



AGROFORESTRY AND REFORESTATION WITH SMALL-SCALE FARMERS IN UGANDA

Document Prepared by PUR Projet



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1 INTERNAL RISK

1.1 Project Management

Project Management		
Risk Factor	Risk Factor and/or Mitigation Description	Risk Rating
a)	Most of the species planted in the project are native species (100%)	0
b)	No enforcement is necessary to prevent encroachment by outside actors. All trees are planted on the individual farmer's parcels, which are not targeted by intrusion. The farm is delimited by a strong fence, and is well designed and properly marked as private land. Most of the staff remains permanently in the project area, and there is permanent vigilance.	0
c)	Local technicians are managed by a Project Coordinator, who is an Engineer (Forestry, Agronomist, environmental). Depending on the team size, the dedicated technical team is composed of other engineers and extensionists (engineers or technicians) graduated in environmental engineering, forestry, or agronomy. The engineers are responsible for the training of the technicians and farmers' formation, the plantation designs, and seedlings distribution. They will check the monitoring results presented by the technicians for quantity, quality and coherence. Field extensionists, trained by the Project Coordinators, as well as by PUR Projet, conduct registration and monitoring activities.	0
d)	Management teams of the implementing partner are located at the centre of their area of influence/areas of planting. All parcels reforested are less than a day of travel from the partners offices	0
e)	PUR Projet has developed similar projects: <ul style="list-style-type: none"> - Alto Huayabamba A/R project, in Peru (San Martin Region), VCS validated in 2012 and verified in 2014 - Biocorredor Martin Sagrado REDD+ project, in Peru (San Martin Region), VCS and CCBA validated (in 2012 and 2013), and verified in 2015 	-2

	<ul style="list-style-type: none"> - APROSACAO A/R community project with small-scale cocoa farmers, in Honduras, Gold Standard validated in 2017 - REGENERATING COLOMBIAN COFFEE ECOSYSTEMS A/R Project, in Colombia, VCS validated in 2017 and verified in 2021 <p>PUR Projet has a portfolio of 20 other A/R community projects with small farmers in developing countries (Indonesia (2), Thailand (4), Philippines, India, China, Japan, Ghana, Ethiopia, Uganda, Honduras, Guatemala (2), Colombia, Peru, Morocco, Brazil),</p> <p>14 years' prior experience of PUR Projet's founders (Tristan Lecomte, Alexis Kryceve, Mathieu Senard, Edouard Rollet, Ilse Keijzer) in grassroots development projects through their experience at Alter Eco (they co-founded Alter Eco in 1998, leading Fair Trade company in France). They developed long-term partnerships and development projects (combining Fair Trade and Organic) with over 60 cooperatives of small-scale farmers in more than 40 countries. More references available at validators request. Detailed information can be found at www.purprojet.com</p>	
f)	<p>Adaptive management is being implemented.</p> <p>Risks have been identified upfront and mitigation actions have been decided and implemented (see mitigation initiatives in the whole document – natural risks, land ownership, longevity, funding, etc.)</p> <p>Procedures keep being improved and corrected as long as the project develops. After plantation waves, the project team sends a report monthly with lessons learned, difficulties, and suggested improvement to the procedures. All difficulties and points are discussed with the project proponent, who approves the modifications of the procedures (ex: timing of steps – registration, Geo mapping, payments, etc. – have already been improved to match field constraints; number of trees delivered; monitoring procedures; quality control procedures; etc.; all these points were improved over the first years of the project).</p> <p>Regular meetings of the project team with the communities allow them to learn lessons from the precedent waves and to improve the procedures. In the same way, the project proponent visits the project at least once every month and reviews all obstacles and difficulties with the implementation team and instances management. Online contacts (Mail/hangout) are done on a weekly basis. Procedures are adapted after each of the visits. Lessons learned, decisions taken, and evolution are documented in visit reports.</p>	-2

Total Project Management (PM) [as applicable, (a + b + c + d + e + f)]	-4
Total may be less than zero.	

1.2 Financial Viability

Project financing is based on a mechanism where tree plantations, farmers' payment, and cooperative payments for the first years (plantation, monitoring) is funded upfront through the sale of environmental services ('tree planting certificates'), or through the investment of PUR Projet's own reserves (provisions and retained earnings).

Most of the cash-out occurs in the first years of the project (plantation years), when the Entities are paid by the project proponent based on annual planting contracts, where the payment from PUR Projet covers seedlings production and distribution, farmers' payment, technical assistance and staff, material and equipment. After planting is done, and after this payment occurs, only minor monitoring and project maintenance costs spread out over time is to be maintained over time.

