

**Eco Village Development Plan  
(EVDP)**

**Village –Mahog  
Block Kandaghat, District Solan  
Himachal Pradesh**

Developed by:-

**Department of Environment Science and Technology  
Government of Himachal Pradesh  
Paryavaran Bhawan, Shimla-1**

## **Model Eco Village Scheme-A brief Note**

The Government of Himachal Pradesh has notified a Model Eco-Village Scheme vide notification No. STE-A(3)-4/2016-L dated 26/09/2017. This Scheme is being implemented by the Government of Himachal Pradesh through Department of Environment, Science and Technology and concerned Block Development office and district administration aiming to ensure sustainable development in an organized and integrated manner. The programme endeavours to sustain prosperity in village that is built around sustainable use of the key natural resources of a village, through the adoption of low-impact practices that result in water security, food security and livelihood security for the village communities.

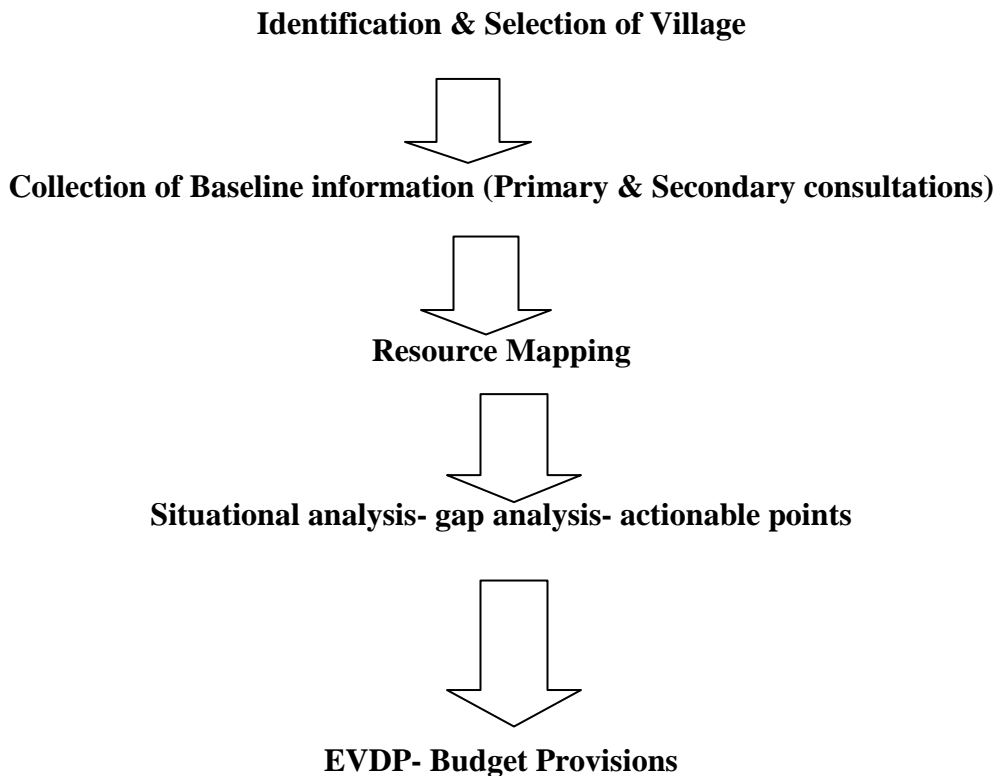
Under this scheme a village will be developed to promote transformative action and achieve sustainable development through environmentally responsible and responsive practice in the area of wafer management, waste management, energy conservation, management of natural resources, climate change action and sustainable livelihoods. This approach will not only help those stakeholders who are working to implement sustainable community development programme but also will set benchmarks for others to adopt and bring a radical change in thinking process of the communities at large in the State, especially in inculcating environmentally responsible behavior.

This scheme is to be implemented in the selected village with the total financial outlay of Rs. 50 lakhs to be utilized over a period of 5 years as per the annual plan of action. Of this outlay DEST shall provide a grant of Rs. 20 lakhs per selected village to meet expenditure on execution of the recommended preparatory actions and funding of critical gaps. The balance funds as may be required over Rs. 20 lakhs for activities shall be garnered through convergence and utilizing budgets from concerned line departments, district administration, etc. under various relevant ongoing Government schemes.

