## Project Title
**SUSTAINABLE FOREST AND WATERSHED RESOURCES MANAGEMENT IN NYAGATARE DISTRICT**

### Project Summary
Soil erosion and siltation of Akagera and Umuvumba rivers are due to deforestation and mismanagement of rain water in water shed of these two rivers. As a mitigation measure to sustain these resources, this project aims at planting a total of **805,380** trees on a total area of **593ha, 94,435** Bamboo cuttings at **85ha**, construction of **500** rainwater harvesting tanks, and supporting **20,408** households to access improved cook-stoves and contribution to the installation of **200** biogas digesters to reduce high demand on wood energy.

### Anticipated Start Date
**01/7/2015**

### Project Duration
27 months

### Funding Requested
**634,248,498**
(83.5% of the project total cost)

## Name of Lead Organisation
Nyagatare District

### Type of Organisation, which best describes the Lead Organisation
- ☒ Government Institution
- □ Non-Governmental Organisation (NGO)
- □ Private Sector Enterprise
- □ Academic Institution
- □ Other (please specify)

## Partner Institutions
Association BAMPOREZE

### Full Office Address
Nyagatare District, P.o Box 36, Nyagatare
E-Mail: nyagataremayor@nyagatare.gov.rw

### Website Address
Website: [www.nyagatare.gov.rw](http://www.nyagatare.gov.rw)

### Contact Person
**Name:** Muganwa Stanley  
**Position:** Vice Mayor in Charge of Finance, Economic and Development in Nyagatare District  
**Email:** stanleymuganwa@gmail.com  
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## Is this a resubmission of an earlier submitted PD
(if so please provide details)
## National Climate Change and Environment Fund (FONERWA)
### Full Project Document (PD)

### SECTION 1: INFORMATION ABOUT THE APPLICANT

<table>
<thead>
<tr>
<th>Q 1.1</th>
<th><strong>What is the Lead organisation's total number of full-time employees?</strong></th>
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<td>The total number of full-time employees in Nyagatare District is 61 at the district level.</td>
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Nyagatare District has wide experience in oversight of environment related projects, ranging from tree planting, installation of biogas digesters, manufacturing improved cook-stoves, electrification funded by the Government through the MINERENA, EWSA/MININFRA, SNV and NBDF. The district has coordinated successfully the implementation of similar projects including Umutara Community Resource and Infrastructure Community Development Project (PDRCIU) I with the total budget of USD50,000. The project intervened in forestry tree plantation, construction of valley dams, roads construction and rehabilitation, bore holes construction, promotion of modern farming techniques, support to the creation of rural enterprises. In terms of Financial management capacity, Nyagatare District managed 9,068,173,744 Rwf for the year ended by June 30th, 2013 (see 2012/2013 financial audit report of Nyagatare District in Annex 5).

The District has permanent staff in environment and water with 4 years of experience. CVs of Nyagatare and Bamporeze permanent staffs that will be involved in the project implementation, monitoring and evaluation are in Annex 6. There are also 14 environment Committees in charge of environment and natural resources protection at sector level and 106 environmental committees at cell level.

In addition, Bamporeze Association as partner has proven wide experience in working with vulnerable women and unemployed youths Self Help Groups and Cooperatives for environmental conservation through implementation of activities such as tree and bamboo planting.

Bamporeze Association has demonstrated high quality performance during implementation of the tree planting project in Bugesera District (a similar region to Nyagatare District), a project that was implemented using Labour intensive techniques from July 2004- April 2007 and realized 100.2% of achievement baing on the number of trees as certified by CDF. Bamporeze also has successfully timely produced improved fruits seedlings (hass) in Bugesera in 2009 as certified by RHODA.

<table>
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<tr>
<th>Q 1.3</th>
<th><strong>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)</strong></th>
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<td>The project will be lead as follow</td>
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<tr>
<td></td>
<td><strong>A. Project Executive Committee:</strong></td>
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</tbody>
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1. MUGANWA Stanley, chairperson of Project Executive Committee; E-mail: muganwastanley@yahoo.com
2. MUHONGAYIRE Jeanne d'Arc: Vice chairperson Executive committee; E-mail: muhojane2@yahoo.fr
3. KANTENGWA Mary, Chief Budget Manager with coordination of technical activities; E-mail: marykantengwa@yahoo.com
4. MBONIGABA Jean, Forester, E-mail: jeanbonigaba@yahoo.fr
5. MURENZI Samuel, Environmentalist, E-mail: samuel.murenzi@yahoo.co.uk
6. MUTABARUKA Fulgence, Agronomist, E-mail: mutafulg@yahoo.fr
7. The Project Manager: To be appointed (Secretary of the executive committee)

B. Project Staff
1. Project Manager, to be appointed
2. Monitoring and Evaluation officer to be appointed
3. Project field officer to be appointed

The steering committee of the project will be made of the project executive committee’s members plus the following persons:

