RADA and RHODA (agro-forestry and fruit trees), NLC (land use and cadastre), REMA (climate change, watershed management).

The program will keep the synergies and complementarities with other programs and projects in the forestry sector.

## 2.2.3 Transfer of competences at two levels

An important strategy of the program will be to continue to support a **transfer of competences** in sustainable management of forest resources. This transfer takes place at two levels. First, from the central level to the decentralized level (within public institutions). Further on, the second degree is from the public decentralized level to the private sector / local population.

In the implementation of the present program, the respective roles of the main actors in the activities and processes of decentralized sustainable management of forest resources are presented in the following table.

Roles of the main actors in the decentralized sustainable management of forest

resources

Actor	Role
<b>NAFA</b>	<p>create the framework of sustainable forest management : new legislation, taxation system, control system of the transfer of management to the private sector, preparation and implementation of the National Forestry Plan ;</p> <p>support technically as « project manager » the implementation of the District Forest Management Plans by the districts. At the same time monitor and control this implementation;</p> <p>support technically afforestation / agro-forestry on private land</p>
<b>Program Management Unit</b>	<p>Support the process of transfer of competences:</p> <p>strengthen capacities (institutional and local);</p> <p>promote consultation between actors.</p>
<b>Districts</b>	<p>implement the District Forest Management Plans on public land as “project owners” (“contracting authorities”) by contracting private operators to implement the management operations;</p> <p>monitor and control the works of the operators;</p> <p>promote afforestation / agro-forestry on private land.</p>
<b>Operators</b> (private companies or Forest Management Groups/cooperatives)	<p>implement the contracts of works : nurseries, plantation, maintenance, surveillance, harvesting.</p>

## 2.2.4 Economic approach

The economic interest of forest resources is often underestimated. This concerns not only their various environmental services that are difficult to translate into figures of financial benefits, but also the tangible contribution of wood as a « cash crop » to the GDP, the employment and the reduction of poverty. This program seeks on the one hand to increase the awareness of all stakeholders regarding the importance of forestry for the national economy, and therefore the importance of intensifying investments in better forest management. And on the other hand the program endeavours to increase the level itself of contribution of the sector to the production of wealth.

In order to reach the latter objective, the production of wood will not be considered in an isolated manner but as part of a continuous chain including the processing and the trade of the wood. In particular, incentive measures proposed will be designed in an integrated manner, taking into account the various actors of the sector.

In this approach to increase the profitability of forestry, to have a direct impact on poverty reduction and contribute to the economy, the program will work a lot with the population

and the private sector. While the public institutions taking part to the program will play the role of policy design, applied research, planning, technical support, control, supervision and monitoring population and private sector will be put at the forefront of the implementation of most activities.

It is important to remind however that the “private forestry sector” and forestry entities of the civil society in Rwanda are currently weak. The generic term “private operators” is used many times in the present document, but it includes simple farmers involved in (agro-)forestry activities. Furthermore, as explained in point 1.3.5.1.a, most of the people with a forestry profession work small scale, with limited equipment and are often informal (craftsmen, small forestry businesses). Real private companies specialized in forestry works (nurseries, plantations e.g.) hardly exist, wood processing industries are small scale and need strengthening, national NGOs competent in forestry are very few, structured and specialized cooperatives active in forestry are very rare at this stage. The program will undertake to contribute to the strengthening of these private operators.

Note: downstream of the chain of wood trade, the activity of promotion of improved stoves exists in the first phase of “PAREF.be” (implemented by MININFRA, energy sector) but it is not included in the program (second phase). It is certainly an extremely important aspect but this type of activity is less related to forestry (takes place at household level), is typically related to the energy sector and is quite specialized. Therefore, it is proposed that in the context of the second phase, the aspect of promotion of improved stoves be a project in its own right directly supervised and implemented by MININFRA. This project should be more important in volume than the current activity of the first phase of “PAREF.be” and should be formulated in a specialized way based on the first results obtained by the first phase. The energy sector is precisely a sector where the Belgian cooperation is active. It is therefore particularly recommended that this project of improved stoves be funded by the Belgian cooperation as an energy sector project. The present program will maintain its operational links with MININFRA (energy sector) through the implementation of the activity of improved charcoal making. MININFRA (energy sector) would implement the separate improved stoves project in regular consultation with the program. These modalities are proposed to maximize overall funding and efficiency.

### 2.2.5 Gender mainstreaming

The gender dimension will be integrated in the present program through a gender mainstreaming approach that will include the following aspects :

(1) The program will assure a proper representation of women among its beneficiaries. To this end, it will facilitate women’s access to all forms of support that it offers :

the access to material inputs (seeds, tools, etc.), directly or through certain activities;

the access to relevant markets (forest products or other opportunities related to forestry), through specific activities. For example, the support of the program will enable women to engage in registered activities like the seed production business with ISAR/CGF;

the access to funding opportunities: calls for proposals, capacity building and training for women on how to write good proposals;

the access to information (in particular transmit information on income generating activities in forestry) and to communication facilities permitting women in rural areas to participate (taking into account their illiteracy). In turn, it will increase the chances of enhancing women's access to markets. This can include specific fora so that women's initiatives can be formalized, assessed and taken into account.

the access to all training and capacity building exercises organized by the program. This can pertain to the strengthening of the capacities of the private operators in the forestry sector in the pilot districts in which women will be properly represented and receive access to technical inputs. The program will check that women are appropriately involved as recipients of proximity extension services.

The program will pay attention to the fact that 28% of the Rwandan rural households are women headed and require specific focus as potential beneficiaries of the activities (nurseries, agroforestry, etc).

(2) When working with Forest Management Groups and other cooperatives, the program will verify that women's cooperatives are properly represented and receive strengthening aimed at improving their economic returns. It will facilitate and support the enhancement of rural women's entrepreneurial skills.

(3) The program will ensure gender sensitive representation and effective participation of women and men in decision making, at all levels. In that sense, representation of women deserves specific attention in the composition of the platforms, like in the communication structures.

(4) The program will become involved in gender specific planning, taking into account the impact of differing gender roles and gender needs of both women and men. It involves the selection of appropriate approaches and their entry points to address women and men's practical needs.

(5) The program will ensure that gender awareness is sufficiently elevated among decision makers in the forestry sector. It will therefore participate in the development of a sector wide gender strategy and contribute to implement the outcomes within the framework of the program. It will also be instrumental in strengthening the capacities of NAFA staff in gender mainstreaming.

(6) The program will engage in gender sensitive implementation: the activities will be executed in a gender sensitive way, where appropriate. More specifically, the program will try to improve the position of women through the following forestry activities in which women play a significant role (the list is not restrictive) :

Tree seed collection and processing;

Nurseries;

Post plantation tending;

Plantation surveillance;

Agro-forestry;

Wood and charcoal trade.

(7) The program will work on gender specific monitoring and evaluation. More attention will be put on the collection of gender-disaggregated data in monitoring and gender aspects will be included in the analyses of the evaluations.

It should be noted nevertheless that given (i) the very limited amount of data on gender in forestry, (ii) the very low availability of forestry skills in general currently and (iii) the weight of procurement procedures in particular to launch field activities, the gender mainstreaming approach needs to be applied in a flexible way: the program should keep enough leeway in the implementation of the activities. In other words, gender mainstreaming has to be considered right from the beginning but its different components will probably need to be introduced gradually.

### **2.2.6 Some emphasis on communication**

One issue which is raised is the lack of familiarity with forestry matters combined to a lack of vision of what should be achieved. This makes it difficult for people to know when things are wrong (HARDCASTLE, 2010). For example, this can influence decision makers at different levels negatively and mislead them. Therefore, besides the efforts dedicated to capacity building in this program, communication activities of various forms will be stimulated to disseminate correct information on forestry issues and accelerate progress.

## 3 Intervention framework

### 3.1 General objective

The aim of the program is to revive the forestry sector, to bring the necessary support to the implementation of the National Forest Policy so that poverty is combated and environment is preserved. More precisely, the program will contribute to (i) the professionalization and the increase of the revenues of the actors of the sector, (ii) the restoration of the productive forest resource through the decentralized sustainable management of public and private woodlands and by doing so (iii) the protection of the environment.

The general objective of the program has been formulated in order to belong to the global objective of the National Forest Policy which is « to make forestry one of the bedrocks of economy and national ecological balance ». So the general objective of the program is :

**The implementation of the national forest policy contributes to poverty alleviation, economic growth and environment protection.**

Objective verifiable indicators are :

- the increase of the income of the actors of the forestry sector
- the increase of the contribution of the forestry sector to the GDP
- the increase of the ratio “production/ consumption”

### 3.2 Specific objective

The specific objective of the first phase of “PAREF.be” was « the quantitative and qualitative degradation of the forest resources is controlled and needs of the country for forest products are increasingly met ». Nevertheless, the Mid Term Review of the first phase pointed out that the specific objective of the program was too ambitious and recommended to reduce it. In particular, the capacity to bring under control the degradation of the resources also depends on the other projects in the intervention zone of the program.

Following the first phase, the preoccupation of the second phase of the program is mostly to set a process in motion and lay the groundwork of an operational system, progressively allowing a better balance between wood supply and demand. Therefore, the specific objective of the program is :

**The bases of a system of sustainable management of the forest resources of Rwanda are established and needs of the country for forest products are increasingly met.**

Objective verifiable indicators are :

- Reliable disaggregated statistics on the forestry sector available and regularly updated (woodland areas, species, ownership, volumes, wood trade, forest economy);

Gender balanced participatory models and systems of sustainable forest management documented, tested and applied;

Increase of the areas of woodlands and increase of the tree cover on farmlands;

Improvement of correct matching tree species-site/uses and increase of the proportion of good genetic material planted;

### 3.3 Expected results

The program plans to reach the specific objective through the reaching of the following three results :

**Result 1 : "The availability of trained professional foresters is increased and technical capabilities of stakeholders in the forestry sector are strengthened"**

**Result 2 : "The institutional capacities to implement the national forest policy are reinforced from the central level to the decentralized level"**

**Result 3 : "Forest resources in the pilot districts (3 in the Northern Province and 3 in the Eastern Province) are increased and diversified and their management is improved"**

The logical framework and point 3.5.3 present a set of objective verifiable indicators that will allow to measure the accomplishment of these results.

It is useful to note that the objectives and the nature of the activities of the program are similar to the ones of the first phase. Nevertheless, some changes have been made to the formulation of the results and the layout of the activities compared to the first phase :

the former Result 1 of the first phase (institutional strengthening) has been divided into two separate results: training on the one hand and typical institutional strengthening on the other hand (given the important needs for training);

the retained activities related to the downstream processing of forest products have been moved from Result 3 of the first phase into the two first results concerning respectively the training and the institutional strengthening (studies). In other words, the activities of improved downstream processing of the wood are still part of the program (except improved stoves), but they are no longer grouped in a separate objective.

#### 3.3.1 Approach used to reach Result 1 (training)

While implementing a large and continuous training scheme targeting all institutions active in forestry, the program will be very careful not to drain these institutions in the process. Indeed, the staff of these institutions needs to remain sufficiently available to keep the activities going. When recruited recently, this staff needs to become operational in a short time. That is why the program will provide a lot of hands-on training and in-service training. Formal training courses will mostly be organized in-country and properly



distributed over the year to allow the staff to continue to fulfill their tasks in a fairly regular way. All training will be very practical and oriented towards the real and immediate application of the techniques and methods. Field practicing under the guidance of competent trainers will be an essential aspect.

### **3.3.2 Approach used to reach Result 2 (development of decision making tools)**

Many activities of the program to develop decision making tools, to support the establishment of a new legal framework and to develop communication tools will be the continuation of the activities of the first phase of "PAREF.be". These activities will be implemented so as to add whenever possible a component of capacity building of the national staff in charge of these activities (NAFA, private companies).

The program will not engage in real forest research. The investigation activities that will be implemented (studies, etc.) will actually be more related to very applied research or research-action, providing most results within the timeframe of the phase. The only subject where the program might progressively venture further towards applied research is tree breeding, where robust and properly designed tests will need to be launched without further delays.

### **3.3.3 Approach used to reach Result 3 (afforestation)**

#### **3.3.3.1 Quality and quantity**

In afforestation activities, the emphasis will be put on technical strengthening, including the development of proven techniques, and proper follow up. In other words, quality of the works will be as important as the amounts planted, if not more. The first cornerstone is to take the necessary steps to improve nursery standards in all actions (training, planning, organization, supervision, testing of improvements). The second cornerstone is to develop and establish a rational system of selection of species according to the site (region/climate, soil) and production objectives (desirable uses). The third cornerstone is to develop and enforce plantation guidelines (season of plantation respected, proper preparation of the ground, good organization of the works, proper plant-handling practices, etc.). The fourth cornerstone is to establish systems of post-plantation tending : surveillance of the sites, maintenance of the seedlings (weeding), etc. The detailed systems of these « cornerstones » will be developed for all different situations : plantation on public land or plantation on private land, afforestation or rehabilitation, first plantation or beating up, etc.

### **3.3.3.2 Promotion of agro-forestry**

To encourage tree plantation on private land, the approach will continue to be the following. The cost of the production and transport of the seedlings, the plantation and protection of the seedling will be covered by the program, while the farmers (private owners) will bear the cost (physical or financial) of the post-plantation tending. Although it is reckoned that if the seedlings are not provided for free to the farmers, very few in the current context would make the step to invest in agro-forestry activities. It is also generally considered that subsidizing partly or entirely the plantation works (paying farmers to plant their own trees on their own land) is not a viable option, for the following reasons :

it would contradict the economic approach described above of promoting a healthy forestry sector and wood market, by introducing artificial and unsustainable incentives. It would hardly be justified in such a scenario to speak about private "investments" in agro-forestry;

the fact that farmers would hardly contribute to the cost of the plantation represents a high risk that they would not maintain the young trees properly, as shown in the past by many a rural forestry project. Indeed many would plant the trees not because they are interested in these trees but because they seize the opportunity of the remuneration.

The program will use two approaches:

- 1) Signature of contract with a local NGO which be in charge of the supervision and follow up during the whole period of the project i.e. 4 years
- 2) Continue to support micro-project presented by beneficiaries and organize performance contracts in order to increase success in maintaining agro-forestry trees after plantation. This will done through calls for proposals : private owners submit their micro-projects of plantation of trees on farmland, which are funded after approval

The program will also start to test in real conditions the deployment of a network of neighbourhood nurseries (local nurseries / « convenience » nurseries) in the administrative cells of the pilot districts. The creation of cell nurseries all over the country is a project nurtured by the Government of Rwanda. This last method will be deployed gradually, after extension resources are in place and made operational (this time needed will allow the first improvements in the supply of tree seeds of better genetic quality). Indeed, a program of neighbourhood nurseries cannot be envisaged without an efficient service of neighbourhood extension (sector level, cell level) to promote good agro-forestry practices.

### **3.3.3.3 New afforestation or rehabilitation of existing woodlands?**

There is sometimes a controversy between those who insist on the need to plant new areas at all costs and on a large scale, and those who claim that no bare land is left

available for afforestation in Rwanda (on public land in particular) and that all efforts should be concentrated on the rehabilitation of existing woodlands.

The second assertion is in some cases actually motivated by an underlying desire to log certain woodland areas to generate immediate income, these particular woodlands being in fact in fairly good conditions.

In front of this question, first, the activities of up-dating of the mapping of forest resources/land cover and of preparation of the forest cadastre will in the coming few years give a much clearer picture of where public land is effectively still available for afforestation. Secondly, it is already known that the situation is variable according to the districts. In some of them it is indeed difficult to find available areas of any sufficient size without such aforementioned systematic surveys. But in some others, available land is already known to exist on a scale that would allow several years of afforestation campaigns.

The present program will therefore consider those two types of plantations as eligible. Most of all, its managers will set out to prepare *balanced* plantation workplans between the two types, based on rational criteria and field verifications. These criteria can be for example : (i) afforestation of bare land on steep slopes receives first priority ; (ii) in a certain district if bare land is available, try to plant this first before rehabilitating existing woodlands ; (iii) rehabilitate really degraded woodlands before rehabilitating or converting the ones that are still in fair condition ; (iv) take into account District Forest Management Plans and Wood Supply Master Plans ; (v) liaise with the National Land Center implementing the Land Use & Development Master Plan, which will define the desired use of the land. There will be a link between keeping control over the implementation of the District Forest Management Plans and keeping control over the launching of rehabilitation works.

#### **3.3.3.4 Types and objectives of plantations**

In the same line of reasoning, all of the following types of plantations will be eligible (public or private land) : restoration of very steep slopes, intensive plantations, small woodlots, roadside planting, agro-forestry planting on schemes of radical terraces, agro-forestry trees on farm. The key points regarding these various possible interventions are (i) to use rational criteria according to the circumstances to select them and (ii) to implement them properly (example : if public roadside planting is decided, precautions should be taken to guarantee that adjacent farmers will respect them : avoid backfiring ; example : if agro-forestry planting is done on terraces, apply the approach for private land, and not the approach on public land).

In the program, the main emphasis will be on fuelwood production (given the structure of the national needs) but certainly without excluding other uses of the trees : soil improvement in agro-forestry but also in intensive plantations (association of several species e.g.), production of service wood, production of timber, fruit production or beekeeping, etc. Some of these other uses like service wood or timber production may even be promoted, for the following reasons : (i) a lot of the service wood or construction wood once discarded ends up being used as firewood ; (ii) a common practice in forestry

is that the best parts of a tree are used for timber, while the branches and secondary parts of the trunk are used for firewood.

In a few words, the program will support multi-purpose afforestation in which fuelwood production has the main importance.

### **3.3.3.5 Plantations in the wider scope of forest management**

All these types of afforestation works, on public or private land will be considered in the wider scope of sustainable forest management. Indeed, although plantations are the heaviest operations in terms of investments, they are just one operation among all operations of the life cycle of well-managed wooded formations. They must be seen as one element of a consistent and comprehensive production system (see next paragraph).

## **3.3.4 Approach used to reach Result 3 (organization of sustainable forest management)**

### **3.3.4.1 On public land**

In order to implement the District Forest Management Plans and establish systems of sustainable management of the public woodlands, the program will support the formation of Forest Management Groups / cooperatives as it was intended in the law of 1988 organizing the forest stewardship/regime. It will train them to involve them in the operations of management of public woodlands through the signature of forest management contracts with these groups.

This will allow an effective involvement of the local population, ultimate beneficiary, in the activities of sustainable forest management, so that it will take ownership of these activities.

However, promoting the appearance of these groups / cooperatives, facilitating their structuring and organization, training them in forestry activities, designing and applying the management systems to be included in the contracts (to implement the District Forest Management Plans), making them capable of offering their services through official procedures, all this will take time and these groups will certainly not be fully operational immediately.

The program can introduce contracts with local associations and cooperatives for the whole period of the program; In this case the payment of contractors should be done every quarter after evaluation of results on the field.

For this reason, for the works of afforestation on public land of the first campaigns, the program will probably be obliged to work with normal contractors (as it has been the case until now in the first phase of "PAREF.be"), lest no offer be obtained in the tenders. In any case, the allocation of the contracts on afforestation works to operators coming from the same district will be encouraged whenever possible. Intermediate systems, like private contractors collaborating with or employing local groups / cooperatives can be envisaged.

HIMO approach will be experiment, the contractors to sign the contract just for the supervision of manpower for the nursery bed and plantation.

### **3.3.4.2 Promotion of agro-forestry**

Beyond the aspect of plantation on private land (agro-forestry or woodlots), the program will endeavour to start developing little by little a network of coordinated (agro-)forestry smallholders (HARDCASTLE, 2010). The first steps will be to provide services of technical advise on sustainable management to those smallholders who wish to be supported and to start preparing with them simple pioneer agro-forestry management plans (PAREF, 2009).

These (agro-)forestry smallholders can also be coordinated as Forest Management Groups / cooperatives.

## **3.4 Activities**

### **3.4.1 Activities leading to Result 1 (trained professionals)**

#### **3.4.1.1 Activity 1.1. Establish a training unit and make it operational**

Rationale

The needs for training have been found very important for all types of actors in the forestry sector: central forestry institutions, decentralized institutions in charge of forestry activities, forestry education institutions and their students, segments of the civil society already involved in forestry and agro-forestry or that should be engaged in it. These needs are so important that a large component of the program will be fully dedicated to that aspect. It will require a systematic approach to target one by one each of these categories of actors at their different levels and to provide them with a comprehensive “package” of training covering the whole range of forestry topics in which they need know-how.

As during the period of the program (and even beyond that) a large number of courses and training modules will have to be given on an almost full time basis, it could have been envisaged to build a real forestry training center, with buildings, equipment, lecturers, field training grounds. Nevertheless, this option has not been adopted as such by the program, for the following reasons.

The main one is that it would take too much time to build a real training center. Furthermore, schools of forestry do exist in Rwanda and it is deemed more rational to give them the required support rather than building yet another one. On the other hand, as regards people who are already working in the forestry sector and need to receive further training, general training infrastructures and facilities exist all over the country and can be used to organize the training sessions. This is an advantage compared to the building of a centralized training center, as the training can be decentralized, closer to some of the target groups or closer to certain forest resources that need to be visited as part of the practical training.

In a way, the idea in the present program is to establish what looks like a “mobile” or “virtual” training center organized in a flexible way, that is called “training unit”. It is mainly

a pool of resources (permanent and specific technical competences to give the training modules, logistical resources, organizational resources, training material and equipment) and an operational system to organize the provision of training.

The staff of the forestry institutions will receive some initial training, especially when they have been recently recruited and start their service. Later on, they will receive regular retraining through this system (refresher courses or update courses).

As to private operators in the forestry sector, in particular in rural areas, their training will be done according to two systems. First, on a regular basis they will be trained by permanent extension staff (sector foresters), themselves trained by the training unit to play this role. Secondly they will receive training modules given by specialist trainers sent by the training unit. It means that in a number of cases the training unit will organize the training of trainers.

An underlying idea ("mobile center") is that many training activities organized by the training unit, especially the field practicing, will be linked to the current activities of the program and the activities of its direct partners.

Therefore, this activity is the first step and also the framework that will be used to implement all the following activities related to Result 1 of the program (trained professionals). There will be links between the training of very specialized officers of NAFA or ISAR on the one hand (activity 1.3.) and the training of professors of education institutions (ISAE-Busogo namely) in the same specialized disciplines (GIS, tree breeding e.g.) (activity 1.2.).

#### Activities

Assess training needs at the different levels and prepare a training plan in collaboration with the concerned departments. National statistics concerning education and the poor participation of women/girls in science and technology have implications for selection criteria regarding persons to be trained during the program. Opportunities for women to be trained should be improved. When assessing the needs, attention should be given to the gender roles on the offer (service delivery by trainers) and the demand side (candidates). While planning training activities, attention should be given to accommodation (child care if necessary) and non-resident training.

Prepare the training materials for selected target groups in different fields of the forestry sector: develop curricula, etc. This will be a continuous process, as new subjects are needed to be added. It should be noted that women could have other training needs and interests than men. The training and didactical material should take into account the gender dimension and avoid any stereotypes.

As part of the training plan, develop a system of evaluation / monitoring of the progress made by all the beneficiaries of the training modules (tests, etc.). The monitoring and evaluation system will disaggregate all statistics (lists of participants, invitations, lists of trainers, pool of trainers, etc.). The M&E will be gender specific, and

gender specific indicators will be integrated. Questions will assess the contribution the training has towards women's empowerment.

Implement the training plan as exposed in the next activities.

#### Expected outputs

Training plan available and ready for implementation (for the 4 years of the program). The training plan contains an assessment of the needs, the program of the training courses for the different target groups and the timetable to give the different training modules to the different target groups;

Training curricula developed for the different target groups as the training program is implemented;

Training material gathered and produced (documentation, etc.);

Training resources mobilized (trainers from outside the program especially) and organizational arrangements made;

Records on progress made by the trainees compiled.

#### Responsibilities

Actor	Tasks
Intervention Director and Principal Technical Advisor	Together with the concerned departments (ISAE, forestry secondary schools, NAFA, ISAR, districts) prepare the bases of the training plan.
TA (Training) of the program	Together with the concerned departments (ISAE, forestry secondary schools, NAFA, ISAR, districts) finalize the training plan; Give support to the organization of the implementation of the training plan; Provide input into training methodology and materials; Develop some training curricula and advise on the development of other curricula by national experts; Give some of the training courses; Provide design input on the extension work of the program and monitor this work. Take part to the evaluation of the results of the training plan.
Training and Communication Officer of the program	Work with the TA (Training) to prepare the training plan; Develop relationships with national and regional training institutions and with resource people (experts in specific areas); Together with the concerned departments (ISAE, forestry secondary schools, NAFA, ISAR, districts) organize the

	implementation of the training plan.
Monitoring and Evaluation Officer of the program	Work with the TA (Training) to monitor and evaluate the implementation of the training plan.
National consultants	Prepare the curriculum of their courses in collaboration with the program; Give some of the training courses.
International consultants	Give some of the most specialized training courses.
ISAE, forestry secondary schools, NAFA, ISAR, districts	Take an active part to the preparation of the training plan; Facilitate the implementation of the training plan (make the trainees available and mobilize them, etc.); When possible, take part to the development of training curricula; When possible, take part to the training of trainers.

#### Resources required

An amount of 614.530 Euros is budgeted for the following activities, International Technical Assistant and items:

Assess training needs at the different levels and prepare a training plan in collaboration with the concerned departments
Prepare the training materials for selected target groups in different fields of the forestry sector
Prepare training materials: stationary / training documents
Prepare training materials: training equipment
Salary International Technical Assistant (Training)
Vehicle
Mission allowances International Technical Assistant (Training)
Salary 1 Driver
Mission allowances 1 Driver
Laptop + printer + stabilizer
Office furniture
Fuel
Maintenance and repairs 1 vehicle
Insurance 1 vehicle



### **3.4.1.2 Activity 1.2. Strengthen the training of the future graduates in forestry**

#### Rationale

Training a new generation of foresters to solve the current extreme scarcity of human resources is a priority. ISAE-Busogo is currently opening a new Department of Forestry and Natural Conservation to train A1 bachelors in Forestry and A0 (Agro-)Forestry engineers. It is the first time a curriculum is developed at that level in forestry in Rwanda and this process needs to be supported. The main difficulty is that very few good professors are available in the country. At the same time, starting from the current A1 agro-forestry training, it is essential to increase the quality of the training. Therefore, the support of the program should be seen as an additional contribution to the existing budget calculated to start off the new department (SENYANZOBE, 2010).

As regards A2 forestry technicians, a significant number of them are trained every year. But their level is insufficient and their training is not strong enough compared to the challenges in the forestry sector. The two concerned schools face a number of difficulties: the teachers need further training, the schools lack field equipment and training materials.

In all those cases, A2, A1 and A0 training cycles, each of them at its respective level, the main objective of the support from the program will be to give to the students all opportunities to effectively master the fundamental techniques to be used in forestry in Rwanda. For example, a lot of emphasis will be put on the training of state of the art nursery techniques and plantation techniques. Enough attention will be paid to making sure the most fundamental skills are strongly developed (calculation skills, written and oral expression skills, etc.). The training on the human aspects of the profession will also receive sufficient attention (extension techniques, gender aspects e.g.).

The support of the program will concern three aspects: (i) the improvement of the courses given in the institute or school; (ii) the facilitation of field trips and activities allowing real practicing with strong technical support and (iii) the facilitation of internships in a professional environment, again with a sound technical support.

Since relatively few women attend these education curricula, attention should be given to eliminate risks of discrimination and corruption. It is widely known that women/girl students suffer more violence, harassment at schools and on their way to school. Training locations, internships and field visits should be organized with this in mind. They should be easily and safely accessible, without risks of harassment, rape or any kind of violence. Selection procedures of students on the other hand should be transparent, public and available for all students, in order to avoid risks of corruption.

#### Activities

Strengthen ISAE-Busogo for the launching of the new forestry department (A1 forestry cycle, A0 forestry cycle, A0 agro- forestry cycle):

support technically the organization of academic programs. Gender specific needs assessments will be integrated in the process. The question of how the percentage of women educated could be increased will be analysed and the results taken into consideration;

strengthen the education program with the support of visiting professors;

supply training equipment and materials (field forestry equipment in particular);

bring operational and technical support to the organization of field practicing activities for the students (field practicing trips and activities);

bring operational and technical support to the organization of internships for students and for their end of studies thesis.

