MicroPlan

Bio-DiversitySubCommitteeLANGCHAVILLAGE

ProjectforImprovementofHimachalPradesh ForestEcosystemsManagementandLivelihoods

GramPanchayat----------Langcha

B M C ---------- Langcha

BMC SubCommittee ----------Langcha

ForestBeat ---------- Kibber

Forest Block ----------Kibber

Forest Range ---------- WildLifeRange,Kaza

ForestDivision----------WildLife DivisionSpiti

Forest Circle ---------- Kaza

HIMACHALPRADESHFORESTDEPARTMENT

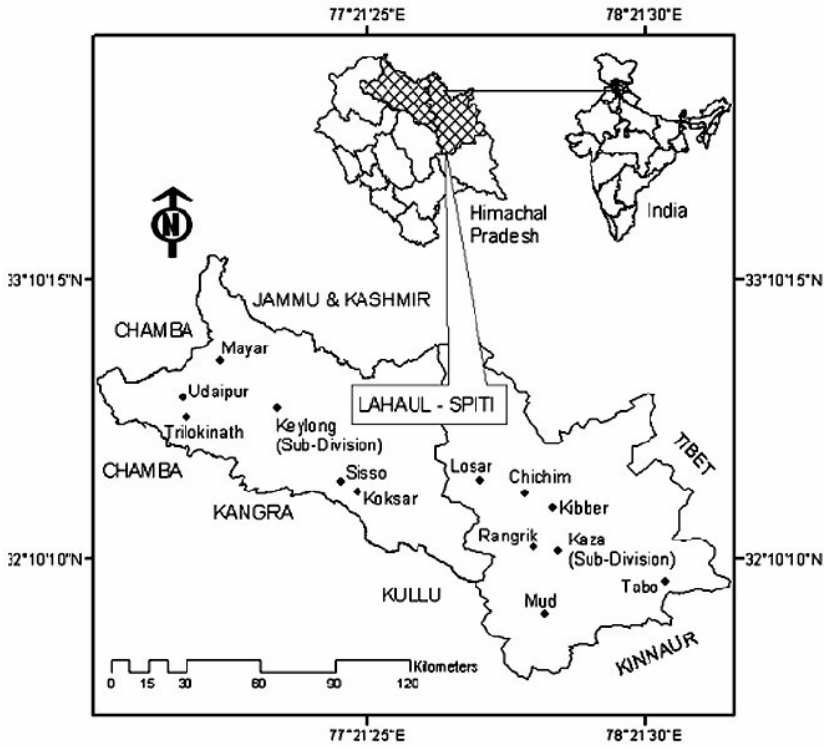
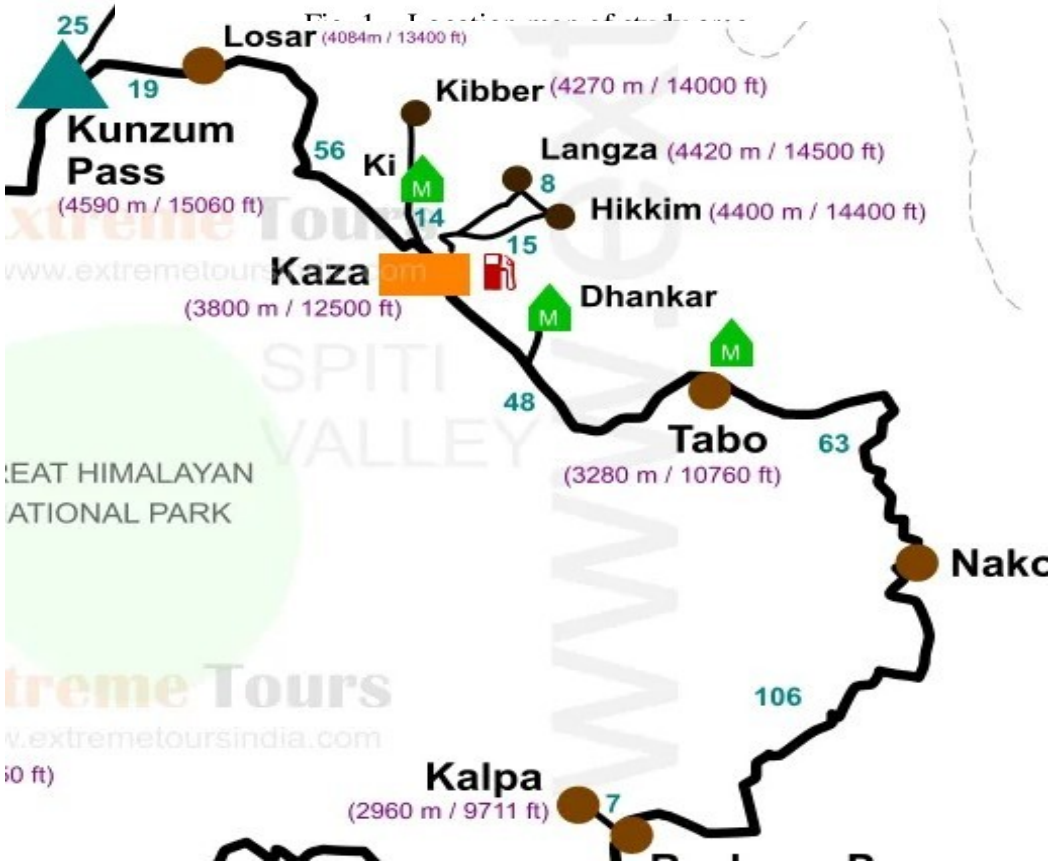


Fig. 1 Location map of study area



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Abbreviations&Acronyms	
ADMU	AssistantDivisionalManagementUnit
ANR	Assisted NaturalRegeneration
BO	BlockOfficer
CBMP	CommunityBasedBiodiversity ManagementPlan
EC	ExecutiveCommittee
CD&LIP	Community Development&LivelihoodImprovementPlan
CIG	CommonInterestGroup
DMU	DivisionalManagement Unit
SMS	SubjectMatterSpecialist
FCCU	ForestCircleCoordinationunit
Fgd	Forest Guard
FTU	FieldTechnical Unit
GIS	GeographicInformationSystem
FD	ForestDepartment
GOHP	Governmentof HimachalPradesh
GP	GramPanchayat
Ha.	Hectare
HHs	Households
HP	HimachalPradesh
HPFD	HimachalPradesh Forest Department
IFMS	Integrated ForestManagementSystem
IGA	IncomeGenerationActivities
INR	Indian Rupees
JICA	JapanInternationalCooperationAgency
MIS	Management Information System
MM	MahilaMandal
NR	NaturalRegeneration
NTFP	Non-TimberForestProduce
O&M	Operationand Maintenance
PFM	ParticipatoryForestManagement
PIHPFEM&L	Project For Improvement of Himachal Pradesh Forest

	EcosystemsManagement &Livelihoods
PMC	ProjectManagement Consultant
PMU	Project ManagementUnit
PRA	ParticipatoryRural Appraisal
RRA	RapidRural Appraisal
RO	RangeOfficer
SHG	Self Help Group
SWC	SoilWaterConservation
TOT	Trainingof Trainers
BMC	BiodiversityManagementCommittee
YM	Yuvak Mandal
WHS	Water HarvestingStructure

1 Introduction

1.1 Project Objectives

The objective of the "Himachal Pradesh Forest Ecosystems Management and LivelihoodsImprovement Project"(HPFESMLIP) is to manage and enhanceforest area ecosystemintheprojectarea,bysustainableforestecosystemmanagement,biodiversityconservation, livelihoods improvement support and strengthening institutional capacity,therebycontributingtoenvironmentconservationandsustainable,socioeconomicdevelopmentintheprojectarea inthe stateofHimachalPradesh.

1.2 ProjectApproachandStrategies

The project aims to sustainably manage and enhance the ecosystems of the forests in theproject area by project interventions under four components in correspondence with theproject outputs as below. Each component has the preparatory phase, implementationandphase outphases.

Output 1: Sustainable Forest Ecosystem
Management,Output2:BiodiversityConservationand
Output 3: Livelihoods Improvement Support are supported
byOutput 4:InstitutionalCapacity Strengthening

Thebasicapproachestobefollowedundertheprojecttoachievetheprojectobjectivesinclude;

Empoweringforest-fringecommunities,particularlywomen,throughsustainablelivelihoods and ensuring positive involvement of rural people in managing their ownenvironment.
Strengthening community institutions such as Village Forest Development Society (VFDS)andBiodiversityManagementCommittees (BMCs)/subcommittees.
Alleviatingpovertyoftheruralpoorthroughincomegenerating interventions.
Planning and implementing site specific technical and scientific forestry interventions,includingsoilandmoistureconservation,restockingofdegradationareasthrough appropriate Silvi-cultural operations utilization of the inherent potential of available rootstock,underplantingwithsuitable species,blockplantationsinblank patches.
Promotinginter-sectoralconvergence(ISC).

Interventions to be planned and implemented by VFDS/JFMCs and BiodiversityManagementCommittee/subcommittees(Micro planning).

Capacity Development of Himachal Pradesh Forest Department and VFDS/JFMCs.Promotingforest-basedandnon-forestbasedenterprises(suchasthevalueadditionandmarketingofmedicinal&aromaticplants, etc.)togeneratesustainableemployment,developindustriesandenhancethevalueofforests.

Caring for the socially disadvantaged groups in the society, such as scheduled castes,Scheduled Tribes, forest dwellers, women and other vulnerable people through propersafeguard measures as per the JICA guidelines and applicable Indian laws and regulations.Institutioncapacity strengtheningofForest departmentand itspersonnel.

1.3 ModeofOperation

The identified areas shall be divided into Participatory Forest Management (PFM) Modeand Departmental Mode. In case identified potential interventions areas are away fromcommunities but interventions are required for the purpose of the Project and the PFMinstitutes (VFDS/BMC sub-committee) showing their unwillingness to work in these areas,such interventions are to be conducted in the departmental mode. However, PFM modeshallbeselectedwhereapplicablefromtheviewpointofsustainability.Themajoractivities tobeimplementedunderdifferent modesincludeasbelow.

PFMMode

DrainageLineTreatmentincluding ex-situSoil &WaterConservation(SWC)workDensificationofmoderatelydenseforestsbyPlantationofmulti-purposetreesindegradedforestssoastoconvertopenforestsintomoderatelydenseforestsandmoderatelydenseforeststodenseforests;gapplantationsshouldbepreferredtobemoreeffective onlargerareas.

Afforestation/ Improvement ofOpen/ ScrubForestRehabilitationofForestAreasInfestedwithInvasive Species

Improvement of Pastures/ Grasslands (including in-situ SWC works)ForestFireProtection

ForestryInterventionatOutsideofForestAreas

DepartmentalMode

Improvement of Forest Boundary Management at Project Intervention AreasImprovement of Nurseries

Seedling Production

Non-PFM Drainage Line Treatment (ex-situ SWC work: including treatableSurfaceerosionControl)

Secondary Silvi-cultural Operations for Improvement of Existing ForestsImprovement/Densification of Moderately DenseForest

Afforestation/Improvementof Open/ScrubForest

Improvement of Pastures/ Grasslands (including in-situ SWC work)ForestFireManagement

In addition, the Community Development & Livelihood Improvement Plan (CD & LIP) willbe executed by PFM institutions including Common Interest Groups (CIG), User Groups,Self-helpGroups(SHGs) andExecutive CommitteeoftheVFDS.

1.4 NeedforSub-CommitteeLevelMicroPlan

All the Project activities at the BMC sub-committee level shall be undertaken afterpreparationof along-term (5-7Years)development/perspective microplan.

MicroplanningshallbeconsideredasanempoweringprocessthathelpsBMCsub-committeetolearnmoreaboutthemselves,theirresources,issuesandchallenges,strengths and weaknesses, and further to plan for their own development and sustainableresourcemanagement.

The implementation of PIHPFEM&L activities at the BMC sub-committee level shall beguided by an approved Micro Plan prepared by the respective VFDS/BMC sub-committee.Microplanpreparationshallbethefirststepofimplementationofthefieldactivities.

Micro Plan shall be a comprehensive development plan with a special focus on forest andlivelihood development. The micro plan shall cover both forest and non-forest areasmanaged by the BMC sub-committee. Micro plan shall integrate the needs of BMC sub-committeeintocomprehensiveplanthroughanalysisofcurrentconditions,socialassessment and interaction with the members, and with reference to the prescriptions oftheWorking Planof the Forest Division.

Micro Plan will not only focus on forestry activities and it should be comprehensive so astoincludealldevelopmentactivitiesthatmaybetakenupbyotherGovernmentDepartments and Agencies through convergence. During the preparation of micro plan theBMCsub-committeeshallinteractwithofficialsofotherdepartmentsandafterpreparation of Micro Plan, it should be shared with other Government Departments andAgenciesfordovetailingtheiractivitiesin BMCsub-committee.

A Micro Plan shall consist of two types of sub plans; i) Forest Ecosystem Management Plan(FEMP) and, ii) Community Development and Livelihood Improvement Plan (CD&LIP) andshallbeaggregatedbyFTUfor each range.

Under the Micro Plan composed by FEMP and CD&LIP, broad action plan is to be preparedfor 5 years based on the 10 year's vision. During the exercise, the achievements of theprevious year shall be assessed and identify issues and corrective measures to furtherincreasetheefficiencies andeffectivenessoftheproject implementation.

In the annual planning undertaken during 4th year, a broad action plan shall be preparedfor the fourth coming 5 years. The process of the 2-5 year action plan shall follow thesamestepasdiscussed intheabovesection.

A copy of Micro Plan, when prepared, shall be shared with the Gram Panchayat, BlockDevelopment Office (BDO) and other Line Departments for dovetailing their activities inBMCsub-committee.

Although Micro Plan shall be prepared for a period of 5-7 years it would be revisited onannualbasis.

2Basic Information

2.1 BasicInformationsheetonMicroplan

	Name oftheBMCSub-Committee	**Langcha**
	Name oftheWard	**Langcha**
	RegistrationNo.	**HPCD-5201**
	Name ofGram Panchayat/BMC	**Langcha**
	Name ofthe FTU/ Range	**Kaza**
	Name ofthe DMU/Forest Division	**Kaza**
	Name oftheDistrict	**Lahaul&Spiti**
	PeriodofMicroPlan	2022-23 to -2027-28
	DateofapprovalofMicroPlanby ExecutiveCommitteeofBMCSub-Committee	(BMC Sub-Committee resolution forapproval of Micro Planattached)
	Date of approval of MicroPlan by Headof DMU	**21/11/2022**
	Key team members engaged in Preparation of Micro Plan	Dr Pawan Kumar AttriMr.AmanKumar Ms.DikshaKumari Mis.Meenakshi Ms. Chhodon zangmo
	Date of Genera house conducted & resolution passed	**16/11/2022**
	Number of participants	**Male:06 Female:05 Total:11**
	Voting Pattern followed for formation of BMC Sub-Committee EC	Nominated:02 Elected:01
	Number of members in EC	Male: 6Female:5 Total:11

2.2 General Profile of BMC SubCommittee selected.

S. No	Description	CurrentStatus
1	Date & Registration No. of BMC Sub-Committee	**HPCD-5201**
2.	No.of Revenue Villages/Ward/Forest Villagescovered	**Ward-(Revenue Village Langcha)**
3.	Totalnumberofhouseholds(HHs)inWard	**32**
4.	TotalNoof householdrepresentingBMC Sub-CommitteeGeneral House	**10**
5.	TotalPopulationinLangchaWard	**158**
6.	TotalGeneral CategoriesHHsinWard Langcha	**Nil**
6	TotalOBC HHsinWardLangcha	**Nill**
7	TotalIRDP/BPLHHs	**11 HHs**
8	TotalLivestockinLangchaWard	**349**
9	Bankaccountdetails	**SavingAccount**
10	NameoftheBank	**SBI KAZA**
11	Date ofaccount opened	**18/06/200**
12	Accountnumber/IFSC	**A/N 40930721562** **IFSC CODE SBIN0003337**

2.3 DetailsofECMembers ofBMCSub-Committee

S.No	Name	M/Fe	Designation	Category	Village
1	Phunchuk Angdui	M	President	ST	Langcha
2	AngchukTakpa	M	Vice-President	ST	Langcha
3	ChheringDolma	F	Secretary	ST	Langcha
4	ChheringButih	M	Member	ST	Langcha
5	DorjeAngchuk	M	Joint Secretary	ST	Langcha
6	RinchenChhering	F	Member	ST	Langcha
7	RingchenDolma	F	Member	ST	Langcha
8	ChheringDikit	F	Member	ST	Langcha
9	ChheringButih	M	Member	ST	Langcha
10	SureshKumar	M	Cashier	ST	Langcha
11	SuryaBhagat	F	Member	ST	Langcha

3MicroPlanningProcess

Beforestartingthemicro-planningprocess FTU-TeamConductedtheGramPanchyatAwareness Meeting in Langcha village, in this Meeting Panchayat representative, othervillagers of Panchayat area participated.FTU team discussed about Jica Project and itsobjective with Participants in detail. After this meeting, FTU Team conducted the wardlevel awareness meeting in Langcha ward with the help of Ward members and othersources.ThenresidentofLangchawardagreedforJICAprojectimplementation.
Sub-committee level Micro Plan consists of Community Based Management Plan (CBMP)and Community Development & Livelihood Improvement Plan (CD&LIP). For activities tobe implemented through line department/agencies detail of Convergence activities alsoadded to the Micro Plan. The detailed process followed in preparation of micro planfocuses on information collection primary, secondary sources, ward level meetings
andothermeetingsheldwithprimaryandsecondarystakeholders.Theinformationalsocollected from different sections of the community using Participatory Rural Appraisal(PRA) and RRA techniques. During PRA focus group discussions (FGD) with the specificgroups i.e. vulnerable families OBC/Women was held. The information collected wastriangulatedwithdifferent groups and finalized ina plenarysession.

TheinformationcollectedwasanalysedjointlywiththeactivemembersofSub-Committee and other community participants. A meeting was conducted to share theprimary information collected. The changes were incorporated based on the participants'consensus.

The participants were divided into different sub-groups such as farmers, women, youth,poor, labour, etc. to identify their problems, perceived needs and priorities. The sub-groupssuggestedthepossiblesolutionstodealwiththeirneeds&prioritieswhichemerged during the group exercises. A detailed set of perceived problems and solutionswas developed jointly by micro planning team of the project and the Sub-committeemembers. During PRA exercise women and men were given maximum opportunities tobringforward forest relatedandlivelihoodrelatedissues.

Theperceivedproblems,solutionsandinformationcollectedthroughprimaryandsecondarysources werediscussedwithGeneralhouseofSub-Committee.Arefinedsetof

problems and solutions emerged to take it forward for inputs from the technical staff andthe experts to finalize the Micro Plan especially the CBMP. Executive Committee of wardwas also formed in the General house according to the HP Forestry Project guidelines. ForForestryinterventionsUserGroupwerealsoformed.

Technical staff of HPFD and Community focused on quantification and decided a tentativetarget for different interventions and prepared cost estimates based on the Project normsandlocallyprevailingrates.ThemicroplanisfinalizedinconsultationwithFieldTechnical Unit (FTU), Divisional Management Unit (DMU) and Executive Committee ofSub-Committeeandinputsfromother experts.

The details presented in the following table indicate the critical steps followed in microplanningprocess.

S. N	**SequentialStepsFollowedAdditioncanbemade asperlocallyfollowedprocess**	**date**
	Communityawarenessbuildingmeetings/workshops organizedat GP &ward Level	10.10.2021
	GPConsenttoworkwithprojectand	
	BMCSub-Committeeformed/Executivecommittee Constituted/sub-committee Registered.	
	ActionplanpreparedwithSub-CommitteeforMicro PlanPreparation	
	Micro planning process started /PRA exercise conducted(From-To)	
	Participatory informationanalysiscarriedout(From-To)	
	Negotiation/planningprocessheld (From- To)	
	Participants involved in negotiation/planning process(Male&Female)	55-60(morethan50% werefemale)
	Presentation of the draft plan in village/ward assemblyforapproval	

	Documentingthemicro plan(From-To)	

	MOUsignedbetweenDMUandECofSub-Committee for undertakingmicroplanningand implementation	
	Problems/challengesexperienced	Little far from JICA office not everyone was showing interest.

4. Socio-EconomicStatusof Langcha

4.1 GeneralDescriptionof theBMCSub-Committee

4.1.1 History of Areaselected:-

Langcha/Langcha Village is located in the Spiti Valley of Himachal Pradesh. Langcha Villageis located in Spiti District of Himachal Pradesh at a distance of 16 kilometers from Kazaand215 kilometers from Manali. Thealtitudeof thevillageis 4420 meters (14500 ft.),and is divided into two sections, namely Langcha Yongma (lower) and Langza Gongma(upper). The name of the village is believed to have derived from the words 'La' whichmeans a mountain pass and 'Za' which is short for Zama, a form of clay pottery practicedin the village. Another theory states that the name comes from the word 'Lang' – thevillage temple. This place is very rich in fossils of marine animals and plants that werefound here millions of years ago. Langcha and many other villages of Spiti were submergedunder the ancient geological Tethys Ocean, more than 200 million years ago. It inhabitedmany varieties of Mesozoic marine animals. It is difficult to imagine that this land couldhave been a huge ocean. Around 50 million years ago, the Himalayan range and theTibetanPlateauemergedfromthecollisionbetweenthetectonicplatesoftwosupercontinents(LaurasiaandGondwana),whichmadetheTethysoceandisappear.FossilsofmarineanimalslivingunderTethysSeaarefoundtodayinLangzaandneighboringvillages.ThevillageofLangchaiscommonlyreferredtoasthe"FossilVillage". In winters, Langcha weather is cold and dry. Winter months are extremely harsh,withtheLangcha temperature dropping as lowas -20degrees.

4.1.2 LocationofBMC Sub-CommitteeArea: -

Langcha Sub-Committee falls under Langcha BMC/Gram Panchayat in Spiti block of Lahul& Spiti District. The selected BMC Sub-Committee area falls under Kibber beat of WLKibberRangeinWLKazaforestDivisionManagementUnit(DMU).LangchaSub-Committee Situated near Kibber Wild Life Sanctuary and Sub-Committee Langcha fallsnearKibberBeat ofTerritorial RangeofKaza.Location Mapis attachedon **PageNo. 3**

Boundary:-The boundaryofselectedBMCSub-Committeeareaisasunder:-

East = komic

VillageWest= Kaza

North = Hikkim

VillageSouth =Forest

land

DistancefromForestand otheroffices:-

Langcha BMC Sub-Committee area is located at a distance of 16 km from WL Range office;Revenueblockoffice, DMUoffice and the 200km district headquarterkeylong.

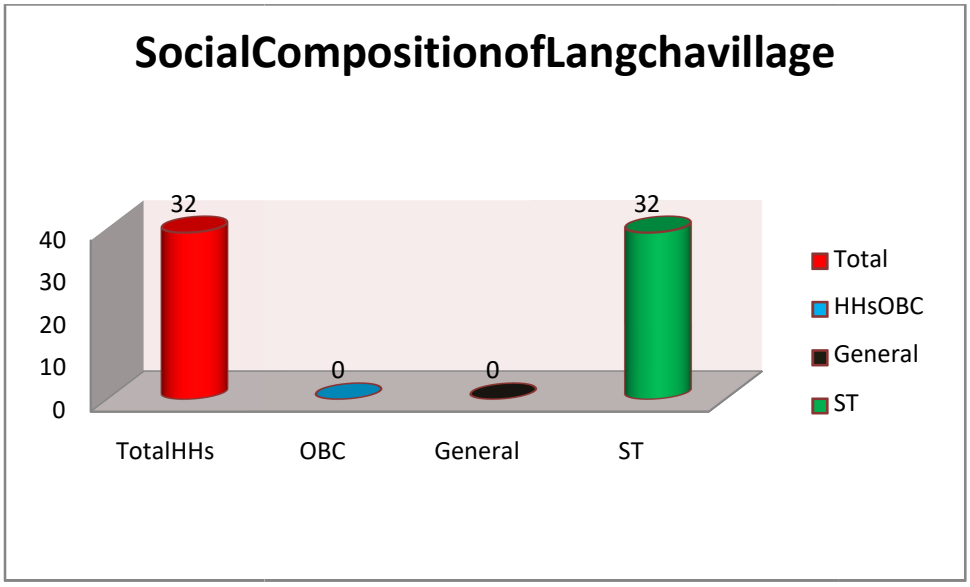
ImportantfeaturesofBMC Sub-Committee:-

Langchaishighaltitudevillageisknownforancientmarinefossils,forspottingendangered animals, and for the gigantic Buddha statue overlooking the Spiti Valley.Tourist comes from all over India to visit this famous site during summer season to enjoythescenicbeauty and climate.