Project break-even point is in 2016 and therefore before the date of the first verification (2019).

For the scope of the first verification (2016-2019 plantings), all of the cash-out until 2019 will be covered by PUR Projet, either from environmental services, grants, or own investment. After 2019, expenses related to this scope of the project will be covered by future sales of credits and possibly further grants. The project has therefore secured 100% of the project cash flow until break-even.

Financial Viability		
Risk Factor	Risk Factor and/or Mitigation Description	Risk Rating
a)	Not applicable	
b)	Not applicable	
c)	Not applicable	
d)	Project break-even point is in 2016. Most of the cash out occurs in the first years (plantation years), where payment to the cooperative for plantations and monitoring is made.	0
e)	Not applicable	
f)	Not applicable	
g)	Not applicable	

h)	All cash-out until project verification date (occurring after the break-even point) was already covered and spent by PUR Projet.	-2
i)	Not applicable	0
Total Financial Viability (FV) [as applicable, ((a, b, c or d) + (e, f, g or h) +i)]		0
Total may not be less than zero.		

1.3 Opportunity Cost

As described in the Project Description Document, in the absence of the project, there could be several credible land-use scenarios:

- a. Continuation of pre-project activities; perennial corps, degraded lands, annual crops, pastures.
- b. Transformation of some annual crops into perennial crops fields
- c. Transformation of degraded lands into perennial crops fields
- d. Transformation of pasture into perennial crops fields
- e. Use of degraded land for annual crops
- f. Use of pasture for annual crops

These baseline activities are subsistence driven. According to AFOLU Non-Permanence Risk Tool guideline 2.2.3.2, the majority of baseline activities are subsistence driven, a NPV analysis is therefore not required (and does not make a lot of sense as 'investments' are personal man work investment from the farmers).

Instead, an assessment of the project impacts on socio and economic well-being of the communities has been undertaken; the results are described in the PDD, section 1.17

As a result of these analyses, it is clear that, in the long run, revenues from projects (timber, yield increase) are more than 50% more profitable for the farmers than coffee alone or annual crops in rotational fallow system, and that socio-economic impacts are very positive for the populations.

Opportunity Cost		
Risk Factor	Risk Factor and/or Mitigation Description	Risk Rating
a)	Not applicable	
b)	Not applicable	
c)	Not applicable	
d)	Not applicable	
e)	Not applicable	
f)	Revenues from the project (timber, yield increase) are more than 50% more profitable for the farmers than coffee alone or annual crops in the rotational fallow system, and socio-economic impacts are very positive for the populations.	-4
g)	Not applicable	
h)	Not applicable	
i)	Not applicable	
Total Opportunity Cost (OC) [as applicable, (a, b, c, d, e or f) + (g + h or i)] Total may be less than 0.		-4

1.4 Project longevity

Project emphasis is clearly on forest restoration and biodiversity habitat. Overall, the aim is to ensure conservation of the forests and ecosystems in the Rwenzori region, for the first project instances, and Uganda more generally. The whole program is part of a long-term vision for this global ecoregion. Even if the crediting period is 35 years, farmers won't stop agroforestry after this period. It is expected that thanks to the development of community nurseries and training on agroforestry, farmers will continue to plant more trees by themselves. In addition, fruit trees will remain alive for a longer period of time as no one will cut them as long as they produce fruits as a source of food and income to the farmers.

Project Longevity		
a)	50 years project longevity	14
b)	Not applicable	
Total Project Longevity (PL) May not be less than zero		14

Internal Risk		
Total Internal Risk (PM + FV + OC + PL) Total may not be less than zero.		6

2 EXTERNAL RISKS

2.1 Land Tenure and Resource Access/Impacts

Proof of user rights is maintained after the project crediting period, since the project occurs on farmer-owned land. Land titles don't expire.

Most of the farmers participating in the project have dwelled on and cultivated their land for several years and thus fall in the definition of customary land tenure. Even without a formal land title, they fully own the land and hence the 'carbon rights' related to their land.

The government recognises the right and the benefit to this land belongs to the farmers and therefore has the right to transfer benefits (such as credit carbon) to anyone. (see lawyer report for further details)

In addition, a customary landowner can apply for a CCO as proof of ownership of the land. Any person, family or community holding land under customary tenure on former public land may acquire a certificate of customary ownership in respect of that land.

