



**IRRIGATION DEPARTMENT**

**UTTARKASHI**

**ZONAL MASTER PLAN OF ECO-SENSITIVE ZONE IN  
DISTRICT UTTARKASHI**



## **IRRIGATION WORK PLAN OF ECO-SENSITIVE ZONE IN UTTARKASHI DISTRICT**

A meeting of Monitoring Committee of Bhagirathi eco-sensitive zone was held on 17.08.2015 under the Chairmanship of Chief Secretary of state of Uttarakhand. During the discussions Chief Secretary directed the District Magistrate of Uttarkashi to arrange wide spread consultation ensuring the participation of women to discuss various issues to be represented in the Zonal Master Plan and also to arrange for the meeting of Monitoring Committee with the people of the region concerned by notification. Further the District Magistrate, Uttarkashi was to also compile a list of on going and proposed development projects and activities.

The District Magistrate, Uttarkashi vide his letter No. 5762/2109(14-15) dated 18.09.2015 called the public meetings at various places namely Harsil, Sungar, Bhatwari, Netala, Gangori and Uttarkashi on dated 20<sup>th</sup>, 24<sup>th</sup>, 29<sup>th</sup> September 2015 and 1<sup>st</sup>, 3<sup>rd</sup>, 6<sup>th</sup> October 2015 respectively and asked the concerned departmental officers to be present in the proposed meeting. The meetings were protested and boycotted by the local people, elected public representatives and women as they were against the Zonal Master Plan.

Regarding existing, ongoing and proposed development Projects of Irrigation Department in that area the provisions and suggestions are being narrated as below:-

- There are 23 existing minor canal systems that provide Irrigation water to Agricultural crops of local inhabitants in Eco-sensitive area and also provide employment and financial support to the people. The list of the existing minors has been appended with this note as annexure-I. These minors require regular repair and maintenance to be carried out from time to time. As per Para 3(b)(i) of the notification extraction of ground water is permitted for the agricultural and domestic consumption of the bona-fide occupier of land. Hence construction of Irrigation/drinking water supply schemes in eco-sensitive area should be permitted.
- In the said eco-sensitive zone, river Bhagirathi and its tributaries flow in steep and hilly areas. These rivers derive their water from the melting of glaciers and from rains. Due to heavy rainfall and cloud burst events during monsoon these rivers carry huge sediment and debris. As the Himalayan rocks are soft and frizzle in nature and moreover the zone being susceptible to earthquake disturbances, there are more cases of landslides and increased rock falls. The lean discharge and maximum recorded flood discharge (Flood recorded at Maneri Dam on 06.08.1978) of river Bhagirathi is the order of 25 cumecs and 4250 cumecs respectively. This flood discharge ranges from 50 to 160 times the lean discharge. Higher the river discharge higher will be sediment load. This large variation in discharge and sediment load poses numerous problems such as: increasing of flood levels, deposition of debris on one bank, silting of reservoir, meandering of river, splitting up of river into a number of interlaced channels etc. Due to deposition of sediments on outer bank, the river tends to leave its original course and flows along new course and thus the inner bank gets eroded.
- River training works such as river channelization, flood protection walls etc. are constructed by the Irrigation department on banks of river so as to guide and confine the flow into the main course to regulate the riverbed configuration and thus protecting the area/properties along the bank.
- There are 4 ongoing, 27 existing and 22 new proposed schemes in the eco-sensitive zone, the details of which have been enclosed as annexure no. II, III and IV respectively. Construction and restoration of flood protection/river channelization works are necessary to protect life and property of local inhabitants as well as for

conservation of existing water bodies. Most of the times during high floods when land and property of local people or of Govt. is in danger, there is urgent need for protection works otherwise it may cause heavy damages and even the river course may be diverted to habituated area.

