GOVERNMENT OF HIMACHAL PRADESH

REVENUE DEPARTMENT

(DISASTER MANAGEMENT CELL)

MEMORANDUM

OF

DAMAGES

DUE TO FLASH FLOODS, CLOUDBURSTS AND LANDSLIDES DURING MONSOON SEASON 2024

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Chapter -1

State Profile

Physical Location:

Himachal Pradesh is predominantly a mountainous State located in North – West India. It shares an international border with China. The State has highly dissected mountain ranges interspersed with deep gorges and valleys. It is also characterized with diverse climate that varies from semi tropical in lower hills, to semi arctic in the cold desert areas of Spiti and Kinnaur. Altitude ranges from 350 meters to 6975 meters above mean sea level. It is located **between Latitude 30° 22'.40" N to 33° 12'.20" N and Longitude 75° 45'.55" E to 79° 04'.20" E.**

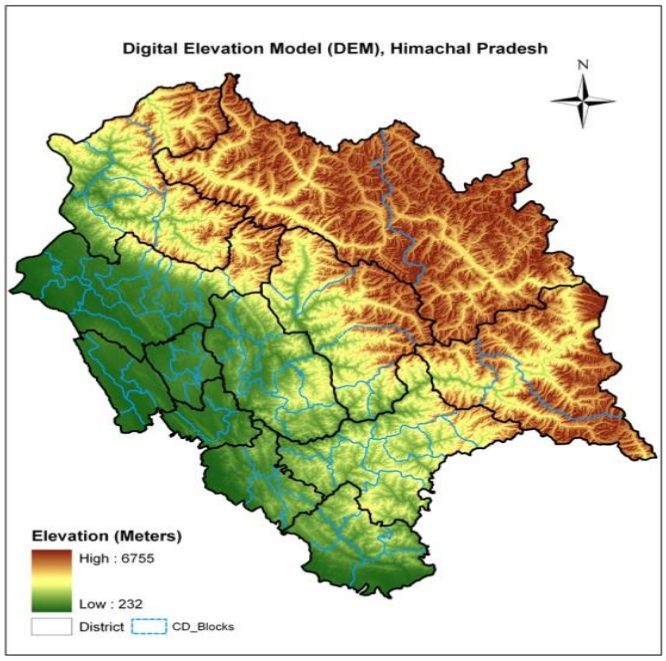


Figure 1.1Digital Elevation Model, H.P.

Demography:

Population of Himachal Pradesh is 68.56 lakh persons as per the Census report for the year 2011. 89.01% of the total population inhabits 20,604 villages in the rural areas of the State. These villages are sparsely distributed across the State having population density as low as 1-2 persons per square kilometer in the remote and tribal area of Lahaul & Spiti. Hamirpur district has largest population density of 369 persons per square kilometer as against 123 persons per square kilometer for the whole State. Himachal Pradesh is one of the few states of the country where gender equality is an integral part of the social ethos as well as the overall development strategy. Female literacy is well above the national level and women employment is much higher than in most states of the country.

Table 1.1 Demographic Features Since 1901

Year	Population	Decennial growth rate	Female per 1000 males	Density per Sq. Km. (Persons)	Scheduled Castes (Percentage)	Scheduled Tribes (Percentage)
1901	1920294	-	884	34	-	-
1911	1896944	-1.22	889	34	-	-
1921	1928206	1.65	890	35	-	-
1931	2029113	5.23	897	36	-	-
1941	2263245	11.54	890	41	-	-
1951	2385981	5.42	912	43	22.69	0.26
1961	2812463	17.87	938	51	22.88	4.35
1971	2460434	23.04	958	61	22.24	4.09
1981	4280818	23.71	973	77	24.62	4.61
1991	5170877	20.79	976	93	25.34	4.22
2001	6077900	27.54	968	109	24.72	4.02
2011	6864602	12.95	972	123	-	-

Source: Census of India 2011.

Table 1.2 Areas, Density and Decennial Growth Population in Different Districts

District	Area in Sq. Kms.	Total Population		Decennial growth (2001-2011)	Density per Sq. Km. (2011Census)
		2001 Census	2011 Census		
1. Bilaspur	1167	340885	381956	12.08	327
2. Chamba	6528	460887	519080	12.58	80
3. Hamirpur	1118	412700	454768	10.08	406
4. Kangra	5739	1339030	1510075	12.56	263
5. Kinnaur	6401	78334	84121	7.61	13
6. Kullu	5503	381571	437903	14.65	79
7. L&S	13835	33224	31564	-5.10	2
8. Mandi	3950	901344	999777	10.89	253
9. Shimla	5131	722502	814010	12.58	159
10. Sirmour	2825	45893	529855	15.61	188
11. Solan	1936	500557	580320	15.21	298
12. Una	1540	448273	521173	16.24	338
Himachal Pradesh	**55673**	**6077900**	**6864602**	**12.95%**	**123**

Source: Census of India 2011.

Administrative Units:

In order to make the functioning smooth, the State is divided into twelve districts which are grouped in three Revenue Divisions i.e. Shimla, Mandi and Kangra. There are 81 Sub Divisions, 113 Tehsil, 73 Sub-Tehsil, 88 Development Blocks and 3615 Panchayats. The State has very effective structure of PRI's comprising 12 Zila Parishads and 81 Panchayat Samitis. There are also 27 Municipal Councils and 29 Nagar Panchayats, besides 7 Cantonment Boards and 5 Municipal Corporations in the State.

Topography:

Topographically, the state can be divided into three zones:

1. **The Shiwaliks or Outer Himalayas:** It covers the lower hills of Kangra, Hamirpur, Una and Bilaspur, lower parts of Mandi, Solan and Sirmour districts. Within this zone, altitude varies from 350 m to 1500 m.

2. **Inner Himalayas or mid-mountains:** Altitude varies from 1500 m to 4500 m above mean sea level and includes areas such as the upper parts of Pachhad and Renuka in Sirmaur district, Chachiot and Karsog tehsils of Mandi district and upper parts of Churah tehsil of Chamba district.

3. **Alpine zone or the greater Himalayas:** Has altitude above 4500 m above mean sea level and comprises areas of Kinnaur district, Pangi tehsil of Chamba district and area of Lahaul&Spiti district.

Geology & Geomorphology:

Himachal Pradesh with its complex geological structures presents a complicated topography with intricate mosaic of mountainous ranges, hills and valleys. Composed of recent Alluvium, Shiwalik hills are made up of rocks such as sandstone, shale and clay that came into existence during the Eocene, Miocene and Pliocene period.

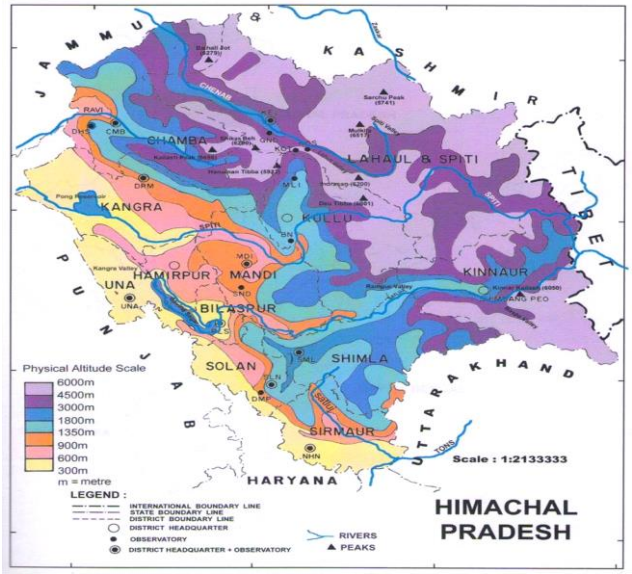


Figure 1.2 Geography of Himachal Pradesh

The central part that extends from Chamba district in the north to Shimla district in the south is mainly represented by Jatog group of rocks which originated in middle Proterozoic period. In the north eastern portion unclassified Granites borders the central part in between Kullu, eastern Shimla, Lahaul-Spiti and parts

of Kinnaur district. The eastern greater Himalaya presents the Triassic formation which is found in Kaza tehsil of Lahaul-Spiti district. The oldest rocks are Granites found at Jeori-Wangtuand Bandel near Largi in Kullu district. These granites date back to a stage of the crust at a time when India was located 8000 Km southwest of its present position.

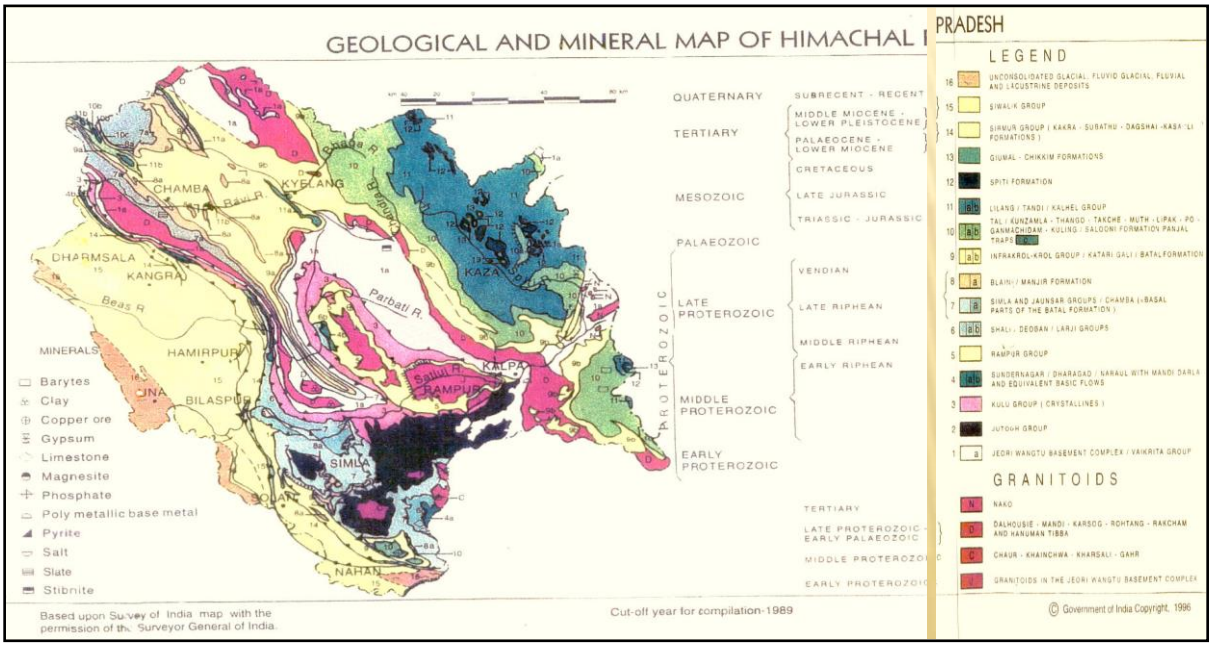


Figure 1.3 Geological and Mineral Map of Himachal Pradesh

Climate:

