**Project Title**
Sustainable forestry, agroforestry and biomass energy management for climate resilience in Gatsibo District.

**Project Summary**
(In 75 words or less please summarise what your project intends to achieve and how)
Gatsibo District has undergone intensive deforestation in the last decades that led to scarcity of wood fuels which is the sole source of energy. The project is aimed at rehabilitating 500 ha of degraded forests; creating 3,000 ha woodlots for environmental protection, agroforestry on 15,000 ha for soil fertility and promoting improved cook-stoves in order to reduce pressure on forest resources. This project will benefit 19,317 poorest households which represents 17% of the total population.

**Anticipated Start Date**
(DD/MM/YYYY)
1/4/2015

**Project Duration** (in months)
36

**Funding Requested (RWF)**
1,469,171,600

**Name of Lead Organisation**
Rwanda Natural Resources Authority (RNRA)

**Type of Organisation, which best describes the Lead Organisation**
- [x] Government Institution
- [ ] Non-Governmental Organisation (NGO)
- [ ] Private Sector Enterprise
- [ ] Academic Institution
- [ ] Other (please specify)

**Partner Institutions**
Gatsibo District, ICRAF and Grassroots Development Organization

**Full Office Address**
RNRA, P. O. Box 433, Kigali

**Website Address (if applicable)**
www.rnra.rw

**Contact Person**
(the person who will have ultimate responsibility and be accountable for delivering this project)
Name: Ms. Mukashema Adrie
Position: Deputy DG RNRA in Charge of Forestry Dept.
Email: Adrie.Mukashema@rnra.rw
Tel: +250 78858 15 95 / 0727 000 326
For Internal Purposes Only: To be Completed by the Fund Manager

Date Received: _________________  PD Code: _________________
Date Comments Sent: _________________
Feasibility Study? (Y/N) _________________  PPD Code: _________________
Thematic Financing Window: _____________________________________
FONERWA Entry Point: ________________________________________
Technical Appraisal Score: _____  Rank: _____

National Climate Change and Environment Fund (FONERWA)

Full Project Document (PD)

(Please provide a complete answer to each question, even if the answer is duplicated elsewhere. This PD should not exceed 35 sides of A4 size paper.)

SECTION 1: INFORMATION ABOUT THE APPLICANT

Q 1.1 What is the Lead organisation's total number of full-time employees?

210 full time employees

Q 1.2 What is your organisation’s experience of managing similar projects or activities (please explain why you think your organisation and partners are capable of managing the project)?

RNRA: Rwanda Natural Resources Authority is the governmental institution that leads the management and promotion of natural resources, and has as its mandate to increase the forest cover and rehabilitate the damaged natural resources in the country. RNRA staff has strong experience in implementing such projects like PAREFBe2, PAGReF and PAREF NL2.

PAREF Be2: Support Program to the Reforestation in the Northern and Eastern Provinces of Rwanda implemented by RNRA in partnership with BTC in the framework of the Belgo-Rwandan cooperation. Therefore, the specific objective of the program was: “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 Belgian contributed 6 million euros and the total duration of the program was 48 months, including 3 months of inception.

PAREF NL2: Support to participatory forest management pilots and biomass energy production in 9 districts of Rwanda (PAREF NI-2). The project is implemented under the Rwanda Natural Resources Authority through the Department of Forestry and Nature Conservation (DFNC). The project has a double institutional anchorage: (i) at the central level it is part of the Rwanda Natural Resource Authority (RNRA) / Department of Forestry and Nature Conservation (DFNC); (ii) at decentralized level, it collaborates with 9
districts where it aims at increasing forest management capacity and testing and promoting decentralized sustainable participatory forest management.

PGREEF: Rwanda Sustainable Woodland Management and Natural Forest Restoration Project which aims to contribute to reducing deforestation and poverty in Rwanda. Its specific objectives are to: (1) increase forest cover and improve the living conditions of forest-area dwellers and (2) create basic conditions that would win Rwanda eligibility for carbon market benefits and payment for ecosystem services. The project duration was three years and its total cost was estimated at EUR 4,920,213, of which a CBFF contribution of about EUR 4,586,859 (representing 93% of the project cost) and a Rwandan Government contribution estimated at EUR 233,672 (or 5% of the total project cost). The project beneficiaries have contributed EUR 99,682 (or about 2% of the total project cost) by participating mainly in village woodland creation and management and agroforestry and fruit tree planting. This project is implemented under RNRA.

- ICRAF: In Rwanda, ICRAF has continuously been present since 1988 and has generated and promoted scientific agroforestry practices. For over 26 years of experience in Rwanda, ICRAF has generated and fostered adoption of agroforestry technologies in sustainable land use management (Rwaza, Nkuli hill, Matyazo in Karago, Kabaya, Nyamagabe, etc) for improving livelihood of smallholder farmers while developing options for adaptation and mitigation of climate change.

- GDO has a team of 8 experienced technicians in improved cook stoves. They have undergone various training in climate change mitigation interventions including carbon markets and alternative cooking energy. They successfully implemented a carbon offset project in Gatsibo and Bugesera districts in 2009 where they designed, produced and tested a cook-stove with about 25% energy efficiency. GDO has also a wide experience in rural community mobilization, sensitization and organization of farmers into viable cooperatives. They have also experience in training cooperatives on the use, production and maintenance of the improved cook stoves.

- Gatsibo District team have efficiently coordinated, monitored and evaluated many environmental development projects. Every year, Gatsibo District commits about 23 million Rwanda francs to tree planting and biogas production in an effort to improve, sustain and rationally use environmental resources; In 2009 - 2013, 50 m wide by 49.5 km belt was planted with trees along the shores of Lake Muhazi with financial support from REMA; In 2006 - 2010, tree planting was implemented on 1250 ha and 40 km along the road in Kabarore Sector financed by PAFOR; UCRIDP financed tree planting on 350 ha in the sectors of Rwimbogo, Kabarore, Kiziguro and Gitoki.