- A number of villages and their properties are situated along the bank of river in eco-sensitive zone. Every year the river Bhagirathi and its tributaries heavily erode banks during monsoon and reduce the already scarcely available agricultural land. Unlike in the plains the development of the villages is restricted to specific areas and the available space in the valley along the banks of river is also acute. In the view of acute land problem the flood protection work against erosion by river is inevitable and will also help in the development of villages as well as ensure their livelihood security.
- Another benefit of flood protection wall is that behind it walking paths for tourism and pilgrimage and local use can be constructed which shall comply Para 2-(10) of notification. In view of above facts the flood protection works need to be kept in permitted works category.
- There exist many religious ghats along or at the confluence of the river in this zone which need to be maintained, repaired or restored from time to time. These ghats exist from ancient times and are of religious importance and used by the tourists/locals during festivals. This has been marked in the map (Annexure-V). Therefore maintenance/restoration of these ghats need to be kept in permitted work category in compliance of Para 2-(2) of notification.
- According to Hindu religion “Ganga Jal” is used in various religious functions and is considered to be holy. It is in great demand in India as well as in foreign countries. M/s Gangotri Mineral Water (P) Ltd. in Jhala and M/s Uttarkashi Mineral Water (P) Ltd. in Ongihas already been permitted by Govt of Uttarakhand to draw of 20,000 liters and 10,000 liters of Ganga Jal per day from Bhagirathi river respectively since one decade. This comes under thrust industry category and gives employment local people also. This should be kept under “permitted category”.

**Executive Engineer**  
Irrigation Divison  
Uttarkashi

**VARIOUS ACTIVITIES TO BE INCLUDED IN ZONAL MASTER PLAN**

<b>Sl. No.</b>	<b>Activity</b>	<b>Prohibited</b>	<b>Regulated</b>	<b>Permitted</b>	<b>Remarks</b>
1.	Use of natural water (Surface/Sub-Surface water) for Drinking and Irrigation purpose.			Y	Construction of water pipeline, tube-well, canal and minor channel for Drinking/Irrigation purpose is necessary for local inhabitants. As per sub Para 3-b(i) of the notification this activity should be in permitted work category.
2.	Protection of Hill slopes and river banks in populated area, agriculture area and at river confluence point.			Y	Construction and restoration of Flood Protection, anti-erosion and river channelization works are necessary to protect life and property of local inhabitants in eco-sensitive areas as well as most essential for conservation of existing water bodies. As per sub Para 2-(4) of the notification Flood protection works need to be kept in permitted works category.
3.	Emergent works required during natural climatic conditions			Y	Most of the time during high floods when land and property of people or of Govt. is in danger there is need for protection works otherwise it may cause heavy damages and even the river course may be diverted to habituated areas. Hence these works should be permitted.
4.	Commercial use of Gangajal (water) upto 20,000 litres/day/ industry.		Y		According to Hindu Religion "Ganga jal" is used in various religious functions and is considered to be holy. It is in great demand in India as well as in foreign countries. M/s Gangotri Mineral Water (P) Ltd. In Jhala and M/s Uttarkashi mineral Water (P) Ltd. In Ongi has already been permitted by Govt of Uttarakhand to draw of 20,000 liters and 10,000 liters of Ganga jal per day from Bhagirathi river respectively since a decade. As per sub Para 3 (b) (i) of the

Sl. No.	Activity	Prohibited	Regulated	Permitted	Remarks
					notification the sale of ground water may be permitted after approval of the state ground water board.
5.	Watershed-Development			Y	<p>1. Water harvesting structures such as check dams, nala bund, farm ponds, tanks etc.</p> <p>2. Capacity building, entry point activities, ridge area treatment, drainage line treatment, soil and moisture conservation, nursery raising, afforestation, horticulture, pasture development, livelihood activities for the asset-less persons and production system - micro enterprises for small and marginal farmers etc.</p> <p>3. Effective rainfall management like field bunding, contour bunding/trenching, staggered trenching, land levelling, mulching etc. As per sub Para (2) of paragraph 4 of the notification this all should be permitted.</p>
6.	Use of existing tunnel for cold storage, military purposes and other purposes.		Y		In past tunnels were constructed for various hydro projects in eco-sensitive zone but are presently not in use. It may serve the purpose of cold storage as well as military activities and other activities. Hence proposal for reuse of tunnels should be permitted after approval of State Govt.



