

IPSI Collaborative Activity Proposal Form

The following form is for use when submitting proposed IPSI Collaborative Activities for consideration by the IPSI Steering Committee. See the Collaborative Activity Guidelines on p. 3 for more information.

Please return the completed form to the IPSI Secretariat (isi@unu.edu).

IPSI Collaborative Activities are the activities that shall be undertaken by more than one IPSI member and constitute an important part of IPSI activities with the purpose of fostering collaboration within the IPSI membership and implementing the IPSI Strategy and Plan of Action. The IPSI Collaborative Activities shall be developed and implemented with the endorsement of the Steering Committee in accordance with the Collaborative Activity Guidelines. Resource mobilization for IPSI collaborative activities shall be the responsibility of the implementing members in principle. – IPSI Operational Guidelines, Chapter 5.4

Date of Application:	Sept 27, 2016
Project title:	
Building sustainable and resilient village economies based on agroforestry forest fruit garden systems and 'fair trade carbon farming' offsets	
Collaborating organizations (IPSI members): (*Please underline the leading organization)	
<ol style="list-style-type: none"> 1. Kathmandu Forestry College (KAFCOL) 2. Ministry of Forest and Soil Conservation, Nepal 	
Other contributing organization(s) (including IPSI non-members):	
District Forest Office, Tanhun Ratanpur Community Forest User Group Jumdanda Jhapri Community Forest User Group Ithaka Institute for Climate Farming, Nepal	
Expected term (e.g. 1 January 2014 – 31 December 2015):	
01 July 2015 to Sept 2018	
IPSI strategic objective(s) addressed (tick all that apply; see p. 3 for more details):	
<input checked="" type="checkbox"/>	1. Increase knowledge and understanding of SEPLS
<input checked="" type="checkbox"/>	2. Address direct and underlying causes responsible for the decline or loss of SEPLS
<input checked="" type="checkbox"/>	3. Enhance benefits from SEPLS
<input checked="" type="checkbox"/>	4. Enhance human, institutional and sustainable financial capacities

Continued on next page.

Description of the activity:

Please provide as much information as possible on:

- Background
- Activities (including site locations if applicable)
- Expected outcomes
- Actors and task sharing
- How the activity relates to the *IPSI Strategy* and *IPSI Plan of Action*
- Resources, funding
- Monitoring and reporting

Background

Kathmandu Forestry Collage (KAFCOL), Ithaka Institute for Climate Farming Nepal and Ministry of Forest and Soil Conservation, Nepal jointly applies this collaborative activity proposal to IPSI Secretariat for approval. This project is proposed to be implemented in Ratanpur villages of Tanahun District (middle hill region) of Nepal with a population of more than 1000 and 224 households. Ethnicity consists of mainly indigenous and disadvantaged communities. This project assists mostly low-income woman farmers to establish sustainable agroforestry forest fruit garden system on barren and under-utilized private farm lands by planting high value timber, fruit, nut, fodder and oil as well as non-timber forest products species including ginger, turmeric, black piper, mulberry, *Moringa oleifera* (drum stick), Buddha *chitta mala*, *Shiva tree*, *cinnamon tree* and broom grass. These species were locally grown in the past two-three decades in the proposed region, but have since almost disappeared from these lands. Agro-forests and cottage industries on family owned farms will be established with the aim to produce both food and fodder for own use and cash incomes from the processing, development and sale of organic non-timber tree products for example Organic Cinnamon leaf oil for the tea and cosmetic industry, and dried *Moringa* leaf for 'super food' producers. In the beginning, existing old local trees will be used for processing essential oil. Innovative knowledge from biochar based organic farming and biodiversity research will be applied to improve fertility and climate change resilience on depleted and abandoned hill-side soils. Those methods proved already to increase the survivability rate and productivity of the planted trees and crops. On farm investments are needed for water harvesting swales and small dams to provide irrigation in dry periods. The increasing carbon stocks both in tree biomass and soil carbon will be sold under a “fair trade carbon farming” offset to CO2 emitting organizations in Europe.