As per the guidelines of the scheme an Eco-Village Development Plan (EVDP) for village Mahog, Block Kandaghat, District Solan has been prepared by DEST integrating all the components and existing programs/schemes operational in the village. The plan has been initially drawn up for implementation in five years. The village level plan has included a situational analysis, baselines and resource mapping. All prescriptions are based on gap assessments and analyses taking into account

the base line status of various environmental aspects pertaining to the actionable components and an annual component wise break-up of the activities. The EVDP has been developed through consultative and participative process, different from conventional planning.

### **Process of EVDP**



### **Selection of Model Eco Village - Mahog**

The Mahog village has been selected by the Government of Himachal Pradesh to be developed as Model Eco Village on dated      out of 5 village of district Solan Recommended by the Dy. Commissioner

### **Village Level Management Committee**

In order to coordinate and guide the implementation of model eco-village scheme in identified village Mahog, Gram Panchayat Jhajha, Block Kandaghat, District Solan a village level Management Committee of village Mahog has been constituted vide No. STE-A(3) by DEST.

**The composition of the Committee is as follows:-**

President/Pradhan/Up-Pradhan (Gram Panchayat Mahog)	Member
Representative of DEST	Member
Elected Member of Mahog Village	Member
Representative of Forest Deptt./Forest Guard	Member

In order to prepare Eco Village Development Plan (EVDP) a preliminary/consultation meeting has been convened in the month of December, 2018 under the Chairmanship of the Block Development officer, Block Kandaghat, wherein the representative of stakeholder department and elected representative and villagers of Mahog village were present



**MAHOG**

Mahog, is a small village in Gram Panchayat Jhaja , Development Block Kandaghat of Solan district of Himachal Pradesh. The village comprises of 22 households with a population of approximately 95. It is at a distance of around five kilometer from Chail on Kandaghat road. Nature has gifted it with profound Serenity and ample scenic beauty which fascinates to enjoy this abode of nature. Inhabitants of village are blessed with inherited spirit of enthusiasm, toil and innovation, which has resulted to name the village for its floriculture activity. There are many hi-tech floriculture polyhouse farms in the village. Blooming flowers, fruit trees blossoms in spring, soothing and refreshing breeze in summers, rain showering lush green trees in monsoon, silent woods in autumn and those snowbound mountain peaks in winter, the scenic view around the village throughout the year has a great attraction for the tourists. As a result, many cottages and hotels are coming up in and around this village.



## Demographic profile of Mahog Village

Total households	22
Population	98
No. of males	53
No. of females	45
No. of BPL Families	02

## FUNCTIONAL COMPONENTS

### 1. Natural water sources and the springs :-

The hilly village is the blessed one, where no scarcity of water has been reported while conducting preliminary survey, since generations by the localities yet need of the day says to protect water for coming generations. Ground water level is good, which is the main reason that floriculture farming has been opted by most of the families.

### **Present Status: A survey Summary**

s. no.	Particulars	Remarks
1.	No. of water sources existing in village	02
2	Maintenance of existing water source i.e. Babri	01

### **An Analysis:**

The present assessment and study of existing water sources of the village clearly suggests that presently the village is enjoying no water scarcity, but there is an acute need for developing protection measures for water sources existing yet drying up slowly. Earlier 03 no of campaigns have been conducted regarding awareness to protect/ conserve water sources and participation of community is essential in this regard.

### Natural Water Source

#### 2. Adaptation of sustainable agriculture & Horticulture practices :-

Maize, the traditional crop, is still grown in the village, just to fulfill the household needs. While conducting survey, one of the progressive farmers talked about the endangered and extinct crops like *dkshj d@nk] ckFkw* which their ancestors used to grow and those crops were considered to be the healthy food which the young generations do not even like to taste. Presently. The farmers have adopted innovative practices and most of the families have diversified their farming towards 'Floriculture Farming' here, which has brought this village on international map and has become a symbol of inspiration to the other villages of adjoining area.

#### **Present Status: A survey Summary**

s. no.	Particulars	Remarks
1.	Name of crops grown in the village	Tomato, Capsicum, Chinese Cabbage, Carnation flower, Gladiolas flower, Lillium, and Chrysanthemum
2.	Detail of good practices	Poly house

**An Analysis:**

No practice of organic farming has been found in the village, which also needs to be taught to the farmers. Also, awareness is required regarding the traditional crop and seeds restoration.

