

COFFEE CONNECTIONS AND PARTNERS COFFEE REHABILITATION PROJECT (CFP2/30)

Environmental and Social Management Plan (ESMP)

Project Description

The partnership in this proposal is between 1500 smallholder coffee farmers each averaging between 0.1 to 5 hectares of grown coffee gardens spread throughout the North and South Fore Constituencies of Okapa District, Ungai Bena and Lufa in Eastern Highlands Province and Siane in the Chuave District of Chimbu Province. The smallholder farmers have organized themselves in their respective groups and have been in this partnership with the Lead Partner producing organically certified coffees. It is anticipated that the partnership will be strengthened through the PPAP support in actual coffee rehabilitation work and the provision of extension services including capacity building trainings.

These smallholder partner groups cumulatively own more than 750 hectares of small holder coffee farms. After prolonged picking and selling coffee from these coffee gardens, the gardens are run down and result in poor production and lack quality coffee which ultimately links to poor income of the smallholder farmers.

This partnership strategy focused on smallholder coffee farmers, in the next three years plans to;

- i. To improve smallholder Productivity.
- ii. To improve smallholder quality.
- iii. To resource and equip 1,500 smallholder male and female partnership members undertake coffee rehabilitation and management.
- iv. To train and build capacities of smallholder male and female coffee farmers involved with the partnership., and
- v. To overall, enable the above (i-iv) contributes to high and sustained net coffee price and incomes are passed-on-to the members of the partnership thereby improving their livelihoods at the villages and community levels.

A. Potential adverse environmental impacts and mitigation measures

The 'Social and Environmental impacts' section of the proposal describes positive impacts of the project. It states that 'The coffee plots available for immediate rehabilitation do not pose any significant environmental problems as the coffee farms are existing smallholder coffee gardens spread over the four districts in two different Provinces. Most of the inputs proposed under the PPAP are in small amounts and will progressively lead to producing coffee under environmentally friendly conditions and promote sustainable farming practices with little or no chemical inputs.' However, following are descriptions of possible adverse environmental impacts identified and measures to mitigate them;

1. **Nurseries:** The improper application of small amounts of chemicals and fertilizers on nursery seedlings could lead to spillage and leakage into nearby streams which could potentially lead to toxicity to terrestrial and aquatic life forms. This will be avoided by centrally locating the nurseries in the vicinity of the three different areas of operation remote from any river or stream. Chemicals use will be discouraged but the use is deemed necessary, then minimal use will be allowed.
2. **Drainage:** In order to minimize spoil from removal of debris from drains and water logging within drains, farmers will be required to ensure that existing drains are

maintained/de-silted. Spoil taken from the bottom of drains will be spread over the inter-rows of the coffee plot. No new drains are envisaged.

3. **Shade management:** The removal and cutting down of larger branches from shade trees could be destructive in nature by falling on existing coffee bushes and younger shade trees and also be obstructive to the farmers' movements within the coffee gardens. To avoid/manage this situation, larger branches cut from shade trees will be tied with ropes to the shade trees themselves and cut to size without the branches falling on coffee trees and young shade trees and the wood will be used for fence maintenance and smaller ones are traditionally used for firewood (home-cooking) while leaves are spread on the ground amongst the coffee.
4. **Pulping:** Coffee pulp and waste water from pulping could impact negatively on the terrestrial and aquatic environments if allowed into water ways. Smallholder farmers will process their coffee cherries to parchment stage on their own coffee gardens. The hand-pulpers used are generally operated in the vicinity of coffee blocks; therefore, the coffee pulp is easy to be returned to the coffee block or food garden as mulch. Water used is minimal and seeps into the ground. Farmers will be instructed and trained in the pulping of their coffee.

Monitoring program and responsibilities

- Staff of the CIC PMU will routinely undertake field inspections of the activities of the Lead Partner and the smallholder farmers included in the Co-Partnership agreement to verify the Quarterly reports provided by the Lead Partner.
- The Lead Partner will maintain records of the use of chemicals, the application of rehabilitation activities (drainage & shade management) and coffee processing.

