

Himachal Pradesh Forest Ecosystem Services (HP-FES) Project









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#### Programme/project description:

#### **Indo-German Biodiversity Programme**

Conservation and Sustainable Use of Biodiversity in India - Himachal Pradesh Forest Ecosystem Services Project (HP-FES)
The project aims to enable the Forest Department of Himachal Pradesh to introduce the Forest Ecosystem Services (FES) approach in the state's forest management system.
HP-FES

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# Micro Plan for Hamta Himachal Pradesh Forest Ecosystem Services (HP-FES) Project

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# List of Abbreviations

ADHPL Allain Duhangan Hydropower Plant Ltd

BMZ German Federal Ministry for Economic Cooperation and Development

BNHS

Bombay Natural History Society
CBD

Convention on Biodiversity
CHF

Compartment History File
DBH

Diameter at Breast Height
DFO

Divisional Forest Office
FES

Forest Ecosystem Services

GIS Geographical Information System

GIZ Deutsche Gesellschaft für Internationale Zusammenarbeit

HH Household

HPFD Himachal Pradesh Forest Department

HP-FES Himachal Pradesh Forest Ecosystem Services

INP Inderkilla National Park

JFMC Joint Forest Management Committees

M&E Monitoring & Evaluation MC Municipal Committee

MoU Memorandum of Understanding

MT Metric Ton

PFM Participatory Forest Management
PRA Participatory Rural Appraisal

SHG Self-help Group

VFDS Village Forest Development Society

WWF World Wildlife Fund

# 1 Introduction

# 1.1 Forest Ecosystem Service (FES) Approach

The ecosystem approach, as defined by the Convention on Biological Diversity (CBD) in 2000, is the integrated management of ecosystems to promote conservation and sustainable use of the services and goods provisioned by these ecosystems to be enjoyed equitably by all sections of society. These services and goods are together termed as "Ecosystem Services".

The ecosystem services derived from forests came to be referred to as "Forest Ecosystem Services" or FES. The FES Approach may be defined as "Forest Management that aims at sustainable provision of a set of ecosystem services based on stakeholder choices".

The FES Approach states that stakeholders prioritize ecosystem services based on their needs.

The forest management under FES Approach will be guided by the ecosystem service/s thus prioritized, with due importance given to the remaining goods and services.

# 1.2 Himachal Pradesh Forest Ecosystem Service (HP-FES) Project

# 1.2.1 Project Background

The German Federal Ministry for Economic Cooperation and Development (BMZ) commissioned Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) to partner with the Himachal Pradesh Forest Department (HPFD) to integrate FES Approach in forest management. The project activities started from April 2016. Using the FES approach in a microplan can facilitate institutionalizing of the approach in management and planning processes of HPFD.

# 1.2.2 Project Objective

The overall objective of the HP-FES Project is to enable HPFD to introduce the ecosystem approach into its forest management.

For this purpose, Hamta is selected as a demonstration site. Microplan for Hamta is prepared with the FES prioritized by the dependent communities which includes ecotourism (cultural), and water (regulating) and fodder (provisioning) services.

# 1.2.3 Role of Microplan in New Working Plan Code

Since 1837, the Indian forests are managed under working plan (WP) guidelines. However, it evolved with changing society and policy demands. Until the National Working Plan Code (2004), the major focus of these codes was on timber extraction which in turn determined the amount to be planted and harvested. The Honourable Supreme Court of India with its ruling (Dec 1996) towards a blanket ban on green tree felling triggered a policy evolution, of which the first step was the Forest Working and Management Plan Code (2014). This Code facilitates management of Indian forests to improve the provision of ecosystem services to dependent population. This enabled FES approach in forest management. The FES approach makes participatory forest management plans (now known as microplans) essential in the new working plan code.

The National Working Plan Code 2014 has made provisions for use of microplans as tools for participatory forest management for forest areas under Joint Forest Management Committees (JFMCs) and working circle within the scope of the Forest Right Act 2006 and the Biodiversity Act 2002.

# 1.2.4 Objectives of the Microplan

The objective of this microplan is to incorporate FES approach into the forest management in the Prini Panchayat forest of Hamta Valley area which lies in the territorial forest division of Kullu. As per the Wildlife Declaration Notification, major region would be part of the ecozone of the proposed Inderkilla National Park (INP). The process of making this microplan includes pre-consultation with community even before a PRA exercise was conducted. Even in these preliminary consultations, the community has highlighted a few main ecosystem services namely ecotourism, water etc., which could be the primary focus for which the participatory management can be established. It is also hoped that community will also share the benefits arising out of conservation in the proposed protected area, INP.

Forest assessment and a PRA exercise carried out established **ecotourism** as one of the prioritized FES besides the regulatory and provisioning services. This provided a base to formulate the management objectives of the microplan provided in Chapter 5. This would also draft the overall objective of the INP in tune with a livelihood-based conservation approach in the ecozone area. Ecotourism, a non-consumptive use of biodiversity services, is known to promote conservation in national parks.

## 1.2.5 Description of Subsequent Chapters of the Microplan

Chapter 2 describes the planning site. It also includes data collection and results of data collection process. Chapter 3 provides the list of elected members of the VFDS Hamta along with their phone numbers. Chapter 4 discusses the aims of forest management clearly spelling out the short-term management objectives that leads to mid-term forest management objectives, resulting in long-term objectives of forest management. It is to be ensured that these objectives are in line with the visioning exercise undertaken with stakeholder participants during the PRA exercise. Chapter 5 dwells into the details of activities undertaken for meeting the short-term forest management goals for the prioritized FESs. Chapter 6 discusses the Monitoring and Evaluation plan for activities undertaken to meet the short-term forest management objectives. This chapter will also enlist the indicators for ex-post assessment of the project and its long-term impacts. This is followed by Annexures that support the microplan.

# 2 Description of the Planning Site

Hamta Valley area (Map 2.1) is located in the Manali division of Kullu District and the areas of selected villages Prini, Sethan, Hamta and the INP territory lies under the Prini Panchayat. The area is about 4 km from Manali. The area is approached via the left bank of the river Beas starting from Manali and from main road a diversion of 2 km road ends at Prini Village of the Panchayat. Another road continues from there under the Allain Duhangan Hydropower Plant Limited (ADHPL) to end at the reservoir of Allan Nala where the trekking trail to Hamta starts. The list of villages of Prini under HP-FES Hamta site and coordinates of Hamta valley is given in Table 2.1 and Table 2.2, respectively.

S. No.	Ward Number	Village
		Sethan
1	1	Hamta
		Chalet
2	6	Prini-1
3	7	Prini-2

Table 2.1: List of Villages of Prini Panchayat Under the HP-FES Hamta Site

Table 2.2: Coordinates of Planning Site in Hamta

Direction	Latitude	Longitude
Northern-most Point	32.17'18.69" N	77.16'25.41" E
Southern-most Point	32.11'45.98" N	77.21'49.49" E
Eastern -most Point	32.12'28.68" N	77.12'24.51" E
Western-most Point	32.13'18.06" N	77.22'04.16" E

# 2.1 Methodology

#### 2.1.1 Environmental Data

The environmental data describes the salient features of the environment at the planning site. This data has been collected based on field measurement and other secondary data. The environment data of the planning site is listed in Table 2.4 in section 2.2.1 of this plan.

# 2.1.2 Demographic Data and User Rights

The data was collected using Participatory Rural Appraisal (PRA), baseline survey report, and other secondary sources like documents from the Gram Panchayats, Department of Animal Husbandry, Anganwaris (Department of Social Justice and Empowerment) and Local Revenue Office. The demographic data is presented in Table 2.5 under section 2.2.2. Mapping and facilitation were the tools used to gather information regarding forest user rights. The results are recorded in Table 2.6 under section 2.2.2.

# 2.1.3 Seasonality of Labour Distribution

Facilitation and matrix were the tools used to collect information on seasonality and labour availability. Materials used were charts and sketch pens. Seasonality of engagement in agriculture, horticulture, wage

labour, migration, labour availability for project activities and rain and snowfall were recorded. The calendar was displayed in front of the PRA group and information of months of occurrence; type of work and its availability was gathered and indicated against the corresponding period or month. Response for various variables were probed and recorded in the Table 2.7 under section 2.2.3.

# 2.1.4 Stakeholder Mapping

Facilitation and stakeholder map were the tools used during stakeholder mapping. The PRA participants were briefed about the concept of stakeholder. A diagram (Figure 2.1) on a chart with four concentric circles and three lines or axes emerging from the central theme of HP-FES was shared with the PRA participants. Almost equal sections were formed with HP-FES. The participants provided information that was recorded on the map and translated into Table 2.9 under section 2.2.4.

Institutional and stakeholder maps were merged to get information of relevant institutions and stakeholders. They were also asked to map the relative distribution of power and interrelation of these institutions with respect to each other in relevance to the project objective.