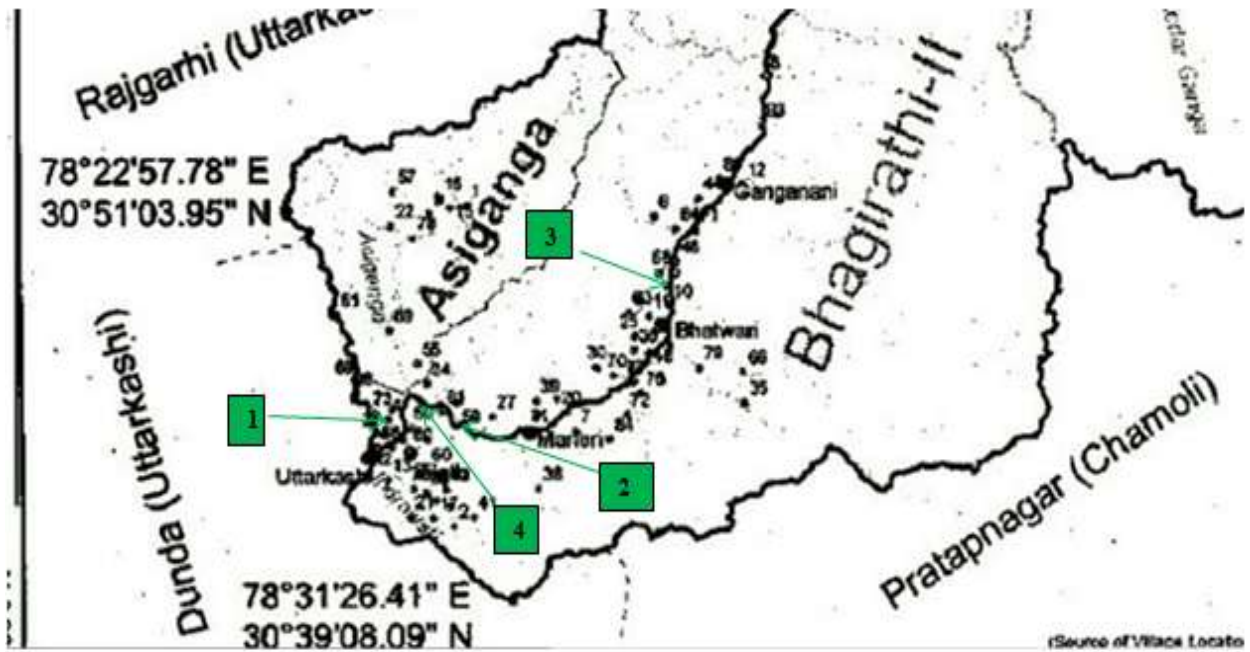
**Annexure-II****Irrigation Division - Uttarkashi****List of Constructed Canals (minors) in Eco-Sensitive Zone**


Sl.	Name of Canals	Constructed/ Under construction/ Proposed	Beneficial Villages	Length ( In Km.)	C.C.A ( In Hec.)	P.P.A ( InHec.)		Total
						Kharif	Rabi	
1.	Pala Canal	Constructed	Pala, Barsu	3.800	110	72	34	106
2.	MallaCanal	Constructed	Pahi ,Malla	3.100	70	24	11	35
3.	RaithalCanal	Constructed	Raithal ,kyark, Bandrani	1.600	80	36	20	56
4.	JamakCanal	Constructed	Kamar, jamak	2.250	15	05	02	07
5.	DidsariCanal	Constructed	Didsari	3.770	39	39	30	69
6.	SainjCanal	Constructed	Sainj	1.800	30	22	12	34
7.	Naitala Canal	Constructed	NaitalaGawa na	4.100	78	31	20	51
8.	GawanaCanal	Constructed	Gawana	2.00	35	20	15	35
9.	UttarkashiCanal	Constructed	Uttron, Gongori, Badahatt.	6.100	40	35	25	60
10.	GyansuCanal	Constructed	Gamdid, Basunga, Gyansu	4.000	52	52	32	84
11.	SeemakoiCanal	Constructed	Bonga, Dobata, Ladari, Dang	2.800	28	28	28	56
12.	Ladari, KansenCanal	Constructed	Ladari, Kansen	1.900	20	20	20	40
13.	ManeraCanal	Constructed	Dilsourd,	0.800	13	08	04	12
14.	Chamkot canal	Constructed	Chamkot	2.23	36	20	16	36
15.	Gorsali canal	Constructed	Gorsali, Dwari, Pahi, Jaunkani.	2.200	150	74	47	121
16.	Thalan canal	Constructed	Thalan	1.500	14	12	10	22
17.	Sora canal	Constructed	Sora	1.500	7-50	07	05	12
18.	Bonga canal	Constructed	Bonga	1.610	15	13	11	24
19.	GajoliCanal	Constructed	Gajoli	2.15	32	18	14	32
20.	Kaflo Canal	Constructed	Saku	1.20	07	05	04	09
21.	Kyark Canal	Constructed	Kyarkrathal	2.77	75	32	15	47
22.	Bhankoli Canal	Constructed	Bhankoli	5.00	64	38	26	64
23.	Manpur kishanpur Canal	Constructed	Manpurkish anpur	4.20	60	35	29	64



