

## People Biodiversity Register (PBR): General Details

**Name of the Panchayat Samiti:** Bhainch

**Taluk:** Poonch

**District:** Poonch

**State:** Jammu and Kashmir

**Geographical Area of the Panchayat Samiti:** 1280 Hectares

**Population under the Panchayat Samiti:** Total 2900

**Males:** 1495      **Females:** 1405

**Habitat and Topography:** Hilly Area

**Climate (Rainfall, Temperature and weather patterns):** Humid Sub-Tropical/Temperate Area with Moderate Rainfall, Strong Monsoon Currents are also experienced in the District

**Land Use (Nine fold classification available with village records):** Agriculture, Horticulture and Animal Husbandry

**Date, Month and Year of PBR Preparation:**

**Management Regime:** Reserve Forest (RF)/Joint Forest Management(JGM)/Protected Areas(PA)/ Community Owned and Managed Forest(COM)

## Annexure 1

**Details of Biodiversity Management Committee (BMC) of the Panchayat (One elected Chairperson and six persons nominated by the local body ; not less than one third to be women and not less than 18% belonging to SC/ST)**

**1)Name of the Chairperson:** Ishrat Nissa

**Age:** 29

**Gender:** Female

**Address:** Bhainch

**Area of specialization:** Chairperson

**2) Name:** Rashida Bi

**Age:** 30

**Gender:** Female

**Address:** Bhainch

**Area of specialization:** Member

**3)Name:** Rajni Sharma

**Age:** 28

**Gender:** Female

**Address:** Bhainch

**Area of specialization:** Member

**4) Name:** Qadeer Hussain

**Age:** 65

**Gender:** Male

**Address:** Bhainch

**Area of specialization:** Member

**5)Name:** Ghulam Rasool

**Age:** 55

**Gender:** Male

**Address:** Bhainch

**Area of specialization:** Member

**6)Name:** Ahsan Ilahi

**Age:** 24

**Gender:** Male

**Address:** Bhainch

**Area of specialization:** Member

**7)Name:** Munir Hussain

**Age:** 65

**Gender:** Male

**Address:** Bhainch

**Area of specialization:** Member

## **Annexure-2**

**List of Vaids, hakims and traditional health care (Human and livestock) practitioners residing and or using biological resources occurring within the jurisdiction of the village**

**1) Name :**

**Age:**

**Gender:**

**Address:**

**Area of specialization:**

**Location from which the person accesses biological material:**

**Perception of the practitioner on the resource status:**

**Medicinal Use:**

**2) Name:**

**Age:**

**Gender:**

**Address:**

**Area of specialization:**

**Location from which the person accesses biological material:**

**Perception of the practitioner on the resource status:**

**Medicinal Use:**

**3) Name:**

**Age:**

**Gender:**

**Address:**

**Area of specialization:**

**Location from which the person accesses biological material:**

**Perception of the practitioner on the resource status:**

**Medicinal Use:**

### Annexure 3

List of individuals perceived by the villagers to possess Traditional Knowledge (TK) related to biodiversity in agriculture, fisheries, and forestry

1)Name: Kadir Hussain S/o Juma

Age: 65

Gender: Male

Address: Bhainch

Area of specialization: Progressive Farmer/Agriculture and Horticulture

2) Name: Mohd. Rashid S/o Jalal Din Mob. no. 9906240029

Age: 60

Gender: Male

Address: Bhainch

Area of specialization: Progressive Farmer/Agriculture and Horticulture

3)Name: Rukam Din S/o Mohd. Din

Age: 61

Gender: Male

Address: Bhainch

Area of specialization: Progressive Farmer/Agriculture and Horticulture

**Annexure 4**

**Details of schools, colleges, departments, universities, government institutions, non-governmental organization and individuals involved in the preparation of the PBR**

**1) Contact Person:**

**Name and Address:** Dr. Abhineet Singh(Animal Husbandry)

**2) Contact Person:**

**Name and Address:** Mohd. Sadiq (Forest)

**3) Contact Person:**

**Name and Address:** Ghulam Rasool (Floriculture)

**4) Contact Person:**

**Name and Address:** Rajiv Bali (Sheep Husbandry)

**You may add names of more institutions/NGO/Individuals etc, if necessary**

## Detail of access to biological resources and traditional knowledge granted, details of the collection fee imposed and details of the benefit derived and the mode of their sharing

S.No	Name and address of the Person/Institute/company others	Local and Scientific Name of the biological material Accessed and quantity	Date and resolution of the BMC and endorsement by the Panchayat	Detail of collection fee imposed	Anticipated mode of sharing benefits or quantum of benefits shared

End of Part I

**Format-1 Crop plants**

1	2	3	4	5	6	7		8	9	10	11	12	13	14
Crop	Scientific Name	Local Name	Variety	Landscape / Habitat	Approx. area shown	Local Status		Special features	Cropping season	Uses	Associated TK	Other Details	Source of Seeds / Plants	Community /Knowledge Holder
						Past	Present							
Rice	<i>Oryza sativa</i>	Taain	Cheena 1039	Lowland valleys		Rare	Rare	medium height crop	Kharif	Food/Fodder	Rich in Nutritional Values, Cultural Values, fine aroma and medicinal properties	In Rice, well balanced amino acid profile	Locally, traditionally cultivated and focussed locally, Agriculture Deptt.	Local/ Aged farmers of rural communities possess TK. Cultivation and management practices among the farming communities across the district.
Maize	<i>Zea mays</i>	Makki	Plandri, Rashi 4794, Bio-9621, Bio-9220	Humid Sub-Tropical Climate/Hilly temperate and intermediate		Plenty	Plenty	April sown, local variety dentles, corn & flour sweet in taste	Kharif	Major food item, used as flour, feed to cattle, poultry etc.	Good for Health, Rich in Vitamin C and E, to boost immune, skin and hair health, Dietary Fiber, Calcium	Maize is generally used for animal feed, Maize flour is used to make chapatis	HH kept seed, Deptt. Of agriculture, private seed dealers	Local/ Aged farmers of rural communities possess TK. Cultivation and management practices among the farming communities across the district.
Common Bean/Rajmash	<i>Phaseolus vulgaris</i>	Mothi	Kidney Bean, Common Bean, Snap Bean and French Bean	Humid Sub-Tropical Climate/Hilly temperate and intermediate		Normal	Normal	Source of dietary fiber, protein, and carbohydrates	Summers	Used for Obesity, Diabetes, colon cancer, high cholesterol, kidney stones	Used for diabetes, Colon cancer, high cholesterol, kidney stones etc.	Rich source of Protein, vitamin and minerals	HH kept seed, Deptt. Of agriculture, private seed dealers	Local/ Aged farmers of rural communities possess TK. Cultivation and management practices among the farming communities across the district.

Brown Mustard	<i>Brassica juncea</i>	Sarsoon/Sareyan	Local, KS-101, KOS-1	Temperate and intermediate		Plenty	Plenty	Locals used to cook green leaves and eat as (Sabzi) Vegetable	Rabi	Green leaves used as vegetables and seeds used for extracting oil used in cooking and for other relevant purposes	Rich in Dietary Fibre, Vitamin B6, C, and Calcium	Crop severely affected by the snowfall during the month of dec-feb	Farm saved seed, from peer groups of farmers, from deptt. Of agriculture and other relevant sources	Local/ Aged farmers of rural communities possess TK. Cultivation and management practices among the farming communities across the district.
Radish	<i>Raphanus sativus</i>	Mooli	Local turnip shaped radish	Temperate conditions		Normal	Normal	The entire plant is edible and the tops can be used as a leaf vegetable	2-3 crops round the year	Eaten raw, used as vegetable and pickle making	Traditional variety and cultivation practice	Round, sharp, white colored	Seed being traditionally cultivated and focussed locally	Farmers of the area
Wheat	<i>Triticum aestivum</i>	Kanak/Gandham	HD2967,PBW 644	Cool Climate during early part of its growth		Normal	Normal	High yielding Variety	Food & Fodder	Source of Energy	Suitable for Chappati/Bread making	Rabi	Farmers / Department/ Private Suppliers	Farmers
Onion	<i>Allium cepa</i>	Pyaz	nasik Red. Red Coral, Monsanto And Local Spp.	local Planee areas		Rare	Rare	Bulbs Cash Crop	Vegetables	Vegetable	Staple Vegetable food	Rabi	Farmers / Department/ Private Suppliers	Farmers/households
Mustard	<i>Brassica juncea/ Brassica compestris</i>	Sarson	Pusa Bold/ KOS -1	Cool & dry		Normal	Normal	Matures in 145-150 days with 40-42 % oil content	Oil for Food	Source of energy	vegetable Oil extracted from seeds used in cooking	Rabi	Farmers / Department/ Private Suppliers	Farmers
Rape Seed/Gobhi Sarson	<i>Brassica napus</i>	Sareyan	GSL-1,DGS-1,Local	Cool & dry		Normal	Normal	Annual Herb,yellow flowers bearing Pods	oil for Food,leaves used as vegetable	Source of energy, calciam,copper , potassium	vegetable Oil extracted from seeds used in cooking	Rabi	Farmers / Department/ Private Suppliers	Farmers



