



*Asia-Pacific Network for Sustainable Forest Management  
and Rehabilitation*

# PROJECT DOCUMENT

**Community Tree Planting Project [2017P3-PNG]**

[Supervisory Agency]

Papua New Guinea Forest Authority

[Executing Agency]

Voice of Yungos

[June 2017 – June 2019]

24 months

### Basic Information

<b>Project Title</b>	Community Tree Planting Project	
<b>Supervisory Agency</b>	Papua New Guinea Forest Authority	
<b>Executing Agency</b>	Voice of Yongos	
<b>Implementation Agency(ies)</b>	Papua New Guinea Forest Authority Papua New Guinea Eco-Forestry Forum Simbu Farmers Marketing Ltd	
<b>Project Manager:</b> Joe Kelly Bik Tel: (675) 73409184 Email: <a href="mailto:voiceyongos@gmail.com">voiceyongos@gmail.com</a> Fax: None		
<b>Target area:</b> Yongomugl Sub-District, Simbu Province. Papua New Guinea (attach map of project site) See Annex A		
<b>Project implementation duration:</b> June 2017 – June 2019 (24 months)		
<b>Total Budget (USD)</b>	228,711.00	
<b>APFNet Grant (USD)</b>	183,811.00	
<b>Conouterpart contribution (USD)</b> (list other funding souces and amounts, specify cash and in-kind constribution)	\$34,900.00 Project Grants from UNDP Small Grants Program & Voice of Yongos's own cash contribution of \$10,000 and in-kind contribution is not indicated in budget.	

**Project Description:**

The community tree planting project was initiated in 2011 to address the high depletion of timber resources including land and habitat degradation over the last 30 years. The goal and objective is to create and promote a community supported reforestation project that contributes to socio-economic and environmental benefits to the people of Yongomugl Sub-District, Simbu Province, Papua New Guinea.

The key project activity is to expand the seedlings production by establishing 4 new nursery sites to produce, distribute and plant 320,000 tree seedlings by 2019, capacity building for farmers and project staff on nursery skills and planting site management, raise awareness to increase the knowledge of students, teachers and community leaders on sustainable forest management practices and to create community initiatives to improve and sustain the livelihoods of landowners, nursery volunteers, tree farmers and the local communities

The trees will be planted on degraded grassland areas as enrichment planting to create secondary forest vegetation to restore land and habitat degradation that will play a vital role for sustainable landscape management and biodiversity conservation to provide opportunities for local communities to get things like medicinal plants, firewood, construction poles, thatching grass, fruits, edible mushrooms and fodders.

The project will provide direct and indirect benefits to the 10,000 plus rural people (men, women and children) mostly subsistence farmers in the sub-district. The main beneficiaries who will have direct benefits are the 5 landowners, 8 nursery coordinators, 8 nursery volunteers, 50 tree farmers and their families and the local communities whose livelihoods will be improved through income generating opportunities and other spin-off benefits like cash flow circulation to be created by the project.

The local project partners are the local PNGFA Simbu Office, the PNG Eco-Forestry Forum (PNGEFF), the Simbu Farmers Market Limited (SFML), the local tree farmers and landowners who will be heavily involved in the proposed project activities. The PNGFA will provide further funding support to the project under its National Reforestation Program. VOY will also liaise with its initial project supporters like UNDP and PDCT to provide further funding support to sustain the project activities.

## **Abbreviations and acronyms**

APFNet	Asia-Pacific Network for Sustainable Forest Management and Rehabilitation
UNDP	United Nations Development Program
PDCT	Pacific Development & Conservation Trust
CBFMP	Community Based Forest Management Plan
PNGEFF	PNG Eco-Forestry Forum
PNGFA	Papua New Guinea Forest Authority
PSC	Project Steering Committee
SFML	Simbu Farmers Market Limited
CBO	Community Based Organization
SFM	Sustainable Forest Management
VOY	Voice of Yongos
NC	Nursery Coordinator
NV	Nursery Volunteer
EO	Extension Officer
FO	Forest Officer
PM	Project Manager
PS	Project Supervisor
CO	Communication Officer
LOs	Landowners
TFs	Tree Farmers

# Project Details

## 1. Background and Rationale

The lowland natural forest resources like nothofagus, castanopsis and casuarina tree species in the Yongomugl Sub-District, Simbu Province have been highly depleted over the last 30 years to get sawn timber for various construction activities, domestic use such as fencing and fuel wood for rural household use, coupled with clear felling and intensive slash and burn subsistence farming practices. The area is inundated with land and habitat degradation, loss of local ecosystems functions, reduce the quality, quantity and natural standard of food and water systems, because they all are weak and vulnerable, and lose their standard of health wholesomeness.

The whole area is deforested and becomes degraded bare grassland. There are no reforestation activities to restore land and habitat degradation, sustaining the timber resources and fuel wood for the future generations. The increase in population has a major impact on the forest resources, particularly in terms of building construction and fuel wood for household use which is a substantial consumption in the rural village communities. The availability of trees is very limited at the present time to meet the growing demand.

In 2011, Voice of Yongos (VOY) had initiated the Community Tree Planting Project to address the above issues in the sub-district by establishing nurseries to raise and plant more trees to increase and sustain the timber resources, restoring land and habitat degradation, and contribute to mitigate the effects of climate disasters at the local level with funding support from the UNDP and Global Environment Facility under its Small Grants Programme.

The original planting sites were covered by forest and dominated by high mountain tropical tree species such as Nothofagus sp, Podocarpus sp, Lithocarpus sp, Castanopsis sp, Syzygium sp, Zanthomyrthisis sp, Papuacedrus sp and other native timber species, but it was converted to bare grassland due to human disturbance over time through clear felling, logging, shifting cultivation and bush fires. The local tree species has been highly depleted.

The PNG Forest Authority (PNGFA) has introduced couple of commercial tree species in various parts of the country over the years to support and sustain local timber resources. As for the Highlands Region, the Eucalyptus Grandis, Pinus Strobus and Pinus Patula tree species grows at fast rate in moist and watery soil. Currently, these are the most sought after hard and soft wood in the Highlands Region of the country which has high commercial value. As for the ecological perspective, these tree species can regenerate vegetation fast on degraded grassland and enhance soil fertility and improves local biodiversity Below is the current market value for each tree species.

Commercial Tree Species	Market Value	
	Natural Stand	Artificial Stand

1. Pinus Strobus	US\$20/m <sup>3</sup>	US\$35/m <sup>3</sup>
2. Pinus Patula	US\$25/m <sup>3</sup>	US\$35/m <sup>3</sup>
3. Eucalyptus Grandis	US\$35/m <sup>3</sup>	US\$50/m <sup>3</sup>

These trees were planted on degraded grassland as enrichment planting to create secondary forest vegetation which plays an important and vital role for sustainable landscape management and biodiversity conservation because secondary forest provides opportunities for local communities to get things like medicinal plants, firewood, construction poles, thatching grass, fruits, edible mushrooms, fodder and sawn wood products.

Pinus strobus and pinus patula grows at a fast rate and fairly long-lived trees. Suitable for light (sandy) and medium (loamy) soils, prefers well-drained soil and can grow in nutritionally poor soil and it prefers dry or moist soil and can tolerate drought. These two pinus species are able to stabilize and enhance soil fertility and improve local biodiversity, pinus strobus has chemical properties to heal fresh cuts and its leaves can be used as herbal medicine to cure cervical cancer which will provide more aid to rural mothers.

These three genus species are dominantly introduced as commercial species in the Highlands Region because of high potential market value and can grow well at fast rate because of the suitable climatic and soil conditions and provide canopy shade cover to the native tree and plant species from direct sunlight contact. Under the Food & Agriculture Organization (FAO) soil classification system, the site soil type is located under the Umbrisols group. The soil here has thick, dark colored, humus-rich horizon with low base status (Umbric) because the parent rock that forms the soil is limestone (calcium).

Because of the topographical settings of the planting sites, soil formation is greatly affected. Periods of instability due to gravity and water down slope leads to considerable variation in the soil depth across the site, with steep areas having thin top layer (A horizon) compared to flat sites, which have slightly thicker A horizon. However, the top soil is thicker (30 – 50 cm) and is still more suitable to plant the three mentioned species in the area as we are currently witnessing the smooth and healthy growth of the trees which were planted in 2011.