Bring technical and material support to the technical schools in the training of A2 forestry technicians (EVFO Kibisabo & Gisovu):

support technically the organization of education programs. Gender specific needs assessments will be integrated in the process. The question of how the percentage of girls educated could be increased will be analysed and the results taken into consideration;

improve the qualifications of the teachers through specific training;

supply training equipment and materials (field forestry equipment in particular);

bring operational and technical support to the organization of field practicing activities for the students (field practicing trips and activities);

bring operational and technical support to the organization of internships for students.

#### Expected outputs

Academic programs in 1 institute and 2 schools strengthened.

Availability of training materials improved in those institutions.

Training and practicing equipment available in those institutions.

8 professors and lecturers supported technically in ISAE-Busogo and between 10 and 20 teachers supported technically in the two forestry secondary schools.

Field practicing activities and field trips regularly organized for 70 A1 candidates each year, 30 A0 candidates each year and 70 A2 candidates each year.

Internships of 2 months in a professional environment organized for these students.

## Responsibilities

Actor	Tasks
TA (Training) of the program	<p>Together with ISAE and the forestry secondary schools prepare a training program;</p> <p>Provide technical support to these institutions in the organization of curricula;</p> <p>Provide input into training methodology and materials;</p> <p>Provide technical support and training to the professors and teachers of those institutions.</p>
Training and Communication Officer of the program	<p>Work with the TA (Training) to prepare the training program;</p> <p>Together with the beneficiary institutions organize the implementation of the training program.</p>
International consultant, visiting professors, national consultants	<p>Provide technical support to these institutions in the organization of curricula;</p> <p>Provide technical support and training to the professors and teachers of those institutions.</p> <p>Give some of the specialized training courses to the students.</p>
ISAE, forestry secondary schools	<p>Take an active part to the preparation of the training program;</p> <p>Take an active part to the implementation of the training program</p>
NAFA	<p>Strengthen and maintain permanent links with ISAE Forestry Department and the two secondary schools</p>
NAFA, ISAR, forestry projects in the country, districts, private companies in the wood processing sector	<p>Provide opportunities of internships to the students of these institutions and give them technical support;</p> <p>Provide comprehensive information to ISAE on the important advanced technical projects which are implemented (national forest inventory, etc.)</p>

#### Resources required

An amount of 330.000 Euros is budgeted for the following items:

Strengthen ISAE-Busogo for the launching of the new forestry department (A1 forestry cycle, A0 forestry cycle, A0 agro- forestry cycle)
International Consultant: Support to ISAE-Busogo (visiting professors and organizational support)
Strengthen ISAE-Busogo: forestry equipment for training
Strengthen ISAE-Busogo: grants for internships
Strengthen ISAE-Busogo: field tours: transport and per diems
Bring technical and material support to the technical schools in the training of A2 forestry technicians (EVFO Kibisabo & Gisovu)
National Consultant: Support to EVFO-Kibisabo & Gisovu School G.: training of professors
Strengthen EVFO-Kibisabo & Gisovu S.G.: forestry equipment for training
Strengthen EVFO-Kibisabo & Gisovu School Group: grants for internships
Strengthen EVFO-Kibisabo & Gisovu S.G.: field tours: transport and per diems

#### **3.4.1.3 Activity 1.3. Strengthen the technical capabilities of the staff of public forestry institutions (NAFA, ISAR) at both central and decentralized level**

##### Rationale

NAFA is a fairly new institution, which started to be established in 2008, a process which is not completed. Its current central staff is still limited and in a transitional condition. It is planned that in the coming months (beginning of the second half year of 2010) all 33 positions of the organizational chart of NAFA at the central level will be filled. Given the scarcity of senior foresters in the country, it is unlikely that the majority of the technical positions will be filled by officers with the desired education background and with extensive experience. As a consequence, it is unlikely that NAFA will be fully operational soon enough. As NAFA plays a central role in the implementation of the National Forestry Policy, it is absolutely necessary to strengthen the capacities of its staff.

This will be done by organizing training modules in Kigali tailored to the functions of the different categories of officers (Directors, Heads of Services, Field Program officers, Research/Planning officers, administration and finance staff). For the officers of the technical staff, this will be complemented by the organization of field practicing activities and field trips. It will also be possible to send some of the officers to short specialized courses in neighbouring countries. On top of that, regular coaching and hands-on training will be provided to the different officers while they perform their duties, especially in the context of the implementation of the activities of the program (preparation of decision-making tools and communication tools, afforestation, forest management, extension: activities 2.1., 2.2., 2.3., 3.1., 3.2.). Specialized courses will be given to some of the officers (GIS in particular).

As regards decentralized NAFA staff, the district foresters have been recently recruited and deployed. Their level and experience is variable. They will be sent regularly to update courses or refresher courses and field trips and activities for practicing with trainers will be organized. Beside the (re)training they will receive on various aspects concerning afforestation works, they will be extensively trained in all aspects concerning the implementation of District Forest Management Plans. Indeed, it is a new activity that is tackled for the first time and district foresters will play an essential role in it. On the other hand, the program will train 220 the forestry animators recruited by MINIFOM and the 30 district foresters. They will be trained at the beginning to carry out their duty, and later on be retrained regularly. Given their important role in forestry extension, they will also be trained as trainers.

The capacities of the administrative and technical staff of the districts and sectors involved in the forestry activities in the pilot districts will also be strengthened. Indeed, as there is a high turnover among this type of staff, these trainings will be organized regularly.

Finally, the team of the Forest Tree Seed Center (CGF) of ISAR needs capacity building, as it is in a way the keystone of all programs to thoroughly renew the tree plantation resource of Rwanda. Another reason is the very specialized nature of the work. The program will support the recruitment of two additional technicians by CGF who will also need training at the beginning. The team (researcher and technicians) will be trained by an international consultant and a national consultant, in the station and in the field, with inputs of the training staff of the program. Like in the case of NAFA central, the activity of training of ISAR/CGF staff will be closely linked to the concrete activities implemented by this team (see activity 2.5.: technical support given by the program to the actual launching of a tree breeding program).

As regards gender issues, it should be analysed how it would be possible to strengthen the position of women among the staff of public forestry institutions. Attention should be given to the vertical and horizontal segregation of women and men (taking into account the gender ratio of staff among Directors, Heads of Services, Field Program officers, Research/Planning officers, administration and finance staff).

During training sessions and other activities oriented towards these target groups (trips, visits, etc.) the attendance of women will be encouraged systematically. With regards to regular coaching and hands-on training a gender sensitive approach should be observed (for example female tutors/mentors coaching and training female students). If necessary special training will be given to male tutors/mentors (for example regarding sexual harassment, gender sensitive approaches,...) when female-female coaching or hands-on training is not possible. In all cases the importance of capacity building for women should be stressed.

Concerning up-date courses, refresher courses, field trips and activities for practicing with trainers organized for district foresters, attention will be given to gender sensitive approaches, since district foresters will play an important role in the development of District Forest Management Plans (the gender sensitive methods should be used for the

implementation of these plans).

The training of sector foresters in the 6 pilot districts will include gender sensitive participatory approaches and gender sensitive tools for assessment and analysis.

#### Activities

Strengthen the capabilities of the NAFA agents at the central level.

Strengthen the capabilities of the NAFA agents at the district and sector level.

Strengthen the capabilities of the administrative and technical agents of the districts and sectors.

Strengthen the capabilities of the ISAR staff in the field of forest tree breeding and production of controlled seeds.

#### Expected outputs

Training curricula developed covering most subjects relating to forestry in Rwanda.

More than 30 officers of NAFA central trained to perform their duties (training modules every year).

Staff of NAFA central coached to perform their duties (hands-on training).

Field practicing activities and field trips regularly organized for more than 15 officers of NAFA central.

1 GIS officer of NAFA central trained.

30 district foresters of NAFA (re)trained to perform their duties (training modules every year).

30 district foresters of NAFA coached to perform their duties (hands-on training).

Field practicing activities and field trips regularly organized for 6 district foresters of NAFA.

Around 220 sector forestry animators, will also benefit from the training.

Sector forester animators (one for two sectors) of NAFA trained to perform their duties (training modules every year).

Administrative and technical staff of 6 districts involved in the forestry activities trained on a regular basis on sustainable decentralized contractual management of forest resources.

Staff of ISAR/CGF (1 researcher and 5 technicians) trained in the development of a tree breeding program and the production of seeds of high quality.

#### Responsibilities

Actor	Tasks
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TA (Training) of the program	<p>Give support to the organization of the implementation of the training modules;</p> <p>Develop some training curricula and advise on the development of other curricula by national experts;</p> <p>Give some of the training courses;</p> <p>Provide design input on the extension work of the program and monitor this work.</p>
Training and Communication Officer of the program	<p>Work with the TA (Training) to prepare the training modules;</p> <p>Together with the concerned departments (NAFA, ISAR, districts) organize the implementation of the training program.</p>
Principal TA of the program	Coach NAFA team and ISAR/CGF team.
Monitoring and Evaluation Officer of the program	Monitor the implementation of the training program and the evaluation criteria.
National consultants	<p>Prepare the curriculum of their courses in collaboration with the program;</p> <p>Give some of the training courses.</p>
International consultants	Give some of the most specialized training courses.
NAFA, ISAR, districts	Facilitate the implementation of the training program (make the trainees available and mobilize them, etc.).

Resources required

An amount of 320.548 Euros is budgeted for the following sub-activities:

Strengthen the capabilities of the NAFA agents at the central level
Train central staff NAFA: courses in neighbouring country: fees, airplane, subsistence
International Consultant: Training central staff NAFA (specialized)
National Consultant: Training central staff NAFA
Train central staff NAFA: indoor courses: training facilities, subsistence
Train central staff NAFA: field training: transport, subsistence
International Consultant: Trainer in GIS for staff of NAFA and other institutions
Strengthen the capabilities of the NAFA agents at the district and sector level
National Consultant: Training of District's Foresters
Train 30 District Foresters NAFA: indoor courses: training facilities, subsistence
Train 30 District Foresters NAFA: field training: transport, subsistence
National Consultant: Training of 220 new Sector Forestry animators
Train Sector Forestry animators of NAFA: transport, subsistence
Strengthen the capabilities of the administrative and technical agents of the districts and sectors
Train district staff: decentralized workshops 1/year x 6 districts
National Consultant: Training district staff in decentralized forest management
Strengthen the capabilities of the ISAR staff in the field of forest tree breeding and production of controlled seeds
International Consultant: Training ISAR/CGF staff in tree breeding
Train staff ISAR/CGF: courses in neighbouring country: fees, airplane, subsistence
National Consultant: Training technicians of ISAR/CGF
Train ISAR/CGF technicians: field training: subsistence

#### **3.4.1.4 Activity 1.4. Strengthen the technical and organizational capabilities of the private operators in the forestry sector in the pilot districts**

Rationale

The private “operators”, farmers, loggers, coalmen, cooperatives, private companies, etc. are the ultimate implementers of the activities in the forestry sector. In the 6 pilot districts where actions of afforestation, forest management and wood processing are carried out, it will be necessary to organize a training program targeting all these implementers. The aims of this training program for private operators are twofold.

It is necessary to improve the quality and efficiency of the achievements, especially in all



forms of afforestation works, as explained in previous chapters. In that sense, the program will endeavour to professionalize as many of these private actors as possible. Secondly, as recommended by the mid-term review of the first phase of PAREF, it is desired to increase the involvement of local communities in the actions of sustainable forest management so that they could take ownership of these actions, which will guarantee a more lasting effect.

This activity relates to the different activities leading to Result 3 (forest resources and management improved). Given the scale and the diversified nature of these field activities developed in Result 3, there is a huge need for training support. The different types of training required are presented as follows.

**First**, it is necessary to provide intensified training (“technical support”) to the private companies, and progressively to the local Forest Management Groups, which are contracted to carry out the afforestation works planned in the six districts. That is to say to carry out the afforestation campaigns of the program on public land that are presented in Activity 3.1. The trainings will concern nursery techniques, plantation techniques, post-plantation tending techniques. When private companies are contracted, they are supposed to take charge of the training of the workforce. Nevertheless, until now few are professional and the training by the program of their team leaders will need to be systematic.

**Secondly**, training operations will be organized for loggers (some of them charcoal makers) in improved logging techniques. Indeed, ordinary tree felling as it is currently done can damage the stumps and prevent a proper coppicing<sup>2</sup>. This causes mortalities among the stands which induce a loss of productivity. Proper logging could also reduce the wasting of wood when logs are prepared.

Together with the training in improved logging, training operations will continue to be organized for charcoal makers in improved charcoal making techniques. Indeed, the move from traditional techniques to improved techniques makes it possible to double the efficiency of the conversion process of wood into charcoal. This can have a huge impact to reduce wastes and increase the supply of the end-product. It will be possible to identify after the first training campaigns in improved charcoal making pilot charcoal makers who will be trained as trainers, whom it will be possible to use and support as trainers in the last campaigns.

When loggers, charcoal makers and people involved in wood or charcoal trade will be organized in cooperatives to improve the marketing of their products, beyond the technical support they will receive organizational support. This activity is linked to the development of controlled rural markets of wood and charcoal (see Activity 2.1: incentive taxation).

Still in the improvement of the use of the wood, but more related to service wood and timber, the program will conduct studies on new or improved possibilities of downstream processing of the wood (see Activity 2.2.: studies). The results of these studies will be disseminated to the private sector of the wood industry (sawmills, etc.).

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<sup>2</sup> In French known as « rejet »

**Thirdly**, training will be given to the Forest Management Groups / cooperatives that will sign contracts in the framework of the implementation of the District Forest Management Plans (see Activity 3.1.). This training will cover the different technical aspects of the sustainable management of forest resources. Their organizational capacities will also be strengthened.

**Finally**, training will be provided to the individuals or groups who will engage in agro-forestry activities on private land as indicated in Activity 3.2. This training will concern nursery techniques, plantation techniques, post-plantation tending. This will take place either in the framework of approved proposals (after calls for proposals) or through the mechanism of extension and progressive development of neighbourhood nurseries (cell nurseries). Technical advice and even proper training will be provided to those individuals or Forest Management Groups/cooperatives who will further dedicate themselves to activities of sustainable management of an agro-forestry capital. In case of support to a Forest Management Group/cooperative, the training can also concern organizational aspects.

The emphasis will be put on the training of women's Forest Management Groups/cooperatives or individual women. These are likely to be more concerned by the following aspects: wood / charcoal marketing, nursery production, post-plantation tending.

Gender specific training to private operators (farmers, cooperatives, private companies) should be provided in function of the needs perceived by the actors. If the aim is to deliver services and products of higher quality, and perform with higher standards, capacity building for women's organization involved in afforestation activities will be welcome. Assistance to local communities in the actions of sustainable forest management, is evenly important and should be conducted in a gender sensitive way.

#### Activities

Strengthen the technical capacities of the private operators involved in afforestation works.

Strengthen the capacities of the private operators involved in the works of forest harvesting and the downstream processing of forest products:

provide training in improved logging techniques;

provide training in improved charcoal making;

provide organizational support and training to Forest Management Groups involved in logging, charcoal making and wood trade;

disseminate to the private sector of the wood industry the results of the technical studies conducted by the program on new methods of wood processing.

Strengthen the technical and organizational capacities of the Forest Management Groups (FMG) and cooperatives working in the decentralized and contractual management of public forest resources (implementation of the District Forest Management Plans, DFMP).

Carry out agro-forestry extension in the pilot districts to disseminate techniques of nursery seedling production, plantations, etc.

Train individual farmers or groups of farmers in agro-forestry techniques;

Provide organizational support and training to Forest Management Groups involved in the development of agro-forestry management plans.

There is a room for the program and NAFA to receive support from the Public Sector Capacity Building Secretariat (PSCBS) an activity to identify the capacity blockages in the delivery chain or the reforestation sector and establish or review of related capacity building plans. See Annexe 7.10.

#### Expected outputs

Training material newly produced or made available on nursery techniques, plantation techniques, post-plantation tending, improved logging, improved charcoal making, sustainable management of woodlands, sustainable management of agro-forestry resources. Other subjects covered can be for example: erosion control, management of afforestation works (management of stocks of inputs e.g.), protection of the environment, fuelwood economy, management of cooperatives, etc.

Between 12 and 50 nursery teams (= 60-250 nursery staff) and between 12 and 50 plantation teams (=50-200 team leaders) trained in nursery & plantation techniques (afforestation on public land). NB: the variability depends on weather the same operators are used every year or they change.

Organizational training provided to at least 12 local Forest Management Groups / cooperatives involved in contracts of works of plantations on public land.

Between 100 and 500 loggers and charcoal makers trained or retrained in improved logging and improved charcoal making. The variability in the figures is explained by the fact that the stability in the profession of the ~500 charcoal makers identified in 2009 in the 6 districts (PAREF, 2010b) needs to be confirmed. As many as possible will be professionalized.

Organizational training provided to at least 6 local Forest Management Groups / cooperatives involved in logging, charcoal making and marketing of the wood/charcoal.

Technical support provided to timber processing industries based on the results of the studies on ways to improve timber processing.

Between 12 and 35 Forest Management Groups / cooperatives trained on technical and organizational aspects of sustainable contractual management of forest resources. That is at least 140 leaders of groups trained. 35 groups if 1 group per 300 ha to manage; more groups (maximum 70 probably) if each of them treats smaller areas.

At least 25 Forest Management Groups / cooperatives trained in agro-forestry techniques (nursery & plantation techniques) in the framework of the implementation of approved proposals (after calls for proposals).

About 6 Forest Management Groups / cooperatives trained in the sustainable management of agro-forestry resources (25% of approved plantation proposals).

473 neighbourhood nursery teams (= 1000 nursery staff (equivalent full time staff)) trained in nursery & plantation techniques.

Among all Forest Management Groups / cooperatives mentioned above, at least 12 women's Groups / cooperatives trained on technical and organizational aspects of targeted forestry activities.

#### Responsibilities

Actor	Tasks
TA (Training) of the program	Give support to the organization of the implementation of the training modules; Develop some training curricula and advise on the development of other curricula by national experts; Provide design input on the extension work of the program and monitor this work.
Training and Communication Officer of the program	Work with the TA (Training) to prepare the training modules; Together with the supervisors of the program and the district foresters of NAFA coordinate and organize the implementation of the training program.
Monitoring and Evaluation Officer of the program	Monitor the implementation of the training program and the evaluation criteria.
Supervisors of the program	Coordinate the training program at province level; Take part to some of the training courses: in APL T, APL O, FM T, FM O, AF T, AFM T, AFM O,
National consultants	Give some of the training courses: in APL T, APL O, IC T, IC O, WI, FM T, FM O, AF T, AFM T, AFM O,
NAFA central	Supervise the district foresters in their role of trainers
District Foresters	Coordinate the training program at district level; Supervise the sector foresters in their role of trainers; Give some of the training courses: in APL T, IC T, FM T, AF T, AFM T,
Sector Foresters	Give some of the training courses: in APL T, IC T, FM T, AF T, AFM T, CN

Pilot charcoal makers	Potentially give some of the training courses: in IC T,
Pilot nursery producers	Potentially give some of the training courses: in AF T, CN
Pilot Agro-forestry producers	Potentially give some of the training courses: in AFM T,

APL T:	Afforestation on Public Land	Technical
APL O:	Afforestation on Public Land	Organizational
IC T:	Improved Charcoal making	Technical
IC O:	Charcoal & wood trade	Organizational
WI:	Wood Industry	Technical
FM T:	Forest Management	Technical
FM O:	Forest Management	Organizational
AF T:	Agro-forestry (proposals)	Technical
AFM T:	Agro-forestry Management	Technical
AFM O:	Agro-forestry Management	Organizational
CN:	Cell nurseries	Technical

#### Resources required

An amount of 176.380 Euros is budgeted for the following sib activities:

Strengthen the technical capacities of the private operators involved in afforestation works
National Consultant: Training in nursery and plantation techniques for private operators (afforestation works)
Train private operators in nursery and plantation techniques: training sessions
Strengthen the capacities of the private operators involved in the works of forest harvesting and the downstream processing of forest products
National Consultant: Training for private sector in wood processing
International Consultant: Training for private sector in wood processing
Train charcoal makers in improved charcoal making techniques: training sessions, materials
National Consultant: Training in improved charcoal making
National Consultant: Training (organizational aspects) of FMG of charcoal makers and wood traders
Train (organizational aspects) FMG of charcoal makers and wood traders: workshops
Strengthen the technical and organizational capacities of the Forest Management Groups (FMG) and cooperatives working in the decentralized and contractual management of public forest resources (implementation of the District Forest Management Plans DFMP)

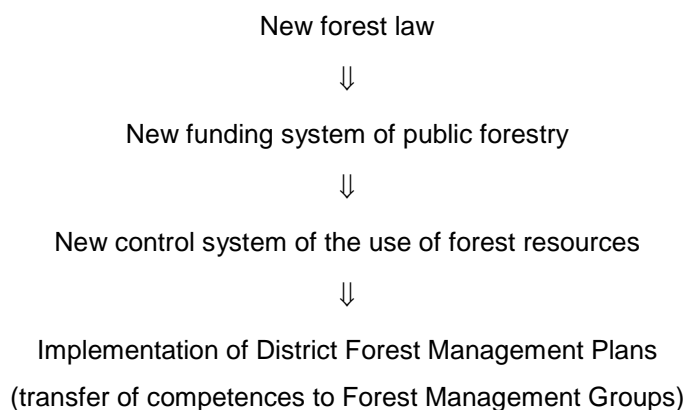
Train FMGs in sustainable forest management (technical aspects): workshops
National Consultant: Training of FMG on technical aspects of sustainable forest management
Train FMGs in sustainable forest management (organizational aspects): workshops
National Consultant: Training of FMG on organizational aspects of sustainable forest management
Carry out agro-forestry extension in the pilot districts to disseminate techniques of nursery seedling production, plantations, etc.

### 3.4.2 Activities leading to Result 2 (institutional strengthening)

#### 3.4.2.1 Activity 2.1. Support the establishment and application of the legal framework allowing the sustainable and decentralized management of forest resources

##### Rationale

The lack of a thoroughly revised forest legislation taking into account the new policy framework and the challenges of the forestry sector has been identified as one of the most decisive constraints to the development of the sector. First, it hinders the progress in the establishment of sustainable management systems on the public woodlands. Secondly it does not stimulate and may well deter private investments in (agro-)forestry. In many cases it is the first step, if not a pre-requisite, before other important elements (tools, measures, etc.) necessary to develop the sector can be established. Indeed, the succession of steps that need to be followed can be represented in the following way:



As regards the new forest law, the new project seems ready to be enacted, although changes are possible. What the program is likely to need to support is the preparation of additional by-laws (by providing advice and proposals) and the dissemination of the content of the new legislation to all target groups (communication operation), so that it may quickly be effectively applied. One of the main stakes in the new legislation is the system of taxation that should be introduced. This system should be clear, transparent and an incentive to private investments in (agro-)forestry productions.

As regards the system of funding of the decentralized management of the resources, it

concerns the continuation of the reflections on the organization of the financial flows. Indeed, if forestry on public land is to be sustainable, it needs to be financially balanced, if possible genuinely profitable and of course transparent.

It's means the continuation of the reflections on the restructuring of the National Forestry Fund, on the District Forestry Funds or any system that could usefully replace them. The support from the program will consist of specialized technical advice to MINIFOM/NAFA on this question.

As to the new system of control, it is an essential element that should also be both transparent and efficient at all levels of the management (harvesting), transport and trade of forest products. The support from the program will concern the provision of technical advice to design the system and physically establish it.

The last aspect that will be supported by the program, in relation with the development of the new legislation, is the design of formal modalities of transfer of competences to the Forest Management Groups in the context of the implementation of District Forest Management Plans.

The finalization and application of the new forest legislation should be screened on its gender sensitiveness. A workgroup on gender should be formed, could provide this input and could give recommendations for a forest legislation that takes into account the gender strategy of the ministry in charge of gender. While conducting the dissemination of the content of the new legislation to all target groups (communication operation) it should be assured that women attend the sessions and that presentations are also given by women.

#### Activities

Support the finalization and application of the new forest legislation:

Advise on (by-)law preparation;

Organize workshops at national and decentralized level, disseminate booklet on the new legislation;

Study and establish modalities of the sustainable funding of decentralized management of forest resources.

Support the design of the control system applied to forest resources utilization.

Support the design of formal modalities of transfer of competences to the Forest Management Groups

#### Expected outputs

Proposals of the program taken into account in the new forest legislation (taxation system, funding of decentralized forest management, control system, modalities of transfer of competences).

New forest legislation publicized and enforced (forest law and its by-laws, especially on the taxation system).

Mechanism of funding of decentralized management of forest resources established and operational at central and decentralized level.

New control system applied to forest resources utilization.

Official modalities of transfer of competences to the Forest Management Groups defined and ready for application.

#### Responsibilities

Actor	Tasks
Principal TA of the program and Director of Intervention	Prepare proposals and give advise to MINIFOM/NAFA on the content and application of new forest legislation, taxation system, funding system, control system.
International consultants	Study the context and prepare proposals on the new funding system and control system; Coach the national consultants in the specific studies.
National consultants	Conduct specific studies for the establishment of the new funding system and control system
NAFA	Work with the program on the new forest legislation, taxation system, funding system, control system and organize their application.

#### Resources required

An amount of 69.300 Euros is budgeted for the following sub activities:

Support the finalization and application of the new forestry legislation
Dissemination of the new legislation: national workshop
Dissemination of the new legislation: decentralized workshops
Dissemination of the new legislation: booklet
Study and establish modalities of the sustainable funding of decentralized management of forest resources
International Consultant: Study on mechanisms of sustainable funding of decentralized forest management
National Consultant: Study on mechanisms of sustainable funding of decentralized forest management
Study and establish mechanisms of sustainable funding: logistics
Support the design of the control system applied to forest resources utilization
International Consultant: Study on control system of forest resource utilization



National Consultant: Study on control system of forest resource utilization
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Support the design of the control system: logistics
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### **3.4.2.2 Activity 2.2. Support the development of decision making tools for the sustainable and decentralized management of forest resources**

#### Rationale

As explained in the introductory chapters, the lack of reliable and accurate data on the forest resource and the forestry sector is a serious constraint to the preparation of strong policies, the efficient planning of interventions and the implementation of good management measures in forestry in Rwanda. The first phase of “PAREF.be” and other projects have been providing support to develop a number of important decision-making tools for policy makers and forest resource managers (see points 1.3.4.3 to 1.3.4.5). In particular, the new mapping of the national forest resources, currently starting, is one of the very important activities of the first phase of PAREF, based on the recent coverage of orthophotos. It will confirm with much more accuracy the areas of woodlands of a size larger than 0.5ha. It will for the first time provide an accurate estimate of the countless woodlots smaller than 0.5ha. And it will prepare a classification of farmland and rangeland according to the density of trees on farms. The program will support the continuation of these efforts. In some cases, it will concern the development of new tools, in other cases it will concern the revision of tools previously developed in order to increase their reliability or accuracy, and finally in some cases it will concern the continuation of the development of certain tools started in the first phase of “PAREF.be” but delayed due to other constraints (insufficient availability of national expertise, legal pre-requisites not ready).

An important issue is that the development of some of these tools started before NAFA was established. It is therefore essential that NAFA take ownership of the new tools developed from now on.