Potato	<i>Solanum tuberosum</i>	Aalo	Kufri Sindhuri, Kufri Badsha, local	Potato is an herbaceous annual, requires cool weather, mostly rainfed conditions		Normal	Normal	Tubers are round to ovoid, creamish white to light red in colour with shallow eyes	Under ground tubers are used as vegetable, chips etc	One of the temperate staples, eaten boiled, baked, fried, stewed etc.	High carbohydrate, provide high n energy value	Rabi	Farmers / Department/ Private Suppliers	Farmers
Chilli	<i>Capsicum annum</i>	Mirchi/Marchi	Pusa Jawala, CH-1	Tropical/sub tropical vegetable, grows well warm humid conditions		Normal	Normal	Pungency and flavor	Used as spice, medicinal value	Used orally for upset stomach, toothache, poor circulation, fever and heart disease	Contains good amount of vitamin A&C	winter season	Farmers / Department/ Private Suppliers	Farmers
Tomato	<i>Solanum lycopersicum</i>	Tamater	Pusa rubi, Pusa early dwarf, Manisha Plus/local	Warm season crop		Rare	Rare	Stems are woody and weak, and tend to vine over other types of plants.	Used as vegetable, salad, soup, Souce	Rich source of Ascorbic acid	Tomatoes are also packed with vitamins A and C, calcium, potassium.	Rabi	Farmers / Department/ Private Suppliers	Farmers
Okra	<i>Abelmoschus esculentus</i>	Bindi	Varsha uphar, Arka Anamika	Tropical/sub tropical vegetable/Hot and humid climate		Rare	Rare	Tender green fruit used as vegetable	Mainly vegetable	Source of Fiber	Contains dietary fibers, protein and carbohydrates	Summer/ Kharif	Farmers / Department/ Private Suppliers	Farmers
Cucumber	<i>Cucumis sativus</i>	Kheera	Kheera local, JL	Grows in all climatic conditions, Tropical, Sub tropical & temperate		Rare	Rare	Limbing annual bearing elongated thick cylindrical fruit	Mainly used as salad	Vegetable	It also used as antipyretic and causing cooling effect	Summer/ Kharif	Farmers / Department/ Private Suppliers	Farmers
Calabash	<i>Lagenaria siceraria</i>	Lokki	PSPL/Punjab Long	Summer & Rainy season crop		Abundant	Abundant	Vines vigorous, profusely branched	Mainly used as Sabzi	Vegetable	It also contains essential vitamins and minerals	Summer/kharif	Farmers / Department/ Private Suppliers	Farmers

Beans	<i>Phaseolus Spp.</i>	Phaliya	Contender	Cool weather crop/Sandy/loamy soil		Abundant	Abundant	Tender green pods are used as vegetable	Mainly vegetable	Source of energy in the shape of Gur/Sugar	High protein, Vitamine B1, B2<B6 and Maganese	Summer season	Farmers / Department/ Private Suppliers	Farmers
Kohlrabi	<i>Brassica oleraceae var. gongylodes</i>	Kadam	White vienna, Purple vienna	cool & moist climate/sub tropical		Abundant	Abundant	Swollen stem ,gren/purple with long and broad leaves	Swollen stem and leaves are consumed as vegetable	Vegetable	Rich in Vitamin C	Rabi	Farmers / Department/ Privaate Suppliers	Farmers
Spanich	<i>Beta vulgaris</i>	Palak	All Green,Delta	Cool season Crop, thrives well on well drained loam soils		Abundant	Abundant	Tender green leaves & root used as Vegetable	Tender green leaves used as leafy Vegetable	Vegetable	Vitamins A and C, fiber, folic acid, and other nutrients	Rabi	Farmers / Department/ Privaate Suppliers	Farmers
Turnip	<i>Brassica rapa</i>	Gunglu /Shalgam	PTWG/Local	Cool & moist climate/sub tropical & intermedite		Abundant	Abundant	Modified Root is eatable	Root is used as Vegetable ,Sal ad	Vegetable	Good source of Vit.C,Diatry Fiber & Potasium	Rabi	Farmers / Department/ Privaate Suppliers	Farmers
Amaranths	<i>Amaranthus spinosus</i>	Gnaar	Local	Cool & moist climate/sub tropical & intermedite		Abundant	Abundant	Leaves are eatable	Summers	Vegetable	Used as an expectorant and to relieve breathing in acute bronchitis.	Summers	Locally, traditionally cultivated	Farmers/Locals
Sponge Gourd	<i>Luffa aegyptiaca</i>	Tori/ Toriyaan	Angled luffa, ridged luffa, wild luffa	Cool & moist climate/sub tropical & intermedite		Normal	Normal	Fast growing, tendriled Used for arthritis pain, chest pain	Summers	Vegetable	Treacting and Preventing colds, Used for nasal swelling and sinus problems etc.	Summers	Locally/Private Suppliers	Famers/Locals
Garlic	<i>Allium sativum</i>	Thoom	Rocambole, Porcelain	Moderate temperature in summer as well as in winter		Normal	Normal	Short days are very favorable, Rich in humus, good content of potash	Summers/ Winters	Vegetable	Boost Immunity, Reduce High BP, Prevention of Cancer, Antibiotic properties	May prevent Alzheimer's and Dementia	Locally/Private Suppliers	Farmers/Locals

### Format-2 Fruit Plants

1	2	3	4	5	6		7	8	9	10	11	12
Plant	Scientific Name	Local Name	Variety	Landscape / Habitat	Local Status		Source of Seeds/ Plants	Season of Fruiting	Associated TK	Uses	Other Details markt / own use	Community /Knowledge Holder
					Past	Present						
Pear	<i>Pyrus communis L.</i>	Nakh	Pathar Nakh, Packham, Limonera, Conference	Highland	Plenty	Normal	Fruit itself	August	Lower Blood pressure, Prevent Cancer, Energy Booster	Fruit, wood	Marketing, Own Use	Farmers/ Locals
Plum	<i>Prunus domestica Opal</i>	Plump	Plum opal	Moisture but well drained Lowland, Deciduous	Plenty	Normal	Fruit itself	July-August	Reduce Blood Sugar, Rich in antioxidants	Fruit	Marketing, Own Use	Farmers/ Locals
Peach	<i>Prunus persica</i>	Aaroo	July Elberta, Quetta, Shan-e- Punjab, Sun Haven, Sharbati	Highland	Normal	Normal	Fruit itself	July-August	Promote Healing, Keep digestion running smoothly etc.	Fruit, wood	Marketing, Own Use	Farmers/ Locals
Apple	<i>Malus domestica</i>	Saib	Ambri Apple, Granny Smith, Bramley	Tree, regular bearing, Temperate Hills	Rare	Rare	Nurseries	August-October	Fruit, Nutritious, Good for weight loss, Prevent Cancer	Fruits	Marketing, Own Use	Farmers/ Locals
Apricot	<i>Prunus armeniaca</i>	Khubani, Sadi	Local apricot, Bebc	Tree, regular bearing, Mid Hills	Plenty	Normal	Nurseries	June-July	Rich in Vitamin A, Excellent for promoting eye health	Fruits, Wood	Marketing, Own Use	Farmers/ Locals
Walnut	<i>Juglans regia</i>	Akhrot	Paper/Thin Shelled, Hard & Medium Shelled	Tree, regular bearing, Temperate Hills	Normal	Normal	Nurseries & Locally raised	Sept-Oct	Dry-fruit, Economy generation, Rich in antioxidants, Reduce risk of some cancers etc.	Fruits, Wood	Marketing, Own Use	Farmers/ Locals
Pecan	<i>Carya illinoensis</i>	Shimla Khor	Western shell	Mid/temperate hills/ Deciduous/ Perennial	Rare	Rare	Nurseries	Sept-Oct	Dry Fruits, Nutritional Value	Fruits	Marketing	Farmers/ Locals

Date Plum	<i>Diospyros lotus</i>	Amlook	Local	Mid/temperate hills	Normal	Rare	Locally raised	July-august	Dry fruits, Nutritional Value, Anti-Cancer agent	Fruit	Own Use	Locals
Common Grape Vine	<i>Vitis Vinifera</i>	Daakh	Local	Mid/ temperate hills	Rare	Rare	Locally raised,govt nurseries	July to september	Reduce Blood Pressure, Improve Kidney Function etc.	Fruit	Own Use	Locals
Loquat	<i>Eriobotrya japonica</i>	Lakaat	Local	Sub tropical to mild temperate	Rare	Rare	Locally Raised, Nurseries	Late Winters	High in Vitamin A, Antioxidant	Fruit	Own Use	Locals
Citrus Fruit	<i>Citrus spp.</i>	Khatti, Galgal, Nimbu, Santra, Kinnoo etc.	Local Selection, Kagzi Lime etc.	Sub Tropical/ Temperate	Normal	Rare	Nurseries	Through Out Year	Fruit, Pickle, Squashes etc	Fruit	Own Use	Locals