The demand is very high for both the introduced and natural trees. Nowadays, the people are concentrating more on the introduced eucalyptus grandis, pinus strobus and pinus patula tree species, these are the industrial hardwood and softwood which are now currently on high demand for infrastructure development, as end users are growing, the sawn wood demand is now projected to be doubled in the next 15 years.

Since the initiation of the Community Tree Planting Project in 2011, there have been challenges and opportunities that have now become a VOY's bank of experience in carrying out the project and some of these valuable experiences and responses are;

#### **Working with Landowners and local communities on customary land**

The Community Tree Planting Project was implemented with landowners on their customary land. Any project despite which the implementation agencies are, still face major issues with customary landowners if the projects are going to be implemented on customary land. VOY have gained the experience to openly discuss with the local customary landowners regarding

land issues, raising public awareness, supporting long-term socio-economic activities, assist in mediating conflict and encouraging partnership with landowners and the rural communities to take ownership of the tree planting sites.

### **Customary Landowners Consultation**

The local people are the customary landowners and they are key stakeholders in the Community Tree Planting Project. Landowners Consultation is a very important process in the project. Thus, VOY takes this process very seriously because the success of the project in terms of community or landowners' participation, mobilization, support and taking ownership depends on it. This has now become one of VOY's strength in the implementation of the community tree planting project.

### **Lack of Community Awareness on the socio-economic and ecological importance and benefits of trees**

Whilst implementing the Community Tree Planting Project, VOY came to face the sad fact that the over 95% of the communities and landowners lack the knowledge on the long-term socio-economic and ecological importance and benefits of the trees. That ignorance has been the main driving force for deforestation and careless forest clearance over the last 30 years. Raising community awareness at the village level is a major project activity to educate the rural people on the importance of the tree planting and its benefits.

### **Helping communities to understand the slow return in cultivating trees than other cash crops and long term benefits**

The local communities are used to short-term benefits or quick benefits of cultivating cash crops and food crops for their own consumption or for selling at the local markets for quick small cash income. Not only that trees take time to grow, the benefits are not short-term but long-term. This is one of the major challenges VOY has been confronted with whilst implementing the project. However, the opportunity is that people are receptive to information and are willing to listen and learn if the project will provide short and long-term benefits to them. This is the striking line VOY has been taking and will continue to do so through the landowner and community consultation process.

It is true that, the local tree farmers and landowners will not generate any economic benefits at the early stages of the tree planting activity. VOY will work closely with them to achieve short economic returns through agricultural projects such as vegetable production and marketing. VOY will also encourage intercropping with fruit trees like banana, orange, guava and other crops like taro and cassava for household consumptions and selling at local markets to earn small cash income while nurturing the trees and maintaining the planting sites.

### **Land Shortage due to Population Growth**

Population growth remains a major challenge and putting pressure on Land. Land shortage is a real threat. Therefore, VOY has been very sensitive on this part when implementing the community tree planting project. The plantings are done with the consent of the local landowners, families and communities through the community consultation process. This is an essential part for a successful project implementation, sustainability and ownership.

### **Demand for Tree Planting**

The interests shown by the local people to plant trees are very high as they see the long-term societal, community and environmental benefits. The new project expansion with the support from the APFNet is to meet this very high demand.

### **The following are the socio-economic benefits from the project**

#### **Improved Water quality**

Clean water is essential for all human communities. Some communities have access to water supply through water supply projects yet some depend on the creek and streams for water sources. Community water supply projects also depend on the natural source of water from streams and creeks. Deforestation is having a negative impact on the quality and quantity of this essential natural resource. Therefore, the Community Tree Planting Project will improve and protection the important water catchment and water systems.

#### **Increase stock of Firewood**

Firewood is the main source (fuelwood) for cooking and lighting in all the rural village communities because it is cheap and available. As the population increases, the demand for firewood has increased thus more woods have been felled which is now depleting the tree resources. Firewood is becoming costlier for those who don't have trees and because of the high demand, the firewood suppliers are causing a lot for forest destruction. There is a need for affordable or easy access to firewood, thus this project will provide this long-term benefits.

#### **Increase timber stocks**

Sawn timbers are essential materials to build semi-permanent or permanent houses to improve the rural housing and lifestyle. The depletion of timber resources has resulted in increase in cost for timber for housing and other construction needs. There is a need to increase timber stocks by planting more trees to meet the growing demand for the future generations through this project.

#### **Cash flow**

The circulation of cash in the village communities through this project has improve the livelihoods of many rural people directly and indirectly through income generating opportunities and other spin-off benefits that was created by the project.

#### **Environmental Benefits for the people**

Community tree planting plays an important role in supporting and providing many valuable ecosystem services such as climate stabilization, carbon storage, protection of hydrological function and biodiversity functions. There are also many other forms of benefits humans from the trees. These important values and benefits from the forests has been destroyed due to extensive logging practices and shifting cultivation (subsistence gardening). Through this project the local environment and biodiversity will be improved and the benefits are;

- Improve watershed protection
- Improve local biodiversity and ecosystem services

- Increase carbon sequestration
- Improving land and wildlife habitat.
- Reducing local climate disasters like landslide
- Reduce soil erosion and enhance soil fertility

The full economical value of the community tree planting must be analyzed so that both environmental and economical values are recognized based on the values. Therefore, the following NTFP must be taken into consideration as it provides both direct and in-direct benefits and values;

- a) Direct - use values (goods and services directly consumed and used)
  - Local NTFP are ornamentals, herbal medicines, thatching grass, fruits, edible mushrooms and fodders
  - Recreation
  - Waste assimilation
- b) Indirect-use values (benefits arising from ecological systems)
  - Biological support – links to other species and improve habitats
  - Physical protection – disaster defense function (reduce flooding, landslips, soil erosion, etc)
  - Climate regulation – contributes to reduce global carbon emissions
  - Global life support – supporting human existence and life on earth
- c) Non-use values
  - Conserving resources for future generations
  - Respecting forest resources, taking ownership to preserve and reduce degradation for future generations
- d) Intrinsic value
  - Supporting organisms for human well being

These four (4) values give the community tree planting project its environmental values and benefits. Therefore, all those benefits will be taken into consideration and address so that the local communities reap maximum long-term benefits.

VOY will adopt the existing working arrangements to minimize costs and get maximum benefits. The implementation of the proposed project activities will be based mainly on the project activity work plan. The project manager will coordinate and delegate activities to its partners and project staff, establish network of leaders, share resources, and transfer knowledge, skills and techniques to target beneficiaries. Much of the attention will be given to upscale small-holder tree farmers and encouraging them to plant more high value trees to receive maximum benefits in the future.

The project is in-line with the PNG Forest Authority's (PNGFA) plans to replant 250,000 hectares of land in PNG by 2025 through reforestation and afforestation under its **“Secure land, grow trees and manage them on sustainable level”** program to create ecological, economic and societal benefits through sustainable forest management.

The PNGFA is encouraging the full participation of local landowners and groups in village communities to involve in community forestry activities. Much of the focus is now in the

Highlands region of the country to replant large sections of degraded grassland areas to create secondary forest cover, sustain the timber resources and improving local environmental conditions.

The Community Tree Planting Project complements the priorities and reforestation plans of the PNGFA and contributes to the mission and objectives of the Asia-Pacific Network for Sustainable Forest Management and Rehabilitation (APFNet) to create forest cover, restore and rehabilitate degraded forest areas to enhance forest quality, strengthen ecological functions, increase socio-economic benefits of forests and mitigate the effects of climate change at the local level.

The annual seedling production target is 160,000. The seedlings will be distributed by the project team to small holder tree farmers and they will supervise the planting and support them to maintain planting sites while at the same time assisting the 5 landowners who had approached VOY to plant the trees on their land. The 5 landowners are local villagers residing in different locations in the sub-district and VOY had chosen the 5 landowners because they very committed and had voluntarily provided 180 hectares of their land for planting. They are also willing to take ownership of the trees and to provide necessary support to maintain the planting sites.