**3. Water Management and Irrigation :**

Water is available in the village and water sources are (water bodies/springs/bore well). Some of the families have opted for Roof-Top rain water harvesting structures. There are 20 no. of check dams in the village. 07 no. of families have adopted for sprinkling method in farming.

**Present Status: A survey Summary**

s. no.	Particulars	Remarks
1.	Roof-Top rain water harvesting structures	04
2.	No. of water sources that need to be revived	01
3.	No. of houses having structures where household waste water is being collected and used for farming	03
4.	Do the farmers have adequate knowledge about minimizing water use and knowledge of strict conservation practices.	no

**An Analysis:**

Water sources need to be protected. Water management committees should be constituted to aware the masses about minimizing water use and knowledge of strict conservation practices.

**4. Adoption of renewable sources of energy :**

The village needs to adopt renewable sources of energy and people have shown their great interest for installing solar street and house hold lights.

### Present Status: A survey Summary

s. no.	Particulars	Remarks
1.	Number of existing solar street lights in village	01
2.	Number of households using solar lights	none
3.	Number of houses with roof top solar geysers	none
4.	Number of farms with solar fencing	none

### An Analysis:-

As the households are keen for installation of renewable sources of energy, this component will be one of the major activities. 10 households are interested to install solar water heater and solar heat pumps. As per direction of Deputy Commissioner, Solan, PO, Himurja will do mandatory verification & spot visits before installation of lights. Solar light must be installed on a private land and further be handed over to the beneficiaries in person. Solar heater & heat pumps will also be installed during 5 years.

### **5. Solid & liquid waste management & cleanliness**

The village is located near one of the world famous tourist destination Chail. Here also some of the households have jumped into tourism sector with construction of Home Stay, Hotels and Nature camps, which has developed the village as a tourist spot. There is inflow of tourists throughout the year especially in the summer and winter season. The plastic waste is a problem of this village as it is elsewhere. The collection and disposal of non-biodegradable waste is an alarming threat in the form of plastic waste which is a regular feature on daily basis coming out of every household and tourism units. The Bio-degradable waste is mainly kitchen waste which is being generally used in cattle's' feed. Three households are having tanks near houses to collect water from kitchen which can be used for farming. Source segregation and vermin composting has been adopted by some families. Reuse of unwanted goods and material is yet not their cup of tea and they have to learn a lot about such practices.

### Present Status: A survey Summary

Sr. no.	Particulars	Remarks
1.	Facilities for collection and disposal of non- biodegradable waste available in the village	01(nearby the village)
2.	Number of households having vermin composting units	Approximately 10
3.	Knowledge of source segregation and vermin composting.	Inadequate, only 8 farmers are aware.
4.	Knowledge of reuse of unwanted goods and material is yet not their	inadequate

### An Analysis:

There is a greater need for facilities like waste recycle plant, plastic shredding machine, decomposer etc. For community participation residents need to be trained and taught about practices of Source segregation, composting and reuse of unwanted goods and material.

### 6. Forest Management and Assured Eco Services:

Mother nature has endowed the village with the adjacent thick Pine forest having other species like Ban and Deodar also a part of this forest cover. Since ages these forest covers had been the dwelling place of the inhabitants of this village. The community knows the value of forest, its management, afforestation, and reforestation. Forest department directed by Deputy Commissioner, Solan to check the feasibility do plantation of native, ecofriendly & wild fruit trees such as Darhu, Paza, Fegra, Kainth, Koranda in the barren & forest land.

### Present Status : A survey Summary

s. no.	Particulars	Remarks
1.	Scope of afforestation and reforestation in nearby Forest	High One afforestation and reforestation campaign is proposed in an area

		of approximately 10 Bighas.
2.	Scope of afforestation of new initiative of growing PAPA trees & plantation of local & wild fruit trees such as Darhu, Paza, Fegra & kainth in nearby forest and	Villagers , being very progressive, are very keen to take initiative of growing such trees by raising a nursery at village level by the SHG of NRLM.(Jai Jwla SHG , Chuahra and Jagriti SHG Chauhra )
3.	Scope of afforestation of fruit trees	Not shown interest to grow fruit trees.