### Format-3 Fodder Crops and Species

1	2	3	4	5		6	7	8	9	10
Plant	Scientific Name	Local Name	Landscape / Habitat	Local Status		Source of Plants / Seeds	Associated TK	Part Used	Other details	Community / Knowledge holder
				Past	Present					
Paddy hay	<i>Orzya Sativa</i>	Chawal	Lowlands	Good	Good	Agriculture Deptt.	NA	Crop	NA	local farmers of rural community
Oat	<i>Avena Sativa</i>	Tain	Lowlands	Good	Good	Agriculture Deptt.	NA	Crop	NA	local farmers of rural community
Barseem	<i>Trifolium Alexandrium</i>	Barseem/ Chhatala	Lowlands	Good	Good	Self	NA	Crop	NA	local farmers of rural community
Maize	<i>Zea mays</i>	Makka	Highland	Good	Good	Agriculture Deptt.	NA	Crop	NA	local farmers of rural community
Oats	<i>Avena sativa</i>	Ghaas	Temperate/ Intermediate	Good	Good	Self	Stored in locally made indigenous structure called "Taai"	Crop	NA	local farmers of rural community
Berseem (Egyptian Clover)	<i>Trifolium alexandrinum</i>	Gjaas	Irrigated areas	Good	Good	Self	NA	Crop	NA	local farmers of rural community
Milkweed	<i>Euphorbia thymifolia</i>	Dudli	Temperate/ Intermediate	Good	Good	self	NA	Crop	containing milky fluid like substance	local farmers of rural community
Charri	<i>Sorghum bicolor</i>	charri	Temperate/ Intermediate	Good	Good	self	NA	Crop	NA	local farmers of rural community
Berea grass	<i>Dactyloctenium australe</i>	Beran	Temperate/ Intermediate	Good	Good	self	NA	Crop	containing lots of fibre	local farmers of rural community
Bray grass	<i>Sorghum halepense</i>	Bray	Temperate/ Intermediate	Good	Good	self	NA	Crop	associated with maize crop	local farmers of rural community

Barseem	<i>Trifolium alexandrium</i>	Chhatala	Annual	Good	Good	Farmers / Department/ Private Suppliers	Nutritious & palatable fodder, Source of energy for animals	Entire Plant	Fodder	Farmers
Oats	<i>Avena spp.</i>	Javi	Annual	Good	Good	Farmers / Department/ Private Suppliers	Nutritious & palatable fodder,	Above ground part of plant	Fodder	Farmers
Oats	<i>Sorghum spp.</i>	cherri	Annual	Good	Good	Farmers / Department/ Private Suppliers	Source of energy	Above ground part of plant	Fodder	Farmers
Oats	<i>Zea mays</i>	Makki	Annual	Good	Good	Farmers / Department/ Private Suppliers	Source of energy	Above ground part of plant	Food & fodder	Farmers
Oats	<i>Vigna unguiculata</i>	Rongi	Annual	Good	Good	Farmers / Deptt./ Private Suppliers	Kharif Legume with high protein	Above ground part of plant	Fodder	Farmers

**Format-4 Weeds**

1	2	3	4	5	6	7		8	9	10	11	12
Plant	Scientific Name	Local Name	Affected crop	Impact	Landscape / Habitat	Local Status		Uses if any	Management options	Associated TK	Other details	Community Knowledge Holders
						Past	Present					
Weed grass	<i>Cyanedon Diactylon</i>	NA	Paddy maize	It competes with main crop and lowers the yield	Highland	Good	Good	Can be used as fodder	Proper and timely removal	Nil	NA	NA
Weed	<i>Phakaris Minor</i>	Gulli danda	Wheat	It competes with main crop and lowers the yield	Highland	Good	Good	Can be used as fodder	Proper and timely removal	Nil	NA	NA
Wild Oat	<i>Avena fatua</i>	Jai	Wheat	It competes with main crop and lowers the yield	Highland	Good	Good	Can be used as fodder	Proper and timely removal	Nil	NA	NA
Ipomoea	<i>Ipomea sp.</i>	NA	Maize	Destroys the plant	Temperate and Intermediate	No weed management`	Scientific based weed management	Nil	Proper and timely removal	Nil	NA	NA
Ipomoea	<i>Ipomeaaqatica</i>	Ghaas	paddy	Destroys the plant	Temperate and Intermediate	No weed management`	Scientific based weed management	Nil	Proper and timely removal	Nil	NA	NA
Celosia	<i>Celosia Argentina</i>	Neeli	Paddy	Destroys the plant	Temperate and Intermediate	No weed management`	Scientific based weed management	Nil	Proper and timely removal	Nil	NA	NA
Mash	<i>Cyprus esceluntus</i>	Ghass	-		Temperate and intermediate areas of the District	No weed management	Weed management on scientific lines being followed by the farmers	-	-	-	-	No TK associated with either knowledge or management of Ipomea weed

Paddy	<i>Marsilia quadrifolia</i>	NA	Paddy	Affect crop yield	Temperate and Intermediate	plenty	Weed management on scientific lines being followed by the farmers	nil	weedicide Butachlore	competes with main crop	NA	local farmers
Paddy	<i>Cynodon dactylon</i>	NA	vegetables	Affect crop yield	Temperate and Intermediate	Average	Weed management on scientific lines being followed by the farmers	nil	using weedicide	competes with main crop	NA	local farmers
Maize	<i>Sorghum halepense</i>	NA	Maize	Affect crop yield	Temperate/ Intermediate	average	Weed management on scientific lines being followed by the farmers	nil	hand picking			local farmers of rural community
Maize	<i>Euphorbia thymifolia</i>	Dudli	maize	Affect crop yield	Temperate/ Intermediate	Average	Weed management on scientific lines being followed by the farmers	nil	using weedicide or hand picking	competes with main crop	NA	local farmers of rural community
Lamb's quarters	<i>Chenopodium album</i>	Bathua/Kanah/ Wild Spinach	Wheat, Pea, Potato		Agri. Land	Normal	Normal	Eaten as boiled green veg	Physical, Mechanical, Chemical	Rich Source of protein, Vit. A, Calcium, Phosphorous & potash	Annual feed & fermentation of Beverages	Farmers
Barnyard Grass	<i>Echinochloa crusgalli</i>	Swank	Paddy		Agri. Land	Abundant	Abundant	Fodder & Animals	Physical, Mechanical, Chemical	Nil	Nil	Farmers
Carrot grass	<i>Parthenium hysterophorus</i>	Congress Grass	Gardens & sugarcane ratoon crops & other crops		Agri. Land	Abundant	Abundant	Nil	Physical, Mechanical, Chemical	Abnoxious weed difficult to manage	Nil	Farmers



### Format-5 Pests of Crops

1	2	3	4	5	6	7	8	9	10
Host	Insect / Animal	Scientific name	Local name	Habitat	Time / season of attack	Management mechanism	Associated TK	Other details	Community knowledge holder
Maize	Cut worm	NA	Kidi	Kharif Crops	May and June	IPM	NA	NA	Rare
Maize	Stem Borer	NA	Tana Chedak	Kharif Crops	May and June	IPM	NA	NA	Rare
Vegetables	Green fly	Aphids	Tela	Kharif Crops	May and June	IPM	NA	NA	Rare
Vegetables	Fruit Borer	Leucinodes Orbanalis	Suin	Kharif Crops	May and June	IPM	NA	NA	Rare
Wheat	Termites	<i>Odontotermis</i>	Sink	Polyphagous/ sandy and loamy soils	Kharif	Field sanitisation and continuous removal and destruction of infected plants	NA	NA	NA
Wheat	Stem borer	<i>Chilo partellus</i>	Ludi	Polyphagous	Kharif	Field sanitisation and continuous removal and destruction of infected plants	NA	NA	NA
Maize	Corn worm	<i>Helicoverpa armigera</i>	Sundi	Maize cobs	Kharif	Field sanitisation and continuous removal and destruction of infected plants. Installing pheromone traps @ 6-10/acre	NA	NA	NA
Maize			Tokka	upper part of maize	Kharif	Proper spray of insecticides	Reduces crop yield	NA	local farmers of rural community
vegetables	leaf borer		pediye		Kharif	Proper spray of insecticides	Reduces crop yield	NA	local farmers of rural community
Bottleguard	fruitfly	Dacus cucurbitee		pulp of the fruits	july to october	Dusting with some repellents	causes fungal and bacterial infection	NA	local farmers of rural community
Rajma dal			Dhoru		july to october		Reduces crop yiield	NA	local farmers of rural community

**Format 6: Markets for Domesticated animals**

1	2	3	4	5	6	7	8	9
Name of the market & location	Weekly (D)/ Fortnightly (D) / Monthly (D) / Biannual (M) / Annual (M) [1]	Types of animals bought and sold [2]	Types and Average Number of animals transacted in a day	Places from which animals are brought	Places to which the animals are sold / transported	Name and location of fish market	Types of fishes sold	Source of fish

**Note: [1] (D) – day; (M) – month;**

**[2] Types of animals may include: Poultry / Sheep / Goats / Cattle / Ducks / Pigs / Donkeys / Mules / Horses / Camels / Others (Specify)**



### Format-8 Landscape

Format-8 Landscape													
1			2	3	4	5	6	7	8	9	10	11	12
Major Landscapes			Sub - Landscapes	Feature s and approx. area	Ownership	General flora	General fauna	User groups	Management practices	General uses	Associated TK	Other details	Community accessed
Agricultural land	Pond	Fallow land											
Agricultural Lands			Forest and water		Farmers	Maize	Cow, Buffalo, Poultry, Sheep and Goats	Farmers		Food, Market and even export to other places			
Cultivated			Cultivated	Fertile Land	Private	Trees, Plants, Herbs, Shrubs	Rodents, Insects	Villagers/ Locals	Crop Rotation, Terracing	Cultivation	Used for Farming	Nil	Low Income Communities
Non- Cultivated Land			Non-Irrigated Land	Less Fertile	Govt./ Private	Marshy/Swampy Plants	Insects and Amphibians	Villagers/ Locals	Crop Rotation, Terracing	Cultivation	Available for Farming	Nil	Low Income Communities
Irrigated Land			Irrigated Land	Fertile Land	Private Land	Rice, Vegetables, Flowers etc.	Amphibians, Insects	Zamindars	Nil	Crop cultivation	Available for Farming	Nil	Every Community
Grazing Land			Non-Cultivated	Lush Grteen	Govt. Land	Plants/Herbs	Rodents, Insects	Villagers/ Locals	Nil	Animal Grazing	NA	Nil	Every Community