B. Potentially adverse social impacts and mitigation measures

The social impact is a positive one of increased income to the household. However, it requires more time to be spent in the coffee gardens as opposed to other social activities. The high income from these farming activities will assist in the reduction of HIV/AIDS and other anti-social behavior by the farming population.

Following are descriptions of possible adverse social impacts identified and the associated mitigation measures;

1. **Indigenous peoples policy:** The partnership has been established based on the co-partners' need to improve productivity of their existing coffee gardens and improve the quality of the produce in order to target markets that desire good quality coffees and are prepared to pay a higher price. This has resulted from intensive consultation and awareness which has enabled the project to have broad community support.
2. **Involuntary resettlement policy:** All the lands to be utilized for the partnership activities are owned by beneficiaries themselves. There will be no land donated to the project by members of the community.
3. **Negative social impacts:** To avoid misuse of income from coffee sales, members of the participating households will be trained in planning expenses / budgeting and record keeping. Awareness and information sessions will also be provided to reduce alcohol abuse and HIV/AIDS prevention. Women will participate fully in all activities and school aged children will be discouraged from involving in farming activities on a full-time basis and during schooling hours. The availability of a grievance mechanism has been made known to the beneficiaries including the locations of grievance boxes.

Monitoring program and responsibilities

- Staff of the CIC PMU will routinely undertake field inspections of the activities of the Lead Partner and the smallholder farmers included in the Co-Partnership agreement to verify the Quarterly reports provided by the Lead Partner.
- The Lead Partner will maintain records of training provided and awareness/information sessions.

Cost Estimates and Source of Funds

Funds to implement the ESMP will be part of the Partnership Budget. These are specified for the initial sub-project investment.

Project Stage	Project Activity	Impacts	When Impact Occurs	Mitigation Plan			Monitoring Plan			Costs
				Mitigation Measure	Who	When to be applied	Indicator	Who	When	
A. ENVIRONMENTAL MANAGEMENT PLAN (EMP)										
1. Nursery Establishment	Site Preparation	Grass Cutting and shrub removal may cause erosion	During Site Preparation	Clearing only within the area to be utilized within existing smallholder garden	Farmers	During Site Preparation	No. of nursery sites cleared	Village Extension Officer (VEO)/ Extension Officer (EO)	During nursery Establishment	AS per activity Budget
	Shade & Shelter Construction	Collecting materials such as posts, bush twines, and kunai grass may result in denudation of small areas	During shade/shelter construction	Only collect sufficient materials for the task in hand	Farmers	During shade/shelter construction	Sites used for nursery material collection undamaged	VEO or EO		AS per activity Budget
	Soil mixture / Seed bed / polybag preparation	Taking excess top soil and sand for potting mixture	During soil mixture preparation	Only collect top soil and sand that will be required	Farmers	During soil mixture preparation	Areas used for taking of soil re-vegetated	VEO or EO		AS per activity Budget
	Seedling Development	Taking excessive amounts of water from nearby creek / water source	During seedling development	Monitor use to ensure other users are not negatively impacted	Farmers	During seedling development	Water courses and streams continue to serve the needs of all users	VEO or EO		AS per activity Budget
2. Rehabilitation	Fencing	Timber required for post preparation may denude areas of trees	During coffee rehabilitation	Avoid unnecessary tree cutting when preparing fencing posts / sticks	Farmers	Coffee rehabilitation period	Fence completion without soil erosion and / or removal of trees unnecessarily	VEO or EO	Farm visit during rehabilitation period	As per project budget
		Post planting may cause erosion		Minimum size holes dug and filled immediately						
	Shade Management	Reduced vegetation cover	Rehabilitation period (after weed control & drainage maintenance)	Minimum number of shade trees cut down and lower branches removed	Farmer	Rehabilitation period	Adequate shade cover and at least 5-6m space between coffee and lowest shade	VEO or EO	Farm visit during rehabilitation period	As per project budget