The climate varies across the state with the altitude. In the southern low tracks between an altitude of 400-900 m it is hot sub humid type, between 900-1800m altitude warm & temperate, between 900-2400 m cool & temperate, cold alpine & glacial above 2400-4800 m altitude. Bilaspur, Kangra, Mandi, Sirmour, and Una districts experience sub tropical monsoon, mild and dry winter and hot summer. Shimla district has tropical upland type climate with mild and dry winter and short warm summer. Chamba district experiences, humid subtropical type climate having mild winter, long hot summer and moist all season. Kullu district experience mainly humid subtropical type of climate with mild winter moist all season, long hot summer and marine. During the period from January to February heavy snowfall in higher reaches create conditions for low temperature throughout the state making it unpleasant

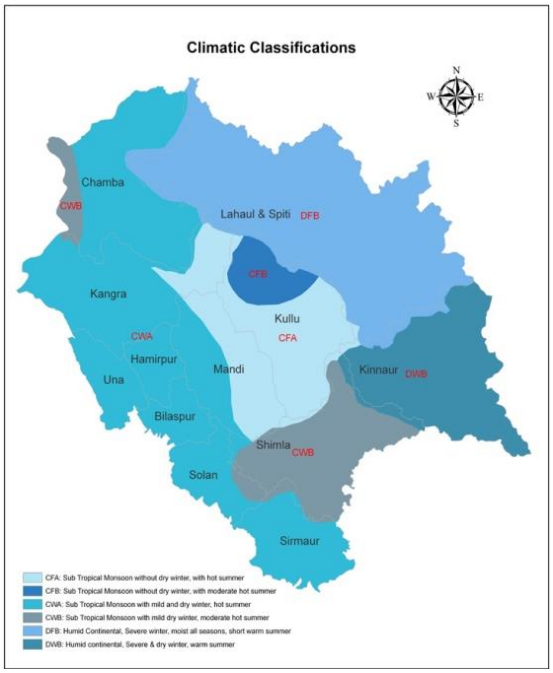


Figure 1.4Climatic Classifications of Himachal Pradesh

and series of western disturbances also affectthe state.

Table 1.3 Climate Pattern of Himachal Pradesh

Climate Pattern	Districts
Sub-tropical Monsoon (Cwa type) Mild and dry winter, hot summer	Bilaspur, Kangra, Mandi, Sirmour, Una, Hamirpur, Solan, Chamba
Sub-tropical Monsoon (Cwb type) Mild and dry winter, moderate hot summer	Shimla, Parts of Chamba
Sub-tropical monsoon (Cfa type) Without dry winter with hot summer	Chamba, Major parts of Kullu, Mandi
Sub-tropical monsoon (Cfb type) Without dry winter with moderate hot summer	Minor parts of Kullu
Humid continental (Dwb type) Severe and dry winter, warm summer	Kinnaur
Humid continental (Dfb type) Severe winter moist all seasons, short warm summer	Lahaul&Spiti

Land use:

As per Land use statistics, Ministry of Agriculture (GoI), 2005, about 12.21 percent of the total reporting area of 4547000 ha of the state (out of 5567000 ha. of geographical area) is under cultivation. 24.06 percentisunder forest. Permanent pastures and other grasslands account for about 33.63 percent, 1.25 percent land is under miscellaneous tree crops and groves, 2.73 percent is under the cultivable wasteland, fallow land other than current fallow 0.29 percent, current fallow 1.19 percent and net sown area is 12.21 percent.

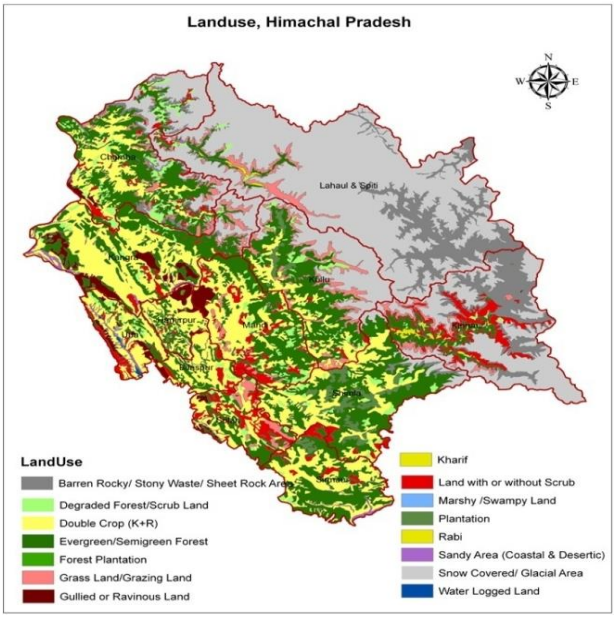


Figure 1.5 land use in Himachal Pradesh

Forest Cover:

Forests are an important resource of Himachal Pradesh. Out of the 55,673 sq km of its geographical area, 37,948 sq km (68.16%) is legally classified forest area.

As per Forest Survey of India Report 2021, Himachal Pradesh has 15,443 sq km (27.73%) of its area under forest cover.

Rivers and Catchments:

Five perennial rivers Satluj, Beas, Ravi, Chenab and Yamuna flow through the state. The utility of these rivers though restricted considerably by the rugged and undulating terrain of the State, nevertheless, these rivers possess immense potential for the generation of hydro-electricity. The following river catchment areas fall in the State.

Table 1.4 River Catchment Areas in Himachal Pradesh

Name of River System	Area of Catchment	Area in percentage
Sutlej	20,398	30.69%
Beas	13,663	24.50%
Chenab	7,850	14.20%
Yamuna	5,872	10.60%
Ravi	5,528	09.90%
Indus	1,450	02.60%
Markanda	360	00.60%
Ganga	290	00.50%
Ghaggar	262	00.50%
TOTAL	**55,673**	**100%**

Lakes/Reservoirs:

The state has both manmade and natural water bodies located in different parts of the state for specific purposes viz. irrigation, hydro-electricity, and flood control. Some of the important reservoirs of the state are Govindsagar, which spreads into the Bilaspur and Una districts, Pong Dam in Kangra, and Pandoh in Mandi District. Chandertal, Renuka and Manimahesh are some the important natural lakes of the state.

Health:

The State has an extensive network of health care institutions. There are 98 hospitals, 2104 Sub- centres, 92 CHC's/RH, 588 PHC's, with available bed capacity of 14527. Similarly, there are 33 Ayurvedic hospitals, 1182 dispensaries/health centres with a bed capacity of 941 available in the state. Besides, there are 3 Ayurvedic Pharmacies and 1 Research Institute. Birth and death rate in the state is 15.3 per 1000 and 6.8 per 1000 respectively.

Roads and Bridges:

Total 18156 villages are connected with roads in the state. The total road length in the state is 40055 Km out of which the single lane road length is 32940 km, double lane road length is 1396 km and jeepable road length is 369 km.

Table 1.5 Population and distribution data Census 2011

S. No	Name of the district	No. of the villages	Population			Distribution of population		Sex Ratio	Population density	Literacy rate	Number of Households
			Male	Female	Total(4+5)	Urban population	Rural population				
1.	**Bilaspur**	1061	1,92,764	1,89,192	3,81,956	25,129	3,56,827	981	327	84.6	80,485
2.	**Chamba**	1591	261320	257767	5,19,080	36,108	4,82,972	986	80	72.2	1,02,460
3.	**Hamirpur**	1725	2,170,70	2,37,698	4,54,768	31,430	4,23,338	1095	407	88.2	1,05,519
4.	**Kangra**	3869	750591	759484	15,10075	86,281	14,23,794	1,012	263	85.7	3,38,887
5.	**Kinnaur**	660	46,249	37,872	84,121	-	84,121	819	13	80.0	19,976
6.	**Kullu**	326	225452	212451	4,37,903	41,391	3,96,512	942	80	79.4	94,807
7.	**L &S**	521	16588	14976	31,564	-	31,564	903	2	76.8	6,674
8.	**Mandi**	3338	498065	501712	9,99,777	62,637	9,37,140	1,007	253	81.5	2,19,145
9.	**Shimla**	3231	425039	388,971	8,14,010	2,01,351	6,12,659	915	159	83.6	1,84,362
10.	**Sirmaur**	976	276289	2,53,566	5,29,855	57,165	4,72,690	918	188	78.8	98,208
11.	**Solan**	2544	308754	271,566	5,80,320	1,02147	4,78,173	880	300	83.7	1,22,425
12.	**Una**	848	263692	257481	5,21,173	44,913	4,76,260	976	338	86.5	1,10,332
Total	**HP**	**20690**	**3481873**	**3382729**	**6864602**	**688552**	**6176050**	**972**	**123**	**82.8**	**1483280**

Source: Department of Economic and Statistics.

