



**Himachal Pradesh Forest Department (HPFD)**  
**Himachal Pradesh, Republic of India**

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## **Himachal Pradesh Forest Ecosystems Climate Proofing Project**

German Financial Cooperation/KfW German Development Bank



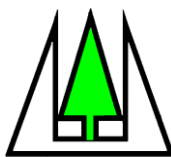
### **Inception Report, HPFECPP**

***Author: Peter Hess, Vinay Tandon***

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**DFS**

Deutsche Forstservice GmbH  
Feldkirchen, Germany



GOPA mbH,  
Bad Homburg, Germany

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## ABBREVIATIONS AND ACRONYMS

CCA	Climate Change Adapted
CTA	Chief Technical Advisor
DFS	Deutsche Forstservice GmbH, Lead Consultant
DPMU	Divisional Project Management Unit
FCS	Forest Cooperative Society
GoHP	Government of Himachal Pradesh
GoI	Government of India
GOPA	Gesellschaft für Organisation, Planung und Ausbildung mbH
HP	Himachal Pradesh
HPFD	Himachal Pradesh Forest Department
IGA	Income Generating Activities
JFMC	Joint Forest Management Committee
KfW	Kreditanstalt für Wiederaufbau, KfW Development Bank
M&E	Monitoring and Evaluation
MoU	Memorandum of Understanding
NTFP	Non-Timber Forest Product
PES	Payment for Ecosystem/ Environmental Services
PFM	Participatory Forest Management
PSC	Project Support Coordinator
SFDA	State Forest Development Agency
SPMU	State Project Management Unit
TOR	Terms of Reference
VFDS	Village Forest Development Society
VGR	Village Group Organizer
VWP	Village Working Plan

## CURRENCY

1 EURO	82 InR (Indian Rupees) (22.09.2014, Preparing FS)
1 EURO	70,44495 (28 February 2017)

## ADDRESSES

DFS Deutsche Forstservice GmbH  
 Wittelsbacherstr. 11  
 D - 85622 Feldkirchen

Tel. + 49 (0) 89 94 00 59 0  
 Fax + 49 (0) 89 94 00 59 79  
 E-Mail [dfs@dfs-online.de](mailto:dfs@dfs-online.de)  
 Internet <http://www.dfs-online.de>

## 1. INTRODUCTION

This **Inception Report (IR)** for the Himachal Pradesh Forest Ecosystems Climate Proofing Project (HPFECPP) reports on project preparations, arrangements and activities carried out during the inception phase from September 2016 to February 2017. It should be noted that the project was launched (31<sup>st</sup> January 2016) prior to joining of the Project Management Consultants (PMC), in end of August, 2016. During this time modifications to the project concept were proposed and several Micro Plans (MP) written and implementation of activities started in some of them. These MPs were found having not properly addressed several aspects as proposed in the DPR particularly in not taking the 'forest' as the unit of planning, lack of any process documentation and usable maps for monitoring issues, etc. The MPs were therefore not accepted by PMC until adjusted to project standard, especially including a FMP planning process clearly indicating CCA silvicultural measures and including regulation according to established guidelines and concept of this project.

The IR records technical guidance provided by international and national consultants and proposes several developmentally necessary amendments to project implementation arrangement, adjustments and clarifications on silvicultural measures and extension to other ecosystems than Chir Pine dominated areas.

A review of the cost and financing plan (yet to be agreed by KfW) is presented. Further to this report, all major guidelines necessary for project implementation and concept notes requested during the KfW review mission in November are attached as separate documents or attached to this report which as well need approval of KfW.

Project implementation provided through German Financial Co-operation (KfW, Kreditanstalt für Wiederaufbau) commenced on 23<sup>rd</sup> August 2016 with the arrival of the CTA in India, at Dharamsala.

The Consulting consortium DFS Deutsche Forstservice GmbH and GOPA mbH of Germany are providing technical advisory services led by the CTA. This Project Inception Report is a contractual reporting requirement by DFS/GOPA of the CTA.

## 2. PROJECT DOCUMENTS

The primary Project documents are:

- 1) *Minutes of Meeting between GoHP (Government Himachal Pradesh) and KfW (Kreditanstalt für Wiederaufbau)*. Project Appraisal Mission for “Himachal Pradesh Forest Ecosystems Climate Proofing Project” signed in Shimla 9 April, 2014.
- 2) *Feasibility Study on “Himachal Pradesh Forest Ecosystems Climate Proofing Project”*, September 2014
- 3) The Financing agreement for this project was signed on 17 December, 2014.
- 4) The Loan Agreement the project officially started on 29 Dec 2015
- 5) Separate Agreement to the Financing Agreement dated 17 December 2014
- 6) Technical Proposal for Consulting Services for “Himachal Pradesh Forest Ecosystems Climate Proofing Project” March 2016, by DFS-GOPA, Germany,

## 3. PROJECT SCOPE AND ORGANISATION

The “Himachal Forest Ecosystems Climate Proofing Project” is located in Himachal Pradesh, North West India and will be implemented in the districts of Chamba and Kangra. The altitude ranges in the districts can be divided in three zones, lowlands or Shiwaliks (350 m to 1500m), the middle Himalayas (1500 to 3000m) and Himadri (above 3000m). The project area does not include the high alpine areas. All localities are accessible, however, Bharmour and Pangri divisions in Chamba district are quite remote from the Headquarters and hardly accessible in winter time.

### 3.1 Project Feasibility Study

A *Project Feasibility Study* dated September 2014 was compiled by HESSEN-FORST and Österreichische Bundesforste – supported by an international forestry consultant – and is an essential part of the Project TOR. The quality of the information presented in the FS appears to have been good at the time of writing, but some parts actually have not been addressed properly and only included the chir pine forests and infestation with lantana, excluding higher altitude conifer areas and other IAS.

A notable gap in the FS is the lack of alternative and relevant CCA silvicultural models and approaches that are proposed during inception phase to manage the complete ecosystem in the selected districts and thus to be in a position to be more resilient to climate change. Furthermore, the selection criteria vulnerability of dependent forest dwellers especially in more remote areas was not considered. The report of the international silviculture adviser provides some technical guidance that will help overcome these shortcomings. Notwithstanding the limitations described here, and a lack of analysis of basic data, the FS in its present form will be technically useful for supporting some planning, in particular, for formulating the proposed Plan of Operations.

Recognising some of these shortcomings, the SPMU proposed some adjustments after launch of the project and discussed these issues in State Level Steering Committee (SLSC) meeting and raised them with KfW. However, a decision on these issues could be achieved only with the help of the PMC.

Since 2014 units cost of forest operations and costs for other project interventions have seriously increased. Furthermore, the exchange rate changed from 1 EURO=82 InR as calculated in the FS dropped to an exchange rate by 1 EURO= 70 InR at present. The cost data shown in the FS, specifically the unit costs need to be revised and updated. Using revised cost data will enable the investment tables to be reviewed that in turn will enable reliable silvicultural planning and other budgeting to be achieved, including the formulation of appropriate and acceptable financial delivery arrangements of the KfW loan to VFMSs.

Against this background, it is recommended that the SPMU with PMC arrange to update and revise silvicultural and costs data during the assembly of the Plan of Operations as a further contribution to the Preparatory Phase.

### 3.2 Project Goal and Objective

The Result matrix from KfW records the project Goal and Objective as follows:

The **overall goal** of the project is public and private investments in the Natural Resource Management sector to improve the natural resource base, minimise the risk of climate change and increase productivity and income in rural areas. Actually, this mean that “Forest ecosystems in HP are managed in a way, that the risks of climate change and its negative impacts are minimized and/or mitigated, resulting in an increase in biodiversity of the treated Himalayan ecosystems and sustained income in rural areas from sustainable management of natural resources”. The project is expected to lead to reduced forest degradation, increased biodiversity, enhanced income for forest-dependent communities in vulnerable landscapes, increased availability of spring water in treated spring catchment areas and sustainable management of forests in the project area.

The **specific objectives** are the introduction, establishment and institutionalization of national and international climate change adopted models and approaches to rehabilitate degraded forest and ecosystems in HP, whereby various models of CCA silviculture and soil and water management (spring rejuvenation) shall be implemented in the project area which covers up to 9 Forest Divisions in the Districts of Kangra and Chamba that fulfil eligible criteria that have been agreed (see next chapter).

SPMU advised on the desirability of reviewing project objectives and proposed other degraded ecosystems to be included in this project and to include other tree species than chir pine and weeds other than lantana.

The Consultants supported this and KfW approved in general these changes. Furthermore, PMC recommends that SPMU should seek KfW endorsement for new silvicultural approaches as proposed in the silviculture guidelines.

### 3.2.1 Increase of project areas and including other ecosystems

In the MoM of the review mission in November 2016, KfW approved changes in the selection criteria as below:

- Availability of forest resources and land for investments,
- Accessibility of intervention areas,
- Joint Forest Management Committees/FDS in place,
- High incidence of poverty and dependence on forests;
- Vulnerability of forest ecosystems and livelihoods to climate change;
- Absence of social conflicts and other similar risks detrimental to project implementation
- Absence of other ongoing foreign assisted projects
- Willingness of the local population to participate in project activities

Furthermore, that presently only 600 villages can be selected to participate in this project in 9 divisions and 32 ranges. The details are in the table. It also was clarified that the selected areas of forest would be of a reasonable size to allow for efficient use of human and financial resources. Emphasis was laid that very remote areas should be avoided to keep transaction cost low.

**Table 1: List of Divisions and Ranges**

District	Divisions	Ranges
Chamba	Chamba	
	Dalhousie	
	Churah	
	Bharmour	
	Pangi	
Kangra	Dharamshala	
	Nurpur	
	Derha	
	Palampur	

Naturally it was agreed that the project will include other ecosystems, including spruce, blue pine, cedar and oak and therefore as well will allow removal of other weeds than lantana as these newly eligible areas are infested with Eupatorium, Parthenium and/ or Ageratum.

### 3.2.2 Increase of project areas and including other ecosystems

Taking into consideration the changes as mentioned in chapter before the project tasks, especially the original proposed CCA silvicultural measures will have to be adopted. During



the mission of the CCA silvicultural expert, new silvicultural approaches have been developed and the proposed areas for implementation of CCA measures changed as follows:

**Table 2: Proposed Silvicultural Approaches by Silviculture Expert**

Measure	costs total InR	units ha	costs/unit	total costs EURO
CCA- Conversion of (infested) forests	1,045,800,000	16,000	65,363	14,940,000
Planting (in gaps, enrichment etc) of CCA-species in all forest types	101,740,000	3,000	33,913	1,453,429
intermediate thinning in all forest types	9,200,000	5,000	1,840	131,429
proposal 1: pasture improvement in return of forests closures (conifer zone)	15,000,000	1,000	15,000	214,286
proposal 2: pasture improvement in return of forests closures (broad leave zone)	30,000,000	1,000	30,000	428,571
proposal 3: fencing (and maintenance) of rotational forest closures tribal areas	24,000,000	2,000	12,000	342,857
proposal 4: fencing (and maintenance) of rotational forest closures non-tribal areas	18,000,000	2,000	9,000	257,143
Proposal: income generating activities like seedlings free of costs, NTFP	15,000,000			214,286
<b>Total costs</b>	<b>1,258,740,000</b>			<b>17,982,000</b>

Table above depicted from report of CCA silviculture expert (at that time old cost norms were used. The areas however will decrease according to new cost norms and actual exchange rate drastically see chapter 4.4

Areas and cost, mentioned in table above are tentative and not adjusted to present cost norm and available budget, and should only indicate the measures the project propose to implement after seriously analysing the present situation in the field and discussions with SPMU. Consequently, these changes also would need modification of the existing log frame.

The STE on CCA Silviculture also proposed the merger of the measure “Improvement works in existing bamboo forests/plantations (1,000 ha)”, to increase equally the CCA conversion of infested forests, where proposed bamboo planting along the nallahs will improve soil and water conservation, which will highly increase effects on climate resilience. The reason is that these originally considered bamboo forest / plantations are very scattered and are only located in the low land of Kangra. These plantations are presently not well managed by the FD due to low economic values and interest by the rural population. Therefore, no sustainability can be granted when improvement would be considered and it is advisable to use the reserved funds to increase CCA conversion, where bamboo planting is also proposed.

Furthermore, the project proposes 2 pasture improvement areas as already agreed in the MoM and forest closure to support natural regeneration and include supplementary enrichment planting where necessary.

These are major changes against the original project design needs fast response/comments and approval before project implementation actually can start. Further, explanations conserving newly proposed measures are clearly described in the silvicultural report attached as a separate report to this document. All silvicultural measures will be compiled in the final FOP within the micro-plan and then subsequently to be implemented by the stakeholders via the VFMS.

### 3.3 Target Groups

***The formation of VFMSs that provides the institutional foundation for CCA/ silvicultural measure planning, soil and water protection measures including spring rejuvenation plans for each of the VFDS (in 600 villages or cluster of villages) and the implementation of various operations prescribed in the FOP (forest operational plans, the main part of the micro-plan) is the core of this project.***

Project assistance on different CCA measures and models for rehabilitation of different forest stands have been agreed, as specified in the MoU of 2014.

The target groups of the project are specified in the MoM are:

- The most dependent communities (up to 600 villages) vulnerable to climate change in Chamba and Kangra districts
- The Himachal Forestry Department in their development of climate adaptive forest management measures to better manage natural resources
- Other departments of GoHP including academic / research institutions
- NGOs and other community based organisations
- Private sector and other interested groups

The project understands that all planning conducted so far (by implication, as expressed in the FS) shall be reviewed during the inception phase once the Project has commenced. The various targets are tentative and may be amended subject to the written consent by SPMU and KfW. Detailed implementation targets will be reviewed and determined as the Project proceeds. All FOPs for each VFMS need to be approached separately, based on the specific ecological characteristics of the forests and the capacity of each VFMS.

### 3.4 Project Phases

**Information:** The Project was launched on 31<sup>st</sup> January 2016 by the Indian side. However, KfW called for a retender for the HPFECPP on 4<sup>th</sup> March 2016. The successful bidder DFS/GOPA then was invited for contract negotiations on 27<sup>th</sup> June and the final contract signed between PEA and the Consultant on 1<sup>st</sup> July, 2016. The Consultant started mobilization with CTA arrival, the HPFECPP Project started 1<sup>st</sup> of September 2016.

Some preparatory works from the Indian side between 31<sup>st</sup> January till 31<sup>st</sup> August, 2016, like starting set up of office, deployment of some staff for SPMU and the establishment of SLSC, were carried out. The SPMU, however, also started some core project activities, i.e. preparation of micro plans that were restricted to 5 per division by KfW. However, due to the absence of PMC, KfW could not decide and was waiting for PMC if these Micro-plans are acceptable for KfW. After PMC's arrival, the period was handicapped by lack of understanding of procedures of a KfW project and realization of SPMU that this project actually

is a forestry project rather a livelihood project. Consequently, the micro plans were not accepted by PMC and needed revision. Numerous meetings and contentious discussions with SPMU, resulted in a backstopping mission followed by an early review mission by KfW in November, 2016. Following these, misunderstandings were clarified.

The Project thus actually started on 1<sup>st</sup> September, 2016 and will be implemented in three phases, namely, Preparatory Phase (12 months), Implementation Phase (40 months) and Consolidation Phase (24 Months) according to the ToR. The MoM dated 2014 confirms a 12 months' preparation phase and the Consultants offer proposed an inception phase of 6 months and continued planning and establishment phase up to 3 years. As per the proposed phasing the project is in time.

Between September 2016 and February 2017 – the Inception Phase – activities have focused on assembling an Immediate Action Plan (see Annex A), drafting of CCA silvicultural guidelines to support the micro planning process and introduction of new silvicultural models and clarifying that without a FOP no silvicultural measures can be planned. A Plan for development and related training of 9 selected nurseries is in place. Further, PMC drafted the development of a Monitoring and Evaluation system, including guidelines for the formation of Third Party monitoring, developed procurement guidelines and an overall procurement plan and developed capacity building guidelines with a draft training plan. Furthermore, financial guidelines are developed and has started preparing for first reimbursement request. No operational activities have commenced except nursery development..

Right now, as of February, 2017, the PMC is to deliver a model FOP which includes a FMP and a Micro plan. Due to reasons beyond control this FOP has been delayed, but the process has re-started and the model FOP is expected to be ready by end of March, 2017. This document, when approved by KfW, becomes a torch bearer for guiding development and 'revision' of other FOPs. The immediate priority is to complete through revision the 45 micro plans (or FOPs) that are pending. The Micro-planning guidelines are also due to be ready by end March, 2017.

### **3.5 Responsibilities**

The project will be primarily implemented by HPFD being the Project Executing Agency (PEA). HPFD has set up the State Level Project Management Unit (SPMU) which has responsibility for overall support, supervision and project monitoring. The project will be implemented at divisional level by the Divisional Project Management Units (DPMUs).

Good mobile, telephone, e-mail communication facilities exist. The project offices and their responsibilities are:

- The State Level Project Management Unit (SPMU) within the HPFD has responsibility to the PEA for the implementation of all aspects of the Project.
- The Divisional Project Management Units, in Kangra (4 Divisions and Chamba 5 Divisions) have direct operational responsibilities for project implementation.

- An independent institution or body, forestry related company to be responsible for monitoring the technical and socio-economic performance, for which indicators are yet to be identified / developed.

The separate agreement identified under Special Implementation agreements several issues which have not been yet addressed sufficiently by responsibilities of HPFD at different levels, e.g. seeking exemption from ban of green felling for sustainable forest management in the areas selected for project intervention and the approval of HP Govt for a performance incentive and appraisal system from Project funds for project staff. Other request is being followed up by PMC with SPMU.

Guidelines for project management drafted by PMC, communicated to and agreed by SPMU, now need to be endorsed by KfW for project operation.

### **3.6 State Level Steering Committee (SLSC)**

The SLSC is the highest decision-making body for the Project. It should meet once a year to provide policy support to the Project and also approve Annual Action Plans and Annual Budgets for the project. It will also approve and endorse the operational manual of SPMU. The SLSC has been notified vide HP Govt. notification no. FFE-B-F(5)1/2015 dated 17-2-2016 and no. FFE-B-F (5)1/2013 dated 22-11-2016. The composition of SLSC is as under:

1. Forest Minister	Chairperson
2. Vice Chairman H.P State Forest Dev. Corp. Ltd	Member
3. ACS/Principal Secretary/Secretary Forests	Member
4. ACS/Principal Secretary / Secretary Rural Development	Member
5. ACS/Principal Secretary / Secretary Finance	Member
6. ACS/Principal Secretary / Secretary Tribal Development	Member
7. ACS/Principal Secretary / Secretary Water Resources	Member
8. Director Agriculture	Member
9. Director Animal Husbandry	Member
10. Director Horticulture	Member
11. Director Environment	Member
12. Convenor SLBC	Member
13. Vice Chancellor – Agriculture University	Member
14. Chief General Manager – NABARD	Member
15. Principal Chief Conservator of Forests (HoFF)	Member Secretary
16. Chief Project Director	Convenor and Member
17. Regional Project Director, H.P. MHWDP Dharamshala, District Kangra (HP)	Member
18. CF Chamba, Dharamshala & Hamirpur	Member

### 3.7 Executive Committee

The committee shall give financial sanctions and facilitate fund flow from the Government of Himachal Pradesh. This committee will be responsible for approval of Annual Plan of Operation and its execution. The committee shall also review the progress activities. The committee will also perform any other function as decided by the Committee/or as assigned by the Government.

The Executive has been notified by HP Govt. notification no. FFE-B-F(5)1/2015 dated 6-10-2016. The Executive Committee composition is as under:

1. ACS/Pr. Secy./Secretary (Forests)	Chairperson
2. Representative of the Addl. Chief Secy. (Finance)	Member
3. Pr. CCF (HoFF), H.P.	Member
4. Chief Wildlife Warden, H.P.	Member
5. Director (Rural Development)	Member
6. Team Leader-Project Management Consultant	Member
7. Addl. Pr. CCF (Working Plan)	Member
8. Addl. Pr. CCF (Research)	Member
9. Addl. Pr. CCF (Participatory Forest Management)	Member
10. Dy. Director (Planning and Development)	Member
11. Dy. Director (Administration)	Member

## **4. STATUS OF PROJECT PREPARATION AND MAIN ACTIVITIES CARRIED OUT BY THE CONSULTANT**

### **4.1 Project Staffing:**

#### **4.1.1 SPMU level**

The State Project Management Unit has been set up and is at present staffed with most of the positions as proposed in the FS. Adjustments have been made and the following organizational diagram (next page) depicts staff positions as decided by SPMU in concurrence with HPFD. However, KfW has not yet been informed in writing of these adjustments, i.e. deputy project directors only 1 instead of 2; project managers only 4 instead of 6; clerical staff seems sufficient according to PMC. According to the M&E and the Capacity Building Report, there would be a need to develop and manage some databases at the SPMU level. This database will need to be linked to DPMU databases or sets. It appears that as of now SPMU and DPMUs do not have skilled persons in computer applications to be able to handle, organise and manage databases and the proposed MIS at either DPMU or their own level. SPMU is advised to contemplate staffing issues.

Another issue is that at present the office space of SPMU is insufficient to provide adequate space for all the staff. 2 project managers are not yet recruited and the GIS expert and the GIS system have no space in SPMU office and is intended to be accommodated in the already congested PMC office. PMC office space is quite limited and have limited space for national and international experts when working in the project.