To have an effective management approach, VOY will collaboratively develop specific Community Based Forest Management (CBFM) plans of each site, through a participatory model, working with landowners, tree farmers and the local communities living close to the planting sites. The participation of local communities and tree farmers in sustainable management of secondary forest (enrichment planting) will give more power to manage their own trees and resources to sustain the established planting sites for long-term ecosystem services and benefits. This will also reduce costs, creates income opportunities and ensures sustainability, and in turn lead to the better maintenance, protection of planting sites and better utilization of created secondary forest.

The CBFM will be a best practice for secondary forest management by the local communities. The principal landowners will take ownership and manage the planting sites, provide directions and ensure that all the safeguards are in place. The main activities to be done under the CBFM are: seedling planting, boundary clearing, firebreaks building to control and avoid spread of fires, putting up warning signboards, planting fire resistant plants, removing fire hazards like broken glasses, site patrolling to prevent tree theft and other illegal activities and site maintenance activities like weeding, fertilizing, pruning and replace dead seedlings. The planting sites will be managed for the provision of fuel wood, non-forest products, vegetation restoration and soil conservation, and restoring local habitat.

VOY and its partners will continue to provide guidance, materials and technical support, community incentives, and will conduct more awareness on sustainable shifting cultivation methods and promoting community forestry to the local communities living close to the planting sites.

## **2. Goal(s) and Objectives**

The goal is to create and promote a sustainable community supported reforestation project

that contributes to socio-economic and environmental benefits to the people of Yongomugl Sub-District, Simbu Province, Papua New Guinea.

The project objectives are:

1. increase the number of project nurseries to produce, distribute and plant 320,000 tree seedlings by 2018;
2. capacity building for farmers and project staff on nursery skills and planting site management;
3. increase the knowledge of students, teachers and community leaders on sustainable forest management;
4. improve and sustain the livelihoods of landowners, tree farmers and the local communities.

### **3. Outputs and Activities**

Below are six (6) key project outputs with detailed activities that will be undertaken by the project staff, project partners, volunteers, landowners, tree farmers, local groups and communities.

#### **Output 1: Four (4) new nurseries sites established & 71 people were trained**

##### *Activity 1.1 Establishment of the Nursery Sites*

Voice of Yongos (VOY) will establish 4 new nurseries at selected locations in order to strengthen its seedlings production capacity. The 4 new sites were selected based on the following factors: easy access to road and water sources, provision of free land, central location for effective coordination and distribution of seedlings, local support and commitment for planting, security for seedlings, nursery and project materials.

Furthermore, having 4 strategic nursery sites will cut the logistics cost for seedling production, distributions and delivery to effectively covered the whole sub-district. The identified locations were indicated in the project site map (Annex A) are: 1. Laswara, 2. Bolgewa, 3. Terebona, 4. Parua.

##### *Activity 1.2 Nursery Management, Maintenance and Quality Control*

###### **a) Management**

- The four (4) nurseries will be managed by VOY staffs while the PNG Forest Authority (PNGFA) as the Project Supervising Agency (PSA) will second an officer to provide full technical advice, supervision and support for the project's implementation and will report to the Project Steering Committee (PSC). Nursery training and seedling silvicultural treatments will be taught to the nursery coordinators, assistants and volunteers by the PNGFA and will monitor and evaluate the whole project activities.
- VOY will have eight full-time (8) nursery coordinators and each nursery will have two local volunteers to support and assist in the seedlings production and distribution. The

local youths, women and church groups will be engaged from time to time to involve in the nursery activities based on the project activity plan.

#### **b) Maintenance**

- Erect fencing around the nursery sites to prevent destruction of seeds and seedlings by animals
- Build green house to store seedlings and seeds sown on trays to prevent infection and destruction by pests, diseases and prevent total sunlight exposure by allowing minimum exposure
- Construct seedling beds with concrete and diamond (mesh) wire to be tied over for tube tree seedlings
- Construct nursery sheds to store soil, sand and with mini-storeroom for nursery equipment and materials

#### **c) Quality Control**

- Site to be flat (180<sup>0</sup>)
- Constant water supply
- Direct sunlight to nursery area (seedlings)
- Good drainage
- Nursery site to be at least 0.3 ha – 1ha
- Seeds procured to be of high mortality (80-100%)
- Seeds to be stored in fridge inside greenhouse to preserve mortality. Different species have different mortality rate, therefore must be properly stored to maintain quality
- Soils (Umbrisols) and sand from site to be sieved for sowing of seeds
- Soil tubing to be firmly packed with soil (tubing)
- Seeds to sown on seed trays and stored in green house to prevent from infection and destruction by pests and diseases
- Transplanting (prickling) of seedlings from seed tray to poly tubes after 2 – 3 weeks
- Seedlings to exposed to minimum sunlight for 2 weeks under shade cloth (hardening)
- Seedlings to be watered between 7am – 9am in the morning and 4pm – 6pm in the evening
- Dead and infected seedlings to be uprooted and disposed
- Seedlings to be placed in wired seed beds for spacing purposes to prevent competition and suppression between seedlings
- Singular species seedlings will be stacked on singular beds in order for easy management (e.g. stocktaking) and reduce spread of infections to other species.

#### ***Activity 1.3 Capacity Building for Nursery Workers & Tree Farmers***

The PM, PS and the FO will plan, organize and conduct:

- (1) 1<sup>st</sup> nursery skills, management & quality control training to 36 tree farmers, nursery staffs and volunteers at the central nursery in Terebona village for 2 days.

(2) 2<sup>nd</sup> nursery skills, management & quality control training to 35 tree farmers, nursery staff and volunteers at the central nursery in Terebona village for 2 days.

The 2 trainings can be conducted anytime in mid-July, 2017, depending on the availability of funding from APFNet. The reason to conduct 2 trainings is that, it will be manageable to have 2 small groups for the training where participants will be fully participated than having a bigger group because of the availability of space at the central nursery site where the training will be conducted and accommodation in the village.

## **Output 2: Seedlings Production**

The target number of seedlings to be produced by the 4 nurseries is 320,000 by 2019. The annual seedling production target is 160,000 and each nursery will produce 80,000 during the project period and it is anticipated that more seedlings will be produced and distributed for planting.

The new nurseries will have the capacity to hold 40,000 plus seedlings at any one time while the 3 old nurseries will be expanded to produce 60,000 plus seedlings annually. Additional seedlings will be produced by individual tree farmers from small nurseries currently supported by VOY.

### ***Activity 2.1 Activities for Seedlings Production***

PS, NCs and NVs will be responsible for all seedlings production activities:

- (1) purchase of all seedlings production materials
- (2) collect seed and distribute them to each nursery sites for germination.
- (3) engage the local women, youth or church groups from the local communities on short term basis to collect soil and sand, soil straining and tubing.
- (4) seedlings transplanted into poly bags and assemble seedlings at nursery beds
- (5) watering, fertilizing, weeding, replace death seedlings
- (6) keep daily records of seedling production

### ***Activity 2.2 Seedlings Distribution***

Distribution of seedlings will be strictly controlled according to VOY Seedlings Distribution Procedures as stipulated below.

1. Seedling Request Form to be filled and signed by the recipient(s) and received by a VOY official;
2. Request Form has to be approved by VOY Project Manager or Project Supervisor;
3. Seedlings Release Form must be signed by a VOY coordinator in charge of the nursery and the delivery transport driver;
4. Seedling Delivery Form must be signed upon the delivery of the seedling on planting site by a VOY coordinator, delivery driver and the local recipient(s);
5. Planting Confirmation Tally Sheet has to be finally signed by a VOY coordinator and the local recipient(s);

6. A Computerized Seedling Accounting System will be set-up so that all the forms, dockets and tally sheets data will be updated regularly;
7. After releasing of seedlings from each nursery, staff will conduct a seedling stocktaking to confirm the remaining number of seedlings and species still in stock.