Table 1.6 Profile of the state in respect of Agriculture, Road, Irrigation, Primary Health Centers, Primary School, Panchayat Ghar

S. No	Name of the district	Agriculture Sector				Road (in Kms)	No. of PHC	No. of PS	No. of Panchayat
		Cultivated Area (in ha)	Total No. of farmers	No of SMF	No. of landless agriculture labourers				
1.	Bilaspur	31459	56097	50325	2923	1701	35	1379	151
2.	Chamba	43389	70012	65232	1655	3257	42	2824	283
3.	Hamirpur	40939	72926	63708	3291	1893	26	1200	229
4.	Kangra	127204	230416	206944	39534	5951	80	4133	748
5.	Kinnaur	9687	10507	8463	1101	1060	21	453	65
6.	Kullu	40028	67753	64452	5590	1907	17	1896	204
7.	Lahaul-Spiti	3461	4152	3015	339	1256	16	383	41
8.	Mandi	96073	149654	135546	6518	5667	63	3916	469
9.	Shimla	80581	109868	92694	9814	5405	86	3400	363
10.	Sirmaur	44646	49046	33993	5767	3062	36	2353	228
11.	Solan	40894	50145	35988	6309	2961	33	1913	211
12.	Una	40395	62807	51910	11330	1929	19	1389	234
Total	**Himachal Pradesh**	**598756**	**933383**	**812270**	**94,171**	**36049**	**474**	**25239**	**3226**

Source: Department of Economics and Statistic

Table 1.7: Number of Operational Holdings and Area Operated by Size Class of Holdings in H.P.

District wise	Marginal (less than 1.00 hect.)		Small (1.00 to 2.00 hect.)		Semi-Medium (2.00 to 4.00 hect.)		Medium (4.00 to 10.00 hect.)		Large (10.00 hect. & above)		Total All Sizes	
	No. of holding	Area	No. of holding	Area	No.of holding	Area	No. of holding	Area	No. of holding	Area	No. of holding	Area
1. Bilaspur	40028	17730	12018	16608	4576	11978	778	4007	22	338	57422	50662
2.Chamba	51978	23061	13876	18552	4378	11238	390	1961	8	101	70630	54908
3.Hamirpur	52619	21932	14452	20436	7057	18970	1866	10293	146	1872	76140	73502
4.Kangra	180170	63810	32691	45441	16184	44334	6046	34587	813	13680	235904	201855
5.Kinnaur	6256	2619	2466	3524	1522	4200	468	2551	45	1332	10757	14227
6.Kullu	63520	21897	8106	11085	2423	6486	385	2048	10	129	74444	41643
7.L&S	1838	1004	1275	1849	929	2571	221	1140	11	177	4274	6743
8.Mandi	111710	48611	30301	41751	10735	28322	1519	7831	37	535	54302	127051
9.Shimla	71813	30971	22808	32114	11535	31283	3576	19704	273	3868	10005	117937
10.Sirmaur	24983	11349	10666	15279	8583	24023	5419	32473	1070	16096	50721	99221
11.Solan	24900	12672	14528	20954	9995	27656	3741	20855	292	4485	53456	86619
12.Una	40610	17609	11409	16349	6951	19417	3197	19012	543	7897	62710	80285
Total	670425	273265	174596	243942	84868	230478	27606	156462	3270	50510	760765	954653

Source: Director of Land Records, H.P. (Agricultural Census 2021-22)

Chapter -2

Rainfall Status and Current Disaster Situation

Pre-monsoon Period

The pre-monsoon period varies each year, and its impact on rainfall can differ based on several factors, including climate patterns and regional variations.

Weather summary

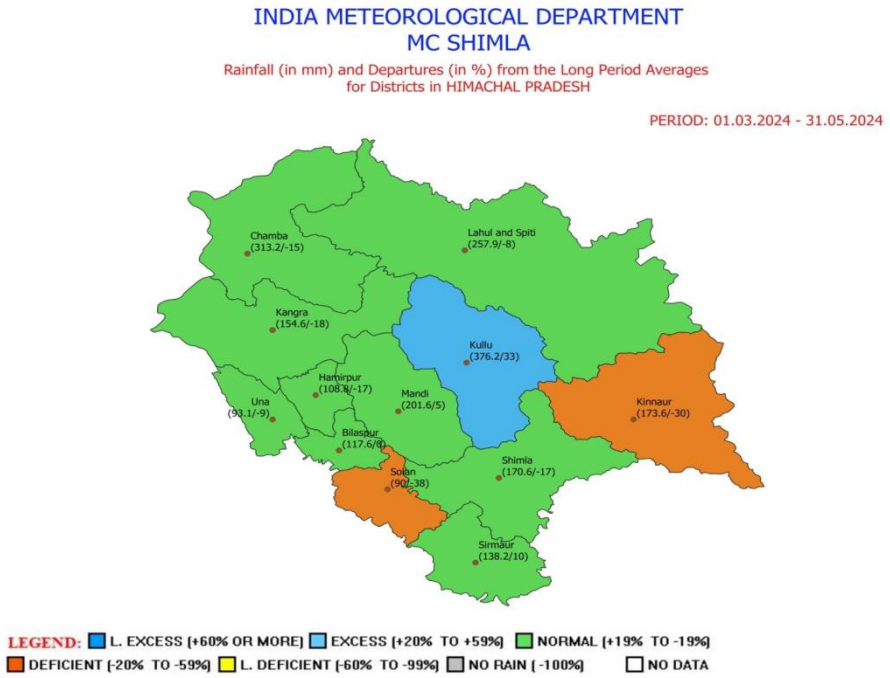
Precipitation activity in Himachal Pradesh in the month of March was weak on many days with four days of widespread vigorous activity. In the month of April, precipitation activity in state was weak on many days with three days of fairly widespread to widespread precipitation activity. In May month, state received four spells of moderate precipitation at few places.

Monthly Precipitation and Departure

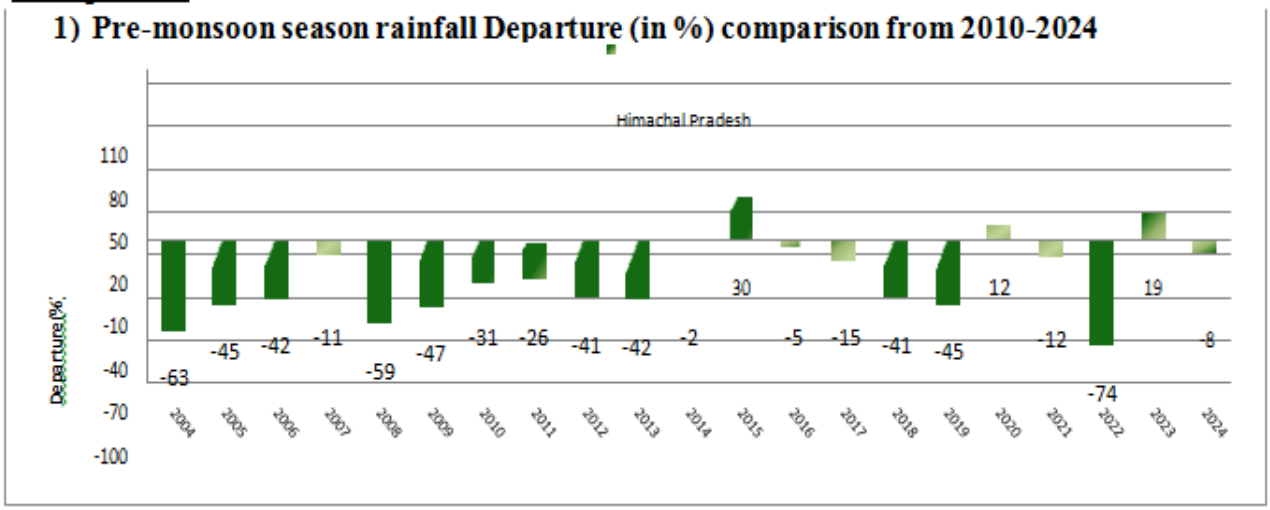
Himachal Pradesh received excess precipitation (24%) in March month i.e. from 01.03.2024 to 31.03.2024 and normal precipitation (-1%) in the April month i.e. from 01.04.2024 to 30.04.2024. The State received large deficient precipitation (-73%) in May month i.e. from 01.05.2024 to 31.05.2024. Districts Bilaspur, Chamba, Hamirpur, Kangra, Kinnaur, Lahaul-Spiti, Shimla, Sirmaur, Solan and Una received large deficient precipitation whereas districts Kullu and Mandi received deficient precipitation.

Pre-Monsoon Season Precipitation and Departure

The state received normal (-8%) precipitation in Himachal Pradesh in pre-monsoon season i.e. from 01.03.2024 to 31.05.2024. 9 districts of the state received normal precipitation. District Kullu received excess precipitation whereas Kinnaur and Solan received deficient precipitation during pre-monsoon season.



Precipitation



According to the abovechart, year 2022 had minimum precipitation (-74%) departure during pre-monsoon season followed by the year 2004 (-63%) departure. Year 2015 had received maximum precipitation with 30% departure followed by 2023 with 19% departure.

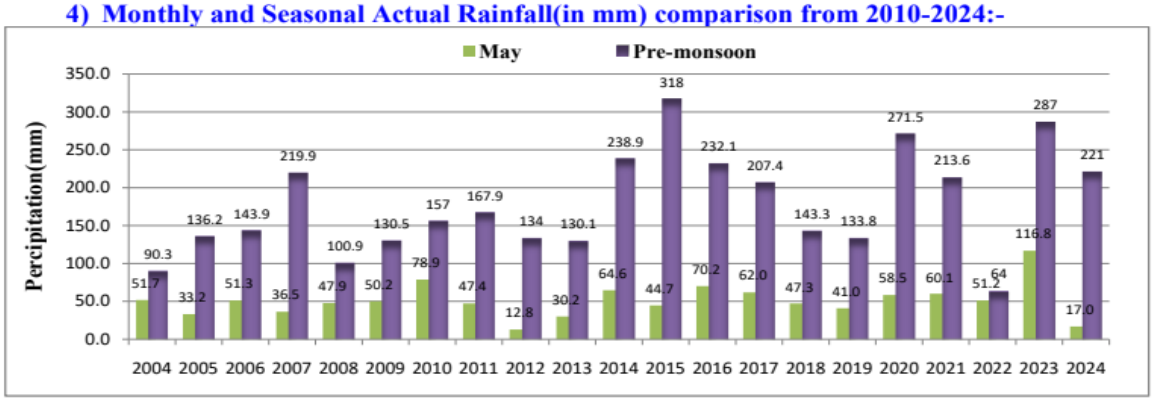
2) Comparison of actual precipitation and departure (%) in HP for period 2010-2024 for May.