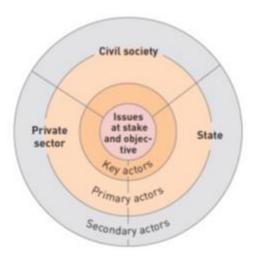


Figure 2.1: Stakeholder Diagram

# 2.1.5 Resource Mapping (for Ecotourism)

The ecotourism plan differs from the usual microplan that collects data on forest resource use mapping. The PRA exercise did resource mapping related to various ecotourism products in the valley. Participants were asked to list all the symbiotic and nature-based products that are of prime interest to the tourists coming to Hamta. It also led the community to see forest resources as base for ecotourism-based business opportunities. The information thus gathered is provided in Table 2.10 under section 2.2.6.

#### **2.1.6 Forest**

An assessment of forest was done before the focus of the project was changed to ecotourism. The forest assessed included 2/17 Hamta Forest comprising C1C (63 ha), C2A (28.68 ha), C1B (41.3 ha) compartments. To get an idea of the status, data on forest were gathered through baseline survey and from documents of HPFD like the Divisional Working Plans, Compartment History Files (CHF). The data on forest rights was collected through PRA and Forest Settlement Reports.

#### 2.1.6.1 Forest Assessment during Baseline Survey

This section states in brief the methodology for forest assessment used in the baseline survey. The forest assessment served three objectives as given below:

- i) Knowing the regenerating tree species
- ii) Knowing the human impacts on different forest types
- iii) Information of the basal area for each forest type

The assessment was based on circular plots arranged on a transect. A forest type was represented by at least two transects. The transects were placed in a way that they represent the forest type. Stands or parts of the forest type that were significantly different from other parts were assessed separately.

Allocation of the Transect: The investigator chose a spot representative of the forest type at the beginning of the transect in the forest 10 m from the edge. The transect was oriented along the longest site of the forest type. The first plot was allocated 30m away from the starting point of the transect and all subsequent plots were placed at similar intervals. Holes, riverbeds and similar locations unrepresentative of the stand were skipped and plots installed 30 m further along the transect.

<u>Assessment of Regeneration:</u> Regenerating tree individuals of different sizes were assessed in circular plots of different sizes. Details are shown in Table 2.3. For analysis, the existing data were combined into two categories: seedlings and saplings.

Table 2.3: Plot Size and D	ata Col	lected to	or Different	Sizes of	Regeneration	l rees

Туре	Definition	Plot used for	Area of each	Data collected			
7.1		assessment	plot	(Same for all plots)			
Seedling 1	Tree species >0-0.30 m	Circular plot	3.14 sq. m	<ul> <li>Species Name</li> </ul>			
Securing 1	height	(r=1 m)	J.14 sq. III	<ul> <li>Number of individuals</li> </ul>			
Seedling 2	Tree species >0.30 m-1.3 m	Circular plot	7.06 sq. m	<ul> <li>Number of individual</li> </ul>			
Seedling 2	height	(r=1.5 m)	7.00 sq. III	grazed/burnt/cut/others			
Capling 1	Tree species >1.3 m height	Circular plot	10.62 ag m	<ul> <li>Number of coppiced</li> </ul>			
Sapling 1	and DBH <3.18 cm	(r=2.5 m)	19.62 sq. m	individuals			
C 1: 2	Tree species DBH >3.18	Circular plot	50.24	<ul> <li>Photo number of species</li> </ul>			
Sapling 2	cm <7 cm	(r=4 m)	50.24 sq. m	Herbarium sheet number			

<u>Assessment of Human Impact</u>: Signs of human impact (trampling, fire, livestock dung, lopping, resin tapping) were assessed using ocular method within 12m radius and noted as present or absent.

Assessment of Basal Area: Basal area gives an insight about the number and size of trees in an area. The basal area was assessed with the Angle Count Method in seven locations in each forest type. This method calculates the basal area for one tree based on the distance between the tree and the investigator and the diameter at breast height (dbh). The investigator counts the trees that fall in a certain range of dbh (count factor 4 or 2) while turning 360°. The number of trees counted in this manner are multiplied by the chosen count factor to get the basal area for the stand. The figures of all locations were averaged to get the value for the forest type.

# 2.1.6.2 HPFD Documents like Divisional Working Plan and Compartment History Files

Documents of HPFD used in planning and forest management were also referred. The Compartment History File (CHF) and Divisional Working Plans were referred to study the management objectives used historically, as well as forest use rights and practices by local communities.

## 2.1.7 Assessment of Forest Ecosystem Services (FES)

The forest ecosystem services as found in the baseline survey was shared with the PRA participants. The PRA participants were also asked to list all the FES including cultural and spiritual services which could support ecotourism. The participants were asked to not only list the FES, but their seasonality, trends, drivers for change in trend etc., and finally rank them based on their dependence on these FESs for their lives and livelihoods. The information thus collected is presented in Table 2.12 under section 2.2.8.

#### 2.1.8 Human-Wildlife Conflict

Human-Wildlife conflicts often hamper the well-being of people and information on the same was collected during the PRA. Facilitation and matrix were the tools used in collecting this. Wild animals causing damage to crop were enlisted, and details of the type and extent of damage were discussed. The result of this exercise is given in Table 2.13 under section 2.2.9.

## 2.1.9 Conflict Management

Issue of prevalence of conflicts on the usage of FES was discussed with PRA participants. Facilitated focus group discussion and matrix were the tools used to gather data. Issues of conflict with parties were identified and recorded along with their intensity. The PRA group was asked to narrate the conflicts (apparent and latent) with respect to FES and has occurred in the past or are ongoing. The information is recorded under Table 2.14 under section 2.1.10.

#### 2.2 Results

This chapter provides the results of the data collected as described under the section 2.1 and includes information generated in PRA, baseline survey, census data and forest records. It is reproduced in this section in the form of tables and figures, supported by text.

#### 2.2.1 Environmental Data

The Hamta DS ranges from 2,000-3,500 m elevation. It is therefore on a higher elevation in Himachal Pradesh. Rainfall patterns suggests heavy rainfall during monsoon seasons. Similarly, snowfall is also on a higher side. Occurrence of such extreme climates will considerably reduce the tourists during monsoon and winters. However high altitudes make Hamta a favourite destination during summer months. The results of environmental data are discussed in Table 2.4.

Table 2.4: Environmental Characteristics of Hamta

Features	Value	Source			
Elevation Range (m)	2000-3500	Field measurement			
Annual Average Precipitation (mm)	1363				
As Rain (%)	80% of precipitation is received from South Western Monsoons and the rest from Western disturbances				
Maximum Rainfall recorded (mm)	250 mm in July				
Minimum Rainfall recorded (mm)	31 mm in November				
As Snow (%)	<mark>250 mm</mark>	Eco-sensitive Zone Proposal			
Dry Months (with precipitation <50 mm)	April and May	around Inderkilla National Park for Hamta Area			
Number of days with frost	Frost is not common in the area except for ground frost during winters				
Period of Frost	3 months				
Temperature (°C/No. of days)	-10 to 25°C				
Forest Type and Area (ha)	<ul><li>Western Mixed Coniferous Forest</li><li>Moist Temperate Deciduous Forest</li><li>Western Himalayan Sub-Alpine Forest</li></ul>				

# 2.2.2 Demographic Data and User Rights

Demographic data (Table 5) suggest that the main occupation of the people in surrounding villages is agriculture, seconded by private job in tourism industry. Amongst the livestock, high number of cows indicates high grazing pressure. Data on landholding suggests that most of the farmers belong to marginal class. The demographic data is presented in Table 2.5.

Table 2.5: Demographic Data of Hamta Village

Partic	Number	Source	
	Female (y)	424	
Population (number)	Male (x)	447	
	Children (below 6 years)	53	
Gender ratio (adult > 14	x/y	374/392	
years) (number)	X/ y	= 766	
	Cow	211	
	Buffaloes	Nil	
Livestock (number)	Bullocks	20	
	Sheep & goat	500	Prini Panchayat
	Horses & mules	10	
	Government job	25	
Occupation	Private job	45	
Occupation (Number of HH)	Self employed	1	
(Number of 1111)	Agriculture/Horticulture	181	
	Wage Labour	Nil	
Land holding	Marginal	80	
(% of HH)	Small	20	

Par	Number	Source	
(Data for 3 wards)	Nil		
	Nil		
	Agriculture	-	No data retrieved
Land use (%)	Grassland	-	for three wards;
Land use (70)	Pasture	-	Panchayat has no
	Non arable	-	data for wards

Forest rights data suggest that most of the rights are with Hamta village. However, this scenario is likely to change after declaration of the ecozone in the Hamta valley (Table 2.6).