Seedlings will be distributed in a way that all information concerning tree farmers, planting area (sites) and other activities involving the project will be closely monitored. Groups to be targeted are;

- Landowners
- Tree Farmers
- Interested tree farmers
- Individuals and Institutions

### **Output 3: Plant 180 hectares on degraded grassland areas**

#### ***Activity 3.1 Baseline Study & Monitoring***

VOY will conduct pre-planting baseline study for each planting sites to collect baseline data prior to tree planting activities so that it will provide quantitative information on each site to serve as basis to assess change of re-vegetation on the state of the physical environment on the planting sites. Signs of return of re-vegetation will take time but indigenous local species that will regenerate much sooner will be such plants as Ficus sp, Alpinia sp, Trema sp, Zingiber sp, Marcaranga sp. These are secondary species that dominate quickly after the primary forest is cleared.

The information will be also used to monitor the project's progress and impact on the contribution to the environment, biodiversity and local communities. Day to day monitoring and field assessments will be employed to evaluate the project's progress. VOY will also conduct a post-planting site assessment for each planting site 24 months after planting to assess changes and make comparison on vegetation changes and below are the process to follow:

- (a) Pre-Planting Photographs –at least a week before clearance for planting
- (b) Planting Photographs – straight after planting
- (c) Post Planting Photographs – 12-24 months after planting

#### ***Activity 3.2 Site Survey & Planting***

PS and FO will conduct:

- (1) survey new planting sites
- (2) supervise planting on each new sites with baseline arrangements, digging and planting
- (3) engage local communities and groups to involve in the planting by carrying seedlings to the planting sites

The supplied seedlings will have their planting sites surveyed and mapped. They will be registered under the VOY's tree farmers list so that goods and services generated by the project will be distributed equally and to the rightful project participants. Information about the project will also be easily gathered for appraisal, monitoring and planning.

### ***Activity 3.3 Site Management & CBFM Plan***

The PS and FO will assist LOs to

- (1) develop the community based forest management plan (CBFM) for each site.
- (2) engage local groups to assist to use CBFM plans for site maintenance activities like boundary clearing, firebreaks, putting up warning signboards, plant fire resistant plants, removing fire hazards like broken glasses, site patrolling to prevent tree theft, weeding, fertilizing, pruning, replace death seedlings

### **Output 4: Increase the knowledge of 2000 students & 8000 people on sustainable forest management**

#### ***Activity 4.1 Poster Design***

PM and PNGEFF will engage

- (1) a local graphic artist to design a couple of awareness posters which will include logos and websites of APFNet, PNGFA and VOY.
- (2) sample posters will be review by PM, PS, FO and PNGEFF and select one sample for printing and withstand weather conditions and human abuse.

#### ***Activity 4.2 Poster Printing***

PM and PNGEFF will

- (1) engage one reputable printer after getting 3 different quotes
- (2) have the 5000 posters to be printed on glossy A3 paper and laminated to last longer

#### ***Activity 4.3 Social Media***

The PM, PS and PAA will

- (1) upgrade the current Facebook page
- (2) upload pictures and stories of project activities
- (3) respond to feedbacks and comments from followers
- (4) record number of visits, likes and shares of each picture or stories posted.

#### ***Activity 4.4 Awareness & Poster Distribution***

The PM, FO and PNGEFF will

- (1) organize, plan, raise public awareness in 7 schools & 15 villages
- (2) distribute posters to 7 schools and 15 villages on tree planting

#### ***Activity 4.5 School Essay & Poster Competition***

The PM and PNGEFF will

- (1) organize and coordinate school essay and poster competitions
- (2) selection will be done by a team of local experts
- (3) present honorary certificates with APFNet and VOY logos inserted
- (4) present prizes to winning entries
- (5) Group photos of winning team will be taken for presentation to each school and for publication
- (6) competition is part of the monitoring process to determine the insights of student's knowledge and understanding on trees and its benefits, and the progress and impact of the awareness activities

The competition will involve 7 schools (2 high schools and 5 primary schools) where 2000 plus students will be attracted to enter the essay and poster competitions. It will assist students to learn and develop their understanding on environment and the important of tree planting and its benefits. An awareness education program will be carried in these schools before announcements will be made for the competition. A team of local experts will be asked to screen and select the winning entries. The winning entries will be published in newsletters of our partner organizations. The potential topics to highlight is the importance of tree planting, what are the long term environmental and socio-economic benefits to the local communities and how the trees can contribute to reduce the greenhouse gas emissions.

#### ***Activity 4.6 Seminar for Community Leaders***

The PM, PS, FO and PNGEFF will

- (1) organize, plan and conduct a seminar for 60 community leaders & village court officials
- (2) conduct random interviews to evaluate seminar presentations and information shared
- (3) increase the knowledge of community leaders on sustainable forest management
- (4) influence village court officials to enforce tougher penalties on bushfires. These leaders are in better position to dissemination information in their respective village communities.

#### ***Activity 4.7 Seminar for Teachers***

The PM, PS, FO and PNGEFF will

- (1) organize, plan and conduct a seminar for 75 school teachers to increase their knowledge on sustainable forest management
- (2) conduct random interviews to evaluate seminar presentations and information shared
- (3) influence them to teach students on the importance of tree planting and its benefits as they are in a very good position to educate and change the attitudes and behaviors of students.

#### ***Activity 4.8 Merchandise for Publicity***

The PM and PNGEFF will

- (1) purchase 100 polo shirts, 200 tee shirts and 100 caps
- (2) logos will be embroidery

- (3) distribute to project staff, LOs, TFs and others.

The project team will consult with APFNet on the layout of the logos on the shirts and caps before embroidery.

#### ***Activity 4.9 Monitoring & Evaluation for Communication Strategy***

The PM, PS and CO will

- (1) conduct random interviews with students, teachers, community leaders and the people
- (2) prepare a summary report on the evaluation of people's behavior, decisions and actions in the community
- (3) evaluate the effectiveness of the communication activities

### **Output 5: Improve and sustain the livelihoods of 71 families and local communities**

#### ***Activity 5.1 Vegetable Production Training***

The VOY and SFML will

- (1) plan, organize and conduct 1<sup>st</sup> vegetable farming training to 36 family members of the landowners, tree farmers, nursery volunteers and other members of the communities at Laswara village for 2 days.
- (2) plan, organize and conduct 2<sup>nd</sup> vegetable farming training to another 35 family members of the landowners, tree farmers, nursery volunteers and other members of the communities at Parua village for 2 days.

The selected vegetables for training are bulb onion, carrot and cabbage, the reason is that, these vegetables are on high demand in the country from major wholesalers, supermarkets and catering firms. The local markets are readily available and accessible so it will bring maximum benefits to the tree farmers and their families. The 2 trainings will be conducted in August, 2017 at 2 different locations. The reason is that: it will be manageable to have 2 small groups for the training at these locations due to availability of space for accommodation and local materials for the training in these villages.

#### ***Activity 5.2 Extension, Marketing & Support Services***

VOY and SFML will carry out

- (1) all extension services after the trainings
- (2) purchase and distribute seeds and supplies to those who attended the training for initial vegetable production
- (3) assist and organize farmers to harvest, packaging and arrange transport to take the produce to SFML purchase depot for payment.
- (4) coordinate and organize with PNG Micro Bank to open bank accounts for farmers so that they can save their income from the sales for future use.

### **Output 6: Effective implementation of the project activities**

#### ***Activity 6.1 Internal Monitoring & Evaluation***

PM will

- (1) engage a local consultant to conduct internal monitoring & evaluation of project activities and administration
- (2) provide finding reports to VOY

#### **Activity 6.2 Auditing**

PM will

- (1) engage a local auditing firm to audit its accounts on an annual basis.
- (2) present the final audit report to VOY

#### **Activity 6.3 External Project Evaluation**

In line with the APFNet project management regulations, APFNet will organize a terminal evaluation Relevant experts will be recruited to conduct the evaluation and expenses will be retained by APFNet.