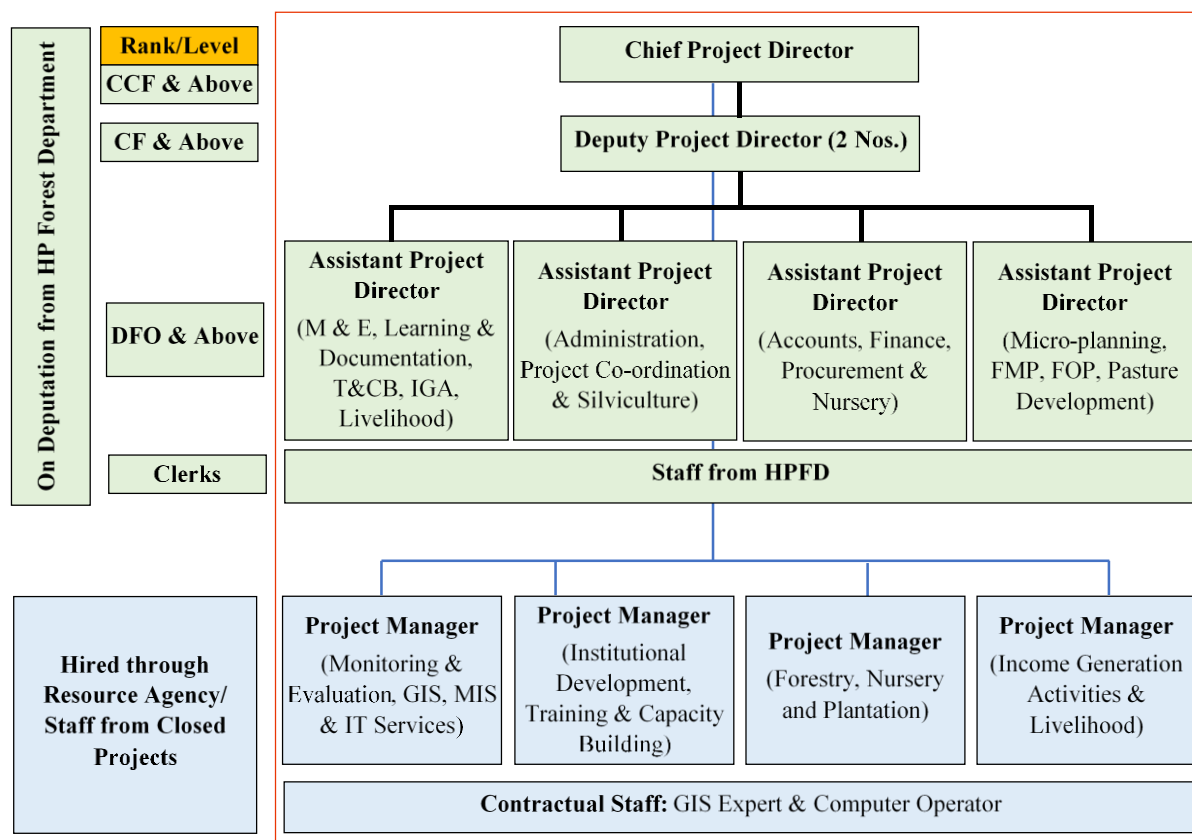
Therefore, SPMU intends to rent another location which will probably be ready by end of May 2017 and then the office space problem may get sorted out.

SPMU staff for project management will be exclusively deployed on long term basis. As far as possible, the staff will not be changed during the execution of the project. Main responsibilities of staff of the project management unit will be in accordance with the DPR and as assigned by the SPMU.

The cost of appointment from the GoHP will be considered as State Government contribution to the project whereas the cost of experts and subordinate staff will be covered from the loan component.

The State Project Management Unit will also be supported by a team of technical and managerial experts i.e. Project Management Consultant covered through grant and loan assistance from KfW as “accompanying measures”.

See organizational diagram of SPMU office as it stand (final) in Figure 1. The responsibilities and functions of SPMU are as follows:



**Figure 1: Organizational Diagram of State Project Management Unit**

**The function of SPMU are as following.**

1. Planning and Coordination
  - Undertake planning and implementation of the Project.
  - Coordinate with and provide continuous feedback to Executive Committee and the State Level Steering Committee.
  - Coordinate with the Working Groups and State Missions of State Action Plan for Climate Change for planning and convergence.
2. Policy and Advocacy
  - Organise workshops, seminars and events for policy advocacy and awareness generation.
  - Ensure that Project lessons and experiences are mainstreamed in the overall planning and development of the State
  - Ensure regular exchange of information with other State PMUs of similar projects and generate awareness on the importance of climate proofing of forest ecosystems for dependent communities.
3. Management and Administration of Project
  - Appoint and/or administer Project Management Staff, at State, Division and Village level
  - Establish Management Information Systems.

- Provide infrastructural and institutional support to the division, range, and village level units.
4. Training and Capacity Building
    - Undertake trainings and capacity building measures at Division, Range and Village level.
  5. Help in investment for IGA through convergence and bank linkages:
    - Define selection criteria for bottom-up IGA interventions in target areas.
    - Ensure forward and backward linkages for livelihood development and entrepreneurship development activities at the village and cluster level.
    - Help divisional and village enterprises and community based organization in conceptualizing entrepreneurship project ideas.
    - Ensure technical support in preparing detailed reports of livelihood and IGA.
  6. Monitoring and Evaluation
    - Plan and ensure monitoring and evaluation of the Project through third party and take corrective measure to achieve objectives.

A list of names and position concerning SPMU is attached in Annex B

#### 4.1.2 DPMU level

Nine (9) divisions and thirty two (32) as agreed in the MoM by KfW in November 2016 will be covered under the Project falling within the Forest Circles of Chamba, Kangra and Hamirpur. The office of the Divisional Forest Officer will be Divisional Project Management Unit (DPMU). DPMU will be headed by the Divisional Forest Officer who will implement,

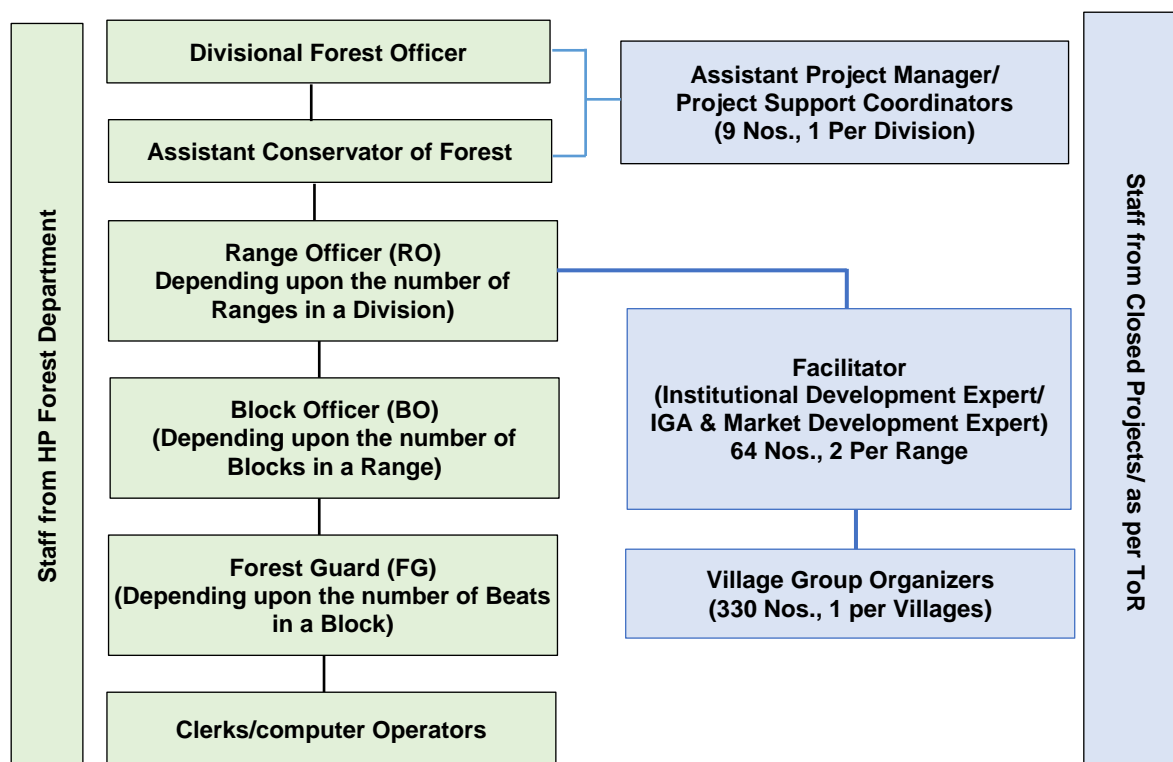


Figure 2: Organizational Diagram of Divisional Project Management Unit



supervise and monitor the project activities in the division concerned. DPMU will be supported by a **Project Support Coordinator** appointed by SPMU. The organizational set-up of the DPMU is shown on page before, Fig. 2

Staffing from FD staff is largely in place; however, continuity of staff is not assured due to frequent transfers of officers and field staff.

Staffing of persons as needed for project implementation on DPMU level which actually will plan, support and facilitate micro-plan implementation, are presently not in place. None of the 9 so-called project coordinators are recruited, only 8 positions (out of 64) facilitators and only 15 (out of 330) village group organizers are posted at present.

This is a critical issue. Recruitment of these staff by SPMU has been raised time and again by PMC and even discussed at the highest level in Shimla in two meetings with Secretary (Forests) and as well during the KfW mission in November. Although the FS recommended that recruitment to various positions should be outsourced, the Govt decided to first fill in the positions from among existing staff rendered surplus in the Swan Project in Una district as well as some staff from the WB project about to close in March, 2017. This only worked to a very limited extent as shown in the staff position in the preceding paragraph. GoHP now seems to have decided to recruit directly through the SPMU, but long procedures and clearances are holding up recruitment and there is no reliable timeframe by which this will be done. SPMU is in the process to get GoHP approval to tender the vacant coordinators by requesting persons with forestry background having already worked in HPFD. That seems the correct decision to bring capable coordinators in the project, which actually know the procedures and only need proper orientation.

There is then the issue of training. Since most of the field staff (VGO level) to be recruited will be from local areas close to the project sites, and are likely to have only rudimentary schooling, the issue of 'adequate' training to make these people useful in the field becomes most important.

Project Implementation without enough and adequately trained staff would obviously suffer. The function and responsibilities of the DPMU are as following:

1. Divisional Planning and Coordination
  - Undertake planning and implementation of the Project at the division level
  - Coordinate with SPMU and actively participate in State and Regional level initiatives
  - Coordinate with and provide continuous feedback to SPMU, district administration, NGOs and private sector for convergence and generating awareness of the Project
  - Ensure that Project lessons and experiences are mainstreamed in the overall planning and development of the division.
2. Implementation and management of Project at the Division level
  - Implement the Project as per guidelines prepared by SPMU
  - Hand hold development of village micro-plan and forestry investment plans
  - Scrutinize the village micro-plans and submit to SPMU for sanction
3. Training and Capacity Building

- Conduct training and capacity building of various stakeholders of the Project at the division, range and village level.
4. Facilitation of IGAs
    - Ensure forward and backward linkages for livelihood development and entrepreneurship development activities at the village and cluster level
    - Help local enterprises and community-based organization in conceptualizing project ideas
  5. Monitoring and Evaluation
    - Plan and conduct monitoring and evaluation of the project activities in the division as per guidelines, take corrective measure to achieve objectives and submit the report to the SPMU.

## 4.2 Project Contracts

The SPMU is advised to prepare relevant contracts and following the procurement guidelines when purchasing equipment and /or requesting services for the independent third party (institute, company etc) monitoring; contracts for external project audits or other services/studies etc..

All silvicultural measures like CCA conversions which involves eradication of lantana and other weeds, seeding of grass, digging of planting holes, planting of trees, construction of fences and measures for soil and water conservation (check dams) will be implemented according to the micro-plan under the authority of the VFMS. The FOP-micro plan contains a table where all measures are listed by quantity and cost norms approved by DFMU. The DFMU has prepared the needed budget for payment in due course the activities are implemented and monitored by DFMU. The implementation of all works will be done by members of the respective villages, village groups or SHGs within the VFMS. The VFMS is to be an institution of participating villagers registered under the HP Societies Act, 2006. The Society has to adhere to certain government regulations and its accounts will be audited every year and report submitted to DPMU & SPMU. The VFMS will be responsible for the implementation of works, including maintenance (described in detail in the FOP-micro plan).

Each VFMS will have two bank accounts. One will be a current account in which funds for implementation of FOP-micro plan will be deposited and then disbursed to those employed for such work through cheque or bank transfer by the VFMS. The second account will be a savings bank account for deposit of funds under the Saving Book Approach. It would be the responsibility of each VFMS to ensure that payments actually go to those who worked. The VFMS will also engage with other departments including the panchayat for seeking funds for IGAs and other useful schemes.

Paying the respective persons who actually implemented the works or groups who were responsible for the protection will be the responsibility of the FVDS. The FVDS will be advised and supported by the project as well in aspects of materializing convergence of other income activities.

The VFMS will sign a MoU with the DFO, where all measures, costs and activities to be paid by DFMU are outlined, where all rules and regulations for payments to members are prescribed including 10% contribution according to KfW requirement when implementing the works according to the micro-plan.

Thus SPMU understood that within the Memorandum of Understanding all the contractual issues are clarified and accepted by KfW.

### **4.3 Project Financing and Accounts**

The PEA will fund all operational costs (except Consultancies & certain equipment) from the budget allocated to the SPMU and DPMUs. Subsequently the SPMU shall apply to KfW for reimbursement after a monitoring report has been received by it. For operational costs other than Consulting services and certain equipment requirements that are eligible for financing from the loan, the Simplified Reimbursement Procedure will be applied in accordance with KfW Guidelines.

The criteria for readiness of disbursement of the German Funds are defined in KfW disbursement guidelines which form an integral part of the Annex to the Separate Agreement, to the Financing Agreement together with additional prerequisites defined in the Agreement.

SPMU has been advised that Memorandum of Understanding including the contractual regulations will be available once the 45 micro-plans have been revised and are in line with the pilot model FOP-Micro-plan and approved by DPMU. The process of revision of the 45 already established micro-plans is scheduled to begin early April, 2017. No funds have yet been disbursed for Project activities under a micro-plan.

Due to delayed arrival of PMC and in the absence of a proper accounting system, SPMU wasn't able to submit the first reimbursement claims and was faced with the prospect of paying the commitment fees for the first year due to late provision of reimbursement request to KfW. SPMU was advised to apply for extension explaining the circumstances to KfW to extend the period for submitting the first reimbursement claims. This request was approved by KfW for six months. As a result, SPMU now can submit their first reimbursement by end of March, 2017.

Project accounts at SPMU and DPMU level has been opened. The CPD advises that counterpart funds required for project activities must be deposited in the project accounts in time to pre-finance planned operational activities in 2017. SPMU is reportedly facing problems that Indian funds received for 2016, could not be reimbursed due to non-acceptance of PMC. SPMU was advised to follow KfW procedure and to adjust activities following recently established guidelines. However, SPMU has been assured by the HPFD that activities implemented in 2016 may not be reimbursed by KfW, will be charged to the regular departmental budget.

#### **4.4 Review of cost and Financing Table**

The Consultant and the SPMU reviewed the cost and finance plan as submitted in the Separate Agreement to the Financing Agreement for the following reasons:

1. A sharp reduction of the Euro-InR exchange rate
2. Adjustment of cost norm for afforestation and enrichment planting
3. Adjusted Cost norms for seedlings (production old system, KFW production using root trainers)
4. Adjusted Cost Norms for fencing;
5. Reallocation of Budgets (using Good Ideas fund for EPA)
6. Allocation of budget for two pilot areas for pasture improvement
7. New silvicultural approach and to include other forests than chir pine, i.e. spruce, blue pine, cedar and oak and plant bamboo only in nallahs instead of improvement works in existing bamboo forest/plantations
8. Reduction of proposed areas for CCA silvicultural measures
9. Reduction of capacity building funds according to proposed training plan

The amended Cost and Financing Plan in the IR (see next page) was provided to inform KfW on operational changes, in particular to show the new possible intervention areas according to the silvicultural guidelines. All the new CCA measures are calculated under the original proposed budget positions. The proposed budget from the Indian side remains unchanged.

Changes and consequences taking into account the foregoing reasons are:

Cost of Project Components																	
Project Measures	ha	cost norm	new budget	Costs						Financing							
				Total			% of Basic Cost	% of Basic Cost	% of Basic Cost	FC			Own Contribution		Total		
				INR (Mil)	Euro (Mil) rate 82	Euro (Mil) rate 70	Cost	Cost	Cost	Loan (EUR m)	KfW Grant (EUR m)	Total (EUR m)	HPFD (INR m)	Beneficiary (INR m)	INR (Mil)	Euro (Mil) exchange rate 70	
							exchange 70	New	Original								
1	CCA-conversion of infested) forests	6.862	131.217	900,40	835,74	11,78	11,94	34,99	36,96	35,34%	10,86	0,00	10,86	0,00	75,54	900,40	11,94
2.1	Grass production, high yield grass in return for forest closer (conifer zone)	250	47.912	11,98	22,15	0,31	0,32	0,93	0,49	0,94%	0,29	0,00	0,29	0,00	1,85	11,98	0,32
2.2	Grass production, high yield grass in return for forest closer (broadleaf zone)	50	47.912	2,40			0,00		0,10							2,40	0,00
2.3	Fencing and maintenance of rotational forest closure (tribal areas)	100	28.500	2,85			0,00		0,12							2,85	0,00
2.4	Fencing and maintenance of rotational forest closure (non tribal areas)	300	22.800	6,84			0,00		0,28							6,84	0,00
2.5	Income generating activities seedling free of costs, woodlots, NTFP	100.000	15	1,50			0,00		0,06							1,50	0,00
2.6	2 pilot areas for pasture improvement	2 pilot(500 ha)		24,24			0,00		1,00							24,24	0,00
3	Planting (in gaps, enrichment planting of CCA species in all forest types plus planting bambo along nallahs)	1500	118.557	177,83	87,88	1,24	1,26	3,68	7,30	3,72%	1,15	0,00	1,15	0,00	7,38	177,83	1,26
4	Silvicultural operations in all forest types (no planting , no fencing)	2000	2300	4,60	145,53	1,91	2,08	6,09	0,19	5,73%	0,96	0,00	0,96	78,33	0,00	4,60	2,08
		11.562		1.132,64	1.091,30											1132,64	
5	Soil and water conservation measures on micro-watershed basis			115,5	115,50	1,62	1,65	4,84	4,74	4,87%	1,46	0,00	1,46	0,00	13,30	115,50	1,65
6	Spring rehabilitation			64,9	64,90	0,91	0,93	2,72	2,66	2,74%	0,82	0,00	0,82	0,00	7,50	64,90	0,93
7	Nursery development and improvement			16,8	16,80	0,24	0,24	0,70	0,69	0,72%	0,24	0,00	0,24	0,00	0,00	16,80	0,24
8	Entry point activities			87,58	63,70	0,91	0,91	2,67	3,59	2,74%	0,91	0,00	0,91	0,00	0,00	87,58	0,91
9	Training and capacity building			72,54	90,30	1,29	1,29	3,78	2,98	3,87%	0,34	0,95	1,29	0,00	0,00	72,54	1,29
10	M&E			52,5	52,50	0,73	0,75	2,20	2,16	2,19%	0,63	0,00	0,63	8,40	0,00	52,50	0,75
11	Project facilitation by locally hired experts			115,5	115,50	1,65	1,65	4,84	4,74	4,95%	1,60	0,05	1,65	0,00	0,00	115,50	1,65
12	JFMC Coordination User Group Meetings			21,7	21,70	0,31	0,31	0,91	0,89	0,92%	0,31	0,00	0,31	0,00	0,00	21,70	0,31
13	Forest protection incentives			237,3	237,30	3,39	3,39	9,93	9,74	10,16%	3,39	0,00	3,39	0,00	0,00	237,30	3,39
14	Preparation of micro working plans			12,6	12,60	0,18	0,18	0,53	0,52	0,55%	0,18	0,00	0,18	0,00	0,00	12,60	0,18
15	Project management (SPMU and DPMU)			314,81	314,81	4,11	4,50	13,18	12,92	12,34%	1,89	0,00	1,89	182,51	0,00	314,81	4,50
16	Accompanying measures (Project Management Consultant)			191,8	191,80	2,74	2,74	8,03	7,87	8,21%	1,74	1,00	2,74	0,00	0,00	191,80	2,74
	<b>Basic Costs (August 2014)</b>			<b>2436,17</b>	<b>2388,71</b>	<b>33,32</b>	<b>34,12</b>	<b>100,00</b>	<b>100,00</b>	<b>100,00%</b>	<b>26,77</b>	<b>2,00</b>	<b>28,77</b>	<b>269,24</b>	<b>105,57</b>	<b>2436,17</b>	<b>34,12</b>
	Technical Contingency (3)			59,24	106,70	1,49	1,52				1,27	0,00	1,27	12,79	5,01	59,24	1,52
	<b>Basic Cost + Technical Contingency</b>			<b>2495,41</b>	<b>2495,41</b>	<b>34,82</b>	<b>35,65</b>				<b>28,03</b>	<b>2,00</b>	<b>30,03</b>	<b>282,02</b>	<b>110,58</b>	<b>2495,41</b>	<b>35,65</b>
	Price increase (4)			168,71	168,71	2,35	2,41				1,97	0,00	1,97	23,26	7,55	168,71	2,41
	Investment / Project Cost			2664,12	2664,12	37,17	38,06				30,00	2,00	32,00	305,28	118,13	2664,12	38,06
	Interest During Implementation			0,00	0,00	0,00	0,00				0,00	0,00	0,00	0,00	0,00	0,00	0,00
	Financing Requirement			2664,12	2664,12	37,17	38,06				30,00	2,00	32,00	305,28	118,13	2664,12	38,06

However, PMC also wants to point out that the presently proposed areas for the CCA silvicultural measures as defined in the silvicultural guidelines are indicative at this stage as forest area selection and development of FOP-micro-plans has not yet started. The actual possible areas of CCA interventions only can be provided when all the FOP-micro plans are completed. SPMU presently informed that actually 330 potential forest areas are already identified, but no FMP was started.