**Format-9 Waterscape**

1	2	3	4	5	6	7	8	9	10	11	12	13
<b>Waterscape element type</b>	<b>Sub- type</b>	<b>Features and approx area</b>	<b>Ownership</b>	<b>General flora</b>	<b>General fauna</b>	<b>Major uses</b>	<b>User groups</b>	<b>Management practices</b>	<b>General uses</b>	<b>Associated TK</b>	<b>Other details</b>	<b>Community accessed</b>
Nallah				Crops, Fruits, Vegetables	Fishes	Used for runing Flour mills	Locals		Atta Chakki			
Ponds	Talab	During Rainy Season	Private Land/State Land	Crops, fruits, vegetables, flowers	Frogs , Tadpoles, snakes, snail,	Cattles, irrigation, etc	Public					
Hand pumps	NIL	NIL	Private/State Land	NIL	NIL	Washing cloths, Drinking etc	Public	NIL				

### Format-10 Soil Type

1	2	3	4	5	6	7	8
Soil Type	Color & Texture	Features	Soil management	Plants / crop suitable	Flora and fauna	Associated TK	Other information
Black soil	Greyish Brown	Clayey texture and are highly fertile		Wheat	All vegetables		dry area
Alkaline soil	Brown			Maize			It is found in the areas without irrigation facility
Black soil	black in colour and clayey in nature	highly fertile and rich in calcium carbonate and poor in nitrogen and phosphorous ,highly retentive of moisture	NA	wheat,maize tomatoes, green chillies etc	both	NA	
Laterite soil	red or rusty in colour and coarser in texture	acidic in texture and unsuitable for cultivation	NA	less fertile, potatoes and fruits	both	NA	
clay soil	partially off white or yellowish in colour and clayey in texture	sticky ,low permeability, rich in calcium, iron ,magnesium	NA	wheat,vegetables	both	NA	
Alluvial soil	light grey or ash grey	fertile soil and rich in potash and lime	NA	pulses, vegetables, fruits etc	both	NA	

**Format-11 Fruit Trees**

1	2	3	4	5	6		7	8	9	10	11	12
Plant Type	Scientific Name	Local Name	Variety	Landscape/ Habitat	Local Status		Source of plant/seeds	Season of Fruiting	Uses (usage)	Other Details market / own use	Community /Knowledge Holder	Associated TK
					Past	Present						
Pear	<i>Pyrus communis L.</i>	Nakh	Pathar Nakh, Packham, Limonera, Conference	Highland	Plenty	Normal	Fruit itself	August	Fruit, wood	Marketing, Own Use	Farmers/Locals	Lower Blood pressure, Prevent Cancer, Energy Booster
Plum	<i>Prunus domestica Opal</i>	Plump	Plum opal	Moisture but well drained Lowland, Deciduous	Plenty	Normal	do	July-August	Fruit	Marketing, Own Use	Farmers/Locals	Reduce Blood Sugar, Rich in antioxidants
Peach	<i>Prunus Persica</i>	Aaroo	July Elberta, Quetta, Shan-e- Punjab, Sun Haven, Sharbati	Highland	Normal	Normal	do	July-August	Fruit, wood	Marketing, Own Use	Farmers/Locals	Promote Healing, Keep digestion running smoothly etc.
Apple	<i>Malus domestica</i>	Saib	Ambri Apple, Granny Smith, Bramley	Tree, regular bearing, Temperate Hills	Rare	Rare	Nurseries	August-October	Fruits	Marketing, Own Use	Farmers/Locals	Fruit, Nutritious, Good for weight loss, Prevent Cancer
Apricot	<i>Prunus armeniaca</i>	Khubani, Sadi	Local apricot, Bebco	Tree, regular bearing, Mid Hills	Plenty	Normal	Nurseries	June-July	Fruits, Wood	Marketing, Own Use	Farmers/Locals	Rich in Vitamin A, Excellent for promoting eye health
Walnut	<i>Juglans regia</i>	Akhrot	Paper/Thin Shelled, Hard & Medium Shelled	Tree, regular bearing, Temperate Hills	Normal	Normal	Nurseries & Locally raised	Sept-Oct	Fruits, Wood	Marketing, Own Use	Farmers/Locals	Dry-fruit, Economy generation, Rich in antioxidants, Reduce risk of some cancers etc.
Pecan	<i>Carya illinoensis</i>	Shimla Khor	Western shell	Mid/temperate hills/Deciduous/ Perennial	Rare	Rare	Nurseries	Sept-Oct	Fruits	Marketing	Farmers/Locals	Dry Fruits, Nutritional Value





**Format-12 Medicinal Plants (Herb, Shrubs, Trees etc.)**

1	2	3	4	5	6	7		8	9	10	11	12
Plant Type	Local Name	Scientific Name	Variety	Landscape/ Habitat	Source of plant/seeds	Local status		Uses (usage)	Part used	Associated TK	Other details market/own use	Community/ Know. Holders
						Past	Present					
Trees	Neem	<i>Azadirachta indica</i>		lowland		good	good	medicinal	Leaves		Own use	good
Trees	Amla	<i>Emblica officinalia</i>		lowland		good	good	medicinal	fruit		Own use	good
Trees	Anardhana	<i>Punigranatum</i>		highland		good	rare	medicinal and food	fruit		Own use	good
Trees	Babool	<i>Acacia Nilolica</i>		lowland		good	rare	Medicinal and wood	stem		Own use	rare
Herbs	Pudina	<i>Mentha arvensis</i>		lowland and highland		good	good	medicinal and in food	leaves		Own use	good
Herbs	kuth	<i>Sassurea lappa</i>		lowland and highland		good	rare	medicinal	root		Own use	rare
Shrubs	Bhang	<i>Cannabis sativa</i>		Temperate	Wild	Abundant	Abundant	medicinal	Leaves	Protection against pain, nausea and vomiting	Own use	Generally, held by community
Tree	Sree	<i>Albizzia lebeck</i>		Lowland/Highland/ Temperate	Wild	Good	Good	medicinal	Bark, seeds, leaves and flowers	Used For migraine, diarrhea, jaundice, skin problems, asthma	Own use	Generally, held by community
Herbs	Dudlu	<i>Taraxacum officinale</i>		Temperate	Wild	Rare	Rare	medicinal	Roots	Antiviral activity, anti-diabetic, anti-inflammatory	Own use	Generally, held by community
Herb	Tamatar	<i>Solanum lycopersicum</i>	Local	Temperate	Cultivated	Available	Available	To reduce heart diseases, kidney stones and gall bladder stones	Fruit	Cure heart and stone diseases	Own use	Generally, held by community
Herb	Dhaniya	<i>Coriandrum sativum</i>	Local	Temperate	Cultivated	Available	Available	Used for loss of appetite, tooth aches	Seeds	Cure pain	Own use	Generally, held by community

Herb	Pudina	<i>Mentha spicata</i>	Local/wild	Temperate	Cultivated/ naturally grown	available	Available	To cure infection	Leaf	Cure infection	Own use	Generally, held by community
Herb	Pyaz	<i>Allium cepa</i>	Temperate	Cultivated	Available	Available	To cure cold and cough	Roots	To relive cough and cold	Extract	Own use	Generally, held by community
Herb	Lahsun	<i>Allium sativum</i>	Local	Temperate	Cultivated	Available	Available	To cure wounds	Whole plant	Used for wounds	Own use	Generally, held by community
Herb	Green Chilly	<i>Capsicum annuum</i>	Local	Temperate	Cultivated	Available	Available	To improve immune system	Entire	Improve eye site	Own use	Generally, held by community
Herb	Neg chetri	<i>Trillium govanianum</i>	Local/wild	Temperate	Cultivated/ naturally grown	Available	Available	Anti inflammatory remedy	Whole plant	available	Own use	Generally, held by community
Herb	Zakhm e hayat	<i>Bergenia ciliata</i>	Local/wild	Temperate	Cultivated/ naturally grown	Available	Available	Wound healing, vomiting ,fever, coughand pulmonary infections	leaves	available	Own use	Generally, held by community
Herb	chooray	<i>Angelica glauca</i>	Local/wild	Temperate	Cultivated/ naturally grown	Available	Available	dysentery, stomach troubles , infantile atrophy,menorrhagia andrinderpest	stems	available	Own use	Generally, held by community
Herb	Gucchi	<i>Helvella esculenta</i>	Local/wild	Temperate	Cultivated/ naturally grown	Available	Available		whole plant	available	Own use	Generally, held by community
Herb	pitpapda	<i>Fumeria parviflora</i>	Local/wild	Temperate	Cultivated/ naturally grown	Available	Available	treatment of fever, gastritis, diarrhea etc	whole plant	available	Own use	Generally, held by community
Herb	Patreesh	<i>Aconitum heterophyllum</i>	Local/wild	Temperate	Cultivated/ naturally grown	Available	Available	used against diarrhoea , general weakness and fever	roots	available	Own use	Generally, held by community
Herb	Ceski	<i>Artemesia absinthium</i>	Local/wild	Temperate	Cultivated/ naturally grown	Available	Available	remedy for indigestion, gastric pains, antiseptic etc	stem and leaves	available	Own use	Generally, held by community
Herb	Bethri dhoop	<i>Juniperus communis</i>	Local/wild	Temperate	Cultivated/ naturally grown	Available	Available	curing asthma, against swellings, stimulant and diuretic	flower fruits	available	Own use	Generally, held by community
Shrub	Kuth	<i>Sassurea costus</i>	Local/wild	Temperate	Cultivated/ naturally grown	Available	Available	dysentery,dental trouble, heart problems etc	leaves/ roots	available	Own use	Generally, held by community