Throughout the project, PUR Projet plans to implement activities to sensitise farmers to land tenure topics and help them to get their title through specific training and support.

Land Tenure and Resource Access/Impacts		
Risk Factor	Risk Factor and/or Mitigation Description	Risk Rating
a)	Not applicable	0
b)	Not applicable	0
c)	Although land tenure is not secured through legal land titles in 100% of the cases, the farmers have some kind of title recognised by communities/other farmers (customary land ownership, or private land purchasing contracts), so there are no disputes over land tenure between the farmers or with other stakeholders. The government recognises the legitimacy of the farmers over land ownership.	0
d)	In the absence of recollected proofs of ownership and use rights for 100% of the parcels planted, the rating is chosen hereafter as to account for potential disputes over access/use rights.	5
e)	Not applicable	0

f)	The project area is not protected by legally binding commitment (e.g., a conservation easement or protected area) to continue management practices that protect carbon stocks over the length of the project crediting period	0
g)	Not applicable	0
Total Land Tenure (LT) [as applicable, ((a or b) + c + d + e + f + g)]		5
Total may not be less than zero.		

2.2 Community Engagement

The project is by definition a community project, where the farmers plant themselves the trees on their parcels. Moreover, farmers are participating on a voluntary basis, and all participating farmers sign an agreement with project partners in which they commit to participate, and recognise, to understand the project conditions and objectives.

Then each participating farmer is visited (in a group or individually) at least 4 times in 18 months after planting, for plantation design and parcel registration, seedlings delivery, monitoring 1 & 2. Further annual monitoring visits will be completed by the technical team for the selection of trees that will be harvested.

Various training is also conducted in all participating communities, as described in the PDD.

Farmers are regularly consulted to influence the design of the project, and give their feedback on the procedures applied.

The reforestation project was proposed to each Instance, discussed and approved by the entities, which represents all farmers of the Instances. Project participants are always able to express opinions regarding the project. All the communities hosting members of the project were visited and consulted, primarily to register participating farmers. The dedicated Instances team visits the communities a first time to present the project, inform the farmers, and register the participating farmers.

On top of that, since the project occurs on private parcels, no other communities are 'reliant on the project area' as mentioned in the risk assessment.

Finally, the project generates high socio-economic positive impacts (see PDD)

Community Engagement		
Risk Factor	Risk Factor and/or Mitigation Description	Risk Rating
a)	100% of households living within the project area who are reliant on the project, have been consulted (all participants sign a contract with instances to participate voluntarily in the project)	0
b)	100% of the communities within 20 km of the project area have been consulted. No communities outside the project area are reliant on the project area since it is on parcels privately owned.	0
c)	Project generates net positive impacts on the social and economic well-being of the local communities who derive livelihoods from the project area.	-5
Total Community Engagement (CE) [where applicable (a + b + c)] Total may be less than zero.		-5

2.3 Political Risk

In addition to the uncertainty related to the pandemic, household and business confidence there is some political uncertainty, mainly because of the recent terrorist attacks, which according to the police are by radicalised groups linked to the ADF. These Ugandan rebels, who have been present in the east of the Democratic Republic of Congo for ten years, became affiliated with the Islamic State in 2019 and seem to have extended their strategy to Ugandan Territory over the past few months, albeit with a presence and means that have so far been considered limited. After the double attack of 16/11/2021, the police announced the neutralisation of suspected members of the ADF rebel groups. This has led to social tensions, narco-traffic-related issues, which can lead to roads blocked or difficulty to access some areas. In case of blocking, accessibility is usually restored within days or weeks. The impact on the project is limited as the farmers' organisations on site are managing the project on a day-to-day basis and can maintain remote communication with PUR Projet.

Additionally, the project's implementation can support potential delays in project implementation. There is no activity that cannot be postponed by a couple of weeks. The team is advised to avoid crowded places throughout the capital (even outside the city centre) and to be cooperative in the event of identity checks or searches by security forces, ensuring that they have the necessary documents at all times.

Political Risk		
Risk Factor	Risk Factor and/or Mitigation Description	Risk Rating
a)	Not applicable	
b)	Governance score of -0.592 to less than -0.32. Calculation can be found in the supporting documents. Governance score estimated for Uganda.	4
c)	Not applicable	
d)	Not applicable	
e)	Not applicable	
f)	Uganda receives REDD+ Readiness funding from the World Bank Forest Carbon Partnership Facility: https://www.unredd.net/regions-and-countries/africa/uganda.html	-2
Total Political (PC) [as applicable ((a, b, c, d or e) +f)]		2
Total may not be less than zero.		