### **4. Risks and Assumptions**

<b>Possible Risks</b>	<b>What to do (Risk Management)</b>	<b>Who to take actions</b>
Bushfires	Build firebreaks, conduct public awareness rising & put up sign posts, plant fire resistant species	VOY, PNGFA, District Administration, landowners, village court officials,
Landslips & road blocks	Engage volunteers & communities to clear the landslips	VOY, volunteers & local communities
Lack of landowner support & participation	Engage direct meetings with landowners & family members	VOY, & partners
Land disputes among families	Landowner consultation & mediation	VOY, village court & land mediators
Loss of funds through exchange rate	Seek funds or in-kind support from partners or review work plan to minimize cost	VOY & partners
Project personnel sick or die	Reschedule activity	VOY
Unavailability of seeds	Buy seeds in bulk & store it	VOY& partners
Seed mortality	Supervise all planting	VOY & partners

### **5. Institutional Management and Communication**

#### **The project team and their specific duties and responsibilities**

<b>Name</b>	<b>Position</b>	<b>Organization</b>	<b>Specific Tasks</b>
Joe Kelly Bik	Project Manager	VOY	Coordinate & manage the overall project implementation
Gaima Takai	Project Supervisor	PNG Forest Authority	Will be seconded to the project by PNGFA to supervise all project activities

Peter Kunma	Nursery Coordinator	VOY	Coordinates all nursery activities & planting
Peter Mulua	Nursery Coordinator	VOY	Coordinates all nursery activities & planting
Alice Winogl	Nursery Coordinator	VOY	Coordinates all nursery activities & planting
Apo Siune	Nursery Coordinator	VOY	Coordinates all nursery activities & planting
Simon DamaKlen	Nursery Coordinator	VOY	Coordinates all nursery activities & planting
Johnny Boi	Nursery Coordinator	VOY	Coordinates all nursery activities & planting
John Tisa	Nursery Coordinator	VOY	Coordinates all nursery activities & planting
Florence Laswara	Nursery Coordinator	VOY	Coordinates all nursery activities & planting
Samson Kupale	Communication Officer	PNG EFF	Provide technical advice & involves in all public awareness & communication program
Ben Kimbe	Extension Officer	SFML	Provide technical advice & involves in vegetable training, production & marketing

#### **Detailed Information on Supervisory Agency, Project Partners, Project Manager & Project Steering Committee**

VOY became a registered member of the PNG Eco Forestry Forum (PNGEFF) in 2007, a national membership based organization whose role is to advocate and promote sustainable forest management and is recognized locally and internationally. The Director of VOY (Joe Kelly Bik) was appointed by the PNG Forest Authority (PNGFA) in 1994 to represent the community-based organizations (CBOs) on the Simbu Provincial Forest Management Committee (SPFMC). VOY had been involved with the two (2) organizations for a long time apart from the other project partners.

The composition of the local project partners are: Simbu Provincial Forest Office, the PNG Eco-Forestry Forum (PNGEFF), Simbu Farmers Market Limited (SFML), tree farmers and the local landowners. Below is a brief on the capacity of each project partner to deliver specific project activities with shared responsibilities to deliver benefits to the 126 families and the local communities:

1. The PNGFA as the supervisory agency of the project will engage its local office (Simbu Provincial Forest Office) to provide technical support and advice involve in all project activities and will assign one of its extension officer to work closely with VOY in the project. The provincial office involves in community forestry extension programs and has the experience and capacity to provide strong supervisory role to implement the project activities. The PNGFA will involve in all aspects of the project by providing training on nursery skills, quality control of seedlings, fire prevention, planting site management, planting and facilitating community awareness, seminar and workshop.

2. The PNG EFF is a strong advocate of sustainable forest management in PNG and involves in lobbying, advocacy, publicity and awareness. PNGEFF will work closely with VOY in the awareness and publicity component to delivery information and awareness on the importance of tree planting and its socio-economic and environmental benefits to communities through a participatory shared learning process, beginning with local knowledge and needs, in which information prepared by PNGEFF to be jointly presented with project partners to the communities. The PNGEFF has the experience, capacity and technical communication skills to involve in the publicity, awareness, training and capacity building activities. PNGEFF will also promote the project activities through their quarterly newsletter, as they normally do to support the activities of the member organizations.
3. The Simbu Farmers Market Limited (SFML) is a marketing company established by the Simbu Provincial Government (SGP) to create market opportunities for rural people to sell their fresh food product. The role of SFML as a buyer is also involves in extension services to assist farmers in all aspects of vegetables farming to produce high quality product for marketing. The 10 landowners, 100 tree farmers and the 16 nursery volunteers had shown personal interest with willing heart to involve in the project by providing land, labour and commitment. VOY will not provide payment or compensation as it will set a bad precedence but as a token of appreciation will create income generating opportunities for them as the market is readily available. SFML will work closely with VOY by providing extension services, training and marketing to 126 families and other members of the local communities to grow and sell fresh food produce to SFML to sustain their livelihoods.
4. VOY and the PNGFA will provide training on basic nursery skills and site management to the 10 landowners and the 100 tree farmers to enhance their capacity to take ownership and manage their own planting sites to ensure sustainability and better utilization of the trees. The main activities to be done under the CBFM are: seedlings planting, boundary clearing, building firebreaks to control and avoid spread of fires, putting up warning signboards, plant fires resistant plants, removing fire hazardous like broken glasses, site patrolling to prevent tree theft and other illegal activities and site maintenance activities like weeding, fertilizing, pruning and replace dead seedlings.
5. VOY has gained a lot of project implementation experience over the last 5 years with the tree planting project and has the capacity to implement the planned project activities, with physical assets like office building funded by the New Zealand AID in 2009, office equipment, permanent nursery sites and local technical expertise. VOY has established local networks within the local communities, has the dedicated support of 10 full-time project staff and 16 nursery volunteers. VOY is positioned well to coordinate and implement the project activities with the support from Simbu Provincial Forest Office, the PNG Eco-Forestry Forum and the Simbu Farmers Market Limited.

The Project Manager is fully responsible for the overall implementation of all project activities; his role is to coordinate and delegate project activities and communicate between the project team, partners and the Supervisory Agency (PNGFA) so that project activities are implemented with other stakeholders on the ground. The project partners and PS reports to PM, he is also responsible for ensuring proper reporting, synthesizing the reports into project reports, and reporting to the APFNet, and will work, as much as possible, according to the work plan. The PM will have quarterly meetings with Project Steering Committee for guidance and directions, and reports directly to them, the APFNet Secretariat, the PNG Forest Authority and VOY Committee Members.

6. The Project Steering Committee (PSC) has the ultimate authority to ensure that all project activities were completed on time, within budget and according to Annual Work Plan. To ensure smooth and effective implementation, quarterly meetings will be conducted so that, the Project Manager and Project Supervisor will provide updates and seek further guidance and direction. The composition of Project Steering Committee (PSC) members are based on the nature of their position and involvement during the project implementation period and also their valuable contribution, inputs and support will be sought to sustain the project;

1. Joe Kelly Bik, Director of Voice of Yongos
2. Arnold Mundua, Provincial Forest Officer, PNG National Forest Authority
3. Bal Numapo, Chief Executive Officer, SinaSina Yongomugl District Administration
4. Ben Kimbe, Extension Officer, Simbu Farmers Marketing Limited
5. Anna Gola, community representative and livelihood programs
6. Apo Siune, representing local tree farmers and landowners, Chair
7. Dr. Ruth Turia, in-country representative from APFNet
8. APFNet Secretariat, observer of PSC

## 6. Project resources and financial management

Funding Source	Amount	Comments
UNDP/GEF Small Grants Program	US\$49,111.33	US\$34,900 is yet to be released so this amount is included in the budget as counterpart contribution
VOY	US\$10,000.00	VOY's own in-kind cash contribution

To maximize the cost, the project manager will liaise and work closely with project staff, partners and volunteers to make use of locally available materials and existing resources, control activities and expenses, request project partners for in-kind support through resource sharing. Identify 3 potential suppliers and procure three estimate quotes before

negotiating and finalizing one based on reasonable quote and reliability to save costs and time. VOY will maintain a stock and inventory list to prevent excess or unnecessary purchase and reduce wastage.

As a small community based organization (CBO), VOY has operated one single bank account to access and manage project funds but it creates separate Cash Books for each donor to register bank deposits and drawdown of funds which helps to keep records of all transactions. The cashbook is regularly maintained and updated so cash balances are also inked up on daily basis which helps the Project Manger to check and sign the cashbook on monthly basis to avoid overspending and to control expenses within approved budget line items.