Year	Actual	%Dep.
2010	78.9	28.0
2011	47.4	-23.0
2012	12.8	-79.0
2013	30.2	-51.0
2014	64.6	-3.0
2015	44.7	-33.0
2016	70.2	5.0
2017	62.0	-7.0
2018	47.3	-29.0
2019	41.0	-39.0
2020	58.5	-12.0
2021	60.1	-10.0
2022	51.2	-23.0
2023	116.8	84.0
2024	17.0	-73.0

3) Comparison of actual precipitation and departure (%) in HP for period 2010-2024 for pre-monsoon season-

Year	Actual	%Dep.
2010	157	-31
2011	167.9	-26
2012	134	-41
2013	130.1	-42
2014	238.9	-2
2015	318	30
2016	232.1	-5
2017	207.4	-15
2018	143.3	-41
2019	133.8	-45
2020	271.5	12
2021	213.6	-12
2022	64	-74
2023	287	19
2024	221	-8

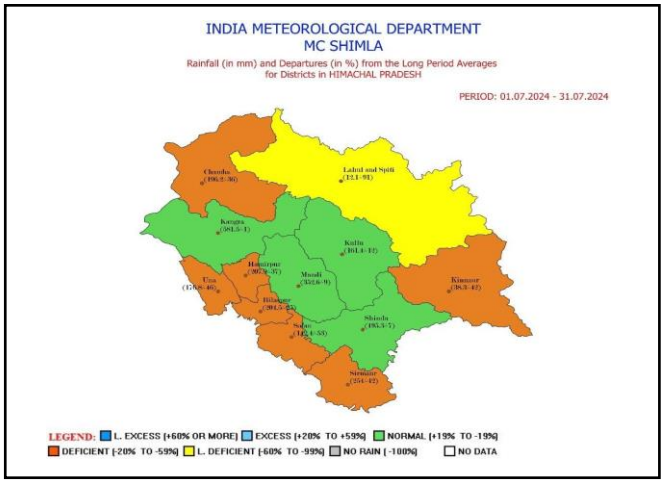
4) Monthly and Seasonal Actual Rainfall(in mm) comparison from 2010-2024:-



Monsoon Period:

Extreme Weather Events of Flash Floods, Landslide and Cloudbursts

Monsoon season in India spans over four months from June to September. However, its arrival and withdrawal occur on different dates in different parts of the country. Normal date of arrival of monsoons in Himachal Pradesh is during the last week of June. This year, monsoon was on time and arrived in Himachal Pradesh on 25 June 2024.



Rainfall data month of July 2024

Precipitation activity in Himachal Pradesh in the month of July was weak to normal on many days with four days of widespread precipitation activity of active intensity. State has received deficient precipitation which is 107th highest rainfall in the month of July for the period (1901-2024) whereas highest rainfall was received in the year 1949 (548.6mm).

Year	Precipitation	Departure
1949	548.6	114.4
2024	180.5	-29

Monthly precipitation and departure-

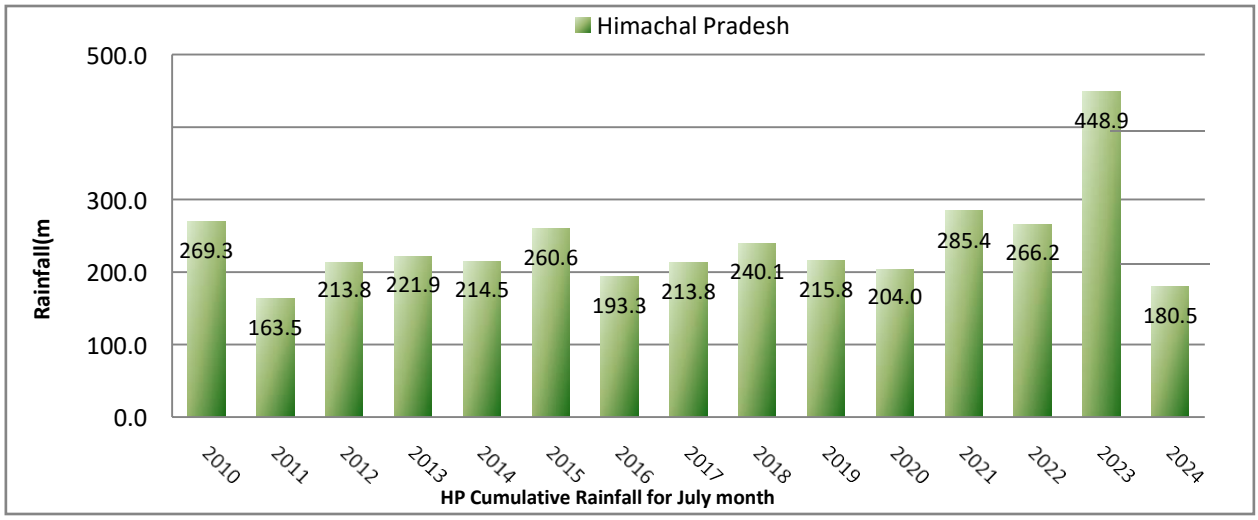
The State received deficient precipitation (-29%) with 180.5 mm actual rainfall against 255.9 mm normal rainfall in the July month i.e. from 01.07.2024 to 31.07.2024. District Kangra has received highest rainfall amount viz. 581.5 mm. Districts Kangra, Kullu, Mandi and Shimla received normal rainfall whereas Districts Bilaspur, Chamba, Hamirpur, Kinnaur, Sirmaur, Solan and Una received deficient rainfall and District Lahaul-Spiti received large deficient rainfall.

District wise monthly rainfall (in mm) and Departure (in %)

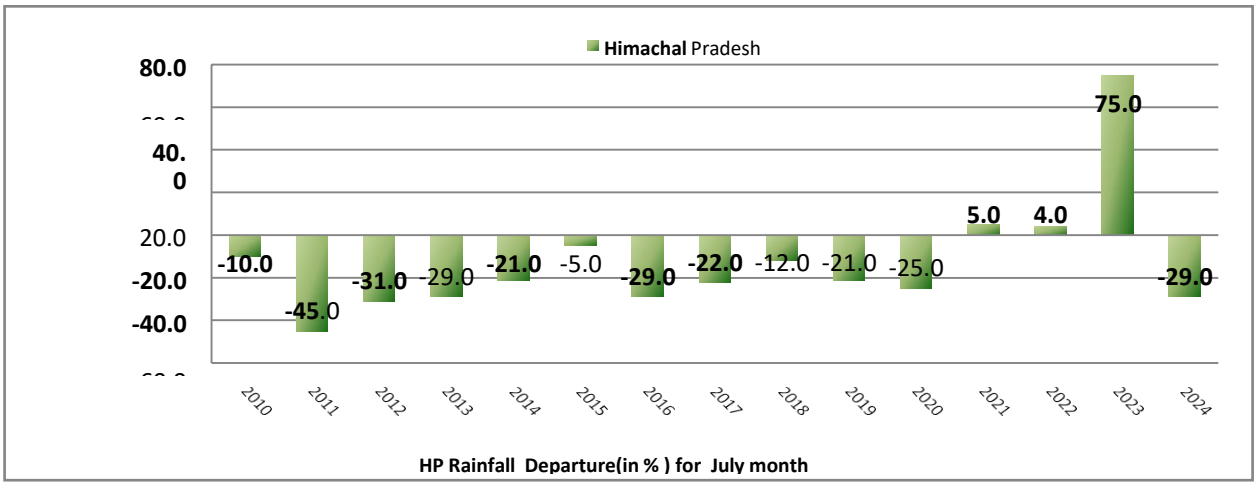
(01st July to 31st July) 2024			
DISTRICTS	**Actual(in mm)**	**Normal(in mm)**	**Departure (in %)**
BILASPUR	204.5	272.2	-25
CHAMBA	196.2	305.7	-36
HAMIRPUR	207.9	328.5	-37
KANGRA	581.5	589.3	-1
KINNAUR	38.3	65.9	-42
KULLU	161.4	184	-12
LAHAUL & SPITI	12.1	131.5	-91
MANDI	352.6	386.5	-9
SHIMLA	195.3	210.2	-7
SIRMAUR	254	437	-42
SOLAN	142.4	303.3	-53
UNA	176.8	329	-46
HP	180.5	255.9	-29

Departure(%)

Monthly Actual Rainfall(in mm) comparison from 2010-2024:-



Monthly rainfall Departure (in %) comparison from 2010-2024:-



Monthly Rainfall distribution and Precipitation Activity for July month.