Q 1.3 List the name, position, and email of key personnel involved in the project, such as the project executive, project manager, and core technical staff. (Provide a CV for each of the key personnel as an attachment to this PD)

<table>
<thead>
<tr>
<th>CORE TECHNICAL STAFF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forestry Technicians 1) Bakundukize Dismas/ email: <a href="mailto:bakudismas@yahoo.fr">bakudismas@yahoo.fr</a></td>
</tr>
<tr>
<td>2) Iyakaremye Jean Baptiste : <a href="mailto:JeanBaptiste.Iyakaremye@rnra.rw">JeanBaptiste.Iyakaremye@rnra.rw</a></td>
</tr>
<tr>
<td>M&amp;E Specialist: to be recruited</td>
</tr>
<tr>
<td>ICRAF Focal person: Athanase Mukuralinda/ email: <a href="mailto:a.mukuralinda@cgiar.org">a.mukuralinda@cgiar.org</a></td>
</tr>
<tr>
<td>Agroforestry specialists: Alain Ndoli/email: <a href="mailto:ndolialain@gmail.com">ndolialain@gmail.com</a> and Ndayambaje Jena Damascene: <a href="mailto:ndjeadamas@yahoo.fr">ndjeadamas@yahoo.fr</a>, DFO: Sylvere Namuhoranye/email: <a href="mailto:namusyl@gmail.com">namusyl@gmail.com</a>; Admin &amp; accountant: Nyagatere jean Bosco: <a href="mailto:JeanBosco.Nyagatare@rnra.rw">JeanBosco.Nyagatare@rnra.rw</a> and Umutoni Mireille : <a href="mailto:Mireille.Umutoni@rnra.rw">Mireille.Umutoni@rnra.rw</a></td>
</tr>
</tbody>
</table>

Project executive: Adrie Mukashema /EMAIL: shemadrie@yahoo.fr |
Project Manager: Felix Rurangwa / email: rurangwafelix@gmail.com |

3
Q 1.4  **Lead Organisational Finances. Provide a copy of these** from the most recent audited annual accounts (income and expenditure statement & balance sheet in RWF, as well as the main sources of funding) as an attachment to this PD.

See Annex

**SECTION 2: INFORMATION ABOUT THE PROJECT**

Q 2.1  **Why** the project is needed *(clearly state the problem this project will address and the evidence base for its justification. Where possible, refer to international, national and/or sectoral strategies.)*

Rural landscapes of Gatsibo district consist of farmlands interspersed with wooded areas. Wooded and agriculture landscapes support the livelihoods of farmers and livestock keepers through providing a set of ecosystem services - biological products (food/fruits, fodder, medicines, construction materials and fuel), as well as services - supporting (soil fertility, moisture, biodiversity), regulating (micro/macro climate, water/air quality), and cultural/recreational services. These ecosystem services are essential for the resilience of the landscapes and for rural people to adapt to climate changes. They also play an important role in climate change mitigation, as they have the potential to store large amounts of carbon both in biomass above-ground and in the below ground. Landscape management and restoration can be central to achieving their climate change mitigation/abatement potentials.

In turn, development and cash income needs under growing population and livestock pressures in rural landscapes of Gatsibo have driven exploitation of the ecosystem services at the rate faster than their regeneration. Land clearing for agriculture has been more responsible for deforestation in Gatsibo. At the same time, rural landscapes have been subjected to widespread degradation due to uncontrolled livestock grazing as well as wood harvest. At landscape-level degradation and loss of biodiversity further exposed the ecosystems vulnerable to climatic hazards, thus reducing the capacity to provide essential ecosystem services to support rural livelihoods. Efforts to enhance ecosystem services in Gatsibo have not been fully successfully due to a number of problems suggested by communities and in many studies. Almost all households use wood for cooking which results into increased demand on wood energy and eventually causes deforestation. According to the district development plan (DDP) (2013), 95% of the households still use the three-stone fire, which is the least efficient way to cook owing to wasted wood energy coupled with high fuel wood consumption and pollution.

In particular, Gatsibo District has been experiencing a low tree survival rate due to termites, prolonged drought, uncontrolled grazing, fire outbreak and low investment from government and donors compared to other districts. For the performance contract evaluation, Gatsibo district was ranked the last based on a set of governance, economic and social indicators. It is in this regard that Rwanda Natural Resources Authority together with the District has identified this project as the remedy to address some of the challenges. This project intends to use good quality seeds; drought and termites resistant tree species to green Gatsibo landscape in order to achieve sustainable land use and natural resources management that will result in food security and reduced vulnerability to climate change impact. Therefore, in addition, the project will promote landscape management approaches (Forest, agroforestry and woodlot) which will target the removal of the drivers of deforestation and degradation; this will improve ecological integrity by supporting and restoring ecological processes, and ultimately enhancing human welfare by increasing the production of ecosystem goods and services. Furthermore, improved cooking-stoves will be promoted to reduce fuel wood consumption and pollution and hence contribute to climate change resilience, green economy and poverty reduction strategies.
The development objective of the project has been formulated in line with the overall goal of the National Forestry Policy: "Making Rwandan forestry one of the pillars of the economy and national ecological viability. Furthermore, this project has been developed to respond to the national strategic objectives for rural development and environmental conservation which include (i) increasing and diversifying national forest and agroforestry resources (Vision 2020 and forest policy); (ii) conserving and sustainably rehabilitating forest and agroforestry resources (EDPRS and forest policy); (iii) assessing the contribution of goods and services provided by the forestry sector to the national economy (forest policy); and (iv) developing an agriculture that seeks to preserve the environment and natural resources (National Agricultural Policy). The project targets the community at village level as the key operational unit responsible for effective implementation, an approach that is in line with the government decentralization objectives such as local people participation in the implementation of plans and enhancement of effectiveness and efficiency in monitoring and delivery services. It fits in the 5 year District Development Plan (DDP) which aims at saving forests from over-exploitation by increasing the number of households using improved cook-stoves from a baseline of 3,600 (2013) to about 60,000 households by 2018. This project builds on what VUP is already doing for alleviating poverty among the poor communities in the proposed project area.

This project complies with EDPRS 2 through contribution to agriculture intensification and creation of employment in rural areas. In fact, the poor farmers in the district will gain cash incomes from forest plantation, restoration activities and in the production of the planting materials. The project is in line with the African Development Bank’s 2012-2016 Country Strategy Paper (CSP) for Rwanda in its two pillars especially in energy and entrepreneurship sectors. The project is also in keeping with the Bank’s general poverty reduction and environmental protection policy as it will help the beneficiaries to improve their income by promoting income-generating activities, creating jobs and increasing the reforestation rate. In addition, this project contributes to the implementation of international agreements in particular, The United Nations Framework Convention on Climate Change, Convention on Biological Diversity and United Nations Convention to Combat Desertification.

Furthermore, the project conforms to the Green Growth and Climate Resilience Strategy (GGCRS) which recognises big wins that can make significant impact on adaptation, mitigation and economic development. As one of the GGCRS big wins, the project puts emphasis on Agroforestry as an element of climate resilience or adaptation and green economy through multiple benefits and services provided by AF. The project will promote agroforestry which will serve for soil erosion control, soil fertility improvement, carbon sequestration and other related environmental benefits (hydrology regulation and biodiversity conservation), it will further reduce pressure on forest resources by promoting the improved and efficient cook stoves. Different species will be used in Agroforestry to provide construction materials as well as livestock fodder and food (fruits and nuts) which will improve food security. In addition, the project will address the 7th Millennium Development Goals (MDGs) about ensuring Environmental Sustainability. The goal recognises that millions of hectares of forests are lost every year, there are many species being driven to near extinction and renewable water resources are becoming scarcer. The project will work towards addressing the issues stated in the 7th MDG by increasing the tree cover which will in turn enhance watershed protection and hence increase the climate change resilience in Gatsibo District.
Q 2.2 What change is this project intended to achieve (state specific objectives, expected results/impact and long-term legacy. To address the core environment and climate change objectives of the project, it would be helpful to refer to national and sectoral climate change and environment objectives. Provide measurable indicators, within a log-frame matrix. In addition, make a note of the expected impacts on employment and poverty reduction, as well knowledge and technological transfer.)?