The rationale of the main tools to develop is as follows:

- 1 The need to register systematically the public woodlands countrywide has been discussed in the introductory chapters. This activity of forest cadastre under the responsibility of the National Land Center is being initiated with the support of the first phase of “PAREF.be”. But given the volume of the work and the fact that new maps showing the location of the woodland plots will be produced, a part of this activity will be supported by the program (second phase).
- 2 A computerized database and a Geographical Information System are essential for any national forestry service. Therefore, the idea to equip NAFA with a “System of Information and Permanent Evaluation” (SIEP) linked to a GIS has been defined already for the first phase of PAREF. The aim of such an information system is to centralize and manage all the data concerning (i) afforestation programs (areas/location, species, nurseries, contractors, etc.), (ii) forest inventories and monitoring of the production, (iii) the management of the resources (operations of the management plans), (iv) the control of the

utilization of the resource (permits delivered, taxation revenues, infractions, seizures, etc.), (v) the monitoring of the consumption of wood, (vi) forest economy (flows of money), (vii) results of studies and research (on-going and completed) and (viii) miscellaneous aspects such as the operations of extension, training, maintenance of equipment or infrastructure e.g. It contains a “static” part with the baseline data that do not change frequently (base maps, etc.) and a dynamic part which continuously receives the data on the activities that are implemented. It is used on the one hand to store the important archives (characteristics of plantation works e.g.) and on the other hand as a tool for reporting (syntheses) and most of all planning. It will be essential to build that tool once the team of NAFA will be completed and operational. The information system needs to be built in parallel with the development of other systems and tools such as the setting up of the new control system, the production of the National Forestry Plan and the implementation of the District Forest Management Plans, the Supply Master Plans, the new mapping and forest inventory of the national forest resources, the forest cadastre, which will all need and generate a lot of data. It is both architecture to make a series of tools consistent with each other and a system of data management. The program will support the implementation of the first task, which is to design and build gradually the SIEP/GIS, and at the same time accomplish the second task, which is to train the NAFA staff in the management of the system. All technical officers of NAFA will be concerned by the development of the SIEP/GIS, but the Mapping Officer and the ICT Officer will play the central role in the operation of the tool. As part of the use of the tool for evaluation purposes, a number of field surveys should be conducted to gather useful data to feed the system. These concern namely the evaluation of the effective plantation and maintenance of the seedlings distributed to private owners in the agro-forestry actions of the program and the monitoring of the effective use of improved charcoal making techniques disseminated by the program.

- 3 Following the new mapping of the national forest resources including the sparsest ones, it is necessary to carry out the new national forest inventory of these resources. The two exercises are linked, as the mapping will provide the basis to design the sampling layout of the inventory. The program will support the preparation and the implementation of this major field operation involving many teams, as well as the processing and analysis of all the data. This exercise will be one of the main activities of the program during this phase. It will include an important component of capacity building and it will be an exceptional opportunity to mobilize around an interesting project different national institutions such as NAFA, ISAR, NUR/CGIS, ISAE, forestry secondary schools and national experts. The forest inventory is the main tool for planning in forestry. Most figures present today in the reports are not reliable because no systematic, large scale and accurate inventory has ever been organized in the country. All available human resources will be involved and mobilized, including students of the forestry education institutions and the sector foresters of the pilot districts. The principle of the forest inventory is

to measure the characteristics (species, diameter of the stem at breast height, height, etc.) of the trees of the stands. This is done on sample plots the main characteristics of which are also recorded (slope, type of soil, land ownership, e.g.).

The sample plots (sampling units) are distributed across the country according to a systematic sampling pattern following a certain sampling intensity (spacing between the sampling units, size of the plots). Sampling units are usually made of clusters of plots, and the sampling design is often stratified (strata can be regions, altitude classes, etc.). The sampling intensity is determined by the desired accuracy of the results and the variability of the resource to measure. The different phases of the exercise are (i) the design of the method (sampling layout, measurement protocols, calculation process, etc.) and detailed budgeting; (ii) the conducting of a pilot inventory to evaluate the variability of the characteristics and test the method; (iii) the procurement of the field equipment; (iv) the logistical preparation; (v) the formation and training of the teams; (vi) the actual field measurement campaign (including quality control); (vii) the gathering and entering of the data in computer(s); (viii) data processing; (ix) analysis of the results and preparation of the report(s); (x) dissemination of the results. At the end of the process, the inventory provides data on the characteristics of the “average woodland” and the total resources, for different categories of woodlands or for all categories combined (example of categories of woodlands: coppice as opposed to high forest; Eastern Province compared to Western Province; Eucalyptus woodlands compared to coniferous woodlands, etc. Or for some categories of products: timber of a certain diameter class, firewood of a certain species, etc. The characteristics determined in the results concern for example the standing volume (mean per ha or total for a certain territory), the mean height, the mean diameter, the distribution of size classes, the tree cover, etc. Additional characteristics can be recorded and analysed: health condition, etc. In some respects, a national forest inventory could be compared to a national census of the population.

- 4 As regards the decentralized management of woodlands, the program will support the revision of the District Forest Management Plans and the preparation of Simple Plans of Operations, while the actual implementation of these plans will have started. The Simple Plans of Operations will precisely be developed immediately to make this implementation easier, more straightforward and safer. The revision of the DFMPs that will be carried out at a later stage will have three objectives: (i) to insert the reliable and accurate baseline data that will have been obtained from the new mapping, new forest inventory and cadastre; (ii) to strengthen the plans in terms of sustainability and reduce their implementation risks; (iii) to harmonize the different plans according to the main orientations given by the National Forestry Plan.
- 5 The program will continue to mobilize financial resources to carry out various studies necessary to assist the development of forestry activities in Rwanda.

In this phase it will concern specific technical, technological and economic studies that will be conducted on the potential new forms of processing of the wood like electric poles, new processes of sawing, etc. The relevant officers of the Forestry Research and Planning Unit and the Forestry Field Programs Unit of NAFA will be associated to the implementation of these studies. Again the program will put emphasis on capacity building. Some resources will be dedicated to the evaluation and extraction of lessons learned from the implementation of the operational activities of the program (preparation of workshops and documents).

As the institutional context is evolving rapidly, according to the circumstances and the priorities on the agenda, the program may optionally contribute to the development of the following tools:

- 1 Support to the elaboration of the National Forestry Plan: the preparation of this plan has started, with the support of different partners. It is an important step to define or confirm the future orientations of forestry in Rwanda and to serve as umbrella for the District Forest Management Plans. The program may provide technical advice and once the plan is finalized, the program may support its dissemination at the level of the decentralized departments.
- 2 Development of Wood Supply Master Plans (SMPs) of the main urban centers: these are tools developed (i) to locate wood harvesting in the most appropriate areas, (ii) to limit the harvesting to the real potential of the resource, (iii) to guarantee a sustainable, stable and cheap supply of wood to the population and (iv) to orient taxation measures. It is based on complementary surveys to determine in particular the fluxes of wood (fuelwood, service wood, timber) towards the urban centers taking into account different parameters such as the region of origin, the means of transport, the type of product. An FAO project that has been closed recently has collaborated with PAREF (first phase) and NAFA to develop a methodology to prepare the SMPs. As part of that project, the system called WISDOM has been set up, which can be used to prepare and manage the SMPs. What needs to be done to develop the SMPs is (i) to update the WISDOM tool and make it operational based on the updated information on the forest resources (woodlots smaller than 0.5ha and trees on farms that should be obtained from the new mapping and the new national forest inventory); (ii) to train the new staff of NAFA in the use of the WISDOM system and (iii) to finalize the preparation of the SMPs of the main urban centers in such a way as NAFA takes ownership of the tool.
- 3 Conclusion of the new mapping of the national forest resources: preparation of an atlas of the forest resources of the districts e.g.
- 4 Various studies to assist the development of forestry activities in Rwanda: these studies can concern the tree species to use and promote in afforestation and agro-forestry activities, silviculture standards and methods, forest economy, socio-economic aspects influencing the forestry sector, carbon market, feasibility studies on the possibilities of geographical

extension of the activities of the program, etc.

As can be seen, some of these tools are related to each other (new mapping, new inventory, cadastre, SIEP/SIG, etc.). and different partners need to be involved in their development. It will be therefore important to maintain collaboration with these departments as a kind of “hub” or network: NAFA – NLC – NUR/CGIS – ISAR.

A condition *sine qua non* for decision-making tools for policy makers and forest resource managers is the availability of gender sensitive and gender disaggregated data and statistics. Available M&E systems, gender statistics and data, should be collected with help from other agencies and NGO’s. Each time new tools are to be developed, the gender aspect will be taken into account when relevant. In the same comprehension the National Forestry Plan, as well as its dissemination should integrate the gender dimension. A gender screening of the National Forestry Plan could be provided by the gender workgroup. Similar reflections concern the Wood Supply Master Plans. Surveys regarding wood harvesting and sustainable, stable and cheap supply of wood to the population as well as taxation measures will be conducted in a gender sensitive way, since provision of fuelwood is also in an important way a women’s issue. The Geographical Information System could be used in a gender sensitive way, thematic maps can be used as gender sensitive monitoring and evaluation tools as well as during training, awareness sessions and reporting.

#### Activities

Support to the building of the cadastre of public forestland.

Build a System of Information and Permanent Evaluation (SIEP) linked to an operational GIS containing comprehensive and reliable data.

Carry out the new forest inventory in all districts, starting with the pilot districts.

Revise the District Forest Management Plans (DFMP) according to the results of the mapping and forest inventory and support the preparation of Simple Plans of Operations.

Conduct the studies and inquiries to improve the knowledge of the forestry sector and disseminate their results, especially on wood downstream processing.

Support the development of various tools, according to the circumstances: National Forestry Plan (NFP), completion of the new mapping of the national forest cover, Wood Supply Master Plans (SMP) and the validation of the SMP of Kigali using the WISDOM system, etc.

#### Expected outputs

Cadastre of public forestland completed, regularly up-dated and used as a tool by NAFA.

System of Information and Permanent Evaluation (SIEP) and GIS operational, reliable, regularly updated and used by NAFA.

GIS officer(s) operational at NAFA.

Full results of the new forest inventory available, reliable and accurate (all resources measured including trees on farms).

6 District Forest Management Plans (DFMP) revised and reliable, Simple Plans of Operations available and implemented.

Results of studies available, reliable and used by NAFA and all concerned actors of the forestry sector: at least 2 studies completed on potential new techniques of processing of wood; 4 workshops on lessons learnt organized and associated document produced.

## Responsibilities

Actor	Tasks
Principal TA of the program and Director of Intervention	Design the methods in collaboration with NAFA, ISAR, NUR/CGIS, international and national consultants, etc.; Promote the existence of a hub gathering the main technical institutions.
Staff of the program (M&E, Communication, etc.)	Gather the data and prepare workshops and documents on lessons learned.
International consultants	Conduct the most specialized studies (provide expertise) in collaboration with the program and NAFA and associated institutions; Coach the national consultants and the staff of the concerned national institutions in the course of specific studies and the development of specialized tools.
National consultants	Conduct the studies under the guidance of the Principal TA of the program, the international consultants and NAFA.
NAFA	Finalize the National Forestry Plan; Work with the program on the preparation of the decision-making tools and the launching/implementation of the studies. Facilitate the operation of the hub including partner institutions. Take ownership of the tools developed and the results of the studies.
NLC	Provide the baseline data, namely the orthophoto coverage of NLC/Swed survey (easy access to work on them); Launch the exercise of construction of the national forest cadastre in collaboration with NAFA and the program; Take part to the new mapping of forest resources (as it concerns land uses).
NUR/CGIS	Provide data for the SIEP/GIS of NAFA (base maps, etc.). Take part to the new mapping of forest resources and derived national forest inventory.
ISAR	Provide data for the SIEP/GIS of NAFA (base-line data, etc.). Take part to the new mapping of forest resources and derived national forest inventory.
MINAGRI	If needed, provide to NAFA base maps for the GIS or some baseline data for the SIEP (soil map e.g.)
ISAE-Busogo and secondary forestry schools	Take part to the implementation of the new forest inventory (contribution = training opportunity).

Resources required

An amount of 1.735.460 Euros is budgeted for the following sub-activities, this include 855.000 Euros for the forest inventory in 30 districts :

Build a System of Information and Permanent Evaluation (SIEP) linked to an operational GIS containing comprehensive and reliable data
National Consultant: Development of SIEP / GIS
International Consultant: Development of SIEP / GIS
National Consultant: Survey to evaluate plantation and maintenance of seedlings in agro-forestry (SIEP)
Survey to evaluate plantation and maintenance of seedlings: logistics and surveyors
National Consultant: Survey to monitor / evaluate real use of improved charcoal making (SIEP)
Survey to evaluate real use of improved charcoal making: logistics and surveyors
Support to the building of the cadastre of public forest land
Support to preparation of forest cadastre: surveyors, logistics
National Consultant: Support to preparation of forest cadastre
Carry out the new forest inventory (855.000 Euros) for the 30 districts
Carry out the new national forest inventory starting with the pilot districts
Revise the District Forest Management Plans (DFMP) according to the results of the mapping and forest inventory and support the preparation of Simple Plans of Operations
National Consultant: Up-dating and revision of DFMP
Up-dating and revision of DFMP: debriefing workshops
Conduct the studies and inquiries to improve the knowledge of the forestry sector and disseminate their results
National Consultant: Studies on innovative wood processing
International Consultants: Studies on innovative wood processing
Extract lessons learned from the activities of the program: workshops and documents



### **3.4.2.3 Activity 2.3. Support the implementation of the Communication Strategy of the forestry sector**

#### **3.4.2.4**

#### **3.4.2.5 Rationale**

Until now forestry remains a subject which is not sufficiently known and is rather obscure in Rwanda. When misunderstandings on technical questions ensue, professional foresters are so few that these misunderstandings are not rectified and can have far-reaching consequences on the resources. The desired process of rapid development of the forestry sector therefore needs to be backed up by well-prepared operations of sound communication.

Recently a communication strategy of the forestry sector including a communication plan has been produced with the support of the first phase of "PAREF.be" (Community Development Initiatives, 2010). This activity is a contribution to the implementation of this plan. It comprises the following components:

- organize information and sensitisation campaigns. For example, a campaign on roadside planting would be to avoid failures or backfiring in that activity, as these plantations are considered as public afforestation but are made very near private plots). This campaigns will use the following media: radio, TV, newspapers/bulletins, workshops of discussion and reflection, leaflets, posters;

- continue to introduce education modules on (agro-)forestry in schools of the pilot districts to create awareness among young generations;

- continue to establish a documentation center and make it operational, an activity initiated in the first phase of "PAREF.be";

- continue to create a NAFA web site related to the information of the SIEP;

- continue to support a framework of consultation between actors of the forestry sector: this includes regular workshops at the national level to discuss important forestry issues, meetings of the forum of the professionals of the forest/wood sector at the national level and the support to the organization of Forestry Joint Action meetings in the 6 pilot districts (see definition in the glossary in *Annex 7.9*).

At the decentralized level, an important objective of the communication activities is to promote agro-forestry tree planting. Indeed, when seedlings are provided to the farmers, whether they will plant and maintain them or not depends on the following elements: incentive economic context, extension and monitoring/follow up by extension staff, and communication.

It is obvious that the communication strategy of the forestry sector including a communication plan, are to be screened from a gender perspective. Gender stereotyping should be identified in all media (newspapers, leaflets, etc.) and replaced by input aimed at empowerment of women and influencing gender roles.

The program should actively motivate and mobilize women to consult/visit the documentation center, the workshops, the framework of consultation and the website. The website should also take into account the accessibility for women, through special attention on topics related to women's role and activities in the forestry sector.

#### Activities

Carry out information campaigns on important forestry subjects at national and decentralized level.

Implement an education program on forest issues in schools.

Continue to establish a rich and accessible documentation center for the forestry sector with a computerized archive system.

Continue to build a web site regularly updated presenting relevant and diversified information.

Continue to support an operational framework of consultation bringing together regularly the different actors of the forestry sector at the central and district level.

#### Expected outputs

Package of communication tools produced on various forestry subjects (leaflets, posters, articles, broadcasts, etc.) and distributed at national and decentralized level.

Communication campaigns organized at national and decentralized level.

Reflection workshops organized.

Educational modules on forestry subjects in use in at least 30 schools.

Documentation center operational and used.

Web site available, up-to-date and visited.

At least 3 national consultation workshops organized.

At least 3 meetings of the national forum of the professionals of the forest/wood sector held.

Forestry Joint Action meetings held at district level on a quarterly basis.

## Responsibilities

Actor	Tasks
Principal TA of the program	Provide technical input in the organization of the campaigns and the design of the content of messages.
Training and Communication Officer of the program	Work with the Public Relations and Communication Officer NAFA and Principal TA to prepare the annual communication plan;  Develop relationships with national communication institutions and with resource people (media e.g.);  Assist the Public Relations and Communication Officer NAFA in the organization of the implementation of the communication plan.
Public Relations and Communication Officer NAFA	In collaboration with the program, organize the implementation of the annual communication plan;  Develop relationships with national communication institutions and with resource people (media e.g.).
National consultants / private companies in communication	Design the communication materials, especially as regards the form.
Staff of NAFA and the program	Provide input to prepare communication material, especially as regards the content.
Media (TV, radio, newspapers, etc.)	Collaborate with NAFA and the program to broadcast / publish the messages.
Professionals of the forestry sector	Take part to the fora, meetings, workshops of reflections and consultation.
MINIFOM	Provide adequate space for the documentation center.
National consultant / NGO (education/outreach)	Work with NAFA (Extension Officer e.g.) and the program to continue to prepare the forestry education material to be used in schools;  Collaborate with the schools (Directors, teachers) to organize the program of forestry education in schools (including practical activities);  Train the teachers to give the modules.
Schools (Directors, teachers)	Collaborate with the National consultant / NGO (education/outreach) to implement the forestry education program in schools.
Districts	Organize quarterly Forestry Joint Action meetings.

#### Resources required

An amount of 160.240 Euros is budgeted for the following sub-activities:

Carry out information campaigns on important forestry subjects at national and decentralized level, implement an education program on forest issues in schools
National Consultant: Design of communication materials
Information campaigns on forestry subjects: contracts with TV and radio channels
Information campaigns on forestry subjects: national reflection workshops
Information campaigns on forestry subjects: articles, posters, leaflets, bulletins, etc.
National Consultant / NGO: Education program in schools on (agro-) forestry subjects
Information campaigns on forestry subjects: decentralized information workshops
Continue to establish a rich and accessible documentation center for the forestry sector with a computerized archive system
Continue to establish a documentation center: documents, stationary, copies
Continue to establish a documentation center: equipment maintenance
Continue to build a web site regularly updated presenting relevant and diversified information
National Consultant: Maintenance and development of NAFA web site
Continue to support an operational framework of consultation bringing together regularly the different actors of the forestry sector at the central and district level
Support an operational framework of consultation: national workshops and fora
Support an operational framework of consultation: district Forestry Joint Action meetings

#### **3.4.2.6 Activity 2.4. Reinforce the operational capacities of NAFA for the implementation of the National Forest Policy**

##### Rationale

NAFA has been created a few years ago but is still far from being fully operational. This situation needs careful attention when the challenges to develop the forestry sector are taken into consideration. Soon a new deployment of staff will take place to fill all positions of the organizational chart of NAFA at central level. In that process the size of the team will increase from 8 to 33 directors, officers and support staff. For that reason, beside the technical support described in the previous activities, the program will make available financial resources that will be used to cover the most urgent needs of NAFA in terms of equipment or operations. This relates to computer equipment, office furniture, field equipment (especially all tools necessary at district level to implement the District Forest Management Plans), etc. Resources are made available to purchase some “operational vehicles”, as this is justified by the specific roles of NAFA, such as the control of forest resource utilization, the supervision of field activities in remote rural areas difficult to access or the combat of bushfires.

Like in the case of the district foresters, the forestry animators will be officers of NAFA

working for the decentralized entities (in this case the sectors), given their mission which includes a role of control. They will have been recruited by NAFA, and will be trained by the program. For the time being 1 forestry animator for 2 sectors, hoping that NAFA will reach 1 forestry animator per sector.

The sector foresters will have 5 roles:

Field supervision of all afforestation sites (technical support to the operators, control of the quality of the works);

Field coordination and supervision of the implementation of the District Forest Management Plans (including technical support to the Forest Management Groups/cooperatives, stimulation of the operations);

Intensive extension work to cover their sector. This concerns the promotion of all agro-forestry activities: support to the implementation of the proposals funded by the program (technical support to nurseries, to planters); promotion of and technical support to the initiatives of sustainable management of agro-forestry resources; technical support to the development of neighbourhood nurseries in the cells of the sector (including the mobilization of the local community and the promotion of tree planting from these nurseries). To summarize, the work of the sector foresters in agro-forestry extension will mean: (i) encourage to plant, maintain and manage trees on farms, (ii) advise local communities on that and (iii) monitor the effective plantation and maintenance of the agro-forestry seedlings by the beneficiaries;

Control that there is no abuse of the forest resources in their sector and report to the district forester;

Participation to the field measurement campaigns of the new forest inventory.

The reasons why the recruitment of such a large team for NAFA is proposed are the following: There is a real huge need of extension staff, and more generally of staff for the field supervision, monitoring, technical and organizational support and instigation of the actual activities of afforestation and forest management on site.

220 Forest "Forestry Animators" (actually guards/woodland warden<sup>3</sup>) have been employed by the ministry/NAFA since 2004, that is to say 1 for 2 sectors in the whole country..

The option of out-sourcing this level of service (to NGOs namely) has been envisaged and not retained. The main reason is that it would anyway be more costly. The efficiency of an out-sourced force of extension workers could be higher (potentially better supervision of the staff) but this is not guaranteed. Finally, the sector foresters have a wider role than pure extension workers, especially in the implementation of the District Forest Management Plans (and the participation to the new forest inventory).

The principle of transferring responsibilities to Forest Management Groups for the sustainable management of public forest resources has been on the agenda for quite some time. When it comes to actually doing it, it must be remembered that it is a

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<sup>3</sup> « grade forestier »

process that is not immediate and that requires substantial human resources to organize it and make it work on the ground. And given the nature of the resource, an important aspect is that when responsibilities are effectively transferred to the civil society, the State still needs to keep a sufficient control over the process at all times (or at least for many years to come). It is in that sense that the support of the program to deploy sector foresters is proposed.

The purpose is to test the system in real conditions and evaluate the impact at the end of the phase. Indeed, during the program, the performance of the sector foresters will be scrutinized and the system will be evaluated.

Whatever the conclusions of that evaluation, the system will allow to deploy a contingent of about a hundred technicians and train them on the job for several years. After these years of work with a good backstopping in a very diversified range of forestry activities these technicians will be operational and will have acquired valuable experience in a much-needed discipline. At that stage (end of the phase), it may be decided hopefully to maintain them in the sectors of the six districts and recruit new ones to generalize the system to the whole country. Or it may be decided to deploy this trained force of a hundred to the whole country (about 1 forester for 4 sectors). If the system of the NAFA sector foresters is abandoned as such, it is obvious that it will need to be replaced by other arrangements (NGOs, etc.) which will imply the deployment of staff of similar importance. In that case the technicians that will have been made operational during the program, at least the best ones, will be much needed.

The more NAFA will be able to contribute from the ordinary budget to the costs of the sector foresters, the more rapidly their recruitment and deployment can be organized. An essential element will be their supervision, as they will be distributed in fairly large numbers in remote rural areas. They will be directly supervised by the district forester and will be like his/her team. As sufficient leadership and regular contacts will be essential, it may be necessary to appoint a few among them as assistant district foresters (intermediate level between the district forester and the sector foresters). Another element to keep in mind is that the district foresters definitely need to be strong to be able to technically steer the process of implementation of the District Forest Management Plan. If some of them turn out to be too weak (A2 instead of A1 e.g.), something will need to be done to appoint someone who can cope with the District Forest Management Plan.

The strengthening of women in the composition of the staff, should be considered in function of the availability. Horizontal and vertical segregation should be redressed whenever possible through measures of positive actions (capacity building, specific training, proportion targets, etc).

#### Activities

Mobilize financial resources to support the development and the activities of NAFA.

Contribute to the recruitment of sector foresters (A2) in the pilot districts to strengthen the action of NAFA at the decentralized level.

#### Expected outputs

Material resources made available to NAFA as its human resources are increased.

Contingent of 98 NAFA sector foresters deployed and made operational.

#### Responsibilities

Actor	Tasks
Program Management	Collaborate with NAFA to confirm the needs for equipment and contributions to operational costs; Collaborate with NAFA to confirm the modalities of recruitment of sector foresters.
NAFA	Collaborate with the program to confirm the needs; Facilitate procedures to acquire and issue the new equipment; Organize the recruitment of sector foresters with the support of the program; Make all arrangements to organize an efficient system of work of the sector foresters.

#### Resources required

An amount of 201.860 Euros is budgeted for the following sub-activities:

Mobilize a fund to support the development and the activities of NAFA
Support NAFA at central level: office equipment (computers, furniture)
Support NAFA at central level: field equipment
Support NAFA at central level: operational vehicles
Support NAFA at decentralized level: fuel for 6 motorbikes Districts Foresters
Support NAFA at decentralized level: insurance and maintenance for 6 motorbikes Districts Foresters
Support NAFA at decentralized level: office equipment (computers, furniture)
Support NAFA at decentralized level: field equipment (compasses, GPS, tape measures, etc.)

#### **3.4.2.7 Activity 2.5. Strengthen the capacities of ISAR to supply tree seeds of good quality and improved genetic origin**

##### Rationale

Within the Land & Forestry Research Center of ISAR, the Forest Tree Seed Center (CGF) officially supplies all tree seeds for the afforestation programs in Rwanda. As explained in the introductory chapters, there is a desperate need to improve the genetic quality of the plantations. However, the capacities of CGF to thoroughly reorganize the

seed supply and select new provenances of better quality seriously need to be strengthened. This material and technical strengthening has started in the first phase of PAREF and should be intensified to reach the qualitative and quantitative needs. The support to bring to ISAR/CGF includes the following well-justified aspects.

The rehabilitation of the Rwandan Arboretum created in the first part of the 20<sup>th</sup> century has been initiated with the support of the first phase of “PAREF.be” (detailed mapping in a GIS, rehabilitation of the plots, etc.). The activities will continue with the support to the implementation of the management plan of the arboretum. Beside the fact that is a unique heritage in Africa, it includes good plots of certain species (non *Eucalyptus*) that are recognized as seed stands.

Immediate actions are necessary to improve the seed supply, but these should be the first steps of a well-designed scheme with a long-term vision. International expertise will therefore continue to be provided to organize a sound tree-breeding program tailored to the future needs of the country. This support to the team of CGF, provided in a regular way, will first give the orientations of the selection program and then advise on the ways to implement the first phases of the scheme in the coming years.

As in any national tree-breeding program, one of the first measures here is to revive the existing network of seeds stands recorded in the country. As this network was established a long time ago and has been disused for many years, the rehabilitation of these stands will continue to be supported. One important aspect concerns the isolation of the seed stands from any source of pollen of low quality (undesired hybridisation, etc.), which requires activities of reconnaissance of the surroundings, of removal/replacement of poor neighbouring stands or of creation of buffer zones, etc. The establishment of some new seed stands for certain species may be another activity.

Nevertheless, for some of these exotic species the genetic material present in the country, even in official seed stands, is likely to be of lower quality than some provenances available abroad (especially in neighbouring countries: Uganda, Kenya, Tanzania, Malawi). Therefore, it will be necessary to establish international contacts and import new seeds from these countries and furthermore to test them in the conditions of Rwanda. A system of trials and comparisons of provenances, well designed but not too demanding, will need to be established. This may comprise trials in stations (early tests especially) and field trials in the different regions of the country. According to the first results of these tests, further steps in the breeding program may be envisaged, such as the selection of plus trees in confirmed national seed stands or the establishment of seed orchards.

The technical support from the program will concern the design and the organization of these activities (including measurement activities), but also the management of the data derived from them.

The program will continue to support technically a more “logistical” activity, the controlled harvest of seeds from confirmed tree stands by local harvesters. This work is of the same nature as the organization of Forest Management Groups/cooperatives to sustainably manage woodlands. These groups need to be trained and organized for the transfer of competences, and the quality of their work needs to be monitored.



Finally, as in the case of NAFA, the operational capacities of ISAR/CGF need to be materially supported to implement this demanding breeding program. The activities will be distributed in the whole country (seed stands, trials) and will have implications abroad (organization of the import of seeds). At the same time, the amounts of seeds to supply will increase with the scale of the afforestation projects in the country. The support of the program concerns the salary of two additional permanent technicians to reinforce the team of CGF, and miscellaneous operational costs.

#### Activities

Support ISAR in the implementation of the management plan of the Ruhande arboretum.

Strengthen ISAR / CGF for the design and the organization of a breeding program of the main tree species used in Rwanda.

Continue to support the improvement by ISAR of the network of national seed stands across the country.

Support the implementation of trials of provenances from the country or abroad.

Continue to improve the system of harvest of tree seeds in the seed stands by local harvesters.

Strengthen the operational capacities of ISAR to facilitate its role of supply of seeds of improved quality.

#### Expected outputs

50 ha of plots of Ruhande arboretum rehabilitated.

Breeding program for the main tree species in use in Rwanda started.

One researcher and 5 technicians coached in the implementation of the tree-breeding program.

200 additional ha of seed stands rehabilitated.