1. BYINSHI Francois, Director of Planning in Nyagatare district, Email: frabyinshi@yahoo.fr, Tel: 0788352824
2. RUTANANA Alphonse, Director of Finance in Nyagatare District, E-mail: arutanana@yahoo.com; Tel: 0788493324
3. KAGIZI Cossia, Professional in charge of Human Resources Management in Nyagatare District, E-mail: kagzcosia@yahoo.com, Tel: 0788562286
4. MUSHABE Claudian, Executive Secretary of Nyagatare Sector, E-mail: mushadcla@yahoo.com, Tel : 0784894164
5. MWUMVANEZA Emmanuel, Executive Secretary of Matimba Sector, E-mail: mwumvaneza.emmanuel20@gmail.com;  Tel:0784894139
6. KUBWA RUBONEKA Sylver, Executive Secretary of Mimuli Sector, E-mail: kubwasilver2005@yahoo.com; Tel:0784894066
7. KAMUGISHA Charles, Executive Secretary of Musheri Sector, E-mail: charleskamu@gmail.com; Tel : 0784894497
8. UWISHATSE Ignas, Executive Secretary of Rukomo Sector, E-mail: iuwishatse73@yahoo.fr; Tel : 0784893698
9. MUYANGO Emmanuel, Executive Secretary of Rwimiyaga Sector, E-mail:muyangoe@yahoo.com; Tel:0784894456
10. MUGABO Faustin; District DASSO commander E-mail: mugabofaustin0101@gmail.com; Tel: 0788757051
11. Nyagatare District Police Commander
12. Representative of tree and bamboo planting Cooperatives (to be established)
13. Representative of rainwater harvesting Cooperative (to be established)
14. Representative of improved cook-stoves marketing cooperatives
15. Representative of canvas biogas marketing cooperative (to be established)

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.
The Annual financial report of the District is attached as an 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.)?**

The District of Nyagatare is one of the seven districts belonging to the Eastern Province. The District is divided into 14 Sectors made of 106 cells and 630 villages. The District spreads over an area of 1,919 km², with Uganda at its northern border, Tanzania at its East, Gatsibo District at the South and Gicumbi District on the Western border. Based on the 2012 Population Census provisional results, the total population in Nyagatare is 466,944 inhabitants of which 228,610 are male (49%) and 238,334 are females (51%).

After the 1994 Genocide, repatriation and resettlement of Rwandans from exile inevitably necessitated the reduction of Akagera National Park from 2,677 km² to 1,021 km², a big part of which formed the Nyagatare District of today.

Deforestation in order to get firewood, land for shelter construction and bush burning in order to get land for crop and cattle farming severely degraded the savannah vegetation characterized mainly by grassland, scattered acacia trees and gallery forests along the banks of Umuvumba and Akagera rivers.

Activities of extracting clay for brick making and cutting trees for fuel-wood for firing the bricks in some areas along Umuvumba and Akagera rivers have led to further land and gallery forest degradation. The mandatory 10 m wide buffer strip has been encroached upon as a result of these anthropogenic activities. The gallery forest, which consists mainly of the *Acacia kirkii* tree species which protects the river banks from erosion, provides a favorable microclimate and habitat for 62 bird and 70 plant species is rapidly diminishing.

Most ranches are poorly managed resulting in overgrazing and soil compaction, loss of water retention capacity of soils, excessive surface water run-off, soil erosion and loss of soil fertility.

Furthermore, the rapid population increase of 83% from 255,104 to 466,944 between 2002 and 2012 has exacerbated the pressure on the ever declining quality and quantity of natural resources in the District. The population needs of construction wood and firewood is increasing. There is need, therefore, to plant more trees and protect them through promotion of wood fuel saving technologies in order to meet the demand of the increasing population.

The insufficiency of water sources leads the population of Nyagatare District to use the water of Umuvumba and Akagera for their household’s needs and livestock.

Although, Nyagatare as the semi-arid district has few water sources and experiences long drought seasons, small quantity of rains with very weak (827mm/year) and very unpredictable to satisfy the needs of households, agriculture and livestock, it is strange to hear that during the raining season, rainwater are source of soil erosion and rivers siltation due to rainwater mismanagement, deforestation and degradation of gallery forest alongside Umuvumba and Akagera Rivers.

This situation requires urgent measures for protection of limited available water resources against siltation through bamboo plantation on mandatory 10m wide buffer strip alongside Umuvumba and plantation of *Acacia Kirkii* for rehabilitation of Akagera River gallery forest.

This project will contribute to the conservation and management of natural resources in six Sectors touching on Umuvumba and Akagera riversides such as, Matimba, Mimuli, Musheri, Nyagatare, Rukomo, and Rwimiyaga.
It will reduce soil erosion, provide an alternative to water households and livestock needs. It will protect Umuvumba and Akagera buffer zone and will improve agricultural yields and enhance sustainable food security. Furthermore, this project will create green jobs for local people and increase their incomes.

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.)?

The overall objective of the project is to enhance the protection of the Akagera and Umuvumba watershed in Nyagatare District. In addition, the project aims to reduce soil erosion, increase soil productivity, reduce consumption of biomass and create new jobs for youths and women in line with Nyagatare DDP 2013-2018, ENR Sector strategy, MDG objective 7, and EDPRS 2.

The project objectives will be achieved through the following outputs:

Output 1: Soil erosion control increased through tree planting and rain water harvesting in 6 sectors\(^1\) of Nyagatare District

In order to reduce soil erosion and ensure sustainable soil productivity in the Akagera and Umuvumba watershed, this project will plant 325,380 agro forestry trees (including 60,690 avocados trees, 60,690 mangoes trees, 102,000 GREVILLEA ROBUSTA and 102,000 CASSIA SIAMEA trees) on 293 ha\(^2\); 94,435 bamboo on 85ha alongside Umuvumba river and 480,000 Acacia Kirkii trees on 300ha alongside Akagera river. The project will Install 500 rainwater harvesting tanks.

For rainwater harvesting, we will use sheeting to install on roof rainwater tanks for neighbouring households tree nurseries will be prepared near the water source to allow watering during the dry season. Youths and women cooperatives will be trained in construction of rainwater harvesting tanks and marketing as an income generating activity.

The following indicators will be measured: 1.1 Area (ha) of agroforestry trees planted; 1.2 Number of rain water harvesting tanks installed.