Specific Change: This project is intended to achieve conservation and management of natural resources through increasing forest and agroforestry cover and use of efficient cook–stoves

The expected results are as follows:
1. 500 ha of degraded forests rehabilitated (as pilot sites);
2. 3,000 ha woodlots for environment protection established
3. Agroforestry systems practiced on 15,000 ha of consolidated agricultural land for soil erosion control, soil fertility, fodder, fruits, wood (fuel wood and stakes for climbing beans) and crop yield improvement
4. 19,317 households’ access and use improved cook-stoves that have proved to be energy serving efficient and less smoking.

Expected impact and long term legacy:
1. Increase in productivity of rehabilitated forests,
2. Increased tree cover, improved soil fertility and crop yields,
3. Increased availability and access to fuel-wood at household level,
4. Increased knowledge and practice of agroforestry.
5. Reduced household consumption and energy expenditure on fuel-wood collection,
6. Increased access and use of improved cook-stoves,
7. Job created for the poor
8. Increased knowledge on environment and climate change issues, hence increased climate change resilience

Q 2.3 How will the project objectives be achieved (include a detailed Work Plan as an appendix highlighting key deliverables and activities and responsibilities. Clearly describe the approach and methodology to be followed and the sequence of activities planned.)?

List of outputs and activities planned to achieve the project objectives

Output 1: Forest plantations in Gatsibo district rehabilitated
1.1 Inventory and mapping of degraded forest plantations
1.2 Sensitization, training and organization of platforms
1.3 Seeds acquisition
1.4 Seedling production
1.5 Site preparation
1.6 Planting
1.7 Maintenance
1.8 Technical backstopping, monitoring and evaluation

Output 2: Woodlots for environment protection established
2.1 Characterization and mapping of sites for woodlots establishment
2.2 Seeds acquisition
2.3 Seedling production
2.4 Site preparation
2.5 Planting
2.6 Maintenance
2.7 Monitoring and evaluation

Output 3: Agroforestry systems promoted and adopted by farmers
3.1 Identification and characterisation of consolidated lands
3.2 Farmers mobilisation and participatory identification of agroforestry practices and tree species
3.3 Farmer trainings of trainers in agroforestry (planting and management)
3.4 Tree seeds acquisition
3.5 Seedling production
3.6 Distribution of tree seedlings to farmers
3.7 Monitoring and evaluation

Output 4: Increased access and use of improved cook-stoves
4.1 Identification of existing energy-saving and less smoking cook stoves appreciated by households
4.2 Training of cooperatives in improved cook-stove production and marketing
4.3 Community mobilization and sensitization on use of improved cook-stoves
4.4 Acquisition of improved stoves from artisans
4.5 Distribution of improved stoves to poor and vulnerable households
4.6 Monitoring and evaluation

METHODOLOGY

Output 1: Forest plantations in Gatsibo district rehabilitated
Objective 1: Restoring 500 ha of degraded public forests

This project objective will be achieved through inventory and rehabilitation of degraded public forests. These forests will be identified and mapped in collaboration with DFO with detailed information on the forest area, degree of degradation and location. In Gatsibo District, there are many old forest that are degraded, these forest were planted for the purpose of protecting watershed and soil erosion and climate regulation, they were mostly planted on the hillsides and to date they are degraded and cause environmental related problems such as soil erosion, water pollution etc. The most degraded public forests will be selected as piloting sites for rehabilitation. These plot sites will be used as a lesson learnt to be widely scaled up in the country.

The project will involve local communities and authorities in the rehabilitation activities of forests. To this end, there will be sensitization and training of local communities on seedling production and planting. In addition, the project will organize platforms which are forum where stakeholders plan and share responsibilities in the project implementation.

Right tree species to the local environment will be selected, high quality seeds to maximize the survival rate will be acquired and nurseries will be established for seedlings production. Site preparation activities will involve selective cutting of old trees, bush clearing, uprooting old stumps, set up of erosion control ditches on sloping land, pegging and digging. Trees will be planted twice a year at the spacing of 2x2.5m equivalent to 2500 trees/ha. Maintenance will involve replacement planting, weeding and fire breaks creation. The project will create employment for farmers by adopting high intensive labour technology approach (HIMO) in tree planting and maintenance. RNRA and Gatsibo district will oversee the implementation of tree seedling production, site preparation, tree planting and maintenance while ICRAF will do supervision and technical backstopping.
Output 2: Woodlots for environment protection established

Objective 2: Creating 3,000 ha woodlots for environmental protection

Sites for woodlot plantation were selected based on priorities for RNRA and DDP of Gatsibo including areas with available land unsuitable for settlements or crop/livestock production purposes. Coppicing trees with higher growth rate and adaptability characteristics to degraded land. A good choice of tree species that match harsh conditions (poor soil fertility, drought and termites) will be recommended by ICRAF.

Tree seedlings will be produced by nursery operators on contract basis after short training by ICRAF. The contract will specify the species, number of seedlings and delivery dates. The activity of seedling production will emphasize on diversifying tree species in the landscape in the ways that enhance forest biodiversity and which best enhance economic and environmental benefits. The project will assist in the supply of seeds and nursery inputs. Nurseries will always be established near the planting sites to facilitate transport. Site preparation and tree planting on public land will be implemented through intensive labour technology, creating income opportunities to farmers. On farmers’ land, tree planting will be done by the land owner with the support and supervision of ICRAF and RNRA staff. Youth and women will be in charge of replacement planting and maintenance of young trees (weeding and maintenance of fire breaks) under the supervision of district, ICRAF and RNRA.

Output 3: Agroforestry systems promoted and adopted by farmers

Objective 3: Enhancing agroforestry systems on 15,000 ha consolidated agricultural land for soil fertility improvement and crop production

The consolidated agricultural lands in Gatsibo district were assessed for the suitability of the incorporation of agroforestry practices in the current farming systems. A minimum of 15,000 ha of consolidated land were selected for planting agroforestry tree species. The project will be concerned with promotion of accessible, efficient and sustainable agroforestry technologies and innovations. It will be implemented in strong partnership with farmers, local authorities, facilitators and NGOs. The implementation of the project will start with participatory appraisals and planning sessions project activities. This will enable a better understanding of the local situations and people’s needs and opportunities, and to explore the community institutions and organizations for further work and partnerships. Farmers will be mobilized and sensitized on the roles of agroforestry in improving land productivity and environmental protection. The fast growing multipurpose trees (e.g Nitrogen fixing species, fodder, firewood, stakes and fruits) will be selected for planting on farm lands.