### **Sharply reduced exchange rate**

The exchange rate in the original cost and finance plan was 1 Euro = 82 InR. Presently the exchange rate is 1 Euro =70 InR. This would result in an area reduction of originally planned silvicultural activities, as follows:

#### **Reduction of intervention areas**

- Removal of Lantana and planting of climate proofed multi-purpose mixed conifer - broadleaf forests from 15.000 ha to **12.750 ha**
- Improvement works in existing bamboo forest/plantations from 1.000 ha to **850 ha**
- Under planting a of degraded Chir Pine stands with bamboo and different multi-purpose trees from 3.000 ha to **2.550 ha**
- Intermediate felling of young and medium-aged forest stands from 5.000 ha to **4.250 ha**

Thus, the originally proposed areas has been reduced from 24.000 ha to 20-400 ha a reduction by nearly 20%.

However, as mentioned before the project has proposed to include other silvicultural measures and incorporate bamboo planting in nallahs (riverine) into the gap and enrichment planting of degraded forests and thus proposed to skip the improvement works in existing bamboo plantations. The project therefore proposed to implement CCA silvicultural measures as following (taking into consideration adjusted cost norms).

- CCA Conversion of infested forests on about **6.862 ha**
- Planting in gaps, enrichment planting of CCA species in all forest types and planting of bamboo along nallahs (riverine) on about **1,500 ha**
- Grass production, high yield grass in return for closure (conifer forests) on about **250 ha**
- Grass production, high yield grass in return for closure (broadleaf forests)) on about **100 ha**
- Fencing and maintenance of rotational forest closure (tribal areas on about **100 ha**
- Fencing and maintenance of rotational forest closure (non-tribal areas) on about **300 ha**
- Income generating activities (provision of seedling free of costs, woodlots, NTFP) about 100.000 seedling

- Silvicultural operation (intermediate felling) in all forest types (no planting, no fencing on about **2.000 ha**

The proposed new silvicultural intervention areas is 11,562 ha (including pilot areas for grazing of about 500 ha) plus an area for planting of free seedlings on private land (100.000 x 4 m<sup>2</sup>) of about 40 ha. This is a reduction of a bit more than 50% of the originally proposed intervention areas. The rationale is the increase of costs for workman ship which increases since project planning in 2014 to now by roughly 30% and the dramatically reduced exchange rate Euro to InR.

#### **Adjustment of cost norms.**

The project is following governmental cost norms which were provided by SPMU and agreed to use for this project. The cost for labour in 2014 was 150 InR which increased to 200 InR in the year 2016. This is an increase of 33% and makes is very clear that the proposed areas will be reduced respectively as mainly workmanship is involved.

The actual cost norms provided by SPMU are as following:

<b>COST CALCULATIONS FOR VARIOUS COMPONENTS</b>											
Sr. No.	Component	Cost of								Total with wooden fencing	Total with RCC fencing
		Removal of Lantana per ha. infestation -25 =11150 -50=19960 -75=25690 -100=30030	Removal of Other weeds per ha. infestation 25=3890 50=7080 75=10070 100=13070	B/ wire Fencing 4 strand @ Rs. 95/- per rmt. (80 Fence posts/ ha.) with wooden fence posts	B/ wire Fencing 4 strand @ Rs. 95/- per rmt. (80 Fence posts/ ha.) with RCC fence posts	Plants @ Rs. 15/- per plant	Planting @ Rs. 2720/- per %	Maintenance with Wooden Fencing	Maintenance with RCC Fencing		
1(i)	CCA -Conversion of (Lantana infested ) Forests @ 1100 plants	19,960	0	22,800	52,200	16,500	29,920	43,520	35,050	1,32,700	1,53,630
1(ii)	CCA -Conversion of (other weed infested ) Forests	0	10,070	22,800	52,200	16,500	29,920	43,520	35,050	1,22,810	1,43,740
2(i)	Planting (in gaps, enrichment) of CCA species in all forests @ 800 plants	19,960	0	22,800	52,200	12,000	21,760	43,520	35,050	1,20,040	1,40,970
2(ii)	Planting (in gaps, enrichment) of CCA species in all forests @ 800 plants	0	10,070	22,800	52,200	12,000	21,760	43,520	35,050	1,01,680	1,31,080
3	Intermediate thinnings in all forest types (no fencing , no planting)	2,300									
4	Grass land developement, Preparation of strips (100x30x5 cm) including sawing grass	6,635									
5	Development of pastures (not yet)	15,000									
6	Cost of broadleaf plants	RS. 15/- per plant									



The details of the cost calculation and the description of working steps for the different silvicultural measures are attached in Annex G. The cost norms for the same measure may differ within the circles, Dharamshala, Chamba and Hamipur.

### **Himachal Pradesh Forest Ecosystem and Climate Proofing Project: Implementation schedule**

Taking into consideration all adjustments like mentioned before (increase of workmanship, by around 33 % in the last 3 years, sharply decreased exchange rate about 20% and the present situation of readiness of the project the implementation schedule of the HPESCPP is proposed as following (see next page).

However, it should also be mentioned, that the actual progress of implementation according to the CCA silvicultural measures depends on the identification of forest areas which at present are only indicative as no FMP is executed yet.

It also appears for PMC, that the present budget line for SWC (soil and water conservation measures) may not be utilized due to the reason, that in the silvicultural guideline only 7.000 InR can be utilized per ha green investment. After consulting with SPMU it was agreed that this budget also have due to increased to 15.000 InR per ha for green investment areas.

A critical issue is that 330 micro-plan, as requested by SPMU and the HPFD will include obviously more than 600 villages which was the proposed target by KfW. This target however still is valid and KfW have to be consulted to get approval when the number of 600 villages will be exceeded.

<b>Implementation Schedule</b>									
<b>PROJECT YEAR</b>	<b>Units</b>	<b>0</b>	<b>PY 1</b>	<b>PY2</b>	<b>PY3</b>	<b>PY4</b>	<b>PY5</b>	<b>PY6</b>	<b>PY7</b>
<b>Project phases</b>									
Implementation phase FC main programme									
Implementation phase Accompanying Measures									
<b>Project Preparation and Management</b>									
Establishment of SPMU & DPMU and Procurement									
Project Management Units (SPMU/DPMU)- Functioning									
Selection of villages (Nos. Micro-plans)	Nos.	330							
Formation of VFMSs and MOU with VFMSs	Nos.		50	180	100				
Preparation of micro-working plans (No of villages)	Nos.		50	180	100				
Preparation of manuals and guidelines			15						
<b>Project Activities</b>									
CCA-conversion of infested forests	Ha		1040	Maintenance					
				3743	Maintenance				
					2079	Maintenance			
Planting (in gaps, enrichment planting of CCA species in all forest types plus planting bambo along nallahs	Ha		227	Maintenance					
				818	Meintenance				
					455	Maintenance			
Silvicultural operations in all forest types (no planting , no fencing)	Ha				500	500	1000		
Grass production, high yield grass in return for forest closuer (conifer zone)	Ha		38	136	76				
Grass production, high yield grass in return for forest closuer (broadleaf zone)	Ha		8	27	15				
Fencing and maintenance of rotaional forest closure (tribal areas)	Ha		15	55	30				
Fencing and maintenance of rotaional forest closure (non tribaal areas)	Ha		45	164	91				
Income generating activities seedling frre of costs, woodlots, NTFP	Ha		5	25	10				
2 pilot areas for pasture improvement				250	250				
Soil and water conservation measures	Ha			3.500	5.000	3.102			
Spring rehabilitation	Nos.			30	30	30	30	30	
Nursery development	Nos.		1	1					
Entry point activities (EPA)	Euros		189.567	682.442	379.134				
Training and capacity building	Euros		369.221	253.925	103.296	103.296	103.296	103.296	
Monitoring and Evaluation	Euros		21.429	121.429	135.714	135.714	121.429	107.143	107.143
Project facilitation by local experts	Euros		150.000	250.000	250.000	250.000	250.000	250.000	250.000
JFMC/FCS coordination meetings	Euros		15.714	58.571	58.571	44.286	44.286	44.286	44.286
Forest protection incentive transfer to JFMC A/c	Euros			3.390.000					
Forest Protection incentive transfer to individual SB A/c	Euros				Depending on area protected average around 10. 300				
Cost excluding escalation, however contingency are partly used (about 40%)									

## 4.5 Micro- Planning

Micro planning is the central element of this project. After designing of a micro-planning manual and a pilot FOP-micro-plan by PMC and approval thereof by KfW, training for staff (coordinators, facilitator and mobilizers) will be provided by PMC. Ideally, the revision of the 45 earlier made micro plans should be taken up after such training of field staff has been completed.

PMC deployed an expert already beginning October 2016 and wanted to submit these guidelines and a pilot micro-plan by end of November 2016. However, PMC failed to do so as the expert does not deliver anything. The expert worked on several sites and was supported by SPMU staff and it was agreed that a pilot plan (actually a new area) in Garola/Chamba district, where as well the silvicultural expert was in the field and proposed some silvicultural planning options should be completed by end of November 2016. Due to several delays and fake promises out of control by PMC, this expert did not deliver the manual, neither a draft of the pilot micro-plan. PMC finally stopped his contract in January 2017. CPD had last contacts with this expert in January 2017 but as well the expert did not deliver anything. PMC immediately proposed other experts and finally got concurrence with SPMU and approval from KfW for the new experts. The new experts actually a team (with specialisation on social field and one on forest subjects) are working since beginning of February to prepare a pilot micro-plan in Dehra. The deadline for Pilot micro-plan and manual is end of March 2017.

PMC is regretting this set-back and assures to deliver now by end of March the Pilot FOP-Micro-plan and the Manual.

However, PMC points out that presently DPMUs can begin FMP work on many fronts right away. The silvicultural guidelines, especially the preparation of the FMP the main part of silvicultural planning is ready, has been presented to SPMU and shared with the DPMUs. What is needed is that the DFOs begin to identify suitable forest areas as per the silviculture guidelines.

PMC was informed on 23rd February that already 330 potential forest areas are identified as follows:

<b>Distict</b>	<b>Divisions</b>	<b>Selected units (micro-plans) with potential forese areas</b>
Kangra	Dharamsala	60
	Nurpur	42
	Palampur	45
	Derha	33
	<i>subtotal</i>	<b>180</b>
Chamba	Chamba	50
	Dalhousie	35
	Churah	35
	Bharmour	15
	Pangi	15
	<i>subtotal</i>	<b>150</b>
<b>Total of planned Micro plans</b>		<b>330</b>

PMC strongly believe that the 330 identified units for micro-planning however will include far more than 600 villages which is the number stipulated in the MoM dated November 2016.

The identification of forest areas should be done on Google Earth.Pro which can be downloaded for free from the Internet. The maps of these identified sites can be got ready on the required scale. This is still to be done for the 45 micro plans that are to be revised and all other identified sites as mentioned above. PMC understood that the 330 selected units already include the 45 already prepared micro-plans to be revised.

Training in google earth pro and the use of GPS was planned for DPMUs by PMC, but could not be done so far as this needs organisation by SPMU. PMC has indicated to SPMU that recruitment of staff (mainly the Project Support Coordinators) who are key persons to develop the FOP-micro plans need to be in place soonest, otherwise micro planning will be further delayed even when the manual and Pilot Micro-plan becomes available.

At present PMC does not know the FOP-Micro-plan areas and thus a detailed calculation of financial implications for the different divisions in terms of areas or even the sites where spring rejuvenation is planned is not known. Consequently PMC will only deploy an expert for spring rejuvenation when these areas and spring sheds are known and training can be provided in this respect.

The MoM emphasized that all measures for pasture development need can be addressed in a micro-plan and may be implemented when semi-nomadic herders agree on protecting forest sites and even proposed 2 pilot grazing schemes. This is already taken up in proposed silvicultural activities. However, to implement such pilot areas for grazing a study in pasture management (ToR are already developed by PMC) should be executed to include these findings. The study is proposed to be implemented in April to June/ July 2017. A Concept note on improvement of sub-alpine & alpine pastures in NE Himalaya and ToR for high altitude pasture management in Chamba and Bharmour areas are proposed, see Annex D/E.

#### **4.6 Nursery Improvement, Plant Production**

The production and timely availability of high quality plants is considered a priority task in the inception phase. Therefore, PMC deployed in October/November a nursery specialist who visited a number of nurseries in the project area. The aim was to find out weaknesses in current methods of raising nurseries, to analyse the training levels of nursery staff and calculate cost efficient plant production regimes. Main finding was that the growing media in existing nurseries is deficient in soil and compost proportion to produce high quality plants and that the current nursery techniques are rather outdated. The report of the nursery specialist is provided as a separate document to KfW and already provided and agreed SPMU since November 2016.

It was agreed that improvement of nurseries, especially using growing material which should be a mix of coco peat and vermin-compost should be used instead and that the polybags methods will be generally replaced with root trainer system. The expert proposed equipment and material to be purchased and to start by November with the new techniques as seed would be available at that time.

As of now, nothing seems to have happened despite SPMU has sent the list of equipment and materials for KfW approval to be able to begin work at the new, modern nurseries. The list of materials was resubmitted in January 2017. Approval from KfW is expected soon.

It appears that the SPMU and the DPMUs have not appreciated the massive requirement of vermin-compost or later just compost that will be required for raising quality nursery stock. The STE has proposed that for in house compost production 48 m<sup>2</sup> concrete platforms would be required in each nursery, beside other ancillary equipment. The construction of these platforms is yet to begin.

In absence of required soil media and equipment and root trainer system and the compost making platforms, no training is feasible. The nursery expert has therefore postponed his visit to June, 2017 to provide training in nursery techniques and improving capacity of nursery staff by when hopefully the staff and equipment would be in place.

It is likely that for the planting season in 2017 only the best seedling, especially tall broadleaf seedling will be selected from existing nursery stock. Seedlings produced with improved growing media first can be used only in the planting season 2018.

SPMU is requested to purchase the proposed equipment for nurseries as soon as possible and to start with the proposed construction works for the selected KfW nurseries.

#### **4.7 GIS system, mapping**

Mapping of forest measures to be implemented and locations of construction activities (like check dams) within a micro-plan is an indispensable tool for checking, monitoring and evaluation. Therefore, the project intends to produce GIS based maps for each micro-plan using

the available GIS system from the closed project in UNA. The system is planned to be shifted to Dharamsala. However, it was realized that the system is not operational yet. SMPU made provision to up-grade the system, and made provisions accordingly in the procurement plan.

However, till now this GIS system is neither operational nor transferred to D'sala despite intensive request from PMC.

Without an operational system and the availability of a plotter the production of FMP maps for the 45 micro plans to be reviewed, expected start in April is critical.

#### **4.8 Equipment**

The Project will offer finance for the procurement of equipment for nursery improvement and tools to be used for micro planning. The separate agreement requires that the SPMU will ensure that users are trained in the utilisation of various tools and that appropriate arrangements for the supply of spare parts and the care of equipment and tools is introduced. No equipment has yet been supplied.

#### **4.9 Immediate Action Plan**

An Immediate Action Plan for the Inception Phase was assembled in October 2016. The plan is, intentionally, a short-term operational document in which specific activities are identified for each month between October 2016 and March 2017. It is based on the Tentative Project Activity Schedule presented in the Consultant's Proposal as amended following consultations between the CPD and PMC. The IAP is attached in Annex A.

Primary responsibilities are indicated for the CPD, SPMU, DPMU, KfW and the Consultant. **The Consultant has an advisory role – nothing more – not an executive or managerial role.** The IAP serves to indicate general scheduling of operations and accordingly the timing of various activities is always tentative. There is always a need for flexibility in implementation depending on local circumstances and to have regard for any unforeseen events that influence scheduling. The IAP also indicates operational responsibilities.

The IAP has been and continues to be acceptable to the CPD, SPMU/ DPMUs for providing guidance for the initial steps in Project implementation. The Consultant has advised the CPD to continue to apply the IAP until such time as the Inception Report/ Plan of Operations is approved because it provides a structured basis for Project implementation.

#### **4.10 Visits by Advisors to Project Districts/Divisions**

The project areas Kangra and Chamba and most of the divisions have been visited by CTA, international and national advisors.

The CTA confirms that large areas of degraded chir pine forest are available and proposed that other forest ecosystems with spruce, blue pine, cedar and oak can be included in the

project areas and that strong interest of villages is available to participate in the Project. CPD was advised that micro-planning only can be implemented on more contiguous forest area which can be accepted as the technical basis of a permanently defined micro-plan for the VFMS. The CTA confirms that the different forest areas represent a diverse range of degradation and ecological variation and should enable CCA forest conversion, grazing improvement and soil and water protection operations to take place. The CTA and advisers quickly familiarized themselves with local conditions during field visits and explained to SPMU/DPMUs and villagers in numerous discussions the important aspects of Project design.

#### **4.11 Training**

A particularly important aspect of the Project design specified in the separate Agreement is training of forestry staff and villagers and the members of the VFMS in the new and diverse skills and practices. The training will increase capacity to implement climate change adapted forestry measures, the formulation of a forest operational plan in each micro plan and the implementation of various forestry operations and soil and water conservation measures prescribed. This is a core strategy of this Project.

Specific topics where continual training is required during Project implementation include:

- the concept, characteristics, aims and expectations of the Project.
- the establishment and implementation of FOP-micro-plans, including workshops for annual planning and how plans will be applied in practice.
- Capacity building of VFMSs /SHGs and villagers participating in the project activities
- Options, procedures and information on tapping of convergence
- The concept of Savings Book Approach – receiving incentives for protection of forests from fire and grazing and survival rates
- close-to-nature forest management and CCA aspects of silviculture
- Training in state of art nursery techniques and improved seed collection practices
- Increasing understanding about loan acceptance and financial management
- Control and monitoring of FOP-micro plan implementation.

The PMC have provided some training in the Inception Phase. Presentations by all supervisors' reports and guidelines. On the job training during accompanying experts in the field. No others trainings took place yet.

The expert for training and capacity building already has developed annual training-plans and proposed the budgets accordingly. For further details see "Guidelines Training and Capacity building".

## Overseas tour studies

This German funded project will organize two international study tours – the first on advanced concepts of sustainable forest management in view of climate change adopted forest measures, watershed management and project management – and the second on German forest operations management and nursery management. The members of the study tour are composed by the management staffs, technicians and financial staffs of SPMU/DPMUs and HPFD. The purposes is to enhance the overall abilities of the administrative staff, technicians, and support staff of HPFESCPP with international advanced experiences.

The study tours are scheduled in June/July of 2017, and May/June of 2018 respectively. Detailed training schedule and proposed costs are provided in Annex H. However PMC explained, that in case that DFS will organize the study tour an addendum to the present contract is needed which must be approved by KfW.

### 4.12 State of readiness for project Implementation Phase

There is sufficient understanding amongst SPMU and DPMU of the Project Goal and Objective and of the various technical, financial and operational procedures concerning Project implementation by now. In general, there is a reasonable understanding amongst SPMU and DPMUs about the Project objective, procedures, obligations and a commitment to implement Project activities in a positive manner. However still now contractual staff like coordinators, facilitators and village mobilizers on divisional level for reviewing, planning and implementation of micro-plans are not yet recruited fully. This is critical for project implementation.

Progress is proposed by the SPMU and the Consultant by 28 February, as follows, to ensure that Project implementation can confidently move ahead into the Implementation Phase from 1 May 2017:

- Submission of the Inception Report /Project Plan of Operations by the SPMU/PMC and securing its approval from KfW not later than 31 March 2017.
- Draft technical guidelines to be delivered to KfW for comments by the Consultant not later than 28 February 2017 on the following topics (a) Silviculture (b) Financial Guidelines and Procurement, (c) improved nurseries for KfW plant production (d) Monitoring & Evaluation; (d) Operational Manual and other documents (TOR for base-line study, TOR for study on high altitude pasture management in project region of Chamba and Bharmour area, concept note to integrate grazing improvement pilots schemes into project approach, concept note for provision of possible EPA approach in the KfW project).
- Confirmation that GIS system will be upgraded (received on 28<sup>th</sup> February) and moved to Dharamsala to facilitate forest management planning maps for micro-planning for all proposed Micro-planning areas at a scale 1:5.000.



- The submission of a pilot micro-plan and the manual by end of March to KfW for comments and approval
- Speeding up the process for recruiting coordinators, facilitators and mobilizers until End of April. SPMU revised the ToR and was requesting that the coordinators should have a forestry background, formerly employed in the HPFD and already being involved in micro-planning in their previous assignments. The new proposed recruitment procedures, advertisement and interview look rather promising than waiting on available and interested person from out sourced projects which generally are lacking forestry background. Thus, the biggest head age could be solved and implementation could start by beginning of May 2017.

#### **4.13 Language Translation and Interpretation**

English – Hindi or other dialects interpretation services for international/national consultants will be taken care by the Consultant according to contract. However in most cases the international consultants are accompanied by project staff and communication normally is in English language. For working with communities the contractual staff is either from the villages itself, thus day to day works will not suffer communication difficulties.

However, the CTA advised that most of the guidelines, especially the silviculture guidelines, the operational manual, and micro-planning manual and pilot micro-plan should be translated into Hindi so that there is no misunderstanding within project staff and stakeholders.

#### **4.14 Consultant Services**

The Consulting consortium DFS-GOPA (Deutsche Forstservice GmbH and GOPA mbH) of Germany are providing technical advisory services led by the CTA/ACTA. Consultant services are described in the Proposal of the Consultant dated March 2016 and comprise up to 73 man-months of international advisers and up to 114 man-months of national advisers. The most important advisory services are being provided during the Inception and preparatory Phases so that the project is ready for project implementation. Consultant services provided during the Inception Phase, September 2016 to February 2017 are summarised in the following table, and comprise international 11,217 p-m, national 9,433 p-m. The preparatory phase however still has 6 months and PMC strongly believe that this time will be needed until the project is fully ready for the implementation phase.