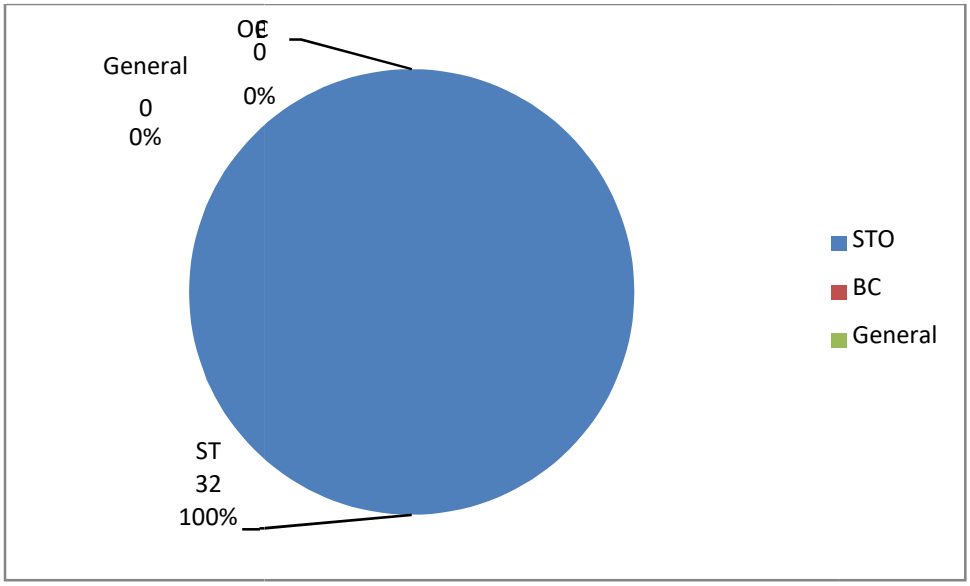
4.2. Socialcomposition

Households(HHs)	ST	SC	General	Total
No ofHHs	**30**	**2**	**0**	**32**
% of HHs	**100**	**0**	**0**	**100%**

- **InLangchaSub-Committee32HHsbelongtoSTcategory,noneofbelongtoOBC andGen. Category.**



- **100%HHs are belong toST category.**



4.3 Population

Socialcategory	Population(Number)					
	Male Adults	Female Adults	Total Adults	Male Children	Female Children	TotalChildren

OBC	00	00	00	00	00	00
ST	75	69	144	11	14	25
SC	8	6	14			
Total	**82**	**76**	**158**			

Total population of Langcha Sub-Committee is 158. Out of these 82 are male and 76 arefemale. Out of total population 14 are belong to SCT category, remaining of which belongtoSTcategory.

4.4 EducationalStatus

4.4.1 EducationalStatus(Adults)

Level	**Number**		
	Male	**Female**	**Total**
Illiterates	**24**	**31**	**55**
Percentage(Illiterates)	**15.18%**	**19.62%**	**34.81%**
Primaryeducation	**0**	**0**	**0**
Middleeducation (10^{th})	**10**	**15**	**25**
HigherSecondary(12^{th})	**43**	**25**	**68**
Graduates and above	**5**	**5**	**10**
Professional courses	**0**	**0**	**0**
Totalliterates	**58**	**45**	**103**
Percentage(literates)	**36.70%**	**28.48 %**	**65.18 %**

65% people are literate. Out of these 36% males are educated while 28% females areeducated. Whereas 34 % population is illiterate out of which 15% male and 19% femaleare iiliterates.15% are middle level educated, 43% are higher secondary level and only 6%aregraduatesandabove.

4.5 EconomicCategories

4.5.1 WealthrankingasperPRAexercise

Category	**Criteria/Indicator**	**No of**	**Category code****	**CategoryWise**

		HHs				
				Gen	ST	SC
Better off	GovtJob,agriculture, Homestays.	15	**B**	**00**	**14**	**1**
Manageable	Agriculture,home stays	6	**B**	**00**	**5**	**1**
Poor(BPL)	SmallFarmers, Labour	11	**C**	**00**	**11**	
Total		**32**		**00**	**30**	**2**

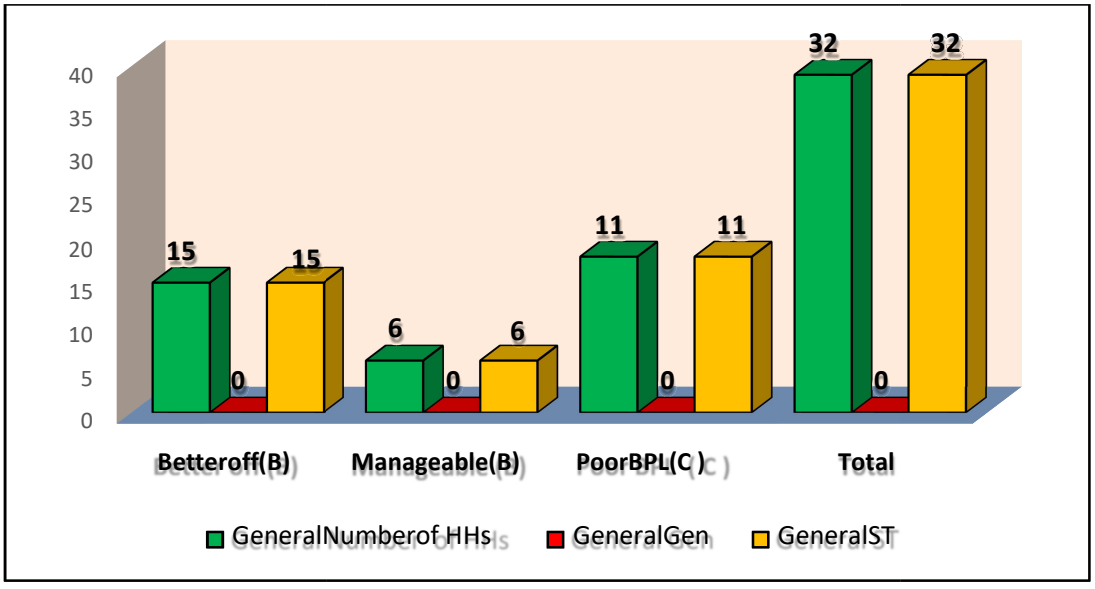
VulnerableHHsarethosefina whichdolabourwork,andaresupportedbyrelatives ncially.

Poorcategoryisof smallfarmers whohavelesslandandalsodolabourwork.

Manageablecategoryincludespeopleinvolvedinagriculturehaving06Bigh landbetween03to ado exclusiveagriculture

BetteroffdoGovt.jobs,andarehavingagriculturelandmorethan6-11bighaandsomeshortof joblikepart time worker, work chargeetc.

InBMCSub-committeepeoplebelongtoBcategory66%,andpoor(BPL)withsmallholding doinglabourworkforotherpeoples are34%.



4.5.2 HHsAbove andBelowPoverty Line*(As per Government Criteria)*

Households	Total	APL	BPL
Noof HHs	32	21	11
%ofHHs	100%	66%	34%

During livelihood analysis B category HHs showed 50 % dependence on Agriculture, 50% ongovtjob work for their livelihoods.

Whereas category B (Manageable) HHs showed 60% dependence on Agriculture andAnimalhusbandryandLabour40%deficiencyinmeeting their livelihoodrequirement.

There is no categoryA classfound in thisarea

4.6 AccesstoBasicFacilities/Services

Facilities/Services	Availability (%HHs)	Distance (Km)	Current status
Toilets	100%	-	Every household have their personel local dry toilet.
Toiletswith flushwater	-	-	**Very few**
LPG	100%	16Km.	kaza
Improvedstove/Tandoor	100%	-	Available.
Electricity	100%		Available.
Drinking water	100%	05-1Km	Available.
Healthservices	100%	16 KM HQ	CHC KAZA
Veterinary	100%	16KM.	Veterinary ServiceisAvailableinKaza.

services			
Banks	100%	16KM.	villagers go to Kaza for avail Bank Services
Markets	100%	16KM.	VillagersgotoKaza, FEW small item shops are available.
Anganwadi	100%	100to 1000 Mtr.	Aganwariavailableinvillagewithgoodservice
Primary schools	100%	100 to 1000 Mtr.	PrimarySchoolavailablewithin the villagewithgood Service
Secondary schools	100%	16Km	Sr.Secondary School availableinKaza.
PDS	100%	0.5-02 KM.	PDSavailablewithinLangchaVillage with betterService
Transport	100%	03-04 KM.	Govt.BusserviceandPvtservice(Taxi) availableinLangchaVillage
Telecommunication	100%	10km	AllHHhaveMobilePhoneswithpoor networks

5. ResourceAnalysis

5.1 LandResources

5.1.1 LandUsePattern

Landuse	Total land	Landundercultivation	Forest land/area	Community /Panchayatland	Wasteland area	Areaunder Non-agriculture use
Area(ha)	**421.8**	**27.53**	**0**	**372.07**	**13.14**	**9.06**
% Area (ha)	**100%**	**6.52**	**0**	**88.21**	**3.11**	**2.14**

5.1.2. Land OwnershipPattern

LandOwnership	Privateland	Community / Panchayatland	Forest land	Waste Land	Total
Area(ha)	**27.25**	**372.07**	**13.14**	**9.06**	**421.8**
% Area (ha)	**6.52**	**88.21**	**3.11**	**2.14**	**100%**

5.2 Forest Resources5.2.1 Forest Area

5.2.1.1 SiteSelection andLocation

ThissitehasbeenshortlistedbytheDMUandhisfieldstaff.Bio-

diversityManagementCommitteeLangchahadformedbyHimachalPradeshStateBiodiversityBoar
dunder

Biodiversity act 2002. As per guidelines of JICA, three sub-committees had to be formedunderBMC.The selectedBMC/GramPanchayatLangchahas threewards.

The Sub-Committee Langcha area falls under Forests falling under One Forest beat ofLangcharange.ThesiteSub-CommitteeLangchaissituatednearkibberWildlifeSanctuary.
The site is approximate 16 Kms from WL Range office Kaza. Location ***Map isattachedPage No. 03***

5.2.1.2 DatafromWildlifeForestDivisionforCommunityBasedBio-DiversityManagement Plan (CBMP)

KibberWildlifeSanctuary

Notified on 1.11.1999 comprising area of 1400.00 sq km. And on dated 28 July 2010 itincludes an area of 867 sq. Km to the existing 1400 sq km whereas 46.88 sq km area ofexcluded alongwith village Kibbrifrom existing 1400 sq km of Kibber wildlife Sanctuary .The total area of 2220.12 sq km shall now constitute the Kibber Wildlife Sanctuary afterrationalization. The sanctuary has three beats Kibber, Langcha and lalung. The area ofkibberbeat is1124.50sqkm.

Beinga highaltitude sanctuary KWS is home to a variety of rare animalslike Ibex, bluesheep, red fox, Tibetanwolly hare, Himalayan Wolf Lynx, Pika elusivesnow leopard.Birds that are found here include the Himalayan snow cock, Himalayan billed chough, thebearded eagle and griffons, and the sanctuary also offers a great view of the regions'speakChau-chauKhanamo &Chau-chau Khang Nilda.

Despitebeing a high altitude cold desert,spiti boasts of more than450 species ofmedicinalandaromaticplants.TheseincludeSeabuckthorn,Hatagirea,Aconitum,Ratanjot, Ephedra, Artemisia and other condiments. The alpine pasture on the highplateaus is home to a verity of small bushes and grasses includes Rosa sericea, Hipopheaeand Lonicera among others. Threatened plants species are *Arnebia euchroma, Berginiastracheyi,Physochlaenapraealta,Rhodiolaheterodonta.*

This areais situated within theGeo-coordinates. North Latitude 32º 45'42" N andLongitude 78º 22' 16" E Latitude 32º 25' 00" N and Longitude 78º 32'33" ESouth latitude32º 08' 27" and longitude 78º 20'35" EWest latitude 32º 35' 38" N and Longitude 78º 47'37" E. This area falls onsurvey of Indiatopo sheet No. 52 L & 52 H of scale 1" 4 miles.Are of Wildlife Sanctuary is 2220.12 sq.km. North boundary of the Sanctuary starts from apointonLunghernallafollowsdownstreamuptoitsconfluencewithMaungnallathena

crossing malung nalla boundary meets interstate boundary of Himachal Praesh and Jammu& Kashmir state where it forms V shaped and then moves around the same interstateboundary of Himachal Pradesh and Jammu & Kashmir upto turning point near Nurbula.East: From turning point interstate the again moves along the interstate boundary ofHimachal Pradesh and Jammu & Kashmir upto the point where that boundary ends andmeet with International boundary i.e. Gya Peak which is highest peak height 22290 feetsthen moves along international boundary of India andTibet upto top of Lingti River thenagain moves along international boundary upto the point where it forms again V shape.South: South boundary start from V shape on the International boundary and moves alonga ridge entering into Spiti Wildlife Division separating the water shed of Lingti river in thenorth and watershed of Spiti river in the south uptothe top of Kibbri nalla. West: westboundary starts from top of Kibbri nalla and then follows a ridge between Kibbri nalla andShiji Bhang nalla upto its confluence with Lingti river downstream upto village Sanglungand then across Lingti river boundary goes to Khukhe nalla leaving aside Sanglungvillageand then followsa small ridge upto the top of the nalla near Langcha village intheopposite side the follows the same nalla down stream upto its confluence with Shila nallaand then a crossing Shila nalla boundaryfollows a small nalla in oppositeto side upto itstop height Dhunbhschen 16900 feet and then followsa small nalla in the oppositesideand moves along the same nalladown stream upto its confluence with Puri Lungbhi andthenfollowsPuri Lungbhi up stream uptoits top Prangla height 18300 feetthenboundarymoves alonga ridge separating the water shed of talking river ,Tanmu riverand Kibji river in the south and Lungherriver and Malung river inthe North and meet inLunghernallaatstarting pointof Northern boundary.

5.2.1.3 Descriptionoftheforests(Sanctuaryarea)

TheentireSpitiregionisclassifiedunderthe‘Trans-HimalayanColdDesert’biogeographic zone . The vegetation in Spiti is classed as ‘Alpine scrub’ or ‘dry alpinesteppe’ vegetation. Such areas are characterised by scattered and open bush-landmainly with herbaceous and shrub species such as *Artemisia spp., Lonicera spp.* and*Caragana* spp. The graminoids such as *Festuca* spp., *Poa* spp. and *Stipa* spp. are foundin the area,but by and large their biomass seems to be depleted(Mishra 2001).Today, the two important vegetation formations in the region include open or desertsteppedominatedbygrassesandsedges(e.g.*Stipa*spp.,*Leymus*spp.,*Festuca*spp.,

Carex spp.) at altitudes up to 4,600 m, and dwarf shrub steppes between 4,000 and5,000 m dominatedby shrubs such as *Caragana*spp.,*Artemisia* spp.,*Lonicera* spp.and *Eurotia* spp.. Mesic sites such as river valleys and areas along springs and glaciersareoftencoveredbysedgemeadows(*Carex*spp.,*Kobresia*spp.).Vegetationoccursup to 5,200 m, but becomes sparse above 4,800 m, and is limited to forbs such as*Saussurea* spp. and *cushionoid* plants such as *Thylacospermum* spp.. The importantplantfamiliesinclude*Graminae,Cyperaceae,Brassicaceae,Fabaceae,Ranunculaceae,andLeguminoceae*.TheVillagersfromLangchaandKomicandLangcha Sub-Committee have their rights in this Forest area .The Villagers of theseareasdependonthisForestareaforFodder,FuelwoodandTimber.Therequirement Of Fodder and Fuel wood of Villagers does not fulfill from this Forest areasotheyalsogo toSanctuary areaforfulfilltheirrequirements.

Geology, Rock and Soil:

Most of the area is rich in fossils, mainly brachipods, trilobites, ammonites, bivalves andalso certaincorals andalgae, indicating its Tethyan past. Thehigh altitude desertsoilsare predominantly sandy and shallow, derived mainly by disintegration due to markeddiurnal and seasonal fluctuations of temperature. The area is characterized by sharpchangesinrock withcombinationofquartzite,shales,limestonesandconglomerates.

Terrain:

All of Spiti occurs above anelevation of3,000 m.Thelowest point is where the riverflows into the Kinnaur district near Hurling. The slopes on the right bank of Spiti are morerugged and have longer streams, while the left bank is less rugged. In fact there is a40km plateau from Kibber to Demul on the left bank, which also extends into much of themid Lingti valley, covering over 500km^2.There is Shilla peak (6,132m) which is one of thepopularclimbingdestinations.

Climate:

Spiti occurs on the leeward side of the Pir Panjal branch of the Himalaya that cut of theMonsoonaleffectfromtheplainsrenderingtheareadryandcold.Westerlydisturbancesinthe winterbringsomeprecipitationintheformofsnow.Thetemperaturescanrangefrom-40inpeakwinter,to30degreeCelsiusinpeaksummer,withtheminimumtemperatureremainingsubzerofromSeptembertoAprilinmostplaces.Severewinds

occur almost every day and are further reason for the desiccated atmosphere and lack oftrees.

Precipitation,Temperature, Wind Speedand Humidity:

Recent local reports and metrological data suggest a marked change in weather patternsin Spiti such as an increase in summer precipitation and a decline in winter snows. Wintersnows are important for both providing irrigation water through snowmelt streams insummer as well as soil moisture for rangelands during the crucial spring and early summerperiod.Latesummerrainsin (July-August)areseenas threats tostandingcrop.

Watersources:

The Sanctuary area is well drained; the Sanctuary falls under water shed of Lingti River inthe north and watershed of Spiti River in the south upto the top of Kibbri nalla. Thereare numerous seasonal nala are Lungher nalla, Maung nalla, Kibbri nalla, Kibbri nalla andShiji Bhang nalla, Shila nalla. These streams and nalas are uniformaly distributed over thesanctuarywholeareaarewelldrainedanditfallsincatchmentofoftalkingriver ,Tanmuriverand Kibjiriver inthe southandLungherriver andMalungriver intheNorth.

Rangeofwildlife, statusdistribution andhabitat:

Te mammalian diversity of Spiti is not exceptionally large, but range-restricted speciesoccurhere.Teprimarylargemammalsreportedfromthelandscapearethesnowleopard, Asiatic ibex, bharal or blue sheep, Tibetan wolf and red fox.All of which arenationally threatened, and many are also internationally threatened. based on existingliterature,prominently represented inthe avifaunalcompositionareConsideringthegood representation of high altitude habitats and their potential to hold good populationsof representative avifauna, Kibber WLSSnow Partridge (*Lerwa lerwa*), Hume's Short-toedLark (*Calandrella acutirostris*), Rosy Pipit (*Anthus roseatus*),Robin Accentor (*Prunellarubeculoides*),Brown Accentor (*Prunella fulvescens*)White-winged Redstart(*Phoenicuruserythrogaster*), Himalayan Grifon (*Gyps himalayensis*),Himalayan Snowcock (*Tetraogallushimalayensis*),SnowPigeon(*Columba leuconota*) etc.

TheBiogeographic classification

The entire Spiti region is classified under the **'Trans-Himalayan Cold Desert'** (Zone 1)biogeographiczonewiththeProvince'Ladakhmountains'(1B)coveringmostofthe

southern bank and the 'Tibetan plateau' (1A) covering the northern bank as per theWildlifeInstitute ofIndia's biogeographicclassification.

AlpinePastures:

The vegetation in Spiti is classed as **'Alpine scrub'** or **'dry alpine steppe'** vegetation.Suchareasarecharacterisedbyscatteredandopenbush-landmainlywithherbaceousandshrubspeciessuchas*Artemisiaspp.*,*Loniceraspp*.and*Caragana spp*.Thegraminoidssuchas*Festucaspp.*,*Poaspp*.and*Stipaspp*.arefoundinthearea,butbyand large their biomass seems to be depleted. Today, the two important vegetationformations in the region include open or desert steppe dominated by grasses and sedges(e.g. *Stipa spp., Leymus spp., Festuca spp., Carex spp*.) at altitudes up to 4,600 m, anddwarf shrub steppes between 4,000 and 5,000 m dominated by shrubs such as *Caraganaspp., Artemisia spp., Lonifcera spp. and Eurotia spp*. Mesic sites such as river valleys andareasalongspringsandglaciersareoftencoveredbysedgemeadows(*Carexspp.*,*Kobresia spp*.). Vegetation occurs up to 5,200 m, but becomes sparse above 4,800 m, andis limited to forbs such as *Saussurea spp*. and cushionoid plants such as *Thylacospermumspp*.TheimportantplantfamiliesincludeGraminae,Cyperaceae,Brassicacea e,Fabaceae,Ranunculaceae, andLeguminoceae.

ThepasturesarefoundabovethetreelineuptolimitsofPA.Avarietyofmedicinalherbs are found in these pastures. Food, water and shelter are the primary requirementsof any living being. Sufficient quantity of food and water both for animals and birds isavailable in the sanctuary. Some parts of the sanctuary are disturbed due to grazing ofdomestic and stray cattle. For wild life this factor is very important as hiding places,shelter, nesting, resting, play, food availability all get disturbed and wild life avoid theseareas. The food source in shape of grass and other biomass is present deficient quantity.Different herbivores prefer diverse food under different circumstances so nothing can besaid about quality of food availability. Even sufficient food present may not be availablefor the wildlife species due to various factors that attract or repel wild life. Disturbancebecomes alimiting factor.

Available boastsof morethan450 speciesofmedicinal andaromaticplants.Theseinclude*Seabuckthorn,Hatagirea,Aconitum,Ratanjot,Ephedra,Art emisia*andothercondiments. The alpine pasture on the high plateaus is home to a variety of small bushesandgressesincludes*Rosasericea,HipopheaeandLonicera*amongothers.Threatened

plantsspeciesare*Arnebiaeuchroma,Berginiastracheyi,Physochlaenapraealta,Rhodiolaheterodonta*.

Achecklistoftrees,herbs andshrubsfoundinthePAisgivenasAnnexure-XVII.

Animals

Vertebrates, their status, distribution and habitats. Habitat quality, quantity and keyareas

The mammalian diversity of Spiti is not exceptionally large, but range-restricted speciesoccurhere.The primary large mammals reportedfrom the landscape are thesnowleopard, Asiatic ibex, bharal or blue sheep, Tibetan wolf and red fox , all of which arenationallythreatened,andmanyarealsointernationallythreatenedAmongtheherbivores, ibex occupies much of the right bank and bharal, the left bank of Spiti River.Ibex also occurs on the left bank from the Lossar till near Kioto for potential distribution.Bharal extend into the Pare Chu valley also. During the field survey over 200 blue sheepwere sighted along with road extended to dumel village over 300 blue sheep in the Lingtivalley and about 25 in the Pare-Chu catchments. Ibex is mainly distributed in the narrowvalleys of the tributaries of the Spiti River along its right bank. Although snow leopardoccurs throughout the upper Spiti valley their signs were more frequent in the Lingti rivercatchments and the gorges formed by the Ula, Ratang and Guindi nala.Other animalsareAsiaticibex,BharalorBluesheep,Tibetanwolf,Redfox,Himalayanweaseletc

It is important to analyze the resources available in the sanctuary in terms ofhabitat, which ultimately control and regulate the wildlife. Habitat can be analyzed interms ofspace, food, cover, presenceof other animals and climaticfactors. Spacemultidimensional factor is a primary prerequisite for wildlife. The length and width givesthe quantity of area available, thickness indicative of number of layers available fordifferent species. The quality and quantity of each of these dimensions gives the idea ofnourishmentof wild animals,whichis in abundance inthis PA.