10 ha of new seed stands established.

Whole network of seed stands (400 ha) evaluated, rehabilitated and used.

Batches of seeds of *Eucalyptus* and other exotic species imported from abroad and tested.

Comparative trials of provenances (national seed stands and foreign provenances) established in stations and in the field (about 40ha). System of recording, data collection and data analysis in place.

20 operations of (re)training carried out for the groups of seed harvesters from the sites of the ~98 seed stands (technical and organizational training).

2 technicians with suitable profile recruited and made operational. CGF team fully operational for work in station and in the field.

Seed supply of improved genetic and physiologic quality increased.

Responsibilities

Actor	Tasks
International consultant	Continue to assess the condition of genetic material in the country and the needs for improvements in the seed supply; In collaboration with the researcher of CGF continue to design the tree breeding program; Continue to provide technical advise to build this breeding program; Coach the team of ISAR/CGF in the implementation of the breeding program and improved seed supply.
Principal TA of the program	Provide additional technical support to the team of ISAR/CGF
The program	Mobilize the resources for the operational support to ISAR/CGF
ISAR/CGF	Implement the activities of the breeding program; (Re)train the groups/cooperatives of seed harvesters.
Groups/cooperatives of seed harvesters	Provide the amounts of seeds ordered by ISAR/CGF according to the specified standards of harvesting and local processing/storing.

Resources required

An amount of 233.930 Euros is budgeted for the following sub-activities:

Support ISAR in the implementation of the management plan of the Ruhande arboretum
Support to management Ruhande arboretum: rehabilitation of old plots
Strengthen ISAR / CGF for the design and the organization of a breeding program of the main tree species used in Rwanda
International Consultant: Technical support to ISAR/CGF to design and develop a tree breeding program
Continue to support the improvement by ISAR of the network of national seed stands across the country
Support to improvement of national seed stands: rehabilitation of existing stands
Support to improvement of national seed stands: establishment of new stands
Support the implementation of trials of provenances from the country or abroad
Procurement of improved seeds abroad: purchasing of seeds
Procurement of improved seeds abroad: missions: airfare and subsistence
Trials of provenances from the country or abroad: in-station trials (supplies)
Trials of provenances from the country or abroad: establishment of trials in the field
Continue to improve the system of harvest of tree seeds in the seed stands by local harvesters
Improve the harvest system of seeds in seed stands: training workshops local harvesters
Strengthen the operational capacities of ISAR to facilitate its role of supply of seeds of improved quality
Operational support to ISAR/CGF: fuel, insurance and maintenance 1 vehicle
Operational support to ISAR/CGF: salary 2 additional technicians
Operational support to ISAR/CGF: mission allowances staff ISAR/CGF
Operational support to ISAR/CGF: miscellaneous supplies
Operational support to ISAR/CGF: salary 1 driver
Operational support to ISAR/CGF: mission allowances 1 driver
Operational support to ISAR/CGF: communications, documentation

### 3.4.3 Activities leading to Result 3 (increased forest resources & management)

#### 3.4.3.1 Activity 3.1. Support the implementation of the management plans of public forest resources for the sustainable supply of wood

##### Rationale

This big activity includes two aspects. The first one is to manage the existing public forest resources. The support to the launching of this activity for the first time in the pilot districts is currently starting in the first phase of "PAREF.be". The program (phase 2) will continue and intensify this activity.

The second aspect is afforestation on public land: from now on, for consistency reasons, this activity is considered to be one component of the first aspect (management plans). This is easy to understand in the situation of woodland rehabilitation / conversion: these woodlands are part of the District Forest Management Plan, and replanting them is just one operation among all operations of management organized by the plan. This comprehensive vision where replanting is taken into account together with the operations of maintenance and harvest of the same forest areas is essential if the objective is the sustainability of the management. It is then important not to forget the afforestation of bare public land for the first time (areas which are not present in the District Forest Management Plans at this stage, because these areas have been poorly recorded until now). This activity of first afforestation is also treated here, because once created, the new woodlands should immediately be included in the longer-term management scheme.

##### Rationale of the sub-activity woodland management:

Hardly any woodlands are really managed so far, except those of the tea estates for example. If public woodlands are managed, they can become a source of income for the rural population (which is important for the low revenue population in particular) and for the districts (to fund their general operations). There are two aspects to discuss about public woodland management:

What will be done: in order to sustainably manage the resources, it is necessary to plan the operations in space and time, that is the object of the District Forest Management Plans or the Simple Plans of Operations, which need to be applied. Some of the *operations* generate income (harvest), while other ones are costly (maintenance, regeneration). As a consequence, some *areas* are profitable to manage (good stands), while other areas (degraded) are costly to manage. The key issue about the planning and its implementation is (i) to make this income regular and spread the expenses (proper distribution) and (ii) to make sure the costly operations are done. District Forest Management Plans, especially after revision, will have a time frame of 25 to 30 years. The Simple Plans of Operations will be drawn up for a period of 5 years. There are two levels regarding the implementation of the planned operations year after year: the level of the whole district and the level of each woodland or more precisely "management unit".

Who will implement the management plans. First, as regards the steering or supervision of the implementation (follow the plan and make all the arrangements to organize the operations that need to be conducted), the districts are in charge.

However, practically speaking or technically speaking, it is the district forester who will steer the process, assisted in the field by his/her sector foresters. Secondly, as regards the carrying out of the actual operations (thinning, etc.), these will be done by private operators, who can be Forest Management Groups/cooperatives (FMG) or private companies. In the same way as it has already been discussed about the plantation works in the first phase of "PAREF.be", a gradual process of transition can be envisaged involving an increasing transfer of responsibilities to real Forest Management Groups/cooperatives. At the beginning, the operations of the management plans that need to be done can be organized on a case-by-case basis with regular tendering procedures (like for typical afforestation works) in which any private operator could make an offer (public auction in the case of harvest operations e.g.). But it is then possible to evolve towards a system in which the communities adjacent to the woodlands are organized in FMG, and real contracts of management of the concerned woodlands are signed between these groups and the district, contracts which concern a "package" (all operations of the plan for a certain period of several years). In that case it is like a concession allocated to the FMG ("management transfer").

As it can be seen, the modalities to evolve towards this management transfer need to be designed, which can be done at the beginning or progressively, as more and more pilot actions are implemented and the modalities are adjusted. But another thing that needs to be clarified as soon as possible is the rules concerning the flows of money. Especially within public institutions, between operations generating income and operations, which need to be funded. But also possibly between the districts and the FMG, as different modalities could be imagined.

The gender dimension should be integrated in this sub-activity, as the implementation of sustainable management plans of natural/forest resources should always consider contributions from the different target groups.

#### Rationale of the sub-activity afforestation:

See introductory chapters and first phase of "PAREF.be". The gender dimension should also be integrated in this sub-activity for example in the planning of the planting: needs, interests, inputs from women and women's organizations should be taken into account, as well as the time aspects (for example gender sensitive activity calendars).

#### Activities

Support in the pilot districts the implementation of District Forest Management Plans and Simple Forest Management Plans on all public woodland (~ 10300 ha, current estimate), including the implementation of 2000 ha of afforestation.

support the implementation of District Forest Management Plans and Simple Forest Management Plans in the 6 pilot districts;

support the implementation of 2000 ha of multi-purpose afforestation on public land (as one operation among all operations prescribed in the Management Plans to form a consistent system).

#### Expected outputs

District Forest Management Plans and Simple Forest Management Plans implemented, that is to say planned operations carried out on the ~ 10300 ha of public woodlands of the pilot districts.

Between 12 and 35 Forest Management Groups / cooperatives formed to take on sustainable contractual management of forest resources. 35 groups if 1 group per 300 ha to manage; more groups (maximum 70 probably) if each of them treats smaller areas.

2000 ha of public land planted (afforestation on bare land) or replanted (rehabilitation of woodlands).

At least 12 local Forest Management Groups / cooperatives formed to be involved in contracts of works of plantations on public land.

#### Responsibilities

Actor	Tasks
Program Management Unit	Support the process of transfer of competences: strengthen capacities (institutional and local); promote consultation between actors.
Principal TA and Director of Intervention of the program	Together with NAFA, design the systems and modalities of implementation of the District Forest Management Plans; Propose technical improvements to the operations of management, including the operations of afforestation.
Supervisors of the program	Collaborate with the district foresters in the technical support and supervision of the activities of forest management and afforestation.
NAFA	create the framework of sustainable forest management : new legislation, funding system, control system of the transfer of management to the private sector ;  support technically as « project manager » the implementation of the District Forest Management Plans by the districts. At the same time monitor and control this implementation.
Head of Forest Management Service and Forest Management Plan Officer	Work with the Principal TA and Director of Intervention of the program to design the systems of implementation of the District Forest Management Plans;

Officer of NAFA central	Technically support the district foresters.
Districts	Implement the District Forest Management Plans on public land as “project owners” (“contracting authorities”) by contracting private operators to implement the management operations;  Monitor and control the works of the operators.
District Foresters	In support to the districts, organize the implementation of the implementation of the District Forest Management Plans (field coordination and supervision, including technical support to the Forest Management Groups/cooperatives);  Field supervision of the afforestation sites (technical support to the operators, control of the quality of the works);  Supervise the sector foresters.
Sector Foresters	At sector level assist the district forester in his tasks regarding the implementation of the District Forest Management Plans and afforestation.
Operators (private companies or Forest Management Groups/cooperatives)	Implement the contracts: nurseries, plantation, maintenance, surveillance, harvesting; “forest management”.

#### Resources required

An amount of 690.125 Euros is budgeted for the following sub-activities:

Support in the pilot districts the implementation of District Forest Management Plans and Simple Forest Management Plans on all public woodland, including the implementation of 2000 ha of afforestation
Support to the implementation of DFMPs: operational workshops with FMGs
Support to the implementation of DFMPs: afforestation on public land

### **3.4.3.2 Activity 3.2. Support the requests for reforestation actions on private land**

#### Rationale

As explained in the chapter on the strategy, the program will use two methods to promote agro-forestry. The first one, already operational in the first phase of "PAREF.be" is through calls for proposals : private owners submit their micro-project of plantation of trees on farmland, which are funded after approval. It can concern typical agro-forestry or the creation of woodlots. The proposals concern mainly the production of seedlings, the plantation and the post-plantation tending. Gradually, on requests from concerned private owners / groups, the program will provide technical support on the aspects of sustainable management of agro-forestry properties.

The second one is that the program will start to test in real conditions the deployment of a network of neighbourhood nurseries in the administrative cells of the pilot districts. The underlying idea is the following. A constraint to the spontaneous increase of trees planted on farms is the fact that farmers who live far away in the hills and want to plant trees cannot do it because they have no access to a nursery because of the walking distance ("logistical constraint"). Another underlying idea is to make the rural world more familiar with tree production (generalize the involvement of the population in agro-forestry) and little by little introduce the habit of little commercial nurseries that could be compared to a neighbourhood grocer's for example (even if it will take time before the population is ready to buy seedlings like a normal commodity). This last method will be deployed gradually, after extension resources are in place.

#### Activities

Implement 2000 ha of diversified reforestation on private land (calls for proposals).

Provide advisory services to those farmers or cooperatives who wish technical support in sustainable management of agro-forestry resources.

Support the distribution of forest seedlings in rural areas through the establishment of a network of cell nurseries in the pilot districts.

#### Expected outputs

2000 ha of diversified reforestation on private land carried out.

At least 25 Forest Management Groups / cooperatives involved in agro-forestry activities (nursery & plantation) in the framework of the implementation of approved proposals (after calls for proposals).

About 6 Forest Management Groups / cooperatives advised on the sustainable management of agro-forestry resources (25% of approved plantation proposals).



473 neighbourhood nurseries established (capacity 7500 to 10000 seedlings / nursery).

#### Responsibilities

Actor	Tasks
Principal TA and Director of Intervention of the program	Develop models of agro-forestry practices to promote; Provide technical support to NAFA for the deployment of the extension service.
Supervisors of the program	Work with the districts and district foresters to select the proposals; Monitor the implementation of the proposals.
NAFA Forest Extension and Agro-forestry Service	Work with the program to deploy and organize the extension service and to provide technical support for the agro-forestry activities.
Districts	Launch the calls for proposals and supervise their implementation.
District foresters	Coordinate the extension work of the sector foresters.
Sector foresters	Carry out the work of agro-forestry extension; Identify the groups/cooperatives who volunteer to run the cell nurseries and support them technically to do so.
Farmers and agro-forestry groups/cooperatives	Run the nurseries, plant the seedlings and maintain them.

#### Resources required

An amount of 476.500 Euros is budgeted for the following sub-activities:

Implement 2000 ha of diversified afforestation on private land (calls for proposals)
Diversified reforestation on private land ((agro-)forestry calls for proposals)
Support the distribution of forest seedlings in rural areas through the establishment of a network of cell nurseries in the pilot districts
Support the establishment of neighbourhood nurseries in 473 cells: seedling subsidies

### 3.5 Indicators and means of verification

The program will not be evaluated only on the basis of areas planted, but also largely on the basis of (i) the improvement of the capacities in the forestry sector and (ii) progress in the application of sustainable forest management systems. In other words, given the rationale of the program which focuses on institutional development, the evaluation of the program will not only be based on the implementation of its own activities. The evaluation will also be based on the results of the activities *of the institutions themselves* that the program strengthens (NAFA, ISAR/CGF, districts, etc.). To this end, the indicators of the objectives and results, together with the means to verify them are presented in the table of the logical framework in **Annex 7.1**. Three levels of indicators are considered in the logical framework:

#### 3.5.1 Impact indicators related to the global objective

Three impact indicators measure the contribution of the program to reach the global objective related to poverty alleviation, economic growth and environment protection.

They concern largely the end beneficiaries of the program, with a gender sensitive approach:

- 1 The increase of the income of the actors of the forestry sector
- 2 the increase of the contribution of the forestry sector to the GDP
- 3 the increase of the ratio “production/ consumption”

The measurement of these indicators can be done based on enquiries and project reports (money inflows and accounts of the Forest Management Groups supported by the program), national statistics and reports from the System of Information and Permanent Evaluation (SIEP) that will be set up as part of Activity 2.2.

#### 3.5.2 Indicators related to the specific objective

Five indicators measure the contribution of the program to reach the specific objective, bases of a system of sustainable management of the forest resources of Rwanda established and needs of the country for forest products increasingly met:

Reliable disaggregated statistics on the forestry sector available and regularly updated (woodland areas, species, ownership, volumes, wood trade, forest economy);

Gender balanced participatory models and systems of sustainable forest management documented, tested and applied (including law, DFMP, etc.);

Increase of the areas of woodlands and increase of the tree cover on farmlands;

Improvement of correct matching tree species - site and increase of the proportion of good genetic material planted;

The reliable statistics will be found in the various tools produced under Result 2 of the program, in particular Activities 2.1. and 2.2. So the important sources of relevant data will be (i) the records, reports and archives related to the new system of taxation and control, (ii) the SIEP/GIS to be developed, (iii) the cadastre of public forest land and the new maps of the national forest resources, (iv) the reports of the new forest inventory, (v) the revised DFMPs and (vi) the reports of the studies conducted.

Whether models and systems of sustainable forest management are applied can be checked from reports (of the program, of NAFA, of the districts) and from field enquiries, compared to the prescriptions of the District Forest Management Plans. The degree to which the management of public woodlands becomes sustainable can be further verified by studying the channels followed by the money related to the operations of forest management (expenses and income).

The increase of wooded areas, woody cover, species-site matching level and genetic quality of the plantations as a consequence of the support of the program could be checked from well-kept archives and records of what has been planted. But more definitively it will be possible to derive this confirmation from future aerial and field surveys (the new mapping and new forest inventory planned as part of Activity 2.2. will be the baseline). Specific field surveys are also planned towards the end of the program within Activity 2.2. to evaluate the rate of effective plantation and maintenance of the seedlings provided to farmers engaged in the agro-forestry activities. In the same way, specific field surveys are also planned within Activity 2.2. to evaluate the actual rate of use of improved charcoal making techniques in the pilot districts well after the training cycles organized for the charcoal makers.

Some measurements of these indicators and some evaluation data will be found in the documents produced by the program on lessons learned from the implementation of the activities, within Activity 2.2. On the other hand, as part of its general implementation, the program will be able to conduct exercises of outcome mapping. These will provide more refined monitoring / evaluation data as regards the contribution or progress of the program in terms of promotion of systems of sustainable forest management or in terms of institutional strengthening of NAFA.

### 3.5.3 Performance indicators related to the 3 results

**Six indicators measure the performance of the program to produce Result 1 (availability of trained professional foresters increased and technical capabilities of stakeholders in the forestry sector strengthened):**

- (1) 8 professors and lecturers supported technically in ISAE-Busogo and between 10 and 20 teachers supported technically in the two forestry secondary schools;
- (2) Education improved for 70 A1 candidates each year, 30 A0 candidates each year and 70 A2 candidates each year of which 15% at least are women;
- (3) Training provided to around 30 officers of NAFA central, to 6 district foresters and 98 sector foresters of NAFA to perform their duties and to administrative and technical staff of 6 districts on sustainable decentralized contractual management of forest resources;

(4) Staff of ISAR/CGF (1 researcher and 5 technicians) trained in the development of a tree breeding program and the production of seeds of high quality;

(5) Technical or organizational training provided to between 12 and 50 nursery teams / plantation teams or FMGs involved in contracts of works of plantations on public land; loggers and charcoal makers (between 100 and 500) and their FMGs; timber processing industries (innovative wood processing); FMGs involved in sustainable contractual management of forest resources (between 12 and 35); FMGs implementing agro-forestry proposals (at least 25); 473 neighbourhood nursery teams. Note: the numbers of groups is not necessarily additive as some groups may be involved in different activities.

(6) Among all FMGs trained, at least 12 are women's Groups / cooperatives.

The main source of verification of these indicators will be the reports of the training unit of the program who will develop a system of monitoring and evaluation of the progress made by the beneficiaries of the training modules (see Activity 1.1.).

**Ten indicators measure the performance of the program to produce Result 2 (institutional capacities to implement the national forest policy reinforced):**

(1) Legal framework of sustainable decentralized management of forest resources established and operational at central and decentralized level: taxation, funding, control, contractual forest management;

(2) Reliable up-to-date decision making tools available and used by NAFA, in particular: System of Information and Permanent Evaluation (SIEP) and GIS, cadastre of public forest land, results of the new national forest inventory (including small woodlots and trees on farms), results of other studies (technology of wood processing, etc.);

(3) 6 District Forest Management Plans (DFMP) revised and reliable, Simple Plans of Operations available and implemented;

(4) Package of communication tools produced on various forestry subjects and distributed at national and decentralized level;

(5) Women sensitive educational modules on forestry subjects in use in at least 30 schools;

(6) Regular consultation meetings organized at central and decentralized level, gathering the actors of the forestry sector;

(7) Extension service operational in the pilot districts;

(8) National network of seed stands confirmed, rehabilitated and used and groups of seed harvesters from these sites proficient and operational;

(9) Comparative trials of provenances (national seed stands and foreign provenances) established;

(10) Seed supply of improved genetic and physiologic quality increased.

The existence of a functional legal framework of sustainable decentralized management of forest resources can be checked from the text of by-laws, contracts of forest management of public woodlands, and the information from the SIEP. Additional sources are the records of NAFA on taxation transactions and control operations, to be built, as well as the records on money flows related to the operations of public forest management, to be organized at district and central level. An efficient legal framework would also be transparent, which will facilitate the analysis of the indicator. The existence of the decision-making tools and communication tools can be checked directly (tool/system itself, communication material produced, reports on the development of the tools). Whether the tools are used by NAFA and other concerned actors can be checked first by observing if the content of the tool is up-to-date, secondly from enquiries and reports of NAFA. The existence of a framework of regular consultation between the actors of the forestry sector can be verified from reports of the program and NAFA and other partners and from the minutes of the meetings. The action of the extension service (sector foresters deployed in Activity 2.4.) can be checked by the aforementioned field survey conducted in Activity 2.2. to evaluate the effectiveness of the agro-forestry activities. Indicators related to the implementation of the tree-breeding program can be verified in reports of the program, of NAFA, of ISAR. They can also be checked by conducting field visits to the seed stands and to the trials and by conducting field surveys or future forest inventories to measure growth rates of the new plantations (the most immediate verification can be the growth in height).

**Six indicators measure the performance of the program to produce Result 3 (forest resources increased and diversified in the pilot districts and their management improved):**

- (1) 6 District Forest Management Plans and Simple Forest Management Plans implemented on ~ 10300 ha of public woodlands of the pilot districts;
- (2) Between 12 and 35 Forest Management Groups / cooperatives formed to take on sustainable contractual management of forest resources;
- (3) 2000 ha of public land planted (afforestation on bare land) or replanted (rehabilitation of woodlands) with a survival rate higher than 80%;
- (4) 2000 ha of diversified (agro-)forestry on private land carried out, taking into account the needs of women (women headed households) and men;
- (5) At least 25 Forest Management Groups / cooperatives involved in agro-forestry activities based on proposals;
- (6) 473 neighbourhood nurseries established (capacity 7500 seedlings / nursery)

A first source of verification of these indicators is the contracts between the districts and the operators and the contracts between the districts and the program regarding forest management, afforestation and agro-forestry activities. A second source is the reports of the contractors, of the districts, of the program and NAFA. Technical verification means include the analysis of maps and archives of the program and NAFA and equivalent

information in the SIEP/GIS of NAFA. These can be completed by field verifications. The numbers and level of organization of Forest Management Groups / cooperatives can further be determined by checking the statutes of these groups and by meeting them on-site.

## 3.6 Assumption and Risks

### 3.6.1 Implementation risks

The beginning of the first phase of PAREF has been affected by difficulties of collaboration with NAFA resulting mainly from the fact that PAREF started before NAFA was set up. A risk of this nature exists for the program (second phase) but it is likely to be limited. Indeed, following the mid-term review of the first phase, measures are being taken to define more clearly the position of PAREF within the NAFA structure and the respective responsibilities in the implementation of the activities. The second phase of the program is right from the start a component of NAFA, the whole structure bearing responsibility for the successful implementation of the activities.

For the same reason, the risk that NAFA does not engage in the activities supported by the program exists but is more and more limited. This concerns the activities in the pilot districts (Result 3) where decentralized NAFA staff has a major role to play and the activities of Result 2 where NAFA might not take ownership of the decision making tools developed with the support of the program. The first reason why this risk is being reduced is the political will to develop the forestry sector and intensify afforestation and forest management. The second reason is that already in the first phase of PAREF and even more in the second phase of the program, there is a large emphasis on the capacity building of NAFA staff, which will reduce constraints limiting the engagement of this staff in the activities. And thirdly, NAFA staff will be involved in the activities right from the beginning (planning, design, launching).

Of more concern could be the risk that the full deployment of NAFA staff be delayed, or that the staff appointed would not have the required profile (background, level, capacity to learn). This is a real risk because of the current acute scarcity of experienced foresters in the country. The existence of procedures to evaluate regularly the staff appointed and to replace it when needed could mitigate this risk in the coming years, as scarcity of trained foresters will decrease progressively thanks to the support of the program. In particular, the implementation of District Forest Management Plans (Activity 3.1.) would be more difficult if District Foresters of NAFA were not strong enough.

Still about human resources, the improvement of the education of the future graduates in forestry with the support of the program (Activity 1.2.) might not lead enough to better capacities of the national forestry institutions in a few years (Result 1) if public recruitment procedures do not properly take into account the technical background of the candidates. However, the program will influence this positively as it helps the forestry sector to gain importance and it dedicates substantial resources to communication in favor of the sector, so that the specific forestry requirements will be better known and recognized in the public selection procedures.

One practical risk that is being felt about the training activities of the program (Result 1) is that there could be a drain of trained staff. It is especially the case for specialized disciplines that are also useful in other sectors, like GIS for example: after receiving advanced training, this staff could leave NAFA. The role of the program to mitigate this risk will be twofold. First, to advise NAFA on staff management policies reducing the risk. Secondly, the program is especially designed with a big training component to address such a risk. The best response of the program over the years will be to sustain the efforts in training activities and to maintain the volume of its contribution, so that, with the help of other contributions, the current shortage of competent natural resource managers will eventually but effectively be reduced.

As regards the legal framework in which the program will work, the first risk identified would be related to a late enactment of the new forest law, or the enactment of a new law that would not facilitate decentralized sustainable forest management. This can impede some activities like the implementation of the District Forest Management Plans (Result 3). For example, the position, role and operation modalities of Forest Management groups have not yet been clearly defined in a formal way. However, the likelihood of very long delays does not seem too high given that the draft law is already at the final stages before enactment. In addition, the program will continue to support the process of reform of the legislation (Activity 2.1.), precisely to reduce this risk.

In a similar way, if the new forest legislation does not initiate a taxation system that is clear and fairly incentive, there is a risk that private investments in (agro-)forestry on a voluntary basis will be deterred or maintained at a low level (Activity 3.2.). Likewise, private operators such as the charcoal makers would not take ownership of the new techniques of improved charcoal making that the program promotes (Activity 1.4.). That is why the program will also play an active role through the provision of advise on the preparation of the by-laws of the taxation system (Activity 2.1.). Another way to reduce the risk of insufficient engagement of loggers in improved charcoal making will be to introduce a stipulation in the contracts of implementation of the District Forest Management Plans that improved techniques need to be used.

Furthermore, if delays are encountered in the preparation of the cadastre of public woodlands, there is a risk of real complication of the operations of management of these woodlands (Activity 3.1.). However, it is likely that this tool will effectively be developed soon, as the ministry has made it a priority and as the first phase of PAREF.be is starting to support this activity. Some delays might occur if the exercise turns out to be heavier than initially planned. That is why specific resources have been allocated to support the completion of this activity as soon as possible in the second phase of the program (Activity 2.2.).

The risk that the forest land use status of the public woodlands is not respected by the districts will be further addressed by the program through (i) the support brought to NAFA in its role of control (Activity 2.1.) and (ii) the communication campaigns to raise awareness about the importance of sustainable forest management that the program will continue to organize at district level (Activity 2.3.).

Finally, the success of the plantation activities (Result 3, especially the afforestation / woodland rehabilitation on public land in Activity 3.1.) could be influenced by two risks.

The first one is that seed provenances of better genetic quality might not be found soon enough to supply the afforestation works. This risk is minimized by the substantial support the program brings to ISAR/CGF in Activity 2.5. In particular it includes international contacts to import improved seeds from neighboring countries. It is also likely that the trials of national and foreign provenances, technically supported by the program, will produce the first results in very few years thanks to the use of so called “early tests”.

The second risk that could jeopardize the afforestation campaigns supported by the program is the consequences of the long and slow tendering procedures in the districts to select operators for the works. If this aspect is not taken into consideration, it can have fatal effects on the outcomes of the campaigns, especially in the Eastern Province where the climate is drier. Indeed, delays to allocate the contracts for the works mean a late production of seedlings in the nurseries, which in turn results in a late plantation just before the beginning of the dry season, the final result being a small survival rate. Nevertheless, the first phase of PAREF has faced this problem and has developed strict planning systems to avoid this risk. The program will continue to reduce that risk through the sustained building of the capacities of district staff (Activity 1.3.).

### 3.6.2 Sustainability risks

Generally speaking, the sustainability risks associated to such a program could have been high due to the weaknesses of the human resources in the forestry sector. However this risk will be mitigated by the weight given to the aspects of training and capacity building in this program. One component of the program (Result 1) out of three is entirely dedicated to the training of the various actors concerned by the activities and more than half of the international technical assistance’s resources is allocated full time to training. There are consequently few sustainability risks.

Admittedly the promotion of agro-forestry in Activity 3.2. is subsidized, as the cost of the production and transport of the seedlings is covered by the program. Nevertheless, it is evaluated that in the current situation, the taxation system on the harvesting of the wood is a deterrent to private investments in agro-forestry, while apart from that, market conditions are favorable to the development of private wood production. That is why the program supports in parallel the preparation of a new forest taxation system that will eventually reduce/replace the need for subsidies. Conversely, the approach used by some projects who subsidize even the plantation of the trees on private land could be more of an implementation risk to the program (this latter implementation risk being limited as the geographical overlap with these projects is reduced).