Table 2.6: Forest User Rights of Communities in Hamta Forest

Village Name	Timber		Fuelwood		Grazing		Fodder		Others	
	Ext.	Int.	Ext.	Int.	Ext.	Int.	Ext.	Int.	Ext.	Int.
Hamta	×	✓	×	✓	×	✓	×	✓	×	✓
Sethan	×	×	×	×	×	×	×	×	×	×
Chalet	×	×	×	×	×	×	×	×	×	×
Prini	×	×	×	×	×	×	×	×	×	×

(Ext. = user right holders outside Hamta; Int. = user right holders inside Hamta; × = No; ✓ = Yes)

Source: PRA at Hamta

# 2.2.3 Seasonality of Labour Distribution

Seasonal labour distribution (see Table 2.7) suggest that wage labour is available to undertake physical interventions during winter and monsoon months. Community members are heavily occupied in summer months when tourism is at its peak.

Table 2.7: Seasonality of Labour Distribution in Hamta

Seasonal activity & climatic		Month										
events	J	F	M	Α	M	J	J	Α	S	О	N	D
Wage Labour												
Agri/Horticulture												
Rains												
Snow/Winter Rains												
Trekking Seasons												
Tourist Visit												
Collection of Fodder for Animals												
Firewood Collection												

Information on seasonality of labour distribution is important for planning the implementation of activities. The information collected during PRA using the seasonal calendar is presented in Table 2.8 and helps in scoping ecotourism potential.

Table 2.8: Planning Ecotourism and Implementation at Hamta

Title	Months	Key Findings
Snow-based Ecotourism	December to Mid- March	The panchayat area remains covered with snow. So white Christmas and snow tourism can be planned. The area is already famous for Igloo tourism which is one of its kind in the country.
Trekking Season  April to June and September & October		The area is famous for the Bhrigu Lake trek as well as the Hamta Trek. These are heavy traffic areas due to non-restrictive trekking. Attention should be diverted to other treks in the area.
Time for Trainings and Workshops	December to March	The snow-covered time is the best, as people have more spare time for trainings. Rest of the year, the villagers are busy with horticulture and agriculture.
Physical Intervention: Labour Availability	August, November and December	Time to plan plantation, creating bridal paths for trekking, culvert, water structures etc.
Tourist Visits	April to June	The main tourist season starts in April and continues till June end. Then it again picks up in September and goes on to October end.
Festivals and Fairs	October and December	Kullu Dusshera and Winter Carnival Manali cluster fairs. These occasions can be used to plan cultural tourism.
Out of bounds for tourism: Rainy seasons	August and September	Season to avoid tourism operation due to poor road connectivity and monsoons

# 2.2.4 Stakeholder Mapping

The stakeholders map indicated VFDS and other related user groups as key civil agency in the ecotourism project. HPFD and Panchayat will be key stakeholders in planning. On private front, various dhabas, tour operators and AD Hydro Power Ltd. (ADHPL) will be primary stakeholders to be consulted. Other agencies are indicated in Table 2.9.

Table 2.9: Stakeholders of Hamta

Туре	Key	Primary	Secondary
Civil Society	<ul><li>VFDS</li><li>User groups on ecotourism products</li></ul>	<ul><li>Panchayat</li><li>Navyuvak Mandal and Women SHGs</li></ul>	State Level Cooperatives
Private	Cooperatives of Nature Guides	<ul> <li>Small hotel owners, service providers like those providing mules, rentals for tents, winter clothes, food grocery suppliers</li> <li>Trekking guides</li> <li>Dhabas</li> <li>ADHPL Hydel Agency</li> </ul>	Large tour operator groups
State	HPFD     Panchayat	<ul><li>Deputy Commissioner's Office</li><li>IPH</li></ul>	<ul><li>Deputy Commissioner's Office</li><li>Tourism Department</li></ul>

Туре	Key	Primary	Secondary
		Line safety	Bank for financial loans
			<ul> <li>Mountaineering Institute</li> </ul>

# 2.2.5 Ecotourism Resource Mapping

The ecotourism resources mapping with community established social, cultural, natural and symbiotic products that can be offered to the ecotourists and help in marketing. The detailed list of nature and ethnic cultural products are presented in the Table 2.11and Annexure IV. The PRA found that unique selling features of the plan could be categorised mainly in the form of 2 to 5-day eco-treks from Hamta to Chandratal on porter and mule supports, camping for birding, star gazing in meadows, and half day excursion to waterfalls and sightseeing points. It also suggested day tourism to specialised attractions like snowboarding and Igloos. The youth participants also showed interest and scope for adventure tourism based on natural resources namely mountaineering, trekking, paragliding. However, capacity building is a necessity to undertake the above. Women seemed to be good at marketing ethnic cultural product, among which a few important ones are mentioned in Table 2.10.

Table 2.10: Important Tourism Products at Hamta

	Prime attractions	Other attractions	Sightseeing points	Ethnic culture products
Product type	<ul> <li>Nature based soft adventure tourism products</li> <li>Mountaineering</li> <li>Camping</li> <li>Rock Climbing</li> <li>Rappelling</li> <li>Heli-skiing</li> <li>Mountain Biking</li> </ul>	<ul><li>Camping</li><li>Yoga</li><li>Meditation at Thatches</li></ul>	<ul> <li>Waterfalls</li> <li>Sunrise points</li> <li>Excursion points</li> <li>Day tourists</li> </ul>	<ul> <li>Kullu Handlooms</li> <li>Fairs</li> <li>Spiritual pilgrimage</li> <li>Temples</li> <li>Cuisines</li> </ul>
Examples	Ecotreks:  • Hamta Pass Trek (horse)  • Hamta Circle Trek (horse)  • Hamta Bhrigu Lake Trek (porter)  • Deo Tibba Base Camp Trek (horse)  • Inderkilla Base Camp Trek (porter)	<ul> <li>Pha Konda Peak</li> <li>Pyagneru Thatch (Deo Tibba)</li> <li>Kansar Marasu Thatch</li> <li>Hoching Bihal</li> <li>Aara Thach</li> <li>Jwara</li> <li>Bhalu Ka Ghera</li> <li>Shia Garu</li> <li>Hanasu Thach</li> <li>Pandu Ropa</li> <li>Bhrigu Lake</li> <li>Panduropa</li> </ul>	<ul> <li>Tuna Waterfall         (Near Barrage)</li> <li>Chalet Waterfall (2         km from Roadhead towards         Bijauri Thach)</li> <li>Chikka Waterfall         (6 km)</li> <li>Jhamir Waterfall (4 km)</li> <li>Snow slides</li> </ul>	<ul> <li>Pattu, shawls, socks etc</li> <li>Magha Ra Saja</li> <li>Jamdagini Rishi yatra;</li> <li>Bini Nawami (Ram)</li> <li>Phemra</li> <li>Momo</li> <li>Khodre Ki Roti</li> <li>Makki ki Roti</li> <li>Chawal ki Roti</li> <li>(chalethi)</li> <li>Siddu</li> <li>Aksu</li> <li>Red Rice</li> </ul>

#### 2.2.6 Forest

The secondary information mentioned in working plan is reconfirmed with the community during the PRA.

The flora around the area are Spruce (*Picea smithiana*), Fir (*Abies pindrow*), Kharshu (*Quercus semicarpifolia*), Burans (*Rhododendron arboreum*), Rakhal (*Taxus baccata*), Khanor (*Aesculus indica*), Boxwood (*Buxus wallichiana*), Walnut (*Juglans regia*), Bhojpatara (*Betula utilis*), Prunus (*Prunus spp*), Ash (*Fraxinus micrantha*), and Maple (*Acer pictum*) etc.

Thus, some of the rare animals like Snow Leopard (*Panthera uncia*), Himalayan Brown Bear (*Ursus arctos*), Himalayan Tahr (*Hemitragus jemlahicus*), Black Bear (*Ursus thibetanus*), Himalayan Ibex (*Capra ibex*), Musk Deer (*Moschus chrysogaster*), Himalayan Griffon (*Gyps himalayensis*), Rakhal (*Taxus baccata*), Bhojpatara (*Betula utilis*), Maple (*Acer pictum*), Gerardiana (*Gerardiania hetrophylla*), Shingli mingli (*Dioscorea deltoidea*), Patish (*Aconitum* spp), Dhoop (*Jurinea macrocephala*), Artemesia (*Artemisia* spp.), Salam panja (*Orcis latifolia*), Banaksha (*Viola* spp) etc. are important, rare, endangered, threatened flora and fauna of the Hamta area.

The site consists basically of three forest types: Western Mixed Coniferous Forest, *Abies pindrow* Forest and *Picea smithianal*mix Forest. A total of ten plots were laid in Western Mixed Coniferous Forest while a total of five plots were laid each in *Abies pindrow* Forest and *Picea smithianal*mix Forest for the assessment of the human disturbance, tree species regeneration and basal area.