### **An Analysis:**

Study of this village shows that Farmers of this village had been very progressive in nature and take initiatives. Earlier floriculture was adopted as an initiative, presently, which has become the one of the main occupation of most of the households and the village has a name at Global Level. When told about the plantation of PAPA trees they readily agreed to grow such trees in the areas which need afforestation and reforestation in nearby Forest and in some of their private lands. The local Self Help Group formed in Jhajha panchyat not in the village Mahaog under National Rural Livelihood Mission will take up Nursery Growing Activity of such trees ,which will not only supply the saplings to this village but to outside areas. This activity will be a new initiative to enhance livelihood measures of the SHG. Also there is a need to meet the challenge of frequent forest fires.

## **7. Undertake Capacity Building Interventions:**

There is a need to identify various contributory groups in the village for capacity building for this upcoming eco –village project to focus on different areas of coverage. Non functional Mahila Mandal / Yuvak Mandals need to be revived. Existing SHG and farmers groups need to be mobilized for participating in the activities for the desirous outcome.

### **Present Status: A survey Summary**

s. no.	Particulars	Remarks
1.	Trainings conducted on environmental issues	None. Proposal for awareness camp on plastic waste.
2.	Village Bio-Diversity group and register	None, likely to be formed.

### **An Analysis:**

Various contributory groups listed below and the villagers need to be trained on issues which are to be incorporated in the Eco-village such as climate change, waste management, natural resources management, endangered and extinct crop protection and off -course on new initiatives such as raising nursery etc. Engaging NGOs with Government functionaries need to be engaged to undertake training camps, awareness material and training modules.

## **9. Various Contributory groups :**

s. no.	Name of Groups	remarks
1.	SHG (NRLM)	0
2.	SHS (ICDS deptt.)	0
3.	Yuvak mandal	0
4.	Mahila Mandal	0
5.	Farmers Group	0

### **10. Eco – Tourism and its scope :**

The village itself offers various eco tourism activities. Picturesque view, sloppy fields and polyhouses with contrast of wilderness on another side are the inviting and enthralling features, which couldn't be escaped from the eyes of any viewer. Stay in Log huts and home stays run by some families' leaves an everlasting impression on the tourists. Trekking in nearby woods makes it a trekkers paradise. Place This is the place where natures solitude can be enjoyed at its best alongwith visit to one of the world famous Tourist Destination Chail, which is about 8 Kilometers from Mahog, where so many places can be visited such as famous Chail Cricket Ground, Chail Palace, Wildlife Sanctuary, Chail Market, Kali Ka Tibba Temple with a view of 360 degree, Gurudwara Sahib and many more. On survey, the people are found interested to take up Tourism activity on individual basis along with their prevailing livelihood activities. There is a need to conduct workshops to train people to switch over to take up tourism activities to enhance tourist inflow in this particular village.