Farmer field school approaches will be used where farmer facilitators will serve as extentionists. The master trainer will organize Training of Trainers (ToTs) who in turn will train groups of farmers at site level. Seedlings will be distributed to farmers for planting on their plots on the consolidated lands. Seeds for the participatory identified tree species will be acquired and made available to nursery operators. Nurseries will be established by the selected nursery operators near the planting sites. ICRAF will provide these operators with technical information and specific seeds while RNRA and District will supervise the proper production of quality seedlings. Quality seedlings will be distributed to farmers in the intervention area by the project. Transport from nurseries to the consolidated land will be facilitated by the project while individual farmers will collect and plant seedlings in their farms. The project will conduct regular monitoring and evaluation to ensure that trees are well established and managed.
Output 4: Increased access and use of improved cook-stoves

Objective 4. 19,317 households access and use improved cook-stoves that have proved to be energy serving efficient, smoke free and innovative in wood energy technology

Different types of improved cook-stoves (e.g. Rondereza and Cana rumwe) are available in Rwanda and are mainly distinguished by the amount of fuel wood used. However, none of them was characterized on gas emission in the atmosphere and gas effect on human health. Therefore, this project will use cheap and efficient cook stove which saves 25% of the biomass energy. Local artisans and small-scale business entrepreneurs composed of youth and women will be grouped into cooperatives, they will be trained and supported on production of more efficient cook stoves. The stoves produced by the trained artisans will be purchased by the project for distribution to poor households following the UBUDEHE Classes. The project will distribute improved cook stoves to 19,317 poor households in Gatsibo in order to reduce fuelwood consumption and pressure on tree resources in the district. The distribution will be done to households in the first and second category of UBUDEHE (low wealth endowment categories). The trained local artisans will be organized into viable cooperatives that will be linked to financial institutions for provision of credits and sustainability of improved stove availability in Gatsibo. The project will provide small start-up advance to the created cooperative for equipment purchase to be able to produce 19,317 cook-stoves which will be bought by the project. To increase adoption of improved cook-stoves, mobilization and awareness campaigns will be done through open days and public media (radio, TV).

Q 2.4 How does the project address cross-cutting issues such as gender and youth?

This project is about alleviating the growing shortage of wood and reducing carbon emissions by concurrently using energy saving cook-stoves and Intensifying firewood production on farms through agroforestry and woodlots. In Rwandan society, it is the role of youth and women to gather firewood. Because of the increasing scarcity of firewood resulting from over-use and depletion of forest resources, it is common to see women and children travelling long distances with heavy loads of firewood that do not match their strength.

It is the role of women to prepare household meals making them exposed to severe respiratory problems caused by smoke inhalation from inefficient cook stoves. As a strategy aimed at remediing the gender gap, technical and financial assistance will be provided to mainstream gender approaches which result in social and economic empowerment of women so that they can access the energy saving and health benefits of the project.

The project will then systematically include the “gender” concern in all decisions and activities. Moreover a considerable number of the project beneficiaries are expected to be women and youth, as the women. Women and youth will not be only beneficiaries of the project but will also take a lead in the project activities such as seedlings production, tree planting and management and improved cook-stoves marketing and repairing., women and youth will be empowered through capacity development in manufacturing, repairing and marketing of improved cook stoves and seedlings production and planting in the beginning of the project in order to allow them to be able to lead the implementation.

Furthermore, decisions and views of women and youth will be considered in order to ensure successful implementation of this project. Gender awareness will be integrated into adaptation, and technology transfer negotiations as early as possible, to ensure that the needs and interests of the youth and women are integrated in the plans to build community resilience. During implementation of the project, women will play a leading role in planting and caring for the young agro-forestry trees. In addition, women and youth will be given priority in the provision of employment during the project implementation.

Q 2.5 Who are the stakeholders affected by the problem, and who are the stakeholders influential in solving the problem? How have they been incorporated and involved in
All the stakeholders of this project are directly or indirectly affected by the problem of fuel wood shortage, environmental degradation and food insecurity. However, the most affected stakeholders by the problem are the beneficiaries (farmers). Local authorities are also directly affected by the problem since they are the main actors in the socioeconomic development of the community. All the project stakeholders are influential in problem solving such as RNRA, District, ICRAF, GDO and beneficiaries in the intervention areas.

A series of consultative meetings and workshops with beneficiaries and other stakeholders were conducted for the problem analysis and to develop the PPD and PD. Consensus was reached with regard to the design and implementation of the proposed project. The communities had the opportunity to raise their concerns of wood shortage and constraints in agricultural production through meetings with their local authorities. Further to this, farmers’ willingness to participate in the project is demonstrated by their previous claims for more and varied species of trees for soil fertility improvement and other related products and services.

The community will be involved in nurseries establishment, tree planting and maintenance. They will also be involved in cook-stove making and maintenance and in forest restoration by uprooting old stumps and planting new trees. The local authorities will be involved in mobilization, identification of project sites and beneficiaries, and in supervision and monitoring of project activities.

The roles and responsibilities of the other stakeholders are summarized below:

<table>
<thead>
<tr>
<th>RNRA:</th>
<th>Sub-contractors</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Overall coordination of the project</td>
<td>• Seedlings production</td>
</tr>
<tr>
<td>• Monitoring, evaluation and reporting</td>
<td>• Site preparation for woodlots establishment</td>
</tr>
<tr>
<td>• Funds management and reporting</td>
<td>• Planting and maintenance of woodlots</td>
</tr>
<tr>
<td>• Supervision of seedlings production</td>
<td>• Restauration of degraded forest plantations</td>
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ICRAF:

- Baseline studies and scaling up research
- Capacity development
- Facilitation in supply of adapted tree seeds
- Monitoring and evaluation

GATSIBO & GDO:

- Awareness raising
- Training of small scale entrepreneurs in making improved stoves
- Monitoring and evaluation

Q 2.6 How will the benefits of the project be sustained after FONERWA funding comes to an end?
The project is based on participatory and cost sharing approaches which ensure the ownership of the project by beneficiaries and therefore the sustainability. The community were involved in project site identification and were sensitized on various products and services to be benefited from the project such as environmental services (biodiversity conservation, hydrology regulation, soil erosion control, soil fertility improvement, carbon sequestration and climate change mitigation, etc.) and products which generate income such as timber, fuel wood, fodder, fruits and stakes for climbing beans. The sensitization of the communities and local authorities on the project activities ownership will continue to ensure the sustainability of the project. Rwanda Natural Resources Authority will continue to earmark some money to the District to enable the management and maintenance of the established woodlots. RNRA will continue to oversee progress and growth of planted trees (on farm trees, woodlots and forests) for a period of 3 years and then handover to district authorities for care and management. ICRAF will continue to mobilize funds to scale up lessons learnt during project implementation. Farmer field school approach will enhance adoption of agroforestry technologies for produce food, fuel wood and income, hence promoting ownership and sustainability. The youth and women equipped with skills of manufacturing improved stoves as a source of income will continue the profession as the demand for improved cook stoves will rise. Towards the end of the project, women and youth will be organized into cooperatives that will sign a co-management contract with the district to ensure the sustainability of the created forest. Furthermore, forest/agroforestry services (Bee keeping, erosion control) and products (fodder, timber, and firewood, charcoal) will motivate farmers to continue maintaining and planting more trees.