HIMACHAL PRADESH					
Date	**Distribution**	**Activity**	Date	**Distribution**	**Activity**
01-07-2024	ISOLATED	NORMAL	**17-07-2024**	SCATTERED	WEAK
02-07-2024	SCATTERED	NORMAL	**18-07-2024**	SCATTERED	NORMAL
03-07-2024	WIDE SPREAD	ACTIVE	**19-07-2024**	ISOLATED	WEAK
04-07-2024	WIDE SPREAD	ACTIVE	**20-07-2024**	ISOLATED	WEAK
05-07-2024	FAIRLY WIDE SPREAD	NORMAL	**21-07-2024**	SCATTERED	WEAK
06-07-2024	WIDE SPREAD	ACTIVE	**22-07-2024**	FAIRLY WIDE SPREAD	NORMAL
07-07-2024	ISOLATED	WEAK	**23-07-2024**	FAIRLY WIDE SPREAD	ACTIVE
08-07-2024	FAIRLY WIDE SPREAD	NORMAL	**24-07-2024**	SCATTERED	WEAK
09-07-2024	SCATTERED	WEAK	**25-07-2024**	FAIRLY WIDE SPREAD	NORMAL
10-07-2024	ISOLATED	WEAK	**26-07-2024**	SCATTERED	NORMAL
11-07-2024	ISOLATED	WEAK	**27-07-2024**	SCATTERED	WEAK
12-07-2024	ISOLATED	WEAK	**28-07-2024**	FAIRLY WIDE SPREAD	NORMAL
13-07-2024	SCATTERED	WEAK	**29-07-2024**	WIDE SPREAD	ACTIVE
14-07-2024	ISOLATED	WEAK	**30-07-2024**	SCATTERED	WEAK
15-07-2024	ISOLATED	WEAK	**31-07-2024**	SCATTERED	WEAK
16-07-2024	ISOLATED	WEAK			

Chief Amount of Rainfall (in cm) in July 2024:

Date	Station
01-07-2024	Chuari (dist Chamba) 6, Bharari (dist Hamirpur) 4, Paonta (dist Sirmaur) 4, Rajgarh (dist Sirmaur) 3, Bhoranj (dist Hamirpur) 3, Saloni (dist Chamba) 2, Kangra Aero (dist Kangra) 1, Manali (dist Kullu) 1
02-07-2024	Kheri (dist Chamba) 10, R L Bbmb (dist Bilaspur) 8, Kangra Aero (dist Kangra) 8, Naina Davi (dist Bilaspur) 5, Barthin (dist Bilaspur) 4, Chuari (dist Chamba) 3, Berthin Agro (dist Bilaspur) 3, Aghar (dist Hamirpur) 3, Dharmsala (dist Kangra) 3, Dharmshala Aws (dist Kangra) 3, Sainj Aws (dist Kullu) 3
03-07-2024	Kataula (dist Mandi) 15, Pandoh (dist Mandi) 11, Sujanpur Tira (dist Hamirpur) 8, Gohar (dist Mandi) 5, Janjehli (dist Mandi) 5, Dharmsala (dist Kangra) 5, Dharmshala Aws (dist Kangra) 5, Kahu (dist Bilaspur) 5, Mashobra Aws (dist Shimla) 5, Bhoranj (dist Hamirpur) 4, Kheri (dist Chamba) 4
04-07-2024	Sundarnagar (dist Mandi) 11, Palampur (dist Kangra) 11, Simla (dist Shimla) 8, Gohar (dist Mandi) 8, Solan (dist Solan) 8, Mashobra Aws (dist Shimla) 8, Jogindarnagar (dist Mandi) 7, Baldwara (dist Mandi) 7, Baijnath (dist Kangra) 7, Kandaghat (dist Solan) 7, Mandi (dist Mandi) 5
05-07-2024	Palampur (dist Kangra) 13, Kataula (dist Mandi) 11, Baijnath (dist Kangra) 9, Jogindarnagar (dist Mandi)6, Mandi (dist Mandi) 4, Kothi (dist Kullu) 4, Kufri Aws (dist Shimla) 3, Chaupal (dist Shimla) 3, Kotkhai (dist Shimla) 3, Hmo Shillaro (dist Shimla) 3, Bijahi (dist Mandi) 3, Dharmshala Aws (dist Kangra) 3
06-07-2024	Dharmshala Aws (dist Kangra) 22, Dharmsala (dist Kangra) 21, Palampur (dist Kangra) 21, Jogindarnagar (dist Mandi) 17, Kangra Aero (dist Kangra) 16, Baijnath (dist Kangra) 14, Nagrota Surian (dist Kangra) 9, Chuari (dist Chamba) 7, Sujanpur Tira (dist Hamirpur) 7, Ghamroor (dist Kangra) 7, Kheri (dist Chamba) 7, Nadaun (dist Hamirpur) 6, Barthin (dist Bilaspur) 6, Bharari (dist Hamirpur) 6, Baldwara (dist Mandi) 5, Pandoh (dist Mandi) 5, Una (dist Una) 5, Berthin Agro (dist Bilaspur) 5, Bhoranj (dist Hamirpur) 5, Guler (dist Kangra) 5, Dehra Gopipur (dist Kangra) 5, Mandi (dist Mandi) 5

07-07-2024	Jhandutta (dist Bilaspur) 3, Rampur Bushar (dist Shimla) 3, Hamirpur (dist Hamirpur) 1, Sarahan (dist Shimla) 1, Kheri (dist Chamba) 1
08-07-2024	Sunibhajji (dist Shimla) 9, Simla (dist Shimla) 4, Kasauli (dist Solan) 4, Kumarsain (dist Shimla) 3, Hmo Kasol (dist Kullu) 3, Rampur Bushar (dist Shimla) 3, Kufri Aws (dist Shimla) 2, Nahan (dist Sirmaur) 2, Kahu (dist Bilaspur) 2
09-07-2024	Bharari (dist Hamirpur) 4, Nadaun (dist Hamirpur) 3, Wangtoo (dist Kinnaur) 3, Aghar (dist Hamirpur) 2, Bhoranj (dist Hamirpur) 2
10-07-2024	Baijnath (dist Kangra) 3, Jatton Barrage (dist Sirmaur) 3, Paonta (dist Sirmaur) 2, Renuka / Dadhau (dist Sirmaur) 2
11-07-2024	Kasauli (dist Solan) 4, Paonta (dist Sirmaur) 2, Nahan (dist Sirmaur) 1
12-07-2024	Dharmsala (dist Kangra) 1
13-07-2024	Baijnath (dist Kangra) 3, Dharmsala (dist Kangra) 2, Shimla Aero (dist Shimla) 2, Manali (dist Kullu) 2, Kangra Aero (dist Kangra) 2, Jogindarnagar (dist Mandi) 2, Saloni (dist Chamba) 2, Kheri (dist Chamba) 2
14-07-2024	Jatton Barrage (dist Sirmaur) 3
15-07-2024	Sundarnagar (dist Mandi) 4, Rajgarh (dist Sirmaur) 2, Mandi (dist Mandi) 2, Nagrota Surian (dist Kangra) 3, Sainj Aws (dist Kullu) 3, Kataula (dist Mandi) 2, Manali (dist Kullu) 2
16-07-2024	Naina Davi (dist Bilaspur) 3, Bharwain (dist Una) 1
17-07-2024	R L Bbmb (dist Bilaspur) 5, Naina Davi (dist Bilaspur) 5, Baijnath (dist Kangra) 3
18-07-2024	Dharmsala (dist Kangra) 14, Bharwain (dist Una) 9, Amb (dist Una) 9, Dharmshala Aws (dist Kangra) 7, Ghamroor (dist Kangra) 5, Una Rampur Aws (dist Una) 5, Chuari (dist Chamba) 4, Baijnath (dist Kangra) 4, Una (dist Una) 3
19-07-2024	Nahan (dist Sirmaur) 6, Sunibhajji (dist Shimla) 6, Kandaghat (dist Solan) 5, Baldwara (dist Mandi) 3, Pachhad (dist Sirmaur) 3, Simla (dist Shimla) 3
20-07-2024	Nahan (dist Sirmaur) 6, Kheri (dist Chamba) 5, Pachhad (dist Sirmaur) 2
21-07-2024	Mandi (dist Mandi) 7, Kothi (dist Kullu) 5, Theog (dist Shimla) 4, R L Bbmb (dist Bilaspur) 4, Dharmsala (dist Kangra) 4, Dharmshala Aws (dist Kangra) 3, Palampur (dist Kangra) 3, Dharmshala Aws (dist Kangra) 13, Palampur (dist Kangra) 11, Nagrota Surian (dist Kangra) 10, Baijnath (dist Kangra) 10, Kheri (dist Chamba) 8, Jogindarnagar (dist Mandi) 5, Guler (dist Kangra) 5, Sundarnagar (dist Mandi) 5
22-07-2024	Bharari (dist Hamirpur) 9, Baldwara (dist Mandi) 9, Bhoranj (dist Hamirpur) 9, Ghumarwin (dist Bilaspur) 8, Dharmsala (dist Kangra) 7, Jhandutta (dist Bilaspur) 6, Kataula (dist Mandi) 6, Sarkaghat (dist Mandi) 5, Dharmshala Aws (dist Kangra) 5, Aghar (dist Hamirpur) 5, Kufri Aws (dist Shimla) 3, Bilaspur Sadar (dist Bilaspur) 3, Barthin (dist Bilaspur) 3, Sundarnagar (dist Mandi) 3, Pandoh (dist Mandi) 3, Simla (dist Shimla) 3, Shimla Aero (dist Shimla) 3, Khadrala (dist Shimla) 3
23-07-2024	Kangra Aero (dist Kangra) 15, Dharmsala (dist Kangra) 14, Sundarnagar (dist Mandi) 5, Gohar (dist Mandi) 4, Bijahi (dist Mandi) 4, Dharmshala Aws (dist Kangra) 4, Bharari (dist Hamirpur) 3, Shimla Aero (dist Shimla) 2, Naina Davi (dist Bilaspur) 2
24-07-2024	Baijnath (dist Kangra) 9, Baldwara (dist Mandi) 5, Kataula (dist Mandi) 4, Palampur (dist Kangra) 3
25-07-2024	Jatton Barrage (dist Sirmaur) 9, Palampur (dist Kangra) 7, Naina Davi (dist Bilaspur) 4, Baldwara (dist Mandi) 4, Dharmsala (dist Kangra) 3, Mehre (barsar) (dist Hamirpur) 3, Kheri (dist Chamba) 3, R L Bbmb