### **11. Village Level Management Committee:**

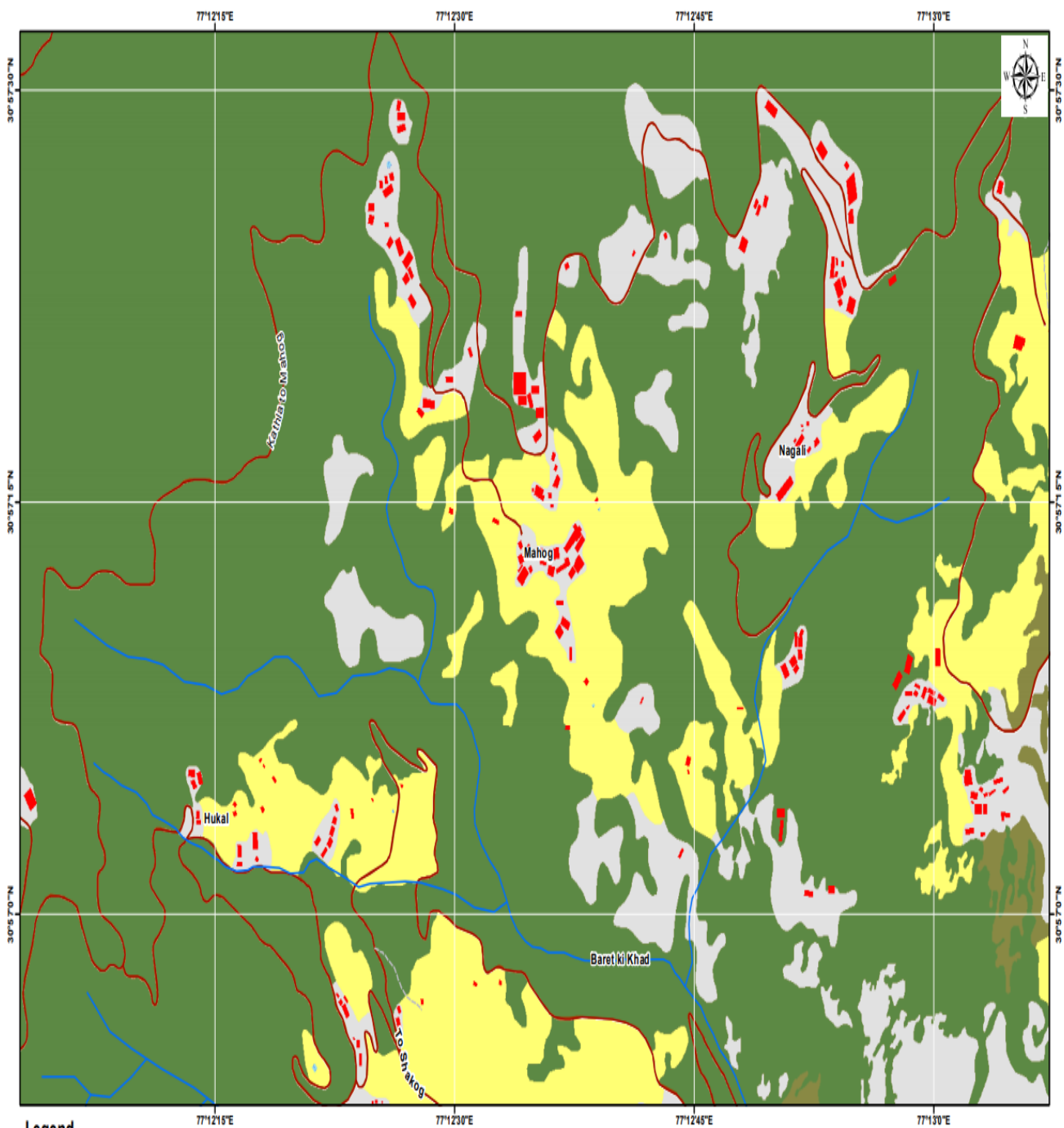
s. no.	Name of person	Position	Contact no.
1.	Sh. Man Singh	Pradhan G P Jhaja	9418556945
2.	Smt. Anju Bala	Ward Member	962512244
3.	Sh. Tara Dutt	Panchayat Secretary	9736215146

### **12. Various Schemes (Ongoing ) in the village**

s. no.	Head	Sanction Amount	Expenditure for the year 2017-18	Estimated Budget for the year 2018-19
1.	MGNREGA	35000	16910	1918090
2.	14 <sup>th</sup> FC	25000	19425	5575