As an innovation, GDO will establish and strengthen an innovation platform (Biomass Fuel Innovation Platform - BFIP) comprised of cook-stove producing artisans, sector agronomists, forest and agro-forest tree seedling producers, customers in need of these products and/or services, and finance institutions (SACCO, PBR and other reliable microfinance institutions in the project area). This will help to strengthen and facilitate business links between the innovation platform actors. The BFIP is the platform whereby all actors will be meeting for the discussion on the project related activities and benefits. The artisans will get opportunity to explain their business of cook stove and interest banks to invest in their business by providing loan to them, the agronomists, and forest and agroforestry tree seedling producers will provide advice to the farmers for land management practices using tree on farm approach for the improved crop and they will take opportunity to explain the benefits raised from trees and therefore encourage them to sustainably continue to plant trees on their land and hence sustain those benefits.

Q 2.7 What is the scope for income generation from the project?

The project will invest in agroforestry technologies hence generating income for smallholder farmers through increased quality fodder for more milk, fuel wood, fruits, and increased crop yields. The project will create jobs for rural communities, thus increasing off-farm income. Tree products (timber, fuel wood, charcoal, and poles) and non-wood products (honey and medicines) from the project interventions will generate income for both private (local communities) and the public. Business in cook stoves will be promoted hence creating sustainable source of income to local artisans. Prospective income from carbon market is expected from the planted trees and woodlots.

**Scope of income:**

- The project will employ the local farmers and each farmer will be getting 1500 Rwf/day.
- Some of the planted agroforestry trees will provide fodder and thus generate income of 50,000 Rwf/ton;
- in year 2, the 400 planted agroforestry trees/ha will give stakes at 4Rwf/stake (This will increase by 5% from year 2)
- From established agroforestry and woodlots farmers will be able to sell some timbers at 1500 Rwf/ton
- From established agroforestry trees will give 1ton of fodder at 10,000Rwf/ton with increment of 1% in the following years.
- Agroforestry will increase crop yield by 70kg/ha with 100Rwf/kg and this will increase by 2% in following years.
- Agroforestry/fruit trees trees will give 40 fruits/tree for 50Rwf/fruit and this will increase by 2.5% in the following years.
- The trained women and youth in manufacturing improved cook-stoves will sell them at 5,000/stove.
- Furthermore, the communities will benefit from the carbon offsetting initiatives. The researchers conclude that investing in carbon offset credit programs yields significant social, environmental and economic returns beyond greenhouse gas emissions reductions. This research finds that each tonne [metric ton] of carbon reduced has additional benefits – such as poverty alleviation, infrastructure development and nature conservation – worth $664, meaning that businesses which are voluntarily offsetting their emissions are having a bigger impact than perceived.” In Rwanda, the carbon offset payment programs are coming in, so the farmers will benefit from that through their established woodlots/trees on farm.

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<thead>
<tr>
<th>Q 2.8</th>
<th><strong>Preparation:</strong> Has a feasibility or pre-feasibility study been conducted (if yes, then please attach a copy to this PD)?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>During the PPD development, farmers as key stakeholders were consulted during the preparation of this project; this was done through the consultation meeting with the involvement of the local authority and other partners. In this meeting, the participatory dialogue between stakeholders and the project team was mainly to identify the most critical problems in environment and agriculture. Furthermore, the problem analysis carried out showed that Gatsibo District is highly degraded, poor in forest cover and less funded in environmental related activities. In the context of this project, it is planned to involve farmers in all actions such as planning, implementation and monitoring and evaluation. During the preliminary meetings with farmers, the farmers strongly showed their willingness to participate through their interest in planting more trees and their claimed to get diversified species for multiple benefits. Therefore, due to their interest and benefits that they expect from the project components such as agroforestry, forest rehabilitation, woodlots and use of cook-stoves, farmers pledged their full participation in the project implementation.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q 2.9</th>
<th><strong>Preparation:</strong> Are there any outstanding regulatory or legal requirements that need to be met before the project can proceed (access to land, planning consent, use of new technologies)?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>There are no legal binding constraints to the implementation of the project since the Government of Rwanda made land reform, which recognizes the right of ownership by giving land title to people after digitizing the plots. Therefore, farmers can take long term investments on their land since they have the right to own and use the land (Art.3 of Organic Law N° 08/2005 of 14/07/2005 determining the use and management of land in Rwanda). Farmers and cooperatives with legal personality own land on long term lease in conformity with provisions of the Organic Law No. 08/2005 (Art. 5). The landowner enjoys full rights to exploit his land. In this respect, trees and woodlots planted on farms are the property of the landowner, who may wish to exploit them for his own benefits. But exploitation of the trees and woodlots must consider terms and conditions specified in the Law N°47bis/2013 determining the management and utilization of forests in Rwanda.</td>
</tr>
</tbody>
</table>

| Q 2.10 | **Preparation:** Has an Environmental Impact Assessment been conducted for the project (if yes, then please attach a copy to this PD)? |
No environmental impact assessment has been conducted. However, relevant literature on the kind of interventions described in this project proposal shows that no negative impact is expected during or after implementation of the project. Instead, there is evidence of positive impact from the reduction of carbon emissions which bring about greenhouse gas effect responsible for global warming. Kitchen air pollution will decrease and this will result in reduced exposure of women and children to smoke that causes eye and respiratory diseases. Agroforestry and forest restoration will result in increased forest cover with a consequence of increased carbon sequestration. Deforestation resulting from over-exploitation of forests for firewood and timber will decrease and forest regeneration will be possible.

Q 2.11 How will the performance of the project be monitored and evaluated (both during and after the project)?

Before the project implementation, a baseline survey will be undertaken for situation analysis which will be based on to measure the change. A logical framework will be used to measure the performance of the project. Participatory quarterly monitoring and evaluation by partners will be done against the set indicators in the log-frame by conducting field visits and preparing quarterly and annual progress reports indicating the status of physical implementation, procurement made, expenditure level, difficulties encountered and measures taken to improve project management. In addition, RNRA together with beneficiaries and other stakeholders will conduct an annual project review to measure all the indicators. RNRA will prepare and present to the project steering committee an annual work plan and budget for consideration and approval and it will be submitted to FONERWA.