Herb	jungli straberry	<i>Fragaria nubicola</i>	wild	Temperate	naturally grown	available	average	Stomach disorders	fruit	available	Own use	Generally, held by community
Herb	Haand dandelian	<i>Taraxacum officinalis</i>	wild	Temperate	seeds	rare	rare	treatment of skin ,indigestion, jaundice etc	Leaves	available	Own use	Generally, held by community
Herb	Banfsha	<i>Violas serpens</i>	Local/wild	Temperate	Cultivated/ naturally grown	Available	Available	cough and cold	whole plant	available	Own use	Generally, held by community
Herb	Dramun	<i>Cynodon dactylon</i>	Local/wild	Temperate	Cultivated/ naturally grown	Available	Available	used for cough	Stem/ leaves	available	Own use	Generally, held by community
Shrub	Datura	<i>Datura stramonium</i>	Local/wild	Temperate	Cultivated/ naturally grown	Available	Available	medicine	Seeds	available	Own use	Generally, held by community
Shrub	Soi	<i>Urtica dioica</i>	Local/wild	Temperate	Cultivated/ naturally grown	Available	Average	Rehumitides	Leaves/ stem	available	Own use	Generally, held by community
Herb	Bhang	<i>Cannabis sativa</i>	Local/wild	Temperate	naturally grown	Available	Available	treatment of pain , loss of appetite , insomania , depression etc	Leaves/ stem	available	Own use	Generally, held by community
Herb	Kaudh	<i>Picrorhiza kurroa</i>	Local/wild	Temperate	Cultivated/ naturally grown	Available	Available	Pain reliever		available	Own use	Generally, held by community
Herb	Kishmay	<i>Berberis lycium</i>	Local/wild	Temperate	Cultivated/ naturally grown	Available	Available	Jaundice		available	Own use	Generally, held by community
Herb	Teevnd	<i>Viburnum grandiflorum</i>	wild	Temperate	naturally grown	plenty	average	cough and anticold	flowers /seeds	available	Own use	Generally, held by community
Herb	Baryan	<i>Acorus calamus</i>	Local/wild	swampy marshy areas	naturally grown	plenty	average	treatment of gout	rhizome/ lowe part	available	Own use	Generally, held by community

**Format-13 Ornamental Plants/Trees/Climbers etc.**

1	2	3	4	5	6	7	8	9	10
Plant Type	Local Name	Scientific Name	Variety	Source of plant/seeds	Commercial/non-commercial	Uses	Associated TK	Other details	Community/ Know. holder
Silver Oak	Silver oak	<i>Gravilla robusta</i>		Nature	Non commercial	Ornamentation			A few
Saroon/Oriental Arbor-vitae	Saru	<i>Platycladus orientalis</i>		Stems	Non commercial	ornamentation			A few
Burnas	Hardul	<i>Rhododendron arboreum</i>			Non commercial	ornamentation			A few
Tree	Gandera	<i>Nerium oleander</i>	-	Plant	Non-Commercial	N.A	N.A	N.A	Generally, held by community
Plant	Canna Lily	<i>Canna indica L.</i>		Plant	Non-Commercial	N.A	N.A	N.A	Generally, held by community
Plant	Creek bottlebrush/ <i>Melaleuca viminalis</i>	<i>Callistemon viminalis</i>		Plant	Non-Commercial	N.A	N.A	N.A	Generally, held by community
Plant	Oriental Arbor-vitae	<i>Platycladus orientalis (L.) Franco</i>		Plant	Non-Commercial	N.A	N.A	N.A	Generally, held by community
Plant	Alpine Rose	<i>Rosa pendulina L.</i>		Plant	Non-Commercial	N.A	N.A	N.A	Generally, held by community

### Format-14 Timber Plants/Trees

1	2	3	4	5		6	7	8	9	10
Plant Type	Local Name	Scientific Name	Habitat	Local status		Wild/ home- garden	Other uses (multi)	Associated TK	Other details	Community/ Know. holder
				Past	Present					
Pinus	Chir	<i>Pinus roxburghii</i>	High lands	Plenty	Normal				Timber, Fuel wood, Edible and source of oil	
Wild walnut	Banakhor	<i>Aesculus Indica</i>	High lands	Plenty	Normal		Dry fruit			
Walnut	Akhroot	<i>Juglanregia</i>	Both highland and low land	Plenty	Normal		Dry fruit			
Tree	Walnut	<i>Juglans regia</i>	Temperate	Plenty	Normal	Wild , home	Furniture, tooth cleaner	NA	unknown	
Tree	Banj	<i>Quercus incana</i>	Temperate	Plenty	Normal	Wild	Firewood	NA	Unknown	
Tree	Apricot	<i>Prunusar meniaca</i>	Temperate	Plenty	Normal	Wild, home	Furniture, firewood	NA	Unknown	
Tree	Peach	<i>Prunus persica</i>	temperate	Plenty	Normal	Wild, home	Firewood	NA	Unknown	
Tree	Keth	<i>Pyru spashia</i>	Temperate	Plenty	Normal	Wild	Firewood	NA	Unknown	
Tree	Rubinkul	<i>Robinia sp</i>	Temperate	Plenty	Normal	wild/ home- garden	Furniture, firewood	NA	Unknown	
Tree	Drek	<i>Melia azedarach</i>	Temperate	Plenty	Normal	wild	Furniture, firewood	NA	Unknown	

Tree	Moru oak	<i>Quercus floribunda</i>	Temperate	Plenty	Normal	wild	Furniture, firewood	NA	Strongest wood	
Tree	Fur	<i>Abies pindrow</i>	Temperate	Plenty	Normal	wild	Furniture, firewood	NA	Unknown	
perinnial	Kail	<i>Pinus wallichania</i>	Temperate	Plenty	Normal	wild	Furniture, firewood	NA	Unknown	
perinnial	Tulkul	<i>Morus nigra</i>	Temperate	Plenty	Normal	wild/ home- garden	fodder for silk worm and Firewood	NA	Unknown	
perinnial	Devdar	<i>Cedrus deodara</i>	Temperate	Plenty	Normal	wild	Furniture, firewood	NA	Strongest wood	
perinnial	Kikar	<i>Robinia pseudoacacia</i>	Temperate	Plenty	Normal	wild	fodder for animals and firewood	NA	Unknown	
Tree	Chinar	<i>Plantanus orientalis</i>	Temperate	Plenty	Normal	wild/ home- garden	Furniture, firewood	NA	Unknown	
Tree	Shisham	<i>Dalbergia sissoo</i>	Temperate	Plenty	Normal	wild/ home- garden	Furniture, firewood	NA	Unknown	

**Format-15 Domesticated Animals**

1	2	3	4	5	6	7		8	9	10	11	12
Animal Type	Local Name	Scientific Name	Breed (local/hybrid)	Features	Method of keeping	Local status		Uses	Associated TK	Commercial rearing	Other details including products and Services	Community Know.Holders
						Past	Present					
Buffalo	Manj	<i>Babulus bubalis</i>	local	Black color body	Domestic	abundant	decreased	Dairy	nil	no	Milk	All
Buffalo	Punjabi manj	<i>Bubalus Bubalis</i>	murrah	Black color body	Domestic	very few	increased	Dairy	nil	yes	Milk	All
Cattle	Gaan	<i>Bos taurus</i>	ND	Low yield	Domestic	abundant	decreased	Dairy	nil	no	Milk	All
Chicken	Desi Murga	<i>Galus domesticus</i>	hybrid	hybrid	Domestic	very few	increased	egg & meat	nil	no	Meat	All
Dog	kutta	<i>canis familiaris</i>	Local	nil	stray	abundant	abundant	nil	nil	no	Nil	All/Stray
Dog	bakerwal kutta	<i>canis familiaris</i>	bakarwal	brown black in color	household	abundant	rare	comparison	nil	no	Nil	Bakerwals
Cat	billi	<i>frlis catus</i>	local	grey colored	pet	abundant	abundant	pet	nil	nil	Nil	All Stray
Sheep	bhed	<i>Ovis aries</i>	local	small sized rough coat	flock rearing	least concern	least concern	mutton,wool & manure	yes	yes	Meat	All
Sheep	bhed	<i>Ovis aries</i>	rambouillet cross	large sized fine wool	flock rearing	least concern	least concern	mutton,wool & manure	yes	yes	Meat	All
Goat	Bakri	<i>Capra aegagrus</i>	local	small size low body weight	flock rearing	least concern	least concern	chevon, hair.milk & manure	yes	yes	Meat	All
Goat	Bakri	<i>Capra aegagrus</i>	kaghani(bakerw alli)	large size low body weight	flock rearing	least concern	least concern	chevon, hair.milk & manure	yes	yes	Meat	All
Goat	Bakri	<i>Capra aegagrus</i>	beetal	large size low body weight	flock rearing	least concern	least concern	chevon, hair.milk & manure	yes	yes	Meat	All