5.2.1.4 SelectionofInterventionareas,planning andtreatment:-

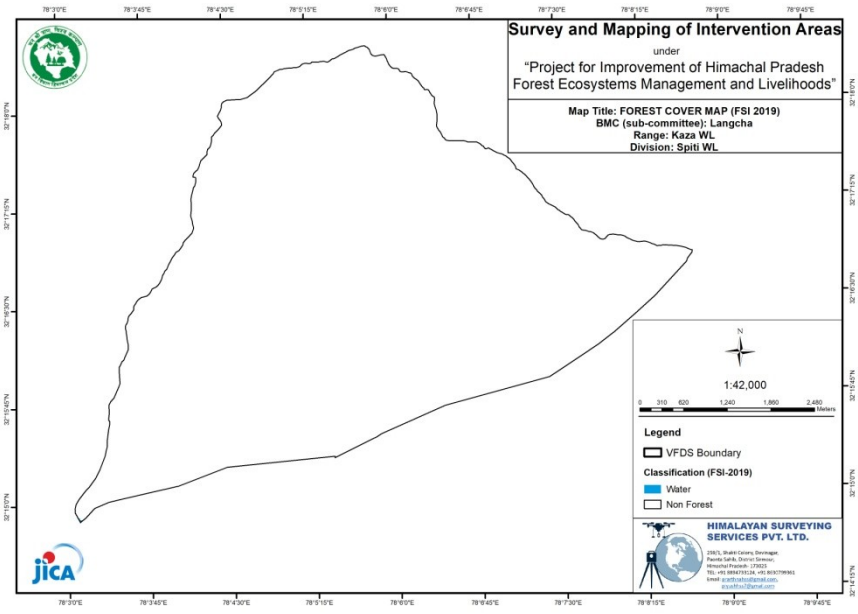
Theentireward has been selectedas site by DMU Kaza and his field stafffollowingprojectguidelineswhichincludedforestbeinginastateofdegradationto various

degrees, deficient to meet with the demand and supply chain to the local right holdersaroundtheforest.

ThePotential intervention areas /treatment plots have been identified during Microplanning exercises by technical staff (Fgd, Block Officer andRange officer/ACF Kaza.)The activities to be carried out stands discussed with villagers in detail during PRAexercises. The selected plots, community land /patches are either open areas or areblank, which would be planted with multipurpose species varying from 500-1000 perhectare.

5.2.1.5 Mapof potentialSites Selected (FOREST)

Social Map, Resource Map, Potential/intervention area Map, proposed intervention Mapsare attached as *Annexure-III, V, VI, the Google earth pro map of Sub-Committee area isannexed as Annex-III. **Technical maps would be prepared by Technical team to behired by JICA Forestry Project. (Land use map, Forest cover map/ Forest Densitymap,GP andWard boundarymaps,Treatment area map)***



5.2.1.6 Dataandmapsongrazing,otherrisksLiv

estock grazing

Livestock	HH	Average	Total
Cows	32	7	215
yak	32	1	49
Goats/Sheep	32	2	55

Horse/Mule	32	1	30
total	**32**	**11**	**349**

As many as 215 Desi cows 55 sheep/goats , 49 yak and 30 mule/horse are reported in thisvillage. The local right holders had been allowed to graze their cattle, sheep and goats inthe past as per their rights recorded in the Settlement Report. Grazing cause problems towildlifesuchas:

Competition for

food.Disturbance.

Transmission of

diseasesSoil Erosion.

Increaseinthequantityofunpalatablegrassesandweeds.

Illegal grazing is occasionally a problem in the area as stray cattle from in and around theprotected area graze inside the sanctuary mixed with the cattle of right holders, thus,disturbingthewildlife.Thisproblemisbeingeradicatedwiththeenforcementofguidelinesr eceivedfromtheMoEF&CCregarding suspensionof rights.

No grazing permits are issued for grazing of cattle in the area. Generally, the people ofthe villages situated outside the sanctuary send their redundant cattle to the forests atnightespeciallyduringrainyseason.Thevillagersalsotaketheirlivestocktohighaltitude pastures for grazing during summer season. They remain unattended and foreststaff is forced to remove them out of the sanctuary and some cattle also become prey tothewild animals.

Wildfires

Areafallsin-

alpinezone.Therearenotrees.longwinterareacoveredwithsnowandglacier.So,noincidence of fire inthisarea

HumanWildlifeConflict

Human –Wildlife conflicts often hamper the well –being of people and information on theissue was facilitated during the PRA exercise. Information about wild animal causingdamage to crop and livestock in the project site was gathered and is given inTable:1.13(there were 19 cases of livestock predation by snow leopards or wolves in 2015, and 28cases of livestock predation in 2016 in upper spiti area , Source :Snow leopard Trust,NatureConservation Foundation, Mysore).

5.2.1.7 HumanWildlifeConflict:TypeandExtentofDamage

Listofwildanimals	Typesof Damage	Extentof Damage
Snowleopard	Cattle/Sheep/pets	Low

Prescriptions:

- Most threats are only partially understood, and there is a need to understand them inthe general and specific area's context to be able to tackle them fully. Also, there is aneed to monitor the indices of the threats as these can change spatio-temporally.Credibleresearchorganizationsarethebesttoleadtheseeffortsaspertheirspecialization with significant contributions from the Forest Department and localorganizations. These studies should be encouraged right from the onset of the planimplementationand willcontinuetillitscompletion.
- Build localcapacityandstructuresforcarryingoutconservationeffortsbylocalcommunities. Village Wildlife Conservation Committees (VWCC), will be set up inappropriate villages or village clusters that will have representation of local gramsabha, youth, women, Gompa (monasteries), NGOs, CBOs, Forest Department, etc.Thisgroupwillbetrainedinparticipatoryplanningandaction,accountingandmonitoring wildlife through training workshops and programs. Particular emphasis willbe given on involving and getting inputs from the local Buddhist religious institutionsthatalreadypromote protectionofallsentientbeings.
- Research Organizations should be involved in developing modules along with capableindividualsororganizations,andprovidingresourcepersonstoconductcapacityenhancement workshops each year. This will help establish a strong group of youth,villagersanddepartmentalpeoplecapableofimplementingconservationandmonitoring initiatives.
- Carry out conservation awareness programmes for important stakeholders, especiallylocal school children, teachers, youthand general public.In addition,awarenessprogrammesforthelocaladministration,panchayats,politiciansandarmedforceswill also be developed and implemented. These programs will primarily target anappreciationandunderstandingoflocal wildlife,threats,and theirmitigation.

- Thelocalpeopleshouldbemadeawareaboutvariousdepartmentalwelfareprogrammes,especially aboutthe proceduretofile compensation claim.
- A rapid response team consisting of trained officials along with equipment's should bestationedeitheratRangeorDivision HQstodeal withanyexigencies.
- Provide economic opportunities wherever possible to reduce people's dependence onlocal resources. Threats such as excessive livestock grazing pressures, extraction andconflict resolution can be addressed through incentive based programmes where thelocalcommunitiesareabletogetdirectaccesstoconservationfundsortoprogrammes thathelpthem economically,orthatsavetheirpersonal resources.
- Set up incentive programmes and self-help groups to reduce the threats by localpeopleandotherusersofnatural resources.
- Fodder tree plantations shall be developed on the periphery of the villages and stallfeeding maybepromoted.

5.2.1.8 Dataandmaponintervention Areas/Treatmentplots

Cost norms applied for calculation are as per Forest Department approved norms. Plants,pit sizes are accordingly to models prescribed and approved by Forest Department andProject guidelines. The forests have been visited by team again and again and as per thesiteconditionstreatmentplotshavebeenprescribed.Thenallatreatment,soilconservation works are applicable in this Sub Committee area. Local ghazis are quite wellmaintained one plot with patch sowing has also been prescribed. Fencing part has beencriticallyanalysedkeepinginviewlocalconditionsaswellasbioticpressureandaccordinglyprescribed. Total6 Haccommunity landhavebeenidentified.

Plotwise detailsofSub-Committee

S. No	Plot name	Plot No	Area	Latitude longitude	PFM mode	FDmode
1	**Langchaward**	**1**	6ha	32.273027N 78.079783E	**Yes**	**---**

5.2.2 TrendinCommunityDependency onForests(as perPRAexercises)

Criteria	**Availability&Access inthe Past**	**CurrentAvailability&Access**
Major speciesavailable	*Trigonella emodi, Cicerarietinum, Festuca rubra,Geranium, Cousinia thomsonii*	*Aconogonum,Trigonellaemodi,Cicerarietinum, Festucarubra,*
Major NTFPs available	*Aconitum, Arnebiaeuchroma,Codonopsisclematidea, Gentiana,Pedicularis,Dactylorhiza hatagirea*	*Arnebia euchroma,Hippophaetibetana,Dactylorhizahatagirea*
Fodderavailability	*Trigonella emodi, Cicerarietinum,Festucarubra, Geranium*	*Trigonella emodi, Cicerarietinum, Festuca rubra, Geranium*
Fuel wood	*Nil ,small broken trees can be used as fuel wood.*	*Nill,small broken trees can be used asfuel wood*
Timberavailability	*nill*	*nill*
Accesstoopen grazing	Easy access	Onlysheep &Goat
Accesstofuel wood	Fuel wood not available	Fuel wood not available
Access to fodder	Easy access	Easy access

Access to	No timber available	No timber available

timber		
AccesstoNTFP	Easy access	Forestlandbeingnearer,butonlysomepeopleoramchicollectfortheirpersonaluses .nocommercializationofNTFP

5.2.3 HouseholdsDependingonForest(asper PRAexercises)

Category	% HHsdepending on forest				
	NTFP	Fuelwood	Fodder	Grass	Other
Primary forest users	20%	1.02 %	70%	50%	-
Secondary forest users	10%	1.02 %	15%	10%	-

Primaryforestusersforfuelwoodare100%,forfodder70%andforgrasscollection50%.Secondaryforestusersforfuelwoodare30%. People from adjoining villagesalsovisitthisforestarea.

5.2.4 Forestresources oftheselectedarea(as perPRAexercises)

S. No	Species	Main uses	RelativeAvailability(%)	Perceivedvalueof plant (scale of 1-10,1beinglowest)	
				Men	Women
1	*Trigonella emodi*	Fodder	8	6	8
2	*Cicer arietinum*	Fodder	6	6	6
3	*Festuca rubra*	Fodder	3	5	7

5	*Arnebia euchroma*	Medicinal	50	10	10
6	*Gentiana*	Medicinal	9	9	9
7	*Caragana brevifolia*	fodder	27	10	10
8	*Lonicera spinosa*	fooder	37	10	10
9	*Salix alba*	Fodder and very rare in fuel.	18	10	10
10	*Hippophae tibetana*	Fodder.	11	8	8

Relativeabundanceof*Arnebiaeuchroma*ishigh,itisoneofthemostfavouredspecies.Whereas*relativeabundanceofLonoicerasp.Caragana sp.*and*Salix*are37%,27%and 18% respectively.

5.2.5 Biodiversity

Major Habitat	**InitiativeTaken**
Snow Leopard	Developing snow leopard & prey species monitoringprotocols • Understandingand managing people-wildlifeconflicts • Developingmodelsformaintainingsociallyfencedareasforconservation • Awarenessprogrammesdirected at school children,

	teachersand youth • Helpinginconservationplanning andimplementation
Bharal	PastureDevelopment,BanonHunting,Improvementof wildlife habitat by constructing water pond, waterharvestingstructure,repairofpathbunkers,salt licksetc
Ibex	PastureDevelopment,BanonHunting,Improvementof wildlife habitat by constructing water pond, waterharvesting structure,repairofpathbunkers,saltlicksetc.
Bluesheep	PastureDevelopment,BanonHunting

HabitatManagement:

Habitat management is one of the most important activities of wildlife management. More ideal the habitat is, better it is interms of availability of food, cover and water to wild animals. It is imperative to analyse the resources that are available in thehabitat as this is the main factor which ultimately controls the wild life. Type of habitats available in the sanctuary needs to bethoroughly studied. As this will ensure the future management and all management practices shall be guided by the type ofhabitatandavailable resources.

Objectives:-

To study the habitat with respect to availability of resources and constraints.Toassessthe suitabilityof habitatfor variouskindof wildlife.

Tocarryoutvariousactivitiesfor habitat enrichment withminimumdisturbance.

Topropagatethe localspecies ofshrubs/fruitbearing planttoensureofavailability offoodtothewildlifeofthearea.

Management Prescriptions:-

- Forbettermanagementofthe habitatfollowingactivities needstobecarriedout.

- ImprovementofPastures.
- Maintenanceofwatersources.
- Augmentationof Salt Licks.
- Protectionand maintenanceofPhysicalFeatures.
- Understandingandmanaging people-wildlifeconflicts
- Helping inconservation planningand implementation

ImprovementofPastures:

Under pasture improvement not only the quality of bushes is to be improved but in vast extensive thaches/ pastures, planting ofbushes like *Cragana, Goylson, Salix sebuckthorn, Ribes sp, Rosa babiyna,Junipis carpus* and other species needs to be carriedout. This along with increasing variety of forage shall also provide shelter to wild life. The local nutritious grasses need to beencouraged.Everyyear10hectare of areashouldbetackledunder thisscheme.

Maintenanceofwatersources:

The ward is deficient in water. To improve the water availability in the sanctuary, it is necessary to construct some waterharvesting structures. These structures should be spread over the entire area. Every year five-six earthen water ponds will beconstructed in the sanctuary. The site of proposed water ponds should be identified carefully after visiting/inspecting the areaby DFO/ACF with clear objectives. The design will be according to the site available on the spot. The cost of each structure willbeas pertheestimateandshallvaryfromsitetosite.

AugmentationofSaltLicks:

Thewildanimalsmostlyungulateslivingintheforestareaarealwaysdevoidofmineralsalts.Tofulfilthisdeficiencytheysearch the place where natural salts oozes out from the rocks. These mineral salts are licked by them. Provision of artificial saltlick affect the behaviour and movement of wild animal and sometimes it also help poachers to locate the presence of theanimals. Therefore, it is necessary to provide due care and protection where artificial salt licks have been provided. It issuggestedthatalltheexistingartificialsaltlicklocationsshouldbemappedandbasedontheinformationdecisiontoprovide

new salt licks should be taken carefully. These salt lick sites should be identified carefully after visiting/inspecting the area byDFO/ACF. During the group patrolling exercises such sites have to be identified andwhich needs to be augmented andsupplemented by providing blocks of rock salts in these places. Monolith salt blocks may also be used for this purpose whichcontainsmixture of manymineral salts.

ProtectionandmaintenanceofPhysicalFeatures:

All the physical features like caves, dens, cliffs; dead and dry bushes would be protected and kept as such, as these features areused by wild animals. They are used by many birds, insects and small mammals as resting, nesting, roosting and perchingpurpose.

Understandingandmanagingpeople-wildlifeconflicts

It will focus on the effective conservation models, especially using local support as well as spreading awareness about wildlifeandenvironmental conservation.

Helping in conservation planning and implementation By creating awareness programmes directed at school, children andyouthand alsolocalcapacity, planningandimplementation ofconservationworks.

5.2.6 **NTFPCollection*(as per PRAexercises)***

S. No	Nameof NTFP (Local)	Collection time(Months)	No.ofHHsengaged - approx.	Averagecollection/Season/HH/year	Quantum collected in aseason/ year	Quantum sold in aseason/ year (Rs)	Sale valuein Rs./kg	From Sub-CommitteeArea - yes/no	Majorproblems
1	Arnebia or ratanjot (50%),								Species becoming Extinct, wild animal attacks

2	Codonopsis sp.(18%),								Wild animals attack
3	Gentianasp. (9%)								Availability reducing
4	Dactylorhiza sp. or salaampa nja(5%)								Abundance Reducing
5	Pedicularis(4%)								Abundance Reducing
6	Leontopodiu m (6%)								

- NoCollection of NTFP byprimary users.
- RattanJotJangliPyazusedforself-consumption only.

5.2.7 FuelsCollection/Consumption(asperPRAexercises)

S. No	Type offuelus ed	NoofHHs involved	Unit	AverageHHC onsumption /Year	AnnualCo nsumption /year	Sources	Costinvolv ed, ifany	MajorProblems
1	LPG	32	No.kg	6	192	Govt.	940.00/per cylinder	Carriageofkazato Langcha(16Km.)

2	**Fuel wood**	32	Cubic Kg.	6 months	625kg /HH/M	Forest &Pvt.Land	680/-per 1000kg	Carriageofkaza to Langcha(16Km.)

5.2.8 Fuels/FuelwoodDeficiency(asperPRAexercises)

Fuelsdeficiency	%HHswithfuelsdeficiency	Duration(Months)	Coping strategies
Low	--	---	--
Medium	---	--	---
High	32	Nov- March	Dependupon Forestcorporationfor fuel wood. PlantingofFodderplantsinforest&OwnLand,ifpossible.

- LPG is partially used for cooking only in 32HHs.Further Forest Department provides fuel wood atsubsidized rates(Rs.680/- per quintal) to all households upto maximum 1000kg per household. Apart from it villager collect woody plantsfuel wood of different plant species i.e. *Cargana sp, Lonicera sp.Salix sp. Seabuckthornsp*. Constitute over half of thecollections from the pastures for fuel wood . Apart from wood, people also collect considerable quantities of cattle, yakdungforfuel.
- Before winter fuelwood isstoredby each household from govt depo for use duringwinter.
- AveragefuelwoodconsumptionIs625KgperHHpermonthperfamilyinwinterseasonfromOcttoMarch.

*5.2.9*FodderCollection/Consumption *(asperPRAexercises)*

S. No	Type of fodder used	NoofHHs involved	Unit	AverageHH Consumption	Annual Consumption	Sources	Cost involved,	MajorProblems

				/Year	/year		ifany	
1	Green Fodder, Green Grass, Dry Grass frompasture land	32	Kg.	8quital /800kg	18quintal	Forest, Pvt.Land	No	Fodderbroughtfromfaroffforests Qualityfoddernotavailable Reducinglandholdingsduetofamilydivision Lessveterinaryfacilities ITKofrearinganimalsnotsuitableforhybrid animals.
						Forest, Pvt.Land	No	
				10quital /1000kg		Forest, Pvt.Land	No	
2	Agricultureresidues from Agricultural field		Kg.			Pvt.Land	No	

*5.2.10*FodderDeficiency*(as perPRAexercises)*

Fodder deficiency	%HHswithfodder deficiency	Duration (Months)	Coping strategies
Low			
Medium	32	Oct-March	Fodder (tuddi) purchased from market the rate Rs. 600per50kgfromKazamarket.PlantingofFodderplants inforest & OwnLand ,
High	-	-	-

Major Problems with the fodder collection/Consumption is that fodder is brought from residues of their crops such as peas.AfterSeptembersheepandYaksaresenttoopenpasturesforfreegrazingtillthesnowoccurs.Inwinterstheytaketheirdomesticcattleb acktothehouses.Averageanimalholdingis11animal(7cows,1donkey,1yak2goat/sheep).Theytoohavelessveterinaryfacilities. Fodder speciesused areagriculturalresiduesincludebarley,peasaregiven asfodder.

- Peopleprefer Highvaluecashcropsandarenot growingtraditional cropswhichare resultinginlessfodderavailability.

- Green and dried grass is obtained from Pastures in summer. Pastures are closed by the possessor from 15 June to the endofOctober,inOctobergrasscutting is doneandthereafterareaisopenedforallvillagersfor grazinginwinter.

While extraction of species for fodder depending upon the rangeland feature and livestock composition. on an average twentythree species were listed as importantfor fodderexcludingthe cultivatedones, and among these *Trigonella sp. Cicer sp. ,Aconogonumsp,Festucasp.,Geranium,Cousiniathomsonii,Lindelofiastylosa,Leymussecalinus,Rumex*,ect.Constitutedthebulkcollected from pastures.

*5.2.11*TimberCollection/ Consumption*(asper PRAexercises)*

S. No	Typeof Timber use	NoofHHsdemand /year	Unit	AverageHHconsumption /Year	AnnualConsumption /year	Currentsource of collection/ purchase	Costinvolved,if any	MajorProblems
1	Agricultural equipment, House construction/repair, Furniture	10-12	KG/quintal	700kg /7 quintal	700kg	Timber distribution, purchase from importedwood depots,sale depots		Thereisnoforesttheyhavetopaycarriageforfuelwoodtheypurchasefromdepot.

*5.2.12*TimberDeficiency*(as per PRAexercises)*

Timberdeficiency	% HHs with Timberdeficiency	Duration (Months)	Coping strategies

Low			
Medium	100%	Throughout the year	Illegalpurchase,illegalfelling,purchasefromHPSFCLTD.
High			

Many woody species of plants are used for construction of traditional mud brick houses. The larger boles for the roof are usuallyobtained from outside or local poplar and willow plantations. The multi-layered roof is lined with bushes and other plants,especially along the edges. Many of these serve as protection against erosion and seepage due to water flow and snow melt, butalso serve as emergency fodder and fuel on occasions. Potentilla, Hippophae tibetana etc. In some areas such as *Astragaluscandolleanus, Caragana brevifolia, Lonicera spinosa, Salix, Potentilla sp. and Hyppophae sp.* are also extracted in significantquantities for constructionof houses.

5.2.13 ForestManagementPractice*(AsPerPRAExercise)*

Keyactivities	**Traditionalpractices**	**Current practices**
Nurserydevelopment	Naturalregenerationwasassistedbyprotectingtrees.	No nurseryraising practice offorestryspp.
PlantationM anagement	Naturally growing spp. are protectedSingling if saplings growing naturallyShrubremoval	Naturally growing spp. are protected.And new plantations made by locals.

Forest protection	Onlyshrubsandherbsspeciesarepresent.	Conservation practices and scientific collectingmethod knowledge mustbethere
Development activities	GramDevelopmentcommittee Monasterycommitteeactivelyparticipate	GramDevelopment committee Monasterycommittee activelyparticipate.
Livelihoodactivities	NA	NA
IllegalActivities	Encroachment	ReducedduetoFDactions. Actionis takenagainstdefaulters

Sub-CommitteewillbeinvolvedinForestryplantations, soilconservationworks,maintenance,protectionworks.

Trainingformaintainingaccounts andrecordswouldbegivenbyproject**.**

5.2.14 ForestProtectionPractices*(AsPerPRA Practice)*

Forest disturbances	**Traditionalpractices**	**Currentpractices**
Forest fire	Noforest fire	
Landslide	Nolandslide	
Flood	Noflood	
Hunting	Hunting/poachingwas prevalentpriortoWLPA1972	Completelybanned/controlled
Illegal activities	Hunting	Nosuchactivitynoticed
Bio-diversity	Exttoafewamchiorlocalmedicinepractitioner	However the extraction from some area

conservation	families ineachvillage.Thispracticeisdeclineinthisareawith theadventof modernmedicine.	continuestheseday,muchofwhichappearsto becommercialforservingoutsidemarkets.Arnbiaor rattanjotisthemostimpotentcollection(50%)follow ed by codonopis sp. (18%)Gentiana sp. (9%) and Dactylorhiza sp. Or salaampanja(5%). Outer sider People extract medicinal plants atearlystage,resultingintoextinctionofmanyspp.d ueto lack of Knowledge.

- Sub-Committeewillparticipateindry stone check dam construction,brushwood checkdamsand bioengineeringworks.
- TakepartinNTFPconservationworks.