VOY will create a separate cashbook for APFNet funding to procure timely and accurate financial reports that will create a stable financial management on drawdowns of funds and transactions, to ensure that funds are used in accountable and correct manner based on the itemized and approved budget. The Project Administration Assistant (PAA) will assist the Project Manager by handling the cashbook and all payments will have vouchers to be printed and will have an individual serial number to maintain daily records of payments, invoices and receipts. The PAA will prepare payment vouchers and it be only approved by the Project Manager, the payee also signs the voucher on receiving the payment.

We use Excel in the project office to keep track of all project expenses and all our project financial reports are in Excel format so it is devoid of any alteration, in case of any mistakes, it is corrected by passing an entry of rectification. The PAA will prepare and present all necessary information to the auditor for auditing under certified auditing standards of the country. An external accounting firm is yet to be found to do auditing during the project implementation and to provide periodical and final audit reports.

The counterpart contribution from UNDP/GEF Small Grants Programme is supporting the on-going project activities currently under the implementation for specify project activities. The project outcomes from APFNet will be reported separately so that each donor know the value of their contribution towards the project. based on the funding and scope of activities of each donor

The funding support from APFNet will be used for the new proposed project activities which will be undertaken separately but complimenting on the expansion of the tree planting project. VOY will provide separate details of the project value and outcomes directly to APFNet.

## **7. Monitoring and evaluation**

Please kindly see the attached internal Monitoring & Evaluation tool that will be used by

VOY to track and monitor the project activities and its impacts that will form the basis to prepare project reports. The project will be appraised quarterly and annually by VOY and the project partners based on the following methods;

- a) VOY will use an appraisal form with specifications to appraise the seedling production, distribution, planting, nursery activities, capacity building, training and awareness
- b) VOY will assess and do baseline study on planting sites before planting
- c) PNGFA will conduct interviews with project partners, land owners, tree farmers and the local communities to get their opinions and comments to assess the project activities
- d) In line with APFNet project management regulation, APFNet will organize a terminal evaluation.

## **8. Dissemination, duplicability and sustainability**

VOY plans to promote and disseminate the importance of community tree planting and encourage sustainable forest management practices to the people of Yongomugl Sub-District through community awareness education activities. The specific target audiences are;

1. the primary target audience are the school students with the communication objective to increase their knowledge by disseminating more information on the functions of trees and the importance of planting more trees. The key message for the students is to learn and understand the functions of trees so that they have a better knowledge to act responsibly. To measure the effectiveness, school essays and poster competitions will be held to determine the knowledge and understanding of the students. Six months after the face to face awareness campaigns, at least 80% of the students are able to write good essays and produce posters, and getting scoring good marks.
2. the secondary target audience are the village community leaders, village court officials and teachers with the communication objective to educate them to have a better knowledge and understanding on the current situation and needs in the area. Two (2) separate seminars will be conducted with the key message to plant more tree, straight after the seminars, the community leaders will be able to educate the people in their respective village communities, the village courts set tougher penalties on bush fires and the teachers continue to educate and teach students on the importance of tree planting through the agricultural lessons.
3. the other secondary audience is the local people in the village communities with the communication objective to have an interactive face to face mobile awareness campaign to educate the illiterate people with the key message to put a stop to cutting down of trees and plant more trees for their children, 3 months after the awareness campaigns, at least 90% of the people plant 20, 000 trees and change their behavior.

4. The following are the dissemination activities for outreach purpose to educate the elites, government officials, politicians, donor agencies and the general public through:
  - (1) submit 2 feature stories about the project for publication in the newspapers
  - (2) submit short video clips for TV news broadcast
  - (3) submit news articles to the 2 daily newspapers for publication
  - (4) submit articles to partner organizations for publication in their newsletters
  - (5) submit news article to local radio station for news broadcast
  - (6) display project activities in the annual NGO exhibitions
  - (7) posting photos, project updates, video clips through Facebook to promote and disseminate project activities to the outside world

VOY will develop 3 key messages for the specific target audience based on the current situation and needs in the area which fits into the project objective as the audience will be hearing, believing and accepting because they have seen the current situation. The communication tools that will be used to disseminate the message is interactive communication through face to face public awareness campaigns in schools and villages, seminars, printing and distribution of educational posters, conducting school essay and poster competitions. The use of social media (Facebook) is to promote the project activities to the outside world.

The extend of the project's impacts is to encourage behavioral change at the community level, promoting and supporting tree planting, influence village court officials to set and enforce tough penalties for people who destroy local environment or setting bush fires. The students and local people have a better knowledge on the importance of tree planting.

This is a viable project and it is very important to generate sufficient funds to sustain the project activities and also to meet the administrative costs beyond the funding period. The project is generating more support as the tree planting becomes a project brand over time since its inception in 2011.



VOY will sign a Memorandum of Agreement with the PNGFA soon to provide further technical and funding support over the next three (3) years under the National Reforestation Program while technical support will be provided by the PNGFA's Provincial Office in Simbu. VOY will also liaise with its initial project supporters like UNDP Small Grants Program to continue supporting the project activities.

## Annex A: Project sites map and relevant information

The brown colour indicates the bare and degraded grassland areas with less trees and shrubs, there's less than 10,000 eucalyptus grandis with some casuarina, pinus strobus and patula trees growing. The average land size is not known, the main land use activity is subsistence farming for household use and selling to earn cash income. This project can be replicated in other nearby districts and neighboring provinces. There are 120,000 trees growing since 2011, raised and distributed for planting by VOY, planting in small plots by tree farmers in various location.



### LEGEND

-  Established Nursery Sites (4)
-  Proposed Nursery Sites (4)

## Annex B: Project logical framework

Items	Intervention logic	Objectively verifiable indicators of achievement <sup>5</sup>	Sources of information and means of verification <sup>6</sup>	Assumptions <sup>7</sup>
<b>Goal(s)<sup>1</sup></b>	To create and promote a sustainable community supported reforestation project that contributes to socio-economic and environmental benefits to the people of Yongomugl Sub-District, Simbu Province, Papua New Guinea.	320,000 seedlings produced, distributed and planted 180ha of degraded grassland areas replanted Livelihoods of 71 households improved	The following data source and methods will be used: Baseline study report Seedling production, distribution and planting report Quarterly internal reports Mid-year reports Annual reports External Evaluations	Positive funding, logistics & technical support from PNGFA  Favorable climate conditions and weather patterns. A prolonged dry spell or rainy period will be of disadvantage of the project.  Timely release of project funds will ensure effective implementation of project activities
<b>Objectives<sup>2</sup></b>	1.increase number of nursery sites to produce, distribute and plant 320,000 tree seedlings by 2018 2.capacity building for farmers and project staff on nursery skills and planting site management by April, 2017 3.increase the knowledge of students, teachers and community leaders on sustainable forest management by 2017 4.create incentives to improve and sustain the livelihoods of farmers and local communities	4 nursery sites established 4 trainings conducted awareness activities carried-out income incentives created seedlings produce and planted program implementation executed as planned	Activity reports Training reports Seminar reports Monitoring reports Baseline survey report External evaluation report	Project partners remain supportive throughout the project duration Timely release of project funds Favorable climate conditions and weather patterns.
<b>Expected outputs<sup>3</sup></b>  <b>Output 1</b>	<b>Four (4) new nurseries sites established &amp; 71 people were trained</b>	Site visits, identified. prepare nursery sites, purchase project materials, cconstruction of nursery sheds and beds Project staff and farmers were trained, skilled and equipped to actively execute project activities	Nursery establishment reports Training reports Evaluation & feedbacks	Arrange project materials in advance Manage land issues Reschedule activities