The financial support to the recruitment of Sector Foresters of NAFA (Activity 2.4.) could be seen as harboring a sustainability risk. However, this solution is proposed after careful consideration, to generate an impulse that is deemed to be necessary after two decades of decay of (agro-)forestry activities and investments. The reasons why the sustainability risk is found to be limited (or compensated by sufficient benefits) are the following. First, NAFA is aware of the need for an efficient forestry extension service and wishes to replace its current system which is estimated to have an insufficient impact: it is made of “forest extensionists” who are actually mere guards of the woodlands, with no technical



background. The support of the program in the pilot districts will assist NAFA in replacing this old system by a real system of extension providing significant technical inputs.

The role of the support from the program is to test the new type of extension service in real conditions in the pilot districts and make it work before deploying it at the national level. Another purpose is to increase the volume of the extension workforce in the coming period where enormous efforts will be needed to rebuild the productive woody resource of the country. Another underlying idea is to deploy these sector foresters in a structure (NAFA) which benefits from important training resources thanks to the presence of the program, so that in the relatively short period of the phase they will be made fully operational and experienced. Of course this investment is meant to be taken over and multiplied by NAFA, but if at the end of the phase a further reform is found to be necessary, the main output which is to have professionalized a hundred forest technicians will remain, whatever the options chosen at this stage (example: redeployment at the national level).

If the preparation of the cadastre of public woodlands was seriously delayed, there would be a sustainability risk in the activities of afforestation and forest management on public land (Activity 3.1.) in addition to the implementation risk. But as already explained in paragraph 6.2 this risk will be reduced by other activities of the program.

### 3.6.3 Fiduciary risks

The first element of fiduciary risk that funds are not used for the intended purpose is low. Considering the fact that the program is implemented under a co-management arrangement most of this risk is eliminated. Furthermore, the program will have a structure in which there is a steering committee which has to endorse reallocations of budget between the different activities and results. In this steering committee BTC will be represented. At the grassroots level, some risks of this category can be encountered, when for example the approach for afforestation on public land is applied because the land to be planted is declared to be public, while in fact it is private. Indeed, in the approach on public land the entire costs of the plantation are supported by the program, while in the approach on private land only the production and transport of the seedlings is funded by the program. Nevertheless, the scale of such a risk is definitely small and the development of the cadastre of public woodlands with the support of the program will eliminate this type of confusion.

The second type of fiduciary risk, that funds are not properly recorded and accounted for is a bit higher, but acceptable. Especially the use of the district administration for the disbursement of funds holds some risks. Yet, these funds are channeled through clear written agreements (contracts) with the districts so that the use of the money is kept under control and the respective efficiency of the districts can even be taken into account. Difficulties might be encountered not so much regarding the proper recording and accounting, but maybe even more importantly, regarding the speed and effectiveness of disbursement of funds. The public system in Rwanda is strict on accounting procedures, and any non-compliance with the procedures is sanctioned heavily. This results in a district administration which is somewhat reluctant to handle and disburse funds. To

mitigate this problem the program will continue to build the capacities of the districts to handle this funding.

The third type of fiduciary risk is that the program does not achieve value-for-money objectives. This risk is real specifically in the field of contracting service providers. Currently there is a lack of skilled service providers, making the market for their services expensive. This can be aggravated by complicated procurement procedures which are part of the public system in which this program is embedded. The procurement procedures for services are strict and based on open tendering. This does however disqualify a large number of potential service providers who do not have the capacity to compete in such procedures. This is true for example for contracts of works of afforestation, in which it is very difficult to obtain good quality work compared to the price and in which a good number of operators who could be more appropriate cannot meet the challenge of the procedures. To mitigate this problem the program will continue to pilot different methods of contracting services at district level to find the most effective ones. This risk is also encountered when the program needs to contract forestry experts for consultancies (technical studies, etc.). The number of these experts on the market is so limited that it cannot be guaranteed each time that satisfactory services will be available. The program will maintain the emphasis on capacity building, which will benefit both the private forestry experts (as a professional body) and more junior foresters who will gradually qualify to join the community of these experts and therefore increase the offer.

### **3.7 Description of beneficiaries**

The first and foremost beneficiary is MINIFOM. The program will support the ministry to design the tools and approaches to implement the National Forestry Policy and to test these in real conditions, while at the same time contributing to reach the objectives of this policy.

#### **3.7.1 Beneficiaries related to Result 1 (training)**

##### **3.7.1.1 Direct beneficiaries**

The beneficiaries of the trainings are:

ISAE-BUSOGO, new Department of Forestry (professors and students);

EVFO-Kibisabo and Gisovu School Group (teachers and students);

NAFA at the central and decentralized level;

ISAR/CGF;

The decentralized entities, especially the pilot districts;

Members of the Forest Management Groups and individuals of the forestry sector in the pilot districts, especially women;

Wood processing units /factories (most of them small: sawmills, etc.).

### **3.7.1.2 Indirect beneficiaries**

The population of the country, as a result of the anticipated better management of the forest resources.

## **3.7.2 Beneficiaries related to Result 2 (institutional strengthening)**

### **3.7.2.1 Direct beneficiaries**

The beneficiaries of the technical and/or operational support are:

NAFA;

ISAR/LAFRC and in particular CGF;

The pilot districts (through the improvement of the DFMP, of the maps, inventory and cadastre of the forest resources).

Other beneficiaries of the development of new tools include:

NLC, NUR/CGIS, MININFRA;

The partners of cooperation, current and future (other projects, especially PAREF.nl)

The national and international NGOs working in the forestry sector in Rwanda;

Wood processing units /factories (sawmills, etc.);

The private sector of forestry/wood;

Anyone looking for information on the forestry/wood sector;

Private forestry experts and consulting companies (extensive opportunities of contracts and activities).

### **3.7.2.2 Indirect beneficiaries**

The indirect beneficiaries of Result 2 include the population of the 6 pilot districts ( ~ 1.7 million inhabitants), through the improved services (environment, agriculture, energy supply, habitat). In fact the whole population of the country is beneficiary from the improved management of the resources, especially the urban population (energy supply).

## **3.7.3 Beneficiaries related to Result 3 (management & afforestation)**

### **3.7.3.1 Direct beneficiaries**

The main beneficiaries of the forest management and afforestation activities are:

The involved private operators: contractors, Forest Management Groups/cooperatives, rural workforce, especially the poor families and women targeted;

The State, the pilot districts and the private owners of woodlands, because of the better management of their woodlands.

### **3.7.3.2 Indirect beneficiaries**

The indirect beneficiaries are the population of the pilot districts, because of the better management of the local forest resources, for the present and the future.

## 4 Resources

### 4.1 Financial resources

The average exchange rate for the last months has been estimated at 750 FrRWA for one Euro.

#### 4.1.1 Rwandan contribution

The Rwandan contribution is made of the following main elements:

The provision of office premises (with internet connection, water and electricity services and security) for the program with NAFA. This is an essential contribution to the implementation of the program.

The salaries of the District Foresters (NAFA), the Forestry animators, Office rent at national and decentralized level, NAFA supervision costs

Part of the MINFOM recurrent cost and operation budget

The Rwandan contribution is estimated at 1.000.000 Euros as shown in the following table:

Table 6: Rwanda Contribution

Activity	Amount in Euros	Period and Comments
Rent of head office Kigal	199,653	4 Years
Office rent at district level	229,843	4 years
District Forester Officers	229,843	One par District
NAFA Supervision	67,294	20% of salaries DG, DAF, Professional etc
Salaries of Forestry Animators	518,020	One per two sector
Total	1.055.786	

The national contribution involve also the supervision activities by the Mayor administration at district level.

Regarding this contribution, it is important to note the following point: as agreed upon in the general development cooperation convention signed on the 18 of may between both

government, any tax, including VAT, on the supplies and equipments, works and services is covered by the Government of Rwanda.

#### **4.1.2 Belgian contribution**

The Belgian contribution for this project is an amount of 6 million Euro. The detailed budget per year of the Belgian contribution is presented in the tables in Annex 7.4.

The goods purchased in the framework of the program will remain the property of the program until its closure and cannot be seized or used for other purposes than the ones planned and approved by the Steering Committee. Their final destination will be determined by the Steering Committee during the approval of the final report of the program. It is recommended to maintain the goods in the services to which they have been allocated.

74% of the budget falls under the Co-Management (CM) and 24% falls in BTC direct management (Regie)

#### **REMARKS**

1) Contingency:

An amount for contingency of 160.637 Euros is necessary to compensate the exchange rate fluctuation, and unforeseen changes in the MINAGRI reorganization.

2) Program duration:

The period duration is four years, including an inception period of 3 months.

Table 7: Contribution of Belgium

BUDGET TOTAL				Mode d'exéc.	BUDGET TOTAL	%
<b>Specific objective: « The bases of a system of sustainable management of the forest resources of Rwanda are established and needs of the country for forest products are increasingly met »</b>						
<b>A</b>					<b>4.376.998</b>	<b>73%</b>
<i>Result 1 : "The availability of trained professional foresters is increased and technical capabilities of stakeholders in the forestry sector are strengthened"</i>						
A 01					1.474.583	25%
A	01	01	Establish a training unit and make it operational Co-management	CM	33.125	1%
A	01	02	Establish a training unit and make it operational Regie	R	614.530	10%
A	01	03	Strengthen the training of the future graduates in forestry	CM	330.000	6%
A	01	04	Strengthen the technical capabilities of the staff of public forestry institutions (NAFA, ISAR) at both central and decentralized level	CM	320.548	5%
A	01	05	Strengthen the technical and organizational capabilities of the private operators in the forestry sector in the pilot districts	CM	176.380	3%
<i>Result 2 : "The institutional capacities to implement the national forest policy are reinforced from the central level to the decentralized level"</i>						
A 02					1.735.790	29%
A	02	01	Support the establishment and application of the legal framework allowing the sustainable and decentralized management of forest resources	CM	69.300	1%
A	02	02	Support the development of decision making tools for the sustainable and decentralized management of forest resources	CM	1.070.460	18%
A	02	03	Support the implementation of the Communication Plan of the forestry sector	CM	160.240	3%
A	02	04	Reinforce the operational capacities of NAFA for the implementation of the National Forest Policy	CM	201.860	3%
A	02	05	Strengthen the capacities of ISAR to supply tree seeds of good quality and improved genetic origin	CM	233.930	4%
<i>Result 3: "Forest resources in the pilot districts (3 in the Northern Province and 3 in the Eastern Province) are increased and diversified and their management is improved"</i>						
A 03					1.166.625	19%
A	03	01	Support the implementation of the management plans of public forest resources for the sustainable supply of wood	CM	690.125	12%
A	03	02	Support the requests for reforestation actions on private land	CM	476.500	8%
<b>X Budget reserves (1.5%)</b>					<b>74.237</b>	<b>1%</b>
X 01					74.237	1%
X	01	01	Budget reserves Co-management	CM	44.237	1%
X	01	02	Budget reserves BTC management	R	30.000	1%

<b>Z</b>	<b>General resources</b>			<b>1.548.765</b>	<b>26%</b>
Z 01	Staff salaries			1.075.800	18%
Z 01 01	International Technical Assistant	R	624.000	10%	
Z 01 02	HR support to NAFA for the project Director	CM	86400	0,014	
Z 01 03	Finance and Administration team	CM	184.500	3%	
Z 01 04	Technical team	CM	121.950	2%	
Z 01 05	Other staff	CM	58.950	1%	
Z 02	Investments			114.400	2%
Z 02 01	Vehicles Regie	R	30.000	1%	
Z 02 03	Office equipment	CM	11.900	0%	
Z 02 04	Office improvements	CM	24.500	0%	
Z 03	Operations			258.565	4%
Z 03 01	Office rent			0%	
Z 03 02	Maintenance services	CM	12.600	0%	
Z 03 03	One Vehicle operation costs Régie	R	32.800	1%	
Z 03 05	Telecommunications, internet	CM	15.000	0%	
Z 03 06	Office supplies	CM	22.500	0%	
Z 03 07	Mission allowances	CM	37.040	1%	
Z 03 08	Public relation and external communication costs	CM	4.500	0%	
Z 03 09	Financial costs	CM	2.925	0%	
Z 03 10	VAT costs	CM	0	0%	
Z 04	Audit and Monitoring Evaluation			100.000	2%
Z 04 01	Evaluation missions	R	50.000	1%	
Z 04 02	Audit	R	36.000	1%	
Z 04 03	Backstopping	R	14.000	0%	
<b>TOTAL</b>				<b>6.000.000</b>	<b>100%</b>

	<b>BTC REGIE</b>	<b>1.398.530</b>	23%
	<b>CO-MANAGEMENT</b>	<b>4.601.470</b>	77%

### Early starting cost expenditures

Before the signature of the Specific Agreement, expenditures related to the start-up of the project can be made for a budget not exceeding 400.000 Euros, such as:

Capital investment (vehicles, office equipment, IT equipment, office improvement) as well as some administrative costs directly relate to the tender procedure.

Recruitment of the international and National Technical Assistant and the PMU support Staff.



## 4.2 Human resources

The list of the staff of the program is indicated in the following table:

**Table 8 : List of the program's staff**

Title	Role	Degree	Term m.m	Salary covered by
Focal Point of the program within NAFA (Director of Field Program Unit of NAFA)	Beside his responsibilities within NAFA, liaise with the Program Management Unit as regards all aspects of the planning and the implementation of the activities of the program.		Permanent, to be appointed	NAFA
Intervention Director & Co-management Delegate/Principal International Technical Assistant	Liaise and collaborate with the Director General of NAFA and the focal point of the program within NAFA (Director of Field Program Unit) on the implementation of the activities of the program.  Conduct the activities of public relations and consultation with partners.	A0	48	Recruited and paid by NAFA with program contribution
	Supervise the development of the procedures, contracts and ensure their proper execution.  Supervise the technical and financial implementation of the program.  Supervise the preparation of strategies, work plans and system of monitoring and evaluation.  Supervise and validate the technical and financial reports.  Role of Principal International Technical Assistant: provide technical and methodological support/advise at all levels of the implementation of the activities.  Prepare the basis of the training plan during the first quarter of the first year, consistent with the other activities of the program.	MSc	48	Program

<b>Title</b>	<b>Role</b>	<b>Degree</b>	<b>Term</b> m.m	<b>Salary</b> covered by
Administration and Finance Officer	Conduct the financial planning and financial management. Supervise and control the accounting (procedures, validity of receipts and accounting documents, etc.). Establish and run the system of management of the property of the program (equipment and expendables). Carry out the financial reporting.	A0	45	Program
Accountant	Keep the accounting of the program and monitor the financial execution of the contracts.	A0/A1	45	Program
Secretary	Run the secretariat and keep the till.	A1	45	Program
Procurement Officer in charge of Operations	Prepare the procedures, management tools, conditions/specifications of contracts of the activities of the program. Supervise the preparation and the implementation of the work plans and activity timetables. Coordinate and monitor the day-to-day implementation of the program activities. Provide support to the technical team. Coordinate the technical reporting of the program.	A0	45	Program
Monitoring and Evaluation Officer	Establish the monitoring and evaluation system of the activities of the program: system of collection and centralization of the information on the progress of the implementation of the activities and the contribution of these activities to the expected results. Extraction of lessons learned and reporting.	A0/A1	45	Program
International Technical Assistant (Training)	Finalize the training plan targeting the main actors of the forestry sector. Give support to the organization of the implementation of the training plan. Provide input into training methodology and materials. Give some of the training courses (specialized skills, advanced techniques). Take part to the evaluation of the results of the training plan.	MSc	42	Program
Training and Communication Officer	Gather lessons learned in national afforestation / forest management programs. Organize the trainings, prepare the training materials and implement the capacity building activities for the different actors. Organize the communication activities of the program (newsletters, web site, etc.).	A0/A1	45	Program
Zone Supervisors (2)	Support the preparation and the implementation of the workplans and timetables of the activities at district level and monitor their implementation in the field. Provide	A0/A1	45	Program

<b>Title</b>	<b>Role</b>	<b>Degree</b>	<b>Term</b> m.m	<b>Salary</b> covered by
Supervisors (2)	technical and methodological assistance to the districts, to the District / Sector Foresters and to the private operators (organization and implementation of the contracts, monitoring of the works). Take part to the training of private operators at field level (FMGs, etc.). Feed the system of monitoring and evaluation and supervise the reporting by the districts (transmission of the information from the field to central level).			
District Foresters (6) (NAFA)	Supervise the implementation of the Activities by the operators. Provide technical support to the districts in the implementation of the District Forest Management Plans. Take part to the training of private operators at field level. Supervise and coordinate the work of (agro-) forestry extension of the Sector Foresters.	A1	Permanent	NAFA
Forestry Animators (NAFA)	Supervise the implementation of the activities by the operators at sector level (afforestation, implementation of the District Forest Management Plans). Carry out the work of (agro-)forestry extension.	A2	Permanent	NAFA
Drivers (7)	Drive and maintain the vehicles of the program. The number of driver take into consideration the number of driver need for the vzeehicles which will be transferred from PAREF I		45	Program
Guard (1)	Watch the office.		45	Program

The duration of the assignment of the staff of the Program Management Unit is **48 months**, with an inception phase of 3 months. The Co-management Delegate/Principal Technical Advisor and the Technical Advisor (Training) will be recruited by BTC. The other members of the team will be recruited by MINIFOM, following a recruitment procedure conducted in a joint way. In order to do so, BTC will be invited to participate in the recruitment & selection process of the administration team and will formulate a non-objection prior to the signature of the contract. The intervention director will be recruited by MIFOM/NAFA, his salary will be paid by NAFA. The program will contribute to his salary (see budget line Z\_01\_02)

The terms of reference of the 2 International Technical Advisors and the Administrative and Finance officer are presented in **Annex 7.5**.

The level and profile of the staff of the administration team (Administration and Finance Officer, Procurement Officer, and Accountant) will be high enough to allow for an important delegation of the responsibilities from the Co-management Delegate to this team **so that the Co-management Delegate may dedicate a large part of his work time to his -main role of Principal Technical Advisor.**

## 4.3 Material resources

### 4.3.1 Equipment

The following -material resources will be necessary to implement the activities:

- Four 4x4 vehicles for the Training Component, for the Monitoring and Evaluation and for the Project Management Unit. One car is budgeted within the result one. Among the four cars, two will be purchased in “regie”.
- 3 Vehicles from PAREF I will be transferred for the 2 Districts Supervisors and one for NAFA
- 6 motorbikes for the district forester
- Computers kit for NAFA
- Computers KIT for the PMU
- Office equipment
- Forestry equipment (GPS, compasses, tape measures) at Central (NAFA) and decentralised level
- Training equipment (projectors, digital cameras, boards, flipcharts, etc)
- Forestry equipment for training at National and decentralised level
- Internet connection equipment
- Regulators

The last PAREF I Steering committee will officially confirm the transfer of Vehicles and equipment to PAREF I. The same procedure will apply for the PAREF NI.

An update list of equipment will be submitted by the project to the steering committee, during the inception phase of the project, taking into account the equipment which have been purchased by the other PAREF project.

#### **4.3.2 Short-term technical assistance & purchased services**

Short-term technical assistance, international and national, and services providers will be contracted on specific subjects to support the technical team of the Program. An evaluation of these resources in month/day is presented in the following table. The mobilization of the short term technical assistance will be based on detailed terms of reference prepared by the technical team of the program and will follow the tendering procedures.

**Table 9:List of short-term technical assistance**

Mission	Unit	Amount International	Amount National
<b>Result 1</b>			
International Consultant: Support to ISAE-Busogo (visiting professors and organizational support)	m.d	115	
National Consultant: Support to EVFO-Kibisabo & Gisovu School G.: training of professors	m.d		213
International Consultant: Training central staff NAFA (specialized)	m.d	54	
National Consultant: Training central staff NAFA	m.d		375
International Consultant: Trainer in GIS for staff of NAFA and other institutions	m.d	60	
National Consultant: Training of District Foresters	m.d		15
National Consultant: Training of the new Sector Forestry Animators in the six district	m.d		80
National Consultant: Training district staff in decentralized forest management	m.d		23
International Consultant: Training ISAR/CGF staff in tree breeding	m.d	15	
National Consultant: Training technicians of ISAR/CGF	m.d		30
National Consultant: Training in nursery and plantation techniques for private operators (afforestation works)	m.d		48
National Consultant: Training for private sector in wood processing	m.d		20
International Consultant: Training for private sector in wood processing	m.d	15	
National Consultant: Training in improved charcoal making	m.d		162
National Consultant: Training (organizational aspects) of FMG of charcoal makers and wood traders	m.d		18
National Consultant: Training of FMG on technical aspects of sustainable forest management	m.d		45
National Consultant: Training of FMG on organizational aspects of sustainable forest management	m.d		45
<b>Result 2</b>			
International Consultant: Study on mechanisms of sustainable funding of decentralized forest management	m.d	25	
National Consultant: Study on mechanisms of sustainable funding of decentralized forest management	m.d		25
International Consultant: Study on control system of forest resource utilization	m.d	25	
National Consultant: Study on control system of forest resource utilization	m.d		25
National Consultant: Development of SIEP / GIS	m.d		90
International Consultant: Development of SIEP / GIS	m.d	75	
National Consultant: Survey to evaluate plantation and maintenance of seedlings in agro-forestry (SIEP)	m.d		30
National Consultant: Survey to monitor / evaluate real use of improved charcoal making (SIEP)	m.d		30
National Consultant: Support to preparation of forest cadastre	m.d		150
Carry out the new national forest inventory	package		
National Consultant: Up-dating and revision of DFMP	m.d		180
National Consultant: Studies on innovative wood processing	m.d		100
International Consultants: Studies on innovative wood processing	m.d	50	
National Consultant: Design of communication materials	package		
National Consultant / NGO: Education program in schools on (agro-)forestry subjects	package		
National Consultant: Maintenance and developpement of NAFA web site	package		
International Consultant: Technical support to ISAR/CGF to design and develop a tree breeding program	m.d	83	
<b>TOTAL</b>	<b>m.d</b>	<b>517</b>	<b>1.704</b>

## 5 Implementation modalities

### 5.1 Legal framework and administrative responsibilities

The legal framework of this project “Support Program to the Development of the Forestry sector in Rwanda” will be determined by a specific agreement between the Republic of Rwanda and the Kingdom of Belgium.

The project will be implemented according to the principles of co-management; in line with rules and regulations of Belgo-Rwandan development cooperation. This means, among others, that Rwandan legislation is applied for procurement for co-managed activities.

MINIFOM is the body responsible for the implementation of the program. MINECOFIN is the body responsible for the financial monitoring of the program.

The implementation of the program is entrusted to BTC, represented in Rwanda by its Permanent Representative.

A Steering Committee oversees and orients the program. This body approves the reports on the implemented activities based on the results of the logical framework and the planning of the activities.

**The Steering Committee** is the highest level of strategic and decision-making entity supervising the implementation and management of the program. Its composition and internal rules & regulations shall be developed and approved by both parties.

#### **Composition:**

The Steering Committee is comprised of decision-making members and non-decision making members.

Decision-making members are:

- 
- Permanent Secretary of MINIFOM (Chair)
  - Resident Representative of BTC (Co-chair)
  - Representative of MINECOFIN (Member)
  - Representative of MINAFFET (Member)
  - Representative of MININFRA (Member)
  - Representative of MINAGRI (Member)
  - The Director General of NAFA (Member)

Decision-making members of the Steering Committee can be substituted by replacements from their respective organizations.

Non-decision-making members (observers) are:

- The Representative of Dutch Embassy
- The Representative of Belgian Embassy
- The Director of Intervention
- The Co-Manager BTC Delegate

### **The Secretariat**

The Secretariat of the Steering Committee is performed by the Project Management Team, and carries out its tasks under the direction and supervision of the Chair and Co-Chair.

Its responsibilities include:

- delivering the written invitations to the meetings, the agenda and preparatory documents;
- drafting of the minutes of the meetings and any reports;
- preserving and maintaining the records and correspondence of the Steering Committee

### **Observers: Donors, experts and/or advisors**

Observers, experts and/or advisors can be invited by any member of the Steering Committee to participate in meetings to provide any useful information or advice for decision making on a particular item of the agenda.

### **Duties of the Steering Committee**

The Steering Committee is a strategic decision-taking instance, supervising the management of the project.

The Chair is charged with inviting, opening, adjourning, reopen, closing and leading of the Steering Committee meetings.

### **The main responsibilities of the steering committee are:**

- Put in place and supervise the management structures of the project;
- To assess the project's progress, in particular with respect to its specific objectives;
- To take any strategic decision ensuring the success of the project as defined in the Technical and Financial File (TFF) and in the limits of its powers, as defined in the TFF;
- To approve action plans for the project;
- To approve the project reports;
- To modify the content of the TFF (except regarding the general and specific



objectives);

- To request for modification of the Specific Agreement of the project;
- To address management problems related to human, financial and material resources, not resolved by the management of the project;
- To ensure the closure of the project and approve the Final report.

### **Meetings and agenda**

The steering committee will meet at least twice a year by invitation of the chair.

The steering committee can also holds a meeting any time when a high level decision is necessary regarding to the project implementation.

The invitation, including the meeting's agenda and all related documents shall always be sent at least one (1) week in advance.

The steering committee also holds a meeting at the latest three (3) months before the end of the validity of the specific agreement to examine the draft final report and clarify the modalities for ending the project, in accordance with the Specific Agreement.

### **Decision making process**

Decisions taken by the Steering Committee are made by consensus, in co-management, and require the presence of both the chair and co-chair or their representatives.

Decisions taken by the Steering Committee are based as much as possible on written proposals prepared by the management of the project, and distributed to the members of the Steering Committee prior its meeting.

Decisions of the steering committee are recorded in minutes signed by the voting members. A copy of these minutes will be sent to the Belgian and the Dutch Attaché for international cooperation by BTC.

The Steering Committee can propose additional rules.

## **5.2 Technical responsibilities**

Under MINIFOM the present program will be overseen by NAFA and under the responsibility of NAFA. At the same time, the program will play a very important role to strengthen NAFA in technical and operational aspects. Beside that, the program will play a similar role of reinforcement of the capacities of ISAR and other institutes/schools in the forestry sector. In the six pilot districts where the program will support operational activities, it will maintain close relationships with the districts and sectors.

As regards the technical responsibilities in the implementation of the intervention, a table in the chapter on strategic orientations summarizes the roles of the main actors (NAFA, the program, the districts, the private operators) in the decentralized sustainable

management of forest resources (Result 3). Furthermore, the chapter describing the activities includes tables indicating the detailed responsibilities for the implementation of each activity. All this is summarized on the right hand side of the organizational chart of the program (point 5.3) and in the table listing the human resources of the program and their function (point 4.2).

The program will be included in the performance contracts of NAFA and the districts concerned by the intervention.

### 5.3 Implementation and follow-up structures

The organizational chart of the program showing its institutional anchorage and its staff is presented on the next page.

To allow the implementation and the monitoring of the activities and the day-to-day management of the program, a Program Management Unit (PMU) is established. It is made of the “Program Management” and a “Unit of Technical and Methodological Support”. The “Program Management” directs the implementation and is made of (i) the Intervention Director, representing MINIFOM, seconded to the program for its entire duration and receiving a salary according to the official rates in Rwanda, and (ii) the Co-management Delegate/Principal Technical Advisor, representing BTC and who will be appointed by BTC after preliminary agreement of the Rwandan part.

The Unit of Technical and Methodological Support is made of an administrative team and a technical team.