Annexure-II

**On Going Flood Protection Works in Eco-sensitive Zone Uttarkashi**



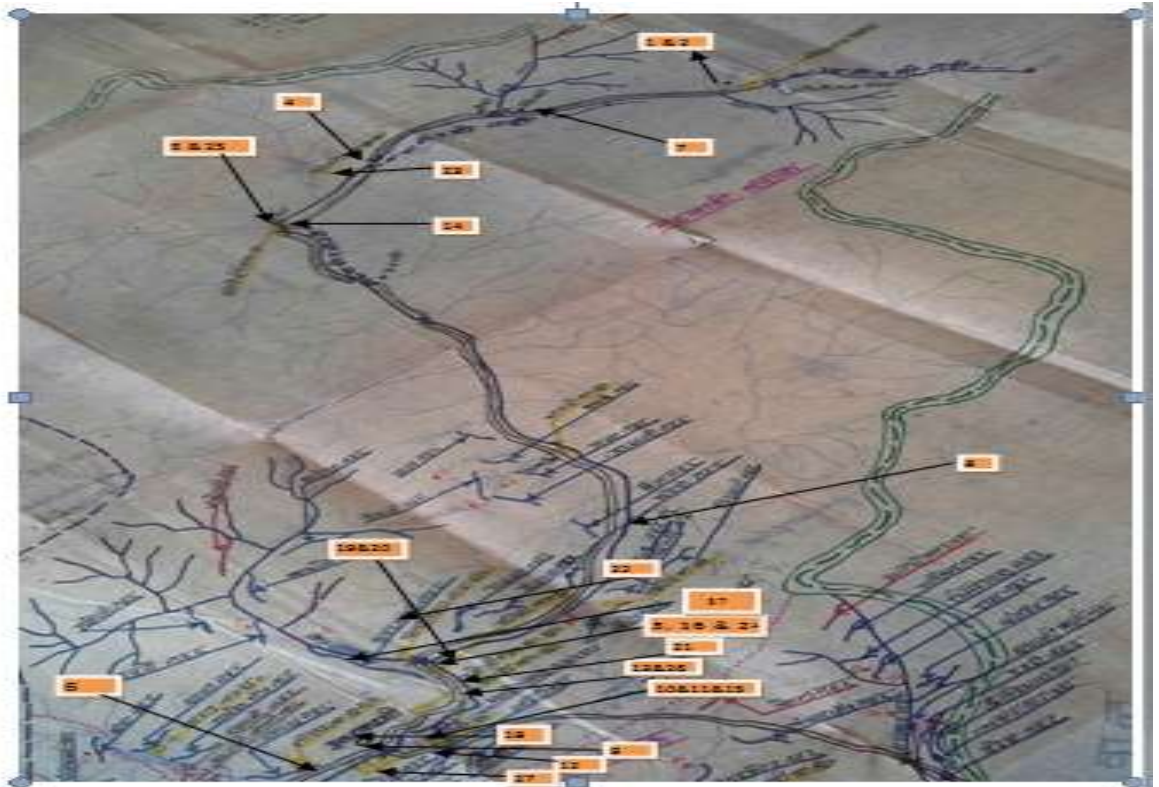
Sl.	Description	Indication
1	On going Flood Protection works	← 


List of Villages in Eco-Sensitive Zone at District Uttarkashi.	88 Uttron, 80 Siror, 10 Bhatwari, 50 Maneri
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**Irrigation Department - Uttarkashi**  
**List of Ongoing Projects in Eco-Sensitive Zone**

SL	Name of Project	Length (In Km.)	According to Eco-Sensitive Zone Gazette Notification		
			Regulated	Permitted	Non Permitted
1	Flood Protection Work Of Power house to Simodi Namatok in Gangori	0.675	-	These Project pertain to F.P.W. which come under permitted activities in the Eco-Sensitive Zone with concept of conservation of existing water bodies, management, conservation of agricultural land, properties of local people and eco-friendly development.	-
2	Flood Protection Work of Naitala-Siror	0.500	-		-
3	Flood Protection Work of Bhatwari to Chadethi	0.500	-		-
4	Flood Protection Work Of Maneri	1.000			