## 2.2.6.1 Forest Assessment during Baseline Survey

## • Human disturbances in different forest types of Hamta

As observed in Table 2.11, Western Mixed Coniferous Forest suffers most in terms of fire, cutting, livestock pressure, and lopping. *Abies pindrow* suffers most in terms of cutting for fuelwood. Other mixed forests with *Picea simithiana* has all signs of human interference except fire. The sampling data suggest huge human impact through trampling by livestock and hiking. Transhumance graziers passes twice a year with their livestock through this area and also use it as a resting place during transit. In addition, huge trekking groups operates in the area in summer.

Forest Type	Fire	Cutting	Trampling	Lopping	Resin	Track	Dung
12/C1d Western Mixed Coniferous Forest	50	90	50	70	0	50	50
Abies pindrow Forest	0	100	0	0	0	0	0
Picea smithiana/mix	0	60	80	100	0	100	100

Table 2.11: Percentage of Plots in which Signs of Human Interference were observed in Hamta

- Regeneration in different forest types of Hamta (Figure 2.3)
  - Regeneration in Western Mixed Coniferous Forest: In this forest type, no species was found to be regenerating
  - Regeneration in Abies pindrow Forest: The only regeneration recorded in this forest was of the seedlings of Picea smithiana.
  - Regeneration in *Picea smithiana*/mix: Seedlings of *Picea smithiana* and *Pinus wallichiana* was found to be regenerating but no sapling was recorded.

- Basal Area in different forest types of Hamta (Figure 2.3)
  - Basal Area in Western Mixed Coniferous Forest: This forest shows mixed composition. It has three lead species in the main stand (*Cedrus deodara*, *Pinus wallichiana* and *Abies pindrow*)
  - Basal Area in *Abies pindrow* Forest: In this forest, *Abies pindrow* has the highest basal followed by *Picea smithiana* and *Betula utilis*.
  - Basal Area in *Picea smithiana*/mix: In this forest, *Picea smithiana* has the highest basal followed by *Abies pindrow* and *Acer pictum*.

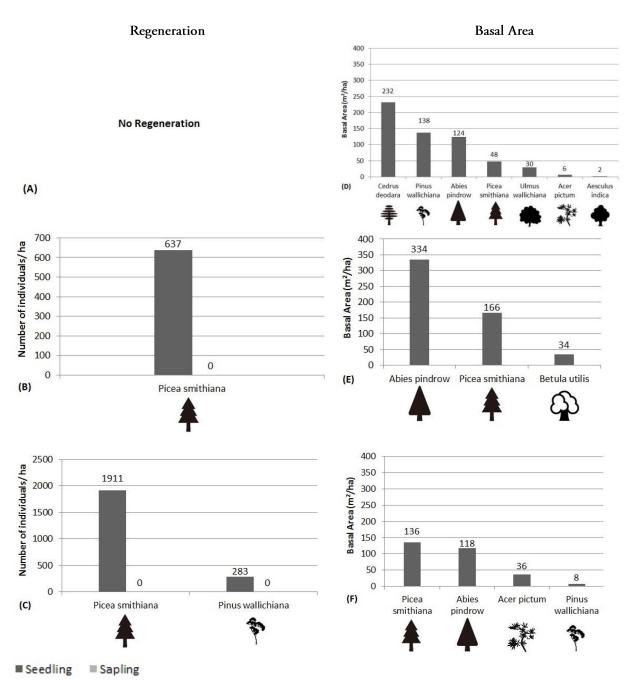


Figure 2.3: Regeneration and Basal area in different forest types of *Hamta* [A: No regeneration in Western Mixed Coniferous Forest, B: Regeneration in *Abies pindrow* Forest, C: Regeneration in *Picea smithianal* mix

Forest, D: Basal area in Western Mixed Coniferous Forest, E: Basal area in *Abies pindrow* Forest, F: Basal area in *Picea smithianal* mix Forest]

# 2.2.7 Forest Ecosystem Service

In pre-assessment interactions with villagers, they expressed interest in indigenous ecotourism-based plans. In the detailed exercise taken up during PRA, they have reconfirmed that they see ecotourism (based on landscape, fresh air and snow) as important forest ecosystem service (Table 2.12). They have ranked ecotourism as one of the top-most FES for its expected high economic returns and as a non-harvesting forest service.

Table 2.12: Ranking and Status Trends in Forest Ecosystem Services in Hamta Village

S. No.	Ecosystem Services	Rank	Availability	Status of Ecosystem Service (changes in last 10yrs)	Expected Advantage	Trend/Reason
a	Fodder	5	$\leftrightarrow$	$\leftrightarrow$	$\longleftrightarrow$	Continuous snow and rain leading to no change in fodder
Ь	Construction Wood	3	<b>→</b>	$\downarrow$	<b>\</b>	Pressure of construction on forest
С	Water	4	$\longleftrightarrow$	$\longleftrightarrow$	$\longleftrightarrow$	Availability of forests
d	Medicinal Herbs	8	$\leftrightarrow$	$\leftrightarrow$	$\leftrightarrow$	Availability of forests and less disturbance in thatches
e	Wild Vegetables	11	$\leftrightarrow$	$\leftrightarrow$	$\leftrightarrow$	Natural growth
f	Fuel Wood	7	$\rightarrow$	$\downarrow$	$\leftrightarrow$	Availability of forests
g	Eco tourism	1	$\leftarrow$	$\downarrow$	<b>\</b>	No government plans, Economy mainly in the hands of outsiders
h	Snow	2	<b>+</b>	$\downarrow$	<b>↑</b>	Natural, source of irrigation for cropland
i	Flora – Fauna	9	<u> </u>	$\downarrow$		Decline due to human wildlife conflict
j	Land Protection	10	$\leftrightarrow$	$\leftrightarrow$	$\leftrightarrow$	Availability of forests

Note: Trend – Decreasing: ↓ Increasing: ↑ No change: ↔

#### 2.2.8 Human-Wildlife Conflict

A repeat exercise of Human Wildlife Conflict undertaken, indicated that the villagers thought wild animals (namely monkeys, bear, foxes and porcupines) to be responsible for the loss of crops such as apple, peas, maize, wheat, pears, potato, pumpkin etc. Animals such as leopard and bear could harm livestock like cows, horses, goats, dog etc. So far, no injury to human life is reported which could be a relief to ecotourism products like nature trekking. Table 2.13 presents the results of discussion on human wildlife conflict in Hamta village during the PRA.

Table 2.13: Human-Wildlife Conflict in Hamta

Damages to	Wild animals causing damage					
	Monkey	Black bear	Leopard	Porcupine	Fox	
Wheat	M	N	N	N	N	
Maize	M	M	N	M	N	
Vegetables	Н	N	N	M	N	
Fruit orchards	Н	Н	N	N	N	
Barley	Н	Н	N	N	N	
Killing of livestock	N	Н	M	N	Н	
Injury to humans	N	L	L	N	N	

Note: H = High, M= Medium, L= Low and N = Nil

# 2.2.9 Conflict Management

The only conflict (Table 2.14) between neighboring villages as perceived by villagers was for fuelwood. It was found during the PRA, that the villagers feel exploited by travel agents and service providers who are not locals and runs business on low-margin-high-volume model. This has often resulted in very low returns to the efforts and services put in by the villagers. This led to conflict between tour operators and villagers which led to the current decision of tourism control and management through VFDS.

Table 2.14: Conflicts: Type, Involved Parties and Intensity

S. No.	Type of Conflict (FES)	Parties in Conflict with Villagers	Intensity
1	Water	None	L
2	Eco-tourism	From non-local nature travel operators	Н
3	Grass	None	L
4	Fuelwood	Neighbouring panchayats like Shuru, Aleo	Н
5	Tourism	From outsiders	Н

Note: H = High, M= Medium and L= Low

# 3 Village Forest Development Society (VFDS) Hamta

The details of the members of VFDS Hamta are given in Table 3.1.