	(dist Bilaspur) 3, Dalhousi Alha Aws (dist Chamba) 3, Baijnath (dist Kangra) 3
26-07-2024	Jatton Barrage (dist Sirmaur) 17, Baldwara (dist Mandi) 7, Dharmsala (dist Kangra) 5, Simla (dist Shimla) 5, Jatton Barrage (dist Sirmaur) 2, Guler (dist Kangra) 2, Gohar (dist Mandi) 2
27-07-2024	Kataula (dist Mandi) 4, Nahan (dist Sirmaur) 4, Bhoranj (dist Hamirpur) 4, Palampur (dist Kangra) 3, Paonta (dist Sirmaur) 3, Sundarnagar (dist Mandi) 3, Naina Davi (dist Bilaspur) 3, Baijnath (dist Kangra) 3, Baldwara (dist Mandi) 2
28-07-2024	Jogindarnagar (dist Mandi) 9, Kumarsain (dist Shimla) 9, Naina Davi (dist Bilaspur) 6, Bharwain (dist Una) 6, Tinder (dist Kullu) 6, Palampur (dist Kangra) 6, Narkanda Aws (dist Shimla) 5, Kataula (dist Mandi) 5, Sainj Aws (dist Kullu) 5, Baijnath (dist Kangra) 5, Theog (dist Shimla) 4, Rampur Bushar (dist Shimla) 4, Sarahan (dist Shimla) 4, Dharmsala (dist Kangra) 4, Nahan (dist Sirmaur) 4
29-07-2024	Ghamroor (dist Kangra) 10, Shimla Aero (dist Shimla) 6, Nagrota Surian (dist Kangra) 6, Sunibhajji (dist Shimla) 6, Theog (dist Shimla) 6, Tissa (dist Chamba) 6, Chuari (dist Chamba) 6, Dharmshala Aws (dist Kangra) 6, Nadaun (dist Hamirpur) 6, Hmo Shillaro (dist Shimla) 5, Jogindarnagar (dist Mandi) 5, Dharmsala (dist Kangra) 5, Dehra Gopipur (dist Kangra) 5, Jubbal (dist Shimla) 5, Bharwain (dist Una) 4, Kufri Aws (dist Shimla) 4, Paonta (dist Sirmaur) 4, Solan (dist Solan) 4, Nahan (dist Sirmaur) 4, Kumarsain (dist Shimla) 4, Guler (dist Kangra) 4, Rohru (dist Shimla) 4, Rajgarh (dist Sirmaur) 4
30-07-2024	Chuari (dist Chamba) 2, Palampur (dist Kangra) 2, Hamirpur (dist Hamirpur) 2, Nahan (dist Sirmaur) 2, Kangra Aero (dist Kangra) 2, Theog (dist Shimla) 2, Kasauli (dist Solan) 2, Sarkaghat (dist Mandi) 2, Naina Davi (dist Bilaspur) 2, Hmo Shillaro (dist Shimla) 2
31-07-2024	Una (dist Una) 6, Dharmsala (dist Kangra) 5, Manali (dist Kullu) 4, Tinder (dist Kullu) 4, Dharmshala Aws (dist Kangra) 3, Jogindarnagar (dist Mandi) 3, Kheri (dist Chamba) 2, Bharwain (dist Una) 2, Saloni (dist Chamba) 2, Palampur (dist Kangra) 2

Rainfall data for month of August 2024:

Precipitation activity in Himachal Pradesh in the month of August was weak to normal on many days with fourspells of fairly widespread to widespread precipitation activity of active intensity. State has received normal precipitation(243.6 mm) which is 73rd highest rainfall in the month of August for the period (1901-2024) whereas highest rainfall was received in the year 1927(542.4 mm).

Year	Precipitation	Departure
1927	542.4	111.2
2024	243.6	-5

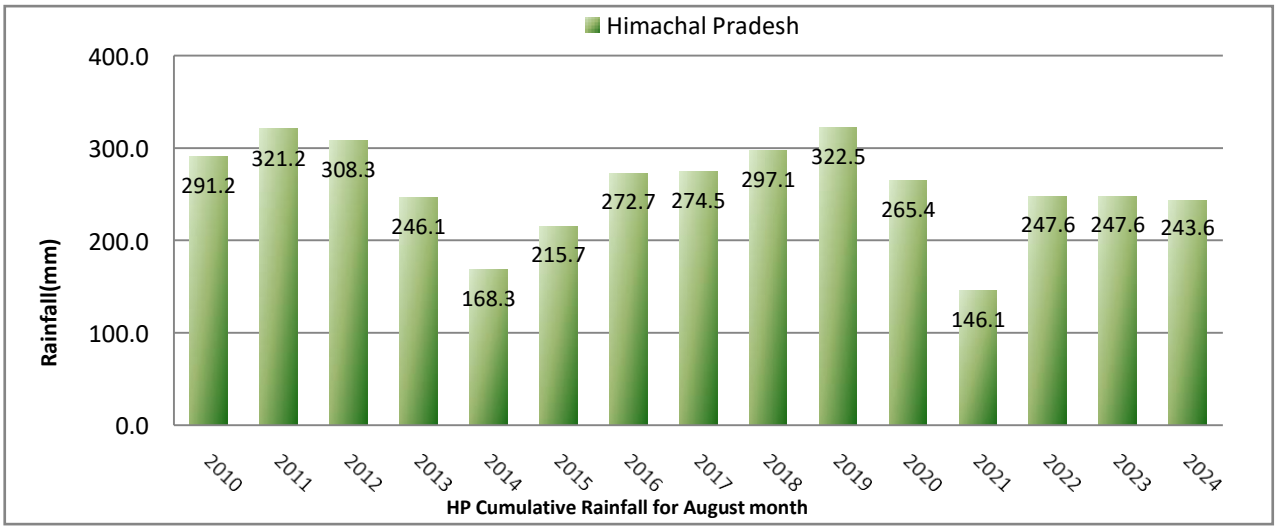
Monthly precipitation and departure:

The State received normal precipitation (-5%) with 243.6 mm actual rainfall against 256.8 mm normal rainfall in the August month i.e. from 01.08.2024 to 31.08.2024. District Kangra has received highest rainfall amount viz. 654.8 mm while district Shimla has received highest rainfall departure (53%) against normal rainfall. Districts Shimla, Sirmaur and Bilaspur received excess rainfall whereas Districts Mandi, Kangra, Solan, Chamba and Una received normal rainfall; Districts Hamirpur, Kullu and Kinnaur received deficient rainfall and District Lahaul-Spiti received large deficient rainfall.

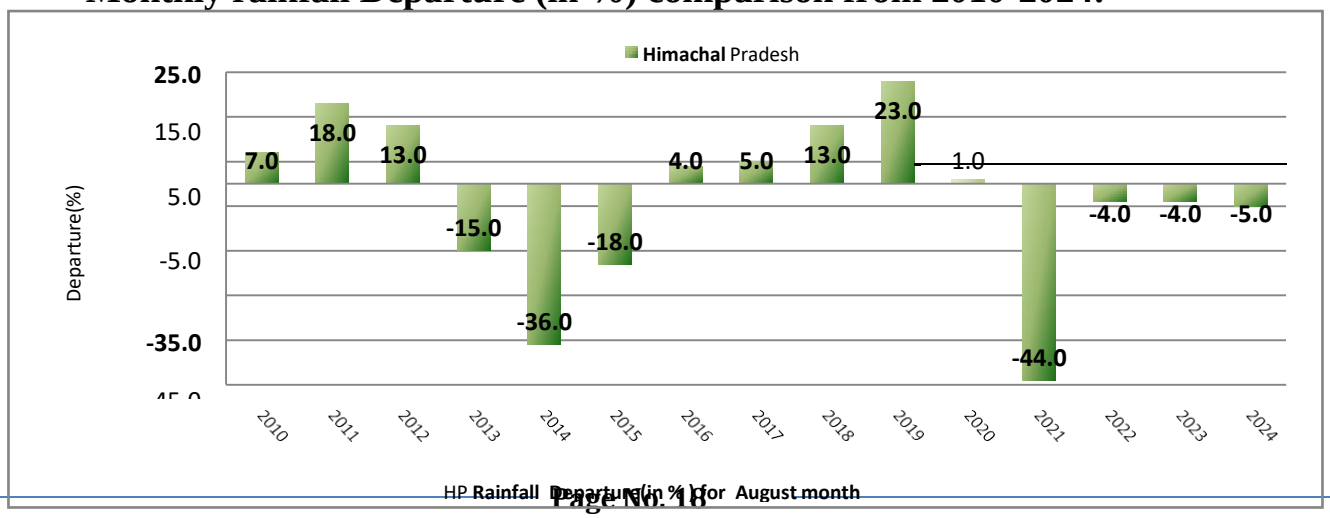
District wise monthly rainfall (in mm) and Departure (in %)

(01st August to 31st August) 2024			
DISTRICTS	**Actual (in mm)**	**Normal (in m)**	**Departure (in %)**
BILASPUR	404.8	316.8	28
CHAMBA	239.3	291.7	-18
HAMIRPUR	320.5	400.6	-20
KANGRA	654.8	631.5	4
KINNAUR	52.6	77.6	-32
KULLU	144.5	180.2	-20
LAHAUL & SPITI	43.4	117.6	-63
MANDI	421.6	395.3	7
SHIMLA	300	196.4	53
SIRMAUR	522.9	402.1	30
SOLAN	271.6	287.9	-6
UNA	305.3	372.2	-18
HP	243.6	256.8	-5

Monthly Actual Rainfall (in mm) comparison from 2010-2024:-



Monthly rainfall Departure (in %) comparison from 2010-2024:-



Monthly Rainfall distribution and Precipitation Activity for August month.