The project will also be periodically supervised by the FONERWA Secretariat to verify project achievements on the ground, assess the level of attainment of expected outputs, issue directives and make recommendations for greater project management effectiveness, with a view to achieving the set objectives. At the end of the project, RNRA will prepare and submit a project completion report to the FONERWA Secretariat. FONERWA will conduct a completion mission to evaluate project achievements and performance. All M&E processes will fully involve the beneficiaries.

After the project period, RNRA as the institution that has the mandate of increasing forest cover, will continue to monitor the established woodlots and rehabilitated forests change. RNRA together with ICRAF as a research institution will also continue to monitor the project expected benefits.

Q 2.12 How will you involve the beneficiaries and other stakeholders in monitoring and evaluation?

In order to optimize the participation of beneficiaries and stakeholders in the M&E, the project will establish a Steering Committee with a broad representation (including farmers, local authorities, private partners and FONERWA) not only to provide strategic orientation but also to participate in the process of validating the project annual work plans and reports. The project will actively participate in the District Joint Action Forums; to enable maximizing synergy and interaction with other actors operating in the district.

The lead institution will engage partners to undertake preliminary planning of the project through workshops. Workshop proceedings produced will indicate partner goals and capacities matrix. The M&E plan will be used to describe participatory M&E activities, the timing and responsibility of each stakeholder. Beneficiary representatives will be involved in monitoring and evaluation of the project achievements and impact. Project stakeholders will organize meetings and joint evaluation missions quarterly, annually and as necessary. Mid-term evaluation of project activities will be done in stakeholder workshops in the presence of FONERWA. Regular performance data collection and periodic evaluations will be conducted by all stakeholders in order to provide information to the project steering committee to modify and/or extend action plans and strategies. All stakeholders will also be involved in final project impact assessment.
Q 2.13 | **Which** Output from the FONERWA’s overarching M&E framework will be contributed to in the project’s M&E Framework (if possible choose an indicator from FONERWA’s M&E framework)?

The project will contribute to the following FONERWA’s output and indicators:

**Output 1:** Conservation and management of natural resources strengthened and sustained as a result of the Fund
- Output indicator 1.1: Area (ha) of land secured against erosion
- Output indicator 1.2: Area (ha) forest and agro-forest cover (disaggregated by afforestation / restored forest / agroforestry)
- Output indicator 1.3: No of ha of watersheds rehabilitated

**Output 2:** Renewable energy and other environmentally sustainable, low carbon and climate resilient technologies adopted, developed and/or improved for use in Rwanda, as a result of the Fund
- Output 2 Indicator 2.3: Tonnes of CO$_2$ equivalent emissions avoided
- Output 2 Indicator 2.4: No. of Rwandan: a) citizens and b) women and girls who have built resilience to climate change impacts

**Output 3:** Environment and climate change issues mainstreamed into policies, programmes, plans, budgets and activities for public and non-public agencies
- Output indicator 3.3: Total number of green jobs created: disaggregated by a) gender, b) youth, c) < 6 months, d) > 6 months

Q 2.14 | **Lesson Learning:** Please explain how the learning from this project will be disseminated and shared during (and at the end) of the project, and to whom this information will target (e.g. Project stakeholders and others outside the project)

Lessons Learned in forest plantation and rehabilitation, agroforestry and improved cook-stoves production will be shared with project stakeholders through participatory monitoring and evaluation field visits, and through regular monthly, quarterly, semi-annual and annual meetings at various levels (village, cell, sector, district, or ministerial) for experience sharing and planning. Lessons learned will also be shared through regular reporting and feedback to and from stakeholders. Meetings and workshops will be organized to learn from the successes and or failures in order to improve future planning for similar interventions. The information from these evaluations will be packaged and disseminated to end users through identification of appropriate communication media. Farmers will be reached through training, dissemination of extension materials (such as leaflets, posters) and media (Radio, TV). Major lessons from project implementation will be posted on RNRA website.

A functional networking system (an innovation platform) will be established and strengthened to optimize knowledge and information transfer and exchange. Through project exchange visits the learning effect is often higher than in a training course situation. The project will put more emphasis on advisory and technical support than giving only financial assistance. Sound training of local technical and marketing expertise is the best guarantee of having a successful project in the long run.

Many users still lack knowledge of the health benefits of smoke-reduced cooking with an efficient cook-
stove. Local health services will be involved in spreading this message and health monitoring should be planned and carried out jointly.

The project final evaluation report will be summarized with emphasizes on best experience and lessons from this project in a booklet and a DVD that will be multiplied and disseminated to stakeholders.

### Q 2.15 Risk Management:

Please outline the main risks to the successful delivery of this project indicating whether they are high, medium or low. If the risks are outside your direct control, how will the project be designed to address them?

<table>
<thead>
<tr>
<th>Risks</th>
<th>Imp</th>
<th>Pro</th>
<th>Mitigation</th>
<th>Assumptions remaining</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special vulnerable groups (household with poor old people, household with disabilities) in intervention area failing to implement the project</td>
<td>L</td>
<td>L</td>
<td>• Advocacy</td>
<td>• The local authorities will advocate for these particular groups to get support from community work</td>
</tr>
<tr>
<td>Delay in seedlings production</td>
<td>L</td>
<td>L</td>
<td>• Good planning for timely seed acquisition and seedlings production</td>
<td>• Availability of tree seeds</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• the calendar for seedlings production and planting will be followed</td>
</tr>
<tr>
<td>Low determination and commitment of partners (Public and Private Institutions)</td>
<td>L</td>
<td>L</td>
<td>• Signing of agreements (MoUs) between RNRA and its partners</td>
<td>• Availability of adequate human capacities with partner institutions</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Regular monitoring and evaluation of activities</td>
<td>• Mutual interest among partners</td>
</tr>
<tr>
<td>Low cooperation of farmers</td>
<td>H</td>
<td>L</td>
<td>• Intensive awareness raising campaigns</td>
<td>Willingness and support of local authorities</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Creation of Job opportunities</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Involvement of farmers and their leaders in project design and implementation phases</td>
<td></td>
</tr>
<tr>
<td>Low purchasing power of the</td>
<td>M</td>
<td>H</td>
<td>• Provision of</td>
<td>Cooperation with microfinance institutions</td>
</tr>
<tr>
<td><strong>households</strong></td>
<td><strong>employment</strong></td>
<td><strong>and local small scale entrepreneurs</strong></td>
<td></td>
<td></td>
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<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Facilitation of payment of improved cook stoves</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Drought/termites</strong></th>
<th><strong>M</strong></th>
<th><strong>L</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Planting drought/termite tolerant tree species</td>
<td>Availability of tolerant tree species germplasm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Timing tree planting seasons</td>
<td>Willingness of farmers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Watering</td>
<td>Skilled personnel for establishing and maintaining trees</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Beating up (Replacement planting)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Maintenance of young trees (weeding, hoeing)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Procurement delays</strong></th>
<th><strong>L</strong></th>
<th><strong>L</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Timely planning</td>
<td>Commitment of the procurement office</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Decentralized financial management</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Appointment of a procurement officer of the project</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Damage of tree plantations by cattle</strong></th>
<th><strong>H</strong></th>
<th><strong>L</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Protection of young plantations</td>
<td>Cattle ranches are fenced</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Enforcement of forest laws regarding penalties</td>
<td>Willingness and cooperation of livestock farmers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Enforcement of zero grazing system</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Initiation of community based protection and management</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Fire outbreaks</strong></th>
<th><strong>H</strong></th>
<th><strong>L</strong></th>
<th>No natural fire hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sensitization campaign</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Initiation of community based protection and management</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Enforcement of forest law and regulations</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Q 2.16 **Risk Management:** What specific risks, if any, does your project pose to the environment, people or institutions affected by the project and how will these be managed and mitigated?