External Risk	
Total External Risk (LT + CE + PC)	2
Total may not be less than zero.	

3 NATURAL RISKS

The project area is very scattered as the project involves to date over 1000 independent farmers, each of them reforesting from 0 to 5 hectares, in a total region of about 60 km. Therefore, if a catastrophic event occurs, the project area impacted will be small, lowering the significance of such events.

3.1 Natural Risk: Fire

Natural Risk: Fire	
Significance	<p>Fire can be a risk for parcels that are planted near forest reserves and National Parks. It happens when farmers near the park are clearing land for cultivation. However, none of the farmers benefited are near those areas.</p> <p>In addition, as the project is very scattered into small areas over a wide region, the risk of spreading is very limited. Although it is always possible that one of the project areas could be lost to fire, the impact would be minimal.</p> <p>The Significance is considered insignificant</p>
Likelihood	<p>Spontaneous fires do not happen. Fires can happen because of neighbours' slash and burn practices only and can spread to projects parcel in exceptionally dry summer time only.</p> <p>In some ecosystems, natural fires are essential to maintain ecosystem dynamics, biodiversity and productivity, However, it has never happened since the beginning of the project. The likelihood of devastating fire is very low. Therefore, the likelihood is estimated to be more than 10 years and less than 25 years.</p>
Score (LS)	1
Mitigation	<p>All project farmers are trained by their Instances technicians and the project team not to use slash and burn practices, on how to plant perennial crops under the canopy without burning, by taking out only the layers 1 and 2 of the canopy but keeping the highest level for covering the fields. The project considers extending this training to non-members, to reduce impact of agricultural practices on forest degradation.</p> <p>Some precautionary measures could be adopted to mitigate the adverse effect of drought (avoid clean weeding in interrow areas, but circle weeding can be done with mulching around the trees with weed removal). For this purpose, training courses will be provided to</p>

	<p>producers in order to enforce these practices effectively on their plantations. Provisions will also be arranged to protect the plantations against the risk of wildfire and drought.</p> <p>Fire occurrence in the planted parcels is monitored at each parcel monitoring and is registered and archived in the monitoring database, with an estimation of losses in the parcel. During parcel visits, the technicians assess whether the parcel was affected by fire and if yes, the affected surface is estimated.</p> <p>The other relevant law in wildfire management is the Prohibition of Burning of Grass Act (Cap 33 Laws of Uganda). The Act prohibits the burning of grass by any person in all areas of Uganda. Under Section 3(1) of the Act, the burning of grass can only be carried out with the permission of a sub-county chief, and under the supervision of a parish or sub-parish chief.</p> <p>Mitigation score: 0.25</p>
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3.2 Natural risk: Pest & Disease

Natural risk: Pest & Disease	
Significance	<p>Most of the species planted on the project are native, which reduces the risk. In addition, the technical recommendation is to plant at least 3 different species in each plot.</p> <p>However, if we focus on the 3 most planted species, Musizi, Mvule Improved and Musisyo, these trees, in very rare case, can be infected by pests and diseases</p> <ul style="list-style-type: none"> - The wood of Musisyo/Albizia Coriaria is subject to termite attack, mainly on young trees. - Mvule Improved/Bathidavia/Neolomackia cadamba can be affected by field gall or the fungus Scytalidium lignicola - Musizi/Maesopsis eminii is prone to defoliation when infested by caterpillars, although this is not so frequent and occurs towards the end of the wet season. <p>However, those pests and diseases are very rare and have not been seen in the project so far.</p> <p>The Significance is considered as insignificant</p>

Likelihood	<p>From our experience, there have not been any registered Pests & diseases registered within the project area.</p> <p>The likelihood is estimated to be more than 10 years and less than 25 years.</p>
Score (LS)	1
Mitigation	<p>To avoid pests and diseases, it is recommended to plant at least 3 different species in each plot. In addition, most of the species are native and are planted in a widely dispersed area, which reduces the risk of spreading the pest or disease.</p> <p>For each species, in case of a pest or disease outbreak, there is a possible treatment that will be carried out. Control will also be exclusively biological.</p> <p>In addition, all farmers live on the land where they have planted trees (or in the immediate vicinity) and can react quickly in case of a pest or disease problem.</p> <p>Mitigation score: 0.25</p>