*Consultant Services provided during the Preparatory Phase (Inception Phase – September 2016 to February 2017*

**Table 3 : Accumulative Statement of Consultant Services**

KfW		Accumulative Statement of Consultant Services			
Consulting consortium: <b>DFS Deutsche Forstservive GmbH / GOPA Worldwide Consultants</b>					
#	Position	Name	Total contract provisions-	Cumulated provided services	Remaining input time
			[PM]	[PM]	[PM]
0	1	2	3	4	5
<b>Foreign personnel</b>					
CTA	Chief Technical Advisor (CTA)	HESS, Peter	42,000	5,233	36,767
i KE 1	Climate change and res. coopera.	TIPPMANN, Robert	5,000	0,000	5,000
i KE 2	Nursery operation	KARLSON, Stellan	5,000	1,167	3,833
i STE 1	Mgm. Proc., finance & procurement	FUCHS Hans-Udo	1,000	0,800	0,200
i STE 2	CCA FMP and silviculture	GAMPE Stephan	5,000	1,433	3,567
i STE 3	Capacity building,	KINDER Rex Gordon	4,000	0,750	3,250
i STE 4	Savings account approach for FM	WILLEMS Heinz	3,000	0,000	3,000
i STE 5	M&E system development	SCHWEIZER Gerhard	4,000	1,433	2,567
i STE 6	Unallocated	Unallocated	1,000	0,000	1,000
B1	Backstopping DFS	Schade/Ludwig	1,800	0,000	1,800
B2	Backstopping GOPA	Tunk	1,200	0,400	0,800
<b>SUB-TOTAL (Foreign personnel)</b>			<b>73,000</b>	<b>11,217</b>	<b>61,783</b>
			<b>100,00%</b>	<b>15,37%</b>	<b>84,63%</b>
<b>Local Personnel</b>					
ACTA	Assitant CTA	TANDON, Vinay	60,000	6,533	53,467
n KE 1	Financial coordinator / accountant	SARASWAT, Mukesh Kumar	18,000	1,000	17,000
n KE 2	IGA capacity develop. & converg.	Dayal JASWEIL	10,000	0,967	9,033
n STE 1	JFM, savings account approach	Thakur/Picky	6,000	0,933	5,067
n STE 2	Climate proofing	Deeraj KOUL	4,000	0,000	4,000
n STE 3	Spring rehabilitation	Das SAMALA V. Govardhan	4,000	0,000	4,000
n STE 4	Pasture mgn./ integrated fire mgn.	RADOTRA Sudesh	4,000	0,000	4,000
n STE 5	NTPF development	CHKRAVARTI Visvarup	4,000	0,000	4,000
i STE 6	Unallocated	unallocated	4,000	0,000	4,000
<b>SUB-TOTAL (Local personnel)</b>			<b>114,000</b>	<b>9,433</b>	<b>104,567</b>
			<b>100%</b>	<b>8,27%</b>	<b>91,73%</b>

The detailed timing the different consultant inputs is shown in the following table.

**Table 4: Detail Statement of Consultant Services (next page)**

<b>KfW</b>		<b>Accumulative Statement of Consultant Services</b>					
Consulting consortium: <b>DFS Deutsche Forstservive GmbH / GOPA mbH</b>							
#	Position, Name	Total Contract provisions [PM]	Provided Services			Cumulated effective services [PM]	Remaining [PM]
			Period		Duration		
			from	to	[PM]		
0	1	2	3		4	5	6
CTA	<b>Chief Technical Advisor</b>	<b>42</b>	23.08.2016	31.08.2016	0,300	0,300	41,700
	HESS, Peter		01.09.2016	30.09.2016	1,000	1,300	40,700
			01.10.2016	31.10.2016	1,033	2,333	39,667
			01.11.2016	15.11.2016	0,467	2,800	39,200
			28.11.2016	30.11.2016	0,100	2,900	39,100
			01.12.2016	20.12.2016	0,667	3,567	38,433
			10.01.2017	31.01.2017	0,733	4,300	37,700
			01.02.2017	28.02.2017	0,933	5,233	36,767
ACTA	<b>ACTA</b>	<b>60</b>	16.08.2016	31.08.2016	0,533	0,533	59,467
	Vinay Tandon		01.09.2016	30.09.2016	1,000	1,533	58,467
			01.10.2016	31.10.2016	1,000	2,533	57,467
			01.11.2016	30.11.2016	1,000	3,533	56,467
			01.11.2016	31.12.2016	1,000	4,533	55,467
			01.01.2017	31.01.2017	1,000	5,533	54,467
			01.02.2017	28.02.2017	1,000	6,533	53,467
iKE2	<b>Nursery operation</b>	<b>5</b>	23.10.2016	31.10.2016	0,300	0,300	4,700
	Stellan KARLSSON		01.11.2016	26.11.2016	0,867	1,167	3,833
nKE1	<b>Financial coordinator / a</b>	<b>18</b>	14.11.2016	28.11.2016	0,467	0,467	17,533
	Mukesh Kumar		19.12.2016	26.12.2016	0,267	0,733	17,267
	SARASWAT		27.01.2017	03.02.2017	0,267	1,000	17,000
nKE2	<b>IGA capacity develop. &amp;</b>	<b>10</b>	05.12.2016	07.12.2016	0,100	0,100	9,900
	JAISWAL, Dayal		12.12.2016	22.12.2016	0,367	0,467	9,533
			06.02.2017	09.02.2017	0,133	0,600	9,400
			13.02.2017	22.02.2017	0,333	0,933	9,067
			28-02.2017	28.02.2017	0,033	0,967	9,033
B2	<b>Backstopping GOPA</b>	<b>1,2</b>	24.10.2016	31.10.2016	0,267	0,267	0,933
	Tunk		01.11.2016	04.11.2016	0,133	0,400	0,800
iSTE1	<b>Mgm. Proc., finance &amp; pr</b>	<b>1</b>	04.12.2016	27.12.2016	0,800	0,800	0,200
	FUCHS Hans-Udo						
iSTE2	<b>CCA FMP and silvicultur</b>	<b>5</b>	02.10.2016	31.10.2016	0,333	0,333	4,667
	GAMPE Stephan		01.11.2016	27.11.2016	0,900	1,233	3,767
			01.12.2016	15.12.2016	0,200	1,433	3,567
iSTE3	<b>Capacity building,</b>	<b>4</b>	02.12.2016	24.12.2016	0,750	0,750	3,250
	KINDER Rex Gordon						
iSTE5	<b>M&amp;E system developme</b>	<b>4</b>	27.10.2016	31.10.2016	0,133	0,133	3,867
	SCHWEIZER Gerhard		01.11.2016	30.11.2016	1,000	1,133	2,867
			01.12.2016	09.12.2016	0,300	1,433	2,567
nSTE1	<b>Micro planning</b>	<b>6</b>	12.10.2016	31.10.2016	0,667	0,667	5,333
	RAI Ajay		01.11.2016	13.11.2016	0,433	1,100	4,900
			11.12.2016	15.12.2015	0,167	1,267	4,733
	Thakur & Picky		01.02.2017	28.02.2017	0,993	0,993	5,067
						up to date	28.02.2017

The mission of nStE1, Mr. Ajay Rai was not accepted from PMC and PEA as the expert failed to deliver any report. He was finally replaced in January 2017 and replaced by the team Thakur/Picky. The time input are only mentioned here, but not accounted (see table before).

Reports provided by the Consultant and submitted in English to SPMU up to 28.02.2017 are summarized in the following tables

**Table 5: Reports to be submitted by Consultants to SPMU by 28-02-2017**

Report No.	PMC Reports/Guidelines	By Whom
1	Initial Plan of Activities (IPA)	Peter Hess
2	Backstopping Report	Christian Tunk
3	Nursery Operation	Stellan Karlsson
4	Silviculture	Stephan Gampe
5	Silviculture Guidelines	Stephan Gampe
6	Report on Monitoring & Evaluation	Gerhard Schweizer
7	Monitoring Guidelines	Gerhard Schweizer
8	Procurement Plan	Hans Udo Fuchs
9	Procurement and Accounting Policies	Hans Udo Fuchs
10	Accounting Guidelines	Mukesh Saraswat
11	Training & Capacity Building	Rex Kinder, Dayal P Jaiswal

All these guidelines (actually are DRAFT Guidelines) and Consultant reports are already submitted to PEA and accepted as they stand at present. The guidelines and reports will be submitted as separate documents together with this report to KfW for approval and comments. It is mentioned that the procurement plan already is submitted to KfW for approval to accelerate the purchase of nursery equipment, GPS for micro-planning and software and plotter for GIS system as these equipment is needed as soon as possible.

The Consultant furthermore prepared the following documents as following:

- ToR of Reference for the Baseline Study and quantitative definition of indicators. Baseline should be implemented as soon as participating villages and forest areas and silvicultural measures are identified and measures are agreed. (Annex C)
- ToR for “HIGH ALTITUDE PASTURE MANAGEMENT IN CHAMBA and BHARMOUR AREAS” under KfW Project (study). See Annex D.
- Concept notes for two pasture improvement projects (Annex E)
- Concept development and definition of measures of small-scale rural infrastructure (entry point measures). See Annex F)

## 5. Next Steps and Activities

- Circulate guidelines, manual and reports to each DPMU
- Start procurement immediately after approval of procurement list
- Submit tender document to KfW for approval
- Inform KfW that national bidding first must follow government regulations, that means accredited government dealers have to be selected in all cases when amount is below amount for international tender
- Finalising pilot micro-plan and manual until end of March 2017
- Drafting guideline for saving book approach be end of April 2017
- Upgrading GIS system for this project and operationalizing GIS system and finally move the GIS system to project site
- Hiring of contractual staff like coordinators, facilitators and VGOs latest by end of April
- Getting selection criteria and appropriate procedures in place for DPMUs to recruit village mobilizer (not on panchayat level rather on VFDS level!)
- Identify suitable and impartial organization's that can be contracted as independent third party field verifications body to monitor evidence of project implementation of the PEA
- Continue to seek exemptions from the ban on green felling for sustainable forest management. Draft a letter addressed to the HPFD explaining that this Sino-German Project aims to introduce several new technical procedures and practices that will significantly strengthen the basis for achieving sustainable management of forests and secure development of mixed broadleaf stands. Availability of branches and provision firewood will further provide basis for sharing benefits and increase interest for communities/villages within the JFMP process. This approach only is requested on pilot areas and not aiming at present to lift the ban of green felling in general.
- Start revision of 45 already established micro plans latest by beginning May
- Select forest areas for FMP others than the 45 areas already existing for FMPs
- Assessment of demand (goods, works, consulting) for upgrading training facilities
- Complete training need assessment by end of April 2017
- Provide areas of reduced water production, springs (catchment areas) so that training in spring rejuvenation can start and be incorporated into the micro-planning process
- Plan site visit to Sikkim project concerning improvement of catchment areas and spring head rejuvenation possibilities for the HPEFCPP
- Start producing compost and improvement of nurseries as soon as equipment is purchased; training by nursery expert in June
- Start training according to training plan, training peak should be the first year of project implementation

- Start first implementation for micro-plan implementation in July/August
- Next KfW review mission planned in March 2017 to discuss/ approve guidelines, adjusted cost norms and cost of finance table to get approval for project implementation.

**Annex A:**  
**Initial Plan of Activities (IPA)**  
***Covering the period 24 August 2016 to 28 February***  
***2017***



**Himachal Pradesh Forest Department (HPFD)**  
**Himachal Pradesh, Republic of India**

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## **Himachal Pradesh Forest Ecosystems Climate Proofing Project**

German Financial Cooperation/KfW German Development Bank



### **Initial Plan of Activities (IPA)**

***Covering the period 24 August 2016 to 28 February 2017***

BMZ ID 2013 70 279

Project Report No. 2016-01

Dharamsala, 01/11/2016



**DFS**

Deutsche Forstservice GmbH  
Feldkirchen, Germany



GOPA mbH,  
Bad Homburg, Germany

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Table 4.1: Immediate Action Plan for Operational Activities in the Preparatory Phase

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Annex 1: Amended Staff Time Schedule of the Consultancy

## ABBREVIATIONS AND ACRONYMS

CCA	Climate Change Adapted
CTA	Chief Technical Advisor
DFS	Deutsche Forstservice GmbH, Lead Consultant
DPMU	Divisional Project Management Unit
GoHP	Government of Himachal Pradesh
Gol	Government of India
GOPA	Gesellschaft für Organisation, Planung und Ausbildung mbH
HP	Himachal Pradesh
HPFD	Himachal Pradesh Forest Department
IGA	Income Generating Activities
JFMC	Joint Forest Management Committee
KfW	Kreditanstalt für Wiederaufbau, KfW Development Bank
M&E	Monitoring and Evaluation
MoU	Memorandum of Understanding
PFM	Participatory Forest Management
SPMU	State Project Management Unit
TOR	Terms of Reference

## ADDRESSES

DFS Deutsche Forstservice GmbH  
Wittelsbacherstr. 11  
D - 85622 Feldkirchen

Tel. + 49 (0) 89 94 00 59 0  
Fax + 49 (0) 89 94 00 59 79  
E-Mail [dfs@dfs-online.de](mailto:dfs@dfs-online.de)  
Internet <http://www.dfs-online.de>

## 1. INTRODUCTION

This *Immediate Action Plan* is an operational document for the *Inception Phase* in the Himachal Pradesh Forest Ecosystem Climate Proofing Project, India. Project implementation commenced on 31<sup>st</sup> January 2016. However due to delay in award procedure the project consultant only could start with the arrival of CTA on 24<sup>th</sup> August 2016.

Financial and technical advisory services are being provided through German Financial Co-operation (KfW). This *Immediate Action Plan* provides guidance to the CPD, APDs and project managers, DFOs and other project staff on the content and timing of activities during the *Inception Phase* for six months from September 2016 to March 2017, or until the Plan of Operations is approved.

The Consulting consortium DFS Deutsche Forstservice GmbH and GOPA World Wide Consultants, GOPA mbH, Bad Homburg of Germany in association with DEVOPSYS CONSULTING India will provide technical advisory services led by the CTA and ACTA.

Beside the establishment of the Immediate Action Plan the objectives after PMCs arrival are focusing during the project inception/preparation phase as following:

- Assessing the current implementation context to identify situations that have evolved since the original preparation of HPFECPP and late award of DFS/GOPA (project management consultant – PMC) to start work
- Revising the adequacy of original planned HPFECPP project measures as requested by PEA and searching acceptance from KfW for proposed changes where they may clearly justifiable taking into consideration the actual situation in HP
- Clarifying mandate and powers of state level steering committee and KfW involvement during absence of PMC and possible implementation of measures revolving from SLSCM approval in upcoming KfW review mission in November 2016
- Preparing submitting approval requests for project Manual, Plan of Operation and annual work plan and establishing guidelines and baselines from which to measure HPFECPP performance and achievements
- Introducing and updating climate resilient measures by using JFM approach
- Updating strategy for capacity building and compiling lessons learned from India and international art to state practices in natural resource management to fight climate change

This section continues in Chapter 4 with the description of planned activities that have been or will achieved during the HPFECPP Inception/Preparation since PMC arrived at 24 August 2016.

## **2. PROJECT DOCUMENTS**

The primary Project documents are:

- 1) Feasibility Study Study on the “Himachal Pradesh Forest Ecosystem Climate Proofing Projec” (September 2014).
- 7) The Minutes of Meeting, of the KfW Appraisal Mission, 30 March to 11 April 2014 between Forest Department Himachal Pradesh (HPFD) and and KfW (Kreditanstalt für Wiederaufbau) Forestry Department of Sichuan Province and KfW (Kreditanstalt für Wiederaufbau).
- 8) Technical Proposal for Consulting Services for “Himachal Pradesh Forest Ecosystem Climate Proofing Project”, March 2016, DFS Deutsche Forstservice GmbH, Germany in cooperation with GOPA mbH, Germany.

### 3. THE PROJECT BRIEF

<b>Title</b>	<b>Himachal Pradesh Forest Ecosystem Climate Proofing Project</b>	
Recipient	Government of Himachal Pradesh, Himachal Pradesh Forestry Department	
Financing Agency	Kreditanstalt für Wiederaufbau (KfW Entwicklungsbank)	
Executing Agency	Himachal Pradesh Forestry Department	
Implementing Entities	State Level Project Management Unit (SPMU) in Dharamsala; 4 Divisional PMUs in Kangra; 5 Divisional PMUs in Chamba; 600 registered VFMSs (village Forest Management Societies in Kangra and Chamba)	
<b>Overall Goal</b>	Forest ecosystems in HP are managed in a way, that the risks of climate change and its negative impacts are minimized and/or mitigated, resulting in an increase of biodiversity of the treated Himalayan ecosystem and raised income in rural areas from sustainable management of natural resources.	
Primary Project Outcomes	<ol style="list-style-type: none"> <li>1. Removal of lantana and planting of climate proofed multi-purpose mixed conifer-mixed broadleaf forests (15.000 ha)</li> <li>2. Improvement works in existing bamboo forests/plantations (1.000 ha)</li> <li>3. Under planting of 3.000 ha Chir Pine stands with bamboo and different multipurpose trees (MPTs)</li> <li>4. Rehabilitation of 150 spring catchments</li> <li>5. Intermediate felling of young and medium aged forest stands (5.000 ha)</li> <li>6. Upgrading of selected range nurseries for production of MPTs and bamboo</li> <li>7. Development of guidelines for climate change adopted forest management planning</li> <li>8. Review and revision of existing site species-matching guidelines and silvicultural prescriptions</li> <li>9. Development of 2 pilot grazing schemes in Kangra and Chamba</li> <li>10. Capacity building for target groups for development of income generating activities (IGA) development and implementation of comprehensive M &amp; E systems (progress performance and impact monitoring)</li> <li>11. Training for JFMCs and forest staff at all administrative levels</li> <li>12. The documentation &amp; dissemination of project knowledge &amp; experience.</li> </ol>	
Duration	7 years (2016 to 2022)	
Total Project Cost	INR 3047,64 or EURO 37,16 million.	
Locations	Two Districts (Chamba and Kangra) and thereof 9 Divisions, as follows:	
	<b>District</b>	<b>Division</b>
	<i>Chamba</i>	Chamba
		Dalhousie
		Churah
		Bharmour
		Pangi
<i>Kangra</i>	Dharamshala	
	Nurpur	
	Palampur	
	Dehra	

Target Groups	Target Group: Forest Dependent Communities vulnerable to climate change identified in 600 JFMCs in Chamba and Kangra district. Himachal Pradesh Forest Department Other departments of the Government of Himachal Pradesh including academic institutions NGOs and other community-based organisations Private sector and other interest groups
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#### 4. IMMEDIATE ACTION PLAN FOR THE PREPARATORY PHASE

##### 4.1 Primary Action Plan Activities

The **Immediate Action Plan** for the *Inception/Preparatory Phase*, shown in Table 4.1, identifies specific operational activities for each month. This plan is based on the Tentative Project Activity Schedule presented in the Consultant's Proposal as amended following consultations between the CPD and PMC October/November 2016.

Primary responsibilities are indicated for the CPD; SPMU, DPMU, DFS/GOPA and KfW. Responsibilities of the Consultant are advisory [shown as (PMC) to support the HPFD in various aspects of project implementation and management. The Consultant does not have an executive or managerial role.

It needs to be appreciated that this plan serves to indicate general scheduling of operations and accordingly the timing of various activities is always tentative. There is a need for flexibility in activities implementation depending on local circumstances and to have regard for any unforeseen events that influence the scheduling.