5.3 WaterResourcesDetail

Waterresources	No.	Availabilityofwater (Months)	Different uses	Current status	Maintained by whom	Problems	Opportunities
Silapeak	01	6	Drinking Water	WaterAvailable	ByVillagers	OpenSource	After new construction availabilityof Drinking Water will be IncreasedandApproximately15HHwillbeBenefited.
Glacierpeak	01	6	Wild Animal	SoilErosion	By Forest Department	Soil Erosion	Cons.OfBrushwood,Dry&CreatewireCheck Dam andsidewalls
Glacier water	01	6	Livestock, WildAnimal	SoilErosion	Villagers&IPHDeptt.	Roof of water tank needs	Check Dams

WateravailabilityfromnaturalspringsisthroughouttheyearThenaturalSourcesaremaximumOpensourcesAfternewconstructionandMaintenanceofthesesources thesesourceswillbemaintainedforVillagers,LivestockandWildlifealso.

5.4 AgricultureResources

5.4.1 CultivableLandUsePattern

	Cultivableland	Pasture / othergrazingland	Rain fedland	Cultivable wasteland	Total
Area(ha)	27.53	372.07	9.06	13.14	421.8
% Area(ha)	**6.52%**	**88.21%**	**2.14%**	**3.11%**	**100%**

Asperthesecondaryrecordsanareaof27.53hac.isundercultivation.Thereisnoirrigatedlandintheward.Therefore,wholecultivable land is under rain fed&cultivablewasteland.

5.4.2LandHolding Pattern

Category	Number of HHs	%HHs
LandlessHHs	-	-
Absentee farmer	-	-
Small&Marginal farmers(1-5 bigha)	**11**	**34**
Medium/large Farmer(6-15Bigha)	**21**	**66**

Nolandless

34 % of the farmers belong to small & marginal category 66 % of farmers are medium farmers.Thereare no Landlessand absenteefarmers.

5.4.3CroppingPattern

Major Crops	No. ofFarmersengaged	Irrigated/Rainfed	Unit ofYield	Average CropYield	District/State averageYield	% Deficit Yield	Reasons, if lowYield	PerceivedSolutions to improve crop yield
Barley	32	Rainfed	Qtl/hac	14.45	16.72qtl/ha	2.75	Lack of irrigationNouseof HYYLess use of FYMPoor cropmanagement	Provision ofirrigationProvidegoodqualityseedsSoilTestingNutrientaddition accordingly
GreenPeas	32	Rainfed	Qtl/hac	65	76.6qtl/ha	11.6	Unbalanced use offertilisersShortage of labourLow use of FYMPowdery mildew disease Highseedrate Low germination	Sameasabove

Potato	32	Rainfed	Qtl/hac	75	86.88qtl/ha	11.88	Unbalanceduseof fertilizersUntimel yapplication of inputs Lack of plantprote ctionmeasuresDiff erences infertility ofsoilLow use of FYMLocal seed	High yielding verities

- 32HHsin the Sub-Committeeare involvedin Cash cropscultivation (Barley, pea,potato,).
- Allcrops grown underrain fedconditions.
- Average yield of crops is as per primarystakeholder's information.
- State averageyieldofcrops isaspersecondarysource(CSKKVPalampur)website.
- Theaverageyieldofcropsgrownislesscomparedtothedistrictaveragebecausethecultivationpracticesaretotallydependent on rains.
- Village levelaverageproduction isasper villagersviewpoint.

5.4.4ChallengesofCultivableLand

Majorchallenges	**Currentstrategiestodealwithchallenges**	**Usefulness the of currentstrategies**
Poorsoilfertility	Application of FYMApplication of chemical fertilizers	Moderatelyuseful
Soilerosion (low	C/o RR stonemasonrystructures	Moderatelyuseful
Soil erosion (medium)	C/o RR stonemasonrystructures	Moderatelyuseful
Soil erosion (severe)	No severesoil erosionnoticed	
Lowlandproductivity	Application of FYMApplicationofF chemical ertilizers Use of Hybridseeds	Moderatelyuseful
Lowreten moisture tion	Grass FYM mulching, irrigation application, Drip practices	

Lackof irrigation	Irrigation through PVC pipes fromwatertanks	Lessuseful
Other-specify		

5.5 Livestock

Resource5.5.1LivestockHoldin gPattern

Type	Numberof HHs involved	Average HH holding	No.ofa nimal s	Problems	Opportunities
Cows	**32**	**7**	**215**	Thelackofcultivat edfodder, use oflow efficiencytools and harshcold	Potential area available forfod der plantationAwarene
yak	**32**	**1**	**49**		
Goats/Shee p	**32**	**2**	**55**		
Horse/Mule	**32**	**1**	**30**		

				winter makethe tasks evenmoredifficult. Lessmilk	ss camps by vet. DepartmentExposure visit tosuccessful areas.

				production Lack of scientificknowledge of animal rearing	
Total	**32**	**11**	**349**	-	-

5.5.2ProductionofMainLivestock

Type	**Product**	**Unit ofproduction**	**Average yield/production**	**Districtaverage**	**% deficit yield**	**Reasons for lowyield/ production**	
Cows	Milk	Kg	4.0kg	**3.9**	0.1	Lack of AwarenessDeficiency of Nutrition StallFeeding	Livestockdevelopmentthroughbreedimprovement,training,management and veterinaryservices
Crossbreed	Milk	0	3.4	**2.4**	1.0		

Goats/ Sheep			3.0	1.5	1.5	Low/lessQualityof Fodder&Grasses	

6 LivelihoodStrategies

6.1 ExistingLivelihood Strategies

Sourceoflivelihood	Number of HHdependent as		Majorconstraints/challenges
	Primary source	Secondary source	
Agriculture	**32**	**0**	Problem of erosion due to serious Topographical and climatic factors andallabioticPressure Maximumareaisrainfed;thereforetheadoptionrateofimprovedtechnologies and inputs by the farmers is less as compared to irrigatedland. Smallandscattered LandHoldingoffarmers Occurrence of natural calamities like drought, Cloud bursts, hailstorm,heavy snowfall, storms, unusual rise in temperature are quite frequentcausing losses to crops. Squeezing of agriculture Lands because of ancestral property division.Low risk bearing capacity and poor purchasing power of the farmers.Low productivityof crops. Increasing Populationofstray animalsandwild animals.
Forestry	**32**		Noforest

			Opengrazing Big pressure on pasture land,new seedling for fodder and Fuel woodEncroachment
Livestock/Animal Husbandry	**32**	**0**	ShortageoffeedsandFodderduringdry season. Traditional method of feeding.Scatteredandlowlandho lding. PooranimalproductivityI.e.lowmilkProduction,largenumberofnon-descripttypeanimal, lack ofbreeding bull,Poorextensionservice. Wildlife attacks. Lackofinterestofnew generation
Wagelabour	**32**		Workisnoteasilyavailable
Service/Job		**5**	ShortageofJobs,lackofquality education orskilled
Carpenters	**5**	**-**	Its wageworkdepends uponpeoplerequirement.

6.2 Livelihoods-ActivityCalendar

Seasonal Activities& Climatic events	Months											
	J	F	M	A	M	J	J	A	S	O	N	D
WageLabour												
Agri/Horticulture												
Grass/Fodder												
Rains												
Snow/winter												
Frost												
Irrigation												
Fuelwood												
Legends												
	Fully Occupied(fullmonth)											
	PartiallyOccupied											

LivelihoodActivityCalendarshowsthatvillagersarebusythroughouttheyear.However,theworkpressureduringSnowfall /winterislesscomparedtootherseasons.So,the villagersareavailableduring NovembertoFebruarymonthsforMicroplanning /meeting.

6.3 FoodDeficiency*(relatestonutrition)*

Foodde ficiency	% HHs withfoo d deficiency	Duration (Months)	Coping strategies
Low	N A		
Medium	**N A**	**-**	**-**
High	**NA**	**-**	**-**

Assuchthereis nofooddeficiency.

6.4 IncomeDeficiency

Incomede ficiency	% HHs with incomede ficiency	Duration (Months)	Coping strategies
Low	**NA**		
Medium	**NA**		
High	**NA**		

Over all there are no income deficiencies. Drudgery load is high; man and women are busy in working in Agriculture, Animalhusbandry in summer season where as in winter season they are involved in handloom, handicraft practices forsustenancelivelihood.

6.5 PotentialLivelihood Strategies

Sourceoflivelihood	Majorconstraints/challenges	Keystrategies
Green house-vegetablecultivation/nurseryraising	Purchasesaplingsfrom openmarket,Nonavailabilityof irrigation waterinsummer	Vegetable nursery rising by interest group.Dripirrigation,glacierwaterharvesting
Handloom	Oldlooms,Marketing	SwitchfromTraditional oldloomstoMordenhandloom
Weaving	Marketingproblem	Training with tools&exposure
Cutting & tailoring	Noexposureandtrainingtowomen	Training with tools&exposure
Collection ofNTFP	LackofknowledgeofmoreNTFPandtheirprotection	IfProjectgivesTrainingaboutitthenitwillbefruitfulforwomen.They can increase their income.

7. InstitutionalAnalysis

7.1 ExistingCommunity BasedOrganisation

CBOs	Ageof CBO (Year)	Formal/ Informal	Registered(Yes/No)	Objectives	Membership	Keyactivities	Credibility ofCBO	External linkages	Useful forthe project
Sub-Committee BMC	14/10/ 2020	Formal	Yes	Project/Forest Objective		ParticipationinJICA Project	Newly Formed	Yettobeestablished	Yes
Mahila Mandal/SHG	NA								
Kisham Mnadal	NA								
YuvakMandal	NA								

Allabove mentionedcommittees/groupswouldbe ofimmense helpto Projectand theirinvolvement wouldbehelpful inimplementation of project activities. Representatives of these committees will be included in BMC Sub-Committees asnominatedmembers

7.2 Preferences for External Linkages (Government institution working under sub-committeearea)

Name ofExternal Intuition(EI)	ImportanceoftheEIs	RelationshipwithEIs	Preference toassociatewith EIs
GramPanchayat	Governmentschemesforfamilies Roads connectivity through PMGSY Generalhousemeeting	Very helpful inintroducing newschemes Village development	**2**
ForestDepartment	Creatingawarenessforprotecting forests/ naturalresources.	Cordial relations.Forest guard, Bokeepsonvisiting villages	**1**
Veterinary	Health benefits for animals	Notverygood relationship	**4**
Health	Basic health facilities Healthcampaigns	Health/Ashaworkers are veryinteractive	**5**
Education	Basic knowledge onClimate change and importance of forests	Veryhelpful	**5**
Agriculture	Provisionofnew varieties, Awarenesscampaigns	Formal relationship with thedepartment	**4**
Horticulture	Awareness Camps ProvisionofnewveritiesofFruitPlants Awarenesscampaigns	Formal relationship with thedepartment	**4**

JalShakti	Veryimportantforwatersupplyandirrigation	Relation with fitteronly,needs improvement	**3**

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8. Problem Analysis and Solutions

8.1 Analysed Problems and Scientific Solutions

S. No	Problems identified	Justification of problems identified	Root cause analysis	Recommended solutions
1	High community pressure on nearby forestland	100% of the HHs depends upon forestland for fuelwood and 75% for fodder. Timber is a basic need of all households.	Depleting supply of fodder and fuelwood from the forestland.	Planting fodder & grass species Planting fuelwood trees Planting timber species
2	Increasing soil erosion & moisture loss	Soil erosion is along contour line Soil Erosion is of medium grade	Medium level soil erosion due to glaciers	Contour trenching Dry Stone check dam Masonry check dams Check walls
3	Lack irrigation coverage	100% percent cultivable land but scarcity of water	Water resources include glacial water used for drinking, domestic and wildlife use	Construction of water harvesting structures at shila peak
4	Low crop yield	Average yield of Pea and vegetables is less	Poor soil fertility Lack of information on crop production technology	Organizing farmers' camps IPM, IN Mat BMC Sub-committee level Linkages for increased information, knowledge & technology

6	Lowincome	Around 34%(11HH)offallinpoor BPLcategory	AllHHsaresmall&marginal farmersLow income from agriculture	Promotingentrepr nurshipSkilldevel opment Promoting income

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			&livestock Lack of employment opportunities Lackoffeasible& viable business opportunities Low level of entrepreneurship	generation activities throughSHGs/CIGs Facilitating cluster basedmicroenterprises development and marketing Upgrading handloom and cash crop cultivation
CommunityDevelopmentNeed& Priorities				
7	Wastage of overflow of drinking water near resources	Water flow at the contourlineofglacier water	Inabsenceof proper maintenancebythe community institutionsandline department	Construction/repairof water harvesting structure/Tanks

8.2 PerceivedProblemsandSolutions

SNo	**KeyStakeholde rs**	**Keyproblemsidentified bystakeholders**	**NoofHHsand/orareaaffected**	**Criticalcauses ofthepro blems**	**Perceived solutions**	**Prioritization ofproblems**
1	**Women**	No Mahila Mandal,fueland fodder availability at	32	Lack of Awareness	Formation of MM Capacity building	FormationofMMandits registration, IGAactivities,

		faroffplaces,lackofIncomeGenerationactivities(IGA).			programmes , plantingfuel,fodderspecies if possible.	Handloom,cash crops promotionPlanting fuel, fodder,timbers pp., If possible.
2	**Wage-labour**	Lackofwagethroughouttheyear	32	Less landholdingsLack oftraining	May be givenwage work in projectactivitiestraining for IGA withtools	Wage in plantationwork , Training in rope weavingetc.carpentry,with toolsprovision.

3	**Farmer**	1. Rain fedagriculture 2. Lack of awareness of agriculturalschemes	32	1 Lack ofirrigationfacilityandless landholdings2Agriculturestafflessvisit	Glacierwaterharvesting,awarenesscamps by Agriculture deptt.	1. Excess usingwaterharvesting byconstructingwaterharvestingstructure 2. Awareness camps onIntegratednutrientmanagement,Integratedpest management

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						andAgriculture deptt. Scheme etc.
4	**Landless**	**NA**				

8.3Implementation Activities/Interventions

Importantissues	PriorityRank	Specificactivitiesaspertheagreedsolutions	BenefittingHHs
Participatoryforest management			
Fuelwoodandfoddercollection from far offareas.	1	*Rosa macrophylla* (wild rose), speciesof*Hippophae,Myricaria,Salixflabellaris, S. hastate, S. lindeleyana,Juniperus recurva, Ribes orientale, R.alpestre, Lonicera spinosa (Thapp), L.obovata, L. rupicola, Capparis spinosa,Caraganabrevifolia(Trama).Rhododendronlepidotum,Coluteanepalensis,Ephedragerardiana,Clematisvernayii,Cotoneastermicrophylla etc*. The scrub and spinycushions are formed by the species of*Caragana,Astragalus,Artemisia,Cousinia,Saussurea,LoniceraandArnebia.Herbaceouselementisdominatedbythespeciesof Astragalus, Chesneya, Oxtropis, Cicer,Lindelophia,Allium,Rumex,Nepeta,Heracleum,Chenopodium,Artemisia,Lactuca,Gentiana,Gentianella,Hyssopus, Pedicularis,Rheum,Aquilaria,Caltha,Taraxacum,Plantagos,Aconitum,Thymus,Delphinium, Lepidium, Crepis, Mentha,Geranium,Bergenia,Senecioand Mertensia*	Wholecommunity

Lessfodder,fueltrees in village near byprivatearea.	**1**	*Chharma,Trama,Thapp,Sia(Wild rose) Umboo (Myricaria), Junipers,Ribesetc.*	Wholecommunity
Soil & water conservation			
Soil erosion and landslide near Contourline	**5**	Checkwalls,Checkdams Gabion wire structuresBio engineeringworks.	Wholecommunity
Water pondconstruction, Bourirepair	**2**	Renovation of existing water bodies,Constructionofpond, WHS etc.	Wholecommuni ty
CommunityDevelopment			
MahilaMandal Bhawan	**6**	Construction ofMahilaMandal Bhawan	Whole community
Livelihood improvement			
LackofIGA(Incomegenerationactivities)for women and otheryounggeneration at sub-committeelevel	**3**	**Asindividualactivities**CuttingandTailoring trainingneeded. **As Group activity** Handloom/ Ropeweaving,andherbstrainingneeded.	32 beneficiaries
Miscellaneousactivitiesforconvergence			
Footpathconstruction tohamlets	**7**	Better accessibility tocommunities.	Whole community
Fuelwood, FodderPlants and Medicinal plants	**1**	Willsupplementindaytodaylocalrequirements.	Wholecommunity
FarmingCamp	**4**	Will educate villagers in latestscientific knowledge and exchange	Wholecommunity

		ideas.	

Footpathconstruction tohamlets	7	Better accessibility tocommunities.	Whole community

8.4 SWOTAnalysisSub-committee

Strength	**Weakness**
Young&energeticgroups Clear vision to environment &climatechange Equal partition of all groupsGender equality Positive response Water available for IrrigationCash Crop Fertilise Land	NoSHGisformed Limitedknowledgeoftheproject LackofAwareness(Agriculture,Horticulture&Livestock) ColdDesertareaDeficiencyofFodder Lack of coordinate with line departmentLackofAwarenessregardingHygiene Shortspanforwork
Opportunity	**Threats**
Willingnessto learnandexecute Highly qualified team connected with advanced communication technology Wider networking with different agencies & government departments.Cash Crop OrganizeFarmingCamps Wellconnectedtoroad Highlyscope foreco tourism	Communityinference indecisionmakingprocess Time constraintsduringsummer Shorttimespanduetocolddesertregion Grazing

8.5 Setting the objectives for Development for the project

durationObjectivesfor Forestry Development

- ProtectionandconservationofforestLand
- Propagationforestshrubspecies
- Enhancedvegetative growth
- Enhancedforestcover
- Overallwatersheddevelopmentbyintroductionofmoistureretentionworks,soilprotectionworks

Objectivesforvillage/community Development

- Sustainablelivelihood
- Reductionofpressureonforestresources
- Assetgeneration
- Convergenceofvariousdepartmentsforoveralldevelopmentofthearea
- Women empowerment
- Introduction toecotourism

9. CommunityBasedBiodiversity ManagementPlan

9.0 WhatisBiodiversity?

Biodiversity **isthefoundationof** ecosystemservices **towhichhuman** well-being **isintimately linked.** No feature of Earth is more complex, dynamic, and varied than thelayeroflivingorganismsthatoccupyitssurfacesanditsseas,andnofeatureisexperiencing more dramatic change at the hands of humans than this extraordinary,singularly unique feature of Earth. This layer of living organisms—the biosphere—throughthecollectivemetabolicactivitiesofitsinnumerableplants, animals,andmicrobesphysically and chemically unites the atmosphere, geosphere, and hydrosphere into oneenvironmental system within which millions of species, including humans, have thrived.Breathableair,potablewater,fertilesoils,productivelands,bountifulseas,theequitabl eclimateofEarth'srecenthistory,andotherecosystemservicesaremanifestations of the workings of life. It follows that large-scale human influences overthis biota have tremendous impacts on human well-being. It also follows that the natureoftheseimpacts, good orbad, is withinthepower of humanstoinfluence.

Forest biological diversity is a broad term that refers to all life forms foundwithinforestedareasandtheecologicalrolesthey perform. In biologicallydiverse forests,thiscomplexityallowsorganismstoadapttocontinuallychangingenvironmental conditionsandtomaintain ecosystemfunctions.

Forests are critical habitats for biodiversity and they are also essential for theprovision of a wide range of ecosystem services that are important to human well-being.There is increasing evidence that biodiversity contributes to forest ecosystem functioningandtheprovision ofecosystemservices.

9.1 WhatisCommunity BasedBiodiversity Management(CBM)?

Community-based biodiversity management (CBM) is a participatory approach to empowerlocal stakeholders as well as the local institutions for managing biodiversity for social,economic, and environmental benefits to communities as well as to the general public.This approach, usually developed by the in-situ conservation approaches and it is focusedon community level issues, enhancing the capacity of communities to analyze livelihoodassets,problems,andtoseekandimplementsolutionswithrespecttouseandconservat ionofgeneticresourcesoflocalbiodiversity.Itrecognizesandsupportslocal

institutions and communities as legitimate and crucial actors in the national plant geneticresource system, and its role in the wider context of biodiversity and development.Communities are empowered to exercise their rights and secure access and control overtheir genetic resources. The approach is community-centered, strengthens local decisionmaking process and emphasizes local governance in the conservation and utilization ofcommunitybiodiversity resources.

Documenting spatial patterns in biodiversity **is difficult because taxonomic, functional,trophic, genetic, and other dimensions of biodiversity have been relatively poorlyquantified.** Evenknowledgeoftaxonomic diversity,thebestknowndimensionofbiodiversity, is incomplete and strongly biased toward the species level, mega-fauna,temperate systems, and components used by people. This results in significant gaps inknowledge,especiallyregardingthestatusoftropical/temperatesystems,marineand freshwater biota, plants, invertebrates, microorganisms, and subterranean biota. Forthese reasons, estimates of the total number of species on Earth range from 5 million to30 million. Irrespective of actual global species richness, however, it is clear that the 1.7–2millionspeciesthathavebeenformallyidentifiedrepresentonlyasmallportionoftotal species richness. More-complete biotic inventories are badly needed to correct forthisdeficiency.

9.2 Communitybased BiodiversityManagement Plan(CBMP)

Communitybased BiodiversityManagement Planisa decentralisedprocess where thelocal community is in the centre stage that monitors the resources around it, its use andplans foritssustainability forlong term benefitsfor allsucceedinggenerations.

Thus community basedbiodiversitymanagementplan hastwofactsasmentioned below:

- Communitybasedbiodiversitymonitoring
- Communitybasedbiodiversitymanagementplanning

9.2.1 Community based BiodiversityMonitoring

<u>Qualitativebiodiversitymonitoring:</u>

Community based biodiversity monitoring can be undertaken through both qualitative andquantitativeapproaches.Qualitativemonitoringsimplydepictsthecommunityperceptions ontheavailabilityofresourcesanditsuseoverasaidtimeperiod.Itiscost-

effectiveandshouldbeusedforsubstantiatingmoreaffirmativeapproachesofbiodiversity monitoring.

Sofar,underthePIHPFEM&Lprojectinterveninggeographies,HimachalPradesh State Biodiversity Board has undertaken the application of Peoples BiodiversityRegisterExercisesinselected120GramPanchayats[1].The People'sBiodiversityRegister (PBR) is a designed tool for the formal maintenance of the local knowledge withproper validation. PBR is a record of knowledge, perception and attitude of people aboutnatural resources, plants and animals, their utilization and conservation in a village or aPanchayat. PBR is also proposed as a mechanism to create awareness among the peopleabouttheconditionofplantsandanimalsandtheirconservationandsustainableutilization . This mechanism can bring the people to participate in development planningwhichwould be ecologicallysustainable andsocially justifiable.

People's Biodiversity Register is a tool for collecting and documenting biodiversitydata.Localcommunitiesneedtobeencouragedandtrainedtobetheprincipalpartici pants in this process. When communities maintain their registers, it will fostergreater conservation of this natural resource base. Despite the provisions within theBiological Diversity Act, 2002, which grants due rights to communities, it has not beenfullytranslated intopractice.

FurtheranalysisofPBRspreparedinHimachal Pradeshhas following deficiencies:

- Mostofthe PBRsarenotcompletedfor theprojectareas ofPIHPFEM&L
- Whatsoever prepared are still in draft stage and it would take at least more than 6monthstogetcompleted.
- In most of the PBRs, the species recorded are found with "No threats" to greaterextents
- Some formats areunfilledeitherfullyorpartially
- Someformats are vaguely orbroadly filledup anddoesnotsatisfy thespecificneedof theformatsit is meantfor

[1] *PreparatorySurveyonHimachalPradeshForestEcosystemsManagementandLivelihoodProjectinIndia,DraftFinalReport,February,2018.*

- ThoughmanyspeciesareoccurringinthetargetedGramPanchayats,manymorespecies areleft and not included inthe PBRs
- NoparticipatoryprocessesareadoptedduringpreparationofPBRsanditisfoundtobethe response record of someindividuals,notcommunity*per se*
- Somespeciesarerecordedas“rare”or“declining”.Butfieldleveldialoguesonthebiodiversity revealsotherwise.