Output 2: Akagera and Umuvumba rivers buffer zone rehabilitated through bamboo and acacia kirkii planting

Based on the fact that Akagera and Umuvumba rivers are the major water resources in Nyagatare District, it is imperative to protect them against soil erosion, siltation through restoration of gallery forest alongside Akagera river by planting 480,000 Acacia Kirkii on 300 ha of protected land alongside Akagera river and 94,435 bamboo stems on 85ha mandatory 10m wide buffer strip alongside Umuvumba River.

The indicator related to the rehabilitation of Akagera and Umuvumba rivers buffer zone will be measured by indicators 2.1: Area (Ha) of Akagera and Umuvumba buffer zone rehabilitated\(^3\).

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1 The 6 targeted sectors are Rukomo, Rwimiyaga, Nyagatare, Musheli, Mimuri and Matimba
2 The total area (Ha) planted with agroforestry trees is obtained by dividing the total number of agroforestry planted trees by 1111 (3m of spacing)
3 By rehabilitation we mean restoring the gallery forest that had once been cleared alongside Umuvumba and Akagera buffer zone through planting Acacia Kirkii on protected land alongside Akagera river and bamboo on the mandatory 10m wide buffer strip alongside Umuvumba River.
Output 3: Exploitation of forests for wood fuel reduced through utilization of biogas and improved cook-stoves

To reduce deforestation and to resolve lack of firewood by residents in Nyagatare District, the project intends to promote the use of wood fuel saving technologies such as improved cook stoves (“Cana rumwe”) and canvas biogas digesters. Promotion of use of wood fuel saving technologies will have many benefits for the local population. Collecting firewood is hard work and takes up a lot of time and effort; it is usually the responsibility of women and children. For a woman that spends many hours every week walking to collect wood fuel, a reduction in the amount of wood she needs to prepare the daily food for her family will allow her to save valuable time and effort that would be used for other developmental activities. In cases where firewood is purchased, the use of improved cook stoves will lead to cash savings. When used correctly, improved cook stoves greatly reduce firewood requirements and amount of smoke in the kitchen leading to households’ better health outcomes. The project will distribute 20,408 improved cook stoves to poor households with beneficiaries’ contribution of 20% of the total cost.

Biogas is an environmentally friendly source of energy because it produces gas that is used in cooking. Despite government subsidy promotion of biogas in Nyagatare district is still limited by its initial cost and the contribution of beneficiaries which are relatively high and not affordable for poor households with less than 5 cows, especially the beneficiaries of Girinka program.

Livelihoods will be diversified through learning vocational skills such installation of rainwater tanks, installation and maintenance of canvas biogas digesters, construction of rainwater harvesting tanks, manufacturing and marketing improved cook-stoves, tree nursery preparation, trees and bamboo planting. This will provide alternative livelihood to protect the natural resources against degradation.

This project will create jobs for beneficiaries of Girinka program; build their capacity for saving at least 12.5% of the total cost of canvas biogas digester installation; the project will contribute the remaining 12.5% for only beneficiaries owning 2 to 4 cows from Girinka program to enable them access to EDCL earmarked subsidy for promotion of biogas in Nyagatare District. Training local unemployed youths and women self-help group/cooperatives in installation, maintenance and marketing biogas canvas digesters will contribute to cutting down its cost and creation of green jobs. It is expected that 200 poor households holding 2 to 4 cows from Girinka program will benefit from the use of biogas canvas digesters.

Indicator related to conservation of forest will be measured by Indicators 3.1: Number of biogas digesters installed and Indicator 3.2: Number of improved cook stoves sold whereas Indicator related to improved livelihoods will be measure by indicator 3.3: Total number of green jobs created for youth and for women. It is expected that 390 green jobs will be created for youth and women.

Outcome 1. Akagera and Umuvumba watershed protected through improved livelihood, and climate change resilience in Nyagatare District.

Outcome Indicator 1.1. Area (Ha) of Akagera and umuvumba Rivers watershed protected

Outcome Indicator 1.2. Number of persons earning income from the project implementation disaggregated by gender

The project has a significant impact on poverty reduction on the long run: it will equip youth and women with technical and vocational skills that will enable them to become self employed; rainwater harvesting

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4 By green jobs we mean income generating activities from tree planting, manufacturing and selling improved cook stoves, rainwater harvesting tanks & Biogas digesters installation and maintenance.
and biogas will save money and time for households, children and women for concentrating on other important things; fruits trees and agro forestry trees that will be planted will generate incomes for households. More importantly, the project will build the capacity of vulnerable peoples in financial literacy. The NPV is estimated at 579 billion within 20 years.

| 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.)? |

**Approach and methodology**

The project uses participatory approach from its design, with the involvement of the local population, local leaders, youths, women, farmers and security service representatives in the targeted sectors of Nyagatare District to promote local ownership of the project. There is no doubt that local population will contribute to the better implementation of the project in the case funds are availed.

The need of making more productive farms by planting fruits and forage trees on cattle ranches and agro forestry trees on consolidated land has initially raised by the local population. Limited access to water sources for households and livestock use was also highlighted by the local population as a challenge especially during the dry seasons. Children drawing water in Akagera rivers are exposed to the risk of being killed by crocodiles. Farmers’ representatives argued that most of cows are channelled to Akagera and Umuvumba rivers for getting water. This contribute to the rapid dissemination of cows’ ‘foot disease (uburenge) in the case one cow is infected. Extreme poverty, unemployment for youths and lack of awareness of the importance of environment protection were also highlighted by representatives of local population as the main causes of degradation of the gallery forest alongside Akagera and Umuvumba rivers to burn charcoal as alternative mean of livelihood.

During consultations meetings with representatives of different categories (youths, women and cattle farmers We noticed that any intervention that can address at the same time the issue of environment protection and poverty for the local population through jobs creation will be supported by youths and women representing the majority of the population of Nyagatare District.