**Village resource map**

### Landuse Map of Eco Village Mahog, Block Kandaghat, District Solan

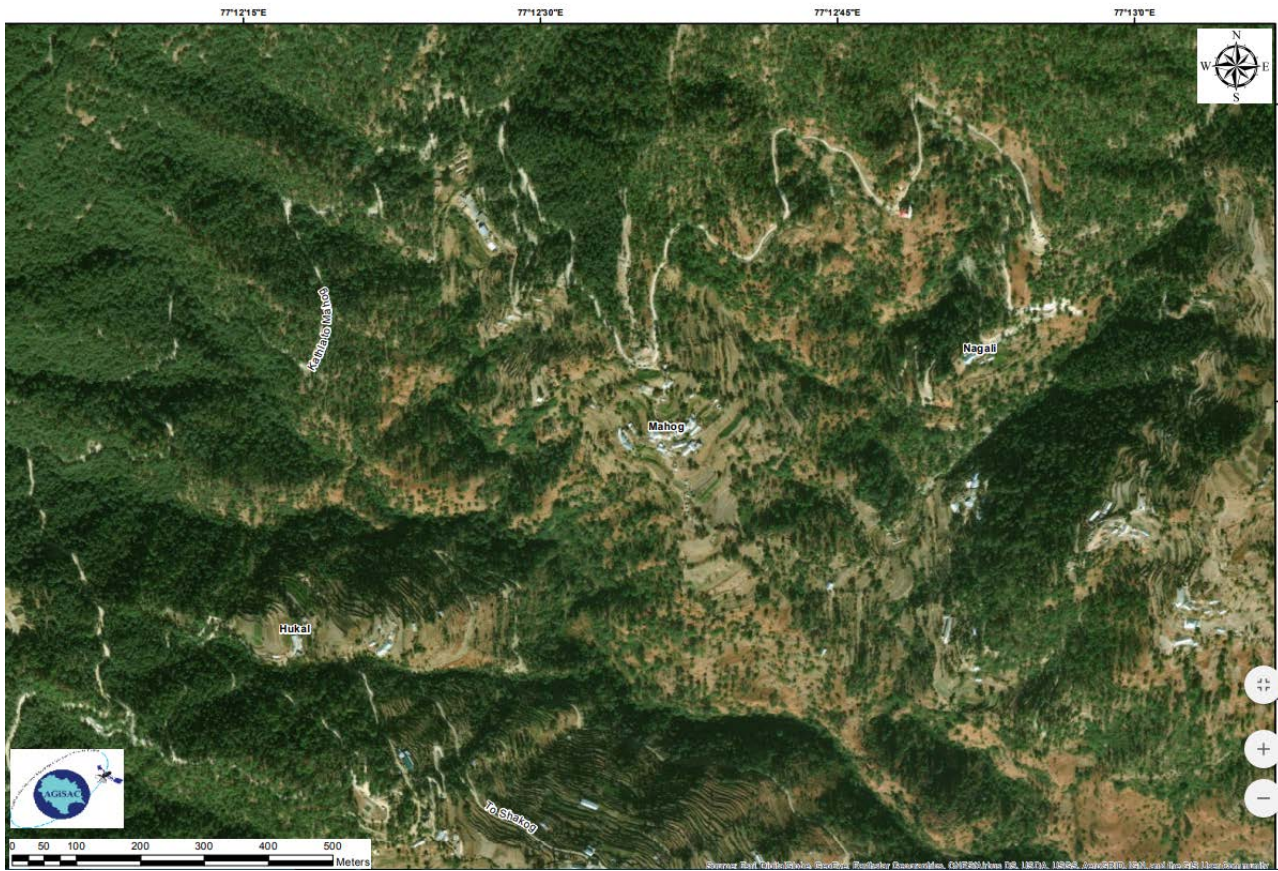


**Legend**

- Road Centre Line    — Drainage    ■ Builtup    ■ Agriculture    ■ Shrubs
- Dsthe    ■ Road    ■ Tank/Dam    ■ Forest    ■ Open/Mista Land



### Aerial View of Eco Village Mahog, Block Kandaghat, District Solan



## Actionable points for implementation of Eco-village s

After detailed analysis and as per directions of Deputy Commissioner. Solan the actionable points are given below as:-

- ❖ Maintenance of water bodies such as Babri.
- ❖ Plantation of native, ecofriendly & wild fruit trees such as Darhu, Paza, Fgra, Kainth & Krundu in the barren & forest land area.
- ❖ Use of renewable energy/solar energy (Solar lights, heater and Heat pumps) to reduce pressure on bio-mass/fuel wood
- ❖ Effective local level solid waste management system and efficient garbage disposal facilities, plastic shredding machine & installation of dustbin (Bio) as per need & utility of area for management of solid waste.
- ❖ Wooden entry gate with detailed description of programme and decoration of gate with reused article.
- ❖ Pucca path (Tiled with side grills) main road to nursery site and beautiful hoarding by using waste/reused items in the background
- ❖ Awareness module and tanning (five years) such as exposure visit for skill development under zero budget farming/reuse the waste etc.
- ❖ Drainage gullies in the village.



## Summary of estimates for the works to be executed for the development of village Mahog

Name of Activity for Year 2019-19 & 2019-20	DEST Share	Convergence	Name of Activity for Year 2020-21	DEST Share	Convergence	Name of Activity for Year 2021-22	DEST Share	Convergence	Name of Activity for Year 2022-23	DEST Share	Convergence	Total	Remarks
<b>Installation of Solar Lights</b>	4	HIMURJA										4.00	To be installed at all common places
Solar Heaters and Heat Pumps	3.18	HIMURJA										3.18	Rs. 1.23 (Individual Subsidy) Total Ex. 4.00
Multipurpose Tree plantation including PAPA trees and Nursery Raising by 2 No. SHGs	0.5	Forest & Hort.	Multipurpose Tree plantation including PAPA trees and Nursery Raising by 2 No. SHGs		Forest & Hort.	Multipurpose Tree plantation including PAPA trees and Nursery Raising by 2 No. SHGs		Forest & Hort.	Multipurpose Tree plantation including PAPA trees and Nursery Raising by 2 No. SHGs	0.5	Forest & Hort.	3.00	Labor from MGNREGA
Awareness module and training i/c Advertisement	0.32	Hort. & Agri. Indus. Tourism	Awareness module and training i/c Advertisement	1	Hort. & Agri. Indus. Tourism	Awareness module and training i/c Advertisement	1	Hort. & Agri. Indus. Tourism	Awareness module and training i/c Advertisement	2.68	Hort. & Agri. Indus. Tourism	5.00	Including Exposure Visit and Hands on Training