Thus it is equally pertinent to quantify the local forest biodiversity through a simple,scientific and participatory manner to substantiate the qualitative indicators on localforestbiodiversity.ThisisdonethroughtheParticipatoryVegetationMonitoringwhere the villagers collect simple quantifiable figures for better decision making inforestbiodiversity management.

Quantitativebiodiversitymonitoring:ParticipatoryForestMonitoring

Participatoryforestmonitoring (PFM)isanongoingprocesswherelocalforestuserssystematically record information about their forest, reflect on it and take managementactioninresponsetowhattheylearn.ParticipatoryForestMonitoring(PFM)forcommunitybasedForestManagementsupportstheVillageForestDevelopmentCommittees (VFDCs) in Himachal Pradesh for planning and managing their forests. ThePFMwasplannedtodevelopparticipatorymonitoringofforestresourcesatlocalcommunitylevelwhichenvisagesinvolvinglocalinstitutions(VFDCs)andotherstakeholder groups such as HPFD[2] staffs, Project staffs[3], NGO[4]s if any, youth clubs, EcoClubs etcinidentification ofresources, planning for utilization and regeneration ofresources, and adaptive management of forests. The basic objectives of PFM is to developpeople centric monitoring system, in which local people should have better understandingof resources around, followed by assessing the status and planning for sustainable use ofthem.

ProcessofParticipatoryForestMonitoring:

[2] *HimachalPradeshForestDepartment*

[3]*ProjectforImprovement ofHimachalPradeshForestEcosystemsManagement& Livelihoods(JICAsupported)*

[4]*NonGovernmentOrganisations*

Preparationof Resource Map:

Since Biodiversity monitoring is a segment of Micro plan prepared through participatoryrural appraisal which also integrated the social and resource mapping. The resourcemapping also included the forest mapping with nomenclatures of different zones withincommunity forests. These forest patches act as different strata for sampling. Sampling offorestvegetationwas donethrough sampleplots of differenttypesofplantforms.

Samplingof forest vegetation:

Ecological data collection of PFM is basically to understand the change in vegetationstatus due to protection and management of the forests by the community. The variousparametersthatcanbeaddressedarestandingbiomass,biomassgrowthrates,harvestable timber volume,species diversity, species density, regenerationstatus ofherb, shrub and tree species, and level of disturbance by way of illegal felling, pest anddiseases and survival rates.

Shrubs: Shrub plots include perennial shrub species but with height above 1.5 m. Shrubplots arenormally smaller insize than treeplots, but thenumber could beat leastdouble that of tree plots to account for the likely heterogeneity of shrubs and youngertrees. Shrub plots are located inside the treeplots, at the rate of two per treeplot.Shrubplot numbercanbetwoper treequadratand the sizecan be 5m X 5m.

Herbsandgrass: Annualherbsespeciallyofmedicinalpropertyandgrassbiomassproduction can be estimated by laying quadrats. Normally, herb layer plots will be of size1 X 1 m and the number is at least double that of shrub plots. Parameters to be recordedinclude; species name, number of plants and number of herbs / grasses destroyed ordisturbeddue tonatural andanthropogenicreasons.

9.2.2 Data on qualitative and quantitative data on Community based BiodiversityMonitoringwithin Langcha BMCSub-Committeezone

Qualitativedata

BasedonthePBRinformationfollowingstatusonfloraandfaunacouldbetraced.Thesestatusesof floraandfaunaarementionedinfollowing table –9.2.2 below:

Table-9.2.2:Issuesidentified based on Peoples BiodiversityRegister[5]

SlNo	Majoritem	Sub-items	Nameoftheitemwith scientificnames	Issues
1.	**Agro-biodiversity**	**Agriculture (Crop diversity)**	Barley(*Hardeum vulgare*)	Present
2.			Pea(*Pisumsativum*)	Present
3.			Potato (Solanum tuberosum)	Present
	Wildbiodiversity	**Trees,shrubs,herbs,climbers, tubers, grassesetc**		
1.			*Abeliatriflora*	Present
2.			*Loniceraangustifolia*	Present
3.			*Andrachnecordifolia*	Present
4.			*Lonicera asperifolia*	Present
5.			*Astragaluscandollianus*	Present
6.			*Lonicerabracteata*	Present
7.			*Astragalus rhizanthus*	Present
8.			*Lonicera discolor* *Berberis aristata*	Present
9.			*Lonicera govaniana*	Present
10.			*Berberis ceratophylla*	Present
11.			*Loniceraheterophylla*	Present
12.			*Berberischitria*	Present

[5]SUB-STATESITEBIODIVERSITYSTRATEGYANDACTIONPLAN(LAHAUL&SPITIANDKINNAUR)TRIBALDEVELOPMENT DEPARTMENT, H.P. SECRETARIAT, SHIMLA-2 & STATE COUNCIL FOR SCIENCE TECHNOLOGY ANDENVIRONMENT, 34 SDACOMPLEX, KASUMPTI,SHIMLA–9

13.			*Lonicerahispida*	Present
14.			*Berberis concinna*	Present
15.			*Lonicera hypoleuca*	Present
16.			*Berberisjaeschkeana*	Present
17.			*Loniceramyrtillus*	Present
18.			*Berberis kunawurensis*	Present
19.			*Lonicera obovata*	Present
20.			*Berberislycium*	Present
21.			*Liniceraparvifolia*	Present
22.			*Berberispachyacantha*	Present
23.			*Loniciera quinquelocularis*	Present
24.			*Berberis petiolaris*	Present
25.			*Lonicieraspinosa*	Present
26.			*Berberisumbellata*	Present
27.			*Lonicierawebbiana*	Present
28.			*Bosia amherstiana*	Present
29.			*Myricaria elegana*	Present
30.			*Buddleia paniculata*	Present
31.			*Myricariagermanica*	Present
32.			*Capparis himalyensis*	Present
33.			*Myrsineafricana*	Present
34.			*Capparisspinosa*	Present
35.			*Osbeckia stellata*	Present
36.			*Caraganabrevispina*	Present
37.			*Periploca calophylla*	Present
38.			*Caragana gerardiana*	Present
39.			*Plectranthus rugosus*	Present
40.			*Caraganaversicolor*	Present
41.			*Potentilla fruticosa*	Present
42.				Present

43.			*Colutea multiflora*	Present
44.			*Prinsepiautilis*	Present
45.			*Colutea nepalensis*	Present
46.			*Prunusjacquemontii*	Present
47.			*Cotneaster acuminata*	Present
48.			*Rhamnua prostrata*	Present
49.			*Cotneaster rosea*	Present
50.			*Rhamnus purpurens*	Present
51.			*Cotneasterthamsoni*	Present
52.			*Rhamnus triqueter*	Present
53.			*Cotoneasterbacillaris*	Present
54.			*Rhamnus virgatus*	Present
55.			*Cotoneasterduthieanus*	Present
56.			*Rhododendron anthopogon*	Present
57.			*Cotoneasterfalconeri*	Present
58.			*Rhododendron campanulatum*	Present
59.			*Cotoneastergilgitensis*	Present
60.			*Rhododendronlepidotum*	Present
61.			*Cotoneastermicrophylla*	Present
62.			*Rhuscotinus*	Present
63.			*Cotoneasternummularia*	Present
64.			*Rhuspunjabensis*	Present
65.			*Cotoneasterobovatus*	Present
66.			*Ribesglaciale*	Present
67.			*otoneasterobtusus*	Present
68.			*Ribes grassularia*	Present
69.			*Cotoneaster pruinosus*	Present
70.			*Ribesnigrum*	Present
71.			*Crataegussonarica*	Present

72.			*Ribesorientale*	Present
73.			*Daphne mucronata*	Present
74.			*Ribesribrum*	Present
75.			*Desmodium concinum*	Present
76.			*Rosabrunonii*	Present
77.			*Desmodiumfloribundum*	Present
78.			*Rosa eglanteria*	Present
79.			*Desmodium natans*	Present
80.			*Rosa macrophlla*	Present
81.			*Desmodium oxphyllum*	Present
82.			*Rosaminor*	Present
83.			*Desmodiumpodocarpum*	Present
84.			*Rosa webbiana*	Present
85.			*Desmodium pseudo-triquestrum*	Present
86.			*Rubus biflorus*	Present
87.			*Desmodiumtilaefolium*	Present
88.			*Rubusbiflorus*	Present
89.			*Deutziacorymbosa*	Present
90.			*Rubusellipticus*	Present
91.			*Deutzia staminea*	Present
92.			*Rubuslasiocarpus*	Present
93.			*Elaeagnusparfiflora*	Present
94.			*Rubuspurpureus*	Present
95.			*Elaeagnus umbellata*	Present
96.			*Sabia campanula*	Present
97.			*Elsholziapolystachya*	Present
98.			*Salixhastata*	Present
99.			*Ephedragerardiana*	Present
100.			*Salix lindleyana*	Present

101.			*Euonymus echinatus*	Present
102.			*Salixoxycarpa*	Present
103.			*Euonymusfimbriatus*	Present
104.			*Salixpycnostachya*	Present
105.			*Euonymus monbeigii*	Present
106.			*Skimmialaureola*	Present
107.			*Euonymus tingens*	Present
108.			*Sorbariatementosa*	Present
109.			*Ficus foveolata*	Present
110.			*Sorbusaccupania*	Present
111.			*Gaultheriatrichophylla*	Present
112.			*Sorbuslanata*	Present
113.			*Hamiltonia suaveolens*	Present
114.			*Sorbusursina*	Present
115.			*Hippophae rhamnoides*	Present
116.			*Spireacanescens*	Present
117.			*Hippopaesalicifolia*	Present
118.			*Spireasorbiflolia*	Present
119.			*Hippopaetibetana*	Present
120.			*Staphyleaemodi*	Present
121.			*Hydroangeaanomala*	Present
122.			*Strobilanthes alatus*	Present
123.			*Hypericum cernuum*	Present
124.			*Strobilanthes atropurpurens*	Present
125.			*Hypericum patulum*	Present
126.			*Strobilanthes dalhousianus*	Present
127.			*Incarvilleaarguta*	Present
128.			*Strobilanthesglutinosus*	Present
129.			*Indigofera gerardiana*	Present

130.			*Strobilantheswallichii*	Present
131.			*Indigoferaheterantha*	Present
132.			*Symplocos crataegoides*	Present
133.			*Inulacappa*	Present
134.			*Syringaemodi*	Present
135.			*Inulacuspidata*	Present
136.			*Tamaricariaelegans*	Present
137.			*Jasminumhumile*	Present
138.			*Verbascum traipses*	Present
139.			*Jasminumofficinale*	Present
140.			*Viburnumcotinifolium*	Present
141.			*Juniperuspseudo-sabina*	Present
142.			*Viburnumnervosum*	Present
143.			*Juniperusrecurva*	Present
144.			*Viburnumstellulatum*	Present
145.			*.Leptodermislanceolata*	Present
146.			*Viscumalbum(Epiphyte ontrees)*	Present
147.			*Lespedezaeriocarpa*	Present
148.			*Wickstromia canescen s*	Present
149.			*Loniceraalpigen*	Present
	Medicinal	**Medicinal Plants**		
1.			*Allium carolinianum*	Present
2.			*A. jaquemontii*	Present
3.			*Arnebia euchroma*	Present
4.			*Achillea millefolium*	Present

5.			*Artemisia brevifolia*	Present
6.			*Bergenia stracheyi*	Present
7.			*Betula jaquemontii*	Present
8.			*Carum carvi*	Present
9.			*Corydalis govaniana*	Present
10.			*Dactylorrhiza hatagirea*	Present
11.			*Ephedra gerardiana*	Present
12.			*Gentiana Kurroo*	Present
13.			*Gentanella moorcroftiana*	Present
14.			*Colchicumluteum*	Present
15.			*Hyoscyamusniger*	Present
16.			*Heracleum condicans*	Present
17.			*Hyssopus officinalis*	Present
18.			*Juniperus communis*	Present
19.			*Juniperus macropoda*	Present
20.			*Malva rotundifolia*	Present
21.			*Onoma*	Present

			hipidum	
22.			*Taraxacum officinale*	Present
	Wildanimals	**Mammals,birds,reptiles,amphibian,insects, others)**		
1.			*Ibex (Capraibex siberica)*	Present
2.			*Snow Leopard (Panthera unica)*	Present
3.			*HimalayanBlueSheep(Pseudois nahyaur)*	Present
4.			*Tibetian Wolf (Cannislapus)*	Present
5.			*Red Fox(Vulpus valpus)*	Present
6.			*Wooly Hare*	Present
7.			*HimalayanChough(Phyrhocorax gracumus)*	Present
1.	**Birds**		*Snow Pigeon (Columbia rupestris)*	Present
2.			*Snow cock (Tetragallus himalyensis)*	Present

3.			*Vulture(Nephron persnopterus)*	Present
4.			*Ducks (Avthva ferina)*	Present
5.			*Murgabi (Anas crecca)*	Present
6.			*Himalayan crow(Corvus tibeteana)*	Present
7.			*Picca(Ochotona rovlei)*	Present
8.			*Raven (Corvus corax)*	Present
9.			*Golden Eagle (Aquila chrysaetos)*	Present
10.			*Griffan (Gyps himalayansis)*	Present
11.			*Red Start (Phoenicurus orchruros)*	Present
12.			*HoopeChakor (Alpalectoris chakor)*	Present
13.			*DoveHimalayanFinches(Cardue lis cardduelis)*	Present

9.2.3 ResultsonqualitativeandquantitativedataonCommunitybasedBiodiversityMonitoringwithin Langcha BMCSub-Committeezone

Qualitativedata

AnalysisofthePBRandcorrespondingabovetablerevealsthatthereare3majorAgriculture crop types namely Pea,Barley, and Potato of plants needs conservationattention. Other then it, 149 wild plants biodiversity include the Shrubs, herbs, climber,tuber, and grasses are recorded similarly, there are 7 species of wild animal and 13species of birdsare presentwithin BMC Sub-Committeeareas.

These management scopes on these plants and animals discussed with the villagersincluding BMC sub-committeemembers, women members (who are theprimeforestusers) and public in general for their perception and options on their improvement of thepopulations.Theidentifiedscopesofpopulationincreasehavebeendescribedintable-9.2.2 below.

Quantitativedata

- Thepatchesareverylessinspeciesdiversity.
- Treesareabsent
- The density ofshrubsisdominant,butfoundinscatteredway.
- Anthropogenic pressures on shrubs are quite much. This could be a fact as a resultof dependencyof the community onthe forests and better vigilof HimachalPradeshForest Department.
- The shrubandherbspeciesarerepresentedwellduetoopencanopy.
- The canopyofthevegetation representspredominantlyopencategory.
- Naturallyspeciesaredeficientofsuccessfulestablishmentsandhenceneedexternal support.

9.2.4 PlanningonCommunitybasedBiodiversityManagementwithinLangchaBMCSub-Committeezone

GapPlantationwithreferencetoParticipatoryVegetationMonitoring:

Plantationofdegradedpatches withappropriatesmultipletree species:

- Plantationof multiplespeciesis aneed

- Afforestation/Enrichmentplantationunderdifferentschemesneedstobeexecuted on priority basis. It would advisable to plant at least 1100 saplings / hamodelwithreference todifferentlandrelatedcasualties.
- Plantation and maintenance of the planted species is absolutely essential sincenaturalregenerationis inadequate.
- Shrub species within the tree spacing may be planted with economically importantshrubspecies.

Dataandmapon interventionAreas/Treatmentplots

Cost norms applied for calculation are as per Forest Department approved norms. Plants,pit sizes are accordingly to models prescribed and approved by Forest Department andProject guidelines. The forests have been visited by team again and again and as per thesiteconditionstreatmentplotshavebeenprescribed.Thenallatreatment,soilconservation works are applicable in this Sub Committee area. Local ghazis are quite wellmaintained one plot with patch sowing has also been prescribed. Fencing part has beencriticallyanalysedkeepinginviewlocalconditionsaswellasbioticpressureandaccordinglyprescribed. Total6 Haccommunity landhavebeenidentified.

Table:9.2.4**PlotwisedetailsofSub-Committee**

S. No	Plot name	Plot No	Area	Latitude longitude	PFM mode	FDmode
1	**Langchaward**	**1**	6	32°45'42" 78°22'16"	**Yes**	**---**

9.2.5 Biodiversity ManagementwithreferencetoBiodiversityStrategyandactionplan):

The vulnerable species as identified under the PBR Exercises were discussed with the BMCSub-Committeemembersandpossiblemanagementstrategieswereexplored.(Reference: **SUB-STATE SITEBIODIVERSITYSTRATEGYANDACTIONPLAN(LAHAUL&SPITIANDKINNAUR)TRIBAL DEVELOPMENT DEPARTMENT, H.P. SECRETARIAT, SHIMLA-2 & STATE COUNCIL FOR SCIENCE TECHNOLOGYANDENVIRONMENT,34SDACOMPLEX,KASUMPTI,SHIMLA-9)**

S. No.	Categories	Name of theitem with scientificnames	Status as perPBR	Management prescribedby theBMC Sub-Committee members
1.	**Agriculture (Cropdiversity)**	Pea(Pisumsativum)	Present	Provisioning ofseedsfromgovernment sources
2.		Barley(Hardeum vulgare)	Present	Provisioning ofseedsfromgovernment sources
3.		Potato (Solanumtuberosum)	Present	Provisioning ofseedsfromgovernment sources
	Horticulture	NA	NA	
	Medicinal Plants			
1.		*Alliumcarolinianum*/Laot,Jangli,Lahasum/Konche,Pharna	Past – MoreNow-Less	Protection offorest patchesthroughcommunity participation Protection offorests fromforestfires Prohibition offorests from

				grazing pressures
2.		*A. jaquemontii*/ Khamet,Ratan jot	Past – MoreNow-Less	Protection offorest patchesthroughcommunity participation Protectionof forests fromforestfires Prohibition offorests fromgrazingpressures
3.		*Arnebiaeu chroma*/Khamet,Ratanjot	Past – MoreNow-Less	Protection offorest patchesthroughcommunity participation Protectionof forests fromforestfires Prohibition offorests fromgrazing pressures
4.		*Achilleamillefolium*/ Gandana,	Past – MoreNow-Less	Protection offorestpatches through

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		Millfoil/		communityparticipation
5.		*Artemisiabrevifolia*/Nurcha, Seinki	Past – MoreNow- Less	Protection offorests fromforestfires
6.		*Bergeniastracheyi*/ Gatikpa,Pashand bhed	Past – MoreNow- Less	Prohibition offorests fromgrazingpressures
7.		*Juniperuscommunis*/Hauber,Dhuppi	Past – MoreNow- Less	Protection offorest patchesthroughcommunity participation Protectionof forests fromforestfires Prohibition offorests fromgrazing pressures
8.		*Taraxacum* /KhurmangDandelion	Past–More Now- normal	Nodecliningisseen in thisforestarea
	Trees, shrubs, herbs,			

	climbers, tubers,grassesetc			
1.		*Rosa macrophylla* (wildrose),	Past – MoreNow-normal	Provisioning ofnurseries *In-situ* cultivation Provisioning ofwatersourcesforits propagation
2.		*Hippophae*	Past–More Now–normal	Provisioning ofnurseries
3.		*Myricaria*	Past–More Now–Less	*In-situ* cultivation
4.		*Salixflabellaris*	Past – MoreNow-Less	Provisioning ofnurseries
5.		*Juniperusrecurva*	Past – MoreNow-Less	Provisioning ofwatersourcesforits propagation
6.		*Ribesorientale*	Past – MoreNow-Less	Provisioning ofwatersourcesforits propagation
7.		*Colutea nepalensis*	Past – MoreNow-Less	Provisioning ofnurseries *In-situ*

				cultivation
8.		*Ephedragerardiana*	Past – MoreNow-Less	Provisioning ofnurseries *In-situ* cultivation
9.		*Cotoneastermicrophylla*	Past – MoreNow-Less	Provisioning ofnurseries *In-situ* cultivation Provisioning ofwatersourcesforits propagation
10.		*Caragana brevifolia(Trama).*	Past – MoreNow-Less	Provisioning ofnurseries *In-situ* cultivation Provisioning ofwatersourcesforits propagation
11.		*Caragana*	Past – MoreNow-Less	Provisioning ofnurseries *In-situ* cultivation Provisioning ofwatersourcesforits

				propagation
12.		*Astragalus,*	Past – MoreNow-Less	Provisioning ofnurseries *In-situ* cultivation
13.		*Artemisia*	Past – MoreNow-Less	Provisioning ofnurseries *In-situ* cultivation Provisioning ofwatersources forits propagation
14.		*Cousinia*	Past – MoreNow-Less	Provisioning ofnurseries *In-situ* cultivation
15.		*Hyoscyamusniger*	Past – MoreNow-Less	Provisioning ofnurseries *In-situ* cultivation Provisioning ofwatersources forits propagation
	Mammals, birds,reptiles,			

	amphibian, insects, others)			
1.		*Ibex (Capra ibexsiberica)*	Past – PlentyNow-Rare	Preventionof hunting Strongcommunityparticipation in protection
2.		*Snow Leopard (Pantheraunica)*	Past – PlentyNow-Plenty	Prevention ofhunting
3.		*HimalayanBlueSheep(Pseudoisnahyaur)*	Past – PlentyNow-Plenty	Strongprotectionrequired inthewild
4.		*Tibetian Wolf (Cannislapus)*	Past – PlentyNow-Rare	Strongcommunityparticipation in protection
5.		*Red Fox (Vulpusvalpus)*	*Past - PlentyNow-Rare*	Prevention ofhunting
6.		*Wooly Hare*	*Past - PlentyNow-Rare*	Strongprotectionrequiredinthewild
7.		*Himalayan Chough*	*Past- Plenty Now-Rare*	Strong community

		(Phyrhocorax gracumus)		participation in protection
1.	**Birds**	*Snow Pigeon (Columbia rupestris)*	*Past – PlentyNow- Plenty*	Protection inthewild is required
2.		*Snow cock (Tetragallus himalyensis)*	*Past – PlentyNow- Plenty*	Protection inthewild is required
3.		*Vulture (Nephronpersnop terus)*	*Past- Plenty*	Protection inthewild is required
4.		*Ducks (Avthva ferina)*	*Now- Rare*	Protectionin the wild isrequired
5.		*Murgabi (Anas crecca)*	*Past- Plenty*	Protectionin the wild isrequired
6.		*Himalayan crow(Corvus tibeteana)*	*Past – PlentyNow- Plenty*	Protection inthewild is required
7.		*Picca (Ochotonarovlei)*	*Past – PlentyNow- Plenty*	Protection inthewild is required
8.		*Raven (Corvus corax)*	Past – PlentyNow- Plenty	Protection inthewild is required
9.		*Golden Eagle (Aquila chrysaetos)*	Past –Plenty	Protection inthewild is required

10.		*Griffan (Gyps himalayansis)*	Now- Rare	Protectionin thewildis

				required
11.		*Red Start (Phoenicurus orchruros)*	Past –Plenty	Protection inthewild is required
12.		*Chakor (Alpalectoris chakor)*	Past –Plenty	Protectionin the wild isrequired
13.		*Himalayan Finches(C arduelis cardduelis)*	Past –Plenty	Protection inthewild isrequired

Managementstrategiesmatrix:

Gap plantation throughAR/ANR (data collectedthroughparticipatoryforest monitoring)	**Flora management withreferencetoPBR**	**Faunal management withreferencetoPBR**
Plantation of degraded landsthroughAR/ANR *Minimum:* Tall Block Plantation @ 500saplings/ha & ANR Planting@200sampling/ha	*Agriculture:* Supply of agriculture seedsby Government of HimachalPradesh on: • Barley (Hordeumvulgare)–totalof125kgper/Ha Pea(Pisum Sativum)totalof100.58kg/ha • Potato (solanumtuberorum20kg/Ha	*Wild life protection:*Though species wisemanagement practicescouldnotbe gainedfromthe community members,broad and holisticprotection modalities wereprescribedas below: • Preventionofhunting • Strong protectionrequiredinthewild • Strong community

		participationin

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		protection Thiscanbeachievedthrough community mobilisationandtheirpartici pation in safeguardingthewildlife.
Desirable:	Provisioning of: • Cultivation of RattanJotandJugli Pyaz	

9.4ApprovalofCBMPandotheractivitiesbyGeneral House:-

Sanction / Approval ofCBMPbytheBio-diversity Sub-Committee:

General house meeting of Sub-Committee Langcha were organized in Langcha on 10thOctober, 2021 and 12th October, 2021. The meeting was attended by Sub-Committeemembers. (List attached in proceeding register). Following issues were discussed anddecision taken:

Micro planning team RFO WL Range Kaza, BO and Forest Guard discussed in detail thevariousinterventionsasincorporatedinthedraftCBMPofSub-CommitteeLangchaForests.