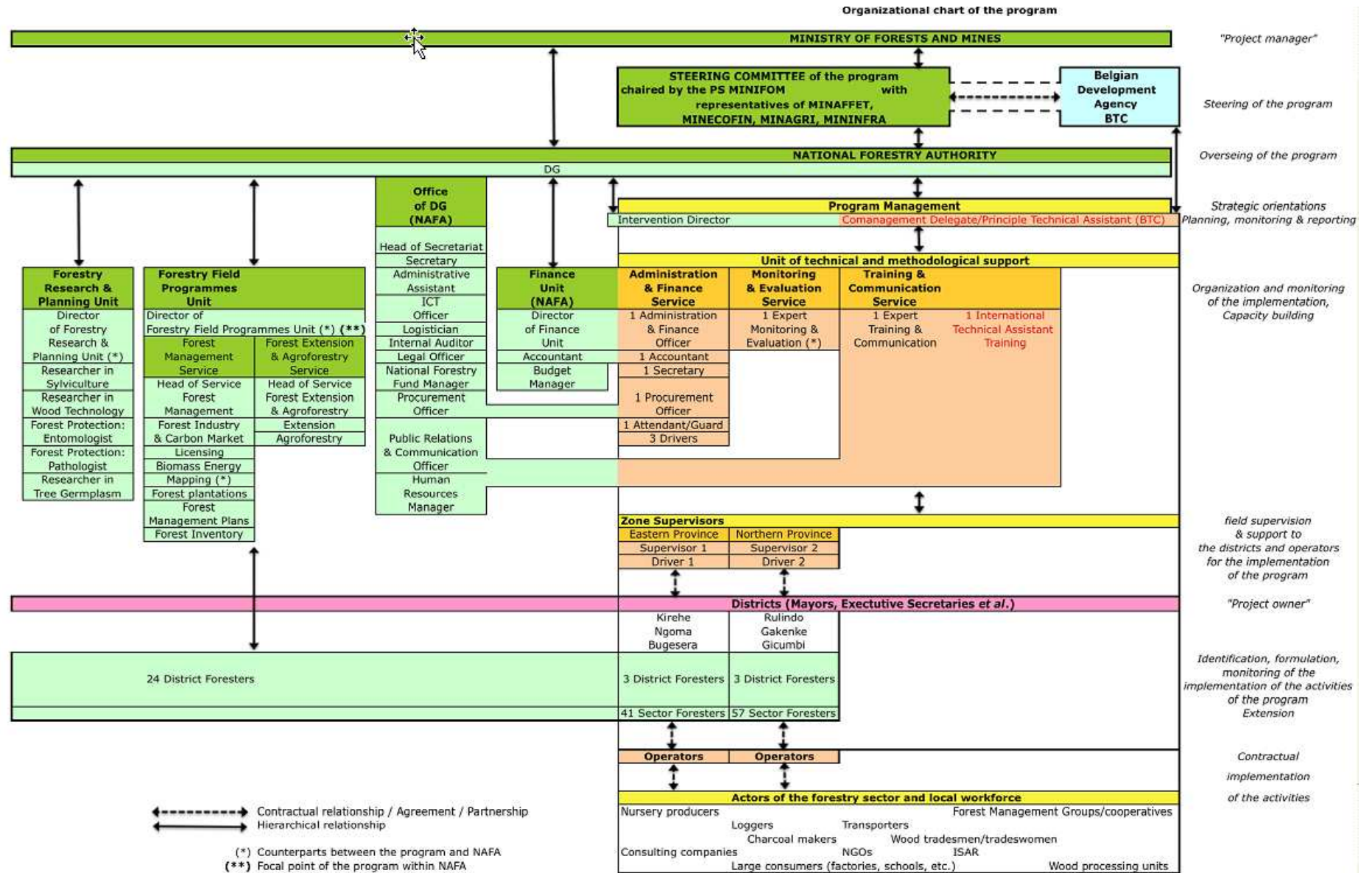
The existence of this PMU -, which is kept small and is embedded in the NAFA structure, is justified by three reasons: (i) the role of service of the program to several actors of the forestry sector (see multi-actor approach); (ii) the temporary increase of the volume of activities to boost the development of the forestry sector after a long period of decline and (iii) the weakness of the national institutions in forestry at this stage.

A focal point of the program within NAFA will be designated, who is likely to be the Director of the Field Program Unit. All experts of the - will have a counterpart among the NAFA staff:

Administration and Finance Officer (PMU) – Director of Finance Unit (NAFA);

Training and Communication Expert (PMU) – Public Relations & Communication Officer (NAFA) for the communication aspects, and the Human Resources Manager (NAFA) for the training aspects;

Monitoring and Evaluation Expert (PMU) – Director of Field Program Unit (NAFA) or Director of Research and Planning Unit (NAFA) or Mapping Officer (NAFA): to be confirmed, according to the exact profile of the staff that will be appointed in NAFA.



## 5.4 Financial responsibilities

This project is a partnership with two counterparts: Rwanda and Belgium. Each one commits to assume the responsibilities described in this TFF and in particular the ones described below.

### 5.4.1 Accounts and signature mandate

Following signature of the Specific Agreement an account in EUR (main account) and an account in Rwandan Franc will be opened with a banking institution, according to the following modalities:

Name of the account: 'Belgian contribution \_ PAREF BE II '

Choice of bank: National Bank of Rwanda (NBR) is the banking institution that works with BTC in the country

Signature mandate: Double signatures are required for commitments and for performing payments

#### Commitments

Signature 1	Signature 2	Limit
Project Manager	Co-manager (partner)	25,000 EUR
Resident Representative (RR)	Co-authorizing officer /delegate (partner)	200,000 EUR
Manager Administration & Finance (MAF) (if RR is absent)	Co-authorizing officer /delegate (partner)	200,000 EUR

#### Payments

Signature 1	Signature 2	Limit
Project Manager	Co-manager (partner)	25,000 EUR
Manager Administration & Finance (MAF)	Co-authorizing officer /delegate (partner)	200,000 EUR
Resident Representative (if MAF is absent)	Co-authorizing officer /delegate (partner)	200,000 EUR

The main account will be replenished on a quarterly basis. The other accounts will be replenished from the main account but with limits to these accounts.

For logistic reasons other co-managed accounts may be opened after agreement of the authorizing officer and the co-authorizing officer.

For local expenses under BTC direct management an account will be opened with double signature at BTC level.

## 5.4.2 Provision of funds

### 5.4.2.1 1/First Transfer

Following notification of the Implementation Agreement between the Belgian state and BTC, a *cash call* can be sent to the local BTC Representation per financing mode. The amount requested must correspond to the needs for the three first months. The authorizing officer must sign the cash call for the co-managed part.

### 5.4.2.2 2/Following transfers

In order to get funds, the project must submit a cash call per financing mode to the BTC Representation at the beginning of the month that precedes the following quarter. This cash call must be signed by project management and also by the authorizing officer for the co-managed part.

The amount of the cash call equals the estimated treasury needs for the following quarter including a margin.

BTC transfers funds at the beginning of the quarter. BTC can also propose a specific financing schedule (payments in several instalments or payment upon request).

The fund transfer is only performed on condition that:

- Accounts of the quarter that precedes the cash call have been forwarded to the BTC Representation,

- The updated financial planning has been forwarded to the BTC Representation,

- The amount of the cash call does not exceed the available budgetary balance.

In case of emergency, the project may submit an early cash call but it has to explain the need.

## 5.4.3 Financial reporting

### 5.4.3.1 Accounting

The accounts are drawn up on a monthly basis and approved following BTC procedures. The accounts must be signed as correct by the manager and the co-manager and forwarded to the authorizing officer and the co-authorizing officer (BTC Representation). Accounting documents that must be forwarded to the BTC Representation include an electronic file, the supporting documents as well as the bank statements and petty cash statements.

### 5.4.3.2 Financial planning

Every quarter, project management must elaborate a *financial planning* for the current quarter and for the following quarter, and for the following years. Financial planning must follow BTC procedures and must be forwarded to the BTC Representation.

### 5.4.3.3 Financial reporting to the Steering Committee

At every steering committee (SC), project management must present the following *financial information*:

- Budget execution report
- Update of financial planning
- List of main commitments
- Overview of banking balances
- List of funds received per financing mode
- Any budget change proposal, if necessary
- Action plan pursuant to the recommendations of a financial audit

### 5.4.4 Managing the budget

The total budget and the budget per execution mode may not be exceeded. In case a budget increase is needed a founded request for the increase must be submitted by the Rwandan partner to the Belgian state after agreement of the Steering Committee. If Belgium accepts the request both parties sign an exchange of letters.

The budget of the project sets out the budgetary limits within which the project must be executed. Any change to the budget must be approved by the Steering Committee on the basis of a proposal that is drawn up by project management. Possible budget changes include:

- Change of the structure of the budget (for instance, addition of a budget line)
- Reallocation of amounts between budget lines
- Reallocation of means between financing modes, and
- Use of the budgetary reserve

Budget change management must follow BTC procedures.

The budgetary reserve may only be used for project activities and after approval of the Steering Committee. Its use is always subject to a budget change.

Commitments must be approved by both parties and respect the mandates (see signature mandate). Project management must ensure that commitments are followed up well. It is not allowed to make commitments on the basis of a budget that is not officially approved.

## 5.4.5 Financial Audit

### 5.4.5.1 Project audit

The project must be audited after one year of activity and during the third year of activity. The audit will cover

- The verification that the project accounts reflect reality

- The control of the existence of and the compliance with the procedures.

The Steering committee may ask for additional audits if it considers them necessary.

The Steering committee asks the Resident Representative to elaborate the Terms of Reference and to select the audit company. The audit company must be an independent company that is certified to international standards.

The audit report must be presented to the Steering committee. If necessary management must elaborate an action plan in order to improve the procedures and show that corrective measures have been taken.

### 5.4.5.2 BTC audit

Every year, a board of auditors audits the accounts of BTC. In this context, they also conduct project audits. The audit committee of BTC can also ask that the internal BTC auditor audit a project.

## 5.4.6 Financial closure

### 5.4.6.1 Financial balance

Six months before the end of the project management must elaborate a financial balance according to BTC procedures. The financial balance that is presented to the closing Steering committee must first be verified by BTC.

### 5.4.6.2 Balances

Amounts under state-management that have not been used at the end of the project, as well as the remaining balance of the financial contribution that has not been deposited into the co-managed accounts will be rescinded at the end of the project. The available balance on banking accounts that are co-managed will be reallocated by mutual agreement.

### **5.4.6.3 Expenses beyond the agreement**

After the end of the Specific Agreement it is not allowed anymore to make any expenses unless they are related to commitments made before the end of the Specific Agreement that have been officially endorsed in the Steering committee minutes.

## **5.5 Management modalities**

The intervention will be implemented according to the principles of co-management; in line with rules and regulations of Belgian-Rwandan development cooperation.

These standard financial, administrative and procurement procedures are outlined in the BTC "Project Implementation guidelines".

The major part of the program budget (76 %) will be co-managed by BTC and MINIFOM/NAFA. Both parties authorize and decide together and authorize expenditures. Procurement of goods, services and works for all activities in co-management will be done following the Rwandan public procurement law and procedures. For specific activities, to be implemented by key partners i.e. Districts, ISAR etc.; public agreements will be signed between MINIFOM/NAFA and BTC on one side and partners on the other side.

Internal travel policy will follow the BTC procedure as the per diem rate. BTC guidelines and procedures will be used to provide guidance to draft and follow up those Public agreement modalities.

The two parties will approve all recruitment. In order to do so, BTC will be invited to participate in the recruitment and selection process of the administrative and technical team and will formulate a non-objection prior to the signature of the contract.

## **5.6 Direct management**

A smaller part (24 %) of the budget will be managed in direct management (regie); the Belgian party authorizes expenditures after informing the Rwandan party. Expenditures and financial reporting under direct management is done following standard BTC financial, administrative and tendering procedures that comply with the Belgian Laws.

Main activities under direct management as described in the program budget are related to International Technical Assistance, vehicles and Audit & monitoring and evaluation.

## **5.7 Reporting**

### **5.7.1 Technical reporting**

Every 6 months, the Program Management (Intervention Director and Co-management Delegate) assisted by the other members of the Program Management Unit will submit an implementation report to the Steering Committee.

In November every year, the program will transmit an operational planning of the activities



for the next calendar year.

Finally, the Program Management will produce annually a monitoring and evaluation report.

### **5.7.2 Financial reporting**

See § 5.4.3

## **5.8 Modification of the TFF**

The SC has the authority to modify the TFF except the specific objective and the total budget of the program, upon motivated and justified need by the program management. Any modification related to the specific objective or the total budget can only be made through exchange of letters between the representatives of Rwandan and Belgian bilateral cooperation.

## **5.9 Monitoring and evaluation**

### **5.9.1 Monitoring**

The Intervention Director and the Co-management Delegate are responsible for the monitoring and the supervision of all activities conducted. They will define and oversee the implementation of half-yearly workplans, with the identification of adequate performance indicators and the officers responsible of each activity and the budget benchmarks. All members of the Program Management Unit as well as the districts need to transmit to them a monthly report of their activities.

### **5.9.2 Internal evaluation**

In the 6 districts a planning/evaluation meeting will be organized every 6 months to analyse the degree of progress of the activities and extract the lessons to adjust the implementation of the next period. A similar meeting will be organized at central level to consolidate the district evaluations.

As part of Activity 2.2, internal studies to extract the lessons learned will be conducted and workshops with the partners will be organized on important subjects related to the activities, including the production of synthesis documents.

### **5.9.3 External evaluation**

An external mid term review will be planned at the beginning of the third year of implementation to evaluate the program. A similar final evaluation is planned at the end of the fourth year before the closure. The objectives will be to determine the impact of the program compared to its objectives and the measures to take to guarantee the durability

of the results, and the possible justifications to renew the funding for a new phase.

## **5.10 Closure of the intervention**

The program duration is four years or 48 months including an inception period of 3 months. The activities described above have to be deployed and results achieved within that given period. The Specific Agreement to which this TFF will be attached is valid for 60 months.

In view of preparing the closure of the program, the project management will plan the program closure at least 6 months before the end date, using the project closure's check list available at BTC.

That plan, including a financial appraisal will be submitted for approval to the SC at least 6 months before the program ends.

## 6 Cross cutting themes

### 6.1 Environment

The positive effect of the program on the environment is obvious and results from the following elements:

(1) A real contribution to the reduction of emissions of carbon dioxide. The program promotes the increase of woodland resources in Rwanda and an improvement of their management. Given the very high and increasing demand for fuelwood, if interventions like the present program were not implemented in the coming years, it would lead inevitably to progressive deforestation due to increasing overharvesting, with the corresponding release of carbon dioxide. It would also lead to increased imports of fossil fuels, with effects of the same nature. The program's contribution is to maintain in a sustainable way a system of energy supply based on a truly renewable resource with no negative effect of greenhouse gases. This will be achieved first directly through the actions of afforestation and forest management during the program but also indirectly through the training of forest professionals who will be available to implement future forestry projects and to manage the woodlands that will be created in the future.

(2) A reduction of the wastes of wood thanks to the introduction of techniques of improved logging and improved charcoal making. This positive effect will combine with the first element.

(3) A significant contribution to erosion control in the areas of steep relief in the pilot districts. This will result from the afforestation of new sites (including roadside planting), the improved management of existing woodlands (reducing the effect of the progressive reduction of the forest cover in the stands) and the actions of agro-forestry. It will also have a positive effect to increase the infiltration of the rainwater.

(4) An improvement of the selection of the tree species according to the characteristics of the site. This will contribute to an improvement of the overall productivity of the land for the different productions.

The program will maximize the positive impact on the environment by intensifying agro-forestry interventions, by integrating its activities in the wider scope of improved land use, including the restoration of sensitive land, and watershed management. Generally speaking, it will contribute to an increase of the management of natural resources, either directly or through the support to forestry education institutions. Finally, the outcomes of the program will strengthen the sustainability of the energy supply of the country, which is an important aspect of sustainable development.

## 6.2 Gender

Given the very important role of women in the collection and use of wood in Rwanda, the program will put a lot of emphasis on their involvement in the activities such as tree seed collection, nurseries, post-planting tending, plantation surveillance, agro-forestry and the trade of forest products.

The program will promote the emergence of women's Forest Management Groups and the requests for support that they will present will receive special attention. In particular, women will receive ample share of the activities of training and capacity building that will be organized, especially to strengthen their entrepreneurial skills. The program will endeavour to increase the participation of women in the forestry sector and to increase the benefits they can draw from this participation.

Beyond the scope of the direct activities of the phase, the program will strengthen the capacities of NAFA in gender mainstreaming for the future development of the forestry sector.

Sustainable development, particularly in forestry, can be achieved only if decision and policy makers connect gender awareness into the cooperation cycle. A prerequisite for a successful project is the continued attention towards the gender dimension during planning, implementation, monitoring and evaluation. Collection of gender-disaggregated data is a first step during this process. The purpose of this memo concerns the use and application of gender-conscious language and tools during formulation and implementation. The aim is to integrate the gender dimension in the concerned policy text (TFF) and field manuals of the above mentioned forestry project.

### 6.2.1 ICP (2006-2010)

The ICP mentions that "Toutes les propositions d'interventions seront évaluées au regard de 3 thèmes transversaux, à savoir l'égalité entre hommes et femmes, l'environnement et la lutte contre le VIH/SIDA". The ICP assessment also refers to the institutional context in Rwanda and notes that the transversal dimensions of gender/environment and HIV/SIDA are integrated in the PSTA II and that MINAGRI is one of the four pilot ministries for gender responsive budgeting.

### 6.2.2 Belgian National Agriculture Strategy (Draft version)

The new Belgian Agriculture Strategy for the Belgian Cooperation has taken the individual and collective empowerment<sup>4</sup> of rural women as one of the four pillars of the strategy. At

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<sup>4</sup> The empowerment approach, as developed by movements from the South, is based on multiple forms of the concept of 'power'. Empowerment is considered as a process of acquisition of power at individual and collective level. It assigns an individual or a collectivity, first of all with the capacity to act in an autonomous way. To this end, the necessary means should be provided and individuals or collectivities will have to go through the process of acquiring these capacities to act, to take decisions and to make appropriate choices regarding life and society. In this way empowerment is regarded as a

page 10 we note that “Les femmes jouent un rôle crucial dans la production agricole des pays en développement, ce qui fait de celles-ci d’importants agents de développement économique. En outre, la part considérable de la production vivrière imputable aux femmes fait de celles-ci les principaux agents de la sécurité alimentaire et du bien-être des ménages en milieu rural. Il est en effet reconnu que l’augmentation des revenus et l’amélioration des conditions de vie des femmes ont un impact positif sur le statut nutritionnel et l’éducation des enfants. Malgré cela, les femmes rurales restent le plus souvent « invisibles » lorsqu’il s’agit d’investissements, de politiques et de programmes. » The integration of the gender dimension in the present formulation respects the recommendations.

The recommendation related to the present formulation is that « Les interventions de la Belgique visent spécifiquement à renforcer l’autonomisation économique et les capacités des femmes rurales en veillant, en particulier, à leur accès aux ressources et moyens de production ainsi qu’à la prise de décision à tous les niveaux. L’effort de la Belgique en la matière vise à ce que les femmes puissent participer, sur un pied d’égalité avec les hommes, au développement agricole et aux bénéfices qui en découlent et, de la sorte, contribuer pleinement à la sécurité alimentaire et à la croissance économique en milieu rural. »

### 6.2.3 National Gender Policy<sup>5</sup> and its National Strategic Plan<sup>6</sup>

However the fact that the representation of women in Parliament is one of the strongest in the world (56.25%, last renewal date 2008)<sup>7</sup> we should<sup>8</sup> not forget that this figure only represents the formal situation. In addition we should be aware of the importance of integrating the gender dimension at practical level, through our own interventions. This is in line with the WB recommendations, stating in their Gender in Agriculture Sourcebook (2009: 646) that “Although an outspoken political commitment exists on nearly all levels to

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process, a dynamic construction of identity with a double dimension: individual and collective.

<sup>5</sup> The National Gender Policy is in line with Vision 2020 (which highlights gender as a crosscutting issue for all its pillars) in terms of creating an environment conducive to the promotion of social security, democratic principles of governance, and an all-inclusive social and economic system that involves effective participation of all social groups within the population.

<sup>6</sup> Ministry of Gender and Family Promotion, STRATEGIC PLAN FOR THE IMPLEMENTATION OF THE NATIONAL GENDER POLICY, June 2009, Rwanda

<sup>7</sup> Note that there are directly elected women (53) and indirectly elected (27), the latter 24 women by electoral colleges from each Province and the City of Kigali; 2 members elected by the National Youth Council and one member elected by the Federation of the Associations of the Disabled. In the Senate we register an lesser percentage of women (34.62%, last renewal date 2003), of whom 14 indirectly elected and 12 appointed 12. The indirectly elected members: includes: 12 members (one per Province and the City of Kigali) indirectly elected by members of the Executive Committees of Sectors and District, Municipality, Town or City Councils and 2 university lecturers indirectly elected by the academic and research staff of public and private universities and institutions of higher education. The appointed members include 8 members appointed by the President and 4 members appointed by the Forum of Political Organizations. We also note that the GOR points out that at least 30 per cent of members must be women.

integrate gender considerations into policy development, reality lags behind. Most policy decisions are still taking a gender-neutral approach, ignoring the complementary capacities of women and men in implementing these policies.”

In order to integrate the gender dimension in the present formulation we refer to the national gender policy (2009) for national policy objectives regarding natural resources. As a tool for the implementation of the National Gender Policy, the strategic plan is in harmony with the goals set in both international and national instruments aiming at empowering women through education, decision making and poverty reduction programs among others. The mission of the National Gender Strategic Plan is to provide an enabling environment for the promotion of gender equality in various sectors. It is intended to serve as a tool for the progressive translation of Rwanda’s commitments to eliminate gender disparities in both government’s and stakeholders’ development interventions.

The overall objective of the National Gender Strategic Plan is the progressive elimination of gender disparities in all sectors as well as in management structures.

The Specific Objectives are the following:

- To integrate gender issues into national, district and community programs and plans;
- To establish a legislative and institutional framework to initiate, coordinate, monitor and evaluate programs aimed at promoting gender equality at all levels,
- To stimulate collective and concerted efforts, at all levels, to eliminate gender disparities and to facilitate gender equality in Rwanda.

The Strategic Plan for the Implementation of the Gender Policy (June 2009) plans and 6 Strategic Objectives and 18 Policy Actions. Under the heading “Strategic Objective n°3: “Improving the Rwandan men’s and women’s welfare” we find the policy action n°13: “Promoting women’s participation in the management of environment and natural resources, and increasing their access to and control over land.” More specifically we note two expected outcomes, as showed in the following table.

Table 1. Expected outcomes

EXPECTED PERFORMANCE					Implementing partner
Expected outcomes	Outcome indicators	Target 2009 (%)	Target 2010 (%)	Target 2011 (%)	Target 2012 (%)

Women's problems are addressed by the committees for the protection and the management of environment and natural resources.	Number of women's problems related to environment and natural resources addressed .	50% of women's problems related to environment and natural resources are addressed .	65% of women's problems related to environment and natural resources are addressed .	80% of women's problems related to environment and natural resources are addressed .	100% of women's problems related to environment and natural resources are addressed.
Women get their share of land.	Percentage of women who have access and control over land.	80% of women have access to and control over land.	90% of women have access to and control over land.	95% of women have access to and control over land.	100% of women have access to and control over land.

Source p. National Gender Policy, 4 June 2009, p. 39, FOUR-YEAR STRATEGIC IMPLEMENTATION PLAN OF THE NATIONAL GENDER POLICY,

We also note the related milestones, of which we see that for the second expected outcome "Women get their share of land" a baseline on women's land ownership is developed at latest in the first quarter of 2010.

In accordance with the Belgian Agriculture Strategy (see Draft : Cadre stratégique pour le secteur de l'agriculture et de la sécurité alimentaire, p. 10) we stress the fact that for rural women, the individual and collective empowerment is one of the four priorities of the strategy. The new strategy states that "D'une façon générale, les femmes ne disposent pas du même accès que les hommes aux moyens de production, que ce soit en termes d'accès à la terre, à l'eau, aux moyens financiers, aux intrants, à la technologie, à l'information et l'innovation, à la formation et également à la prise de décision. Par ailleurs, les femmes sont souvent débordées par la multitude de tâches reproductives qui leur incombent puisque, outre leur activités productives, elles sont généralement chargées de l'approvisionnement en eau, de la collecte du bois de feu, de la transformation et de la préparation de la nourriture, des soins aux enfants, aux malades et aux personnes âgées. Ces disparités entre les sexes et ces contraintes spécifiques entravent le développement du potentiel des femmes en tant que moteurs de la croissance agricole et agents principaux de la sécurité alimentaire et du bien-être des ménages."

Therefore the present intervention should take into account awareness-building on rights and obligations regarding land ownership for women.

Table 2. Milestones Policy Action n° 13: Promoting women's participation in the management of environment and natural resources, and increasing their access to and control over land.

	Milestones 2009				Milestones 2010				Milestones 2011				Milestones 2012			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Women's problems are addressed by the committees for the protection and the management of environment and natural resources.				Baseline on environment and natural resources management committees is developed.	Gender needs assessment of environment and natural resources management committees is conducted.				Gender sensitive operational plan to address women's problems is developed.				Implementation and monitoring of the operational plan.			Evaluation
Women get their share of land.				Baseline on women's land ownership is developed.	Needs assessment for the promotion of women's land ownership is conducted.				Gender sensitive operational plan to promote women's land ownership is developed.				Implementation and monitoring of the operational plan.			Evaluation

Source p. National Gender Policy, 4 June 2009, p. 52-53, FOUR-YEAR STRATEGIC IMPLEMENTATION PLAN OF THE NATIONAL GENDER POLICY,

### 6.2.4 Gender statistics

Following figures illustrate the gender differences regarding illiteracy, secondary school enrolment and university teachers. We note that women are over-represented as illiterate, certainly in the group of women over 25 years. The gross secondary school enrolment is lower for women than men. Only 6% of the university teachers are female.



Table 3. Gender and Education Statistics for CARPE Countries

	Illiterates among 15-24 years old (%)		Illiterates among 25+ year old females* (%)		Gross Secondary school enrolment (% in age group, year)**		Female University Teachers (%) (1990)
	F	M*	F	M	F	M	
Burundi	52.0	40.0	82.0	57.0	5 (1993)	8 (1993)	11
Democratic Republic of Congo	Na	na	na	na	19 (1994)	32 (1994)	na
Rwanda	55.3	40.3	84.6	55.6	7 (1991)	9 (1991)	6

Source:

\* Data sources: 1990 figures from Wistat & UNESCO cited on the Women in Development Network (WIDNET) web site ([www.focusintl.com/statr1a3.htm](http://www.focusintl.com/statr1a3.htm)).

\*\* Data sources: World Bank Summary Gender Profiles for all CARPE countries but the Central African Republic

Poor participation of women/girls in science and technology, and in technical and vocational education and training (TVET) is another gender inequality that needs to be given the attention it deserves. The percentage of women in science and technology is far below the percentage of women in other fields, as shown in the Table 3 below.

Table 4: National University of Rwanda Statistics: Undergraduate programme

N°	FACULTY/SCHOOL	2006		2007		2008	
		Females	Males	Females	Males	Females	Males
1	Agriculture	69	188	80	211	147	399
		26.9%	73.1%	27.5%	72.5%	27%	73%

The table below shows data on women in decision-making

Table 2. Evolution of women's participation in decision-making

Year	2006			2007			2008		
	M	F	% F	M	F	% F	M	F	% F
Ministers/ Ministers of	20	09	31	20	09	31	17	10	37.1

State									
Secretary Generals	-	-	-	15	03	16.6	15	03	16.6
Deputies	41	39	48.8	41	39	48.8	35	45	56.25
Senators	14	06	30	14	06	30	17	09	30
Préfets/ Governors	4	1	25	3	2	40	4	1	25
Bourgmestres / Mayors	29	1	3.3	29	1	3.3	28	2	6.7

Source: Beijing Secretariat, 2008

### 6.3 Social economy

Rwanda has got a long tradition of development through associations and professional groups, in some cases involved in (agro-)forestry activities. However, the formal and more systematic involvement of Forest Management Groups / cooperatives is a new step in which the program will engage. It is certainly new in the decentralized forest management. That is why the work with FMGs will be a test to evaluate their potential role in this sector of the socio-economic development of the districts.

To this end, the program will strengthen the capacities of the FMGs not only in technical matters but also in organizational matters (capacities to negotiate, internal management, etc.). It will continue to use a participatory multi-actor approach taking into account the various and sometimes diverging interests of the different social groups, for example producers and traders, or men and women. These different groups will be represented in the fora of discussion of the issues related to the sustainable management of forest resources, in particular at the decentralized level the Forestry Joint Action meetings.

Finally, one of the roles of the program will be to stimulate whenever appropriate the true cooperative nature of the Forest Management Groups which until now are easily called "cooperatives". The development of the idea of mutual services between the members will concern for example the procurement of inputs, the improved marketing of the products, the defense of the common interests of the cooperative. All this can lead to an improvement of the social condition of the members of these Forest Management Groups.

## 7 Annexes

### 7.1 Logical framework

The following table presents the logical framework, with indicators, pre-requisites and hypotheses.