Name of Activity for Year 2019-19 & 2019-20	DESI Share	Convergence	Name of Activity for Year 2020-21	DESI Share (in lacs)	Convergence	Name of Activity for Year 2021-22	DESI Share	Convergence	Name of Activity for Year 2022-23	DESI Share	Convergence	Total	Remarks
			Common Drain {Road Side} Flood Water	1	MGNREGS Conv.							1.00	Total 5.84 lakh under MGNREGS Conv.
			Pucca Path {Tiled with Side Grills} Main Road to Nursery Site		MGNREGS Conv.							0.00	Total 2.41 MGNREGS Conv
			Maintenance of Bawari	0.7	MGNREGS Conv							0.70	Total 0.70 lakh MGNREGS Conv.
									C/o Entry Gate with Detailed Description of Programme	0.73	C/o Entry Gate with Detailed Description of Programme	0.73	Total 2.00 Lakh MGNREGS Conv.
	4.00			4.00			4.00			4.00		20.00	

## Eco Village Development Plan

Base line Data/Information

Name of Village \_\_\_Mahog Name of Panchayat \_\_\_Jhajha\_\_\_\_\_

Block Name \_\_\_kandaghat\_\_\_\_\_Name of District \_\_\_\_\_Solan\_\_\_\_\_

### 1. Availability of Village Map:

Panchayat.  Revenue Department  Concerned BDO

### 2. Land use map:

Panchayat  Revenue Department  Concerned BDO

### 3. Demographic profile:

- i. Total households \_\_\_22\_\_\_
- ii. Population \_\_\_98\_\_\_\_\_
- iii. No. of males \_\_\_53\_\_\_\_\_
- iv. No. of females \_45\_\_\_\_\_
- v. No. of BPL Families\_02\_\_\_\_\_
- vi. Mahila Mandals: \_\_\_nil\_\_\_\_\_ (with details)
- vii. Yuvak Mandals: \_\_\_nil\_\_\_\_\_ (with details)
- viii. Self Help Groups: \_\_\_nil\_\_\_\_\_ (with details)

### 4. Agriculture:

- i. Major crops: \_\_cash crop tomato, Shimla mirch \_
- ii. Marketing: Delhi

### 5. Horticulture:

- i. Major Crops: flowery culture, gladeolous
- ii. Marketing: Delhi

### 6. Animal husbandry:

- i. Families involved in Animals husbandry: \_\_\_\_\_
- ii. Livestock: cow total no 18, buffalow  
25\_\_\_\_\_
- iii. Dairy Milk Production: \_\_\_40kg per day\_\_\_\_\_

### 7. Socioeconomic Profile:

- i. Major: Horticulture  (yes)  Agriculture  Animal husbandry
- ii. Minor: Business (yes)  Wages  Govt. job

### 8. Members of village Committee constituted to implement the Scheme\_pradhan, up pradhan, panchayat secretary\_ ward member etc \_\_\_\_\_

(with details)

**9. Functional component of Eco-Village/activities to be undertaken:**

Sr. No.	Component	Status		
		Existing	Proposed	
1	Protection and Conservation of Natural Water Sources/springs.	a) No. of water sources in the village.	2 bwari	Maintains of water body
		b) No. of critical spring sources identified and prioritized for conservation.	nil	nil
		c) No. of spring recharging structures available.	nil	nil
		d) No. of village level committees constituted to check the water sources.	1	----
		e) No. of awareness campaign in village previously conducted to protect/conservethe natural water source.	1	-----
		f) No. of	nil	nil