Members from hamlets (Langcha,Langcha, Komic)expressed that area nearhabitations as well as areas which fall within the grazing zone of migratory graziers needsfencing. The members were assured that the vulnerable points will be taken care of andbarbed wire fencing will be recommended so that there will be least grazing incidences inthe plantation areas. The members assured that they will not leave their domestic cattlefor grazing in open without attendant which may cause damage to the seedlings in theclosed areas. Plots identified were discussed in detail and assigned to two user groups. Inaddition, the participants suggested itemised conservation measures to be taken for eachspecies.

Work to be executed in PFM mode and in FD mode was discussed and finalized. AllPlantations planted by Sub-Committee will be protected by Sub-Committee. Technicalworks,Masonry/Gabioncheckdams,waterharvestingstructures,willbebuiltbyFD.

Bioengineeringstructures,DrystoneCheckDamsonsmallstreams,willbed Masonrypondsetc. oneby Villagers.

Pic-: Meeting oftheGeneralHouseontheconsensus building

9. 3Memorandum of Understanding (MoU):

Memorandum of understanding (English version) translated in Hindi / local language wasread and explained to all present. The issue of community contribution was discussed indetailandthecommunitymemberssuggestedtheir contribution in followingforms:

Pic -:Meeting oftheGeneralHouse on theconsensusbuilding

- All the user group members agreed that they will contribute their Sub-Committeemembershipbeneficiary shareintotheSub-Committeeaccount.

- All members agreed for their contribution in project activities, and decided tocontribute membership fee of Rs. 200. This has to be paid only once. The amountwill be kept in Sub-Committee account and can be used as community share fordoing any other development work with other departments or with project, if Sub-Committee members desire so, otherwise they can use it after project completion.This is important because villagers should feel sense of ownership in works andfurther, they have to maintain and protect forest area / assets for several yearsevenafter completion of project.

- The Micro Plan was finally approved by the General House of BMC Sub-Committeeon dated 10th. October, 2021 (Details written in proceeding register) and amendedfurtheron12st October 2021.

- The MoU was also signed by the president of Sub Committee and DFO WL Kaza ondated12.11.2021(SignedMoUannexedas Annexure-X)

9. 4ProjectSupporttothebeneficiary(SubCommittee)forImplementationofMicroplan

The village levelorganizationwillbebeneficiaryof PIHPFEM&L projectfor:

- **Financialsupport**

- **Implementationof theapprovedmicro-plan**

- **Labour wages** for Fencing, pit digging, carriages, planting, weeding, mulching ofplantsexcludingthe communitycontribution.

- **Other works** as per approved micro plan (*ALL WAGES ARE TO BE PAID BY THE Sub-CommitteebyCHEQUEORBYBANKTRANSFER.NOCASHTRANSACTIONSPERMITTED)*.
- **CDAs:** The Community Development Activities as identified by the Sub-Committeeand in conformity with the Project guidelines will be decided and implemented bytheSub-Committee through aconsultativeprocess.

- **Maintenance:**
  Beating up operations, weeding mulching in MP plantations for years.Maintenanceoffencefor5years.

- **Stockandmaterial:**
  Stock:qualitynursery raisedplants
  Material e.g.B.wire,U. nails,fenceposts,Tar/black Japanetc.

- **Stationary ofSubCommittee**
  Stationary to Sub-Committee, including stamps, stamp pad, two registers, receiptbook, carbon papers, paper pin, resolution pads, pen, pencil, Darrie, chairs, table,Almirahetc.torun theofficeeffectively.

9.5 PlantationActivitiesIdentified:

Sr.NO	Activity	Benefiting HHs	Area tobecovered(Ha)						
				2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
1	**TallblockPlantation(FuelandFodderPlantation@500NormalPlantsNormally**Introductionofsuitablegrassesandlegumes inCommandAreasforimprovingsoilfertility*Trigonellaemodi,Cicerarietinum,Festucarubra,Arnebiaeuchroma,Gentiana Caragana brevifolia,Loniceraspinosa,Salix,Hippophaetibetana*inproject command areas and privatelands.	32		6(Ha)					
2	**ANR Planting @200 Plant/Ha.** Introductionofsuitablegrassesandlegumes in Command Areas forimproving soil fertility, *Trigonellaemodi,Cicer arietinum,Festucarubra,Arnebia euchroma,GentianaCaragana brevifolia,Loniceraspinosa,Salix,Hippophae tibetana* inprojectcommand areasand private lands.	32		1(Ha)					
	TOTAL			7(Ha)					

9.5.1 RequirementofPlantingMaterials

Year	NumberofSamplingRequired(NewPlantation)										
	Trigonella sp.	Cicer Sp.	Aconogonum sp.	Caragana sp.	Lonicera Sp.	SalixSp.	Hippophae Sp.	Gentiana Sp.	ArnebiaSp.	Dactylorhiza sp.	Source of Planting Material
2022-23	2600	1300	900	880	1400	1180	760	780	0	0	nursery
Total	2600	1300	900	880	1400	1180	760	780	0	0	
Year	NumberofSamplingRequired(Maintenance)										
											Source of Planting Material
2023-24	0	0	0	0	0	0	0	0	0	0	nursery
2024-25	780	390	270	264	420	354	228	234	0	0	
2025-26	520	260	180	176	280	236	152	156	0	0	
2026-27	390	195	135	132	210	177	114	117	0	0	
2027-28	260	130	90	88	140	118	76	78	0	0	
Total	2210	1105	765	748	1190	1003	646	663	0	0	

9.5.2 ForestProtection/Silviculture/MaintenanceoperationforthePlantation

Years	ActivitiestobetakenupSite/Model Wise		Responsibility	
	Langcha		Project	Sub-Committee
2022-23	ANRPlanting @200Plants/Ha.	TBPlanting Fuel,Fodder and WildFruitPlantation@1100NormalPlants	Yes	Yes
2024-25	Maint.	Maint.	Yes	Yes
2025-26	Maint.	Maint.	Yes	Yes
2026-27	Maint.	Maint.	Yes	Yes
2027-28	Maint.	Maint.	Yes	Yes

9.5.3 PlantationActivityunderPFMMode

Years	ActivitiestobetakenupSite/Model Wise		Responsibility	
	Langcha		Project	Sub-Committee
2022-23	ANRPlanting @200Plants/Ha.	TB PlantingFuel,Fodderandmedicinal plants Plantation @500NormalPlants	Yes	Yes
2023-24	Maint.	Maint.	Yes	Yes
2024-25	Maint.	Maint.	Yes	Yes
2025-26	Maint.	Maint.	Yes	Yes
2026-27	Maint.	Maint.	Yes	Yes
2027-28	Maint.	Maint.	Yes	Yes

9.6 SoilandWaterConservation

9.6.1 Soiland WaterConservationWorks(Proposed)

S No	Land	Typeof SWCwork	Nameof the site	Unitofwork	Quantumof work	HHs beneficiaries	Responsibility		
							Project	Sub-Committee	Convergence
1	**Langchaward community Land/forest land**	**DryStoneC/dams**	Shilla peakconto ur	No.	8	32	Yes	Yes	
			Glacialpeak contour	No.	9	32	Yes	Yes	
			Langchavillage contour	No.	8	**32**	Yes	Yes	

9.6.2 (B)SoilandWaterConservationworks(YearwisePhysicalTarget)

S No.	Land	Type ofSWCwork	Name of thesite	Unit ofwork	Quantum ofwork	HHsbeneficiaries	PhysicaltargetforSWCactivities						
							2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
1	Sanctuary Area	Dry Stone C/dams	Shillapeak contour	No	8	32	0	4	4	0	0	0	0
			Glacialpeak contour	No	9	32	0	5	4	0	0	0	0
			Langchavillage contour	No	8	32	0	4	4	0	0	0	0

9.7 Physicaland FinancialPlan(CBMP)

9.7.1 ProposedPhysicalandFinancialPlan

S. No	Proposedactivities	Unit	Total		2022-23		2023-24		2024-25		2025-26		2026-27		2027-28	
			Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
1																
a)	TBplanting@500normalplants	Ha	6	335181	6	335181	0	0	0	0	0	0	0	0	0	0
b)	ANRPlanting200plants /Ha)	Ha	1	30725	1	30725	0	0	0	0	0	0	0	0	0	0
A	**Total(NewPlantation)**		**7**	**366006**	**0**	**366006**		**0**	**0**	**0**		**0**		**0**		**0**
2																
a)	TBPlanting@ 500normalplants			Maintenance												
i)	1st.YearMaint.(6250/Ha.)	Ha	6	37500	0	0	6	37500	0	0	0	0	0	0	0	0
ii)	2nd.YearMaint.(4250/Ha.)	Ha	6	25500	0	0	0	0	6	25500	0	0	0	0	0	0
iii)	3rd.YearMaint.(3200/Ha.)	Ha	6	19200	0	0	0	0	0	0	6	19200	0	0	0	0
iv)	4th.YearMaint.(2200/Ha.)	Ha	6	13200	0	0	0	0	0	0	0	0	6	13200	0	0

v)	5th.Year Maint.(2200/Ha.)	Ha	6	13200	0	0	0	0	0	0	0	0	0	0	6	13200
	SubTotal			**474606**	**0**	**366006**	**0**	**37500**	**0**	**25500**	**0**	**19200**	**0**	**0**	**0**	**13200**
S. No	**Proposedactivities**	**Unit**	**Total**		**2022-23**		**2023-24**		**2024-25**		**2025-26**		**2026-27**		**2027-28**	
			Phy	**Fin**	**Phy**	**Fin**	**Phy**	**Fin**	**Phy**	**Fin**	**Phy**	**Fin**	**Phy**	**Fin**	**Phy**	**Fin**
c)	**ANRplanting200plants/Ha)**			**Maintenance**												
i)	1st. Year Maint.(4600/Ha.)	Ha	1	4600	0	0	1	4600	0	0	0	0	0	0	0	0
ii)	2nd.YearMaint.(3100/Ha.)	Ha	1	3100	0	0	0	0	1	3100	0	0	0	0	0	0
iii)	3rd.YearMaint.(2400/Ha.)	Ha	1	2400	0	0	0	0	0	0	1	2400	0	0	0	0
iv)	4th.YearMaint.(1650/Ha.)	Ha	1	1650	0	0	0	0	0	0	0	0	1	1650	0	0
v)	5th.YearMaint. (1650/Ha.)	Ha	1	1650	0	0	0	0	0	0	0	0	0	0	1	1650
	SubTotal			**13400**	**0**	**0**	**0**	**4600**	**0**	**3100**	**0**	**2400**	**0**	**1650**	**0**	**1650**
B	**Total(Maintenance)**			**488006**		**366006**		**42100**		**28600**		**21600**		**14850**		**14850**
S. No	**Proposedactivities**	**Unit**	**Total**		**2022-23**		**2023-24**		**2024-25**		**2025-26**		**19800**			
			Phy	**Fin**	**Phy**	**Fin**	**Phy**	**Fin**	**Phy**	**Fin**	**Phy**	**Fin**	**Phy**	**Fin**	**Phy**	**Fin**
4	**SMCTrenching**															

a)	SMC works(Preparationofstaggered GradonialTrenches1mx0.3mx0.3m)500trenches/Ha @ 12375 /Ha	Ha	**6**	**74250**	**6**	**74250**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
D	**TotalSMC**			**74250**		**74250**		**0**		**0**		**0**		**0**		**0**
	Total(A+B+C+D)			**562256**		**440256**		**42100**		**28600**		**21600**		**14850**		**14850**
S. No	**Proposedactivities**	**Unit**	**Total**		**2022-23**		**2023-24**		**2024-25**		**2025-26**		**2026-27**		**2027-28**	
			Phy	**Fin**	**Phy**	**Fin**	**Phy**	**Fin**	**Phy**	**Fin**	**Phy**	**Fin**	**Phy**	**Fin**	**Phy**	**Fin**
5																
a)	**Soil & WaterConservation(CBMP)** Drystonecheckdams	No.	5	100000	0	0	5	100000	0	0	0	0	0	0	0	0
E	**Total(S&WC)**			**100000**		**0**		**100000**		**0**		**0**		**0**		**0**
6	**WildLife Habitat Improvement**															
a)	Cons.Of WaterPond	No.	6	180000	2	60000	2	60000	2	60000	0	0	0	0	0	0
b)	Maint.OfWater Pond	No.	4	40000	0	0	2	20000	2	20000	0	0	0	0	0	0
F	**Total(Wildlife Habitat Improvement**			**220000**		**60000**		**80000**		**80000**		**0**		**0**		**0**
	GrandTotal(A+B+C+D+E+F)			**882256**		**500256**		**235900**		**108600**		**21600**		**21600**		**21600**

9.9.2AnnualWorkPlanCBMPFor The2020-21yearwise

ProposedActivity	BenefittingHH	UnitofWork	Quantum OfWork	Unit cost(Rs)	Proposed Budget	FinancialSource		
						Project	Convergence	Comm. Contribution
TBPlanting@500 normalPlants	32	Ha	6	55863	335181	Project		Management
ANRPlanting@200 Plants	32	Ha	1	30725	30725	Project		Management
Sub-Total					366006			
Soil&Water Conservation								
DryStoneCheckwall	32	No	1	20000	20000			
Sub-Total					20000			
HabitatImprovement								
ConstructionOfWater Ponds		No	2	30000	60000			
Sub-Total					60000			
Total					**446006**			

10CommunityDevelopment andLivelihoodImprovementPlan(CD&LIP)

Table10.1- CommunityDevelopmentActivities

S. No	Activity	Purposeoftheactivity	HHsto be benefitted	Community contribution (%)
1	Glacialwater harvesting structure	Onlyrelayonthis watersource	Wholecom munity	10%
2	CommunityP ond for agriculture	Due to climate change,scarcity like situation in summer season	Wholecom munity	10%
3	Solar installation	Lack of proper supply of electricity	Whole community	10%
4	Solid fencingalong withsolarfenc ing	Animallikeyak,cowusetoentert hecropfieldandresults indestruction of crop,whilesolarfencingis neededtopreventinfluxofanima lsuch asbluesheep ,hare,goat andsheep.	WholeCom munity	10%

Table10.2-Livelihood Improvement Activities& Plan

S. No	Activity	Purposeoftheactivity	HHs to bebenefi tte d	Communityc ontribution (%)
1	Threemonthsearlyv arietyseed e.g. Pea	Oftentheyfaceclimatefluctu ation;mostofthe cropgetssparedleadsto	39	10%

		hugeeconomicloss.		
2	Carpet Making , yakwoolropemaking	Inwinteroutdooractivities are about null ,theywantsustainedwinters easoninmakingsuchitemsh elpingin boostinglivelihood	39	10%
3	Introduce Koda(*Fagopyrumesculentum*)	Lack water ,to avoid soildegenerationduetomon oculture,with nutritionvalue	32	10%
4	Conservation ofRatan Jot, Jangli Pyaz,	Illegaltradingdonebyoutsid er	32	10%
5	Modified polyhouse	Foroffseasonvegetable, oldstructurepolyhousesare notdurable	32	10%

UnderCommunity Developmentworks

Activities

1. **Glacial water harvesting structure:** As the whole population of this particularplanning site/ ward have only one source of water i.e glacial water, which theyusefordomesticpurposes,drinking,irrigation,cattleusesetc.Andmostimportantly this source do not stay for every season .Often they face watercrisis and they lack other sources as well in Langcha village. So glacial waterharvesting structure would definitelyhelpineradicationofthis primaryissue.

Table10.4-Showingestimated amountforwatertank

S.no.	Particulars of work	Length	Breadth	Depth	Volume	Rate Rs.	Amount Rs.
	Tank	10	10	10	1000 ft^3 28000/lit	8Rs /Lit	224000/-
	Number of tank 3						224000x3= 672,000/-
	20%hikein totalamountforcarriageof rawmaterialin colddesert area						
	Thisconstruction workcanbedoneundertheMGNREGA						

2. **Community Pond for Agriculture:** The climate change has definitely made thefastmeltingofglaciers,insummerstheygetsufficientwaterfortheiragricultural activities along with their domestic activities but later in otherseason it gets worst to have water .So the particular pond for agriculture use inthiswardis needed.

Table10.5Summary ofestimatetoconstructpond.

S.no.	Particulars of work	No.	Length	Breadth	Depth	Volume	Rate Rs.	Amount Rs.
	Pond	1	20m	20m	1m	400m^3 4 laclit	8Rs/lit	32Lac
	20%hikein totalamountforcarriageofrawmaterialincolddesert area							
	TheconstructionofpondcanalsobedoneundertheMGNEGAandwithhelpofAgriculture Department underirrigationscheme withsubsidy							

Solar Installation: As we know the present ward is situated on the height of 4400mThe ward do not have proper supply of electricity ,which makes the barrier for theworking habits of people including their outdoor activities, children education ,peopleworkinginfieldsetc.Solarinstallationcanbetheimmediatesolutionoftheirregularpowersupply.Peopleoptingforgridconnectedrooftopsolarpanels/powerplantarebeinggiven70percentsubsidy,andsurpluspowerwouldbefurther sold to HPSEBL at the rate of rupees five per unit, which would also add totheincomeoftheindividual,besidesusingfreesolarpower.

Solid fencing along with solar fencing: The farmers of this village claimed thatmostly the yak and cows use to enter the fields and results in destruction of cropswhile solar fencing is needed to prevent influx of animal such as blue sheep, hare,goatandsheep.

Table10.6-Showing estimateforinstallingfencing

S.No.	**Particulars of work/** Models	Protected Area/ acre	Perimeterforfencing/ meter	Unit Cost/Rs	CostperRunning meter/Rs
	Model1	1	300	161907/-	540
	Model2	2.5	500	210793/-	422
	Model3	5	700	259679/-	371
	Model4	10	1000	407716/-	408
	Model5	20	1400	505489/-	361

The average cost per running meter of 7 rows fence comes to beRs.396/Meter.ThispracticewillbeimplementedbytheDeputyDirectorthroughProjectImplementingAgency(PIA)inthedevelopmentblocki.eSubjectMatterSpecialist .In Tribal district, the District Agriculture Officer, Keylong & Assistant ProjectOfficer,Kaza of Lahaul & Spiti Districtwill act as Project Sanctioning Authority aswell as Project Implementation Agencies (PIA's).The PIAs shall be responsible foridentificationandselectionofthepotentialbeneficiaries.

AsProjectassistance@80%isavailableforindividualfarmersand85%foragroupofthreeor morefarmersforinstallation&CommissioningofSolarElectricPowered Fencing Systems in the Farmer's Fields on the actual work done by theFirm/Company .Project assistance shall be released to the beneficiaries directly orthrough bank ,in case the farmer avail loan .The assistance for the installation ofSolar Electric Powered Fencing can be released to the company after obtainingsatisfactory report from core team and farmers/ a group of farmers. The paymentsshall be worked out on actual work done and its measurement basis in view ofprevailingsiteneedandrequirementdulyverifiedbytheCore Teamconcerned.

LivelihoodImprovement Activities& Plan

- **Three months early variety seed e.g Pea:** As they have monoculture for agricultureproductivity followed by few months i.e from April to the September month .Thefarmers told if they get early snowfall which makes transportation blocked their cropsget spared and they get huge loss .So if they have early varieties of seeds such as ofPeas they can make it harvest as soon as to get snowfall .And somehow monoculturecan be avoided. The required seeds they can get from Agriculture department ofHimachalPradesh .Whereitcanbe subsidized forfarmers.

- **Carpet Making, yak wool rope making:** The community traditionally makes the carpetof Yak wool and also the ropes .If the people make it on large scale and get it to becommercialized its surely going to make the people benefitted. As they do not requireany raw material for this activity, it would fit better with livelihood uplift componentwithoutmuchmoney.
- As the most of households rears the Yak so the availability of raw material i.e yakwool is there for practices ofcarpetand yakwoolropemaking.

IntroduceKoda(*Fagopyrumesculentum*):ThevillagegrowsonlytheBarley,Peas ,Potato .As per the geographical and climaticconditions IntroductionofKoda(*Fagopyrumesculentum*)can beexperimentedas this is served asstaple food andbeing richinaminoacids. This can be alsocommercializedas otherfoodcrops.

The requirement of the koda crop seeds can be fulfilled by the agriculture departmentastheseeds canbe provideatsuitable subsidyor pricesforthefarmers.

- **Conservation of Ratan Jot, Jangli Pyaz:** At Langcha village the local people told thatoutsiders use to do illegal trading of Ratan jot and jangali pyaz which is also unfair totheBMC.TheBMCandlocalpeoplemustbeawareofthis.Theconcerneddepartments for such activity which includes the conservation of medicinal plants canbetheForestDepartmentas wellasBio-Diversity ManagementCommittee.

Modified Poly house: For off seasonvegetable growththe modifiedpoly houses canbedurableandeffective.Asfewfarmershavetriedgrowingsquashes,carrots,tomatoes, cucumber, cabbage and coriander etc. The only issue with the old polyhouses infrastructure is that these dome shaped don't go with heavy snowfall for longduration .While the roof topped like poly houses are more compatible than domeshaped one. The roof topped one must be with the Covering of Poly ethylene sheet forlongduration.

Himachal Govt 80-85% subsidy. State Government gets approximately 50% subsidy fromCentral Govt. in return. Guidelines for implementing the Mukhya Mantri GreenhouseRenovationScheme(MMGRS)throughDeptt.ofHorticulture,H.P.1.Underthissc heme, 70% assistance for the replacement of poly sheet subject maximum to Rs.44.80/-persq.mtr.asback-endedsubsidywouldbeavailabletotheindividual

beneficiaries(i.e.Farmers)whoareengagedingreenhousecultivationofhighvalueflowers andvegetablecrops. cost Rs900-1200/-per square meter.

SummaryofHuman Capacity Building

Apart from the ecosystem services, the site also boosts of strong women groups who tryto microfinance their agriculture needs for example seeds for sowing with the help ofSelf-Help Groups (SHGs).However more capacity building is needed within the project aswell as additional support from BDO , Rural development , Tourism Department ,NABARDagencies etc. SHG meetings also provide a gender specific platform to discuss other issuesrelated to resources as mostly women are prime usrs of fodder and water for theirhouseholds.

Table10.7:SHGLivelihoodImprovement:TrainingBudget(twoworkshops ayear)

S. No.	Particulars	No. Of Group	No of Person	Rate Rs.	Amt. Rs.
1	Refreshment/lunch	10	15	160	22500
	Stationary	10	15	30	4500
	Resourceperson(Honorarium&Travel)	2	4	2500	20000
	Banner &Photography	2	2	250	1000
	Totalfor oneworkshop				48000/-
	Grand Total for 4Workshops				**1,92,000/-**

MonitoringandEvaluation (M&E) Framework

A participatory framework is established to monitor the efforts made by the stakeholders,the flow of Ecosystem services and related forest management goal. The participatoryframeworkwillbesegregatedintwo sections as givenbelow:

- MonitoringandEvaluationbytheForestDepartment(in-house/outsourcedinfrastructure support):This systemwill timely evaluatevegetation andotherrelated ecosystem service flow through GIS –based map of JFM areas, with villageboundaries.
- ParticipatoryUnit:Thiswillbeinstrumentalinprovidinggroundtruthingofvegetationgrowthandrelatedimprovementoftheecosystemserviceflowappropriate protection measures in a frequency of every two years .This will alsoassessthecommensurateimprovementinlivelihoodthroughsocio-economicsurvey .The participatory unit will do the monitoring and evaluation based onclearlyagreedprotocolon rightsandresponsibilitiesofallstakeholdersparties.