Objectives of the project

The main objective of the project is to help breaking the negative cycle of land degradation and diminishing returns from the practice of low-input monocultural farming on depleted hill-side soils and thereby improving livelihoods for their families and village communities and restoring disappeared trees and plant species of private owned barren farm lands.

Specific objectives are to:

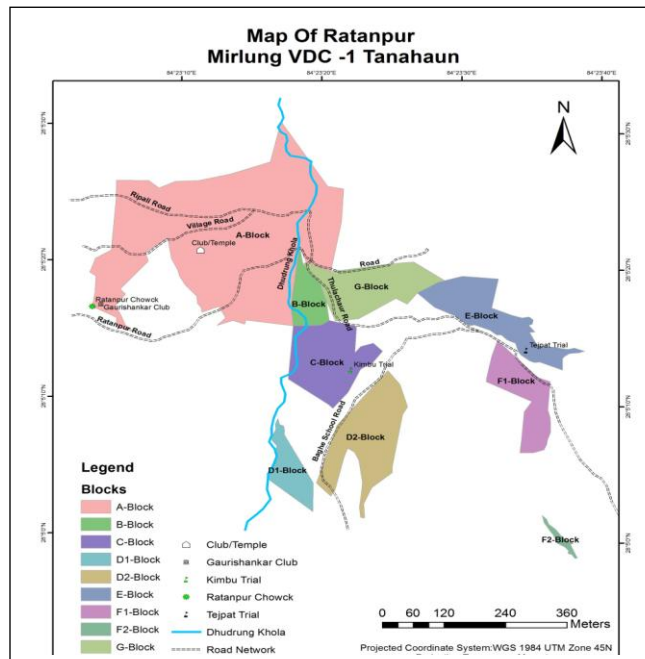
- Cultivate barren and underutilized lands
- Restore ecosystem services (water, biodiversity and humus) and control erosion
- Capture carbon in agroforestry systems
- Increase the economic potential of degraded farm lands
- Develop new forest products (such as essential oils, dried fruits, silk)
- Create opportunities for new jobs in the village and thereby motivate migrant youths returned home.

Activities

The following are the planned activities to be implemented in project location (see below map):

- Consultations and training for participating farmers on managing polyculture (biodiversity) agroforestry systems and workshops for best practice biochar production and application in tree planting campaigns
- Site design, on farm improvements, soil preparation and intercropping of legume trees and shrubs in the agroforestry system.
- Socio-economic and species documentation survey, and GIS mapping

- Sourcing appropriate tree species, pit making and planting of disappeared species
- Measuring and monitoring carbon stocks in agroforestry systems following established protocols from carbon certification bodies. Records integrated with GIS
- Use of already installed essential oil distillation unit of Ratanpur
- Producing essential oil from tree leaves, sourcing leaf drying and crushing equipment for *Moringa* leaf production and packaging, collaboration with organic certification bodies to implement certified organic practices on farm.
- Marketing of organic products to major suppliers such as Lush (soap) and Yogi Tea, by the project .
- Promotion of “fair trade” carbon offsets to environmentally friendly businesses and individuals in Europe and carbon payment.
- Regular stakeholder meetings to coordinate project activities (both online and face to face);
- Dissemination activities (events, website creation, media articles)



Expected Outcomes

- Planting of at least 16,000 trees and NTFPs species on 20 ha private farm lands of at least 150 farmer families and sequestration of at least 150 t CO₂eq per year.
- Annual amendment of 75 t of biochar to the soil, to sequester around 200 t CO₂eq annually.
- At least 50 additional Agroforestry plant species including timber and non-timber species restored and preserved.
- At least 15 private agroforestry farms will be registered with DFO, Tanhu and start private forest business (selling cinnamon leaf essential oil)
- Installation of one innovative oil distillation unit powered by bioenergy and which produce biochar and stored hot water.
- Production of high value non-timber tree products e.g organic Cinnamon leaf oil and dried moringa leaf for export to international vendors.
- On farm investments in water harvesting swales and dams, and biochar and organic fertilizer production to make farms self-reliant for crucial nutrient and water supply.
- Establishment of a voluntary “fair trade carbon offset” program that makes possible long term financing from richer countries for agroforestry land improvements in Nepal.