		studies conducted relating to vulnerability of springs.		
		g) No. of climate resilient spring shed development plan.	1	nil
		h) No. of village water security plans in the village.	nil	nil
2	Adoption of Sustainable Agriculture Horticulture Practices.			
	a) Crop Diversification and Traditional crops:	i. No. and name of different crops grown in the village.	8 no maize.wheat,peas been,gobhi,capsicum ,Gladiolus	Flower culture,shimla mirch,tomato
		ii. No. & names of the endangered or extinct crops of the village.	Maize,paddy	Flower culture, seed,
		iii. Cereals/crop wise seed produced in the village.	wheat 100kg,maize70kg,paddy	nil
		iv. Cereals/crops wise seed procured from	maize,wheat and seed horticulture	nil

		outside.		
	b) Organic farming	i. No. of farmers practicing organic farming in the village.	02	06
		ii. No. of Organic manure producing units in the village.	1	05
	c) Farm Produce and Management Practices	i. No. of farm produce organizations.	nil	nil
		ii. No. & details of good practices.	organic farming, drip irrigation	nil
3	Water management and irrigation.			
	a) Rain Water Harvesting from Roof Tops	i. No. of roof-top rain water Harvesting Structures in the village.	nil	nil
	b) Revival and Creation of water ponds/maintenance of water bodies:	i. No. of water recharge bodies.	nil	1
		ii. No. of Check dams in the village.	nil	nil
	c) Collection of treated waste water for farming	i. No. of households having tanks near house to collect water from kitchens,	nil	nil

		which can be used for farming.		
	d) Minimize water use through strict conservation practices-supply in sustainable manner:	i. No. of water ponds constructed in the village.	nil	nil
		ii. No. of farmers who have adopted sprinkling method in farming.	07	15
		iii. No. of water management committees constituted in the village.	nil	nil
4	Adoption of Renewable Sources of Energy.	i. No. of biogas plants in the village.	2	nil
		ii. No. of Solar Lights and Heaters in the village.	05	6
		iii. No. of awareness programmes conducted in the village about use of renewable sources of energy.	nil	3 camp

		iv. No. of Solar pump for lifting of water which is used for clusters.	nil	nil
		v. No. of Solar fencing done in the village farmland to protect it from stray/wild animals.	nil	nil
5	Solid Waste Management-Cleanliness.	i. No. of villagers who collect Non-Bio-degradable waste at one place and reused or sent for disposal through vendors.	nil	nil
		ii. No. of villagers who know & practice vermi composting techniques to degrade the Bio-degradable waste in to manure.	4	nil
		iii. No. of farmers who is aware of Source Collection,	7 no	15 family

		Segregation and Composting techniques.		
		iv. No. and details of practices noticed where villagers re-used unwanted goods and material.	nil	7 family
		v. No. of community based groups (MM, YM, NGO etc.), which are aware of solid waste management techniques.	nil	nil
6	Forest Management and assured Eco Services.	i. No. of areas adopted for plantation.	50bigha	60bigha
		ii. No. of community based Plantation campaigns undertaken.	5bigha	7bigha
		iii. No. of plantations of fruit trees in the village.	<b>Pomegranate,Lemon</b>	<b>Pomegranate,Lemon and Apples</b>
		iv. No. of Forest fire incident last year.	<b>2015,2016,17</b>	
7	Undertake	i. No. of	<b>nil</b>	<b>nil</b>

capacity building interventions.	trainings conducted in village on Environmental issues.		
	ii. No. of training and awareness modules available for villagers.	<b>mashroom,flower culture,etc</b>	<b>mashroom,flower culture,solid -liquid wastemanagement</b>
	iii. Village Bio-diversity group and register.	<b>nil</b>	<b>nil</b>

### ECO VILLAGE DEVELOPMENT PLAN MAHOG

#### 10 Various ongoing scheme;

sr. no	Head	sanction amount	Expenditure for the year 2017-18	Estimated budget for the year 2018-19
1	MNREGA	35000	16910	1918090
2	14th fic	25000	19425	5575
3	MP LAD	-----	-----	-----
4	MLA LAD	-----	-----	-----

#### 11 Activites proposed for eco village and the budget outlay;-

sr. no	name of work/activity	estimate cost in lakhs	beneficary contribution in lakhs	convergence from central sponsored/state scheme (name of scheme amount in lakhs)	model eco village ,dest contribution in lakhs
1	solid liquid waste management plan	8 00000		---	--
2	Solar street light	4 00000		---	--
3	multi purpose tree	100000		---	
4	Maintaince of water body	1,50,000		-----	
5	Solar Heat pump	5,50,000			