The MINAGRI and the Government departments such as Rwanda Agriculture Board( RAB), Rwanda Natural Resources Authority (RNRA) and Rwanda Energy Group (REG) were consulted for advice on ecological suitability of fruits, agro forestry & forestry trees, the type of biogas digester suitable for poor households beneficiaries of Girinka Program in Nyagatare District as well as the unit cost and life span for various species of trees, water harvesting tank, canvas biogas digester, and improved cook-stoves.

Rwanda Agriculture Board (RAB) advised us to promote avocados and mangoes fruits trees because they are likely to resist in the semi-arid region with long drought seasons and small quantity of rains. However farmers need to be trained on the proper management of their farm to avoid the risk of Mangoes fruits endocarp that can harm livestock. This requires farmers to plant fruit trees on a small portion of their cattle ranches (10% of area of cattle ranches) and make sure that during the harvesting period cattle are kept on the remaining 90%. For agro forestry tree species, Grevillea Robusta and Cassia Siamea were selected due to their resistance up to 6 months of drought. For forestry trees, Acacia Kirkii and Bambusa Vulgaris were selected.

Consultation meetings have been also held with different stakeholders such as RDF Reserved Force, Environmental Committees at District, Sector and cell levels, Association Bamporeze, farmers’ cooperatives, private entrepreneurs to share their experiences in tree planting, maintenance and follow up,
financial literacy and jobs creation for unemployed youths and poor and vulnerable women. All of them welcomed the project and promised their cooperation for the better implementation of “sustainable forest and watershed resources management” project in Nyagatare District. The District and sector environmental committees have already started raising public awareness on forest and watershed resources management in Nyagatare District and they have promised full participation in the implementation of the project. This project will strengthen their capacity so that they can effectively oversee the project interventions at District and sector levels.

Memorandum of Agreement specifying the role of Nyagatare District as the lead Applicant and Bamporeze Association as the implementation partner already has been drawn up and signed to ensure commitment on all sides and avoid any friction during the project implementation (see annexe7).

Under supervision and guidance of Bamporeze Association, Self Help Groups (gathering project manpower) will be responsible for preparation of tree and bamboo nurseries, preparation of planting sites, tree and bamboo planting, follow up and maintenance on protected land, installation of rainwater tanks and dam sheets, marketing, installation and maintenance of canvas biogas digesters up to 1 year; manufacturing, marketing and installation of improved cookstoves.

Households will be provided by Bamporeze Association with agro forestry tree seedlings and will be responsible for preparation of planting site (on their own farms), transplantation, follow up, maintenance and protection of planted trees.

The District Administrative Security Support Organ (DASSO) in collaboration with environmental protection committees at Cell, sector and District levels, Self Help Groups/ cooperatives will ensure the protection of trees and bamboo planted on protected land.

The Coordination, monitoring and evaluation of the project by Nyagatare District will be done in collaboration with Association Bamporeze. The project will use Labour Intensive techniques for project implementation to provide income for poor households. Manpower recruitment will be based on the Ubudehe categories, land ownership at the first level, gender and youth oriented selection with high Labour intensity approach will be used.

Bamporeze Association will organize all recruited manpower in Self Help Groups of twenty members each one and provide them with institutional and need based capacity building aiming at developing their financial literacy and empowering them socio-economically and politically through weekly Self Help Groups meetings and savings. Members of Self Help Groups will be equipped with technical and vocational skills for preparation of tree nurseries, tree planting and maintenance (on government land), installation and marketing and maintenance of rain water tanks and dam sheets; installation, maintenance and marketing of canvas biogas digesters as well as manufacturing, installation and marketing improved cook stoves. The skills acquired will enable members of Self Help Groups to implement most of on field technical tasks required by the project. Farmers will be trained on tree planting, maintenance and follow up. Environmental protection committees at cell level will be involved in monitoring of planted trees and rewarding farmers who will perform well in maintaining planted trees (at least survival rate of 90% after 2 years).

Once Self Help Groups become mature, 8 to 10 self-help groups will be organized in cooperatives at sector level for increased sustainability of intervention. Women and youth cooperatives which are the majority of the population will be specialized in trees planting and maintenance; rainwater harvesting, installation and maintenance of canvas biogas, manufacturing and marketing of improved cook-stoves.
The project will pay man power on the rate ranging between 1,500 (for casual workers) to 15,000 (for trainers) per days payment will be done on monthly basis on individual bank account in Sector SACCOs. Self Help Group members will be encouraged for weekly saving and investment in individual small income generating activities. Through SHGs weekly meetings, members will be trained on financial literacy. Small Income Generating Activities, saving, access and utilization of loan. From their weekly saving, members will be able to access to loans for initiating individual Income Generating Activities and in the case they need more loan, they will contact the SACCO.

The project will outsource specialised trainers, in rainwater harvesting using sheeting; installation and maintenance of canvas biogas digester, manufacturing, installation and marketing improved cook stoves. Like any other procurement task in the project implementation, the work will be tendered according to Government procedures.

i. A procurement plan is prepared,

ii. the invitation to tender is published for 30 days,

iii. the tenders are opened in a meeting with all the applicants and the Tender Committee,

iv. the provisional result is communicated to all the applicants,

v. the applicants have 7 days to appeal the decision, and then a final notification is sent to all the applicants;

vi. if a guarantee is required, the successful bidder has 15 days to secure it,

vii. Then the Contract negotiation and signing follows.

b. The contract implementation will be monitored by an independent third party hired by the project (using the above process) in close collaboration with the District Infrastructure Officer and the community committees.

c. The project will work through organised groups including cooperatives to extend its reach and provide cost effective support services.