HIMACHAL PRADESH					
Date	Distribution	Activity	Date	Distribution	Activity
01-08-2024	WIDE SPREAD	ACTIVE	17-08-2024	FAIRLY WIDE SPREAD	ACTIVE
02-08-2024	ISOLATED	WEAK	18-08-2024	SCATTERED	WEAK
03-08-2024	WIDE SPREAD	NORMAL	19-08-2024	FAIRLY WIDE SPREAD	ACTIVE
04-08-2024	SCATTERED	WEAK	20-08-2024	FAIRLY WIDE SPREAD	NORMAL
05-08-2024	SCATTERED	WEAK	21-08-2024	SCATTERED	WEAK
06-08-2024	FAIRLY WIDE SPREAD	WEAK	22-08-2024	ISOLATED	WEAK
07-08-2024	WIDE SPREAD	NORMAL	23-08-2024	ISOLATED	WEAK
08-08-2024	FAIRLY WIDE SPREAD	NORMAL	24-08-2024	SCATTERED	WEAK
09-08-2024	FAIRLY WIDE SPREAD	NORMAL	25-08-2024	FAIRLY WIDE SPREAD	NORMAL
10-08-2024	FAIRLY WIDE SPREAD	NORMAL	26-08-2024	SCATTERED	WEAK
11-08-2024	WIDE SPREAD	ACTIVE	27-08-2024	WIDE SPREAD	ACTIVE
12-08-2024	WIDE SPREAD	ACTIVE	28-08-2024	WIDE SPREAD	NORMAL
13-08-2024	SCATTERED	WEAK	29-08-2024	FAIRLY WIDE SPREAD	NORMAL
14-08-2024	FAIRLY WIDE SPREAD	WEAK	30-08-2024	FAIRLY WIDE SPREAD	NORMAL
15-08-2024	FAIRLY WIDE SPREAD	ACTIVE	31-08-2024	SCATTERED	WEAK
16-08-2024	FAIRLY WIDE SPREAD	NORMAL			

Chief Amount of Rainfall (in cm) in August 2024-

Date	Station
01-08-2024	Palampur (dist Kangra) 21, Chuari (dist Chamba) 20, Dharmshala (dist Kangra) 18, Jogindarnagar (dist Mandi) 16, Kangra Aero (dist Kangra) 15, Sujanpur Tira (dist Hamirpur) 14, Baijnath (dist Kangra) 13,Paonta (dist Sirmaur) 12, Nadaun (dist Hamirpur) 10
02-08-2024	Kasol (dist Kullu) 3, Seo Bagh (dist Kullu) 2
03-08-2024	Jogindarnagar (dist Mandi) 9, Gohar (dist Mandi) 8, Shillaro (dist Shimla) 8, Baijnath (dist Kangra) 7,Paonta (dist Sirmaur) 7, Palampur (dist Kangra) 6, Dharmshala (dist Kangra) 6
04-08-2024	Aghar (dist Hamirpur) 4, Bhoranj (dist Hamirpur) 3, Bangana (dist Una) 2, Berthin Agro (dist Bilaspur) 2, Mehre (barsar) (dist Hamirpur) 2, Barthin (dist Bilaspur) 2
05-08-2024	Aghar (dist Hamirpur) 4, Jogindarnagar (dist Mandi) 4, Nadaun (dist Hamirpur) 4, Bhoranj (dist Hamirpur) 4, Dehra Gopipur (dist Kangra) 3, Hamirpur (dist Hamirpur) 3, Palampur (dist Kangra) 3,Nahan (dist Sirmaur) 3
06-08-2024	Bharwain (dist Una) 7, Jogindarnagar (dist Mandi) 5, Gohar (dist Mandi) 5, Una (dist Una) 4, Amb (dist Una) 4, Bilaspur Aws (dist Bilaspur) 3, Bijahi (dist Mandi) 3, Bilaspur Sadar (dist Bilaspur) 3, Kumarsain (dist Shimla) 2, Baldwara (dist Mandi) 2, Janjehli (dist Mandi) 2, Chuari (dist Chamba) 2, Karsog (dist Mandi) 2
07-08-2024	Jogindarnagar (dist Mandi) 13, Paonta (dist Sirmaur) 12, Karsog (dist Mandi) 6, Nahan (dist Sirmaur) 6
08-08-2024	Shillaro (dist Shimla) 9, Ghumarwin (dist Bilaspur) 8, Bijahi (dist Mandi) 8, Sundarnagar (dist Mandi) 6, Mandi (dist Mandi) 6, Chaupal (dist Shimla) 6, Gohar (dist Mandi) 6

09-08-2024	Jogindarnagar (dist Mandi) 16, Dharmshala (dist Kangra) 11, Kataula (dist Mandi) 11, Bharari (dist Hamirpur) 10, Kandaghat (dist Solan) 8, Palampur (dist Kangra) 8, Pandoh (dist Mandi) 8, Baijnath (dist Kangra) 7, Kufri Aws (dist Shimla) 7, Shimla (dist Shimla) 6, Bhoranj (dist Hamirpur) 6
10-08-2024	Nahan (dist Sirmaur) 17, Jatton Barrage (dist Sirmaur) 11, Nagrota Surian (dist Kangra) 9, Baldwara (dist Mandi) 7, Renuka / Dadhau (dist Sirmaur) 6
11-08-2024	Nahan (dist Sirmaur) 20, Renuka / Dadhau (dist Sirmaur) 19, Una Rampur Aws (dist Una) 16, Naina Davi(dist Bilaspur) 14, Sangraha (dist Sirmaur) 14, Una (dist Una) 13, Paonta (dist Sirmaur) 11, Kangra Aero (dist Kangra) 9, Palampur (dist Kangra) 8, Amb (dist Una) 8, Ghumarwin (dist Bilaspur) 8, Jatton Barrage(dist Sirmaur) 8, Dehra Gopipur (dist Kangra) 7, Ghamroor (dist Kangra) 7, Pachhad (dist Sirmaur) 7
2-08-2024	Kasauli (dist Solan) 9, Una (dist Una) 9, Naina Davi (dist Bilaspur) 8, Jatton Barrage (dist Sirmaur) 7, Pachhad (dist Sirmaur) 7, Nadaun (dist Hamirpur) 7, Renuka / Dadhau (dist Sirmaur) 7, Paonta (dist Sirmaur) 6, Sujanpur Tira (dist Hamirpur) 6, Sangraha (dist Sirmaur) 6, R L Bbmb (dist Bilaspur) 6, Rajgarh (dist Sirmaur) 6
13-08-2024	Naina Davi (dist Bilaspur) 10, R L Bbmb (dist Bilaspur) 3, Dharmshala (dist Kangra) 3
14-08-2024	Dharmshala (dist Kangra) 2, Rampur Bushar (dist Shimla) 1, Hmo Kasol (dist Kullu) 1, Chamba (dist Chamba) 1, Tissa (dist Chamba) 1, Kheri (dist Chamba) 1, Narkanda (dist Shimla) 1
15-08-2024	Kangra Aero (dist Kangra) 16, Dharmshala (dist Kangra) 15, Palampur (dist Kangra) 14, Nahan (distSirmaur) 12, Baijnath (dist Kangra) 9, Naina Davi (dist Bilaspur) 8, Dehra Gopipur (dist Kangra) 7
16-08-2024	Dalhousie (dist Chamba) 6, Baijnath (dist Kangra) 6, Palampur (dist Kangra) 6, Kandaghat (dist Solan) 4, Ghamroor (dist Kangra) 4
17-08-2024	Naina Davi (dist Bilaspur) 11, Palampur (dist Kangra) 7, Una (dist Una) 7, Gohar (dist Mandi) 7, Hamirpur (dist Hamirpur) 6
18-08-2024	Khadrala (dist Shimla) 3, Chuari (dist Chamba) 3, Jatton Barrage (dist Sirmaur) 2, Sujanpur Tira (dist Hamirpur) 2, Shillaro (dist Shimla) 2, Nadaun (dist Hamirpur) 2, Pandoh (dist Mandi) 2, Bharmaur (distChamba) 2, Bijahi (dist Mandi) 2
19-08-2024	Naina Davi (dist Bilaspur) 14, Baijnath (dist Kangra) 12, Guler (dist Kangra) 8, Bilaspur Sadar (dist Bilaspur) 6, Jogindarnagar (dist Mandi) 6, Bharari (dist Hamirpur) 5, Wangtoo (dist Kinnaur) 5, Palampur (dist Kangra) 5, Kataula (dist Mandi) 5, Kangra Aero (dist Kangra) 4, Dharmshala (dist Kangra) 4, Chuari (dist Chamba) 4, Barthin (dist Bilaspur) 4
20-08-2024	Baijnath (dist Kangra) 11, Mandi (dist Mandi) 10, Nagrota Surian (dist Kangra) 8, Naina Davi (dist Bilaspur) 7, Aghar (dist Hamirpur) 5, Seo Bagh (dist Kullu) 5, Sundarnagar (dist Mandi) 5, Kangra Aero (dist Kangra) 5
21-08-2024	Palampur (dist Kangra) 6, Naina Davi (dist Bilaspur) 3, Barthin (dist Bilaspur) 2, Dharmshala (dist Kangra) 2
22-08-2024	Palampur (dist Kangra) 1, Dharmshala (dist Kangra) 1, Jogindarnagar (dist Mandi) 1
23-08-2024	Dharmshala (dist Kangra) 1, Baijnath (dist Kangra) 1, Jogindarnagar (dist Mandi) 1
24-08-2024	Palampur (dist Kangra) 3, Chuari (dist Chamba) 2, Una (dist Una) 2
25-08-2024	Solan (dist Solan) 4, Dharmshala (dist Kangra) 3, Aghar (dist Hamirpur) 3, Kasauli (dist Solan) 3, PtoKoksar (dist Lahaul & Spiti) 3, R L Bbmb (dist Bilaspur) 2, Kataula (dist Mandi) 2, Barthin (dist Bilaspur) 2, Baldwara (dist Mandi) 2, Una (dist Una) 2
26-08-2024	Janjehli (dist Mandi) 3, Rajgarh (dist Sirmaur) 3, Kotkhai (dist Shimla) 2, Bharmaur (dist Chamba) 2

27-08-2024	Kahu (dist Bilaspur) 8, Shimla Aero (dist Shimla) 8, Kandaghat (dist Solan) 8, Sangraha (dist Sirmaur) 8,Kufri (dist Shimla) 7, Arki (dist Solan) 7, Dharampur (dist Solan) 7, Shimla (dist Shimla) 6, Theog (dist Shimla) 6, Rajgarh (dist Sirmaur) 6, Pachhad (dist Sirmaur) 6
28-08-2024	Chaupal (dist Shimla) 5, Renuka / Dadhau (dist Sirmaur) 5, Arki (dist Solan) 4, Manali (dist Kullu) 4,Narkanda Aws (dist Shimla) 4, Sunibhajji (dist Shimla) 4, Nalagarh (dist Solan) 4, Kufri (dist Shimla) 4, Shimla Aero (dist Shimla) 4, Khadrala (dist Shimla) 4, Shimla (dist Shimla) 4, Shillaro (dist Shimla) 3,Kumarsain (dist Shimla) 3, Rajgarh (dist Sirmaur) 3, Bijahi (dist Mandi) 3
29-08-2024	Kumarsain (dist Shimla) 5, Chaupal (dist Shimla) 4, Renuka / Dadhau (dist Sirmaur) 4, Wangtoo (dist Kinnaur) 3, Sangraha (dist Sirmaur) 3, Rohru (dist Shimla) 3
30-08-2024	Kheri (dist Chamba) 8, Naina Davi (dist Bilaspur) 7, Ghumarwin (dist Bilaspur) 3, Bharari (dist Hamirpur)2, Bilaspur Sadar (dist Bilaspur) 2
31-08-2024	Sundarnagar (dist Mandi) 5, Shillaro (dist Shimla) 4, Kumarsain (dist Shimla) 3, Shimla Aero (dist Shimla) 2, Manali (dist Kullu) 2

Major Landslides which took place during this period

A large number of landslides were recorded because of heavy rainfall, cloudburst and flash floods during this season. District wise detail is as under:-

Landslide Incidents		
Sr. No	**Name of District**	**Total**
1.	Chamba	06
2.	Kinnaur	06
3.	Kullu	02
4.	Lahul&Spiti	06
5.	Mandi	10
6.	Shimla	10
7.	Solan	05
Total		**46**

Source: State Emergency Operation Centre, Himachal Pradesh

In addition to this large number of medium and small landslides also took place in various parts of the State which resulted in huge loss to public and private properties.