**Existing Flood Protection works in Eco-Sensitive Zone Uttarkashi**



Sl.	Description	Indication
1	Existing Flood Protection Works	← 

**Irrigation Department Uttarkashi**  
**List of Existing Flood Protection Works in Eco-Sensitive Zone**

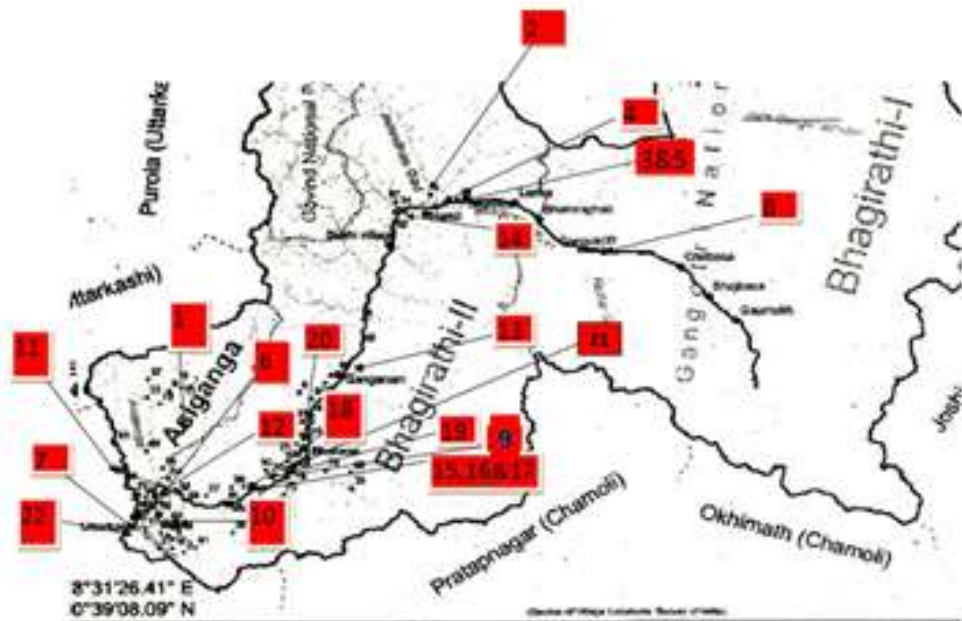
Sl.	Name of work	Constructed/ Under construction /Proposed	Length ( In Km.)	Beneficial Villages	Remark
1	2	3	4	5	6
1.	Gangotri Flood Protection Work at right bank.	Constructed	0-210	ShriGangotridham	-
2.	Gangotri Flood Protection Work at Left bank.	Constructed	ShriGangotridham	ShriGangotridham	-
3.	Gyan ganga Ashram Flood Protection Work	Constructed	0-142	Gyanganga Ashram (Chinwa)	-
4.	MukhvaNala Flood Protection Work	Constructed	Mukhva	Mukhva	-
5.	Kakoda gad Flood Protection Work.	Constructed	0-300	Harsil, Miliatry Campus	-
6.	GyansuNala Flood Protection Work	Constructed	0-290	Gyansu colony & market	-
7.	BharavJhapNala Flood Protection Work	Constructed	0-309	ShriGangotridham	-
8	Keshawpuram Flood Protection Work	Constructed	0-091	Keshawpuramashram maneri	-
9	Uttarkashi Flood Protection Work	Constructed	4-000	LuksheshwarUttarkashi	-
10	Tiloth Flood Protection Work	Constructed	0-330	Tiloth village	-
11	Tilothnala Flood Protection Work	Constructed	0-250	Tiloth village	-
12	Indrawati Flood Protection Work	Constructed	0-290	Ginda, Aletha, Saida, Bonga, manalpur village	-
13	Bheemgufa to Anand Ashram Luksheshwar Flood Protection Work	Constructed	0-180	Luksheshwar	-
14	Dharali village Flood Protection Work	Constructed	0-190	Dharali	-