**Table 4.1: Immediate Action Plan for Operational Activities in the Preparatory Phase**

Primary Action Plan Activities	October	November	December	January	February	March	Primary Responsibilities
<b>Operational planning &amp; reporting – Immediate Action Plan, Project Inception Report, Plan of Operations</b>							
Draft <b>Immediate Action Plan</b> – led by the CTA							CPD, (PMC)
Arrange & convene a <b>Project Inception Workshop</b>							SPMU/DPMU, PMC
Further consultations with CPOs on draft Immediate Action Plan							CPD; PMC
Amend draft Immediate Action Plan to include CPD amendments							PMC; CPD
Agree on final Immediate Action Plan							CPO, (PMC)
Circulate Immediate Action Plan to DPMUs for implementation							SPMU
Implement activities in Immediate Action Plan							SPMU, DPMU
Assemble first draft of a <b>Project Inception Report</b>							CPD, (PMC)
Consultations with CPD on draft <b>Plan of Operations</b> , inc. workshop							CPD; SPMU, DPMU, PMC
Review draft Project Inception Report, plus operational Planning							CPD
Review & finalize draft Project Inception Report, PoO							CPD, (PMC)
Circulate Plan of Operations to DFOs							CPD

Primary Action Plan Activities	October	November	December	January	February	March	Primary Responsibilities
Submit final Project Inception Report; Plan of Operation to KfW for approval (within 6 months of PMC 24 August 2016)							CPD, (PMC)
Secure approval of Inception Report and Plan of Operations from KfW							KfW
Circulate Plan of Operations to DPMU							CPD, SPMU
<b>Project administration &amp; management, including monitoring – institutional arrangements, monitoring guidelines</b>							
<b>Institutional arrangements</b> completed; staffing for SPMU and DPMU completed (project managers, coordinators, facilitators, mobilizers)							CPO; DPMU
<b>Select third party for monitoring</b> (concerning all measures that will be implemented)							CPO, PMC
<b>Project monitoring guidelines</b> drafted							CPD, (PMC)
Project monitoring guidelines approved & applied							CPD, PMC
<b>Equipment</b> procurement initiated (based on Plan of Operations & KfW guidelines)							CPD, (PMC), KfW
Equipment requirements approved & procurement proceeds							CPD
<b>Newsletter</b> publicity on the project drafted & reviewed by CPD							CPD, PMC
<b>Project financial management – financial management guidelines, financial monitoring</b>							
Advise on project accounting principles & procedures, guidelines, tables							CPD, (PMC)
<b>Financial project monitoring guideline/s</b> drafted & approved							CPD, (PMC)
Training of accounting at DPMU level and SPMU							CPD, (PMC)
Establishing of procurement guidelines							CPD, (PMC)
Discussion with CPO, finalizing guidelines							CPD, (PMC)
Submit final procurement and tendering guidelines to KfW for approval							CPD, (PMC)
Specific administrative arrangements for financial monitoring arranged in DPMU							CPD, DPMU
<b>Development of Microplanning and revision of already established micro-plans-preparatory activities</b>							
Establishment of pilot micro-plan and revision for already established micro-plan (Kangra and Chamba)							CPD, (PMC)
Micro planning guidelines drafted and guidelines for revision of already prepared micro-planning guidelines before PMC arrived							CPD
Consultations with CPD and stakeholders on draft micro-planning guidelines							CPD, JFMCs, DPMU
Amend draft micro planning guidelines to include CPO amendments							CPD, (PMC)
Field testing and orientation training of micro planning guidelines to stakeholders and coordinators							CPO; DPMU staff

Primary Action Plan Activities	October	November	December	January	February	March	Primary Responsibilities
, facilitators and mobilizers and of SFM planning guidelines commences on pilot sites							
Training in microplanning, set up of benefit sharing agreement und MoU for micro-plans,							CPD (PMC)
Development of spring reunification, spring shed development guidelines							CPD, PMU, (PMC)
Consultations with CPOs on draft spring shed guidelines							PMU, CPO
Amend draft spring shed guidelines to include CPO amendments							CPD, (PMC)
Submit completed spring shed guidelines to KfW for approval							CPD (PMC)
<b>Silvicultural Forest Management Planning – formats, models training, forest management objectives</b>							
Develop appropriate <b>SFM planning models/format/s, guidelines</b> based on lantana eradications possibilities, under planting options in chir pine forests and others SFM planning in blue pine, picea and cedar forests							CPD (PMC)
Consultations with CPD and DFO on guidelines to be implemented in the micro-plans							CPD, (PMC)
Develop <b>training</b> activities for forest staff and other stakeholders							CPD (PMC)
Training of CPO staff and DPMU staff and other FMU stakeholders in proposed FM planning							CPD, (PMC)
Development of saving book approach within Micro-planning process SFM training of forest farmers & other stakeholders							CPO
Consultations with CPO and DPMU and stakeholders on different saving book options							CPD (PMC)
Finalizing saving book approach and suitable guidelines to be included in Micro-planning process and implementation							CPD (PMC)
Submit completed <b>Forest Management and Saving book guidelines</b> to KfW							CPD (PMC)
<b>Establishment of Monitoring guidelines– guidelines, criteria for monitoring, contracts third party</b>							
Develop <b>M &amp; E guidelines</b> for the activities implemented during project implementation, especially formats, indicators and physical monitoring							CPD, PMU, (PMC)
Prepare Formats for data management for monitoring							CPD, PMC
Consultations with CPD and DFO on draft <b>M &amp; E guidelines</b>							CPD, PMC
Amend <b>draft M &amp; E guidelines</b> to include CPO amendments							CPD, (PMC)
Submit finalized <b>M &amp; E guidelines</b> to KfW for approval							CPD (PMC)



Primary Action Plan Activities	October	November	December	January	February	March	Primary Responsibilities
Propose third party monitoring process and discuss selection of suitable institute or entity							CPD (PMC)
Training in M & E to CPD, HPFD staff and other stakeholders							PMC
<b>Nursery establishment– guidelines for KfW Nurseries and standards of seedling quality</b>							
Development of <b>nursery guidelines</b> and propose improvement measures to up-grade existing nurseries for project							CPD, PMU, (PMC)
Develop plant standards and propose planning targets for plant production; advise on grass seed collection of high quality grass or propose possibilities where to purchase such high quality seed							PMU, CPO
Consultations with CPD on nursery guidelines and improvement measures for KfW nurseries							CPD, (PMC)
Amend draft nursery guidelines							CPD, (PMC)
Provide training in nursery management and new technologies for nursery staff							
Submit completed Nursery guidelines to KfW for approval							CPD (PMC)
2 <sup>nd</sup> mission of nursery expert to give training and improve further applied nursery techniques							PMC, CPD

## 4.2 Scheduling of Specific Operations

### 4.2.1 Professional Advisory Services

Indicative scheduling of professional advisory services for the Preparatory Phase was presented in the Consultant's Technical Proposal. Some modifications are now proposed following consultation between the CPO, KfW and PMC. Proposed assignments of international specialists between October 2016 and March 2017 are in Table 4.2.

**Table 4.2: Short-term Consultant's Assignments in the Preparatory Phase**

Consultant Specialist	Consultant Name	Dates
Chief Technical Adviser	Mr. Peter Hess	24 Oct. – 14 Nov. 12 Jan.- 20 March
Expert for Microplanning	Mr. Ajay Rai	12 Oct. – 5 Nov. 12 Dec. – 25 Dec.
Expert for CCA silviculture,	Dr. Stephan Gampe	24 Oct. – 25 Nov.
Expert for Nursery development	Mr. Stellan Karlsson	24 Oct. – 25 Nov.
Expert for M&E	Mr. Gerhard Schweizer	20 Oct.- 8 Dec.
Expert for Accounting	Mr. Mukesh Saraswat	16 Nov. – 30 Nov. 15 Jan. – 30 Jan.
Expert for management procedures , finance and procurement	Mr. Hans Udo Fuchs	20 Nov.- 20 Dec.
Expert for Capacity building and training	Mr. Malcolm Bell	26 Nov. – 20 Dec.

<b>Consultant Specialist</b>	<b>Consultant Name</b>	<b>Dates</b>
Expert for saving book approach	Mr. Hung Ha Van	28 Nov. – 20 Dec.
Expert for IGF and capacity development	Dayal Jaiswal	16 Nov. - 2 Dec.
Expert spring rehabilitation / spring shed improvement from Sikkim project	Not yet identified	25 Nov. – 15 Dec.
Technical back-up	Mr. Christian Schade	15 Febr. – 5 March

#### **4.2.2 Reporting Schedules**

During the period of this Immediate Action Plan reports are to be prepared as follows:

- |                             |  |
|-----------------------------|--|
| 1) Immediate Action Plan    | As soon as practicable (November 2016) |
| 9) Project Inception Report | within six months (28 February 2017);  |
| 10) Plan of Operations      | within six months (28 February 2017);  |

#### **4.2.3 Project Staff Deployment Schedule**

Tentative Staff Deployment Schedules that was included in the Consultant's Project Proposal dated March 2016 have been reviewed and revised. The amended staff time schedule of the consultancy is annexed to and comprise a part of this Immediate Action Plan.

**ANNEX 1:**

**AMENDED STAFF TIME SCHEDULE OF CONSULTANCY**

	Year 1				Year 2				Year 3				Year 4				Year 5				Year 6				Year 7			
	INCEPTION	PLANNING AND ESTABLISHMENT							PROTECTION AND CONSOLIDATION																			
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
<b>Staff deployment schedule</b>																												
<b>KEY PERSONNEL</b>																												
CTA	Peter HESS - Forestry expert																											
ACTA	Vinay TANDON - Community forestry expert																											
i KE 1	Robert TIPPMANN - Climate change and research cooperation																											
i KE 2	Stellan KARLSON - Nursery operation																											
n KE 1	Mukesh Kumar SARASWAT - Financial coordinator/ accountant																											
n KE 2	Dayal JAISWAL - IGA capacity development and convergence																											
<b>BACKSTOPPING</b>																												
B1	Ralf LUDWIG - DFS Princinal Backstopper																											
B2:	Christian TUNK - GOPA Co-Backstopper																											
B3:	Edeltraut DREWES - GOPA																											
<b>INTERNATIONAL SHORT TERM EXPERTS</b>																												
iPool	Hans-Udo FUCHS - Management procedures, finance and procurement																											
iPool	Stephan GAMPE - CCA forest management planning and silviculture																											
iPool	Malcolm BELL - Capacity building and training programme development																											
iPool	Hung HA VAN - Savings account approach for forest management																											
iPool	Gerhard SCHWEIZER - M&E system development																											
iPool	Unallocated																											
<b>NATIONAL SHORT TERM EXPERTS</b>																												
nPool	Ajay RAI - JFM, savings account approach																											
nPool	Deeraj KOUL - Climate proofing																											
nPool	Venkata Govardhan Das SAMALA - Spring rehabilitation																											
nPool	Sudesh RADOTRA - Pasture management/ integrated fire management																											
nPool	Visvarup CHKRAVARTI - NTFP development																											
nPool	Unallocated																											

intensive implementation  
 intermittend implementation  
 M Meeting of Steering Committee  
 PW Planning Workshop

## **Annex B:**

### **List of names and position concerning SPMU**

S. No	Name	Designation	Job Responsibility
<b>SPMU at Dharamshala</b>			
1	Dr. Suresh Kumar IFS	Chief Project Director	Project management and facilitation
2	Sh. R: S. Banyal	Deputy Project Director	assist CPD in all matters
3	Ms. Basu Kaushal IFS	Assistant Project Director	Training & Capacity Building, M & E
4	Sh. Ram Kumar Dogra HPFS	Assistant Project Director	Administration, Silviculture
5	Sh. Narendar Thakur HPFS	Assistant Project Director	Finance & Accounts, Nursery
6	Sh. Naresh Kumar HPFS	Assistant Project Director	Micro-planning
7	vaccant	Project Manager (SFDA Support)	
8	Dr. Sanjeev Bhal	Project Manager	M & E, GIS, MIS & IT Enabled Services
9	Dr. Pankaj Bhalla	Project Manager	Training & Capacity Building
10	vacant	Project Manager	Forestry
11	vacant	Project Manager	IGAs & Livelihood

## **Annex C:**

**ToR of Reference for the Baseline Study and quantitative definition of indicators.**

# Baseline Study

## Kangra and Chamba (December January-2016/17) on Himachal Pradesh Forest Ecosystems Climate Proofing Project

### Terms Of Reference

The Himachal Pradesh Forest Ecosystems and Climate Proofing Project (HPFECPP) aims at increasing climate resilience of forest ecosystems, biodiversity and adaptive capacities of forest dependent communities in the selected project area. Planning will be done on participatory basis with communities falling into areas having 80-400 ha forest area where project measures can be implemented. Following a forestry assessment of the area and the development of a Forest Management Plan (FMP), Micro-plans will be developed with the assistance of the communities (Village Management Groups - VFVG) and will be summarized into a Forest Operational Plan (FOP) for the area. Based on the right of the communities in one contiguous forest area one or more villages will be covered by one micro-plan.

The HPFECPP is being implemented in 32 Forest Ranges of 9 Forest Divisions in Kangra and Chamba districts. It is proposed to be implemented in up to 600 villages forming interest groups (VFVG) covering 1 or more villages up to a whole panchayat in Kangra and Chamba districts.

### Purpose of the Study

Baseline data will serve as a benchmark to which positive developments as a result of project measures will be assessed. The purpose of this study is to record and document and develop a BASELINE on various project parameters that will later be used in monitoring changes in the natural assets and household conditions sought to be addressed under this project. The indicators identified for recording changes should be easily understandable and measurable.

### Subject of the Study

This baseline study will be undertaken to establish a starting point against which the HPFECPP will measure the impact of climate change adaptive measures in Kangra viz.:

- Clearing of ground vegetation (removal of lantana and other species),
- Planting of trees (i.e. mp-trees) on forest land,
- Planting of fodder trees, fuel wood lots, medicinal trees on unstocked forest land,
- Planting/vegetative propagation of suitable tree species/bamboo along nallahs,
- Fodder banks, establishment of high-yield grass for hay production,
- NTFP plantation,
- Annual weeding and site clearing,

- Single tree protection of planted trees,
- Fencing around plantations,
- Maintenance of fences, (planned for 1 to 5 years if budget available),
- Rotational forest closure in open stands for natural regeneration and / or supplement planting of natural regeneration,
- Intermediate thinning in mixed species stands, 6 - 20 m height.

The total area covered by the different measures will amount to roughly 14,000 ha. The exact area for each model or model combination will only be available after detailed planning.

The project will include measures like income generating activities and improvement of pastures which may in general improve forest dependent rural people standards and dependency on natural resource and to better adapt to climate challenge. In addition, for the participating community's entry-point measures will be implemented.

As well as providing valuable insights into the situation in the villages especially the institutional arrangements of the society and willingness to join the FD in protection and management of natural resources.

Furthermore, the base line study should look into reliably assessing the dependence of rural households on forest produce (mainly timber, firewood, fodder and grass and NTFPs) at present for subsistence as well as livelihoods needs of rural people participating in the project.

### **Project Objectives for which Baseline Data are required**

Based on an analysis of the project planning matrix (logframe) baseline data for the following parameters will be studied:

- Forest cover and species mix assessment,
- Biodiversity – development of (i) species richness & (ii) species abundance or through use of Importance Value Index (IVI), count of floral biodiversity on randomly selected sites of different project measures, proportionate to the planned forestation measures and re-count 3 years after implementation,
- Occurrence of harmful incidences like fire, and grazing damage, alien species infestation (e.g. lantana), and an improved fodder base,
- Development of the area to be treated areas w.r. to (i) species richness, and (ii) species abundance or through use of Importance Value Index (IVI),

Social and village parameters for which baseline data need to be collected comprise of:

- Livelihoods of forest dependent communities, expressed in:
  - household income and income base, o presence and magnitude rating of small enterprises, No. of people and households depending on it,
  - presence and magnitude of groups or associations engaged in income generating activities, No. of people and households depending on it,



- households entirely dependent on agriculture and/or forest products, o collection of fire wood (distance) and availability of fire wood (how many back loads)
- Presence of social conflicts over the use of natural resources (villager/herders, village/village etc.,
- Awareness of local leaders and inhabitants of effects of climate change,
- Stock of animals by type and sex,
- Village fodder base and relation to the presence of domestic animals,

Additional natural resources parameters to be monitored over a longer period, i.e. before and a minimum of three years beyond treatment include:

- Run-off data series from monitoring plots,
- spring well yields below treated micro-watershed areas,
- erosion control pits below larger treated areas, in particular below areas where lantana will be removed.

## **Approach and Methodology**

### **Area Selection**

It is proposed that the area will be stratified at 3 altitude levels, viz. <600 m, between 600 & 1800 m and >1800 m. The study will be carried out in 20 % of the selected villages and will cover not less than 20% of the forest area under the project. The probability of occurrence of selected forest areas will be more in the first two altitude ranges.

Before the start of the survey the successful bidder will be furnished with copies planning documents such as FMP, planning maps and micro-plans

### **Sampling Households:**

Villages can be stratified on the basis of population into 3 categories viz. <200, 200 to 400 and >400 people or <40 HHs, between 40 & 100 HHs and >100 HHs. Villages falling in the above categories are listed and 8% villages picked up randomly from each of the 3 lists. 10% of the HHs (including SC/ ST and Women headed) in each selected village (total 150 villages) are then interviewed for generating quantitative and qualitative data.

## **Methodology for Collecting Social Information**

### **Household Interviews**

Conducted as structured informal interviews, one data sheet per household will be used.

Focus Group Discussion:

One FGD per village will be conducted and documented in detail. Marginal groups and SC HHs must be represented in such meetings.

### Key Informant Interviews:

Selected persons (half men and half women) from 50 panchayats equitably distributed in the project areas including Pradhans/ Ward Panches / FD Officials/ NGOs to be interviewed on standard formats. The data derived from the Focus Group Discussions and Key Informant Interviews will be analysed by the consultant, and this analysis to provide the baseline of the situation of the village as well the estimation of the degradation of the natural resources within the village.

The techniques focusing mainly, but not exclusively, the Household Survey will obtain quantified data. The baseline study as well will collect data of forest to be treated by the project and just to asses present situation like (infection of lantana, availability of grass and fodder (number of back loads), collection of fire wood (distance) and availability of fire wood (how many back loads).

### Deliverables

A Baseline Study Report with suggested Chapters (Annexure I) is required as the principal deliverable. All the data gathered and analysis carried out will be handed over to the Chief Project Director of the HPFECPP at Dharamsala.

### Time Frame for the Study

The Study is to be started out not later than 45 days from the award of the contract. The draft final report is to be circulated by the 40<sup>th</sup> day of the study's commencement.

Other Conditions: The successful bidder shall deploy at least two teams (with appropriately skilled members) simultaneously in Kangra and Chamba districts. CVs of all team members are required.

### Required skills, experience and infrastructure

The bidder shall provide evidence of commanding of suitable staff (with CVs) and of required resources (capital, transport, office infrastructure). Evidence / reports of earlier work on similar lines and familiarity with the conditions and terrain will be an advantage.

### Bidding:

Technical (explaining the approach) and Financial bids to be submitted in separate sealed envelopes. Experience and technical approach and the financial part of the bid shall each count for 50 % of the rating obtained for the bid.

**Table 1: Rating of Bids**

Staff offered	20 %
Similar experience	10 %
Approach	10 %
Resources (financial, Office, staff)	10%
Financial proposal	50 %

(Sources used for TOR preparation: Proposal for a TOR developed by Vinay Tandon, Asst. CTA.)

**Annexure I****SUGGESTED SECTIONS & CHAPTERS FOR THE BASELINE REPORT****1. INTRODUCTION**

1.1. OPERATIONAL CONTEXT, district maps, forest cover maps

1.2. OBJECTIVES OF THE STUDY

1.2.1. Baseline Study

**2. METHODOLOGY**

2.1. SAMPLING AND PREPARATION

2.2. DATA COLLECTION TOOLS

2.3. DATA ENTRY AND ANALYSIS

**3. DISCUSSION**

3.1. OVERVIEW OF VILLAGES SAMPLED

3.2. GENDER ISSUES

3.3. PROBLEM DISCOVERED

3.4. ROLE OF HPFD

3.5. VILLAGE CAPACITY/EXPERIENCE

3.6. OVERVIEW OF DATA GATHERED FROM DISTRICT OFFICIALS/ Micro plans

**4. BASELINE DATA OUTCOME INDICATORS**

4.1. OBSERVATIONS REGARDING PROJECT OUTCOME INDICATORS.

4.2. QUALITATIVE BASELINE INDICATOR DATA.

4.3. QUANTITATIVE BASELINE INDICATOR DATA.

**REFERENCES****TABLES****Figures****Annexes**

## Annexure II Collection formats

The following tables should serve as a sample for data collection. They are not exhaustive and should be developed so as to reflect parameters for project objectives as described above.

BASELINE – INDICATORS TO MONITOR CHANGE AT JFMC LEVEL to help development of suitable formats for data collection:

### 10% Sample of HHs in village(s) to record for each Micro Plan: (Month & Year)

Species / local name	Qty collected in Kg		No. of times/ week/month/season	Time spent in hrs. per trip	Who Collects
	PVT	GOVT			
FODDER					
GRASS					
FIREWOOD					
NTFPs					

### 10% Sample of HHs in village(s) to record for each Micro Plan: Status of Cook Stoves & Heating devices

TYPE OF COOK STOVE	Hours of use / day	Firewood used / day in Kg.	Cooking Time in hrs. per day	Who Cooks
Chulla				
Tandoor				
LPG				
Induction				
Other				
<i>Water Heating</i>				
Chulla				
Hamam				
Electric				
<i>SPACE Heating</i>				
Tandoor				
Electric heater				
Other				

### LIVESTOCK: Total Numbers for all HHs

Kind of Livestock	Stall fed	Grazed	No. Start of Project	No. at 2 yr intervals
Local cows				
Hybrid cows				
Bulls				
Buffaloes				
Sheep				
Goats				
Others				

**WATER HARVESTING: For all HHs in village**

TYPE OF STRUCTURE	At HH / Individual	At Village Community /	Change 1 yr interval
Tank			
Farm Pond			
Roof Water			
Well			
Bore well			

**BAMBOO: HH level on private land holdings (Number of Clumps)**

HH No	Clumps owned in village	On agri. land	Change 2 yr interval

**HUMAN – WILDLIFE CONFLICT: At JFMC Level**

Species	Crops Damaged / threat to humans	Loss at Village level	Change at 1 yr interval
Monkeys			
Wild Boars			
Nil gai			
Others			

**STATUS OF IAS: Change over time**

SPECIES	AREA infested (Ha)	Area Treated (Ha)	Change 1 yr	Change 2, 3, 4 yrs
Lantana				
Eupatorium				
Congress Grass				
Ageratum				

**PEOPLE'S BIODIVERSITY REGISTER: At Panchayat / JFMC Level – whether such documentation exists?**

Activity	Who is involved	Responsibility
Constitution of BMC	By All JFMC members, Panchayat	Dy. Ranger, FGd, Pradhan
Survey & data collection	By identified knowledgeable local people, facilitation by FD	Forest Ranger & Pradhan
Monitoring changes	Sub set of JFMC & FD	Forest Ranger

**Annex D:**

**ToR for High Altitude Pasture Management  
IN CHAMBA and BHARMOUR AREAS under KfW Project (study)**

## **HIGH ALTITUDE PASTURE MANAGEMENT IN CHAMBA AND BHARMOUR AREAS UNDER KFW PROJECT**

### **TERMS of REFERENCE**

#### **BACKGROUND**

Because of the altitudinal migration of herds of sheep and goats with seasonal cycles, transhumance is perhaps one of the most sustainable forms of natural resource use in the Western Himalaya. Marked by great altitude variation, the inner Himalaya offer vast expanses of pasture for summer grazing. Pastures situated in sub-alpine and alpine regions of the Himalaya are an important forage resource for the livestock of the area. These pastures are used for grazing during March-April to September–October. Generally, these pastures are grazed by sheep and goats reared by Gaddis but in some cases buffaloes and cattle of migratory gujjars have been observed at the upper reaches of sub–alpine pastures for grazing. The high grazing pressure on the subalpine and alpine pastures is increasing unabated. The overgrazing of these pastures has also resulted in destruction of palatable grass and legume species. These areas have never been improved. A combination of factors, including growing intensity of grazing in generally shrinking pastures, roads and other development activities, expanding agriculture and forestry plantations / closures and conflict with local communities along the migratory routes, all generally exacerbate with growing impact of climate change threatens this centuries' old practice that has been the mainstay of pastoral livelihoods of the Gujjar and gaddi tribes of the NW Himalaya.