3.3 Natural risk: Extreme Weather

Natural risk: Extreme Weather	
Significance	<p>Cyclones, hurricanes and tornadoes are not relevant to the project area. The shift of rainy seasons from (September-November) and (March-May) have caused extreme rising temperatures and in other cases erratic rainfall resulting in different landslide types causing damage to infrastructure.</p> <p>The rise in temperatures can cause long periods of too much sunshine leading to drought that could lead to drying of the trees. Too much rainfall, on the other hand, could lead to floods and the washing away of the trees when riverbanks burst or when there are landslides. Human activities such as deforestation has been singled out as a key preparatory factor for recent, shallow landslides (> 3 m deep) removing almost all vegetation cover.</p> <p>Therefore, there is always the possibility that one of the project areas could be lost due to a landslide caused by flooding, but the impact would</p>

	<p>be minimal as the project is widely dispersed in small areas over a large region.</p> <p>There is simply some distortion of growing seasons that confuse farmers on deciding on timing for planting activities as well as a reduction in water-harvesting.</p> <p>The risk is insignificant</p>
Likelihood	The likelihood that extreme weather happens is less than every 10 years.
Score (LS)	2
Mitigation	<p>To mitigate drought, all farmers live on the land where they have planted trees (or in the immediate vicinity) and can react quickly in times of drought. Farmers can fetch water from nearby permanent water sources if there is not enough rainfall.</p> <p>Irrigation schemes have also been set up by the Government through the Ministry of Agriculture Animal Industries & Fisheries (MAAIF) that has managed to construct 711 water projects for production facilities in 54 districts. There has also been rehabilitation of three major irrigation schemes in the country, one of which is in the Rwenzori region called Mubuku Irrigation Scheme.</p> <p>To mitigate floods farmers are encouraged to plant bamboo tree species along riverbanks and also deep-rooted tree species that can stay firm in the ground.</p> <p>The project design is focused on the recommendation to plant in a staggered rows model following the contour lines to mitigate the landslides risk.</p> <p>Mitigation score: 0.25</p>

3.4 Natural risk: Geological Risk

Natural Risk Geological Risk	
Significance	<p>The Rwenzori area is characterised by contrasting geomorphological patterns. These are landforms and landform changes that happened many years ago due to the Compression and Tension forces that created a variety of physical features like a Block Mountain, Rift valley, Lakes and Rivers.</p> <p>Today, mild tremors can be felt in the Northern part of the project in Fort Portal District but very insignificant on the Richter scale.</p> <p>Being a Block Mountain, Mt. Rwenzori does not pose a threat for volcanic eruptions and therefore not a risk for the farmer and nor to the project.</p> <p>The risk is insignificant</p>
Likelihood	<p>Besides a landslide that happened during the 1994 earthquake, there are no registered earthquake events in the Rwenzori region.</p> <p>The likelihood is estimated to be more than 10 years and less than 25 years.</p>
Score (LS)	1
Mitigation	<p>It is therefore important to promote and encourage highly adaptive and productive tree varieties in crop farming systems in the project area</p> <p>The project design is focused on the recommendation to plant in a staggered rows model following the contour lines to mitigate the landslides risk.</p> <p>Mitigation score: 0.25</p>

Score for each natural risk applicable to the project (Determined by $LS \times M$)	
Fire (F)	0.25
Pest and Disease Outbreaks (PD)	0.25
Extreme Weather (W)	0.5
Geological Risk (G)	0.25
Other natural risk (ON)	0
Total Natural Risk (as applicable, $F + PD + W + G + ON$)	1.25

4 OVERALL NON-PERMANENCE RISK RATING AND BUFFER DETERMINATION

4.1 Overall Risk Rating

Risk Category	Rating
Internal Risk	6
External Risk	2
Natural Risk	1.25
Overall Risk Rating (a + b + c)	9.25

The overall risk rating is below the minimum risk rating of 10. So, the overall risk buffer is 10%.

4.2 Calculation of Total VCUs

Total VCUs = 5,213 before buffer, based on ex-post calculation

Number of buffer credits to be deposited in the AFOLU pooled buffer = 512

Year	Net Anthropogenic GHG removals by sinks C (t)	10% buffer	Annual anthropogenic net GHG removals by sinks ΔC (t) After 10% buffer
	tCO ₂ eq	tCO ₂ eq	tCO ₂ eq
2016	0	0	0
2017	371	37	334
2018	780	78	702
2019	1,047	105	942
2020	1,504	150	1,354
2021	1,511	151	1,360
TOTAL	5,213	521	4,692