<b>Sl.</b>	<b>Name of work</b>	<b>Constructed/ Under construction /Proposed</b>	<b>Length ( In Km.)</b>	<b>Beneficial Villages</b>	<b>Remark</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
15.	Flood Protection Work up stream of Tiloth bridge at left bank of Bhagirahti river	Constructed	0-156	Tiloth	-
16.	Flood Protection Work of gangori village at right bank of Bhagirahti river.	Constructed	0-600	Gangori	-
17.	Flood Protection Work of gangori village at right bank of Assiganga river.	Constructed	0-500	Gangori	-
18.	Flood Protection Work of Mando village at left bank of Bhagirahti river.	Constructed	1-200	Mando	-
19.	Flood Protection Work of gangori village at left bank of Assiganga river.	Constructed	1-000	Gangori	-
20.	Flood Protection Work Down stream of steel bridge at right bank of Assiganga river.	Constructed	0-400	Gangori	-
21.	Flood Protection Work Down stream of Tekhla steel bridge at river bank of Bhagirahti river	Constructed	0-484	Tekhla	-
22.	Flood Protection In Naitala at Tapassyalay.	Constructed	0-065	Naitala	-
23.	Flood Protection In Markandey	Constructed	0-040	Markande	-
24.	Flood Protection	Constructed	0-075	Gyanganga	-

<b>Sl.</b>	<b>Name of work</b>	<b>Constructed/ Under construction /Proposed</b>	<b>Length ( In Km.)</b>	<b>Beneficial Villages</b>	<b>Remark</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
	In Gyanganga			Ashram (Chinwa)	
25.	Flood Protection at Jaledri gad in Harshil	Constructed	0-150	Harshil	-
26.	Flood Protection at Bheemgufa to Anand Ashram Luksheshwar	Constructed	0-180	Luksheshwar	-
27.	Flood Protection at Bhailudavillage	Constructed	0-450	Bhailuda	-

# New Proposed Flood Protection Works For Year 2015-16 in Eco-Sensitive Zone Uttarkashi

Annexure-IV



Sl.	Description	Indication
1	Flood Protection Works	← ■

**Annexure-IV**

**Irrigation Department - Uttarkashi**

**List of New Proposed Flood Protection Work For Year 2015-16 in Eco-Sensitive Zone**

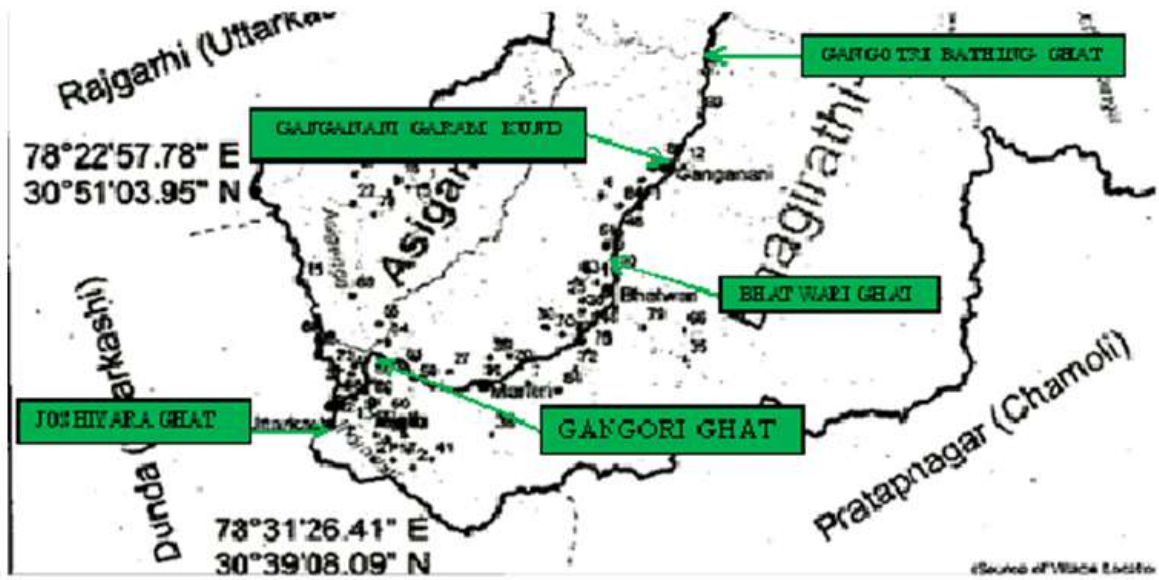
SI	Name of Project	Locations of Villages in Eco Sensitive Zone, District Uttarkashi, Uttarakhand	According to Eco-Sensitive Zone Gazette Notification		
			Regulated	Permitted	Non Permitted
1	Construction of Gangori Ghat in Block Bhatwari Ditt-Uttarkashi under C.M. Announcement.	Uttron (88)		These Project Pertain to F.P.W. which comes under Permitted activities in the Eco-Sensitive Zone with concept of conservation of existing water bodies management, conservation of agricultural land, properties of local people and encourage eco-friendly development.	
2	Construction of Flood Protection Work at Pudkanala, to protect Bagori village in Block Bhatwari Ditt-Uttarkashi under C.M. Announcement.	Bhatwari (10)			
3	Construction of Flood Protection Work at Jalendri gads to protect Bagori - Harshil Village in Block Bhatwari Ditt-Uttarkashi under C.M. Announcement.	Bagori (03)			
4	Construction of Flood Protection Work at Kheer gad to protect Dhatali Village - town in Block Bhatwari Ditt-Uttarkashi under C.M. Announcement.	Dharali (18)			
5	Construction of Flood Protection Work at Kakoda gad to protect Harshil town in Block Bhatwari Ditt-Uttarkashi under C.M. Announcement.	Dharali (18)			
6	Construction of Flood Protection Work at both bank of Bhagirathi river to protect Siror - Naitala Village in Block Bhatwari Ditt-Uttarkashi under C.M. Announcement.	Siror (80)			
7	Construction of Flood Protection Work at Kansennala - drianega work at Kaleshwar mandir	Joshiyara (36)			