Most often conflict arises between nomadic pastoralist and villages over use of pasture lands. The conflicts may be due to unavailability of required pasturelands and low forage availability. The current status of pasture productivity and the socio-economic scenario of pastoralists and livestock farmers particularly of Chamba area are to be explored. The problems faced by pastoralists in migratory routes during upward and downward migration in terms of forage availability etc. and rehabilitation of denudated and degraded grasslands need to be addressed. There are well defined migratory routes to various pastures from different areas. Although grazing rights of nomads over certain forests are well established they face scarcity of fodder and water while traversing from up-hills to low lands and vice versa. Their transgression into unmarked territory leads to conflicts. Similarly, inter-village and intra-village conflict over use of grazing land are also frequent due to disparity between access to such resources and ability of villagers to utilize and share these resources equitably. Community based scientific pasture management systems need to be established and evolved under the project.

75% of the total alpine pastures in the Himalaya are located in Himachal Pradesh, (SK Sharma, 2011)

46595 buffaloes were charged grazing fees in Chamba during 2011-12 (website: HPFD); compared to 62898 sheep & goats and 3570 cows & bullocks.

While climate change is expected to 'push up' lower altitude tree and other perennials along the gradient, it is not certain whether alpine pastures will also move up correspondingly. "Upward movement of the tree line and encroachment of woody

vegetation on alpine meadows are reported widely. In the eastern Himalayas, the tree line is rising at a rate of 5 to 10 m per decade (Baker and Moseley 2007). As temperature rises, species shift their ranges to follow their principal habitats and climatic optima". "Mountain ecosystems are sensitive to global warming and show signs of fragmentation and degradation (Xu and Wilkes 2004; Körner 2004). Species in high-elevation ecosystems are projected to shift to higher altitudes, although alpine plant species with restricted habitat availability above the tree line are projected to experience severe fragmentation, habitat loss, or even extinction if they cannot move to higher elevations."

Further, as temperatures rise, several alien invasive species threaten the composition-mix of native flora. Under the present project, these and related issues surrounding high altitude pastures is sought to be understood better, particularly the search for practical conflict resolution measures.

Study time in alpine areas – April to May / June-July 2017

### **TASKS:**

1. A thorough review of literature on Nomadic grazing and Transhumance in Himachal Pradesh with special reference to Chamba district, resulting in a short (about 5000 words) analytical document highlighting the natural resource and human conflict dimensions generally and more specifically for Chamba.
2. Alpine and sub-Alpine pastures are rich repositories of herbaceous medicinal flora. There are several highly traded medicinal plants (*Aconitum heterophyllum*, *Picorrhiza kurruoa*, *Podophylum hexandrum* etc.) that have been categorised as Threatened under the IUCN Red Listing process for the NW Himalaya. Due to historical neglect and over-exploitation such species are on the verge of extinction. The presence, absence or degree of abundance of such species would be very useful to record in the pastures visited. (For more details please refer to RED LIST of MEDICINAL PLANTS OF HP, FRLHT, Bangalore, 1998, 2003 available on their website). In situ conservation approaches for these species could be included under this project. (THIS IS TENTATIVE?)
3. Field visits to sample study status of pastures and legume and non-legume grasses in the pastures and migratory routes of gujjars and gaddis; data collection, marking routes and migration stage timing on maps of 1: 50, 000 scale;
4. A pilot sample study to gain evidence based estimation of 'carrying capacity' of sub-alpine pastures;
5. Carrying out a sample study to understand the state of conflict between migratory graziers, forest department and local communities along the migratory routes;
6. Assess the extent of IAS spread through appropriate sampling along migratory routes;
7. Suggest practical remedial measures especially around improving pasture management and conflict resolution in sites where interventions are most likely to work;



8. In randomly selected villages in the project area investigate on fodder availability in relation to domestic livestock/roaming/grazing livestock and suggest required magnitude of areas planted to fodder (legume and non-legume forages) or fodder trees as compensation to closed or newly afforested areas.
9. Making a presentation to a panel set up by the Forest Department including experts;
10. Incorporation of ideas, comments, suggestions into a draft final report;
11. Circulation of the draft report on the Web and to concerned networks and interested individuals;
12. Refinement and submission of the draft Final Report to CPD.

### **DATA COLLECTION:**

- This is to be carried out through interviews with gujjars, gaddis, selected villagers with substantial cattle, buffalo, sheep and goats;
- Focussed Group Discussions (FGDs) with graziers and villagers on problems and possible solutions / approaches for better management.
- Village interviews and survey on livestock and fodder
- Structured interviews with FD staff;
- From secondary sources like Division and Range Offices / panchayats;
- Detailed mapping of customary migratory routes of gujjars and gaddis on 1:50,000 scale toposheets;
- Recording of status of abundance of Threatened medicinal species of HP in / along the migratory routes

### **DELIVERABLES**

- The Report with suggested Chapters (Annexure I) is required as the principal deliverable. All the data gathered and analysis carried out will be handed over to the Chief Project Director of the HPFECPP at Dharamsala with copy to PMC.

### **TIME FRAME FOR THE STUDY**

- The Study is to be submitted within 60 days from the award of the contract. The draft final report is to be circulated by the 50<sup>th</sup> day of the study's commencement.
- Other Conditions: The successful bidder shall deploy at least two other team members (with one woman) who are familiar with local conditions and the dialect(s) used by gujjars and gaddis.

### **REQUIRED SKILLS, EXPERIENCE AND INFRASTRUCTURE**

- The bidder shall provide evidence of commanding of suitable staff (with CVs) and of required resources (capital, transport, laptops). Evidence / reports of earlier work on similar lines and familiarity with the conditions and terrain will be an advantage.

**BIDDING:**

- Technical (explaining the approach) and Financial bids to be submitted in separate sealed envelopes. Experience and technical approach and the financial part of the bid shall each count for 50 % of the rating obtained for the bid.

**Table 1: Rating of Bids**

Staff offered	20 %
Similar experience	10 %
Approach	10 %
Resources (financial, Office, staff)	10%
Financial proposal	50 %

**ANNEXURE I****SUGGESTED CHAPTERS:****1. INTRODUCTION**

- 1.1. Operational Context, district maps, forest cover maps, migratory routes, trekking routes
- 1.2. Objectives of the Study

**2. METHODOLOGY**

- 2.1. **LITERATURE REVIEW:** RECENT STUDIES and RESEARCH PAPERS ON TRANSHUMANCE AND MIGRATORY GRAZING IN HIMACHAL with special reference to CHAMBA district. Refer to ICIMOD database and website of the MOUNTAIN INSTITUTE and Himachal Pradesh University etc.
- 2.2. **SYNTHESIS:** of various literature consulted presented with an analytical take of the current situation highlighting the various issues and problems that need resolution for improved pasture management and reduction of conflict.
- 2.3. **PREVIOUS MANAGEMENT BY FOREST DEPARTMENT:** Main approaches and strategies used and their outcomes; changes in the livelihood options around transhumance

**3. SAMPLING AND PREPARATION**

- 3.1. Data Collection Tools
- 3.2. Data Entry and Analysis

**4. DISCUSSION**

- 4.1. Overview of nomadic groups & Villages Sampled
- 4.2. Fodder balance and required plantings in selected villages under the project
- 4.3. Problems discovered & SOLUTIONS OFFERED
- 4.4. Role of HPFD

**5. THE WAY FORWARD**

- 5.1. Resolving Conflict
- 5.2. Improving Pasture
- 5.3. Monitoring Change: Grazing Intensity, Livestock Health, Attitude of Villagers and Forest Department
- 5.4. Framework for Action, Timeliness

**REFERENCES****TABLES****Figures****Annexes**

**Annex E:**  
**Concept Notes for Two Pasture Improvement Projects**

## **CONCEPT NOTE ON IMPROVEMENT OF SUB-ALPINE & ALPINE PASTURES IN NW HIMALAYA**

### **BACKGROUND:**

Because of the altitudinal migration of herds of sheep and goats with seasonal cycles, transhumance is perhaps one of the most sustainable forms of natural resource use in the Western Himalaya. Marked by great altitude variation, the inner Himalaya offer vast expanses of pasture for summer grazing. Although the border between sub-alpine and alpine regions is blurred, it is best delineated by tree species with *Betula-Rhododendrons-Junipers* characterising alpine areas and predominance of *Betula* in sub-alpine tracts. While the alpine pastures are grazed more by sheep and goats of gaddis, the sub-alpine areas are grazed by buffaloes of migratory gujjars.

A combination of factors, including growing intensity of grazing in generally shrinking pastures, roads and other development activities, expanding agriculture and forestry plantations / forest closures and conflict with local communities along the migratory routes, all generally exacerbate with growing impact of climate change threatens this centuries' old practice that has been the mainstay of pastoral livelihoods of the Gujjar and gaddi tribes of the NW Himalaya.

Migratory grazing has also been restricted in several alpine areas of Chamba and Kangra due to the establishment of Protected Areas under the Wild Life Protection (Act), 1972. Strictly grazing, local or migratory is prohibited inside Protected Areas.

Most often conflict arises between nomadic pastoralist and villages over use of pasture lands. Although grazing rights of nomads over certain forests are well established they face scarcity of fodder and water while traversing from up-hills to low lands and vice versa. Their transgression into unmarked territory leads to conflicts. Similarly, inter-village and intra-village conflict over use of grazing land are also frequent due to disparity between access to such resources and ability of villagers to utilize and share these resources equitably. Community based scientific pasture management systems need to be established and evolved under the project.

While climate change is expected to 'push up' lower altitude tree and other perennials along the gradient, it is not certain whether alpine pastures will also move up correspondingly. "Upward movement of the tree line and encroachment of woody vegetation on alpine meadows are reported widely. In the eastern Himalayas, the tree line is rising at a rate of 5 to 10 m per decade (Baker and Moseley 2007). As temperature rises, species shift their ranges to follow their principal habitats and climatic optima". "Mountain ecosystems are sensitive to global warming and show signs of fragmentation and degradation (Xu and Wilkes 2004; Körner 2004). Species in high-elevation ecosystems are projected to shift to higher altitudes, although alpine plant species with restricted habitat availability above the tree line are projected to experience severe fragmentation, habitat loss, or even extinction if they cannot move to higher elevations."

Further, as temperatures rise, several alien invasive species threaten the composition-mix of native flora. Under the present project, these and related issues surrounding high altitude pastures is sought to be understood better, particularly the search for practical conflict resolution measures.

### **HISTORICAL DECLINE:**

High altitude pastures in the NW Himalaya have historically suffered neglect, due to heavy over grazing and absence of any effective management able to restore / rejuvenate these exhausted resources especially along customary migratory routes. In addition, medicinal herb collected has been an important cash income source for mountain people and here too the scenario is marked by over-exploitation. Free riding in collection of medicinal herbs has greatly reduced regeneration resulting in declining collections over the years. Several high value medicinal species of the NW Himalaya have been categorised as “threatened” as per IUCN Red Listing process.

75% of the total alpine pastures in the Himalaya are located in Himachal Pradesh, (SK Sharma, 2011)

46595 buffaloes were charged grazing fees in Chamba during 2011-12 (website: HPFD); compared to 62898 sheep & goats and 3570 cows & bullocks.

These figures underline the intensity of grazing pressure in the already depleted alpine / sub-alpine pastures. Given the livelihood implications on thousands of migratory herders due to further loss of productivity and pasturage, it becomes imperative that this project address the continuing threat to this important resource in order to come up with practical remedial approaches.

### **STUDY PROPOSED:**

In order to better understand the current situational context and the shifting dynamics of vegetational change and transhumance in general, it is proposed to carry out a quick study (2 months) during April & May 2017.

The proposed study would aim at:

- 1) A thorough review of literature on Nomadic grazing and Transhumance in Himachal Pradesh with special reference to Chamba district, resulting in a short (about 5000 words) analytical document highlighting the natural resource and human conflict dimensions generally and more specifically for Chamba.
- 11) Alpine and sub-Alpine pastures are rich repositories of herbaceous medicinal flora. There are several highly traded medicinal plants (*Aconitum heterophyllum*, *Picrorhiza kurruoa*, *Podophyllum hexandrum* etc.) that have been categorised as Threatened under the IUCN Red Listing process for the NW Himalaya. *In situ* conservation approaches for these species could be included under this project.

- 12) Field visits to sample study status of pastures (particularly grasses and legumes) and migratory routes of gujjars and gaddis; data collection, marking routes and migration stage timing on maps of 1: 50, 000 scale;
- 13) Carrying out a sample study to understand the state of conflict between migratory graziers, forest department and local communities along the migratory routes;
- 14) Assess the extent of IAS spread through appropriate sampling along migratory routes;
- 15) Suggest practical remedial measures especially around improving pasture management (species mix, limited closure of overused areas) and conflict resolution in a few sites where interventions are most likely to work;
- 16) In randomly selected villages in the project area investigate on fodder availability in relation to domestic livestock/roaming livestock and suggest required magnitude of areas planted to fodder grasses or fodder trees as compensation to closed or newly afforested areas (this is what the project is planning at present).

A study of this nature would help the Project to focus on a few pilot locations to test a range of environmentally benign interventions that could, if found to be reasonably successful, be replicated on a wider scale across the alpine regions of the NW Himalaya.

#### **FUNDING:**

Since there is no Budgeted Head for "Pasture Improvement" in the outlay, it is proposed that to fund this study and the ensuing works in at least 2 pilot locations, half percent (150,000 Euros) can be diverted from the Head earmarked for Lantana Eradication?

## **Annex F:**

### **Concept Development and Definition of Measures of Small-scale Rural Infrastructure (Entry Point Measures)**



## **CONCEPT NOTE ON ENTRY POINT ACTIVITIES (EPAS) UNDER HPFECPP**

It has been argued that because of low community interest in forestry programs (due to their long gestation period), EPAs are needed to enthuse local people / community to more willingly protect and manage assets created through afforestation or closure of areas. EPAs are also thought of as a tool to compensate people for long closure of areas which deprives them of grazing ground.

In practice, however, under forestry schemes and more so under JFM, EPAs have tended to be kind of handouts given at a community level. For example, repair to spring-structures, school buildings, temples, cementing village paths and so forth. Such EPAs are normally carried out at the beginning of the project and have little or no connection with the enthusiasm or involvement shown by the community in the actual protection and management of afforested areas later. This is borne out by the fact that in Himachal the survival (and therefore any material benefit to people) rate of plantations under JFM has been generally dismal. The idea of EPAs did not work.

The HPFECPP also allows EPAs up to about 3% of the project outlay. Refreshingly, the project also specifies that EPAs carried out need to be in line with the overall objective of contributing to climate change mitigation / adaptation. This offers an opportunity to effectively use EPAs to actually benefit eligible stakeholders and simultaneously to contribute to project objectives.

### **RATIONALE:**

While previous experience with EPAs under JFM has indicated that EPAs directed at general community good or welfare, do not really work (for want of community cohesion, subsequent upkeep and continued management), but whenever, welfare measures are taken up for individual households, there is not only more enthusiastic uptake and people, including the poor, come forward to even share costs. Clearly, the lure of individual or household benefit over general and vague community welfare, is in no doubt. With questions about collective responsibility (like in maintaining a village pond or 'bawdie') obviated, recurring disputes and conflict over public assets (sharing grass or fodder) also do not take place. It would seem logical then to support under EPAs such interventions that benefit individual households (HHs).

For example, LPG is encouraged to discourage or minimise the use of firewood collected with much difficulty and tedium for women and girls. LPG also benefits women (and men) in other ways, especially by reducing indoor air pollution, positively impacting household health, freeing time from cooking and so forth. It has also been researched that in the long run use of LPG is much cheaper than firewood or other sources like kerosene, if one factors the cost of collection into the equation. Environmentally LPG is the cleanest cooking fuel. However, LPG related interventions have been restricted to either handing out or subsidising LPG stoves to villagers. While even this is a great improvement over say repairing a temple, more innovative ways are possible to make LPG a most wanted EPA among project villages.

It is estimated that 50 HHs would be the average within a FOP / Micro-plan area. Figures collected over several years by NGOs in HP show that on an average a rural HH uses 3 LPG cylinders a year. If the EPA allows 2 cylinders per year free to a HH, then 200 LPG cylinders would be needed to cover a FOP area for one year. At a cost of Rs 570 per cylinder this would come to Rs 1,14,000. Presuming that the total cost of a FOP is Rs 15,00,000 (1.5 million), this works out to 7.6 % of the budget per FOP. The 2 free cylinders come in exchange for over 80% survival of plantations. In case the LPG cylinders are given at 30% cost sharing basis, this EPA would come down further to a mere 4%. More variations depending on the HH numbers with a FOP can be worked out to fine tune this EPA to make it more attractive. There are other energy efficient devices (like hamams) that can be added to such a package and funding found under budget heads like 'incentives' or 'conflict mitigation' for this purpose?

### **POSSIBLE ENTRY POINT INTERVENTIONS (AS PART OF MICRO-PLAN)**

- 1) PRIVATE FARM PONDS – COST SHARING BASIS?  
These are simple, dug out ponds of variable size, depending of land availability, and will have a HD polythene sheet and a drainage leading into the pond to collect rain run-off. Repair and improvement of existing water tanks / bodies within the VFMS area, esp for surplus overflow from Springs;
- 2) FODDER & FIREWOOD SPECIES ON PVT LANDS – INCENTIVISE: Tall plants of favoured species like oak, anogeissus, bamboos and other MPTs can be made available to villagers in the village AND a token amount given for each surviving tree at the end of one, two & third year.
- 3) IMPROVED COOK STOVES / LPG for POOR HOUSEHOLDS/ SOLAR WATER HEATERS & COOKING DEVICES/ HAMAMs in JFMCs: Cost sharing basis, involve an NGO;
- 4) ROOF WATER HARVESTING in JFMC villages – INCENTIVISE / COST SHARING BASIS: can also be done as a group initiative (adjoining houses can have a common tank); case for convergence with similar Rural Development schemes.
- 5) VERMI-COMPOSTING as SHG or INDIVIDUAL enterprises? (The vermi-compost will be bought by project supported nurseries); There is also market for vermi-compost among cash crop growers and orchardists; (chir pine needles when decomposed for a few months in a pit can be made into vc; the needles collected by villagers as fire prevention measures can be used for this).
- 6) Use of Chir pine needles rolled in nylon nets, in reducing flow of water in seasonal streams to reduce soil erosion and increase percolation. Chir needles are bundled / compacted into nylon nets about 1 or 1.5 m long and then 'pegged' across streams at 1 or 2 m intervals.
- 7) Inland fisheries, ducks, Israeli poultry (done in WB project?); User group or individual initiatives, project to help with involving/ pursuing with Fisheries dept./ AHD? (Convergence possibilities).

In the meeting / workshop with Project staff and HPEDs people (on 17 Oct 2016 & later with KfW), it was being stated that 'EPAs' are important to 'buy' co-operation of villagers in Project activities. EPAs have been a part of various JFM schemes since the beginning to JFM in HP (1993) including in externally aided projects. In fact, EPAs were a substantial part of the Sanjhi Van Yojna (SVY) scheme in HP since 1998. However, experience has shown that there is no evidence that people / villagers become more 'project friendly' because of EPAs and is evident from the dismal performance and fate of JFM in HP. The thrust in EPAs if admitted at all should focus on creation of individual assets principally related to HH energy (cutting emissions) and water conservation because water is the first and most critical natural capital that is going to be hit by Climate Change. Evidence of this happening is already writ large on Himachal's rural (and urban) landscape.