MonitoringandEvaluationPlanwithIndicatorsareprovidedinTable1.35

Table10.8:Monitoring andEvaluationPlan

S.No.	FES	Measure stobeMonitored	Baseline value	Target Value	Indicator	MeansofVerification	responsibility
	Waterincrease of watersupply	Availability of waterflowandseasonalityespecially during Summer	ND	Sufficientwateravailabilityduringsummer	Cropsdon'tdry due to lackirrigation water duringSummer	RecordkepingbyMonitoring team	Monitoring Team of VillageCommittee
	Fuel &Foddersupply	All the blanksarefullystocked with	Noplantation	At list 10% increaseinfodder &fuel	Continuedavailability of fuel &	Recordkepingof the number of head	

		plantation			fodder	loads of fuel & fodder	

Table .10.11-AnnualWork PlanCBMPForThe2022-23year wise

9.10.1**Physical&Financialdetailsof CommunityDevelopment Works**ProposedActivity	Benefitting HH	Unit of Work	Unit cost (Rs)	Proposed Budget	FinancialSource ProjectConvergence Comm.Contribution
Glacialwaterharvestingtank	32	3	224000+ 20% carriage44800	2,68800/-	Under MGNREGA
Community Pond for Agriculture	32	1	32 lac+ 6,40000/-	38,40000/-	Under MGNREGA
Solarinstallation	32	1		98000/-	FromHimUrja 70% Subsidy
Solidfencing&Solarfencing	32	1	396/meter	1400x396 554400/-	80%subsidyon solarfencing
Total					

1012proposedphysical&financialIncomeGenerationActivities (IGA)

Sr.No.	ProposedActivities	Total	Finance Contribution	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
1.	**SHG Livelihood Improvement:Training Budget(CarpetMaking, yak woolropemaking)**	192000/-	JICAwith helpofRDDept&Tourism	96000/-	96000/-	0	0	0	0
2.	Three months earlyvarietyseede.g.Pea IntroduceKoda	1500/- max.x32	Agriculture Deptt.60% subsidy	48000/-	48000/-	0	0	0	0
3.	ConservationofRatanJot,JangliPyaz,		ForestDeptt.&HPS BiodiversityBoard	0 \	0	0	0	0	0
4.	Modifiedpoly house,Minimum25squaremeter	900-1200/- per squaremeter15HH	FromAgriculture Deptt. 70 % subsidy 10% beneficiaries , 20%JICA	300000/- 20% JICA (60000/)-	300000/	300000/	0	0	0
5.	Total			444000	444000	300000			

Table 10.13 -AnnualWorkPlanCBMPForThe2021-22yearwise

9.11AnnualWorkPlanfor2020-21:CD&LIP ProposedActivity	BenefittingHH	Unit of Work	Unit cost (Rs)	Proposed Budget	FinancialSource ProjectConvergence Comm.Contribution
Glacial water harvestingtank	32	3	224000+20% carriage 44800	2,68800/-	Under MGNREGA
Community Pondfor Agriculture	32	1	32 lac+ 6,40000/-	38,40000/-	Under MGNREGA
Solarinstallation	32	1		98000/-	From HimUrja 70% Subsidy
Solidfencing&Solarfencing	32	1	396/meter	1400x396 554400/-	80%subsidyonsolar fencing

SHG Livelihood Improvement:TrainingBudget	32		192000/-	192000/-	JICAwithhelpofRDDept&Tourism
Three months early varietyseed e.g.PealntroduceKoda	32		1500/-max.x32	48000/-	Agriculture Deptt.60% subsidy
ConservationofRatanJot,JangliPyaz,	32				Forest Deptt.& HPSBiodiversity Board,JICA
Modifiedpolyhouse,Minimum 25 square meter	32		900-1200 /-per square meter15HH	13500/-	FromAgricultureDeptt.70%subsidy10%beneficiaries, 20%JICA

11 ConvergenceswithExternalAgencies

ActivitiestobecarriedoutwiththeSupportofOtherDepartments/Projects/SchemesCommunityInfrastructuredevelopment,basichuman needs,agriculture andhorticulture(through Convergence)

11.1 ActivitiesidentifiedforConvergence

S.No	Activities	HHs to bebenefitted	Department/Agencyfor convergence
1	**Repair ofCommunityHall**	**32**	**Panchayat/Block**
2	**FootPath**	**32**	**Panchayat/Block**
3	**Drain**	**32**	**Panchayat/Block**
4	**Training/FarmingCamp**	**32**	**Agri/Horti/AnimalHusbandry**
5	**Silage(Demonstrationsbasis)**	**32**	**A/Hexposure Visit**
6	**Medicinalplantsharvestingtraining**	**15**	**Forest/HorticultureDepartment**
7	**Training on Eco-Tourism Activities**	**10**	**Forest/TourismDepartments**

11.2 PhysicalandFinancialPlanforConvergenceActivities

	Activitiesidentifiedfor convergence															
S. No	Proposedactivities	Unit	Total		2022-23		2023-24		2024-25		2025-26		2026-27		2027-28	
			Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
1	DryStoneCheck Dam	No.	5	100000	0	0	3	60000	0	0	2	40000	0	0	0	0
2	Dry Stone C/Wall	No.	1	15000	0	0	1	15000	0	0	0	0	0	0	0	0
	TotalConvergence Activity			**115000**	**0**	**0**		**75000**				**40000**		**0**		**0**

12ImplementationStrategies

12.1 implementationguidelinesoncomponentsandsub-components

Participatoryforestmanagement

Soil& waterconservation/landslide controlmeasures

Communitydevelopmentand livelihoodimprovementwithgendermainstreaming

12.2 Trainingandcapacitybuildingofcommunity institutions*(Sub-Committee,CIG,SHG)*

Institution	Areasoftraining/ capacitybuilding	Resource person/group	Locationsforexposure visits
Sub-Committee		Consultant	
ExecutiveCommittee	Proceeding writingAccount maintainAssetscreated Role& responsibility of EC	JICA Staff/ Forest Department staff/Consultant	Dehradun,Shimla,Kulu,Kangra

CIG	Proceeding AccountmaintainingValueadditiontraining	Consultants	Local /Program manager ruralfinancing
SHG	Groupformation,Accountmaintaining,Proceeding writing,Bank linkagesetc.	NABARD/Master trainer	

12.3 Year wisedetail oftrainingandcapacitybuildingplan

S. No	Year& Month	Community institution	Subjectoftraining	Noof Participants	Duration	Resourceperson/group
1	2022-2023	ECtrainingExposure visitCIG SHG	Proceeding writingAccountmaintainingRole&responsibilityofEC Gender	7-15 EC Representative	2days 5days	1.Master trainer, FDaccountants 2. Successfulprojectsinsideandoutsidestate.
2	2022-2023	1.EC Training2.CIG 3. SHG	M&E /Socialaudit	3-5	2days	FTU- coordinators

3	2023-2024	1.EC Training2.CIG 3. SHG	Assetscreated	3-5	1day	FTUcoordinators

12.4 ProposedYear WiseTraining

Sr. No	ProposedActivities	Unit	Total		2022-23		2023-24		2024-25		2025-26		2026-27	
			Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
Trainingand CapacityBuildingofCommunityInstitutions														
I	Sub-Committee(EC)Training													
a)	Proceeding account Maintain	No	2	0	1	0	0	0	1	0	0	0	0	0
b)	RoleResponsibility,Gender,Assetscrated	No	3	0	1	0	1	0	1	0	0	0	0	0
c)	M&E andSocialAudit	No	4	0	0	0	1	0	1	0	1	0	1	0
	Sub-Total		9	0	2	0	2	0	3	0	1	0	1	0
II	CIGTraining													
a)	ProceedingWriting, AccountMaintaing	No	2	0	1	0	1	0	0	0	0	0	0	0
b)	Valueaddition	No	4	0	1	0	1	0	1	0	1	0	0	0
	Sub-Total		6	0	2	0	2	0	1	0	1	0	0	0
III	SHG													
a)	Group Formation, ProceedingWriting	No	2	0	1	0	1	0	0	0	0	0	0	0
b)	AccountMaintaing,Bank Linkagesetc.	No	2	0	1	0	1	0	0	0	0	0	0	0
	Sub-Total	No	4		2	0	2	0	0	0	0	0	0	0

12.5 Records tobemaintainedbythecommunityinstitutions

S. No	Nameoftherecord/register to be maintained	To bemaintainedbywhom	To be verified bywhom
1	Membership register,byelaws,&OTHERRECORDS	President / MemberSecretaryVFDS	FTU Officer/FTU Co-ordinator
2	Proceeding register	Member Secretary VFDS/Joint Secretary	FTUCo-ordinator
3	Cash account register&relatedbooks	Treasurer,Secretary,jointSecretary,	FTUOfficer FTUCo-ordinator
4.	Asset created register	President, Secretary	FTU/Projectrepresentatives.

ANNEXUREs

Project for Improvement of Himachal Pradesh Forest Ecosystems Management and Livelihoods

Memorandum of Understanding

Between

The Langcha BMC Sub Committee

And

The Forest Department (represented by DFO Wildlife SPITI) for Participatory Forest Management.

Whereas

- The Langcha BMC Sub-Committee (hereinafter called "Society") has been constituted as per procedure described in the HP PFM Regulations notified by Govt. of HP vide No. FFE-C (9) 1/2001 dated 23.8.2001 and vide No.FFE-B-F (5) 5/2016- Part III dated 19.11.2018. by the Villagers of Langcha BMC Sub-Committee in district lahoul & Spiti and Forest Division Wildlife Spiti of Himachal Pradesh and has an elected Executive Committee (hereinafter called"EC");
- as part of the Japan International cooperation Agency (JICA) supported "Project For Improvement of Himachal Pradesh Forest Ecosystems Management and livelihoods" (hereinafter called "Project") the Micro plan (Forest Ecosystems Management Plan & Community Development & Livelihood Improvement Plan) for Forest Management and Community Development (hereinafter called "Plan") for Forest protection, rehabilitation and management of the specified forest areas has been jointly prepared by the Society and the Forest Division;
- the Plan contains details of program for conservation, management and development of forest areas, Biodiversity conservation, Livelihood improvement works and also the description of equitable distribution of usufructs obtained from allocated forest areas and public resources of the ward/village;
- the Plan has been approved by the Officer in Charge of the wildlife Forest Division (here- in after called "Forest Officer") on behalf of Government of Himachal Pradesh;

Now herewith

The Wild Life Forest Division and the Society have mutually agreed on this MoU, and consequently, this MoU is executed with the following articles:

1. Purpose of the Memorandum of Understanding

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

2. Responsibilities of the Society

2.1. With regard to its Constitution, working, powers, duties and benefits, the Society agrees to act in accordance with the HP Government Notification No. FFE-B-F (9) 1/2001 dated 23.8.2001 and vide No.FFE-B-F (5) 5/2016- Part- III dated 19.11.2018, and other relevant Government orders and instructions.

2.2. The Society agrees to provide all necessary assistance to the Forest Officer in selection of forest area(s) to be allotted to it for forest management and development so that there is no dispute regarding areas of common use of nearbyvillages.

2.3. The Society agrees to prepare and submit general house approved, quarterly physical & financial plans with budget requirements to FTU concerned for releasing funds after Plan's approval from PMU.

2.4. The Society agrees to identify Community Development Activities (CDAs) in conformity with the CDA guidelines, decide on these through a consultative process and implement them according to the relevant standards asapplicable.

2.5. The Society agrees to carry out works laid out in the Plan for the forest area (such as planting, fencing, maintenance and protection) and in doing so, follow the principles of management of forest and wildlife specified therein, also taking into account the guidelines of the Government, prevalent legal provisions and technical principles. The Society will ensure that no existing acts/rules of forest/wildlife management are beingviolated.

2.6. The Society agrees to contribute membership fee through its members/user groups. The amount with interest will be available to VFDS/BMC (Sub-Committee) after project closure and can be used by VFDS/BMC (Sub-Committee) consensus. The amount deposition to be done within six months.

2.7. The Society agrees, after completion of the related works, to protect the forest area from fire, illicit grazing, illicit felling, illicit transport, illicit mining, encroachments and poaching and shall help the forest department in this regard.

2.8. The Society agrees to pass the information regarding person(s) engaged in harming the wild animals and forests or those engaged in illegal activities on to the Forest Department. The Society agrees to help forest employees in apprehending such person(s) and provide all possible assistance in protecting any seized produce etc.

2.9. The Society agrees to rectify any shortcomings found during review of its works by the Forest Officer/monitoring agency.

2.10. The Society agrees to keep accounts of income and expenditure of the funds from various sources and also to get regular annual audits done by the agency assigned by the Forest Officer.

2.11. The Society agrees to maintain the records specified by the project regularly and in prescribed formats.

2.12. The Society agrees that the distribution of products and services generated as a result of implementation of the Plan among its members/User Groups is done in an equitable manner. If the Forest Officer points out any mismanagement or irregularity in the equitable distribution of such products and services, then the Society agrees to implement the necessary corrections/improvements suggested by the Forest Officer.

2.13. Society agrees to ensure that there will be no mis utilization of funds provided by Forest Department for implementing project activities.

2.14. Society will open two accounts of VFDS/BMC (Sub-Committee), One for FEMP

implementation (FE Account) and second one as; revolving fund under Livelihood activities (CD&LI Account).

2.15. The funds and maintenance of account would be in accordance with Para-36 to 43 of the Bye-laws notified by Govt. on dated 19-11-2018 for Sub-committee under the Project.

3. Responsibilities of the Forest Department

3.1. The Forest Department will provide to the Society the related input materials required to carry out the works specified in the Plan, such as saplings, fencing materials, etc. in a timely manner.

3.2. The Forest Department will provide the payments specified in the Plan to the Society for implementation of works carried out in the forest area on the basis of the Plan in a timely manner. The Society to prepare and submit general house approved, six monthly physical & financial plans with budget requirements to DMU through FTU concerned for release of funds. DMU to release the fund to the VFDS/BMC (Sub-Committee)

3.3. Funds from other department's schemes as the Panchayat may be able to garner/ converge, may also be used for activities that help meet the project's objectives.

3.4. The Forest Department shall provide the necessary advice and guidance to the Society for implementation of works carried out in the forest area on the basis of the Plan.

3.5. The Forest Department shall NOT be responsible for any loss in any of the works related to implementation of the Plan and no claim of any sort can be presented against Forest Department.

3.6. Forest Department will take legal action against any mis appropriation of fund by VFDS/BMC (Sub-Committee).

4. Support by the Project

4.1. The Project will provide funds for Community Development & Livelihood activities (CDAs) identified by the Society and in conformity with the CD&LIP guidelines, which will be implemented by the Society.

4.2. The Project will provide to the Society if required the related input/materials required to carry out the works specified in the Plan. such as saplings, fencing materials, etc. in the required qualities and quantities.

4.3. The Project will provide to the Society the payments specified in the Plan for implementation of works carried out in the PFM area on the basis of the Plan.

4.4. The Project will provide to the Society members training and other capacity building measures, as well as support for income generating activities as specified in the Plan.

4.5. The funds earmarked for Plantations, soil and water conservation, Biodiversity conservation etc.,willbecredited into the VFDS/BMC (Sub-Committee) bank account according to six-month plan requirement (prepared from Micro plan)of VFDS/BMC (Sub-Committee). In addition, VFDS/BMC (Sub-Committee) to open an account for Livelihood activities.

4.6. Payment and receipt of project funds will be strictly by means of cheques online payment/RTGS etc. or bank transfers to the account of theSociety. Society will further distribute fund similarly.

5. Rights and Benefit Sharing

5.1. The **Rights** of right holders as admitted in the Forest Settlement will remain unaffected

due to constitution of the Society and will continue to be exercisedas heretofore.

5.2. The **Benefits** which Society members and their user groups will be entitled to after closure of plots / patches in the forest for various project interventions are asfollows:

i) to collect the yield such as fallen twigs, branches, loppings, grass, bamboos, fruits, flowers, seeds, leaf fodder and non- timber forests products free of cost through individual or collective arrangements as decided by the Society;

ii) to the sale proceeds of all intermediate harvest, subject to protection of forest and plantations for at least 3 years from the date of agreement;

iii) to organize and promote vocational activities related to forest produce and land; and other activities such as promotion of self-help groups which may provide direct benefits, including micro-lending to women. None of the activities so promoted shall affect the legal status of the forest land;

iv) recorded rights over the forest shall not be affected by these benefits;

v) after 5 years, the Society may expand the area, on the basis of a fresh agreement deed, by inclusion of adjoining or nearby areas;

vi) To utilize at least 40 percent of the sale proceeds on forest regeneration activities including soil and water conservation.

Provided that for the purpose of usufruct, the usufruct sharing family shall be one unit.

5.3 The Society will be entitled to their share of payments from intermediate and final felling,

Whenever they take place in this forest, as laid out in the PFM Regulations of HP, 2001,

6. Monitoring & Evaluation

6.1. Monitoring and Evaluation of project activities will be done at different levels, including by the EC, a participatory monitoring committee and an independent third party apart from Project authorities.

6.2. The EC of VFDS/BMC (Sub-Committee) or any of its members will monitor progress and quality of work during execution of various works. The Member Secretary will record the date, places and names of EC members who checked the work(s) and whether works were satisfactory and any instructions given.

6.3. A participatory monitoring committee made up of members of the Society, a member from the Panchayat as well as a representative from the Forest Department (e.g. Deputy RO) will on quarterly basis review objectives, inputs and work progress and report to the whole Society. Their reports will then be sent to the Forest Officer for further action.

6.4. Where Society groups have carried out or are responsible for activities like social fencing, fire prevention, plantations or maintenance of plantations, annual monitoring will be carried out by Project-approved monitors (Third Party) and the results of this monitoring linked to release of payments, a) for social fencing in lieu of barbed wire fencing, b) for fire prevention as specified in the Plan and c) for survival in forest plantations as given in the agreed to norms for thatactivity.

6.5. Settlement of Disputes: Settlement of disputes and conflict resolution will be governed as laid out under para 47, 48 and 49 of the Bye Laws notified by GoHP.

Memorandum of Understanding

We are aware that the benefits mentioned in this agreement shall be available to the Society only

when it discharges its duties, responsibilities and works in a satisfactory manner and this is certified by the Forest Officer every year. However, if the Forest Officer fails to fulfil conditions mentioned in para 3 and 4 of this agreement and this is a cause for the Committee not able to discharge its responsibilities and works, and then it will be kept in mind while evaluating the works of the Committee every year.

I Phunchok Angdui, President, Langcha Joint VFDS/BMC (Sub-Committee), declare on behalf of the Society, that I am committed to follow all the conditions mentioned in this MoU and am signing this memo after reading/understanding all conditions mentioned herein, literally and in their original meaning.

Phunchok Angdui

(Name and Signature of the President)
On behalf of VFDS/BMC (Sub-Committee)

President
B.M.C. Sub Committee

Divisional Forest Officer
_____ Forest Division
(on behalf of HPFD)

DFO WL Spiti

Witnesses: Village Forest Development Society/BMC (Sub-Committee) and The Forest Department for Participatory Forest Management.

1. Kesang.
2. Sonam.
3.
4

I, Phunchuk Angdui [position] undertake, on behalfof Bmc comm Longchu. Forest Department, to implement all duties/responsibilities of the Forest Department mentioned in this memorandum.

DFO WL Split

(Name and Signature of the Divisional Forest Officer or other officer authorized by him) On behalf of_____Forest Department

Registration No : HPCD-5201

Certificate of Registration of Societies

हिमाचल प्रदेश सरकार

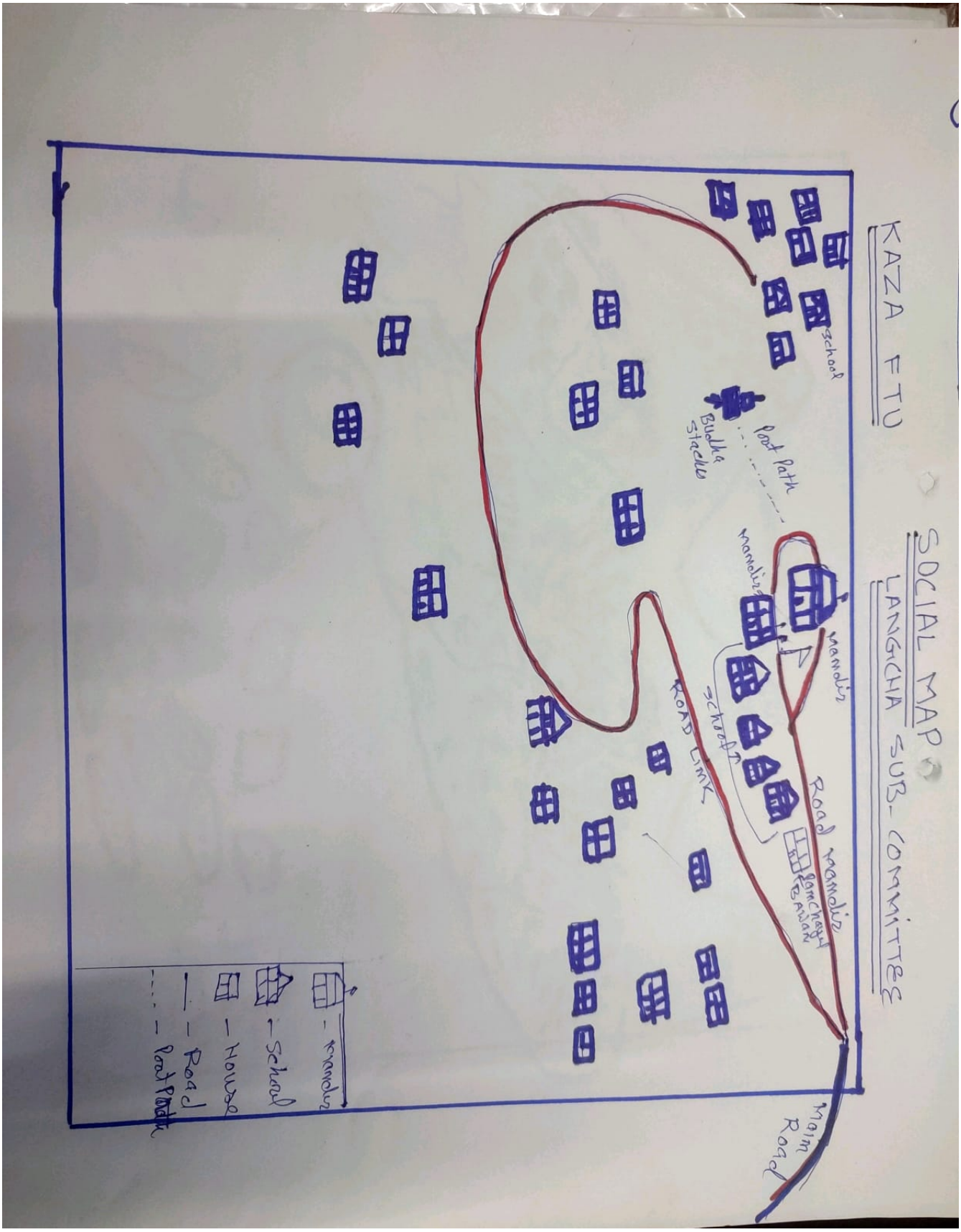
Himachal Pradesh Societies Registration Act 2006 (Act No. 25 of 2006)

This is certified that the **BMC SUB COMMITTEE LANGCHA** located at **VILL.LANGCHA P.O KOMIC TEHSIL SPITI DISTRICT L&S ,HP -172114** has been registered under the provisions of the Himachal Pradesh Societies Registration Act, 2006 (Act No. 25 of 2006) on the **3rd** day of **June 2022** (03/06/2022).

Given under my hand and seal at **SDM Office, Kaza**, Himachal Pradesh.