Details and sequencing of the specific activities are included in the attached work plan.

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

The project specifically targets the livelihood of unemployed youth and vulnerable women which represent the majority of the population of Nyagatare District. As indicated by the General Household and Population Census conducted in 2012, the youth population represents 33.7% of the total population of Nyagatre District, while female population represents 51% of the total population of Nyagatare District. Those groups will be involved in watershed protection activities as paid workers. As stated in the log frame on the outcome Indicator 2; equal number of females and males will earn income from the project implementation. Strengthened and diversified livelihoods will raise household incomes for women and youth enabling them to afford more nutritious diets, subscribe to the medical insurance for improved access to health services. The project will also ensure that women and youth also have an equitable representation on local watershed management committees through a quota of seats reserved for women headed households and youth.

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 project design and delivery?
STAKEHOLDERS INFLUENTIAL IN SOLVING THE PROBLEM

1. Local Environmental Committees

Environmental Committees at Cell, Sector and District levels will continue playing an important role in community awareness rising on environmental protection. They will be involved in supervision and monitoring of project activities. This will be easier since they have been involved from the beginning in the project design. In the monitoring phase they will play a role for which incentives will be provided based on their performance.

2. Unemployed youths and poor women Self Help Groups/ Cooperatives

Unemployed youths and poor and vulnerable women will be organized in Self Help Groups of 20 members each. They will benefit from capacity building and implementation of different activities of the project including tree nurseries preparation, planting, follow up and maintenance of Acacia Kirkii on protected land alongside Akagera river and bamboo on mandatory 10m wide buffer zone alongside Umuvumba river, installation of rainwater tanks and dam sheets, installation of canvas biogas digesters, manufacturing and marketing improved cook-stoves.

3. Civil Society Organization (Association Bamporeze)

Association Bamporeze will bring its vast experience in working with youths and women self-help groups and cooperatives for environment conservation. Association Bamporeze will build the capacity of project manpower in finance literacy, through Self Help Group approach and cooperatives. Association Bamporeze will be responsible for formation, capacity building and regular mentoring of Self Help Groups and cooperatives. Association Bamporeze will oversee the implementation of activities such as tree nurseries preparation, trees and bamboo planting, installation of rainwater harvesting tanks and dam sheets, promotion of wood fuel saving technologies (canvas biogas digesters and improved cook stoves) by youths and women Self Help Groups/Cooperatives.

4. District Administrative Security Support Organ (DASSO)

DASSO is a district organ in charge of security. DASSO will collaborate with Farmers, environmental protection committees at cell, sector and District levels, local authorities at village, cell and sector levels, women and youth self help groups and National police to ensure the security of planted trees and bamboo on protected land.

5. District

The district staff team will be responsible for the financial, technical management and coordinating all stakeholders. They will also ensure the long-term sustainability of the project through a well-planned decentralized follow up plan.

6. FONERWA

FONERWA will provide Financial Support and provide feedback to the reports of the project monitoring and evaluation team.

Q 2.6 How will the benefits of the project be sustained after FONERWA funding comes to an end?

The participatory approach and job created for local communities of the project will ensure that positive outcomes are sustained by the community beyond the lifetime of the project. At the end of the project funding, the management will be assured mostly by beneficiaries through Self Help Groups/Cooperatives established. Monitoring, maintenance and protection of planted trees and bamboo will be ensured by
DASSO and environmental protection committees inNyagatare District in collaboration with beneficiaries Self Help Groups and cooperatives.

The District will oversee the implementation and monitoring of all project activities and sign Memorandum of agreement with the partners. Ongoing monitoring of project activities even after the end of project will be facilitated by the fact that all project components are aligned with the EDPRS II, the District Development plan and the District Performance contracts signed every year. Thus, the District technicians in charge forest and environment and water will supervise the project as much as possible to verify everything is going according to the plan.

The financial benefits will allow sustainability of the project:

- Reduced erosion and Improved soil fertility leading to increased agriculture production and enhanced food security and increased household incomes which can be invested in off farm income generating activities.
- Socio-economic empowerment of local community through Self Help Group approach will build the socio and economic capital of beneficiaries. Organization of Self Help Groups in cooperatives specialised in one project component as their income generating activity will also increase the sustainability of the project.
- Increased incomes generated from fruit and forage trees on cattle ranches will stimulate other cattle ranchers holders and households to plant fruit trees on their own ranches as a multiplier effect of the project. Similarly, effective management and marketing harvested rainwater by cooperatives will have a multiplier effect as neighbours will be motivated to install their rain water tanks on their own houses.
- Legal exploitation of planted bamboo (reference made to organic law No 47bis/2013 of 28/06/2013) for producing handicraft materials and capacity building on rational use of bamboos will ensure sustainability of the project long term benefits.

Employment opportunities and income generation activities will be created for some of the poorest households in the district especially following gender balance and youth participation principles. This project will be sustainable because we have started the public participatory and consultation approach with the locally based environmental committees at cell and sector levels. These committees are already functional and will continue the mediation of peoples’ interests to the natural resources interests. In addition, the monitoring plan of planted trees will involve the local private landholders and incentives will be provided based on grown trees (Somehow similar to the carbon trading principles). Thus, they will participate actively in the monitoring and protection of planted trees.