Actors and task sharing

These activities will mainly be implemented by the Kathmandu Forestry College (KAFCOL) in collaboration with the Ministry of Forest and Soil Conservation (MoFSC)/ District Forest Office, Tanahun and Ithaka Institute for Climate Strategies Nepal. District Forest Office, Department of Forest under MOFSC, Nepal (IPSI Steering Committee member) will provide a necessary role to implement private forest rules and regulation in support of local communities including tree saplings arrangement for forest gardening. The Ithaka Institute is a volunteer climate farming private organization will be used in advancing forest garden design for increased carbon capture, designing and implementing key product value adding technologies eg. biochar / essential oil production equipment and communicating and marketing of fair trade carbon credit program in Europe and US. Besides the other local forest user groups and women associations will be involved in participatory management of forest gardens.

How the activity relates to the *IPSI Strategy* and *IPSI Plan of Action*

This project falls within three IPSI strategic objectives including 1-increase knowledge and understanding of SEPL, 2- reduce direct loss of biodiversity and 3- enhance benefits from SEPLs. People will gain knowledge and wisdom on how to secure ecosystem services and value through various training on water harvesting swales and dams, and biochar and organic fertilizer production to make farms self-reliant for crucial nutrient and water supply and ecosystem services under objective 1. Under objective 2, the agroforestry plantation will reduce the direct pressures on BD and promote sustainable use and management of areas under agriculture and forestry, and manage and use invasive alien species for making biochar based organic fertilizer. Restoration of previously lost or disappeared agroforestry tree species will safeguard the ecosystems, which ultimately provide essential services; ecosystem resilience and contribution to carbon stock (objective 3).

Resources and funding

Activities	Description of items	Funding source		Total
		Ithaka Institute	Co-financing by KAFCOL	
1. Consultations and training for participating farmers on managing polyculture (biodiversity) & carbon credits	2 events of 3days each @ 500 USD/ day including senior researchers' fee	1000	2000	3000
2. Site design, on farm improvements and intercropping	USD 1000/season * 2 including researchers' fee	0	1000	1000
3. Socio-economic and species documentation survey and GIS mapping	2 graduate students @ 500 USD/month	0	1000	1000
4. Sourcing appropriate tree species and planting of disappeared & high value species saplings	16000 tree saplings	Seedling free	800	800
5. Measuring and monitoring carbon stocks in agroforestry systems	3 persons mid career staff for 5 days per site = one month	1000	500	1500

6. Buying plastic and irrigation pipe	Plastic and irrigation pipe for 15 ponds/site @ 1500/site	1500	1500	3000
7. Producing essential oil from tree leaves, sourcing leaf drying and crushing equipment for Moringa leaf production and packaging	Renting equipment	0	500	500
8. Marketing of organic products to major suppliers such as Lush (soap) and Yogi Tea, by project	packaging bottle etc	0	500	500
9. Promotion of “fair trade” carbon offsets to environmentally friendly businesses and individuals for carbon payment in Europe.	14400 seedlings produces approx 150 t co2 @ USD 35/t	5250	0	5250
10. Regular stakeholder meetings to coordinate project activities (both online and face to face);		0	100	100
11. Dissemination activities (case study paper, events, website creation, media articles)	Two senior scientists @ USD 200/day for 10 days each	0	2000	2000
Grand total		8750	9900	18650

Monitoring and reporting

Joint monitoring will be done by Kathmandu Forestry College and Ithaka Institute Nepal in a quarterly basis. The annual report will be submitted by KAFCOL to IPSI secretariat.