SDM -cum- Deputy Registrar of Societies
Himachal Pradesh

KAZA FTU
LANGCHA - BMC SUB Committee
Mountains
Glacier
GRAZING AREA
GRAZING AREA
GRAZING
Fossil
Medicinal Plants
Water tank

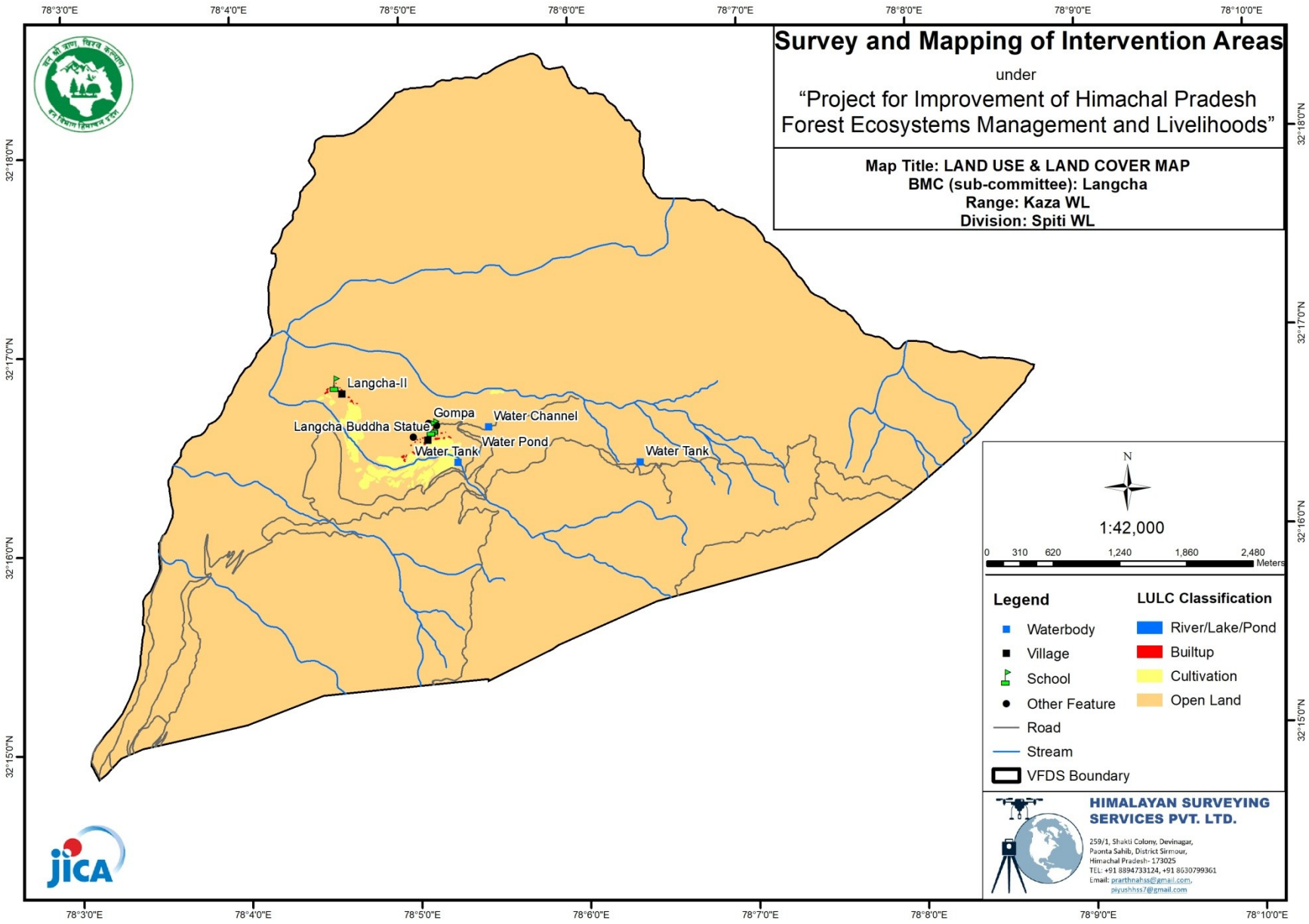

KAZA FTU
SOCIAL MAP
LANGCHA SUB- COMMITTEE
School
Buddha Statue
Foot Path
Mandir
Road
Langcha
ROAD LINK
Main Road
- Mandir
- School
- House
- Road
- Foot Path

Annexure-I

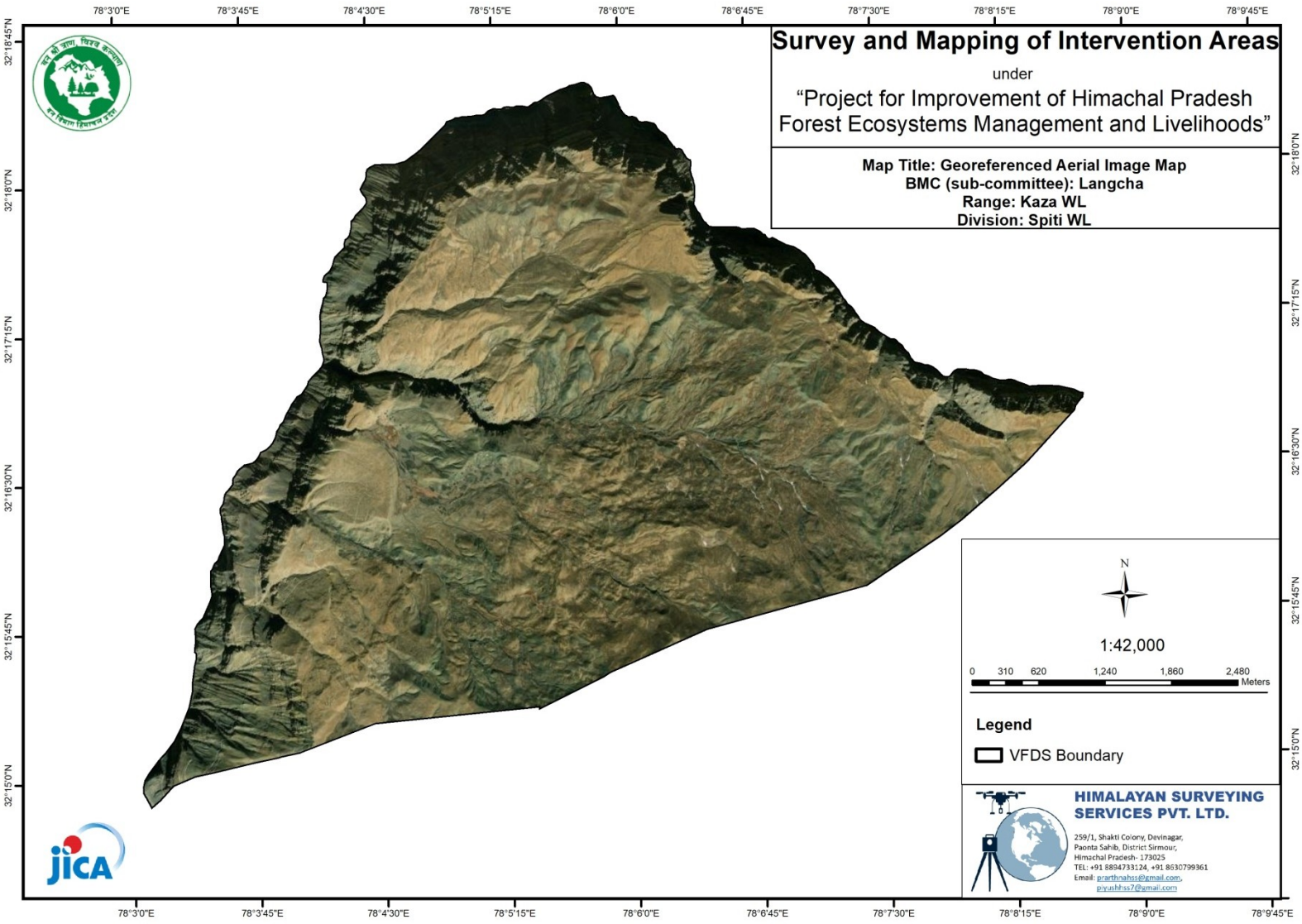
Mine
Date: 13/10/2021
Page:

आज दिनांक 13-10-2021 को ग्राम पंचायत लांगचा के गाँव लांगचा में (BMC) के प्रधान और सभी सदस्यों व वन विभाग के अधिकारियों उप वन राजिक और वन रक्षक की अध्यक्षता में मीटिंग किया गया जिसमें शिमला से आयका के प्रतिनिधि द्वारा आयका सम्बन्धित विषयों पर चर्चा किया गया और उन्होंने एक मोबिलाइजर नियुक्त करने को कहा गया है। और लांगचा में जितनी भी समस्या है उनको उजागर करने को कहा गया है BMC के Sub कमेटी के प्रधान और सभी सदस्यों द्वारा बताई गई समस्याओं का विवरण इस प्रकार से है:-

1. लांगचा गांव में वाटर हार्वेस्टिंग के काम (टैंक स्टोरेज) के बारे में बताया गया।
2. प्राकृतिक झील को सुधारना और जल इकट्ठा करने के बारे में।
3. सिंचाई के सामुदायिक टैंक को बनाना।
4. सामुदायिक भवन के लिए बजट प्रावधान करना या सामुदायिक भवन बनाना।


Survey and Mapping of Intervention Areas
under
"Project for Improvement of Himachal Pradesh Forest Ecosystems Management and Livelihoods"
Map Title: LAND USE & LAND COVER MAP
BMC (sub-committee): Langcha
Range: Kaza WL
Division: Spiti WL
78°3'0"E
78°4'0"E
78°5'0"E
78°6'0"E
78°7'0"E
78°8'0"E
78°9'0"E
78°10'0"E
32°18'0"N
32°17'0"N
32°16'0"N
32°15'0"N
Langcha-II
Gompa
Water Channel
Langcha Buddha Statue
Water Pond
Water Tank
Water Tank
N
1:42,000
0 310 620 1,240 1,860 2,480
Meters
Legend
Waterbody
Village
School
Other Feature
Road
Stream
VFDS Boundary
LULC Classification
River/Lake/Pond
Builtup
Cultivation
Open Land
HIMALAYAN SURVEYING SERVICES PVT. LTD.
259/1, Shakti Colony, Devinagar,
Paonta Sahib, District Sirmour,
Himachal Pradesh- 173025
TEL: +91 8894733124, +91 8630799361
Email: prarthnahss@gmail.com,
piyushhss7@gmail.com
JICA

Annexure-II


Survey and Mapping of Intervention Areas
under
"Project for Improvement of Himachal Pradesh Forest Ecosystems Management and Livelihoods"
Map Title: Georeferenced Aerial Image Map
BMC (sub-committee): Langcha
Range: Kaza WL
Division: Spiti WL
N
1:42,000
0 310 620 1,240 1,860 2,480
Meters
Legend
VFDS Boundary
HIMALAYAN SURVEYING SERVICES PVT. LTD.
259/1, Shakti Colony, Devinagar,
Paonta Sahib, District Sirmour,
Himachal Pradesh- 173025
TEL: +91 8894733124, +91 8630799361
Email: prarthnahss@gmail.com,
piyushhss7@gmail.com
JICA
78°3'0"E
78°3'45"E
78°4'30"E
78°5'15"E
78°6'0"E
78°6'45"E
78°7'30"E
78°8'15"E
78°9'0"E
78°9'45"E
32°18'45"N
32°18'0"N
32°17'15"N
32°16'30"N
32°15'45"N
32°15'0"N

Annexure-IX

THE BYE-LAWS

OF

The Langcha Village Forest Development Society

Project for Improvement of HP Forest Ecosystems Management & Livelihoods

NAME, ADDRESS AND AREA OF OPERATION

1 The society shall be called the _BMC Sub Committee Langcha Village Forest Development Society.

It shall be referred to here-in-after as the society.

2 The registered address of the society shall be C/O Phunchok Angdui S/O Tashi Angrup Village Langcha Post Office Komic Tehsil Spiti District Lahaul & Spiti

3 The area of operation of the society shall cover the following village/villages:

Definitions

4 In these by-laws, unless there is anything repugnant in the subject or context

i "**Act**" means Indian Forest Act, 1927, (Act No.16 of 1927) as amended in its application to Himachal Pradesh;

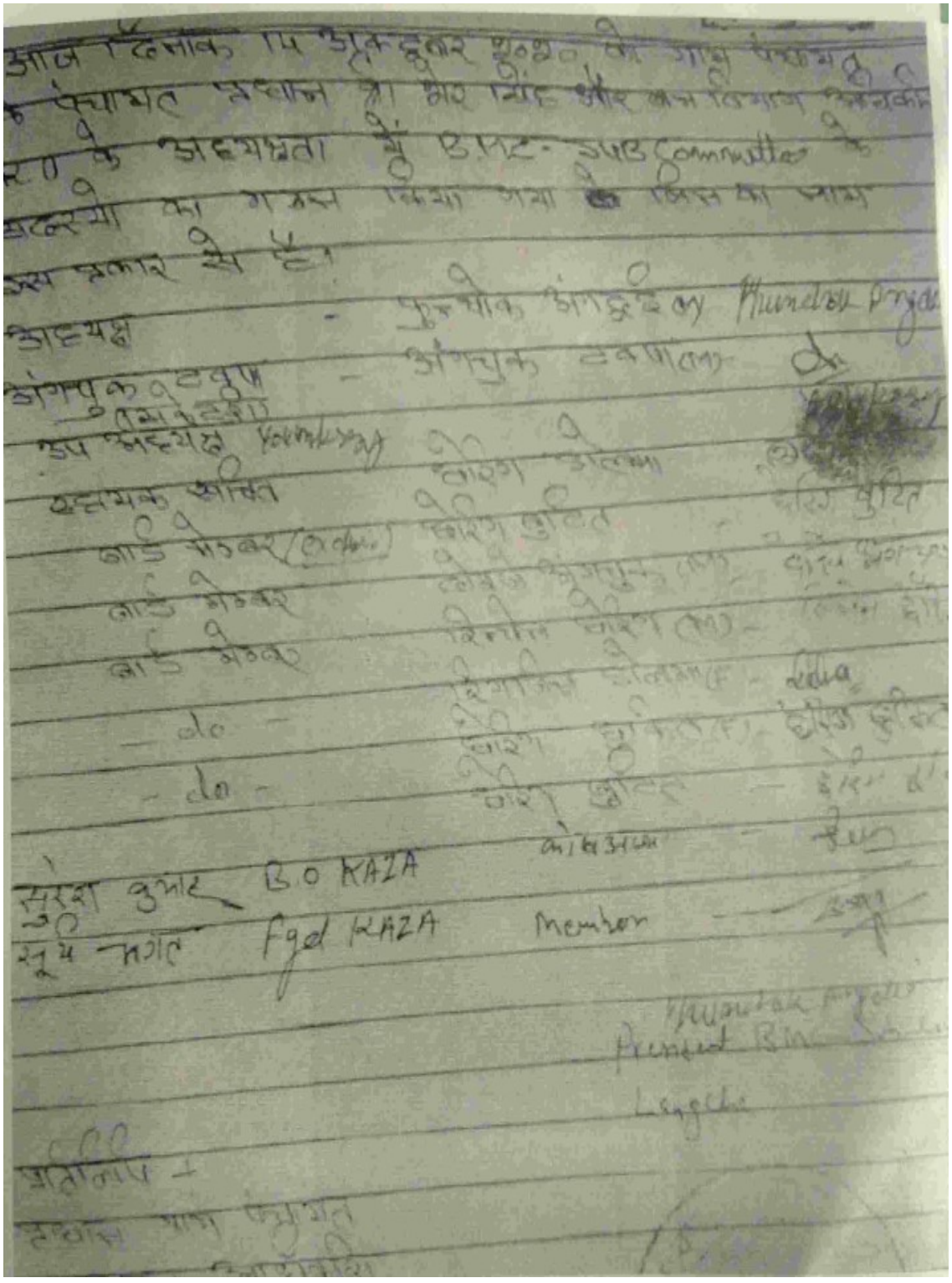
ii "**Conflict Resolution Group**" means a group consisting of representatives of the concerned Gram Panchayats, a representative of the local non-government organizations or local community based organizations, a representative from local/migratory community and the concerned Assistant Conservator of Forests/Forest official;

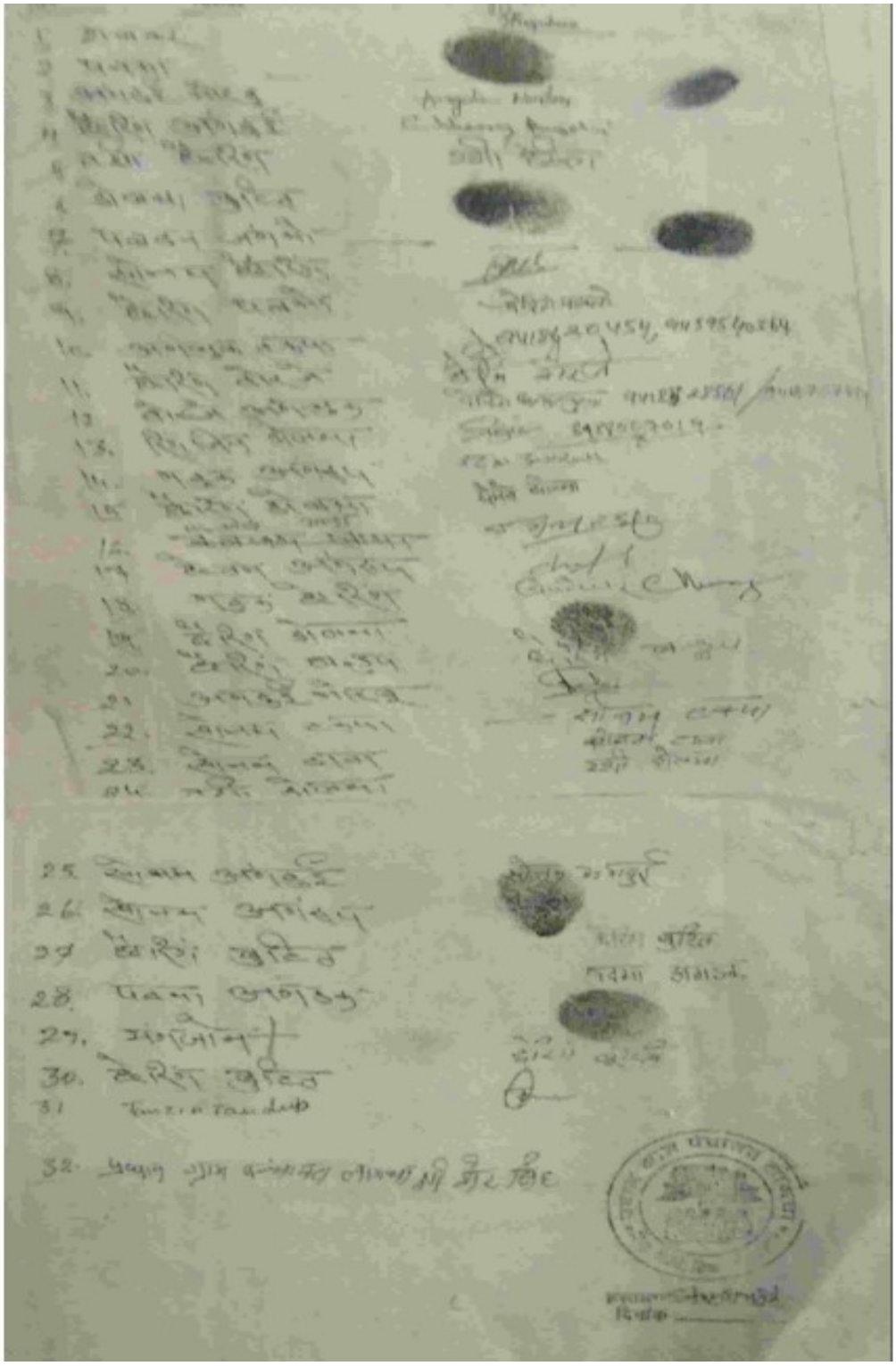
iii **"common land', "family', "Gram Panchayat', "Panch", "Pradhan", "Village" and "Ward"** shall have the meanings respectively assigned to them in the Himachal Pradesh Panchayati Raj Act, 1994 (Act No.4 of 1994);

iv **CD & LIP:** Community Development and Livelihood Improvement Plan refers to the plan activities that shall be included in the microplan to enhance community well being and resilience of household economy.

v **CIG:** Common Interest Group refers to a group of persons who have a common interest in a particular Livelihood Improvement Activitiy.

vi "**Department**" means the Himachal Pradesh Forest Department.





Annexure-X

Glimpsesofmicroplanningprocess

Annexure-XIIGlimpsesofLangchaWard

AnnexureXIII

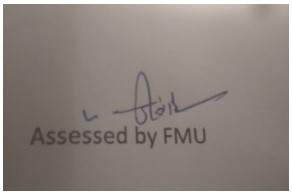
MicroPlanAssessmentCriteriaforFinancingandSanctioningDMU

:WildlifeDivision……. FTU:WildlifeRange…..Beat:……..

GP:…… BMCSub-Committee:……..

S.NO	AssessmentCriteria	AchievementDD/MM/YY	Statusat thetimeAppling forApproval
	ProcessRelated		
1.	GPLevelandWardLevelawarenessdone	10/10/21	DONE
2.	GPConsent/WardConsenttoworkwithProjectObtained	13/10/21	DONE
3.	BMCSub-CommitteeFormed/Executive CommitteeConstituted	14/10/21	DONE
4.	BMCSub-CommitteeRegistered	03/06/22	DONE
5.	MOUSignedbetweenDMUandBMCSub-Committee forundertakingmicro-planningand implementation	21/11/22	DONE
6.	EC1st meetingheldtoexplaintheirroleand responsibilities	07/11/21	DONE
7.	BMCSub-CommitteeaccountOpened	30/11/22	DONE
8.	Percentofhouseholdsrepresentedinmicro-planningprocess(App.)	50-60%	DONE
9.	PercentofWomenParticipantsinvolvedinmicro-planningprocess(App.)	60%	DONE
10.	Collectedinformationcrosscheckedand updatedinGreenAssembly	30/10/22	DONE
11.	Women,Poor,Youthandothercommunitieswereinvolvedinmicro-planningprocess	YES	DONE
12.	BMCSub-Committeeinvolvedin informationanalysisandfinalizingkeyemergingactivities	YES	DONE
13.	MicroPlan(CBMP,CD&LIP)approvedbyBMCSub-CommitteeinGeneralAssembly	30/11/22	DONE

	andconfirmedbyexecutivecommittee		
14.	FormatsprescribedforMP(CBMC,CD&LIP)used bysocialand technicalstaff		
15.	TotalamountofCBMP,CD&LIPandconvergence mentionedinMicroplan		07
16.	Daystakentocomplete MP(CBMP,CD&LIP)	03 Months	DONE
17.	MicroplanSubmittedbyFTUtoDMU	19/11/22	DONE
18.	MicroplanapprovedbytheHeadofDMU	21/11/22	DONE
	Outputrelated		
19.	Listofexecutivemembersattached	Yes	DONE
20.	BMCSub-Committeecontributionisthere	Yes	DONE
21.	AreCBMPandCD&LIPactivitiesinlinewithprojectobjectives	Yes	DONE
22.	Livelihoodactivitiescheckedforinitial technicalfeasibilityandeconomicviabilitybymicroplanning team	Yes	DONE
23.	Convergenceactivitiesincluded	Yes	DONE
24.	BMCSub-Committeetrainingandcapacitybuildingaspectincluded	Yes	DONE
25.	CostingofCBMP,CD&LIPcheckedbyDMU	Yes	DONE
26.	Microplanincludesadverselyaffectedhouseholds/group,ifany	Yes	DONE
27.	PRAtools,wellbeinganalysis,BMCsub-committeeresolution,mapsofCBMPandotherdocumentsareannexed	Yes	DONE
28.	Sourcesofsecondaryinformation mentionedImicroplan	Yes	DONE



AssessedbyFMU RecommendedbyDMU ApprovedbyPMU

Annexure