Table 3.1: Details of Executive Members of VFDS Hamta

S. No.	Name S/o, W/o, D/o	Age	Designation	Address for Correspondence	Occupation	Mobile Number
1	Sh Shiv Dyal s/o Sh. Pyare Ram	42	President	Sh Shiv Dyal s/o Sh. Pyare Ram Pradhan Gram Panchayat Prini	Agriculturist	981609652 7
2	Kundan Lal s/o Sh. Tehlu Ram	40	Vice-President	President, Hamta Paryavaran Suraksha Samiti	Agriculturist/ Taxi Service	981600004
3	Bhagwan Chand s/o Sh. Labh Chand	56	Member Secretary	Block Officer c/o Range Office, Teh Manali Distt. Kullu	Forest Officer (BO)	981615867 7
4	Sh. Thakur Das s/o Sh Chet Ram	45	Joint Secretary	X Pradhan Gram Panchayat Prini	Guest House Owner	981600275 6
5	Mohan Lals/o Sh Kalu Ram	39	Treasurer (Guard)	FG	Forest Guard Hamta Beat	941877288 6
6	Keshav Ram s/o Sh. Jindu Ram	43	Executive Member	X Village Commitee Member	Agriculturist	981638072 4
7	Lot Ram Chalet s/o Sh. Manglu Ram	79	Executive Member Yuvak Mandal	Kardar , Village	Agriculturist	981648040 8
8	Gyan Chand s/o Roop Das	39	Executive Member	President Viilage committe Prini	Contractor	981629900 9
9	Prem Chand s/o Sh. Devi Ram	34	Executive Member SHG 2	Pradhan Phali Nag Yuvak Mandal, Prini Sec, HPSS, Prini	Travel Agency	981670228 5
10	Raju Ram s/o Sh Nathu Ram	57	Executive Officio Ward Panch	X member Village Commitee Kamdar of Devta Phali Naag	Agriculturist	981675752 0

S. No.	Name S/o, W/o, D/o	Age	Designation	Address for Correspondence	Occupation	Mobile Number
11	Bina Devi w/o Sh. Pratap Chand	30	Mahila Mandal Member	Bina Devi w/o Sh. Pratap Chand Village Prini, Teh Manali Distt. Kullu	Ex Offico Member	988200078 1
12	Khimi Devi w/o Late Sh Sangat Ram	55	X Mahila Mandal Pradhan Prini	Khimi Devi w/o Late Sh Sangat Ram Village Prini , Teh Manali Distt. Kullu	Ex Offico Member	945938581
13	Mani Devi w/o Sh Dharam Chand	44	Ex-Officio Pradhan Mahila Commitee	Pradhan Mahila committee	Mani Devi w/o Sh Dharam Chand	821971422 0
14	Durga Devi w/o Sh Devi Singh	46	Ex-Officio Member	Secretary Mahila committee	Durga Devi w/o Sh Devi Singh	981615893 3
15	Kam Dev s/o Sh, Surat Ram	38	Ex-Officio Member	Secretary Village Committee Prini	Kam Dev s/o Sh, Surat Ram	981652707 7
16	Gautam Thakur s/o Sh. Karam Chand	45	Ex-Officio Member	Village Commitee Member Prini	Gautam Thakur s/o Sh. Karam	980553472 3
17	Om Prakash s/o Sh. Tirath Ram	32	Ex-Officio Member	Vice President Fali Nag Yuvak Mandal	Om Prakash s/o Sh. Tirath Ram	981684875 6
18	Ram Chand s/o Sh Jindu Ram	30	Ex-Officio Member	Ward Panch MOI (Skiing & Mountaineering)	Ram Chand s/o Sh Jindu Ram	981654481 1

# 4 Aims of the Management Plan

Table 4.1 describes management short term (five years), mid-term (15 years) and long-term (30 years) plan for Hamta.

Table 4.1: Management Plan based on PRA for Hamta

Project Goals	Conservation	Social Entrepreneurship	Community Development	Measures
Long Term (30 Years)	Community is actively contributing to conservation efforts through person days or money generated through ecotourism	<ul> <li>Community has set up award winning social entrepreneurship models of ecotourism through transparent systems of benefit sharing</li> <li>Self Help Groups, Cooperatives and private limited companies belonging to locals are well established in the national park</li> </ul>	<ul> <li>Women self-help groups are earning through the handicrafts and products produced by them</li> <li>The money earned by VFDS is also routed to development projects. For e.g. reforestation of degraded patch</li> </ul>	VFDS meetings ensure active community participation in forest management     Regular meetings of VFDS and SHGs, aiming on resolving and innovating ecotourism models
Mid Term (15 years)	<ul> <li>The community shares         <ul> <li>a common vision on                 the rejuvenation of                 these national park and                 takes action on this                 regard</li> <li>Community established                 rules for ecotourism                 operations as per code                  of conduct are up and                  running</li> </ul> </li> </ul>	<ul> <li>SHGs become         efficient cottage         industry for cultural         souvenirs for         ecotourist.</li> <li>Capacity building of         community user         groups is complete</li> </ul>	Community plays efficient role in participatory monitoring for forest development.	Regular meetings of VFDS and SHGs, development of operational plan in joint participation with forest department and civil administration.

Project Goals	Conservation	Social Entrepreneurship	Community Development	Measures
Short Term (5 years)	Community has identified economic value of ecologically sensitive nature-based tourism  Community finalises rules and period for review for ecotourism operations activities, established the do's and don'ts for tour operators and key elements of CBET and have installed the required checks and balances to regulate and reduce tourism pressure.	<ul> <li>Rights holders have established ecologically sensitive adventure tour operations with trained villagers from Panchayat</li> <li>SHG's are well established with good savings and has started lending for production purposes amongst themselves</li> <li>Static Campsite, Winter Tourism with Igloo models of houses, mountaineering paragliding etc., are identified as key products managed by community-based organizations</li> </ul>	Community plays effective role in participatory monitoring of forests	<ul> <li>Regular meetings of VFDS and SHGs, development of operational plan in joint participation with forest department and civil administration.</li> <li>VFDS actively participate in ecotourism management</li> </ul>

Project Goals	Conservation	Social Entrepreneurship	Community Development	Measures
Project period (1.25 year)	<ul> <li>Community is aware of the concept of National Park and the mechanisms of conservation arising from economic benefits of ecotourism.</li> <li>The community has identified ecotourism activities to be taken into longer run which will generate maximum employment and minimise the impact on nature</li> <li>Community frame rules for ecotourism activities, do's and don'ts for tour operators and key elements of CBET and have installed regulatory a system to reduce negative tourism pressure.</li> </ul>	<ul> <li>User groups for nature trails and trekking tours are identified, listed and registered.</li> <li>User groups have been actively trained and are setting up specialized ecofriendly tour operation businesses in the area.</li> <li>Users have formed community associations like Self Help Groups, cooperatives or private limited companies to carry out the work of ecotourism.</li> </ul>	<ul> <li>Women Self Help         Groups have been         made and are doing         alternative income         generation activity         highlighting the         National Park (e.g.         Like embroidered T         Shirts with park logo)</li> <li>Institutions like         VFDS, SHG         strengthened and         trained in Ecotourism</li> <li>There is a conscious         reduction of         deforestation through         community groups         keeping an eye on the         poachers</li> </ul>	<ul> <li>Institutional capacity building for VFDC.</li> <li>Convergence planned with NABARD for SHG capacity building.</li> <li>Human capacity building for mountaineering, trekking, ecological sensitive tourism's code of conduct,</li> <li>Mass awareness for ecological sensitive community based rural tourism.</li> <li>Marketing strategy and infrastructure development through workshop, trainings, online communication tools.</li> </ul>

# 5 The Plan (for 1.25 years)

Activities considered for microplan preparation are:

- PRA was conducted at Prini secondary school with members from villages under Prini Panchayat.
   Participants were informed about the project to generate a list of preferred forest ecosystem services.
   This, it was inferred, will help plan ecotourism resource information, and their views on key capacity needs.
- Microplan was reviewed at GIZ, HPFD and community level and approved by DFO as part of MoU.
- Formation of VFDS For the formation of Hamta VFDS, identification of active members, proposal of members and selection of VFDS executive members is done by a general body meeting.

The main thrust of the microplan is to improve ecotourism practices in Hamta valley of Manali leading to direct income to participating village forest development committee members. It is hoped that community members will realize the non-consumptive sustainable use of ecosystem surrounding them and the importance of the newly declared Inderkilla National Park. Implementation would be undertaken in the Hamta Panchayat Area which includes villages namely Prini, Sethan, Chalet and Hamta.

Mountaineering has been identified as the key tourism product along with homestays.

Active role of women and their integration in the entire process of community-based tourism activities is ensured.

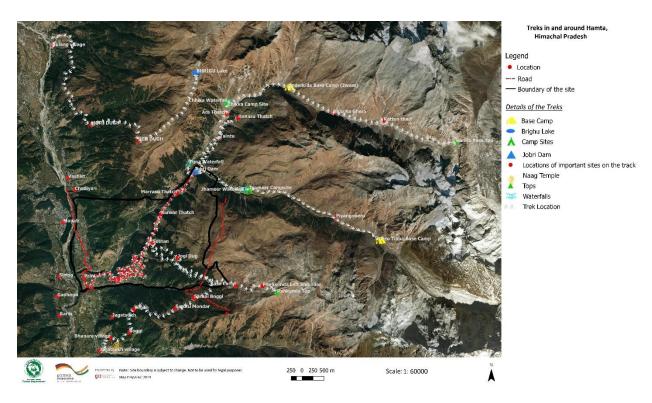
The interventions (Table 5.1) are planned around results got from five activities namely tourism resource mapped & photographed; stakeholders identified, institution building (Table 5.2) and awareness generation; skill-based trainings (Table 5.3 and Table 5.4) on business development and site management, marketing (Table 5.5) and required physical interventions (midterm plan is outside the preview of the GIZ project).

Organizations and institutions namely World Wildlife Fund (WWF), Bombay Natural History Society (BNHS), Handicrafts and Khadi Gram Udyog, Food Craft Institute, Department of Tourism, Govt. of India will be involved for appropriate intervention.