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

The income will be generated by the project through:
1. Job creation for local people for the project implementation
2. Selling fruits and increased quantity of milk
3. The sustainable increased agricultural yields from improved soil fertility (due to soil erosion control and nitrogen fixing agro forestry trees and also the leaves fertilizing capacity, organic fertilizer from Biogas digesters) will increase the incomes generation of the local community.
4. Saving time that would be used in fetching water in far distances and money used in buying water to vulnerable groups who are not capable of fetching water.
5. Saving money and time that would be used in firewood for the local people who are using biogas and improved cook stoves
6. Selling improved cook-stoves, installation and maintenance of canvas biogas digesters.
7. In the long term, as Umuvumba is among the Important Birds, snakes, monkeys and baboons areas, tourists will be attracted and they will spend a considerable amount of money when the project will be fully completed.

8. Some of the agro forestry trees will be exploited rationally depending on their qualities (fuel wood products, timber ...)

Q 2.8 Preparation: Has a feasibility or pre-feasibility study been conducted *(If yes, then please attach a copy to this PD)*?

Feasibility study not required for this kind of project.

Q 2.9 Preparation: 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)*?

Enforcement of the organic law No 04/2005 of 08/04/2005 determining the modalities of protection, conservation and promotion of environment in Rwanda, specifically in its article 85 institutionalizing mandatory 10m wide buffer zone along side rivers should be done by the District to avail land for planting bamboo alongside Umuvumba river.

Q 2.10 Preparation: Has an Environmental Impact Assessment been conducted for the project *(If yes, then please attach a copy to this PD)*?

The Environmental Impact Assessment is not needed for this project, reference made to the Organic Law No 04/2005 of 08/04/2005 determining the modalities of protection, conservation and promotion of environment in Rwanda, and ministerial order N° 004/2008 of 15/08/2008 determining works, projects that requires Environmental impact Assessment, this project is not included.

Q 2.11 How will the performance of the project be monitored and evaluated *(both during and after the project)*? Explain the monitoring system below and then fill in the budgeted M&E Plan (in the table below – example activities listed for information purposes only).

During the project implementation period, the monitoring and evaluation will be done as follow:

- The technicians hired to supervise the works at the field will make a report of all activities and report to the project manager every month;
- After compiling reports from technicians, project manager will send a monthly consolidated report to the district coordination team *(Project Executive Committee)*;
- The project Executive Committee Secretariat will monthly monitor and evaluate the progress of the project implementation according to the information provided in the monthly report by project manager.
- The District coordination team will analyse reports, supervise the field activities and provide advice to the project manager.
- Quarterly progress reports will be prepared by the Project Manager submitted to the Executive committees for approval and submission to FONERWA.
- Project Midterm evaluation will be conducted after 18 months of project implementation to allow adjustment in order to achieve all project targets by the end of the project. Results for midterm evaluation will be shared with the Executive steering committees and FONERWA.
- A Final evaluation will be conducted by an independent consultant who will present the findings to FONERWA, and Nyagatare District.

Beyond the lifetime of the project the management committees, the professional in charge of forest and professional in charge of environment and water will continue to monitor the ongoing operation and maintenance activities. But the main role will be played by the local environmental committees who will
continue to raise public awareness through regular sessions in order to avoid the overuse of water and forest in the Akagera and Umuvumba watershed.

<table>
<thead>
<tr>
<th>M&amp;E Activity</th>
<th>Responsible person</th>
<th>Timeframe</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Committee meetings</td>
<td>Vice-Mayor in charge of Economic Affairs</td>
<td>Monthly</td>
<td>3,240,000</td>
</tr>
<tr>
<td>Steering committee meetings</td>
<td>Vice-Mayor in charge of Economic Affairs</td>
<td>Quarterly</td>
<td>3,780,000</td>
</tr>
<tr>
<td>Joint supervision of field activities</td>
<td>M&amp;E officer and District professional officers in charge of Forest, Environment &amp; water</td>
<td>Monthly</td>
<td>4,752,000</td>
</tr>
<tr>
<td>Project progress narrative and financial reports</td>
<td>Project manager</td>
<td>Quarterly</td>
<td>56,700,000</td>
</tr>
<tr>
<td>Annual stakeholders workshop at District level</td>
<td>Project Manager</td>
<td>Annually</td>
<td>1,286,000</td>
</tr>
<tr>
<td>Project midterm evaluation</td>
<td>External consultant</td>
<td>6th Quarter</td>
<td>4,100,000</td>
</tr>
<tr>
<td>Project Final Evaluation</td>
<td>External consultant</td>
<td>12th Quarter</td>
<td>4,920,000</td>
</tr>
</tbody>
</table>

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

The stakeholders of this project will be involved in monitoring and evaluation as follow:

- Project Direct beneficiaries will be organized in Self Help Groups of 20 members each. Every Self Help Group will elect a representative, a vice-representative, a book writer and assistant book writer. Group leadership will rotate among the members. Each member is encouraged to moderate the weekly meeting in turns.

- Community Facilitators will be carefully selected among community members and trained on self Help Group concept. Community Facilitators will be empowered during the project implementation to support SHG in conducting self-assessment and grading and plan for improvement of their performance. Baseline survey will be conducted at SHG level by members themselves and recorded in SHG’s admission books. SHGs will be provided with monitoring tools including individual pass book, minute’s book and Loan ledger book and report formats. Those books will be checked regularly by the community facilitators and the project officer during the visit of SHG.

- Every SHG will be specialized in one the following activities: tree and bamboo planting; Installation of rainwater harvesting tanks and dam sheets; Installation and maintenance of canvas biogas digesters and manufacturing and marketing improved cook stoves.

- SHGs will sign performance contracts with the implementing partner to contribute to the achievement of projects milestones. SHGs members will be paid on the rate of 1,500Rwf per day of work but their will receive 1,000Rwf on their own bank account and 500Rwf will be accumulated and transferred to the SHG account after joint assessment of SHG performance that will be conducted on quarterly basis.