- **Risk:** The use of the polyethylene bags in nurseries causes the environment pollution
- **The mitigation measure:** After using the polyethylene bags, they will be collected and taken to the appropriate factory for recycling. This will be done through sensitizing the communities in the management of the polyethylene bags after planting.
- **Risk:** Emission from improved cook –stoves will affect environment and increase gas emission
- **Mitigation measure:** The improved cook-stoves will produce low gas emission and will reduce significantly the gas emitted in the atmosphere
- **Risk:** The establishment of woodlot/ forest can causes a risk of conflict between people and project due to the land immobilisation when land is needed for other uses.
- **The Mitigation measure:** is to involve farmers in project identification, planning and implementation. The project and local authorities will explain to the people in various meetings the products and services, people will benefit from woodlot / forest
- **Risk:** Emission from improved cook stove affect the health of people
- **The Mitigation measure:** Improved cook-stoves to be produced have less effects on human health as compared to the traditional cook stoves AND we assume that The improved cook –stoves to be used will have low emissions

**SECTION 3: PROJECT BUDGET AND VALUE FOR MONEY**

Q 3.1 **What** is the total cost of the project (RWF; provide total cost for each year of the project disaggregated by capital and recurrent expenditure)?

The total project cost is 1,581,576,600 Rwf. capital expenditure is (1,389,948,600 Rwf) and recurrent expenditure is (191,628,000 Rwf) of the total cost.

<table>
<thead>
<tr>
<th>Expenditure</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital</td>
<td>551,693,300</td>
<td>716,693,800</td>
<td>121,561,500</td>
<td>1,389,948,600</td>
</tr>
<tr>
<td>Recurrent</td>
<td>63,876,000</td>
<td>63,876,000</td>
<td>63,876,000</td>
<td>191,628,000</td>
</tr>
<tr>
<td>Total</td>
<td>645,188,500</td>
<td>839,080,000</td>
<td>193,044,500</td>
<td>1,581,576,600</td>
</tr>
</tbody>
</table>

Q 3.2 **What** is the total amount requested from FONERWA (RWF; provide financing needs for each year of the project)?
The project is seeking the total amount equivalent to **1,469,171,600 Rwf** from FONERWA for the implementation of all project components.

<table>
<thead>
<tr>
<th>Cost item/output</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>output 1. Forest plantations in Gatsibo district rehabilitated</td>
<td>165,187,500</td>
<td>165,995,000</td>
<td>7,800,000</td>
<td>338,982,500</td>
</tr>
<tr>
<td>output 2. Woodlots for environment protection established</td>
<td>171,740,000</td>
<td>351,280,000</td>
<td>23,400,000</td>
<td>546,420,000</td>
</tr>
<tr>
<td>Output 3. Agroforestry systems promoted and adopted by farmers</td>
<td>146,145,300</td>
<td>139,937,800</td>
<td>2,895,000</td>
<td>288,978,100</td>
</tr>
<tr>
<td>Output 4. Increased access and use of improved cook-stoves</td>
<td>34,573,000</td>
<td>38,743,000</td>
<td>65,075,000</td>
<td>138,391,000</td>
</tr>
<tr>
<td>Output 5. Monitoring and Evaluation</td>
<td>34,047,500</td>
<td>20,738,000</td>
<td>22,391,500</td>
<td>77,177,000</td>
</tr>
<tr>
<td>Sub/total</td>
<td>551,693,300</td>
<td>716,693,800</td>
<td>121,561,500</td>
<td>1,389,948,600</td>
</tr>
<tr>
<td>Personnel</td>
<td>63,876,000</td>
<td>63,876,000</td>
<td>63,876,000</td>
<td>191,628,000</td>
</tr>
<tr>
<td>Grand Total</td>
<td><strong>645,188,500</strong></td>
<td><strong>839,080,000</strong></td>
<td><strong>193,044,500</strong></td>
<td><strong>1,581,576,600</strong></td>
</tr>
</tbody>
</table>

**Q 3.3** List all other sources of funding. Note whether the status of other funding sources (i.e. Whether the money has been approved or is awaiting authorisation)

- RNRA will contribute **67,975,000** Rwf, (approved)
- ICRAF will contribute **18,180,000** Rwf (approved)
- Gatsibo will contribute **26,250,000** Rwf (approved)

**Q 3.4** Additionality: Explain why the project cannot be fully financed by other sources than FONERWA?

The Government allocates about 150 million Rwf annually to Gatsibo District in forest resource management with the objective of increasing forest cover in the context of reaching 30% forest cover as stated in Rwanda vision 2020. Furthermore, district authorities and development partners are raising awareness on the use of improved cook-stoves to reduce fuelwood consumption and its impact on forests, thereby reducing carbon emissions. However, effects of these interventions on carbon sequestration, resilience to climate change and improved livelihoods of people are not evident. With FONERWA funding, it will be possible to carry out actions that will enhance carbon offsets through the establishment and rehabilitation of woodlots, agroforestry and reduction of pressure on existing forests for (fuel) wood supply and consumption. Additionally, the project will tackle health and energy issues by creating short distance supply of fuel wood and promoting use of improved cook-stoves that will emit little or no noxious substance. This project, therefore, will increase carbon sequestration, thus increasing the potential to access income from the carbon market.
Apart from FONERWA, RNRA is looking for more Donors in order to achieve the 2020 target of increasing forest cover up to 30% and put in place District forest management plans and ensure its implementation. RNRA together with IUCN has recently submitted a project proposal to BMU (Germany environment funds) of 5 million USD for Forest Landscape Restoration (FLR) that is going to be implemented in Gicumbi and Gatsibo Districts. This project will be implemented in line with FONERWA project as an extension since it will extend some activities of FONERWA project to more sectors since the funds requested from FONERWA cannot cover the whole District.

Many improved cook stoves initiatives have been undertaken but one of the stumbling blocks has been the high cost compared to the incomes of the community. With this project, the community will be sensitized on the current saving system of SACCOs. The population will be encouraged to save part of the money earned from the project works and use it to create a revolving fund that will enable them to purchase the cooking stoves and repair them. In addition to this local artisans (youth and women) will be trained to produce them locally with local materials and this will ensure an affordable price and sustainability.