Cattle	Gau	<i>Bos indicus</i>	ND	Low yield	stall feeding	Abundant	Decrease	Dairy	Nil	No	Milk	All
	Jersey Gau	<i>Bos taurus</i>	CB Jersey	Dished face	stall feeding / semi intensive	Very few	Increase	Dairy	Nil	yes	Milk	All
	Amrecan Gau	<i>Bos taurus</i>	CB HF	Black and white spot	stall feeding / semi intensive	Very few	Increased	Dairy	Nil	Yes	Milk	All
Buffalo	Manj	<i>Bubalus bubalis</i>	Local	Low yield	stall feeding	Abundant	Decreased	Dairy	Nil	No	Milk	All
	Punjabi Mais	<i>Bubalus bubalis</i>	Murrah /Graded	Black color body	stall feeding / semi intensive	Very few	Increased	Dairy	Nil	Yes	Milk	All
Horse	ghoda	<i>Equus caballus</i>	Local	Red color body	Backyard	Abundant	Decrease	Pack/ Cart	Nil	No	Pack/ Cart	All
Parrot	Tota	<i>Psittaciformes</i>	Local	parrot green in colour with red beak	Backyard	few	Decrease	decorative	Nil	No	Nil	All
Pigeon	Kabutar	<i>Columbidae</i>	Local	white color , fast growing	Backyard	few	Decrease	decorative	Nil	No	nil	All
Dog	Kutta	<i>canis familiares</i>	Local	Nil	Pet ,Stray	Abundant	Abundant	Nil	Nil	No	Nil	All / stray
Rabbit	Khargosh	<i>Oryctolagus cuniculus</i>	White gaint	white	Pet ,wild	few	few	Pet	Nil	No	Nil	All / wild
Poultry	Kukkar	Gallus domesticus	Desi/ Local	Enriched Meat Flavour	Intensive, Free range, Backyard	Abundant	Decreased	Egg/Meat	Nil	Nil	Nil	All
	Farmi Kukkar		Chabro Cross	Good Egg Yielder		Very Few	Increased					All



**Format 16: Culture Fisheries**

1	2	3	4	5	6	7		8	9	10	11	12
Fish Type	Local Name	Scientific Name	Variety	Features	Waterscape (Pond/Bheri/Talao)	Local status		Uses	Associated TK	Commercial Rearing	Other details	Community Know. Holders
						Past	Present					

Note: Other details include mode of catching fish, time of availability, breeding time, feeds and etc



**Format-18 Trees, Shrubs, Herbs, Tubers, Grasses, Climbers etc.**

1	2	3	4	5	6		7	8	9	10	11
Plant Type	Local Name	Scientific Name	Habit	Habitat	Local status		Commercial / own use	Part collected	Associated TK	Other details	Community Knowledge Holder
					Past	Present					
Tree	Chir	<i>Pinus roxburghii</i>	Tree	Northern/Sub-Tropical	Good	Moderate	Commercial/own use	Timber/ Firewood	Resin	-	local farmers of rural community
Tree	Deodar	<i>Cedrus deodara</i>	Tree	Forest , temperate	Dense	Less dense	Commercial, own use	Whole plant	Furniture, roofing	Furniture	local farmers of rural community
Tree	Kail	<i>Pinus wallichiana</i>	Tree	Forest , temperate	Dense	Less dense	Commercial, own use	Whole plant	Furniture, roofing	Furniture	local farmers of rural community
Shrubs	Kemel	<i>Barberries</i>	Shrubs	Forest , temperate	Dense	Dense	Commercial, own use	Roots and leaves	Medicinal use	Medicinal	local farmers of rural community
Herbs	Datura	<i>Datura stramonium</i>	Herb	Forest , temperate	Dense	Dense	Commercial, own use	seeds	Medicinal use	Medicinal	local farmers of rural community
Grasses	Ghass	<i>Rhododendron</i>	Grass	Forest	Dense	Dense	own use	Whole	Medicinal use	Medicinal use	local farmers of rural community
Mushroom	Guchhies	<i>Morchella spp.</i>	Mushroom	Temperate	Available	Available	Commercial, own use	Whole plant	Medicinal use	Used in medicines preparation	local farmers of rural community
Tree	Rubinkul	<i>Robinia sp</i>	Temperate	Temperate	Plenty	least	Furniture, firewood	Whole plant	Firewood	Furniture	local farmers of rural community
Tree	Drek	<i>Melia azedarach</i>	Temperate	Temperate	Plenty	Average	Furniture, firewood	Whole plant	furniture, firewood	Furniture	local farmers of rural community
Tree	Moru oak	<i>Quercus floribunda</i>	Temperate	Temperate	Plenty	Average	Commercial, own use	Whole plant	Strongest wood	Furniture	local farmers of rural community
Tree	Fur	<i>Abies pindrow</i>	Temperate	Temperate	Plenty	Average	Furniture, firewood	Whole plant	Furniture, roofing	Furniture	local farmers of rural community
perinnial	Kikar	<i>Robinia pseudoacacia</i>	Temperate	Temperate	Plenty	Average	, own use	Whole plant	Firewood	fodder for animals and firewood	local farmers of rural community

Tree	Chinar	<i>Plantanus orientalis</i>	Temperate	Temperate	Plenty	least	Commercial, own use	Whole plant	Furniture, roofing	Furniture, firewood	local farmers of rural community
Tree	Shisham	<i>Dalbergia sissoo</i>	Temperate	Temperate	Plenty	Average	Commercial, own use	Whole plant	Furniture, roofing	Furniture, firewood	local farmers of rural community
Herb	Neg chetri	<i>Trillium govanianum</i>	Local/wild	Temperate	Available	Available	Commercial, own use	Whole plant	Anti inflammatory remedy ,	Medicinal use	local farmers of rural community
Herb	Zakhm e hayat	<i>Bergenia ciliata</i>	Local/wild	Temperate	Available	Available	Commercial, own use	leaves	Wound healing, vomiting ,fever, coughand pulmonary infections	Medicinal use	local farmers of rural community
Herb	chooray	<i>Angelica glauca</i>	Local/wild	Temperate	Available	Available	Commercial, own use	stems	dysentry, stomach troubles , infantile atrophy,menorrhagia andrinderpest	Medicinal use	local farmers of rural community
Herb	Gucchi	<i>Helvella esculenta</i>	Local/wild	Temperate	Available	Available	Commercial, own use	whole plant	prevent heart diseases and diabaties	Medicinal use	local farmers of rural community
Herb	pitpapda	<i>Fumeria parviflora</i>	Local/wild	Temperate	Available	Available	Commercial, own use	whole plant	treatment of fever, gastritis, diarrhea etc	Medicinal use	local farmers of rural community
Herb	Patreesh	<i>Aconitum heterophyllum</i>	Local/wild	Temperate	Available	Available	Commercial, own use	roots	used against diarrhoea , general weakness and fever	Medicinal use	local farmers of rural community
Herb	Ceski	<i>Artemesia absinthium</i>	Local/wild	Temperate	Available	Available	Commercial, own use	leaves/ stems	remedy for indigestion, gastric pains, antiseptic etc	Medicinal use	local farmers of rural community
Herb	Bethri dhoop	<i>Juniperus communis</i>	Local/wild	Temperate	Available	Available	Commercial, own use	flower fruits	curing asthma, against swellings, stimulant and diuretic	Medicinal use	local farmers of rural community
Shrub	Kuth	<i>Sassurea costus</i>	Local/wild	Temperate	Available	Available	Commercial, own use	leaves/ roots	dysentry,dental trouble, heart problems etc	Medicinal use	local farmers of rural community
Herb	jungli straberry	<i>Fragaria nubicola</i>	wild	Temperate	available	average	Commercial, own use	fruit	Stomach disorders	Medicinal use	local farmers of rural community
Herb	Haand dandelian	<i>Taraxacum officinalis</i>	wild	Temperate	rare	rare	Commercial, own use	Leaves	treatment of skin ,indigestion, jaundice etc	Medicinal use	local farmers of rural community
Herb	Banfsha	<i>Violas serpens</i>	Local/wild	Temperate	Available	Available	Commercial, own use	whole plant	cough and cold	Medicinal use	local farmers of rural community
Herb	Dramun	<i>Cynodon dactylon</i>	Local/wild	Temperate	Available	Available	Commercial, own use	Stem/ leaves	used for cough	Medicinal use	local farmers of rural community
Shrub	Datura	<i>Datura stramonium</i>	Local/wild	Temperate	Available	Available	Commercial, own use	Seeds	medicine	Medicinal use	local farmers of rural community
Shrub	Soi	<i>Urtica dioica</i>	Local/wild	Temperate	Available	Average	Commercial, own use	Leaves/ stem	Rehumitides	Medicinal use	local farmers of rural community

Herb	Bhang	<i>Cannabis sativa</i>	Local/wild	Temperate	Available	Available	Commercial, own use	Leaves/ stem	treatment of pain , loss of appetite , insomnia , depression etc	Medicinal use	local farmers of rural community
Herb	Teevnd	<i>Viburnum grandiflorum</i>	Herb	Temperate/ Intermediate	Available	Available	Commercial, own use	flowers /seeds	cough and anticold	Medicinal use	local farmers of rural community
Grass	Oats	<i>Avena sativa</i>	Herb	Irrigated areas	Local varieties	Improved varieties	own use	Leaves/ stem	Fodder	NA	local farmers of rural community
Grass	Berseem (Egyptian Clover)	<i>Trifolium alexandrinum</i>	Herb	Temperate/ Intermediate	NA	Improved varieties	own use	Leaves/ stem	Fodder	NA	local farmers of rural community
Grass	Milkweed	<i>Euphorbia thymifolia</i>	Herb	Temperate/ Intermediate	local varieties	local varieties	own use	Leaves/ stem	Fodder	NA	local farmers of rural community
Grass	Charri	<i>Sorghum bicolor</i>	Herb	Temperate/ Intermediate	local varieties	local varieties	own use	Leaves/ stem	Fodder	NA	local farmers of rural community
Grass	Berea grass	<i>Dactyloctenium australe</i>	Herb	Temperate/ Intermediate	local varieties	Improved varieties	own use	Leaves/ stem	Fodder	NA	local farmers of rural community
Grass	Bray grass	<i>Sorghum halepense</i>	Herb	Temperate/ Intermediate	local varieties	Improved varieties	own use	Leaves/ stem	Fodder	NA	local farmers of rural community
Tree	Safeda	<i>Eucalyptus</i>	Tree	Northern/Sub-Tropical	Good	Moderate	Commercial/Own use	Timber/ Firewood	-	-	local farmers of rural community