Since the inception of the HPFES project, the site is under consideration to be declared as an ecozone under the proposed Inderkilla National Park (INP).

#### Box I: Notification of Inderkilla National Park

State Notification for the Declaration for Inderkilla National Park "The State Government shall, for the purpose of the ecosensitive zone, prepare a Zonal Master Plan within a period of two years from the date of publication of this notification in the Official Gazette, in consultation with local people and adhering to the stipulations given in this notification."



Map 5.1: Intervention map of Hamta

Table 5.1: Implementation Plan R0 and R1

	Year One (2019)				
Result area R0 and R1: PRA, Resource Mapping and Activities towards the Development of Microplan	2nd Qtr. (April to June)	3rd Qtr. (July to Sep)	4th Qtr. (Oct to Dec)		
GIS based maps for eco-tourism activities generated					
Value Chain Analysis for key identified tourism products namely Homestays and Trekking					

Table 5.2: Result Area R1 Activities (Post VFDS Institutionalisation)

Result Area R1: Activities (Post VFDS	2nd Qtr.	3rd Qtr. (July	4th Qtr.
Institutionalisation)	(April to June)	to September)	(Oct to Dec)
<ul> <li>A. Institutionalisation workshop of VFDS with following agenda:</li> <li>VFDS takes center stage with respect to planning; identifies and establishes self-help groups (SHGs) of user groups/stakeholders (both for training and for implementation) based on tourism products</li> <li>Identify degraded patches due to trampling, over tenting and recommend them to the forest department for management under the operational plan</li> <li>For VFDS and user groups, training are organized for Institutional Training (management, marketing,</li> </ul>			
accountancy, computerization, conflict resolution, team building etc.,) for Hamta VFDS  B. Focused awareness programme to fulfil its two objectives:  • How ecologically sensitive tourism is business friendly to local livelihoods  • How non-local travel agents is detrimental to the livelihood model of locally driven community-based			
<ul> <li>ecotourism</li> <li>Community develops a participatory Monitoring and evaluation framework for smooth implementation of microplan</li> <li>Allocation of roles and responsibilities of user groups as watcher for reporting all forest wildlife crimes, fire incidences, illegal tourism activities, or camping without adequate permit</li> </ul>			

Table 5.3: Result Area R2 Activities (Skill Building)

	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.
Result Area R2	(April	(July	(Oct	(Jan	(April	(July
Activities (Skill Building)	to	to	to	to	to	to
	June)	Sep)	Dec)	Mar)	June)	Sep)
Exposure visits of SHG's and user groups for						
to ecotourism sites in nearby valleys						
Capacity building for code of conduct drawn						
for site management in terms of maintenance						
of aesthetic, cultural values and ecological						
values						
Trainings (Basic and Advanced Level) on						
Homestays, certification process on eco-						

sensitive homestays initiated			
Training on static campsite management			
Selected women get culinary training;			
homestays menu made and tested			
Communication and Marketing Training			
Training on regulating carrying capacity and			
maintaining cleanliness, Solid Waste			
Management			

Table 5.4: Result Area R4 Activities (M&E Framework and Additional Actions)

Result Area R4 Activities: M&E framework and additional actions	2nd Qtr. (April to June)	3rd Qtr. (July to Sep)	4th Qtr. (Oct to Dec)	1st Qtr. (Jan to Mar)	2nd Qtr. (April to June)
Indicators include reduction in reported cases of solid waste management, regulation					
of negative tourism pressure					
Creation of infrastructure like solid waste					
management centre					
Creation of bridal paths on trekking trails,					
safety rails for risky areas for safety of					
ecotourists					

Table 5.5:Result Area R3 Activities: Marketing

	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.
Result Area R3 Activities: Marketing	(April	(July	(Oct	(Jan	(April	(July
	to	to	to	to	to	to
	June)	Sep)	Dec)	Mar)	June)	Sep)
Overall marketing strategy on elements of						
pricing, promotion, place and product mainly						
online based; Unique selling feature of the						
whole package based on products offered by						
Inderkilla National Park						
Pictorial and Text Documentation of all						
tourism products in the area						
Development of marketing hub for						
promotions with chosen tour operators,						
ecotourism consultants and qualified SHG						
members and society members						
Creation and hosting of Master Website						
Maintenance and creation of blogs, Web 2						
Tools and Websites						
Production of Brochures and other						
innovative print media with maps & contact						

	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.
Result Area R3 Activities: Marketing	(April	(July	(Oct	(Jan	(April	(July
	to	to	to	to	to	to
	June)	Sep)	Dec)	Mar)	June)	Sep)
information						

# 6 Monitoring and Evaluation (M&E) Framework

A participatory framework is established to monitor the efforts made by the stakeholders. It will also monitor the flow of ecosystem service and related forest management goal. The participatory framework will be segregated in two sections:

- 1.M&E by HPFD: In-house monitoring of activities against physical and financial indicators as per a predefined timeline. This will be undertaken by the HPFD frontline staff. The work done will also be subjected to the monitoring framework used by the HPFD. This system will evaluate vegetation and other related ecosystem service flow over a period. GIS-based maps for JFM areas, with clearly delineated village boundaries will be deployed by HPFD.
- 2.Participatory Monitoring by VFDS: The M&E team will include a local forest guard of the beat, one member of VFDS nominated by the Executive Committee of the VFDS and the president of local Mahila Mandal. This group will provide report against indicators after ground truthing for various activities undertaken in the field.

Every 2 years an assessment of improvement in livelihoods through socio-economic survey needs to be undertaken. The M&E should clearly mention, agreed protocol on rights and responsibilities of all stakeholder parties.

#### **Baselines Data**

A baseline will be done to measure the flow of existing FES from the project area. For this, quantitative data will be collected using socio-economic surveys, field exercises and observations along with the community. In addition to this, photo-documentation at different stages of works will be done.

#### **Monitoring Plan**

An elaborate monitoring plan will be prepared and appended to the microplan document once the plan is approved and its budget finalized. The plan will consist of activities, milestones, indicators for these milestones and the way to validate these indicators. Each activity and milestone will have responsible persons also indicated. The communities and frontline HPFD staff will be trained in monitoring under the microplan framework.

# 7 Recommendations

There are a few areas and issues identified during PRA exercise calling for additional studies that could help gather more information to enhance forest management at the site.

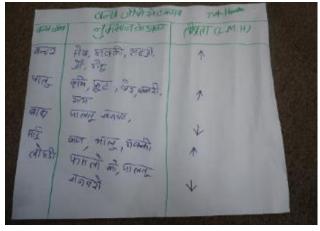
- a. Carrying Capacity Research on the area and the Inderkilla National Park;
- b. Management Plan of the Inderkilla National Park;
- c. Study of flora and fauna of the national park and the surrounding ecozone area;
- d. Study of the viability of horse trekking in the area along with scientific study on grazing.

# 8 Annexures

# Annexure I: Consolidated Financial Budget Sheet for Hamta

S. No.	Activity	No.	FA (food, travel of resource persons, training equipment rental)
1	Institutional Training (management, marketing, accountancy, computerization, conflict resolution, team building etc., for panchayat level society	1	20,000
2	Mass awareness on ecologically sensitive community based rural tourism	1	45,000
3	Exposure visits to see community-based ecotourism for chosen members	1	1,00,000
4	Three-day cluster level residential camp for trainings on upgradation of homestays x 2 (basic and advanced levels for 20 persons)	2	68,000
5	Five-days cluster level residential camp for training on Trekking and Camping x 2 (basic and advanced levels for 20 persons)	2	2,15,000
6	Two-day non-residential training on solid waste management for 20 persons	1	20,000
7	Two-day non-residential training on culinary skills for 20 persons X 2 (Basic and Advanced)	2	45,000
8	Five-day cluster level residential training on static campsite management X 2 for 20 persons (Basic and Advanced)	2	2,60,000
9	Mountaineering training (Basic and Advanced course at ABVIMAS, Manali) at scheduled rates for five persons	2	1,80,000
10	Three-day non-residential training for identified trekking guides on First Aid and Rescue	2	25,000
11	Training on communication and marketing for guides, homestay owners and local tour operators	1	70,000
12	Any other trainings as suggested by the HP Forest Department (SHG training for handicrafts, etc)	5	80,000
Total B	ıdget for Capacity Building		11,28,000
15	Digitalization of Tourism Resource Mapping of Entire catchment to identify and verify tourism resources and plan for participatory tourism interventions	1	-
17	Production of Brochures and other innovative print media with maps & contact information	1	-
18	Pictorial and Text Documentation of all tourism products in the area	1	-
19	Creation of Master Website as marketing hub with linkages	1	-
20	Maintenance of blogs, Web 2 Tools and Websites	2	-
Marketi	ng Communication Media		1
21	-		
Eco guio	le Equipment Total		
22	1	1,15,000	
Office T	1,15,000		
	ordinator/community mobiliser		12 /2 000
Grand to		12,43,000	

## Annexure II: Photo Documentation of PRA





Extent of Loss due to Human-Wildlife Conflict

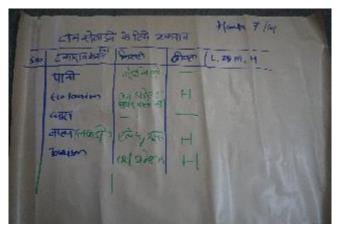
Stakeholder Analysis at Hamta

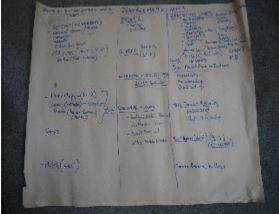




Seasonal Labour Availability

Ecotourism Resource Mapping 1





Inter-community Conflict for FES

Ecotourism Resource Mapping 2

## Annexure III: Formation of the Society

Original Names of the members of the VFDS were proposed and seconded in the PRA meeting itself in front of all members of the society.