SI	Name of Project	Locations of Villages in Eco Sensitive Zone, District Uttarkashi, Uttarakhand	According to Eco-Sensitive Zone Gazette Notification		
			Regulated	Permitted	Non Permitted
	in Block BhatwariDitt-Uttarkashi under C.M. Announcement			eco-friendly development.	
8	Construction of Flood Protection Work at Kadar ganga to protect Gangotri town in Block BhatwariDitt- Uttarkashi under C.M. Announcement	Gangotri (23)			
9	Construction of Flood Protection Work at left bank of Bhagirathi to protect Syuna village in Block BhatwariDitt-Uttarkashi under C.M. Announcement.	Siror(80)			
10	Construction of Flood Protection Work in both bank of indrawati river to protect population - Agriculture land in Block BhatwariDitt- Uttarkashi under C.M. Announcement.	Ladari(49)			
11	Construction of Flood Protection Work at Badikhali to protect population - Agriculture land in Block BhatwariDitt-Uttarkashi under C.M. Announcement.	Sald (68)		These Project Pertain to F.P.W. which come under Permitted activities in the Eco-Sensitive Zone with concept of conservation of existing water bodies management,co nservation of agricultural land,properties of local people and encorage eco-friendly development.	
12	Construction of Flood Protection Work in both bank of Assiganga to protect villagchinwa - uttron village in Block BhatwariDitt- Uttarkashi under C.M. Announcement.	Uttron(88)			
13	Construction of Flood Protection Work in right bank of Bhagirahti river to protect P.H.C SunagarGangnani, - uttron village in Block BhatwariDitt- Uttarkashi under C.M.	Sunagar (82)			

SI	Name of Project	Locations of Villages in Eco Sensitive Zone, District Uttarkashi, Uttarakhand	According to Eco-Sensitive Zone Gazette Notification		
			Regulated	Permitted	Non Permitted
	Announcement.				
14	Flood Protection Work at New Didsari village	Didsari (20)		These Project Pertain to F.P.W. which come under Permitted activities in the Eco-Sensitive Zone with concept of conservation of existing water bodies management, conservation of agricultural land, properties of local people and encourage eco-friendly development.	
15	Flood Protection Work at Didsari village	Didsari (20)			
16	Flood Protection Work at Sainj village	Sainj (69)			
17	Flood Protection Work at New Ongi village	Ongi (61)			
18	Flood Protection Work at Bhelatipri village	Bhelatipri (11)			
19	Flood Protection Work at Odar gad	Bhatwari (10)			
20	Flood Protection Work at Soura gad	Soura (76)			
21	Flood Protection Work at Kansennala.	Joshiyara (36)			

## Existing Religious Ghats in Eco-Sensitive Zone Uttarkashi



Sl.	Description	Indication
1	Existing Religious Ghats	← ■