While development partners in Gatsibo District fostered projects with short term impacts like agricultural crop production, few environmental related projects that provide long term impacts have rarely been included in their plans due to the lack of funds. In this regard, funding from FONERWA is sought to implement activities such as afforestation and agroforestry that will generate economic and environmental benefits in the long run. The impact of these activities extends beyond the district level.

<table>
<thead>
<tr>
<th>Project</th>
<th>Description</th>
<th>Timing and geographical coverage</th>
<th>Potential duplication and synergies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forest management support project (PAFOR)</td>
<td>The main objectives of the project were: - Water shade protection by planting trees on hillside - Agroforestry</td>
<td>Timing: 2003 to 2010 Gatsibo, Nyagatare, Kayonza, Kirehe, Bugesera, Rulindo, Gakenye, Muhanga, Ruhango, Nyamagabe, Nyaruguru and Nyamasheke</td>
<td>• Agroforestry • Erosion control</td>
</tr>
<tr>
<td>Forest Landscape restoration (FLR)</td>
<td>This project is in pipeline, RNRA together with IUCN team have developed a proposal that was submitted to Germany government, the project is likely to be approved by the end</td>
<td>GATSIBO AND GICUMBI Timing: end 2015-2017</td>
<td>• Developing forest management plans • Scaling up FONERWA intervention in the rest of the District</td>
</tr>
</tbody>
</table>
of July. Since the FONERWA Project will not cover the whole District this will be a complement to the FONERWA project for the rest of the District (scale up) and it will additionally develop the entire District forest management plan which is very critical today for the better forest management

the forest landscape restoration is planned process that removes drivers of deforestation and degradation from landscapes, the project will improve ecological integrity by supporting and restoring ecological processes hence
Enhancing human welfare by increasing the production of ecosystem goods and services. This will be done
Through restoration interventions that work within the mosaic of different forest land uses including agriculture, agro-forestry, plantations, and natural forests.

Q 3.5 **What** non-financial support is needed to implement the project? What is the best way for FONERWA to deliver this support?
Advisory services and timely disbursement of funds are expected from FONERWA. Other non-financial support (e.g. linking farmers to carbon markets, advocacy) will be provided by RNRA. The District will facilitate the project to get suitable land for nursery establishment and will also mobilize the community for active participation in the project activities.

### Q 3.6 Value for Money (Economy):

i) Briefly describe how the required inputs have been identified and how the GoR procurement procedures will be used to ensure they are obtained cost effectively

ii) Provide identified unit cost measures or selected project outputs? (Please see VfM guidelines on how to determine these. Further guidance from the FONERWA Secretariat is available)

The project inputs have been identified based on the consultations made with farmers and preliminary survey on the problem identification and needs for solutions. The agro ecological conditions of the district were taken into account to determine the tree species to be used.

The costs related to salaries, transports, accommodation and field allowances were determined with reference to the existing government policies.

The public procurement Law N°05/2013 of 13/02/2013 will guide on procedures and regulations for acquisition of services, goods and works during the implementation of this project. The Transparency, Competition, Economy, Efficiency, Fairness, Accountability those are the fundamental principles governing the GoR procurement policy. Although the Procurement Law allows to use different procurement methods (Open Competitive bidding, Restricted tendering, Request for quotations, Shopping, Single sources, Force account, Community participation, etc.), the open competitive bidding will be prioritized for all cases where it is possible.

#### UNIT COST MEASURES

<table>
<thead>
<tr>
<th>Deliverables</th>
<th>target</th>
<th>total cost</th>
<th>Unit Cost- Rwf/ha</th>
</tr>
</thead>
<tbody>
<tr>
<td>output 1. Forest plantations in Gatsibo district rehabilitated</td>
<td>500 ha</td>
<td>338,982,500</td>
<td>677,965</td>
</tr>
<tr>
<td>output 2. Woodlots for environment protection established</td>
<td>3,000 ha</td>
<td>546,420,000</td>
<td>182,140</td>
</tr>
<tr>
<td>output 3. Agroforestry systems promoted and adopted by farmers</td>
<td>15,000 ha</td>
<td>288,978,100</td>
<td>19,265</td>
</tr>
<tr>
<td>output 4. Increased access and use of improved cook-stoves for 19317 HH</td>
<td>19317 Hh</td>
<td>138,391,000</td>
<td>7,164</td>
</tr>
</tbody>
</table>

Hh: household, ha: hectare
**Q 3.7 Value for Money (Efficiency):**

i) Briefly explain how the provision and operation of project inputs produce the expected outputs

ii) What is the Net Present Value (NPV) and benefit cost ratio for this project (Please see VfM guidelines on how to determine these measures. Further guidance from the FONERWA Secretariat is available)?

Basing on a logical framework approach activities and inputs were planned to achieve the project outputs. This process is supported by the feasibility study and experience from other almost similar projects implemented by Rwanda Natural Resources Authority. In order to make sure that inputs are identified in a realistic manner, the detailed budget (units, unit costs and quantity) has been prepared and discussed at different levels and M&E indicators were established to be able to measure the project expected results.

The expected results are as follows:

1. 500 ha of degraded public forests restored;
2. 3,000 ha woodlots for watershed protection established
3. Agroforestry systems practiced on 15,000 ha of consolidated agricultural land for soil erosion control, soil fertility, fodder, fruits, wood (fuel wood and stakes for climbing beans) and crop yield improvement
4. 19,317 households’ access and use improved cook-stoves that have proved to be energy serving efficient, smoke free and innovative in wood energy technology.

- Net Present Value of the project (NPV): 2,221,739,893
- Benefit Cost Ratio (BCR): 2.64

**Q 3.8 Value for Money (Effectiveness):**

How does your project demonstrate effectiveness:
- How will it show the outputs meet the project objectives?
- Which indicators will you measure to demonstrate effectiveness?

The agroforestry and forest restoration components will increase forest cover and so will carbon sequestration. Beneficiaries will get jobs, and other forest products and soil erosion will be reduced. Soil fertility will increase as a result of agroforestry (nitrogen fixation) and consequently, crop productivity will increase. Improved cook-stoves reduce firewood consumption, carbon emissions, and thus save lives and forests and reduce the impacts of climate change. All the project interventions are strongly addressing the climate change resilience.

To demonstrate the effectiveness the following indicators will be measured:

- Area (ha) of forest plantations rehabilitated Number of casual labourers (man-days) in forest rehabilitation activities
- Area (ha) of woodlots established Area (ha) of newly established agroforestry
- Number of farmer trainers trained in agroforestry Number of established and trained cooperative representatives (trainers) in improved cook-stove making and marketing Number of cook stoves distributed to households
ANNEXES:

1. Project budget
2. Cost benefit analysis
3. Work plan
4. Project M&E
5. Log frame
6. Audit report
7. Key personnel CVs