## **Annex G:**

### **Cost Norm Calculations Sheets**

- ✓ Planting Dharamsala
- ✓ Planting Chamba
- ✓ Planting Hamipur
- ✓ Weed Removal Lantana 25% and maintenance
- ✓ Weed Removal Lantana 50% and maintenance
- ✓ Weed Removal Lantana 75% and maintenance
- ✓ Weed Removal Lantana 100% and maintenance
- ✓ Weed Removal other weed 25% and maintenance
- ✓ Weed Removal other weed 50% and maintenance
- ✓ Weed Removal other weed 75% and maintenance
- ✓ Weed Removal other weed 100% and maintenance
- ✓ Fencing Dharamshala wooden post
- ✓ Fencing Chamba wooden post
- ✓ Fencing Hamirpur wooden post
- ✓ Maintenance of plantation 1<sup>st</sup> year
- ✓ Maintenance of plantation 2<sup>nd</sup> year
- ✓ Maintenance of plantation 3<sup>rd</sup> year
- ✓ Maintenance of plantation 4/5<sup>th</sup> year
- ✓ Cost norm for silvicultural thinning (no fencing, no planting)

### Dharamshala Forest Circle

#### Planting of Plants / Ha. (1100 plants)

Page	Item	Sr. No.	Particulars of work	Qty/ No.	Unit	Rate	Amount
64	F -v	1	Preparation of inspection path 60 cms. Wide.	120	Rmt.	11	1320.00
64	vi	3	Layout of pits and pathces	1	hac.	170.5	170.50
	ix	4	Digging of pits				
			b) 45cm X 45 cm X 45 cm	1100	% Nos.	954.25	10496.75
	x	5	Filling of pits				
			b) 45cm X 45 cm X 45 cm	1100	% Nos.	272.75	3000.25
	xi	6	Planting of entire plants in pits i/c ramming.				
			a) Raised in Polythiene bags.	1100	% Nos.	218.25	2400.75
65	xx	7	Mulching of plants.	1100	% Nos.	59.75	657.25
	xxi	8	Weeding & hoeing of plants	1100	% Nos.	81.75	899.25
62	D - i	9	Carriage of plants by manual labour	1100	% Nos.	218	2398.00
							21342.75
			<b>Add increase 33.33%</b>				7113.54
							28456.29
		9	Carriage of plants by mechanical means over distance 10 Km. average	1100	LS		1500
			<b>Total</b>				<b>29956.29</b>
			<b>Cost of planting 100 plants</b>				<b>2723.30</b>
			<b>or say</b>				<b>2720.00</b>

### Chamba Forest Circle

#### Planting of Plants / Ha. (1100 plants)

Page	Item	Sr. No.	Particulars of work	Qty/ No.	Unit	Rate	Amount
56	vi	1	Preparation of inspection path 60 cms. Wide.	120	Rmt.	9.30	1116.00
	vi	3	Layout of pits and pathces	1	hac.	147.65	147.65
	ix	4	Digging of pits				
			b) 45cm X 45 cm X 45 cm	1100	% Nos.	827.10	9098.10
	x	5	Filling of pits				
			b) 45cm X 45 cm X 45 cm	1100	% Nos.	236.40	2600.40
	xi	6	Planting of entire plants in pits i/c ramming.				
			a) Raised in Polythiene bags.	1100	% Nos.	189.15	2080.65
57	xx	7	Mulching of plants.	1100	% Nos.	51.80	569.80
	xxi	8	Weeding & hoeing of plants	1100	% Nos.	70.85	779.35
54	vii-1	9	Carriage of plants by manual labour	1100	% Nos.	188.90	2077.90
							18469.85
			<b>Add increase 53.84 %</b>				9944.17
							28414.02
		9	Carriage of plants by mechanical means over distance 10 Km. average	1100	LS		1500.00
			<b>Total</b>				<b>29914.02</b>
			<b>Cost of planting 100 plants</b>				<b>2719.46</b>
			<b>or say</b>				<b>2720.00</b>

### Hamirpur Forest Circle

Planting of Plants / Ha. (1100 plants)							
Page	Item	Sr. No.	Particulars of work	Qty/ No.	Unit	Rate	Amount
44	6-v	1	Preparation of inspection path 60 cms. Wide.	120	Rmt.	12.35	1482.00
	vi	3	Layout of pits and pathces	1	hac.	193.1	193.10
	ix	4	Digging of pits				
			b) 45cm X 45 cm X 45 cm	1100	% Nos.	1081.6	11897.6
	x	5	Filling of pits				
			b) 45cm X 45 cm X 45 cm	1100	% Nos.	268.9	2957.9
	xi	6	Planting of entire plants in pits i/c ramming.				
			a) Raised in Polythiene bags.	1100	% Nos.	247.35	2720.85
45	xxi	7	Mulching of plants.	1100	% Nos.	67.65	744.15
	xxii	8	Weeding & hoeing of plants	1100	% Nos.	92.65	1019.15
43	4-b	9	Carriage of plants by manual labour	1100	% Nos.	247.05	2717.55
							23732.30
			<b>Add increase 17.65%</b>				4188.75
							27921.05
		9	Carriage of plants by mechanical means over distance 10 Km. average	1100	LS		1500
			<b>Total</b>				<b>29421.05</b>
			<b>Cost of planting 100 plants</b>				<b>2674.64</b>
			<b>or say</b>				<b>2680.00</b>

**Cost Norm for Clearing of Ground Vegetation on the total area****Removal of Lantana with infestation up to 25% at wage rate of Rs. 200/-**

Sr. No	Particulars of the work	Qty.	Unit	Rate	Amount
1	Cutting /removal/ disposal of Lantana under CRS method	39.66	Mandays per ha.	200	7932.00
2	Cleaning of Lantana (sprouts) / seedlings one time after first cut under CRS	2	Mandays per ha.	200	400.00
3	Tending operations	1.15	Mandays per ha.	200	230.00
	<b>Total</b>				8562.00
4	Contingency for tools, documentation, photoes, exposure visits, workshops etc. 5%				428.10
	<b>GRAND TOTAL</b>				<b>8990.10</b>
	<b>Or say</b>				<b>8990.00</b>

**Cost Norm for 1st year Maintenance (Year -II)****Removal of Lantana with infestation up to 25% at wage rate of Rs. 200/-**

Sr. No	Particulars of the work	Qty.	Unit	Rate	Amount
1	Cleaning of Lantana (sprouts)/seedlings three times throughout the year	6	Mandaysper ha.	200	1200.00
2	Tending operations	1.15	Mandaysper ha.	200	230.00
	<b>TOTAL</b>				<b>1430.00</b>
	<b>Or Say</b>				<b>1430</b>

**Cost Norm for 2nd year Maintenance (Year -III)****Removal of Lantana with infestation up to 25% at wage rate of Rs. 200/-**

Sr. No	Particulars of the work	Qty.	Unit	Rate	Amount
1	Cleaning of Lantana (sprouts)/seedlings three times throughout the year	4.5	Mandaysper ha.	200	900.00
2	Tending operations	1.15	Mandaysper ha.	200	230.00
	<b>TOTAL</b>				<b>1130.00</b>
	<b>Or Say</b>				<b>1130.00</b>
	<b>Total cost including maintenance</b>				<b>11550.00</b>

**Cost Norm for Clearing of Ground Vegetation on the total area  
Removal of Lantana with infestation up to 50% at wage rate of Rs. 200/-**

Sr. No	Particulars of the work	Qty.	Unit	Rate	Amount
1	Cutting /removal/ disposal of Lantana under CRS method	67.66	Mandays per ha.	200	13532.00
2	Cleaning of Lantana (sprouts)/seedlings one time after first cut	4	Mandays per ha.	200	800.00
3	Tending operations	1.15	Mandays per ha.	200	230.00
	Total				14562.00
4	Contingency for tools, documentation, photoes, exposure visits, workshops etc. 5%				728.10
	<b>GRAND TOTAL</b>				<b>15290.10</b>
	<b>or Say</b>				<b>15300.00</b>

**Cost Norm for 1st year Maintenance (Year -II)  
Removal of Lantana with infestation up to 50% at wage rate of Rs. 200/-**

Sr. No	Particulars of the work	Qty.	Unit	Rate	Amount
1	Cleaning of Lantana (sprouts)/seedlings three times throughout the year	12	Mandaysper ha.	200	2400.00
2	Tending operations	1.15	Mandaysper ha.	200	230.00
	<b>TOTAL</b>				<b>2630.00</b>
	<b>Or Say</b>				<b>2630.00</b>

**Cost Norm for 2nd year Maintenance (Year -III)  
Removal of Lantana with infestation up to 50% at wage rate of Rs. 200/-**

Sr. No	Particulars of the work	Qty.	Unit	Rate	Amount
1	Cleaning of Lantana (sprouts)/seedlings three times throughout the year	9	Mandaysper ha.	200	1800.00
2	Tending operations	1.15	Mandaysper ha.	200	230.00
	<b>TOTAL</b>				<b>2030.00</b>
	<b>Or Say</b>				<b>2030.00</b>

<b>Total cost including maintenance</b>	<b>19960.00</b>
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**Cost Norm for Clearing of Ground Vegetation on the total area  
Removal of Lantana with infestation up to 75% at wage rate of Rs. 200/-**

Sr. No	Particulars of the work	Qty.	Unit	Rate	Amount
1	Cutting /removal/ disposal of Lantana under CRS method	86.33	Man days per ha.	200	17266.00
2	Cleaning of Lantana (sprouts)/seedlings one time after first cut	6	Man days per ha.	200	1200.00
3	Tending operations	1.15	Man days per ha.	200	230.00
	<b>Total</b>				<b>18696.00</b>
4	Contingency for tools, documentation, photoes, exposure visits, workshops etc. 5%				934.80
	<b>GRAND TOTAL</b>				<b>19630.80</b>
	<b>Or say</b>				<b>19630</b>

**Cost Norm for 1st year Maintenance (Year -II)  
Removal of Lantana with infestation up to 75 % at wage rate of Rs. 200/-**

Sr. No	Particulars of the work	Qty.	Unit	Rate	Amount
1	Cleaning of Lantana (sprouts)/seedlings three times throughout the year	15	Man days per ha.	200	3000.00
2	Tending operations	1.15	Man days per ha.	200	230.00
	<b>TOTAL</b>				<b>3230.00</b>
	<b>Or Say</b>				<b>3230.00</b>

**Cost Norm for 2nd year Maintenance (Year -III)  
Removal of Lantana with infestation up to 75% at wage rate of Rs. 200/-**

Sr. No	Particulars of the work	Qty.	Unit	Rate	Amount
1	Cleaning of Lantana (sprouts)/seedlings three times throughout the year	13	Man days per ha.	200	2600.00
2	Tending operations	1.15	Man days per ha.	200	230.00
	<b>TOTAL</b>				<b>2830.00</b>
	<b>Or Say</b>				<b>2830.00</b>

<b>Total cost including maintenance</b>	<b>25690.00</b>
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**Cost Norm for Clearing of Ground Vegetation on the total area  
Removal of Lantana with infestation up to 100 % at wage rate of Rs. 200/-**

Sr. No	Particulars of the work	Qty.	Unit	Rate	Amount
1	Cutting /removal/ disposal of Lantana under CRS method	105	Mandays per ha.	200	21000.00
2	Cleaning of Lantana (sprouts)/seedlings one time after first cut	8	Mandays per ha.	200	1600.00
3	Tending operations	1.15	Mandays per ha.	200	230.00
	Total				22830.00
4	Contingency for tools, documentation, photoes, exposure visits, workshops etc. 5%				1141.50
	<b>GRAND TOTAL</b>				<b>23971.50</b>
	<b>Or say</b>				<b>23970</b>

**Cost Norm for 1st year Maintenance (Year -II)  
Removal of Lantana with infestation up to 100 % at wage rate of Rs. 200/-**

Sr. No	Particulars of the work	Qty.	Unit	Rate	Amount
1	Cleaning of Lantana (sprouts)/seedlings three times throughout the year	15	Mandaysper ha.	200	3000.00
2	Tending operations	1.15	Mandaysper ha.	200	230.00
	<b>TOTAL</b>				<b>3230.00</b>
	<b>Or say</b>				<b>3230</b>

**Cost Norm for 2nd year Maintenance (Year -III)  
Removal of Lantana with infestation up to 100 % at wage rate of Rs. 200/-**

Sr. No	Particulars of the work	Qty.	Unit	Rate	Amount
1	Cleaning of Lantana (sprouts)/seedlings three times throughout the year	13	Mandaysper ha.	200	2600.00
2	Tending operations	1.15	Mandaysper ha.	200	230.00
	<b>TOTAL</b>				<b>2830.00</b>
	<b>Or say</b>				<b>2830.00</b>

<b>Total cost including maintenance</b>	<b>30030.00</b>
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**Cost Norm for Clearing of Ground Vegetation on the total area  
Removal of Other weeds with infestation up to 25% at wage rate of Rs. 200/-**

Sr. No	Particulars of the work	Qty.	Unit	Rate	Amount
1	Cutting /removal/ disposal of Other weeds	8.75	Mandays per ha.	200	1750
2	Cleaning of sprouts / seedlings one time after first cut	2	Mandays per ha.	200	400
3	Tending operations	1.15	Mandays per ha.	200	230
	Total				2380
4	Contingency for tools, documentation, photoes, exposure visits, workshops etc. 2%				47.60
	<b>GRAND TOTAL</b>				<b>2427.60</b>
	<b>Or say</b>				<b>2430</b>

**Cost Norm for 1st year Maintenance (Year -II)  
Removal of Other weeds with infestation up to 25% at wage rate of Rs. 200/-**

Sr. No	Particulars of the work	Qty.	Unit	Rate	Amount
1	Cutting /removal/ disposal of Other weeds	3	Mandaysper ha.	200	600
2	Tending operations	1.15	Mandaysper ha.	200	230
	<b>TOTAL</b>				<b>830</b>
	<b>Or say</b>				<b>830</b>

**Cost Norm for 2nd year Maintenance (Year -III)  
Removal of Other weeds with infestation up to 25% at wage rate of Rs. 200/-**

Sr. No	Particulars of the work	Qty.	Unit	Rate	Amount
1	Cutting /removal/ disposal of Other weeds	2	Mandaysper ha.	200	400
2	Tending operations	1.15	Mandaysper ha.	200	230
	<b>TOTAL</b>				<b>630</b>
	<b>Or say</b>				<b>630</b>

**Total cost including maintenance 3890**

**Cost Norm for Clearing of Ground Vegetation on the total area  
Removal of Other weeds with infestation up to 50 % at wage rate of Rs. 200/-**

Sr. No	Particulars of the work	Qty.	Unit	Rate	Amount
1	Cutting /removal/ disposal of Other weeds	17.5	Mandays per ha.	200	3500.00
2	Cleaning of sprouts / seedlings one time after first cut	4	Mandays per ha.	200	800.00
3	Tending operations	1.15	Mandays per ha.	200	230.00
	Total				4530.00
4	Contingency for tools, documentation, photoes, exposure visits, workshops etc. 2%				90.60
	<b>GRAND TOTAL</b>				<b>4620.60</b>
	<b>Or Say</b>				<b>4620</b>

**Cost Norm for 1st year Maintenance (Year -II)  
Removal of Other weeds with infestation up to 50 % at wage rate of Rs. 200/-**

Sr. No	Particulars of the work	Qty.	Unit	Rate	Amount
1	Cutting /removal/ disposal of Other weeds	6	Mandaysper ha.	200	1200.00
2	Tending operations	1.15	Mandaysper ha.	200	230.00
	<b>TOTAL</b>				<b>1430.00</b>
	<b>Or say</b>				<b>1430.00</b>

**Cost Norm for 2nd year Maintenance (Year -III)  
Removal of Other weeds with infestation up to 50 % at wage rate of Rs. 200/-**

Sr. No	Particulars of the work	Qty.	Unit	Rate	Amount
1	Cutting /removal/ disposal of Other weeds	4	Mandaysper ha.	200	800.00
2	Tending operations	1.15	Mandaysper ha.	200	230.00
	<b>TOTAL</b>				<b>1030.00</b>
	<b>Or say</b>				<b>1030.00</b>

**Total cost including maintenance**

**7080.00**

**Cost Norm for Clearing of Ground Vegetation on the total area  
Removal of Other weeds with infestation up to 75 % at wage rate of Rs. 200/-**

Sr. No	Particulars of the work	Qty.	Unit	Rate	Amount
1	Cutting /removal/ disposal of Other weeds	26.25	Mandays per ha.	200	5250.00
2	Cleaning of sprouts / seedlings one time after first cut	6	Mandays per ha.	200	1200.00
3	Tending operations	1.15	Mandays per ha.	200	230.00
	Total				6680.00
4	Contigency for tools, documentation, photoes, exposure visits, workshops etc. 2%				133.60
	<b>GRAND TOTAL</b>				<b>6813.60</b>
	<b>Or say</b>				<b>6814.00</b>

**Cost Norm for 1st year Maintenance (Year -II)  
Removal of Other weeds with infestation up to 75 % at wage rate of Rs. 200/-**

Sr. No	Particulars of the work	Qty.	Unit	Rate	Amount
1	Cutting /removal/ disposal of Other weeds	8	Mandays / ha.	200	1600.00
2	Tending operations	1.15	Mandays/ ha.	200	230.00
	<b>TOTAL</b>				<b>1830.00</b>
	<b>Or say</b>				<b>1830</b>

**Cost Norm for 2nd year Maintenance (Year -III)  
Removal of Other weeds with infestation up to 75 % at wage rate of Rs. 200/-**

Sr. No	Particulars of the work	Qty.	Unit	Rate	Amount
1	Cutting /removal/ disposal of Other weeds	6	Mandaysper ha.	200	1200.00
2	Tending operations	1.15	Mandaysper ha.	200	230.00
	<b>TOTAL</b>				<b>1430.00</b>
	<b>Or say</b>				<b>1430.00</b>

**Total cost including maintenance** **10074.00**  
**or say** **10070**

**Cost Norm for Clearing of Ground Vegetation on the total area  
Removal of Other weeds with infestation up to 100 % at wage rate of Rs. 200/-**

Sr. No	Particulars of the work	Qty.	Unit	Rate	Amount
1	Cutting /removal/ disposal of Other weeds	35	Mandays per ha.	200	7000.00
2	Cleaning of sprouts / seedlings one time after first cut	8	Mandays per ha.	200	1600.00
3	Tending operations	1.15	Mandays per ha.	200	230.00
	Total				8830.00
4	Contingency for tools, documentation, photoes, exposure visits, workshops etc. 2%				176.60
	<b>GRAND TOTAL</b>				<b>9006.60</b>
	<b>Or say</b>				<b>9007.00</b>

**Cost Norm for 1st year Maintenance (Year -II)  
Removal of Other weeds with infestation up to 100 % at wage rate of Rs. 200/-**

Sr. No	Particulars of the work	Qty.	Unit	Rate	Amount
1	Cutting /removal/ disposal of Other weeds	10	Mandays / ha.	200	2000.00
2	Tending operations	1.15	Mandays/ ha.	200	230.00
	<b>TOTAL</b>				<b>2230.00</b>
	<b>Or say</b>				<b>2230.00</b>

**Cost Norm for 2nd year Maintenance (Year -III)  
Removal of Other weeds with infestation up to 100 % at wage rate of Rs. 200/-**

Sr. No	Particulars of the work	Qty.	Unit	Rate	Amount
1	Cutting /removal/ disposal of Other weeds	8	Mandaysper ha.	200	1600.00
2	Tending operations	1.15	Mandaysper ha.	200	230.00
	<b>TOTAL</b>				<b>1830.00</b>
	<b>Or say</b>				<b>1830.00</b>

**Total cost including maintenance** **13067.00**  
**or say** **13070**

**Note:**

1. The rates have been arrived by assuming that one Headload of 30 kg will be obtained from an area of 4\*4 mtr. fully weed infested area.
2. The rate cutting of alien species is taken as Rs. 10.20/head load as per schedule rate approved for bush cutting.