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 directly contributes to the following FONERWA output 1: Conservation and management of natural resources strengthened and sustained, and the following five indicators have been used in the project log-frame:
Indicator 1.1: Area (ha) of land secured against soil erosion
Indicator 1.2: Area (ha) of forest and agro-forest cover (disaggregated by afforestation/restored forest/agro forestry).

**Q 2.14 Duplication** of project with other funding sources - all relevant potentially overlapping projects need to be identified and the areas of overlap and complementarities identified, drawing lessons and establishing a framework for coordination during implementation. Please provide a summary of recently concluded, ongoing, and pipeline projects that are relevant to the proposed project in the table below.

<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>Community Based Climate Change adaptation</td>
<td>This is an initiative of Nile basin Discourse Forum in Rwanda in partnership with Environmental Conservation Organization (RECOR) funded by European Union basically for planting 3300 agro forestry trees, installation of 3 rainwater tanks, one model compost, and manufacturing and distribution of 250 improved cook-stoves, installation of 20 solar energy in Gatebe I village.</td>
<td>July 2013- June 2015, targeting 100 households in one village (Gatebe I) of Kirebe cell in Rwimiyaga Sector.</td>
<td>The sustainable forest and watershed resources management project will learn from the experience of community Based Climate Change adaptation especially in management and follow up of agro forestry trees by farmers and management of harvested rain water.</td>
</tr>
<tr>
<td>Lake Victoria Water Supply and Sanitation Phase II</td>
<td>This is a project working in WASAC funded by UN habitat through African Development Bank for construction of 12 standard public toilets and 0.8km drains channel. The project plans to construct a modern landfill, faecal sludge treatment plant, providing suction truck, truck trail, water supply</td>
<td>2014-2016 Nyagatare Town</td>
<td>This project will provide compost manure to be used in tree nurseries preparation.</td>
</tr>
<tr>
<td>MINERENA earmarked transfers for forest plantation</td>
<td>This project is implemented by Nyagatare District in collaboration with RDF reserved forces in Rwimiyaga sector. It mainly focuses on protecting high slop hills by planting forest trees.</td>
<td>2011 - 2015</td>
<td>The sustainable forest and watershed resources management project will learn from the experience of RDF reserve Force on how to protect and manage trees in the areas characterised by termites, prolonged drought, and livestock free land grazing.</td>
</tr>
<tr>
<td>National Domestic Biogas Program support</td>
<td>This is EDCL earmarked funded project through REG to provide subsidies to farmers who are capable to contribute 100,000Rwf for installation of canvas biogas digester in Nyagatare District.</td>
<td>2009 -2015</td>
<td>This project will facilitate transfer of knowledge in installing and maintaining canvas biogas digester to the local population (youth and women) through hiring the technicians for training Self Help group members. The project also will support 50% of beneficiary contribution for Girinka Program beneficiaries in order to increase the number of Farmers accessing EDCL subsidies for canvas biogas digester installation.</td>
</tr>
</tbody>
</table>

**Q 2.15 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)

The lessons will be disseminated using:

1. Progress reports to stakeholders and decision makers where challenges encountered will be raised and recommendations corresponding will be shared; thus all the stakeholders will be able to ask questions to understand better during monthly meetings.
2. Articles will be published regularly on the District website for all stakeholders including researchers, policy makers;
3. Radio broadcasting will be disseminated for local community who do not have access to internet
4. Posters and leaflets in local language will be used for local community members;
5. Lesson learning meetings and workshops with all stakeholders will be organized;
6. Cross visits for observation and experience sharing with beneficiaries and other farmers in the District will be organized.

After this project, documents will be accessed because they will be saved electronically in the form of soft copies and other hard copies will be stored in the district’s archives.

**Q 2.16 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>Risk description</th>
<th>Category (political, operational, financial, environmental)</th>
<th>Risk level (low, medium high)</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of funding</td>
<td>Financial</td>
<td>Low</td>
<td>Well prepared PD and submitted on time</td>
</tr>
<tr>
<td>Money inflation</td>
<td>financial</td>
<td>Low</td>
<td>Miscellaneous prevision</td>
</tr>
<tr>
<td>Appropriate and qualified staffs are not available when needed.</td>
<td>Operational</td>
<td>Low</td>
<td>Referring on the recruitment process in place, the project will put in place thorough evaluation criteria and competence check mechanism for making sure the right people are recruited at the right place</td>
</tr>
<tr>
<td>Shortage of rainfall leading to the destruction of planted trees by sun.</td>
<td>Environmental</td>
<td>Medium</td>
<td>Tree nurseries will be prepared early to allow tree planting and replacement at the beginning of raining seasons.</td>
</tr>
<tr>
<td>Destruction of planted trees by the white ants, livestock and fire.</td>
<td>Operational</td>
<td>Medium</td>
<td>Tree species resistant to white ants will be planted, Intensive follow up of planted trees, prevents measures and replacement of destructed trees will be considered.</td>
</tr>
<tr>
<td>Relocation of planted trees by the local population from the planted sites to their own farm.</td>
<td>Operational</td>
<td>Medium</td>
<td>More trees seedlings will be produced for covering the targeted sites and meeting the needs of the local population.</td>
</tr>
<tr>
<td>Resistance of cattle ranches holders for planting some fruit trees species like Mangoes that can kill livestock.</td>
<td>Operational</td>
<td>Low</td>
<td>Fruit trees will be planted at 10% of the total area of cattle ranches; Spacing of 10 meters. Cattle keepers will be trained on how to manage fruit trees and livestock especially during the harvesting season.</td>
</tr>
<tr>
<td>Pests and diseases used to destroy fruits trees in the targeted zone. Possible risk that local community may abandon fruit trees.</td>
<td>Operational</td>
<td>Medium</td>
<td>The local population will be trained on how to prevent and fight pests and diseases for planted fruit trees.</td>
</tr>
<tr>
<td>Failure to create ownership and commitment to the project at the local level. Possible resistance to adopting proposed measures.</td>
<td>Operational</td>
<td>Low</td>
<td>Involvement of the local community in the design, implementation, Monitoring and evaluation of the project to reinforce their ownership.</td>
</tr>
<tr>
<td>Delays in Disbursement of funds, procurement and institutional bureaucracy</td>
<td>Operational</td>
<td>Medium</td>
<td>Project manager and finance officer will have considerable experience at the District Level procurement and finance management and they will ensure timely mobilization of funds.</td>
</tr>
</tbody>
</table>