**Annex B: Project logical framework**

<p>Activity 1.1</p>	<p><b>Identification of the Nursery Sites</b></p> <p>PM, PS and Nursery Coordinators will work together to identify the best nursery sites based on the following factors:</p> <ul style="list-style-type: none"> <li>(1) Easy access to road and water sources</li> <li>(2) No land disputes</li> <li>(3) Central location for effective coordination and, and distribution</li> <li>(4) Local support and commitment</li> <li>(5) Security for seedlings</li> </ul>			
<p>Activity 1.2</p>	<p><b>Establishment of Nursery Sites</b></p> <p>The PM, PS, NC and local communities to work together to establish the 4 new nurseries;</p> <ul style="list-style-type: none"> <li>(1) Engage local people for site preparation; clearing, site works and fencing.</li> <li>(2) Purchase and transport project materials to nursery sites</li> <li>(3) Engage local carpenters to construct nursery sheds, greenhouse and nursery beds</li> </ul>	<p>2 visits are made to each proposed nursery sites for assessments</p> <p>4 nurseries fully established with the capacity to function</p> <p>2 trainings conducted for 71 people, well trained and equipped to build nurseries and are able to manage nurseries and practice community forest management</p>	<p>Meeting records for project implementation/plans</p> <p>Site assessment reports</p> <p>Site construction updates and reports.</p> <p>Nursery activity reports</p> <p>Training reports</p>	<p>Project activity reports are destroyed by virus</p> <p>Unavailability of project materials, may delay construction</p> <p>There is less likely of landslide with the newly constructed road</p> <p>Participants taking initiatives to build their own nurseries</p>
<p>Activity 1.3</p>	<p><b>Capacity Building for Nursery Workers &amp; Tree Farmers</b></p> <p>The PM, PS and the FO will plan, organize and conduct;</p> <ul style="list-style-type: none"> <li>(1) 1<sup>st</sup> nursery skills, management, &amp; quality control training to 36 tree farmers, nursery staff and volunteers at the central nursery in Terebona village for 2 days.</li> </ul>			

## Annex B: Project logical framework

	(2) 2 <sup>nd</sup> nursery skills, management, & quality control training to 35 tree farmers, nursery staff and volunteers at the central nursery in Terebona village for 2 days.			
<b>Output 2</b>	<b>Production &amp; distribution of 320,000 tree seedlings</b>	Purchase of seeds and poly bags Seed germination Soil collection and tubing Seedlings transplant into poly bags Seedlings assembled at beds Daily record of production	Seedling production record Nursery activity reports Number of poly bags used	Favorable climate conditions and weather patterns.
Activity 2.1	<p><b>Seedlings Production.</b></p> <p>PS, NCs and NVs will be responsible for all seedlings production activities;</p> <ul style="list-style-type: none"> <li>(1) purchase of all seedlings production materials</li> <li>(2) collect seed and distribute them to each nursery sites for germination.</li> <li>(3) engage the local women, youth or church groups from the local communities on short term basis to collect soil and sand, soil straining and tubing.</li> <li>(4) seedlings transplanted into poly bags and assemble seedlings at nursery beds</li> <li>(5) watering, fertilizing, weeding, replace death seedlings</li> <li>(6) keep daily records of seedling production</li> </ul>	<p>Record of seeds purchased and distributed to the sites for germination</p> <p>Daily record of seeds transplant to the poly bags monthly production is 1666 seedlings per nursery Annual production is 20,000 seedlings per nursery</p>	<p>Daily record of seedlings Daily record of transplant Monthly production record Nursery activity reports Number of poly bags used Photographs of seedlings</p>	<p>Regular monitoring of nursery sites, seed germination preparation and transplanting to the poly bags.</p>
Activity 2.2	<p><b>Distribution of seedlings</b></p> <p>NCs and NVs will</p> <ul style="list-style-type: none"> <li>(1) create seedlings traceability</li> </ul>			

## Annex B: Project logical framework

	<ul style="list-style-type: none"> <li>records</li> <li>(2) create distribution list and types of species supplied</li> <li>(3) control seedlings stock</li> <li>(4) distribute seedlings</li> </ul>			
<b>Output 3</b>	<b>Plant 180 hectares (199,980 seedlings) on degraded grassland areas</b>	<ul style="list-style-type: none"> <li>Undertake baseline survey</li> <li>Develop CBFM plans</li> <li>Planting site surveys</li> </ul>	<ul style="list-style-type: none"> <li>Baseline survey report</li> <li>Number of seedlings planted</li> <li>Seedlings distribution list</li> <li>Maps of planting sites</li> <li>CBFM plan</li> <li>Photographs of planting</li> </ul>	<ul style="list-style-type: none"> <li>Land disputes are managed</li> <li>Landowners use CBFM plans</li> <li>Community support</li> <li>Fires are managed</li> </ul>
Activity 3.1	<p><b>Baseline Study &amp; CBFM plans</b></p> <p>The PM, PS and FO will conduct;</p> <ul style="list-style-type: none"> <li>(1) baseline surveys on 5 planting sites of the 180 hectares of land voluntarily provided to get quantitative information on the areas before planting so that the information will be used to monitor the project's progress and impacts</li> <li>(2) develop the community based forest management plan (CBFM) for each site.</li> </ul>	<ul style="list-style-type: none"> <li>Physical area surveys are done and CBFM plans developed for 5 sites</li> <li>Awareness activities conducted near 5 planting sites</li> <li>5 warning sign posts are erected at planting sites</li> <li>5 planting sites surveyed is conducted for 180 hectares of land for planting</li> <li>CBFM plans are used.</li> <li>Big number of communities and local groups are involved in the planting</li> </ul>	<ul style="list-style-type: none"> <li>Physical area surveys are done and CBFM plans developed for 5 sites</li> <li>Awareness activities conducted near 5 planting sites</li> <li>5 warning sign posts are erected at planting sites</li> <li>5 planting sites surveyed is conducted for 180 hectares of land for planting</li> <li>CBFM plans are used.</li> </ul>	<ul style="list-style-type: none"> <li>Posters or warning post are subject to destruction from public</li> <li>No fire hazard that will potentially destroy the planting sites</li> <li>No presence of pest and disease attack</li> <li>Appropriate law enforcers will be engaged if destruction are identified with CBFM</li> <li>Community taking ownership of the project vision and run with it.</li> </ul>
Activity 3.2	<p><b>Site Survey &amp; Planting</b></p> <p>PS and FO will conduct;</p> <ul style="list-style-type: none"> <li>(1) survey new sites</li> <li>(2) supervise planting on each new site.</li> <li>(3) engage local communities and groups to involve in the planting by carrying seedlings to the planting sites, arrange baselines, digging and planting.</li> </ul>			
Activity 3.3	<b>Site Management</b>			

## Annex B: Project logical framework

	<p>The PS and FO will assist LOs to</p> <ol style="list-style-type: none"> <li>(1) use CBFM plans for site maintenance activities like boundary clearing, firebreaks, putting up warning signboards, plant fire resistant plants,</li> <li>(2) removing fire hazards like broken glasses, site patrolling to prevent tree theft,</li> <li>(3) weeding, fertilizing, pruning, replace death seedlings</li> <li>(4) engage local groups to assist</li> </ol>			
<b>Output 4</b>	<b>Increase the knowledge of 2000 students, 75 teachers, 60 leaders &amp; educate 8000 people on sustainable forest management practice</b>	<p>Production &amp; distribution of posters            Conduct public awareness            Conduct school competitions            Conduct seminars</p>	<p>Awareness activity reports            Numbers of posters            Number of competition entries            Seminar reports</p>	<p>Favorable weather conditions            Approval from education office            Favorable response from schools            Support from local people</p>
Activity 4.1	<p><b>Poster Design</b></p> <p>PM and PNGEFF will engage</p> <ol style="list-style-type: none"> <li>(1) a local graphic artist to design a couple of awareness posters,</li> </ol>	<p>5000 posters are developed and distributed to 25 schools and 15 villages</p> <p>Project activities are uploaded to the Face book page</p>	<p>Comment and feedback posts from public</p> <p>school activity report            Records of awareness created or pictures</p>	<p>Reliable printing sources are arranged or printer is established to aid printing needs</p> <p>Teachers teach students on</p>