**Format-19 Wild Plant Species of Importance**

1	2	3	4	5	6
Sl. No.	Local Name	Scientific Name	Variety	Importance (as economic, social, cultural etc.)	Status
1	Kanner/Lal Gandila	<i>Nerium indicum</i>	Shrub	NA	Good
2	Bhang	<i>Cannabis sativa</i>	Shrub	Medicinal	Good







### Format-22 Wild Plants of Medicinal Importance

1	2	3	4	5	6		7	8	9	10	11
Plant (Herb, Shrub, Tree)	Local Name	Scientific Name	Variety	Landscape / Habitat	Local Status		Associated TK	Uses (usage)	Part used	Other details market/ own use	c.knowledge holder
					Past	Present					
Plant	Bankakri	<i>Podophyllum hexandrum</i>	plant	Temperate	Available	Available	Available	It has been found to be effective in controlling skin diseases and recently attracted attention for use in certain form of cancer	Fruit	own use	local farmers of rural community
Herb	Banafsha	<i>Viola spp.</i>	Herb	Temperate	Available	Available	Available	Flowers are used in perfumery and are also used medicinally as demulcent and biliousness and lungs troubles	Flower	own use /marketing	local farmers of rural community
Climber	Kins	<i>Dioscorea deltoidea</i>	Climber	Temperate	Available	Available	Available	The yield Diosgenin, which is used to synthesize sex hormones and Corisone, Cortisone is extensively used in rheumatism and allergic conditions. Propagation of the species is through rhizome.	Tuber	own use	local farmers of rural community
Mushroom	Guchhies	<i>Morchella spp</i>	Mushroom	Temperate	Abundant	rare	available	Used in medicines preparation	Whole plant	own use /marketing	local farmers of rural community
Herb	Neg chetri	<i>Trillium govanianum</i>	Herb	Temperate	Abundant	average	Available	Anti inflammatory remedy ,	Whole plant	own use /marketing	local farmers of rural community
Herb	Zakhm e hayat	<i>Bergenia ciliata</i>	Herb	Temperate	abundant	abundant	Available	Wound healing, vomiting ,fever, coughand pulmonary infections	leaves	own use /marketing	local farmers of rural community
Herb	chooray	<i>Angelica glauca</i>	Herb	Temperate	abundant	abundant	Available	dysentery, stomach troubles , infantile atrophy,menorrhagia andrinderpest	stems	own use /marketing	local farmers of rural community
Herb	Gucchi	<i>Helvella esculenta</i>	Herb	Temperate	abundant	average or rare	Available		whole plant	own use /marketing	local farmers of rural community
Herb	pitpapda	<i>Fumeria parviflora</i>	Herb	Temperate	abundant	average	Available	treatment of fever, gastritis, diarrhea etc	whole plant	own use /marketing	local farmers of rural community
Herb	Patreesh	<i>Aconitum heterophyllum</i>	Herb	Temperate	abundant	average	Available	used against diarrhoea , general weakness and fever	roots	own use /marketing	local farmers of rural community
Herb	Ceski	<i>Artemesia absinthium</i>	Herb	Temperate	abundant	abundant	Available	remedy for indigestion, gastric pains, antiseptic etc		own use /marketing	local farmers of rural community

Herb	Bethri dhoop	<i>Juniperus communis</i>	Herb	Temperate	Available	Available	Available	curing asthma, against swellings, stimulant and diuretic	flower fruits	own use /marketing	local farmers of rural community
Herb	Kuth	<i>Sassurea costus</i>	Herb	Temperate	abundant	Available	Available	dysentery,dental trouble, heart problems etc	leaves/ roots	own use /marketing	local farmers of rural community
Herb	jungli straberry	<i>Fragaria nubicola</i>	Herb	Temperate	abundant	average	Available	Stomach disorders	fruit	own use /marketing	local farmers of rural community
Herb	Haand dandelian	<i>Taraxacum officinale</i>	Herb	Temperate	rare	rare	Available	treatment of skin ,indigestion, jaundice etc	Leaves	own use /marketing	local farmers of rural community
Herb	Banfsha	<i>Violas serpens</i>	Herb	Temperate	Available	Available	Available	cough and cold	whole plant	own use /marketing	local farmers of rural community
Herb	Dramun	<i>Cynodon dactylon</i>	Herb	Temperate	abundant	abundant	Available	used for cough	Stem/ leaves	own use /marketing	local farmers of rural community
Herb	Datura	<i>Datura stramonium</i>	Herb	Temperate	Available	Available	Available	medicine	Seeds	own use /marketing	local farmers of rural community
Herb	Soi	<i>Urtica dioica</i>	Herb	Temperate	abundant	Average	Available	Rehumitides	Leaves/ stem	own use /marketing	local farmers of rural community
Herb	Bhang	<i>Cannabis sativa</i>	Herb	Temperate	abundant	abundant	Available	treatment of pain , loss of appetite , insomania , depression etc	Leaves/ stem	own use /marketing	local farmers of rural community
Herb	Kaudh	<i>Picrorhiza kurroa</i>	Herb	Temperate	Available	Available	Available	Pain reliever		own use /marketing	local farmers of rural community
Herb	Kishmay	<i>Berberies lycium</i>	Herb	Temperate	Available	Available	Available	Jaundice		own use /marketing	local farmers of rural community
Herb	Teevnd	<i>Viburnum grandiflorum</i>	Herb	Temperate	plenty	average	Available	cough and anticold	flowers /seeds	own use /marketing	local farmers of rural community
Herb	Patrees	<i>Aconitum heterophyllum</i>	Herb	Temperate	plenty	average	Available	It is an excellent tonic for combating ability after malarial & other fevers & diseases	Roots	own use /marketing	local farmers of rural community
Herb	Banafsha	<i>Viola</i>	Herb	Temperate	plenty	average	Available	Flowers are used in perfumery & are also used medicinally as demulcent and biliousness & lungs trouble	Flower	own use /marketing	local farmers of rural community
Herb	Kuth	<i>Soussurea lappa</i>	Herb	Temperate	plenty	average	Available	Used in treatment of cough, asthma & fever.	Root	own use /marketing	local farmers of rural community
Climber	Dioscorea	<i>Dioscorea deltoidea</i>	Climber	Temperate	plenty	average	Available	The tubers yield diosgenin, which is used to synthesize sex hormones.	Tuber	own use /marketing	local farmers of rural community
Shrub	Simlu	<i>Berberis lyceum</i>	Shrub	Temperate	plenty	average	Available	It is an excellent tonic for combating ability after malarial & other fevers & diseases	Fruit, roots	own use /marketing	local farmers of rural community



**Format-24 Ornamental Plants**

1	2	3	4	5	6	7	8
Local Name	Scientific Name	Variety	Habitat	Commercial / Non-commercial Uses	Associated TK	Any other Detail	Community/ Knowledge Holder
Saroon	<i>Cupressus</i>		lowland	non commercial		nil	
Gandila	<i>Nerium indicum</i>	Shrub	Northern/ Sub-Tropical	non commercial	-	-	Locals
Bougainvillea	<i>Bougainvillea glabra</i>	Shrub	Northern/ Sub-Tropical	non commercial		-	Locals
Gandera	<i>Nerium oleander</i>	Shrub	Northern/ Sub-Tropical	non commercial			Locals

**Format-25 Fumigate/Chewing Plants**

1	2	3	4	5	6		7	8	9	10	11
Plant (Herb, Shrub, Tree)	Local Name	Scientific Name	Variety	Habitat	Local Status		Uses (usage)	Part used	Associated TK	Other details (mode of use)	Community knowledge holder
					Past	Present					
Herb - Spearmint	Pudna	<i>Mentha spicata L.</i>	Lamiaceae	Homestead, agricultural land	Abudant	Abudant	Spice	Leaves	Anti cancer activity against different types of human cancers as cervix, breast and many others	Widely used in savory dishes, food, beverages, and confectionary products	Locals
Herb - Holy Basil	Tulsi	<i>Ocimum tenuiflorum</i>		Moist soil	Normal	Normal	Medicinal	Leaves	Used in Cough, Colds, Asthma, and Bronchitis	Effective remedy for hair loss treatment	Locals
Herb	Methi	<i>Trigonella foenum-graecum</i>	Annual plant	temperate regions /homegardens	Plenty	Normal	used in stomach troubles and anaemia	leaves and seeds	cooking	NA	local farmers