Objectives & Results	Indicators	Means of verification	Hypotheses
<b>Global objective</b>			
<b>The implementation of the national forest Policy contributes to poverty alleviation, economic growth and environment protection</b>	<p>the increase of the income of the actors of the forestry sector</p> <p>the increase of the contribution of the forestry sector to the GDP</p> <p>the increase of the ratio "production/consumption"</p>	<p>Household enquiries and project reports (money inflows and accounts of the Forest Management Groups supported by the program)</p> <p>National statistics</p> <p>Reports from the System of Information and Permanent Evaluation (SIEP)</p>	
<b>Specific objective</b>			
<b>The bases of a system of sustainable management of the forest resources of Rwanda are established and needs of the country for forest products are increasingly met</b>	<p>(1) Reliable disaggregated statistics on the forestry sector available and regularly updated (woodland areas, species, ownership, volumes, wood trade, forest economy);</p> <p>(2) Gender balanced participatory models and systems of sustainable forest management documented, tested and applied (including law, DFMP, etc.);</p> <p>(3) Increase of the areas of woodlands and increase of the tree cover on farmlands;</p> <p>(4) Improvement of correct matching tree species-site/uses and increase of the proportion of good genetic material planted.</p>	<p>(1) Reports, SIEP/GIS of NAFA;</p> <p>(2) Reports, field verifications;</p> <p>(3) Reports, aerial surveys, field surveys (forest inventories);</p> <p>(4) Reports, field surveys, reports of ISAR, reports and archives of NAFA and partners, field enquiries;</p> <p>(5) (Reports of) field surveys;</p> <p>(1-5) Reports of final and mid-term review of the program; reports on the implementation of the National Forestry Plan.</p>	<p>The ordinary budget allocates sufficient resources to NAFA in the years to come;</p> <p>Interventions of donors in the forestry sector are coordinated and tailored to the National Forestry Policy;</p> <p>Programs of promotion of improved stoves (energy sector) are intensified and coordinated with the interventions in the forestry sector.</p>

Results	Indicators	Means of verification	Hypotheses
<p><b>Result 1 :</b></p> <p>The availability of trained professional foresters is increased and technical capabilities of stakeholders in the forestry sector are strengthened</p>	<p>(1) 8 professors and lecturers supported technically in ISAE-Busogo and between 10 and 20 teachers supported technically in the two forestry secondary schools;</p> <p>(2) Education improved for 70 A1 candidates each year, of which at least 15% are women, 30 A0 candidates each year and 70 A2 candidates each year of which 15% at least are women;</p> <p>(3) Training provided to around 30 officers of NAFA central, to 30 district foresters and 220 forestry animators of NAFA to perform their duties. Administrative and technical staff of 6 districts on sustainable decentralized contractual management of forest resources;</p> <p>(4) Staff of ISAR/CGF (1 researcher and 5 technicians) trained in the development of a tree breeding program and the production of seeds of high quality;</p> <p>(5) Technical or organizational training provided to between 12 and 50 nursery teams / plantation teams or FMGs involved in contracts of works of plantations on public land; loggers and charcoal makers (between 100 and 500) and their FMGs; timber processing industries (innovative wood processing); FMGs involved in sustainable contractual management of forest resources (between 12 and 35); FMGs implementing agro-forestry proposals (at least 25); 473 neighbourhood nursery teams. Note: the numbers of groups is not necessarily additive as some groups may</p>	<p>(1-6) Reports of the program and partner institutions; reports on the training sessions/programs (including the evaluation of the trainings).</p>	<p>The recruitment procedures in the forestry sector evaluate properly the technical background of the candidates;</p> <p>The participation and investment of the beneficiaries in the training activities is high;</p> <p>Competent trained staff of the public institutions is kept in these institutions;</p> <p>The system of forest taxation is clearly defined in the new legislation and encourages private operators to take ownership of the techniques in which they have been trained.</p>

Results	Indicators	Means of verification	Hypotheses
	be involved in different activities. (6) Among all FMGs trained, at least 12 are women's Groups / cooperatives. (7) Gender balances beneficiaries trained		

Results	Indicators	Means of verification	Hypotheses
<p><b>Result 2 :</b></p> <p>The institutional capacities to implement the national forest policy are reinforced from the central level to the decentralized level</p>	<p>(1) Legal framework of sustainable decentralized management of forest resources established and operational at central and decentralized level: taxation, funding, control, contractual forest management;</p> <p>(2) Reliable up-to-date decision making tools available and used by NAFA, in particular: System of Information and Permanent Evaluation (SIEP) and GIS, cadastre of public forest land, results of the new national forest inventory (including small woodlots and trees on farms), results of other studies (technology of wood processing, etc.);</p> <p>(3) 6 Districts Forest Management Plans (DFMP) revised, reliable and gender sensitive, Simple Plans of Operations available and implemented;</p> <p>(4) Package of communication tools produced on various forestry subjects and distributed at national and decentralized level;</p> <p>(5) Women sensitive educational modules on forestry subjects in use in at least 30 schools;</p> <p>(6) Regular consultation meetings organized at central and decentralized level, gathering the actors of the forestry sector;</p> <p>(7) Extension service operational in the pilot districts;</p> <p>(8) National network of seed stands confirmed, rehabilitated and used and groups of seed harvesters from these sites proficient and operational;</p> <p>(9) Comparative trials of provenances (national seed stands and foreign provenances) established;</p> <p>(10) Seed supply of improved genetic and physiologic quality increased.</p>	<p>(2-5) Document / tool / material / system itself;</p> <p>(1) Text of by-laws, contracts of forest management of public woodlands, SIEP;</p> <p>(1-10) Reports of the program, of NAFA, of ISAR.</p>	<p>The concerned actors are mobilized and take an active part in the development of new tools for the forestry sector;</p> <p>A good collaboration and consultation framework exists between those actors and they accept to share the information requested to build the decision making tools;</p> <p>NAFA takes ownership of the tools developed;</p> <p>Soon enough seed origins of improved genetic quality are discovered that could be multiplied with no unnecessary delays and be used in afforestation / woodland rehabilitation actions;</p> <p>Premises are made available for the documentation center before the beginning of the phase.</p>

Results	Indicators	Means of verification	Hypotheses
<p><b>Result 3:</b></p> <p>Forest resources in the pilot districts (3 in the Northern Province and 3 in the Eastern Province) are increased and diversified and their management is improved</p>	<p>(1) 6 District Forest Management Plans and Simple Forest Management Plans implemented on ~ 10300 ha of public woodlands of the pilot districts;</p> <p>(2) Between 12 and 35 Forest Management Groups / cooperatives formed to take on sustainable contractual management of forest resources;</p> <p>(3) 2000 ha of public land planted (afforestation on bare land) or replanted (rehabilitation of woodlands) with a survival rate higher than 80%;</p> <p>(4) 2000 ha of diversified (agro-)forestry on private land carried out, taking into account the needs of women (women headed households) and men;</p> <p>(5) At least 25 Forest Management Groups / cooperatives involved in agro-forestry activities based on proposals;</p> <p>(6) 473 neighbourhood nurseries established (capacity 7500 seedlings / nursery) involving women.</p>	<p>(1-5) Contracts districts – operators, contracts districts – the program;</p> <p>(2, 5) Statutes and reports of the FMGs;</p> <p>(2, 3, 4) Reports of the contractors;</p> <p>(1-6) Reports of the program and NAFA;</p> <p>(3, 4) Maps and archives of the program and NAFA, SIEP/SIG of NAFA, field surveys.</p>	<p>An efficient collaboration between district NAFA officers and district authorities;</p> <p>An effective involvement of district and sector NAFA officers in the activities supported by the program;</p> <p>Sufficient technical capacities of the district foresters;</p> <p>The speeding up of the various regular procedures to reduce delays that could jeopardize season-bound activities;</p> <p>The effective control over the staff at all levels (recruitment aspects, staff management aspects);</p> <p>The willingness of farmers to plant seedlings on their own land and to protect them without the presence of artificial incentives;</p> <p>Land tenure is properly monitored and regulated in line with the set up of a public forestry land register;</p> <p>The timely production of the essential technical tools (forest cadastre, updated reliable data</p>



Results	Indicators	Means of verification	Hypotheses
			<p>on forest resources, etc.);</p> <p>Linked to the previous topic, the timely improvement of the District Forest Management Plans and the possibility for NAFA / the program to keep at all times a sufficient control over their implementation;</p> <p>Actors working in the forestry sector are ready to consult each other in networks or fora of joint action.</p>

## 7.2 Implementation calendar

Given the nature of the program, which deals with forestry aspects which are naturally rather slow and the need for a gradual and in-depth approach in capacity building, the total duration proposed for the program is 48 months. The three first months are an inception period with a minimal team (Program Management) who will prepare the launching of the activities.

## 7.3 Chronogram

The timetable of the program is presented hereafter.

The starting date is not yet known but it will be important to take into account the seasonal aspects of the afforestation campaigns: in order to plant during a certain year, which should be done around October, the nurseries need to be established around March.

As regards the timing of the activities of Result 1, the program will seek to properly spread out the training of the staff employed by the different forestry institutions and departments over the years of the phase, to avoid an excessive disruption of the activities of this staff. This means a proper rotation of the staff through the various training modules. The training of the new staff recruited will be linked to their deployment.

The activities of Result 2 should also be properly spread out to avoid problems related to the limited number of national forestry consultants.

Regarding the timing of the activities of Result 3, the establishment of cell nurseries can only take place once the extension service is ready to operate.

RWA 09 070 01 Support Program to the Development of the Forestry Sector in Rwanda		Year 1				Year 2				Year 3				Year 4			
Budget Code	Activities and operational tasks per result	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<b>A_01</b>	<b>The availability of trained professional foresters is increased and technical capabilities of stakeholders in the forestry sector are strengthened</b>																
<b>A_01_01</b>	<b>Establish a training unit and make it operational</b>																
	Assess training needs at the different levels and prepare a training plan in collaboration with the concerned departments																
	Prepare the training materials for selected target groups in different fields of the forestry sector																
<b>A_01_02</b>	<b>Strengthen the training of the future graduates in forestry</b>																
	Strengthen ISAE-Busogo for the launching of the new forestry department (A1 forestry cycle, A0 forestry cycle, A0 agro-forestry cycle)																
	Bring technical and material support to the technical schools in the training of A2 forestry technicians (EVFO Kibisabo & Gisovu)																
<b>A_01_03</b>	<b>Strengthen the technical capabilities of the staff of public forestry institutions (NAFA, ISAR) at both central and decentralized level</b>																
	Strengthen the capabilities of the NAFA agents at the central level																
	Strengthen the capabilities of the NAFA agents at the district and sector level																
	Strengthen the capabilities of the administrative and technical agents of the districts and sectors																
	Strengthen the capabilities of the ISAR staff in the field of forest tree breeding and production of controlled seeds																
<b>A_01_04</b>	<b>Strengthen the technical and organizational capabilities of the private operators in the forestry sector in the pilot districts</b>																
	Strengthen the technical capacities of the private operators involved in afforestation works																
	Strengthen the capacities of the private operators involved in the works of forest harvesting and the downstream processing of forest products																
	Strengthen the technical and organizational capacities of the Forest Management Groups (FMG) and cooperatives working in the decentralized and contractual management of public forest resources (implementation of the District Forest Management Plans DFMP)																
	Carry out agro-forestry extension in the pilot districts to disseminate techniques of nursery seedling production , plantations, etc.																
<b>A_02</b>	<b>The institutional capacities to implement the national forest policy are reinforced from the central level to the decentralized level</b>																
<b>A_02_01</b>	<b>Support the establishment and application of the legal framework allowing the sustainable and decentralized management of forest resources</b>																
	Support the finalization and application of the new forestry legislation																
	Study and establish modalities of the sustainable funding of decentralized management of forest resources																
	Support the design of the control system applied to forest resources utilization																
<b>A_02_02</b>	<b>Support the development of decision making tools for the sustainable and decentralized management of forest resources</b>																
	Support the preparation of the National Forestry Plan (NFP) by MINIFOM																
	Build a System of Information and Permanent Evaluation (SIEP) linked to an operational GIS containing comprehensive and reliable data																
	Support to the building of the cadastre of public forest land																
	Carry out the new forest inventory starting with the pilot districts																
	Revise the District Forest Management Plans (DFMP) according to the results of the mapping and forest inventory and support the preparation of Simple Plans of Operations																
	Conduct the studies and inquiries to improve the knowledge of the forestry sector and disseminate their results																
<b>A_02_03</b>	<b>Support the implementation of the Communication Plan of the forestry sector</b>																
	Carry out information campaigns on important forestry subjects at national and decentralized level, implement an education program on forest issues in schools																



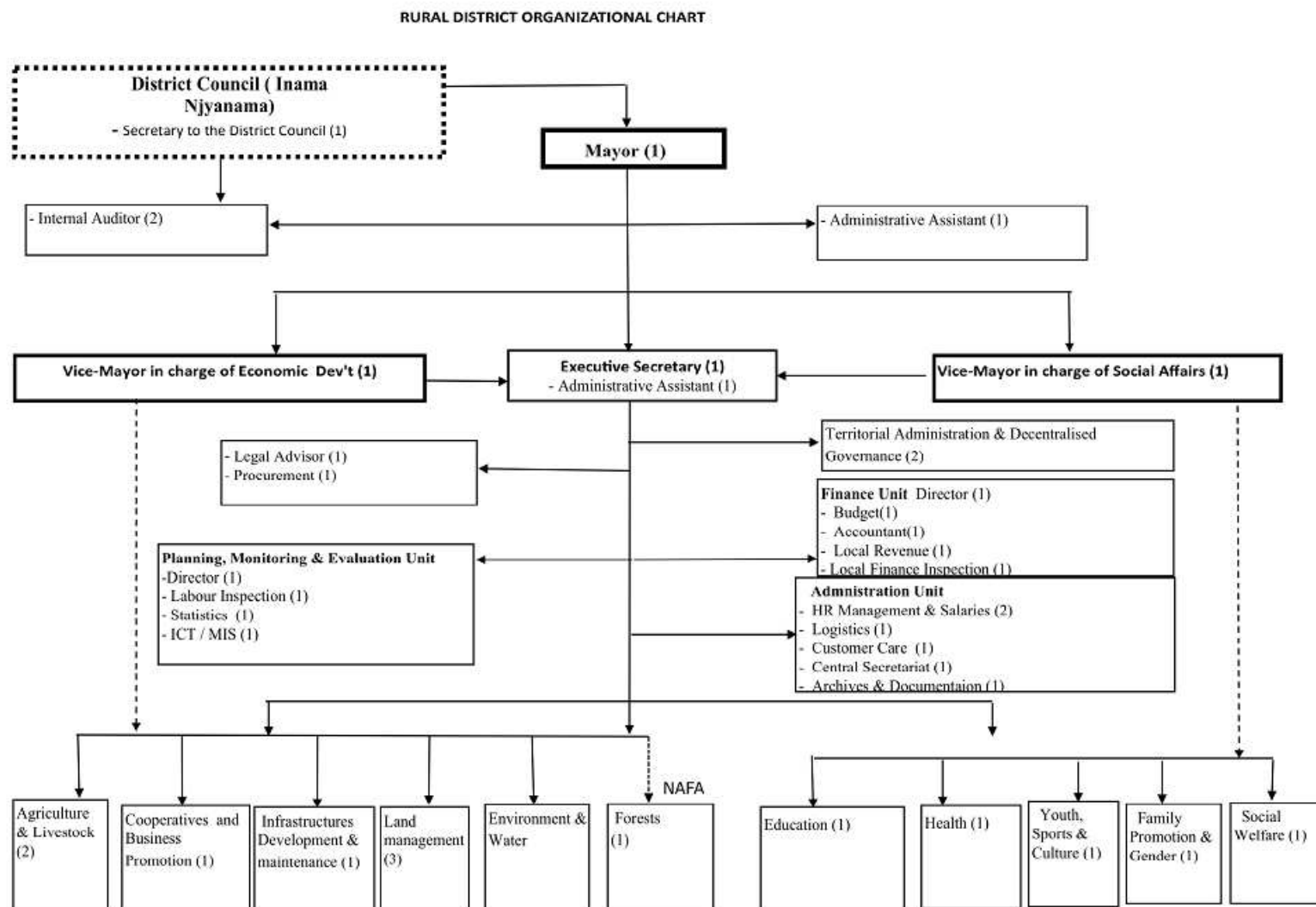
## 7.4 Detailed Budget per Year

BUDGET TOTAL					Mode d'exéc.	BUDGET TOTAL	%	ANNEE 1	ANNEE 2	ANNEE 3	ANNEE 4
<b>Specific objective: « The bases of a system of sustainable management of the forest resources of Rwanda are established and needs of the country for forest products are increasingly met »</b>											
<b>A</b>						<b>4.376.998</b>	<b>73%</b>	<b>1.145.016</b>	<b>1.309.007</b>	<b>1.000.342</b>	<b>922.632</b>
<i>Result 1 : "The availability of trained professional foresters is increased and technical capabilities of stakeholders in the forestry sector are strengthened"</i>											
A	01					1.474.583	25%	445.187	369.612	376.172	283.612
A	01	01	Establish a training unit and make it operational Co-management	CM		33.125	1%	13.985	6.380	6.380	6.380
A	01	02	Establish a training unit and make it operational Regie	R		614.530	10%	194.170	166.560	166.560	87.240
A	01	03	Strengthen the training of the future graduates in forestry	CM		330.000	6%	96.500	77.833	77.833	77.833
A	01	04	Strengthen the technical capabilities of the staff of public forestry institutions (NAFA, ISAR) at both central and decentralized level	CM		320.548	5%	110.292	78.519	65.869	65.869
A	01	05	Strengthen the technical and organizational capabilities of the private operators in the forestry sector in the pilot districts	CM		176.380	3%	30.240	40.320	59.530	46.290
<i>Result 2 : "The institutional capacities to implement the national forest policy are reinforced from the central level to the decentralized level"</i>											
<b>A 02</b>						<b>1.735.790</b>	<b>29%</b>	<b>513.804</b>	<b>691.362</b>	<b>376.137</b>	<b>154.487</b>
A	02	01	Support the establishment and application of the legal framework allowing the sustainable and decentralized management of forest resources	CM		69.300	1%	30.025	39.275	0	0
A	02	02	Support the development of decision making tools for the sustainable and decentralized management of forest resources	CM		1.070.460	18%	300.360	483.233	241.233	45.633
A	02	03	Support the implementation of the Communication Plan of the forestry sector	CM		160.240	3%	36.198	44.314	41.864	37.864
A	02	04	Reinforce the operational capacities of NAFA for the implementation of the National Forest Policy	CM		201.860	3%	82.065	57.265	31.265	31.265
A	02	05	Strengthen the capacities of ISAR to supply tree seeds of good quality and improved genetic origin	CM		233.930	4%	65.156	67.275	61.775	39.725
<i>Result 3: "Forest resources in the pilot districts (3 in the Northern Province and 3 in the Eastern Province) are increased and diversified and their management is improved"</i>											
<b>A 03</b>						<b>1.166.625</b>	<b>19%</b>	<b>186.025</b>	<b>248.033</b>	<b>248.033</b>	<b>484.533</b>
A	03	01	Support the implementation of the management plans of public forest resources for the sustainable supply of wood	CM		690.125	12%	138.025	184.033	184.033	184.033
A	03	02	Support the requests for reforestation actions on private land	CM		476.500	8%	48.000	64.000	64.000	300.500
<b>X Budget reserves (1.5%)</b>						<b>74.237</b>	<b>1%</b>	<b>0</b>	<b>0</b>	<b>37.119</b>	<b>37118,5</b>
<b>X 01</b>						<b>74.237</b>	<b>1%</b>	<b>0</b>	<b>0</b>	<b>37.119</b>	<b>37118,5</b>
X	01	01	Budget reserves Co-management	CM		44.237	1%			22.119	22.119
X	01	02	Budget reserves BTC management	R		30.000	1%			15000	15000

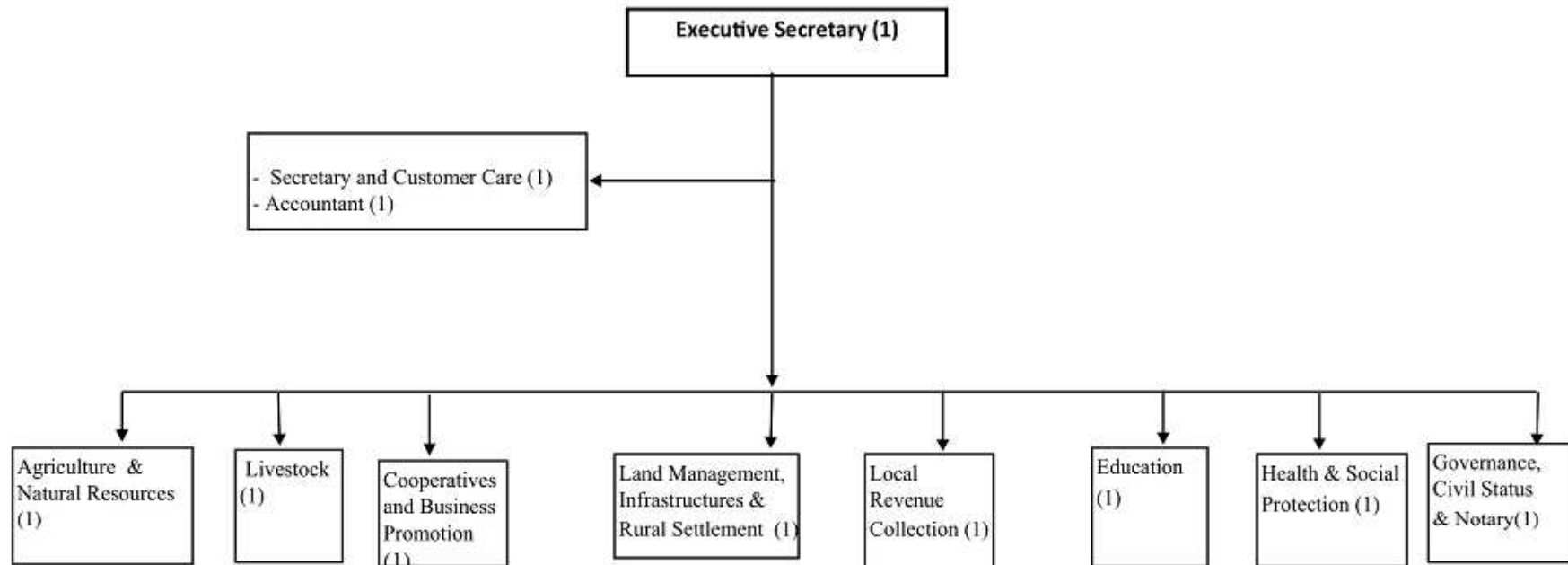
<b>Z</b>	<b>General resources</b>		<b>1.548.765</b>	<b>26%</b>	<b>431.030</b>	<b>381.312</b>	<b>356.312</b>	<b>380.112</b>
Z 01	Staff salaries		1.075.800	18%	250.680	275.040	275.040	275.040
Z 01 01	International Technical Assistant	R	624.000	10%	156.000	156.000	156.000	156.000
Z 01 02	HR support to NAFA for the project Director	CM	86400	0,014	21600	21600	21600	21600
Z 01 03	Finance and Administration team	CM	184.500	3%	36.900	49.200	49.200	49.200
Z 01 04	Technical team	CM	121.950	2%	24.390	32.520	32.520	32.520
Z 01 05	Other staff	CM	58.950	1%	11.790	15.720	15.720	15.720
Z 02	Investments		114.400	2%	114.400	0	0	0
Z 02 01	Vehicles Régie	R	30.000	1%	30.000	0	0	0
Z 02 03	Office equipment	CM	11.900	0%	11.900	0	0	0
Z 02 04	Office improvements	CM	24.500	0%	24.500	0	0	0
Z 03	Operations		258.565	4%	53.450	68.772	68.772	67.572
Z 03 01	Office rent			0%				
Z 03 02	Maintenance services	CM	12.600	0%	3.000	3.600	3.600	2.400
Z 03 03	One Vehicle operation costs Régie	R	32.800	1%	7.240	8.520	8.520	8.520
Z 03 05	Telecommunications, internet	CM	15.000	0%	3.000	4.000	4.000	4.000
Z 03 06	Office supplies	CM	22.500	0%	4.500	6.000	6.000	6.000
Z 03 07	Mission allowances	CM	37.040	1%	7.760	9.760	9.760	9.760
Z 03 08	Public relation and external communication costs	CM	4.500	0%	1.125	1.125	1.125	1.125
Z 03 09	Financial costs	CM	2.925	0%	585	780	780	780
Z 03 10	VAT costs	CM	0	0%				
Z 04	Audit and Monitoring Evaluation		100.000	2%	12.500	37.500	12.500	37.500
Z 04 01	Evaluation missions	R	50.000	1%		25.000		25.000
Z 04 02	Audit	R	36.000	1%	9.000	9.000	9.000	9.000
Z 04 03	Backstopping	R	14.000	0%	3.500	3.500	3.500	3.500
<b>TOTAL</b>			<b>6.000.000</b>	<b>100%</b>	<b>1.576.046</b>	<b>1.690.319</b>	<b>1.393.773</b>	<b>1.339.863</b>

	<b>BTC REGIE</b>	<b>1.398.530</b>	23%	<b>392.670</b>	<b>360.060</b>	<b>350.060</b>	<b>295.740</b>
	<b>CO-MANAGEMENT</b>	<b>4.601.470</b>	77%	<b>1.183.376</b>	<b>1.330.259</b>	<b>1.043.713</b>	<b>1.044.123</b>

## 7.5 Organizational chart of districts and sectors



### RURAL SECTOR ORGANIZATIONAL CHART





## 7.6 ToR long-term personnel

### 7.6.1 Co-management Delegate/Principal International Technical Assistant

Duty station: Kigali

Duration of the assignment: 48 months

#### 7.6.1.1 Description of the function

Under the general supervision of the BTC Representative in Kigali, in conformity with the directives of the Steering Committee of the program, the Co-management Delegate/Principal International Technical Assistant will work in close collaboration with the Intervention Director and the staff of the program as well as with the Director General of NAFA and the staff of NAFA.

In accordance with the descriptive elements presented in the Technical and Financial File of the program, he/she will be entrusted with the following responsibilities:

Role of Co-management Delegate:

Assist the Intervention Director in all decision making process regarding the management of the intervention, in particular regarding the co-management of the funds. In that framework, he/she will be responsible for the preparation of the tendering procedures and will take part to the evaluation of the offers, the contracting and the administration of the contracts. He/she will supervise the establishment of rigorous methods of budget accounting; sign the agreements between the program and its partners (districts, etc.);

Establish the system of monitoring and evaluation of the activities of the program, supervise the preparation of the workplans and timetables of the activities;

Supervise the production of the technical and financial reports of the program for the Steering Committee and take part to the meetings of this committee;

Be responsible for the operational and financial closure of the program at the end of the implementation period;

Role of Principal International Technical Assistant:

Bring a key contribution to the development of models, systems and methods aiming at the sustainable decentralized management of forest resources;

Make sure the strategy of the program is consistent and ensure a technically sound implementation of the program;

Provide direct technical support to all activities aiming at making NAFA operational;

Coach NAFA and ISAR/CGF teams;

Bring technical support to the preparation of the terms of reference of all studies and technical consultations planned;

Provide a technical input in all studies, trials and other applications implemented or supported by the program;

Take part to and support the technical evaluation of the activities and the production of technical documents on analyses, lessons learned and recommendations on the interventions;

Prepare the bases of a comprehensive training plan targeting the main actors of the forestry sector (ISAE-Busogo, forestry secondary schools, NAFA headquarters, ISAR/CGF, the pilot districts, NAFA staff in the pilot districts and the private operators involved in the activities of the program), in collaboration with these institutions;

More specifically, he/she will fulfill the following tasks:

Support the wide consultation on the implementation of the National Forestry Policy;

Prepare proposals and give advise to MINIFOM/NAFA on the content and application of the new forest legislation (including taxation system, funding system, control system);

Design the methods to produce decision-making tools for the managers of the Rwandan forest resources, in collaboration with the concerned partners (NAFA, ISAR, NUR/CGIS, international and national consultants, etc.);

Provide technical input in the organization of communication campaigns and the design of the content of messages to promote sustainable management of forest resources;

Together with NAFA, in collaboration with the pilot districts, design the systems and modalities of implementation of the District Forest Management Plans;

Propose technical improvements to the operations of forest management, including the operations of afforestation;

Develop models of agro-forestry practices to promote and advise on the establishment of a strong and efficient (agro-)forestry extension system.