## Annex B: Project logical framework

<p>Activity 4.2</p>	<p>(2) sample posters will be review by PM, PS, FO and PNGEFF and select one sample for printing</p> <p><b>Poster Printing</b></p> <p>PM and PNGEFF will</p> <p>(1) engage one reputable printer after getting 3 different quotes</p> <p>(2) print, packaging and deliver 5000 posters</p>	<p>Awareness are conducted to 7 schools and 15 villages</p> <p>60 community leaders and village court official increase their knowledge on sustainable forest and management and</p> <p>75 school teachers receive knowledge and skills through seminar</p> <p>100 polo shirts, 200 tee shirts and 100 caps are distributed to project staff and others</p>	<p>poster distribution list</p> <p>Reports of awareness conducted to the schools and village communities</p> <p>Reports of seminars conducted to the community leader, village court officials and school teachers.</p> <p>Distribution list of merchandize items</p> <p>Annual activity report from PNGEFF</p>	<p>the importance forest management</p> <p>Village court officials enforce tougher penalties for bushfire</p>
<p>Activity 4.3</p>	<p><b>Social Media</b></p> <p>The PM, PS and PAA will</p> <p>(1) upgrade the current Facebook page</p> <p>(2) upload pictures and stories of project activities,</p> <p>(3) respond to feedbacks and comments from followers,</p> <p>(4) record number of visits, likes and shares of each picture or stories posted.</p>			
<p>Activity 4.4</p>	<p><b>Awareness &amp; Poster Distribution</b></p> <p>The PM, FO and PNGEFF will</p> <p>(1) organize, plan, raise public awareness in 7 schools &amp; 15 villages</p> <p>(2) distribute posters to 7 schools and 15 villages on tree planting</p>			
<p>Activity 4.5</p>	<p><b>School Essay &amp; Poster Competition</b></p> <p>The PM and PNGEFF will</p>			

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<p>Activity 4.6</p>	<ul style="list-style-type: none"> <li>(1) organize and coordinate school essay and poster competitions,</li> <li>(2) selection will be done by FO and PM</li> <li>(3) present prizes to winning entries.</li> <li>(4) competition is part of the monitoring process to determine the insights of student’s knowledge and understanding on trees and its benefits, and the progress and impact of the awareness activities</li> </ul> <p><b>Seminar for Community Leaders</b></p> <p>The PM, PS, FO and PNGEFF will</p> <ul style="list-style-type: none"> <li>(1) organize, plan and conduct a seminar for 60 community leaders &amp; village court officials</li> <li>(2) conduct random interviews to evaluate seminar presentations and information shared</li> <li>(3) increase the knowledge of community leaders on sustainable forest management</li> <li>(4) influence village court officials to enforce tougher penalties on bushfires. These leaders are in better position to dissemination information in their respective village communities.</li> </ul>			
<p>Activity 4.7</p>	<p><b>Seminar for Teachers</b></p> <p>The PM, PS, FO and PNGEFF will</p> <ul style="list-style-type: none"> <li>(1) organize, plan and conduct a</li> </ul>			

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<p>Activity 4.8</p>	<p>seminar for 75 school teachers to increase their knowledge on sustainable forest management</p> <ol style="list-style-type: none"> <li>(2) conduct random interviews to evaluate seminar presentations and information shared</li> <li>(3) influence them to teach students on the importance of tree planting and its benefits as they are in a very good position to educate and change the attitudes and behaviors of students.</li> </ol> <p><b>Merchandise for Publicity</b></p> <p>The PM and PNGEFF will</p> <ol style="list-style-type: none"> <li>(1) purchase 100 polo shirts, 200 tee shirts and 100 caps</li> <li>(2) logos will be embroidery</li> <li>(3) distribute to project staff, LOs, TFs and others.</li> </ol>			
<p>Activity 4.9</p>	<p><b>M &amp; E for Communication Strategy</b></p> <p>The PM, PS and CO will</p> <ol style="list-style-type: none"> <li>(1) conduct random interviews with students, teachers, community leaders and the people</li> <li>(2) prepare a summary report on the evaluation of people's behavior, decisions and actions in the community</li> <li>(3) evaluate the effectiveness of the communication activities</li> </ol>	<p>5000 posters are developed and distributed to 25 schools and 15 villages</p> <p>Project activities are uploaded to the Face book page</p> <p>Awareness are conducted to 7 schools and 15 villages</p> <p>60 community leaders and village court official increase their knowledge on sustainable forest and management and</p> <p>75 school teachers receive knowledge and skills through seminar</p>	<p>Comment and feedback posts from public</p> <p>school activity report</p> <p>Records of awareness created or pictures</p> <p>poster distribution list</p> <p>Reports of awareness conducted to the schools and village communities</p> <p>Reports of seminars conducted to the community leader, village court officials and school</p>	<p>Favorable weather conditions</p> <p>Favorable response from schools</p> <p>Support from local people</p>

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			teachers. Annual activity report	
<b>Output 5</b>	<b>Improve and sustain the livelihoods of 71 people and their families</b>	Organize and conduct training for vegetable production & provide initial start-up seeds and materials	Training report production reports, marketing report annual activity report from SFML	Full participation of family members Initial start-up materials are properly utilized Participants fully understand farming skills
Activity 5.1	<p><b>Vegetable Production Training</b></p> <p>The VOY and SFML will</p> <p>(1) plan, organize and conduct 1<sup>st</sup> vegetable farming training to 36 family members of the landowners, tree farmers, nursery volunteers and other members of the communities at Laswara village for 2 days.</p> <p>(2) plan, organize and conduct 2<sup>nd</sup> vegetable farming training to another 35 family members of the landowners, tree farmers, nursery volunteers and other members of the communities at Parua village for 2 days.</p>	<p>71 family members of tree farmers and nursery volunteers trained on vegetable farming</p> <p>Seeds and materials are purchased and distributed to training participants for initial start</p> <p>Each family members sell fresh vegetables and generate cash income marketing of fresh produce that generates income to</p> <p>Family members open bank accounts</p>	<p>Training report production reports, marketing report annual activity report from SFML</p>	<p>No pest Good weather condition No landslides on road Availability of logistics</p>
Activity 5.2	<p><b>Extension, Marketing &amp; Support Services</b></p> <p>VOY and SFML will carry out</p> <p>(1) all extension services after the trainings,</p> <p>(2) purchase and distribute seeds and supplies to those who attended the training for initial vegetable production</p>	<p>New household items acquired by family members &amp; livelihoods sustained</p>		

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	<p>(3) assist and organize farmers to harvest, packaging and arrange transport to take the produce to SFML purchase depot for payment.</p> <p>(4) coordinate and organize with PNG Micro Bank to open bank accounts for farmers so that they can save their income from the sales for future use.</p>			
<b>Output 6</b>	<b>Effective implementation of the project administration</b>	<p>Conduct internal M &amp; E</p> <p>Engage external evaluation</p> <p>Engage audit of funds</p> <p>Quarterly meetings for project implementation with the project partners</p>	<p>Internal M &amp; E report</p> <p>External evaluation report</p> <p>Audit report</p>	Reliable local consultants
Activity 6.1	<p><b>Internal Monitoring &amp; Evaluation</b></p> <p>PM will</p> <p>(1) engage a local consultant to conduct internal monitoring &amp; evaluation of project activities and administration</p> <p>(2) provide report to VOY</p>	<p>Internal M&amp;E of project activities and administration identify issues and provide action plans</p>		
Activity 6.2	<p><b>Auditing</b></p> <p>PM will</p> <p>(1) engage a local auditing firm to audit its accounts</p> <p>(2) present the final audit report to VOY</p>	<p>External project evaluation identifies issues and provide strategic action plans</p> <p>Audit of the accounts and accompany report details the use of funds and provides financial advice.</p>	<p>Internal M &amp; E report</p> <p>External evaluation report</p> <p>Audit report</p> <p>Annual reports to APFNet</p>	<p>All reports submitted on time</p> <p>Project activity reports are destroyed by virus</p>
Activity 6.3	<p><b>External Project Evaluation</b></p> <p>APFNet will organize a terminal evaluation. Relevant experts will be recruited to conduct the evaluation and expenses will be retained by APFNet.</p>	<p>Detail reports are made available and submitted to APFNet</p>		

### Annex C: Project management structure and communication mechanism chart(s)

The Project Manager (PM) is fully responsible to coordinate, delegate project activities and communicate between the project team, partners and the Supervising Agency so that activities are implemented on the ground with nursery coordinators, volunteers, landowners, tree farmers and other stakeholders. The Project Steering Committee (PSC) have the ultimate authority to ensure that the project activities are completed on time, within budget and according to Annual Work Plan. PM and PS meets quarterly with PSC to update them and seek further guidance and directions. The partners and PS reports to and PM reports directly to PSC, the APFNet Secretariat, the PNG Forest Authority and VOY Committee Members.