### 2.17 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?

<table>
<thead>
<tr>
<th>Risk</th>
<th>Risk level (low, medium high)</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk of conflict between local population and local leaders due to enforcement of law institutionalizing mandatory 10 m wide buffer zone alongside Umuvumba river.</td>
<td>Low</td>
<td>Awareness raising of the local population on environmental protection and hiring the local population manpower.</td>
</tr>
<tr>
<td>Risk of environmental degradation due to exploitation of clay soil and burning improved cook-stoves.</td>
<td>Low</td>
<td>Training Self Help Group members on environmental protection and enforcement of existing laws and orders related to environment protection.</td>
</tr>
<tr>
<td>Risk of conflict due to selection of beneficiaries of Biogas and Rainwater tanks due to limited support.</td>
<td>Medium</td>
<td>Setting and widely communicating clear criteria for selection of beneficiaries; Selecting beneficiaries in transparent way; where more people than needed meet the set criteria, use random selection method.</td>
</tr>
<tr>
<td>Risk of disengagement by District Authorities not having the necessary resources/capacity to engage fully with the project.</td>
<td>Medium</td>
<td>Involvement of District technicians in charge of forests, water and environment protection in the project design, implementation, Monitoring and Evaluation. Mobilization of District staffs and involving them in Executive and steering committees. Avail minimum financial resources to support District authorities to fully engage with the project. The Project Manager and Project M&amp;E Officer to be recruited and hosted by Nyagatare District. The District has the running budget which also has to support the project implementation as it</td>
</tr>
</tbody>
</table>
Risk of overloaded District technicians not having enough time to concentrate on the project implementation. Medium Joint planning between District technicians, Sectors technicians and project team. Hiring qualified and competent project team.

### 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 cost of the project 754,655,165 RWF.

The Capital = 649,887,165 RWF (86.1%) and recurrent expenditures = 104,768,000 RWF (13.9%).

#### Q 3.2 What is the total amount requested from FONERWA (RWF; provide financing needs for each year of the project)?

The total amount requested from FONERWA is 632,475,165 (83.8% of the total cost).

#### 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)

Nyagatare district and beneficiaries will provide 122,180,000 RWF (16.2% of the project total cost), will contribute to the total project cost.

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

Although, it is a priority for the District there are insufficient funds to address the soil degradation in the Akagera and Umuvumba watershed.

According to the District Development plan 2013-2018, the District needs 46.4 billions of Rwf for protecting environment and natural resources for 2015/2018. According to the district projections, only the amount of 10.4 billions of Rwf can be mobilized from Government block grants, own taxes and fees, Donor projects, Private sources and other sources. Therefore, the environment and natural resources protection financial gap in Nyagatare District is estimated at 36 billions of Rwf for the period of 2015-2018.

Funding is being sourced from FONERWA because it closely fits with its objectives and will contribute to its output 1: Conservation and management of natural resources strengthened and sustained as a result of the Fund. The FONERWA funds will contribute to the financial gap for environment and natural resource protection in Nyagatare District.

#### Q 3.5 What non-financial support is needed to implement the project? What is the best way for FONERWA to deliver this support?

FONERWA can support the project in the following:

- Lesson learning events (with other FONERWA supported projects)
- Technical support during project implementation (Monitoring and Evaluation Reporting).
- Structured reviews.
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)

i) Inputs will be procured using the Rwandan Government Procurement Procedures as outlined below:

- A procurement plan is prepared,
- the invitation to tender is published for 30 days,
- the tenders are opened in a meeting with all the applicants and the Tender Committee,
- The tender committee evaluates the bids and recommends the successful bidder
- the provisional result is communicated to all the applicants,
- the applicants have 7 days to appeal the decision, and then a final notification is sent to all the applicants;
- if a guarantee is required, the successful bidder has 15 days to secure it,
- Then the Contract negotiation and signing follows.

Different procurement procedures will be applied depending on the nature of the tender.

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)?

i) The right inputs to produce the high quality of the outputs will be procured. The project team will ensure that those inputs are processed efficiently to generate the desired outputs

ii) NPV= 579,077,145,542 RWF

BCR= 560

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 overall objective of the project is to enhance the protection of Akagera and Umuvumba watershed in Nyagatare District and the four outputs formulated under this project, each contribute directly to this objective. The set output indicators are quantifiable and easy to verify.

- The following outcome indicators will be measured to demonstrate effectiveness: Number of ha of land planted with trees, Number of ha of Umuvumba buffer zone rehabilitated with bamboo planting.

As the value for money refers to economy, efficiency and effectiveness of a given project; this project justifies the value for money considering the estimated results to be achieved and money allocated to each output.

**Annexes attached:**
Annexe 1: Log-frame
Annexe 2: Work Plan
Annexe 3: Budget
Annexe 4: Cost-Benefit-Analysis
Annexe 5: Financial Audit Report
Annexe 6: District Staff and partners’ CVs
Annexe 7: Memorandum of Agreement between Nyagatare District and Bamporeze Association