### Dharamshala Forest Circle

#### Cost of raising Barbed Wire Fencing with wooden posts (100 mtr length)

Page	Item No.	Sr. No	Particulars of work	Qty / No	Unit	Rate	Amount
63	e -1 (i)	1	Cutting & preparation of wooden post 1.8 mtr. Long and 8 to 10 cm. dia mtr. i/c debarking & fashioning the top 15 cms. In conical shape.	34	% Nos.	1295	440.30
	ii	2	Carriage of fence posts upto 1.8 mt. Long and 8 to 10 cm. dia . Over average distance 1 km.	34	% Nos. /	681.75	231.80
	iii	3	Charing and coaltarring of the ends of the posts 45 cms. Bottom % 15 cms. Conical trring	34	% Non.	279.5	95.03
	iv	4	Preparation / Digging of holes 20-30 cm dia & 45 cm deep	34	% Nos.	906.75	308.30
	v	5	Fixing of wooden posts i/e strutting	34	% Nos.	696.25	236.73
	vi	6	Streching and fixing of barbed wire with U- stepple in each strand	400	Rmt.	4.75	1900.00
	vii	7	Interlacing of thorny bushes in the barbed wire obtained from planting site.	35	Head load	4	140.00
	xii	8	Carriage of barbed wire bundles over distance 1 km.				
			a) Level/down hill side		Qtl./K.M.	136.5	
			b) Up hill side	0.70	Qtl./K.M.	170.5	119.35
			Total				<b>3471.50</b>
			<b>Add increase 33.33%</b>				1157.05
			<b>Total A</b>				<b>4628.54</b>
			Cost of B/ Wire	0.70	Qtl.	6500	4550.00
			Cost of U/ Nails, Black Japan etc.	1	No	100	100.00
			Carriage of Barbed wire from central store to plntation site	1		100	100.00
			<b>Total B</b>				<b>4750.00</b>
			G. Total A+ B				9378.54
			Or Say				<b>9400.00</b>
			<b>Cost of erecting B/wire per rmt.</b>				<b>94.00</b>

### Chamba Forest Circle

#### Cost of raising Barbed Wire Fencing with wooden posts (100 mtr length)

Page	Item No.	Sr. No	Particulars of work	Qty / No	Unit	Rate	Amount
54	A - (i)	1	Cutting & preparation of wooden post 2 mtr. Long and 8 to 10 cm. dia mtr. i/c debarking & fashioning the top 15 cms. In conical shape.	34	% Nos.	1122.6	381.67
	ii -b	2	Carriage of fence posts upto 2 mt. Long and 8 to 10 cm. dia . Over average distance 1 km.	34	% Nos. /	787.35	267.70
	iii	3	Charing and coaltarring of the ends of the posts 45 cms. Bottom % 15 cms. Conical trring	34	% Non.	242.10	82.31
	iv	4	Preparation / Digging of holes 20-30 cm dia & 45 cm deep	34	% Nos.	785.85	267.19
	v	5	Fixing of wooden posts i/e strutting	34	% Nos.	603.30	205.12
	vi	6	Stretching and fixing of barbed wire with U- stepple in each strand	400	Rmt.	4.10	1640.00
	vii	7	Interlacing of thorny bushes in the barbed wire obtained from planting site.	35	Head load	3.55	124.25
55	xi	8	Carriage of barbed wire bundles over distance 1 km.				
			a) Level/down hill side		Qtl./K.M.		
			b) Up hill side	0.7	Qtl./K.M.	147.65	103.36
			Total				<b>3071.60</b>
			<b>Add increase 53.84%</b>				1653.75
			<b>Total A</b>				<b>4725.34</b>
			Cost of B/ Wire	0.7	Qtl.	6500	4550.00
			Cost of U/ Nails, Black Japan etc.	1	No	100	100.00
			Carriage of Barbed wire from central store to plntation site	1		100	100.00
			<b>Total B</b>				<b>4750.00</b>
			G. Total A+ B				9475.34
			Or Say				<b>9500.00</b>

**Cost of erecting B/wire per rmt.**

**95.00**



### Hamirpur Forest Circle

#### Cost of raising Barbed Wire Fencing with wooden posts (100 mtr length)

Page	Item No.	Sr. No	Particulars of work	Qty/ No	Unit	Rate	Amount
43	5-A (i)	1	Cutting & preparation of wooden post 1.8 mtr. Long and 8 to 10 cm. dia mtr. i/c debarking & fashioning the top 15 cms. In conical shape.	34	% Nos.	1468.1	499.14
	ii	2	Carriage of fence posts upto 1.8 mt. Long and 8 to 10 cm. dia . Over average distance 1 km.	34	% Nos. /	772.60	262.68
	iii	3	Charing and coaltarring of the ends of the posts 45 cms. Bottom % 15 cms. Conical trring	34	% Non.	316.90	107.75
	iv	4	Preparation / Digging of holes 20-30 cm dia & 45 cm deep	34	% Nos.	1227.80	417.45
	v	5	Fixing of wooden posts i/e strutting	34	% Nos.	788.95	268.24
	vi	6	Streching and fixing of barbed wire with U- stepple in each strand	400	Rmt.	5.40	2160.00
	vii	7	Interlacing of thorny bushes in the barbed wire obtained from planting site.	35	Head load	4.65	162.75
	xii	8	Carriage of barbed wire bundles over distance 1 km.				
			a) Level/down hill side		Qtl./K.M.	154.65	
			b) Up hill side	0.7	Qtl./K.M.	193.35	135.35
			Total				<b>4013.36</b>
			<b>Add increase 17.65%</b>				708.36
			<b>Total A</b>				<b>4721.71</b>
			Cost of B/ Wire	0.7	Qtl.	6500	4550.00
			Cost of U/ Nails, Black Japan etc.	1	No	100	100.00
			Carriage of Barbed wire from central store to plantation site	1		100	100.00
			<b>Total B</b>				<b>4750.00</b>
			G. Total A+ B				9471.71
			Or Say				<b>9500.00</b>

**Cost of erecting B/wire per rmt.**

**95.00**

## Dharamshala Forest Circle

### Maintenance of Plantation 1st year

Page	Item	Sr. No.	Particulars of work	Qty/ No.	Unit	Rate	Amount
65	xiii	1	Re-digging of pits				
			b) 45cm X 45 cm X 45 cm	300	% Nos.	477.25	1431.75
	x	2	Filling of pits				
			b) 45cm X 45 cm X 45 cm	300	% Nos.	272.75	818.25
	xi	3	Planting of entire plants in pits i/c ramming.				
			a) Raised in Polythiene bags.	300	% Nos.	218.25	654.75
65	xx	4	Mulching of plants.	300	% Nos.	59.75	179.25
	xxi	5	Weeding & hoeing of plants	1100	% Nos.	81.75	899.25
62	D - i	6	Carriage of plants by manual labour	300	% Nos.	218	654.00
43	5-A (i)	7	Cutting & preparation of wooden post 1.8 mtr. Long and 8 to 10 cm. dia mtr. i/c debarking & fashioning the top 15 cms. In conical shape.	27	% Nos.	1468.05	396.37
	ii	8	Carriage of fence posts upto 1.8 mt. Long and 8 to 10 cm. dia . Over average distance 1 km.	27	% Nos. /Km	772.60	208.60
	iii	9	Charing and coaltarring of the ends of the posts 45 cms. Bottom % 15 cms. Conical trring	27	% Non.	316.90	85.56
	iv	10	Preparation / Digging of holes 20-30 cm dia & 45 cm deep	27	% Nos.	1227.80	331.51
	v	11	Fixing of wooden posts i/e strutting	27	% Nos.	788.95	213.02
	ix	12	Repair of B/Wire fencing	350	Rmt.	1.75	612.50
	vii	13	Interlacing of thorny bushes in the barbed wire obtained from planting site.	35	Head load	4.65	162.75
			<b>Total</b>				<b>6647.56</b>
			Add increase 33.33%				<b>2215.63</b>
			<b>Total A</b>				<b>8863.19</b>
		14	Carriage of plants by mechanical means over distance 10 Km. average	300	LS		500
		15	<b>Cost of plants</b>	300		15	<b>4500.00</b>
			<b>Total B</b>				<b>5000.00</b>
			<b>Total A+B</b>				<b>13863.19</b>
			<b>Or say</b>				<b>13860</b>

## Dharamshala Forest Circle

### Maintenance of Plantation 2nd year

Page	Item	Sr. No.	Particulars of work	Qty/ No.	Unit	Rate	Amount
65	xiii	1	Re-digging of pits				
			b) 45cm X 45 cm X 45 cm	200	% Nos.	477.25	954.5
	x	2	Filling of pits				
			b) 45cm X 45 cm X 45 cm	200	% Nos.	272.75	545.5
	xi	3	Planting of entire plants in pits i/c ramming.				
			a) Raised in Polythene bags.	200	% Nos.	218.25	436.5
65	xx	4	Mulching of plants.	200	% Nos.	59.75	119.5
	xxi	5	Weeding & hoeing of plants	1100	% Nos.	81.75	899.25
62	D - i	6	Carriage of plants by manual labour	200	% Nos.	218	436.00
43	5-A (i)	7	Cutting & preparation of wooden post 1.8 mtr. Long and 8 to 10 cm. dia mtr. i/c debarking & fashioning the top 15 cms. In conical shape.	27	% Nos.	1468.05	396.37
	ii	8	Carriage of fence posts upto 1.8 mt. Long and 8 to 10 cm. dia . Over average distance 1 km.	27	% Nos. /Km	772.60	208.60
	iii	9	Charing and coaltarring of the ends of the posts 45 cms. Bottom % 15 cms. Conical trring	27	% Non.	316.90	85.56
	iv	10	Preparation / Digging of holes 20-30 cm dia & 45 cm deep	27	% Nos.	1227.80	331.51
	v	11	Fixing of wooden posts i/e strutting	27	% Nos.	788.95	213.02
	ix	12	Repair of B/Wire fencing	350	Rmt.	1.75	612.50
	vii	13	Interlacing of thorny bushes in the barbed wire obtained from planting site.	35	Head load	4.65	162.75
			Total				<b>5401.56</b>
			<b>Add Increase 33.33%</b>				<b>1800.34</b>
			<b>Total A</b>				<b>7201.90</b>
		14	Carriage of plants by mechanical means over distance 10 Km. average	200	LS		500
		15	<b>Cost of plants</b>	200		15	<b>3000.00</b>
			<b>Total B</b>				<b>3500.00</b>
			<b>Total A+B</b>				<b>10701.90</b>
			<b>or Say</b>				<b>10700</b>

### Dharamshala Forest Circle

#### Maintenance of Plantation 3rd year

Page	Item	Sr. No.	Particulars of work	Qty/ No.	Unit	Rate	Amount
65	xiii	1	Re-digging of pits				
			b) 45cm X 45 cm X 45 cm	100	% Nos.	477.25	477.25
	x	2	Filling of pits				
			b) 45cm X 45 cm X 45 cm	100	% Nos.	272.75	272.75
	xi	3	Planting of entire plants in pits i/c ramming.				
			a) Raised in Polythene bags.	100	% Nos.	218.25	218.25
65	xx	4	Mulching of plants.	100	% Nos.	59.75	59.75
	xxi	5	Weeding & hoeing of plants	1100	% Nos.	81.75	899.25
62	D - i	6	Carriage of plants by manual labour	100	% Nos.	218	218.00
43	5-A (i)	7	Cutting & preparation of wooden post 1.8 mtr. Long and 8 to 10 cm. dia mtr. i/c debarking & fashioning the top 15 cms. In conical shape.	27	% Nos.	1468.05	396.37
	ii	8	Carriage of fence posts upto 1.8 mt. Long and 8 to 10 cm. dia . Over average distance 1 km.	27	% Nos. /Km	772.60	208.60
	iii	9	Charing and coaltarring of the ends of the posts 45 cms. Bottom % 15 cms. Conical trring	27	% Non.	316.90	85.56
	iv	10	Preparation / Digging of holes 20-30 cm dia & 45 cm deep	27	% Nos.	1227.80	331.51
	v	11	Fixing of wooden posts i/e strutting	27	% Nos.	788.95	213.02
	ix	12	Repair of B/Wire fencing	350	Rmt.	1.75	612.50
	vii	13	Interlacing of thorny bushes in the barbed wire obtained from planting site.	35	Head load	4.65	162.75
			Total				<b>4155.56</b>
			<b>Add Increase 33.33%</b>				<b>1385.05</b>
			<b>Total A</b>				<b>5540.61</b>
		14	Carriage of plants by mechanical means over distance 10 Km. average	100	LS		500
		15	<b>Cost of plants</b>	100		15	<b>1500.00</b>
			<b>Total B</b>				<b>2000.00</b>
			<b>Total A+B</b>				<b>7540.61</b>
			<b>or Say</b>				<b>7540</b>

### Dharamshala Forest Circle

#### Maintenance of Plantation 4th & 5th year

Page	Item	Sr. No.	Particulars of work	Qty/ No.	Unit	Rate	Amount
65	xiii	1	Re-digging of pits				
			b) 45cm X 45 cm X 45 cm	50	% Nos.	477.25	238.625
	x	2	Filling of pits				
			b) 45cm X 45 cm X 45 cm	50	% Nos.	272.75	136.375
	xi	3	Planting of entire plants in pits i/c ramming.				
			a) Raised in Polythiene bags.	50	% Nos.	218.25	109.125
65	xx	4	Mulching of plants.	50	% Nos.	59.75	29.875
	xxi	5	Weeding & hoeing of plants	1100	% Nos.	81.75	899.25
62	D - i	6	Carriage of plants by manual labour	50	% Nos.	218	109.00
43	5-A (i)	7	Cutting & preparation of wooden post 1.8 mtr. Long and 8 to 10 cm. dia mtr. i/c debarking & fashioning the top 15 cms. In conical shape.	27	% Nos.	1468.05	396.37
	ii	8	Carriage of fence posts upto 1.8 mt. Long and 8 to 10 cm. dia . Over average distance 1 km.	27	% Nos. /Km	772.60	208.60
	iii	9	Charing and coaltarring of the ends of the posts 45 cms. Bottom % 15 cms. Conical trring	27	% Non.	316.90	85.56
	iv	10	Preparation / Digging of holes 20-30 cm dia & 45 cm deep	27	% Nos.	1227.80	331.51
	v	11	Fixing of wooden posts i/e strutting	27	% Nos.	788.95	213.02
	ix	12	Repair of B/Wire fencing	350	Rmt.	1.75	612.50
	vii	13	Interlacing of thorny bushes in the barbed wire obtained from planting site.	35	Head load	4.65	162.75
			<b>Total</b>				<b>3532.56</b>
			<b>Add Increase 33.33%</b>				<b>1177.40</b>
			<b>Total A</b>				<b>4709.96</b>
		14	Carriage of plants by mechanical means over distance 10 Km. average	50	LS		250
		15	<b>Cost of plants</b>	50		15	<b>750.00</b>
			<b>Total B</b>				<b>1000.00</b>
			<b>Total A+B</b>				<b>5709.96</b>
			<b>or Say</b>				<b>5700</b>

### All Forest Circle

#### Cost Norm for Silvicultural thinning

Page	Item	Sr. No.	Particulars of work	Qty/ No.	Unit	Rate	Amount
64	F-1	1	survey & demarcation of area	1	ha	102.25	102.25
65	H-i	2	Enumeration of trees	350	% Nos.	177.25	620.38
	G-ii	3	Marking of trees for felling	350	% Nos.	265.75	930.13
		4	Hammering of trees	350	% Nos.	20.25	70.88
			Total				1723.63
			Add increase 33,33				574.54
65	xx	4	Grand total				2298.16
	xxi	5	<b>Or Say</b>				<b>2300.00</b>

\*This cost norm is not confirmed by FCs and DFOs

**Annex H:**  
**Study Tour Proposal**

**HPFECF Project in Dharamsala, India  
(BMZ ID: 2013 70 246)**

**INTERNATIONAL STUDY TOUR 2017 -- COST ESTIMATE**

**Objective:** SFM of natural and artificial forest (including forest management planning and mapping in terms of forest function zoning), silvicultural treatment on mixed forest, individual forestry, community forestry, forest owners' cooperatives, scientific research (silviculture, nursery, genetic engineering) and forestry policy.

**Calculation basis:** 14 participants x 10 days (tentatively from June/July 2017)

<b>Cost Break Down (Lump Sums, in Euro)</b>				
<b>Item</b>		<b>Units</b>	<b>Unit Rate €</b>	<b>Total €</b>
1	Roundtrip Chaoyang-Munich-Chaoyang	14 flights	0	MPO
2	Per diem Allowances (meals, banquettes, entrance fees, etc.)	140 days	70	9.800
3	Accommodation	126 nights	140	17.640
4	Bus transport including driver (incl. board & lodging)	10 days	1.310	13.100
5	Professional Translation, incl. board & lodging English/German/Chinese	10 days	660	6.600
6	Allowances for lecturers	7 lectures	800	5.600
7	Tour preparation, communication (DFS HQ)	8 days	625	5.000
8	Insurance	14 persons	70	980
9	Tour guide from DFS, incl. board & lodging	10 days	<b>625</b>	<b>6.250</b>
<b>10</b>			<b>TOTAL</b>	<b>64.970</b>

ad 1) arrival and departure at/from Munich

ad 2) lump sum administered by DFS, unless otherwise desired (unit costs does not include pocket money)

ad 3) double rooms, 3 star category, lump sum administered by DFS

ad 4) unit cost includes board & lodging for driver

ad 5) unit cost includes board & lodging for interpreter

ad 6) lump sum administered by DFS

ad 9) alternatively, costs for tour guide can be borne by item (I) iKE4 of consulting contract

ad 10) in case of cancellation of the tour after commencement of planning procedure, a fee of 10% applies

## Study Tour 2017 to Germany for decision makers from the HPFECPP India, Dharamsala

**Schedule: proposed June/July in Germany (Proposal 2017-12-28)**

Date	Time	Venue
<u>Day 1</u>	???	<b>Arrival in Munich Germany</b> with xx and check in Hotel <ul style="list-style-type: none"> <li>• Welcome by Mr. Peter Hess, Study Guide</li> <li>• Briefing on study tour program</li> </ul> Overnight stay in Munich
<u>Day 2</u>	09:30 - 11:30	<b>BAYERISCHES STAATSMINISTERIUM FÜR ERNÄHRUNG, LANDWIRTSCHAFT UND FORSTEN – STMELF</b> Topic: Forest Organisation of Bavaria, development of forestry considering adaptation to climate change, forest functions, distribution of forest and ownership, contribution of forest sector to GDP deployment in forestry and forest products.
	14:00 – 16:30	<b>WALDERLEBNISZENTRUM GRÜNWALD</b> <ul style="list-style-type: none"> <li>• Land use planning in the context of other forest-related planning</li> <li>• Forest services for municipal and private forest owners</li> <li>• Financial management</li> <li>• Management of State forest, subsidies and other support for small private forests, forest protection and coordination of agriculture and forestry</li> </ul>
	18:30 - 20:00	<b>Sightseeing</b> Allianz Arena (World Cup Stadium), Olympian stadium, Marienplatz etc.
	20:30	Dinner hosted by DFS Deutsche Forstservice GmbH at Hofbräuhaus (A Bavarian entertainment and food in historic banquet hall)
<u>Day 3</u>	08:30 - 12:00	<b>Travel to Ramsau Berchtesgaden / Germany</b>
	13:30 - 18:00	Meeting place Wimbachparkplatz <b>NATIONAL PARK BERCHTESGADEN</b> <i>Topics: Park management</i> <ul style="list-style-type: none"> <li>• Objectives and zoning of the park</li> <li>• Diverse types of land use</li> <li>• Management measures</li> <li>• Spring research and spring monitoring</li> <li>• Walk to the springs of the Wimbachtal</li> </ul> Overnight stay in Berchtesgaden
<u>Day 4</u>	08:30 - 10:00	Boat trip on the Königsee (King Lake) or alternative if excellent weather cable car to mountain (top overview of national park and alps)



Date	Time	Venue
	10:30 - 12:00	<b>Transfer to Bad Aibling / Rosenheim</b> (Lunch on the road)
	13:00 - 16:30	<b>FOREST OWNER ASSOCIATION ROSENHEIM – BAD AIBLING</b> <i>Topic: Forest management by forest owner association</i> <ul style="list-style-type: none"> <li>• Tasks and functions of the association</li> <li>• Co-operation between small private forest owners, government incentives, extension</li> </ul> Visit farms (animal husbandry and woodlots)
	16:30 - 18:00	<b>Transfer to Munich</b>
	19:00	Dinner hosted by DFS Deutsche Forstservice GmbH at Donisl (A Bavarian entertainment and food in historic banquet hall) Overnight in Munich
<u>Day 5</u>	08:30 - 09:30	<b>Travel to Eurasburg</b>
	09:30 - 14:00	<b>FORSTBETRIEB LANDSBERG A. LECH FOREST ENTERPRISE LANDSBERG (Bayerische Staatsforsten AG - Bavarian State Forest Cooperation)</b> <i>Topic: Restructuring from forest bureau to forest enterprise</i> <ul style="list-style-type: none"> <li>• Major opportunities and challenges</li> <li>• New business areas</li> <li>• Forest management (visit of selected sites)</li> </ul> Picnic in a forest hut
	14:00 - 14:30	<b>Travel to Augsburg</b>
	15:00 - 17:00	<b>BAYERISCHES LANDESAMT FÜR UMWELT (LFU) BAVARIAN ENVIRONMENTAL AGENCY</b> <i>Topic: Environmental Administration in Bavaria</i> <ul style="list-style-type: none"> <li>• Tasks and functions of the agency</li> <li>• Nature protection and drinking water protection with a focus on spring areas</li> <li>• Environmental compliance monitoring</li> <li>• Methods of cooperation with public agency and private sector</li> </ul>
	17:00 - 18:30	<b>Transfer to Horgau</b> and check in hotel
	19:00	Dinner hosted at home of Family Hess, Dinkelscherben
<u>Day 6</u>	08:30 - 13:30	<b>Travel to Markt Erlbach ANW Bayern</b> Geschäftsstelle
	13:30 - 17:00	<ul style="list-style-type: none"> <li>• Tasks of the Office of the ANW</li> <li>• Principles of working with close to nature forestry</li> <li>• Demonstration of concrete work methods and approach based on the concept of the ANW i.e. how to convert Pine monoculture, techniques, cost.</li> <li>• Examples of forest stands in nearby visit</li> </ul>
	17:00 - 18:00	Transfer to Lohr am Main and check in Hotel
<u>Day 7</u>	09:00 - 12:00	<b>BAVARIAN FORST- AND TECHNICAL SHOOOL AT LOHR AM MAIN</b>

Date	Time	Venue
		Topics: <ul style="list-style-type: none"> <li>• Training programme for Foresters, forest technician</li> <li>• Silviculture - construction of mixed forests, conversion to natural forest management.</li> <li>• Consulting concepts for small forest owners,</li> <li>• Road construction</li> </ul>
	14:30 – 16: 00	<b>PRIVATE WINE PROCESSING ENTERPRICE</b> <i>Topics: Wine production and processing</i> <ul style="list-style-type: none"> <li>• Tasks and organization of the Enterprise</li> <li>• Visit of Model vineyard</li> <li>• Marketing through wine production cooperative</li> <li>• Testing of local produced products</li> </ul>
	19:00	Dinner at Lohr am Main Overnight in Lohr am Main
<u>Day 8</u>	08:00 – 12:00	<b>Travel to Munich</b> and check in Hotel
	12:00 - 14:00	Lunch in Munich
	14:30 - 20:00	<b>Sightseeing .</b>
<u>Day 9</u>	08:00 - 9:30	<b>Travel to Murnau</b>
	10:00 - 12:00	<b>FORSTBETRIEB WEILHEIM SEESHAUPT</b> <i>Topic: forest bureau and their tasks</i> <ul style="list-style-type: none"> <li>• Major opportunities and challenges</li> <li>• New business areas</li> <li>• Forest management (visit of selected sites)</li> </ul>
	13:30 - 14:00	Travel to Füssen
	14:00 - 17:00	Visit of famous Castle “Neu Schwanstein” Overnight at Füssen
<u>Day 10</u>	90:00 - 12:00	<b>ALPGENOSSENSCHAFT FÜSSEN</b> <i>Topics: Management of cattle in Forest</i> <ul style="list-style-type: none"> <li>• Major opportunities and challenges of cooperative and cattle farmers</li> <li>• Land conflicts: forest and landowners and solutions</li> <li>• Visit of animal husbandry sides in so-called ALPEN</li> </ul>
	13:00 - 15:00	<b>Return to Munich</b> and check in Hotel
	16:00 - 19:00	Time for shopping in Munich, sightseeing
	20:30	Fare well dinner hosted by DFS Deutsche Forstservice GmbH at Augustiner Bräu (A very famous Bavarian brewery restaurant).
<u>Day 11</u>	8:00 - 10:00	Sightseeing/Shopping
	??	Transfer to Airport
	??	Departure to Delhi