**Format-26 Timber Plants**

1	2	3	4		5	6	7	8
Local Name	Scientific Name	Habitat	Local Status		Other Uses, if any	Associated TK	Other Details	Community/ Knowledge Holder
			Past	Present				
Chir Pine	<i>Pinus Roxiburghi</i>	Terrestrial temperate	good	rare	NA	NA	nil	local people
Deodar	<i>Cedrus deodara</i>	Terrestrial temperate	good	rare	Dense	NA	Commercial, own use	local people
Fir	<i>Abies pindrow</i>	Terrestrial temperate	good	rare	Dense	NA	Commercial, own use	local people
Kail	<i>Pinus wallichiana</i>	Terrestrial temperate	good	rare	Dense	NA	Commercial, own use	local people
Walnut	<i>Juglans regia</i>	Terrestrial temperate	good	rare	Furniture, tooth cleaner	NA	Commercial, own use	local people
Banj	<i>Quercus incana</i>	Terrestrial temperate	good	rare	Furniture, roofing	NA	Commercial, own use	local people
Apricot	<i>Prunus menisaca</i>	Terrestrial temperate	good	rare	Furniture, roofing	NA	Commercial, own use	local people
Peach	<i>Prunus persica</i>	Terrestrial temperate	good	rare	Furniture, roofing	NA	Commercial, own use	local people
Keth	<i>Pyru spashia</i>	Terrestrial temperate	good	rare	Furniture, roofing	NA	Commercial, own use	local people
Rubinkul	<i>Robinia sp</i>	Terrestrial temperate	good	rare	Furniture, roofing	NA	Commercial, own use	local people
Drek	<i>Melia azedarach</i>	Terrestrial temperate	good	rare	,firewood , furniture	NA	Commercial, own use	local people
Moru oak	<i>Quercus floribunda</i>	Terrestrial temperate	good	rare	furniture, roofing ,ploughing equipment etc	NA	Commercial, own use	local people
Kikar	<i>Robinia pseudoacacia</i>	Terrestrial temperate	good	rare	use for fodder ,firewood	NA	Commercial, own use	local people
Chinar	<i>Plantanus orientalis</i>	Terrestrial temperate	good	rare	Furniture, roofing	NA	Commercial, own use	local people
Shisham	<i>Dalbergia sissoo</i>	Terrestrial temperate	good	rare	Furniture, roofing	NA	Commercial, own use	local people
Teak	<i>Tectona granis</i>	Terrestrial temperate	good	rare	furniture, roofing etc	NA	Commercial, own use	local people
Tulkul	<i>Morus nigra</i>	Terrestrial temperate	good	rare	firewood , fodder for silkworm etc.	NA	Commercial, own use	local people
Safeda	<i>Eucalyptus</i>	Northern/Sub-Tropical	Good	Moderate	Commercial/ own use	Timber/ Firewood	-	-







**Format 28: Wild Animals (Mammals, Birds, Reptiles, Amphibia, Insects, others)**

1	2	3	4	5	6	7		8	9	10	11	12
Animal Type	Local Name	Scientific Name	Habitat	Description	Season when seen	Local Status		Uses (if any)	Associated TK	Mode of Hunting, collecting (if any)	Other details	Community/ Knowledge Holder
						Past	Present					
Grey Junglefowl	Bankukard	<i>Gallus sonneratii</i>	Highlands	The species is endemic to India	November to January	Good	Rare			Hunting Banned		
Mammals	Chitra	<i>Panthera pardus</i>	Forest	Endangered	Winter season	Least	More	-	-	Weapon	endangered	-
Mammal	Bhalu	<i>Ursus americanus</i>	Forest	-	summer	Least	More	-	-	Weapon	-	-
Mammal	Fox	<i>Vulpes vulpes</i>	Forest	-	All season	More	More	-	-	Weapon	-	-
Birds	Neel	<i>Monal pheasant</i>	forest	Endangered	All season	Least	Least	-	-	Weapon	Endangered	-
Birds	Gid	<i>Gyps africanus</i>	Forest	Critically Endangered	All season	Least	Least	-	-	Weapon	Critically Endangered	-
Birds	Chakore	<i>Pheasant</i>	Forest	Endangered	All season	Least	Least	-	-	Weapon	Endangered	-
Birds	kabutar	<i>Columba livia</i>	Forest	-	All season	More	More	-	-	Weapon	-	-
Reptile	Sapp	<i>Ptyas mucosa</i>	Forest	-	summer	More	More	-	-	Stick	-	-
Reptile	Sapp	<i>Lycodon Mackimoni</i>	Forest	-	Summer	More	More	-	-	Stick	-	-
Lizards	chipkali	<i>Hemidactylus brookii</i>	Forest/Local	-	Summer	More	More	-	-	Stick	-	-
Aquatic	Fish	<i>Trout</i>	Pond / Nalla	-	all	More	More	-	-	Hook n Net	-	-
Bird	Iel	<i>Gyps himayensis</i>	Forest		All time	Available	Less	No		Prohibited	Maintains forest ecosystem	Self-observed
Bird	Khukhow	<i>Clamato rJacabinu</i>	Forest		Spring season	Available	Less	No		Prohibited	Maintains forest ecosystem	Self-observed
Bird	Dhik Charak	<i>Picus chololorolphus</i>	Forest		All time	Available	Less	No		Prohibited	Maintains forest ecosystem	Self-observed

Bird	Kova	<i>Corvus smacrorhynchus</i>	Forest		All time	Available	Less	No		Prohibited	Maintains forest ecosystem	Self-observed
Snake	Samp /sap	<i>Serpentes</i>	Forest /water		All time	Available	Less	No		Prohibited	Maintains forest ecosystem	Self-observed
Fishes	Machli	<i>Himaliyen trout</i>	Water		All time	Available	Available	No		Prohibited	Maintains forest ecosystem	Self-observed
Bird	Myna	<i>Acridotheres tristis</i>	Forest		all time	common	common	No		Prohibited	Maintains forest ecosystem	local people
Insect	Tuller	<i>Apis melifera</i>	Temperate region	Dark brown colour body	Spring and summer	common	common	extraction of honey		NA	pollinating agent	local people
Insect	Mohh	<i>Aedes spp</i>	Temperate region	white marking on their legs and body	summer	common	common	Na		NA	body parasite of human and animals	local people
Insect	spider	<i>Araneus mitificus</i>	Temperate region	males are smaller and less colourful than females	all time	common	common	Na		NA	NA	local people
Insect	Bomsin	<i>Pheretima posthuma</i>	Temperate region	individual are hermaphrodite with segmented bodies	during summers	common	common	Na		Na	known as farmers friends	local people
Insect	Raeii	<i>Tapinoma sessile</i>	nests in open soil ,under stones etc	small sized insects with varied body	during summers	common	common	NA		NA	Strongly attracted to sweet substances	local people
Insect	Tcharr	<i>Cimex lectularius</i>	Temperate region	Adult cimex are light brown in colour ,flat oval	during summers	common	common	NA		na	nuisance pest	local people
Amphibian	Meinn	<i>Rana tigrina</i>	semi acquatic	solitary and nocturnal in nature	during spring to autumn	common	common	NA		NA		local people
Wild Animal	Leopard	<i>Panthera pardus</i>	Northern/ Sub-Tropical	-	Winter	Good	Good	-	-	-		local people
Wild Bird	Red jungle fowl	<i>Gallus gallus</i>	Northern/ Sub-Tropical	-	-	Good	Good	-	-	-		local people
Wild bird	Rose ringed parakeet	<i>Psittaculidae</i>	Northern/ Sub-Tropical	-	-	Good	Good	-	-	-		local people
Wild Animal	Fox	<i>Vulpes</i>	Northern/ Sub-Tropical	-	-	Good	Good	-	-	-		local people
Wild Animal	Porcupine	<i>Erethizon dorsatum</i>	Northern/ Sub-Tropical	-	-	Rare	Rare	-	-	-		local people
wild insects	Grasshooper	<i>Parallelus</i>	Northern/ Sub-Tropical	-	-	Good	Good	-	-	-		local people
wild insects	butterfly	<i>Chorthippus brunneus</i>	Northern/ Sub-Tropical	-	-	Good	Good	-	-	-		local people
wild insects	bees	<i>Apis mellifera</i>	Northern/ Sub-Tropical	-	-	Good	Good	-	-	-		local people
wild insects	ants	<i>Brachymyrmex patagonicus</i>	Northern/ Sub-Tropical	-	-	Good	Good	-	-	-		local people

wild insects	Bumble bee	<i>Bombus</i>	Northern/ Sub-Tropical	-	-	Good	Good	-	-	-		local people
Amphibia	Frog	<i>Euphlyctis cyanophlyctis</i>	Northern/ Sub-Tropical	-	-	Good	Good	-	-	-		local people
Reptiles	Snake/Sap	<i>Serpentes</i>	Northern/ Sub-Tropical	-	-	Good	Good	-	-	-		local people

**URBAN BIODIVERSITY**

**Format 29: Flora**

1	2	3	4	5	6	7
Sr. No.	Local Name	Scientific Name	Type of Plants	Habitat	Flowering Season	Remarks (Rare / Common etc.)

**Note:** Separate format should be used for road side plantation / Parks and Gardens / Housing estate / Commercial buildings/ other institutional areas, Private club premises and also for Aquatic (water) habitat and Terrestrial (land) habitat

**Format 30: Fauna**

1	2	3	4	5	6
Sr. No.	Local Name	Scientific Name	Type of Animals (Mammals / Birds / Fish / Insect etc.)	Habitat	Remarks (Rare / Common etc.)

<b>Format 31: Any other information of local importance</b>		
<b>1</b>	<b>2</b>	<b>3</b>
<b>Sr. No.</b>	<b>Information of local importance</b>	<b>Remarks</b>
1	The Halqa Panchayat is Hilly and almost half of the area is not connected to road	Nil

*End of Part II*