Meetings were then organized with specific stakeholders with the following agenda:

- Agenda of the Meeting
- Name of the Society
- Type of Registration
- Core Body of Society
- External Members
- Governing Board
- Date of Registration
- Memorandum of Association
- Articles of Association
- Fees
- Bank Name
- Area of Operation
- Core Name of Persons (4 main)
- Qualification of General Members
- Optimum Strength of Society
- Relationship with Other Societies
- Active Tourism Stakeholders of Hamta
- Logo/Tagline
- Accountant/Lawyer

# OFFICE OF THE SUB DIVISIONAL MAGISTRATE, MANALI, DISTT, KULLU (H.P)

## **Certificate**

Regn No: 17/2018

Dated : 28.11.2018

This is certified that "HAMTA VILLAGE FOREST DEVELOPMENT SOCIETY" VPO-Prini, Teh Manali, Distt. Kullu H.P has been registered under the Himachal Pradesh Societies Registration Act, 2006 (25 of 2006) on the 28th day of November 2018.



Sub Divisional Magistrate, Manali-cum-Sub Registrar of Societies, Manali

Distt. Kullu (HP)

# Annexure IV: Memorandum of Understanding (MoU) or Memorandum of Agreement (MoA)

HIMACHAL PRADESH FOREST ECOSYSTEM SERVICES (HP-FES) PROJECT

#### Memorandum of Understanding

between

The Hamta Village Forest Development Society
and
the Himachal Pradesh Forest Department
for Village Forest Management.

#### Whereas

The HamtaVillage Forest Management Society (hereinafter called "Society") has been constituted as per procedure described in the HP PFM Regulations notified by Govt. of HP vide No. No FFE-C (9). 112001 dated 23.8.2001, registered under the Himachal Pradesh Societies Registration Act, 2006 Registration number 17/2018 (dated 28-11-2018) by the villagers of Hamta Panchayatunder Forest Division ,Manali, in the districtKullu of Himachal Pradesh and has an elected Executive Committee (hereinafter called "EC") to implement the Micro Plan for Forest Management and Village Resource Development (hereinafter called "Plan") for protection, rehabilitation and management of the specified forest areas that has been prepared by the Society and theForest Range ManaliForest Division; the Plan contains details of activities to be undertaken for management and development of forest areas using a Forest Ecosystem Services (FES) approach and also description of equitable distribution of products and services obtained from the allocated forest areas and public resources of the village; the Plan has been approved by the Officer in Charge of the Forest Division (hereinafter called "Forest Officer") on behalf of the Government of Himachal Pradesh;

#### Now herewith

The Manali Range KulluForest Division and the Society have mutually agreed on this MoU, and consequently, this MoU is executed with the following articles:

#### Purpose of the Memorandum of Understanding

This Memorandum of Understanding (hereinafter called "MoU") details the responsibilities of the Society regarding management and protection of forest area(s) and village(s) resource development, in the manner specified in the Plan and for equitable distribution of benefits amongst its members/working groups in the manner specified in the Plan. It further entails payments and support to be provided by the project (HP-FES) and other associated conditions.

## Responsibilities of the Society

With regard to its Constitution, working, powers, duties and benefits, the Society agrees to act in accordance with the HP Government Notification No. Fts. II (B) 15.10.87 dated 23.08.2001 and other relevant Government orders and instructions.

- 2.1 The Society agrees to provide all necessary assistance to the Forest Officer in selection of intervention area(s) to be allotted to it for forest management so that there is no dispute regarding areas of common use of nearby villages.
- 2.2 The Society, pursuant to the approval of Micro plan by the DFO agrees to develop a 6-month (Activity & Budget) Plan, get it approved by the General House of the Society, and submit to the Forest Officer for release of funds.
- 2.3 The Society agrees to carry out works laid out in the Plan for the forest area as per the approved schedule of rates of work and labor and in doing so, follow the principles of management of forest and wildlife specified therein, also taking into account the guidelines of the Government, prevalent legal provisions and technical principles. The Society will ensure that no existing acts/ rules of forest/ wildlife management are being violated.
- 2.4 The Society agrees to contribute to the cost of works proposed through a 10% cash/ kind contribution of total investment, to be collected by the VFDS from its members/ User Groups and deposited in the Saving Bank Account held by it. The amount of contribution so deposited by the VFDS will be returned along with interest accrued to the VFDS at the end of the project period and the VFDS will be free to spend the amount as jointly decided by them. This community contribution is to be made within 6 (six) months of the commencement of the Plan.
- 2.5 The Society agrees, after completion of the related works, to protect the forest area from fire, grazing, illicit felling, illicit transport, illicit mining, encroachments and poaching and shall help the forest department in this regard.
- 2.6 The Society agrees to pass the information regarding person(s) engaged in harming the wild animals and forests or those engaged in illegal activities on to the Forest Department. The Society agrees to help forest employees in apprehending such person(s) and provide all possible assistance in protecting any seized produce etc.
- 2.7 The Society agrees to rectify any shortcomings found during review of its works by the Forest Officer/ Monitoring Agency.
- 2.8 The Society agrees to keep accounts of income and expenditure of the funds from various sources, present it to the Forest Officer or his representative when required, and to get regular annual audits done by the agency assigned by the Forest Officer.
- 2.9 The Society agrees to maintain the records specified by the Forest Officer regularly and in prescribed formats.
- 2.10 The Society agrees that the distribution of products and services generated as a result of implementation of the Plan among its members/User Groups is done in an equitable manner. If the Forest Officer points out any mismanagement or irregularity in the

equitable distribution of such products and services, then the Society agrees to implement the necessary corrections/ improvements suggested by the Forest Officer.

2.11 The society agrees to ensure that there is no misuse of funds allocated from the Forest Department for implementation of the activities under this project.

## 3. Responsibilities of the Forest Department

- 3.1 The Forest Department will provide to the Society the related input materials required to carry out the works specified in the Plan, such as related equipment, trainings, institution building, marketing etc. in a timely manner.
- 3.2 The Forest Department will provide the funds specified in the Plan to the Society for implementation of works carried out in the forest area on the basis of the Plan in a timely manner Subsequent to approval of the Plan, a 6-month (Activity & Budget) Plan will be developed by the VFDS and got approved by the General House. After acceptance of this 6-month plan, the DFO will transfer the budgeted amount into the general account of the VFDS prior to commencement of works.
- 3.3 Funds from other department's schemes as the Panchayat may be able to converge/garner, may also be used for activities that help meet the project's objectives.
- 3.4 The Forest Department shall provide the necessary advice and guidance to the Society for implementation of works carried out in the forest area on the basis of the Plan.
- 3.5 The Forest Department shall NOT be responsible for any loss in any of the works related to implementation of the Plan and no claim of any sort can be presented against Forest Department
- 3.6 In the event of any misutilization of the funds at the level of the VFDS, the Forest Department shall initiate proper legal action against the former.

## 4. Support by the Project

- 4.1 The Project (HP-FES) will provide to the DFO the funds (after signing the Financing Agreement with GIZ) for specified activities in the approved Plan for implementation of works carried out in the forest area (s). These funds will be disbursed by the DFO to the Society considering the 6-month plan submitted by the Society.
- 4.2 The Project (HP-FES) will provide training and other capacity building measuresto the Society members, as well as support for income generating activities as specified in the approved Plan.
- 4.3 The funds earmarked for ecotourism activities etc. (mentioned in the approved Plan) will be credited into the general bank account with the VFDS as per accepted 6-month plans derived from the Plan.
- 4.4 Payment and receipt of funds will be strictly by means of cheques or bank transfers to the account of the Society. All disbursals by the Society to VFDS members will also be executed through bank transfers.