Project Stage	Project Activity	Impacts	When Impact Occurs	Mitigation Plan			Monitoring Plan			Costs
				Mitigation Measure	Who	When to be applied	Indicator	Who	When	
	Pruning	Recycle Pruning	During project implementation	Old/mature stems of unproductive trees removed	Farmer	After main harvesting period	Only healthy bearing heads and young suckers on all trees	VEO or EO	Farm visit during rehabilitation period	As per project budget
		Maintenance Pruning	After harvesting and every 2-4 months thereafter	Sucker selection, de-suckering & skirting	Farmer	Every 2-4 months	2-4 stems /uprights per stump/main stem	VEO or EO	Farm visit during rehabilitation period	As per project budget
	Drainage	Removal of debris and soil in drains	After harvesting & prior to wet season	Cleaning drains of matter that clogs-up drains and spreading this under the coffee	Farmer	Rehabilitation period	Well drained coffee block	VEO or EO	Farm visit	As per project budget
3. Processing	Pulping	Hand-Pulping (by s/holder) may result in waste water entering drainage system	Harvesting period	Use of small amounts of water and recycle	Farmer	During coffee season	Water source not polluted	VEO or EO	Farm visit	NIL
				Decompose pulp and spread under coffee	Farmer	During & after coffee season	Coffee pulp under coffee trees	VEO or EO	Farm visit	NIL
B. SOCIAL IMPACT / ISSUES: SOCIALMANAGEMENT PLAN (SMP)										
1. Indigenous Peoples Policy	<i>All Co-Partners have signed up voluntarily following free, prior and informed consultations</i>									
2. Involuntary Resettlement Policy	<i>All land used are existing coffee gardens owned by beneficiaries and no land will be used collectively by Co-Partner Groups</i>									
3. Negative Social Impacts	Coffee Sales	Partnership only catering for men's interests may result in marginalization of women	Cash is received in payment for coffee	Training on expenses planning & budgeting for both husbands & wives Farmer group adopts a policy of income expenditure	Lead Partner	During farm management training for households & capacity building training for farmer groups	List of training materials offered include training on budgeting and attendance list	Lead Partner (PMU)	Quarterly (review reports & random verification inspections)	In line with budget

Project Stage	Project Activity	Impacts	When Impact Occurs	Mitigation Plan			Monitoring Plan			Costs
				Mitigation Measure	Who	When to be applied	Indicator	Who	When	
				record keeping						
	All Activities	Incremental income could worsen existing problems of alcohol abuse and domestic violence	When income potential increases as a result of more income for household	If alcohol abuse is rampant, ensure partnership activities include awareness and counseling	Lead Partner	When capacity building trainings are provided, when tools and farm implements are distributed, and encourage both men & women to be involved equally	Training materials should include alcohol abuse prevention, counseling, etc.,	Lead Partner (PMU)	Quarterly (review reports & random verification inspections)	In line with budget
	HIV / AIDS Training	Possible increase incidences of HIV / AIDS	When income potential increases as a result of more income for household	If HIV/AIDS is prevalent ensure partnership activities include HIV/AIDS awareness and prevention seminars	Lead Partner	HIV / AIDS awareness and prevention training	List of proposed activities include HIV / AIDS awareness and prevention campaigns	Lead Partner (PMU)	Quarterly (review reports & random verification inspections)	In line with budget
	Child abuse	Possible exploitation of children in the farms, preventing them from going to school	Project implementation	Ensure farmers / groups adopt policy restricting employment of children during school days	Group Leaders / Lead Partner	During Training sessions		Lead Partner (PMU)	Quarterly (review reports & random verification inspections)	In line with budget
	Communications	Absence of grievance mechanism	Project implementation	Ensure that grievance mechanism is in place and the people are aware of it	Lead Partner (PMU)	During project implementation		Lead Partner (PMU)	Quarterly (review reports & random verification inspections)	Negligible