#### **7.6.1.2 Qualifications needed**

Forest Engineer or master's degree in forest sciences or environmental sciences;

At least 5 years of experience in afforestation forestry (silviculture of plantations) and forest management (management of tree plantations / management of forests or woodlands) in tropical or subtropical countries;

Proven experience of several years in the institutional strengthening of forestry services at all levels (central, decentralized and local);

Proven experience of several years in capacity building in forestry, especially at institutional level;

Experience in the following disciplines is strongly desired: forest policy, forest legislation; GIS and other information systems (development, management); design, organization and data processing of forest inventories; participative approach and involvement of local communities in forest management; agro-forestry; gender mainstreaming;

Experience in the following disciplines is desired: watershed management and erosion control, integrated rural development, forest ecology, wood downstream processing;

Experience in the Great Lakes Region an asset;

Good reporting and communication skills;

Fluent in English and French, with at least good capacities to communicate in the other language.

## 7.6.2 Co-management Intervention Director

Duty station: Kigali

Duration of the assignment: 48 months

### 7.6.2.1 Description of the function

Under the general supervision of the Director General of NAFA and in conformity with the directives of the Steering Committee of the program, the Intervention Director will work in close collaboration with his counterpart, the Co-management Delegate/Principal International Technical Assistant and the staff of the program as well as the staff of NAFA and with the BTC Representation Office.

In accordance with the descriptive elements presented in the Technical and Financial File of the program, he/she will be entrusted with the following responsibilities:

Role of Intervention Director:

Take part with the Co-management Delegate/Principal International Technical Assistant in all decision making process regarding the management of the intervention, in particular regarding the co-management of the funds. In that framework, he/she will be responsible for the preparation of the tendering procedures and will take part to the evaluation of the offers, the contracting and the administration of the contracts. He/she will supervise the establishment of rigorous methods of budget accounting; sign the agreements between the program and its partners (districts, etc.);

Establish with the Co-management Delegate/Principal International Technical Assistant the system of monitoring and evaluation of the activities of the program, supervise the preparation of the workplans and timetables of the activities;

Supervise the production of the technical and financial reports of the program for the Steering Committee and take part to the meetings of this committee;

Be responsible for the operational and financial closure of the program at the end of the implementation period;

Role of Intervention Director along with the Co-management Delegate/Principal International Technical Assistant:

Bring a key contribution to the development of models, systems and methods aiming at the sustainable decentralized management of forest resources;

Make sure the strategy of the program is consistent and ensure a technically sound implementation of the program;

Provide direct technical support to all activities aiming at making NAFA operational;

Advise and support NAFA and ISAR/CGF teams;

Bring technical support to the preparation of the terms of reference of all studies and technical consultations planned;

Provide a technical input in all studies, trials and other applications implemented or supported by the program;

Take part to and support the technical evaluation of the activities and the production of technical documents on analyses, lessons learned and recommendations on the interventions;

Prepare the bases of a comprehensive training plan targeting the main actors of the forestry sector (ISAE-Busogo, forestry secondary schools, NAFA headquarters, ISAR/CGF, the pilot districts, NAFA staff in the pilot districts and the private operators involved in the activities of the program), in collaboration with these institutions;

More specifically, he/she will fulfill the following tasks along with the Co-management Delegate/Principal International Technical Assistant:

Support the wide consultation on the implementation of the National Forestry Policy;

Prepare proposals and give advise to MINIFOM/NAFA on the content and application of the new forest legislation (including taxation system, funding system, control system);

Design the methods to produce decision-making tools for the managers of the Rwandan forest resources, in collaboration with the concerned partners (NAFA, ISAR, NUR/CGIS, international and national consultants, etc.);

Provide technical input in the organization of communication campaigns and the design of the content of messages to promote sustainable management of forest resources;

Together with NAFA, in collaboration with the pilot districts, design the systems and modalities of implementation of the District Forest Management Plans;

Propose technical improvements to the operations of forest management, including the operations of afforestation;

Develop models of agro-forestry practices to promote and advise on the establishment of a strong and efficient (agro-)forestry extension system.

#### **7.6.2.2 Qualifications needed**

Forest Engineer or master's degree in forest sciences or environmental sciences;

At least 10 years of experience in afforestation forestry (silviculture of plantations) and forest management (management of tree plantations / management of forests or woodlands) in tropical or subtropical countries;

Proven experience of several years in the institutional strengthening of forestry services at all levels (central, decentralized and local);

Proven experience of several years in capacity building in forestry, especially at institutional level;

Experience in the following disciplines is strongly desired: forest policy, forest legislation; GIS and other information systems (development, management); design, organization and data processing of forest inventories; participative approach and involvement of local communities in forest management; agro-forestry; gender mainstreaming;

Experience in the following disciplines is desired: watershed management and erosion control, integrated rural development, forest ecology, wood downstream processing;

Good reporting and communication skills;

Fluent in English and French, with at least good capacities to communicate in the other language.

### **7.6.3 International Technical Assistant (Training)**

Duty station: Kigali

Duration of the assignment: 42 months

#### **7.6.3.1 Description of the function**

Under the general supervision of the BTC Representative in Kigali, the International

Technical Assistant (Training) will work in close collaboration with the Intervention Director, the Principal International Technical Assistant, the Training and Communication Officer and more generally with the staff of the program and the staff of NAFA.

In accordance with the descriptive elements presented in the Technical and Financial File of the program, he/she will be mainly in charge of the Result 1: **"The availability of trained professional foresters is increased and technical capabilities of stakeholders in the forestry sector are strengthened"**, which means that he/she will be entrusted with the following responsibilities:

Finalize a comprehensive training plan targeting the main actors of the forestry sector (ISAE-Busogo, forestry secondary schools, NAFA headquarters, ISAR/CGF, the pilot districts, NAFA staff in the pilot districts and the private operators involved in the activities of the program), in collaboration with these institutions;

Give support to the organization of the implementation of the training plan;

Provide input into training methodology and materials;

Develop some training curricula and advise on the development of other curricula by national experts;

Give some of the training courses (specialized skills, advanced techniques);

Provide design input on the extension work of the program and monitor this work;

Take part to the evaluation of the results of the training plan.

### **7.6.3.2 Qualifications needed**

Forest Engineer or master's degree in forest sciences or environmental sciences;

At least 5 years of experience in afforestation forestry (silviculture of plantations) and forest management (management of tree plantations / management of forests or woodlands) in tropical or subtropical countries;

Proven experience in capacity building / training in forestry or in a field closely related to forestry, both at institutional level and local community level;

Experience in the following disciplines is strongly desired: GIS and other information systems; design, organization and data processing of forest inventories; participative approach and involvement of local communities in forest management;

Experience in the following disciplines is desired: institutional strengthening in forestry, forest policy, agro-forestry, watershed management and erosion control, integrated rural development, gender mainstreaming, forest ecology, wood downstream processing;

Experience in the Great Lakes Region an asset;

Good reporting and communication skills;

Fluent in English and French, with at least good capacities to communicate in the other language.

## 7.6.4 Administrative and Finance Officer (AFO)

### Tasks

The AFO shall be responsible for the administrative and financial management of the project. He/she will show excellent qualities in organizing, analyzing and reporting. He/she will work under the authority of the project Manager. He/she will work in close collaboration with the Delegate to the co-management of the project and with the local office of BTC in Kigali.

#### 1) Administrative management task

The AFO will:

- Be in charge of the staff management;
- Contribute to the elaboration of tender documents, Memorandum of Understanding, Public agreement to help control their consistency before sending ;
- Write service and supply contracts, and control their implementation;
- Watch over the efficient and effective management of the staff and logistics of the project;
- Contribute to the performance evaluation of the project staff;
- Advise the project management in improving administrative procedures;
- Contribute to capacity building of the project staff and the stakeholders in terms of administrative management.

#### 2) Financial management tasks

In the field of financial management, complying with the national and BTC procedures, he/she shall:

- Supervise and control the accountancy service ;
- Check the accounting record and payment requests;
- Validate financial reporting from Districts;
- Write terms of references and monitor audits of districts specific accounts;
- Control monthly the accounts and records of the different components of the project;
- Control the cashier;
- Support the project management in budget planning and monitoring;
- Prepare quarterly cash-calls.
- Prepare budget revisions ;

Write monthly, quarterly and annual financial reports for the partners (MINIFOM, NAFA, MINECOFIN, CEPEX and BTC) and to answer their questions and requests for clarification;

Contribute in the capacity building of the project staff and contracting parties in terms of financial management;

Advise the project management for improving financial procedures.

#### Profile

Citizen of the Rwandan Republic;

In possession of a Bachelors degree in commerce (Accounting option), management or accounting (A0);

Having least 5 years of relevant and continuous work experience in the field of financial management with at least 3 years in development projects;

Mastering accounting procedures and corresponding management software;

Having excellent skills in team management;

Fluent in French and English. Working knowledge of the other language would be an added advantage.

He/she will work in the Project Management Unit with a team of about ten colleagues and will be in charge of the administrative management of more than 30 employees.

He/she will have training opportunities, among others in implementing the procedures and financial management tools developed by BTC.

## 7.7 ToR for missions at the start of the program

As the program is the continuation of the first phase of PAREF, there are no specific missions at the start of the program.



## 7.8 Sylvicultural intervention schedules

The following table, adapted from DFS (2010b), gives typical examples of the succession of sylvicultural interventions in artificial plantations in Rwanda. Actual durations of the cycles will depend on the exact species, the quality of the soil, the particular objectives pursued.

Sylvicultural intervention schedule for <i>Eucalyptus sp</i> for fuelwood production (coppice)			
Cycle	Age (years)	Intervention	Remarks / spacing
1 <sup>st</sup> rotation	0	Planting	3m x 3m = 1111 seedlings/ha
	0-2	Beating up; Post-plantation tending	
	7	Clear cutting	
2 <sup>nd</sup> rotation	8	Coppice reduction	
	14	Clear cutting	
3 <sup>rd</sup> rotation	15	Coppice reduction	
	21	Clear cutting	
4 <sup>th</sup> rotation	22	Coppice reduction	
	28	Final cutting	
			Followed by a new cycle: Stump extraction (if needed); Anti-erosion works (if needed); Replanting; Etc.
			Remark: the rotation can be between 6 and 10 years, that is to say a final cutting cycle of 24 to 40 years.

Sylvicultural intervention schedule for <i>Eucalyptus sp</i> for timber production (high forest)			
Cycle	Age (years)	Intervention	Remarks / spacing
Rotation	0	Planting	3m x 3m = 1111 seedlings/ha
	0-2	Beating up; Post-plantation tending	1111 /ha
	8	Thinning	750 /ha (remaining)
	16	Thinning	500 /ha
	24	Thinning	250 /ha
	30	Felling (final cutting)	0 /ha
			Followed by a new rotation (=cycle): Stump extraction (if needed); Anti-erosion works (if needed); Replanting; Etc.
Sylvicultural intervention schedule for <i>Pinus sp</i> for timber production (high forest)			
Cycle	Age (years)	Intervention	Remarks / spacing
Rotation	0	Planting	2,5m x 2,5m = 1600 seedl./ha
	0-2	Beating up; Post-plantation tending	1600 /ha
	10	Pruning to 2m Thinning	1200 /ha (remaining)
	15	Thinning Pruning to 7m	600 /ha
	20	Thinning	300 /ha
	25	Felling (final cutting)	0 /ha
			Followed by a new rotation (=cycle): Replanting <u>or</u> selection / thinning of the natural regeneration Etc.

## 7.9 Glossary

In the definitions below, the words in *italics* are defined elsewhere in the glossary.

Afforestation	Synonymous of <i>forest</i> plantation, on a piece of land that has not been wooded so far (at least in recent times). Almost synonymous of reforestation (this last term refers to the fact that the land was once wooded).
Agro-forestry	<p>Land use system in which trees (<i>forestry</i>) are associated with fields (agriculture). The type of association may vary :</p> <p>trees scattered on fields (most common type) ;</p> <p>lines of trees along the fields ;</p> <p>clumps of trees between the fields ;</p> <p>etc.</p> <p>The trees grown may be for timber, firewood, fruit, shade, soil improvement, etc.</p> <p>In other words, according to ICRAF, agro-forestry is any land use system where trees are intentionally integrated into the agricultural or animal production on the same unit of land. The system can be called agro-forestry only if there is ecological and economic interaction between the tree and the non-tree components.</p> <p>The expression « Trees on Farms » is about equivalent to agro-forestry.</p>
Beating up	The replacement of seedlings which die or fail to develop after planting. This replacement by new seedlings in the gaps in the plantation is done in the months following the plantation, or in a pinch during the next plantation campaign.
Breeding program	Research program to improve the genetic quality of cultivated (planted) <i>forest</i> resources.
Conversion	Transformation of the <i>sylvicultural</i> system of a <i>stand</i> : change from <i>coppice</i> to <i>high forest</i> e.g., or change from one tree species to another.
Coppice (noun)	<i>Forest stand</i> made of trees originating from stump shoots.
Coppice (verb)	Verb used when a tree has been cut to express that it produces new shoots from the stump and grows again. Only some tree species have got this capacity.
Coppice reduction	Selection of 2 to 3 of the best shoots of each stump in a <i>coppice stand</i> and cutting of all other shoots in order to speed

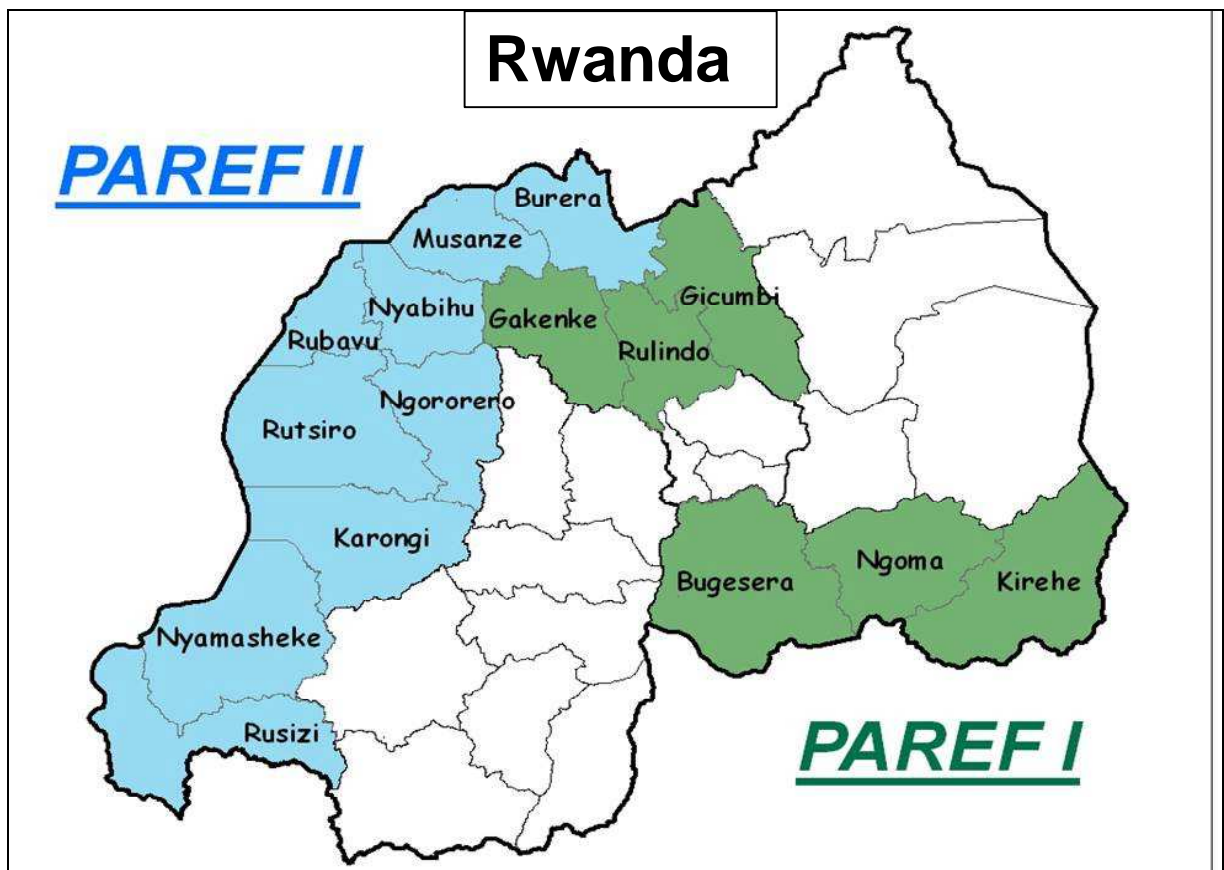
	<i>coppice stand</i> and cutting of all other shoots, in order to speed up the growth in diameter.
Final cutting cycle	Concerning a <i>stand</i> it means the number of years needed from the early growth stages to maturity and full <i>regeneration</i> .
Forest Management Group	<p>Any local structure managed by and for professionals that is active in production, downstream processing, storing or trade of <i>forest</i> products or <i>agro-forestry</i> products (wood or non timber forest products).</p> <p>By extension, community associations of loggers and users of the resources of a <i>forest</i> management unit (made of closed <i>woodland</i> or <i>agro-forestry</i> land), whether they are formally organized and registered as a cooperative or not, private companies of the forestry sector, professional organizations, may all be considered as Forest Management Groups.</p> <p>On the other hand NGOs and public services cannot be considered as <i>Forest Management Groups</i>.</p> <p>The term <i>Forest Management Group</i> appeared in the law of 1988 organizing the forest stewardship/regime. The word <i>cooperative</i>, frequently used currently in national policies and regulations (in all sectors) is also used with the same meaning as <i>group</i>.</p>
Forest (noun)	<p>Strictly speaking, forest is synonymous of natural forest (exclusive of artificial <i>woodland</i>). Forest is made of high trees of mixed indigenous species, comprises different storeys and is usually closed.</p> <p>By extension, it can include « man-made forest », but in that case it is better to use the word « <i>woodland</i> ».</p>
Forest (adjective)	<p>Related to <i>forestry</i>.</p> <p>Example : forest policy, forest management plan, forest <i>stand</i>, forest resources, etc.</p>
Forestry	The discipline dealing with <i>forests</i> and <i>woodlands</i> (all aspects : planning, <i>afforestation</i> , <i>sylviculture</i> , harvesting, <i>forest</i> economy, national <i>forest</i> policy, wood technology, marketing of <i>forest</i> products, <i>forest</i> research, etc.).
Forestry Joint Action	Forestry Joint Action is a committee established in each district of intervention. It is derived from the District Development Committee but has a specific role in <i>forestry</i> issues. It is made of the district forester, district administration staff, representatives of the NGOs and projects working in the district in <i>forestry</i> activities and representatives of the <i>Forest</i>

		Management Groups and cooperatives.
High forest		<i>Forest stand</i> made of trees originating from seeds and which are intended to reach full development prior to being cut.
Mean Annual Increment	Annual	An expression of the yield of <i>woodlands</i> : in an even-aged <i>stand</i> , the cumulative volume production including thinnings and dead trees, divided by the age of the <i>stand</i> , is referred to as the mean annual increment. After planting (or <i>regeneration</i> ), the mean annual increment is small at first, increases during the early years of vigorous growth, reaches a maximum and then declines with increasing age.
« Plus » tree		Highly superior tree individual in a <i>seed stand</i> selected to collect excellent seeds for <i>afforestation</i> programs. A network of « plus » trees is the third level of a <i>breeding program</i> .
Provenance		Practically synonymous of origin (of seeds of planted trees). It generally means a region or an area of origin of the seeds. The choice of good provenances is the first level of a national forest <i>tree breeding program</i>
Pruning		The removal of the (low) branches of the trees of a <i>stand</i> to improve the quality of the timber (in high forest, coniferous plantations).
Regeneration		Replacement of the old trees of a <i>stand</i> or <i>woodland</i> area by young trees, either by a natural process (natural regeneration) or by an artificial process (replantation).
Rehabilitation		Improvement of degraded <i>stands</i> by different possible means : restocking, enrichment (with better species), replanting with better seed <i>provenances</i> .  In this document, the term <i>rehabilitation</i> of degraded artificial <i>woodlands</i> is the generic term referring to the replacement of the old degraded stands by new plantations (= a <i>regeneration</i> ). A <i>conversion</i> , is one particular type of rehabilitation where the <i>silvicultural</i> system or the species is changed during the process.
Rotation		Interval in years between the creation or regeneration of a <i>stand</i> and the harvest of all trees of this <i>stand</i> (and the regeneration once again of this <i>stand</i> ). In the case of <i>coppice</i> , it means the interval between the regular cycles of clear-cutting. For high forest it is a bit synonymous of <i>final cutting cycle</i> (after all <i>thinning cycles</i> ).
Seed orchard		Artificial <i>stand</i> of one tree species established with the offspring of the best trees of a good <i>provenance</i> , of a network of <i>seed stands</i> or of a network of « plus » trees, with the sole objective

	to harvest seeds for <i>afforestation</i> programs. Seed orchards are the fourth level of a <i>breeding program</i> .
Seed stand	<i>Stand</i> of mature trees of a certain species that is used to harvest seeds for <i>afforestation</i> programs, because of the recognized excellent quality of its trees. A network of seed stands is the second level of a national forest <i>tree-breeding</i> program (first level of improvement within a <i>provenance</i> ).
Stand	Homogeneous piece of <i>forest</i> or <i>woodland</i> in which the trees are characterized by a certain age class structure, a certain species composition, a certain <i>sylvicultural</i> treatment, etc. A wooded plot.
Sylviculture	A discipline of <i>forestry</i> dealing with how to grow trees in <i>woodlands</i> or <i>forests</i> . <i>Forest tree cultivation</i> .
Thinning	Removal of a proportion of the trees in a <i>stand</i> (to provide more growing space for the remaining trees). Thinning should be carried out at regular intervals (see <i>thinning cycle</i> ).
Thinning cycle	Interval in years between successive <i>thinnings</i> (in a high forest).
Woodland	Any wooded expanse of land, any wooded area, whether it is made of natural woody vegetation (less developed than real <i>forest</i> : shorter, less dense, etc.) or it is made of artificial <i>stands</i> (exotic tree species, plantations).
Woodlot	Individual plot of limited size planted with trees (usually to produce firewood or poles or even timber).

## 7.10 Map

The map shows the intervention zone of “PAREF.be” first phase (6 districts in green) and the intervention zone of PAREF.nl (9 districts in blue). The intervention zone of the present program is the same as the one of “PAREF.be” first phase (6 districts in green).

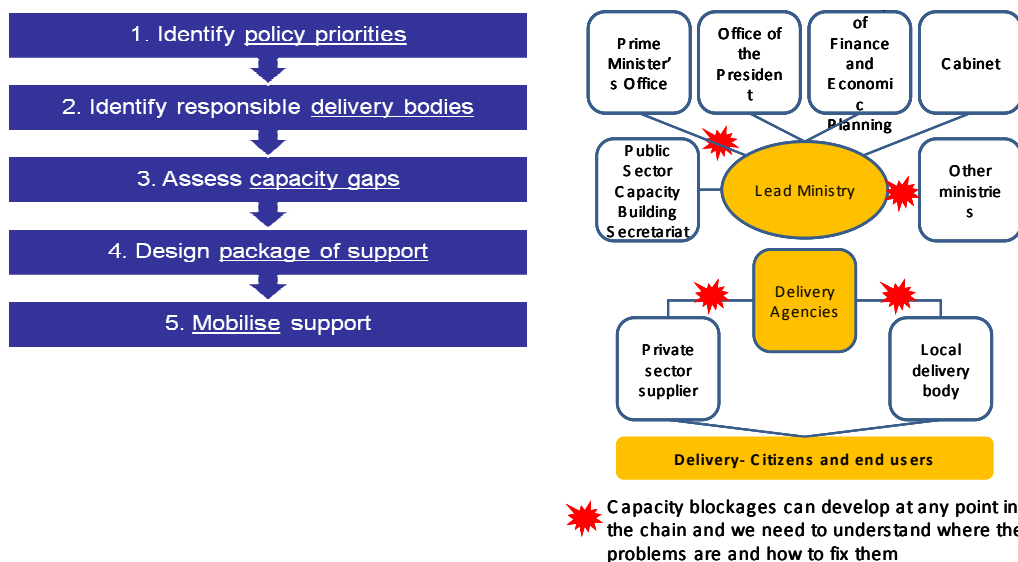


## 7.11 Cooperation with PSCBS for institutional strengthening

Support to the identification of capacity blockages in the delivery chain of the reforestation sector and establishment or review of related capacity building plans.

### Rationale

The Government of Rwanda adopted a new model for targeting capacity development throughout the public sector. This model is called the delivery chain and is meant to identify blockages that need to be overcome to build capacities. It's now being piloted in four priority sectors in Rwanda for a period of 3 years



### GoR conceptual framework of the delivery chain

The theory is based on the idea that the improvement of sector performance can only take place when certain blockages are removed. Therefore these blockages need to be identified, through an assessment of the sector, on which the formulation of capacity needs can be built. Based on these needs, a capacity building plan can be formulated and capacity development actions can be undertaken.

Every public institution in Rwanda is ought to have a feasible capacity building plan that is in line with sector needs and government priorities, and can therefore benefit from this assessment to improve, modify and complete it.

The Government of Rwanda has established a public institution called PSCBS (Public Sector Capacity Building Secretariat) to offer technical support and quality assurance to capacity development interventions within the Rwandan Public Sector. In order to



accomplish this task, PSCBS has therefore developed various tools and templates that facilitate the identification of capacity needs and the set up capacity development processes. These tools, being specifically developed in accordance with the Rwandan context, can prove to be relevant for achieving this result 2.6. It is therefore recommended to consult and involve PSCBS when using and applying the above mentioned tools.

#### b) Activities

Support a sector analysis that identifies the capacity blockages in the delivery chain at sector level and sets up an overall capacity building strategy at sector level, based on these blockages. The identification will be done with all actors in the reforestation sector as well as PSCBS, involving them actively in the process through workshops and qualitative consultations. Further support of the sector bodies in adapting their capacity building plans accordingly should also be provided.

- Establish ToR for two consultants that will lead the process of identification and formulation of the sector capacity needs and proposed actions. These consultants will accomplish this task by organising consultations and workshops with the sector institutions.
- Organise a validation workshop with all sector institutions
- Support the sector bodies in adapting their capacity building plans accordingly

Support an annual process of (re-)identifying the capacity blockages and re-defining the sector CD strategy and CD plans of sector institutions to ensure they remain relevant in a changing environment.

- Develop ToR for a consultant to make an update of the analysis of capacity blockages and capacity needs and propose suggestions for the improvement, completion and modification of the existing capacity building plans.
- Organise a validation workshop with all sector institutions
- Support the sector bodies in adapting their capacity building plans according to the needs identified through the consultancy and provide technical guidance in collaboration with PSCBS

#### c) Expected outputs

- An analysis of capacity blockages and capacity needs at sector level
- An annual workshop with all sector stakeholders for validation of the conclusions of the above mentioned analysis
- Adapted and more complete capacity building plans for the various sector institutions

#### d) Responsibilities

Actor	Task
Principal TA of the program and Director of Intervention	Prepare the ToR for the consultancy and follow-up on the implementation of the consultancy assignment (facilitation of contact between consultants and sector institution, progress according to timeframe, quality and usability of results)

International consultant	Lead initial sector analysis
National consultant	Contribute to the initial sector analysis and lead consultant for the yearly updates of sector capacity assessments
NAFA	Organise validation workshop for the results of the consultancy with all sector institutions
PSCBS	To offer technical support and input with tools and templates to the consultants and the sector institutions when implementing their capacity building plans
MINIFOM, NAFA, ISAR, ISAE other sector institutions at central and local level	Contribution to the sector assessment process Owner of their capacity building plans, with the responsibility to adjust and complete them according to the outcomes of the sector analysis

e) Resources required to be mobilised form the PAREF II training budget

Initial capacity assessment and capacity building strategy of the sector, initial support to adapting sector institutions' CD plans
International + national consultant
Workshop for validation
Technical support to the sector institutions for the modification of capacity building plans
Annual updates of capacity assessments and strategy of the sector as well as support to adapting sector institutions' CD plans
National consultant
Workshop for validation
Technical support to the sector institutions for the modification of capacity building plans

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