## Rights and Benefit Sharing

- 5.1 The Rights of right holders as admitted in the Forest Settlement will remain unaffected due to constitution of the Society and will continue to be exercised as such.
- 5.2 The Benefits which the Society members and their User Groups will be entitled to after closure of plots/ patches in the forest for various project interventions are as follows:
  - 5.2.1 Group members responsible for protection and maintenance of different closed patches will harvest and share among themselves the various benefits accruing from Community Based Responsible Tourism;
  - 5.2.2 Benefits accruing from CBT share it amongst themselves equitably;
  - 5.2.3 Trekking and other products areas will be made functional and shared amongst the groups/ villagers as decided by the EC or in rotation;
  - 5.3 The Society will be entitled to sale proceeds of all intermediate and final of NTFPs, as laid out in the PFM Regulations of HP, 2001.

#### 6. Monitoring &Evaluation

- 6.1 Monitoring and Evaluation of project activities will be done at different levels, including by the EC, a monitoring committee, the Forest Officer or his representative, and an independent third party.
- 6.2 The EC or any of its members will monitor progress and quality of work during execution of various works. The Member Secretary will record the date, places and names of EC members who checked the work(s) and whether works were satisfactory and any instructions given.
- 6.3 A participatory monitoring committee made up of members of the Society, a member from Panchayat as well as a representative from the Forest Department (e.g. Deputy Range Officer) will on quarterly basis review objectives, inputs and work progress and report to the whole Society. Their reports will then be sent to the Forest Officer for information.
- 6.4 Where Society groups have carried out or are responsible for activities like fencing, plantations and maintenance of plantations (all the works according to the Plan), annual monitoring will be carried out by Project-approved monitors (Third Party) and the results of this monitoring will determine the quantum of release of incentive payments as per the norms/scheme agreed upon in the approved Saving Book Approach Guidelines.
- 6.5 Settlement of Disputes: Settlement of disputes and conflict resolution will be governed as laid out under section49 & 50 of the Bye Laws of Society.

Memorandum of Understanding

are aware that the terms of this agreement will be valid and benefits mentioned in this agreement shall be available to the Society only when it discharges its duties, responsibilities and works in a satisfactory manner and this is certified by the Forest Officer every year. However, if the forest Officer fails to fulfill conditions mentioned in para 3 and 4 of this agreement and there is a cause for the Committee not able to discharge its responsibilities and works, the same will be kept in mind while evaluating the works of the Committee every year.

IShiv Dyal s/o Sh. Pyare Ram VPO Prini, Prini Panchayat, Manali, President, Village Forest Management Society, declare on behalf of the Society, that Iam committed to follow all the conditions mentioned in this MoU and am signing this memo after reading/understanding all conditions mentioned herein, literally and in their original meaning.

(Name, Seal and Signature of the President, VFDS)

On behalf of VFDS

I, Dr. Neeraj Kumar Chadha [ Sectional Forest Officer, Kullu] undertake, on behalf of Manali Forest Range, Distt.Kullu, to implement all duties/responsibilities of the Forest Department mentioned in thismemorandum.

(Name, Seal appropriate the Divisional Forest Officer) On behalf ofForest Department

Witnes Without

1. AMKIT SOOD Scobulism Consultant

2. A.B-Kullu

2. DITEMBRARMA, Adviso, 412, RITEM. SHARMAR & 412. do

## **Annexure V: List of Ecotourism Products**

List of nature and ethnic culture-based products and sub products in ecotourism. This is derived during the PRA exercise.

Table 8.1: Nature-based Tourism (Source: PRA)

Product	Sub-products/Events
	Deotibba
Peaks	Indrasan
	Pha Konda Peak (13000 Feet)
	Hamta Pass Trek (Horse)
	Hamta Circle Trek (Horse)
Eco-treks	Hamta Bhrigu Lake Trek (porter)
	Deo Tibba Base Camp Trek (Horse)
	Inderkilla Base Camp Trek (porter)
	Bhrigu Lake
	Khari Mandiari
W/ D 1	Marasu(with bridge)
Water Body	Dam Barrage
	Rauli Khoi (15 Km from Roadhead)
	Panduropa
	Tuna Waterfall (Near Barrage)
	Chalet Waterfall (2 Km from Roadhead towards
Waterfalls	Bijauri Thach)
	Chikka Waterfall (6 KM)
	Jhamir Waterfall (4 KM)
Pristine Forests	Hocham Bihai Camspites (2 KM)
	Peka – Dani Devta Devvan
	Jamdagini Rishi Van
	Jogi Dug
	Goshtbari
	Black and Brown Bear
	Leopard
	Snow Leopard
Wildlife Watch	Ibex
	Miato
	Ghoral
	Bina (Musk Deer)
	Pyagneru Thatch (Deo Tibba)
Thatches	Nihar Thatch
	Kansar Marasu Thatch
	Bhujdhar- Chikka- Jobri Thach
	Hoching Bihal
	Aara Thach
	Jwara
	Bhalu Ka Ghera
	Shia Garu

Product	Sub-products/Events			
	Hanasu Thach			
	Pandu Ropa			
Missellanassa Tassiana Assisia	Igloo Stay			
Miscellaneous Tourism Activity	Night photography and star gazing			
	Mountaineering			
	Trekking			
	Camping			
	River Crossing			
	Paragliding			
	Rock Climbing			
	Rappelling			
	Heliskiing			
	Mountain Biking			
Symbiotic products (man- made adventure	Skiing			
sports based on nature resources)	Tubing			
	Zorbing			
	Bouldering			
	Day Treks			
	Yoga and Meditation at Thatches			
	Horse Riding			
	Snow boarding			
	Grass Skiing			
	Caving – Arjun Gufa (behind Shuru) and Shiv			
	Gufa (Pandu Ropa)			
Fish	Haripur Nala			
	Monal, Koklash, Khokta, Smaller Birds, Chakor			
With the company	Black and Brown Bear, Leopard Snow Leopard			
Wildlife & Birding	Ibex			
	Miato. Ghoral, Bina (Musk Deer)			
	Patish			
	Hathpanja			
	Mehandi			
	Dhoop			
	Jangli Bidi			
	Rakhal			
	Kidajadi			
Medicinal Herbs	Other Forest Produce			
	Lingdi			
	Shingli Mingli			
	Gucchi			
	Jangli Aadu Nagchatri			
	Lahsun			
	Kadu			
	Dhoop			
	Walnut			
Wild Fruits collection	Khanor (For Cows)			
	Jamun			
	J			

Product	Sub-products/Events		
	Mushroom		
	Bhumbe		
Sunset/ Sunrise Points	Chikka		
	Ghot Bari		
	Sethan Campsite		
	Jwara		
Snow Glaciers	Deo Tibba Glacier		
	Hamta Snow Point (December to May)		
	Kafoni (20-25 Km from Roadhead)		
	Shigri (20 Km from Roadhead)		

Table 8.2: Ethnic Culture product at Hamta

Product	Events		
	Dress		
	Local Pattu		
Ethnic culture experience	Shawls		
Ethnic culture experience	Kullu Cap		
	Oon Pyajama		
	Jwarkhat		
	Jamagini Rishis journey from Spiti		
	Piti Thakur		
	Jintu- Pintu		
Folklore	Inderassan Peak		
Folklore	Nag devta flklore with stone cut rock		
	Natural Nag Devta Stones		
	Pandu Ropa- Kilta		
	Bridge to Bhrigu		
	Phali Nag devta		
	Jamgaini Rishi		
Temples	Ram Mandir		
	Local Songs of Jamdagini Rishi		
	Prini Village Means Prani Leaving towards		
	Inderkilla (mokh) from here		
	Pattu		
	Shawl		
Handicrafts	Socks		
Trandicians	Mandri		
	Poolien from Grass of Dhan		
	Goldsmith/ Black Smith		
Musicians	SesRam from Prini plays the Shehanai		
Other Manmade	Gharat on Prini Nala (8-10)		
Attractions	Kathkuni Architecture (30-40 households)		

Product	Events		
	Jamdagini Mahila Mandal		
Cultural Groups	Phalden Lam SHG		
	Yuvak Mandal		
	Sethan Mahila Mandal		
	Phemra		
	Momo		
	Khodre Ki Roti		
	Makki ki Roti		
	Chawal ki Roti (chalethi)		
	Soosh (Water Based Saag)		
	Siddu		
Cuisine	Local Rajmah		
	Gicche		
	Aksu		
	Bari with Ghee		
	Red Rice		
	Lingdi		
	Chacchi		
	Local Kulluvi Dham		
	Kathu and Sarson ka Saag		
Drive away excursions	Only one single road to barrage and Chet village		
Fairs and Festivals	Magha Ra Saja (January)		
	Khichri Saja (January)		
	Phagli Jamdagini Rishi (March)		
	Local Diwali (Jan)		
	Bini Nawami (Ram) April with Devta Race		
	Hoom (September)		
	Shishu (August in Sethan Village)		

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

> Matsubara Building, Village Sargheen (Near HFRI), Shimla - 171013 Himachal Pradesh (India)

> > For further Information

Principal Chief Conservator of Forest, Forest Department, Himachal Pradesh, Talland, Shimla- 171001, India