Cloudbrust recorded during this period:

During this monsoon season a number of cloudbursts were recorded. A total 12 numbers of Cloudburst were recorded which are as under:-

Cloudburst Incidents		
Sr. No	**Name of District**	**Total**
1.	Kinnaur	01
2.	Kullu	05
3.	Lahul&Spiti	04
4.	Mandi	01
5.	Shimla	01
Total		**12**

Source: State Emergency Operation Centre

Flash Floods recorded during this period:

During this monsoon season several flash floods were recorded. A total of 39 numbers of flash flood incidents were recorded which are as under: -

Flash Flood Incidents		
Sr. No	**Name of District**	**Total**
1.	Chamba	01
2.	Hamirpur	01
3.	Kinnaur	05
4.	Kullu	03
5.	Lahul&Spiti	18
6.	Shimla	02
7.	Sirmaur	02
8.	Solan	01
9.	Una	06
Total		**39**

Source: State Emergency Operation Centre

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Chapter –3

Preparatory Measures

Preparatory measures taken to prevent/reduce losses from disasters during Monsoon Period:

Monsoon season brings a lot of challenges to the state and causes wide spread damages and losses. In order to reduce loss of human life and property, the State was well prepared to deal with the situation and had taken a lot of measures. Some of the steps taken have been elaborated in the succeeding paras.

State Wide Mega Mock Drill:

The HP State Disaster Management Authority successful organized mega mock drill on Flood Landslide and GLOFs conducted on 14.06.2024. The collaborative efforts and coordination displayed during the drill reflect a significant step towards unified disaster preparedness and response. By involving the National Disaster Management Authority (NDMA), various stakeholder departments, and response agencies, the exercise demonstrated the importance of working together during crises.

The simulation of 103 different sites across the state in the mock drill provided a comprehensive and realistic approach to testing disaster response capabilities. This thorough assessment helped identify areas of improvement and strengths in the disaster management plan, contributing to more effective preparedness in the future.

Some of the key aspects that were assessed and highlighted during the mock drill include:

1. Effective Coordination and Collaboration: The success of the mock drill was attributed to the seamless coordination and collaboration among all participating agencies and stakeholders. This shows that working together is essential in disaster management scenarios.
2. Importance of Preparedness: The mock drill underscored the significance of regular preparedness initiatives. Being well-prepared and conducting such drills can enhance the response capacity during actual disasters.

3. Communication Systems: The drill emphasized the need for robust communication systems that can function effectively during a crisis. Efficient communication is crucial for coordinating responses and disseminating information.
4. Public Awareness and Participation: The drill stressed the importance of educating the public about disaster preparedness, evacuation procedures, and safety measures. Public participation and awareness can significantly improve overall response and safety.
5. Resource Allocation and Management: The exercise exposed the importance of proper resource allocation and management. Adequate deployment of personnel, equipment, and relief materials can have a significant impact on response effectiveness and minimize casualties and damages.
6. Multi-Agency Response: The mock drill highlighted the necessity of integrating efforts from various departments, including police, fire services, medical teams, and NGOs, to optimize disaster management strategies. A coordinated multi-agency response is vital for handling large-scale disasters effectively.
7. Evacuation Procedures: The mock drill involved government offices and schools conducting evacuation drills in their respective premises. This helped identify areas for improvement, such as identifying safe evacuation routes and addressing potential bottlenecks to ensure swift and safe evacuations.

   Overall, the successful mock drill has proven to be an essential learning experience and a valuable tool for enhancing the state's disaster preparedness and response capabilities. Implementing the lessons learned from the drill will undoubtedly strengthen the disaster management plan and improve overall resilience in the face of future emergencies

Monsoon Preparedness Review Meeting:

In order to review monsoon preparedness, a meeting was held with State and Central agencies and all the Deputy Commissioners on 13 June, 2024. Necessary directions were issued to all stakeholders to ensure adequate measures for relief, response, search and rescue and restoration of essential services during the monsoon.

- As a preparatory measure the NDRF was prepositioned at Mandi, Nurpur (Kangra), Kullu and Rampur.
- Three Life buoys were stationed at Bilaspur (Govindsagar lake), Kangra (Pong dam) Mandi (Tattapani) for Search and Rescue. One Drone was provided to DEOC Mandi for aerial survey.

Review Meeting with Large Dam Authorities:

A special meeting was held on 1st May, 2023 by the State Disaster Management Authority with the department of energy and authorities of 24 hydro power projects to review the status of preparedness of impending Monsoon 2023 and implementation of guidelines of the Central Water Commission.

Communication Mock Drill:

A communication mock drill was conducted under the chairmanship of Sh. D.C. Rana, Director-cum-Ex Officio Special Secretary (Revenue-DM), at the State Emergency Operation Centre (SEOC), HP Secretariat, Shimla, on 18th June 2024 at 11:30 AM. The SDMA organized a video conference with all DDMAs and relevant departments, during

which officials from M/s Station Satcom provided a presentation on I-SAT functions and addressed queries from participants. During the drill, Flyway VSAT with video conferencing capabilities installed by the CTS Police Department was tested. The functionality of V-SAT and I-SAT systems was also reviewed, followed by test calls conducted by all departmental and SEOC representatives. The details of the calls made during the exercise are enclosed as annexures for further reference.

Following the tests, M/s Station Satcom was instructed to provide a list of Dos and Don'ts for using I-SAT phones and to address technical faults, such as the non-functional I-SAT displays in Lahaul & Spiti. SDO(C) Barmour was directed to resolve antenna issues and advised that I-SAT phones at police stations be stationed at the Munshi's desk for continuous functionality.

Further, the Police Department was asked to submit a proposal for procuring I-SAT antennas and prepare a report on the interference of 5G with V-SAT signals. A stock check of the ISAT phones provided to HP-SDRF revealed non-functional devices, prompting the chair to direct SP-SDRF to activate them before the 2024 monsoon season. All SDMs were advised to keep I-SAT docking stations with their PA/Steno during office hours and maintain I-SATs as per the SOP issued in June 2019.

Review of Mock Drill conducted by HPSDMA

Review Meeting Post Disaster:

Hon’ble Chief Minister Thakur Sukhvinder Singh Sukhu convened an emergency meeting of senior officers of the state government to review the situation arisen due to five cloud bursts and heavy rains in different parts of the state. Three cloud bursts struck the Kullu district and one each in Mandi and Shimla districts.

The most affected site was Samej area of Jhakri in Shimla district where residential area had also been affected due to cloud burst and around 36 persons were missing whereas one road had also been blocked. In Mandi district, the cloud burst occurred near Tikkan Thalukot village of Padhar tehsil where about seven persons were reported missing and two bodies had been retrieved while three houses were also damaged.

In Kullu district, the cloud burst hit village Jaon in Nirmand Tehsil where seven persons were missing and nine houses were washed away besides causing damage to two bridges. The incidents of cloud bursts also took place in the upper reaches resulting in a rise in water level in Pin Parvati river and one bus was washed away. Another incident took place at Malana Sub Tehsil Jari of district Kullu causing damage to Malana bridge and nine persons were stranded along the Beas river near Malana.

In view of this, five transport drones are proposed to enable the police to carry out transportation activities in the affected areas. The Satellite phones are also being provided at SDM level so that the communication system could be strengthened. 50 generators are proposed to be given to Police Stations and Police Posts to ensure 24×7 power back up.

- The Chairman of the State Disaster Management Authority (SDMA) has established a cabinet subcommittee focused on strengthening disaster management in the state.

Search and Rescue:

- QRTs were constituted for search and rescue operation in the districts.

- The State machinery was fully activated, and relief and restoration work was carried out round the clock. The situation of the three districts was monitored constantly.
- Search and Rescue (SAR) operations were executed promptly.

Funds:

- State has released funds under SDRF/NDRF to Deputy Commissioners to the tune of Rs. 210.31Crore under different heads for relief and restoration measures during the current Financial Year.
- State has released funds under SDRF/NDRF to Departments to the tune of Rs. 132.46 Crore under different heads for relief and restoration measures during the current Financial Year.

IEC and Early Warning

- Early warnings with CAP were disseminated regularly as and when received from IMD and CWC.
- State has set up 30 Nos. of Landslide sensors for Sirmour, Mandi, Kangra and Kinnuar District for Landslide Monitoring.
- Do's and Don'ts were broadcasted through AIR, TV, Print and Other electronic media on regular intervals.

Losses and Damages Monitoring

- The DEOCs were monitoring and reporting incidents/losses and damages regularly and the State EOC generated cumulative loss reports on daily basis.
- With the assistance of the Department of Energy, HPSDMA has established a comprehensive dam safety control system to monitor the water levels of 23 dams. This initiative aims to enhance safety measures, ensure efficient water management, and mitigate potential risks associated with dam operations. Regular monitoring will help in making informed decisions and maintaining the integrity of these critical infrastructures.

Steps taken by the government for the Monsoon of 2024

- 73 more I-sats (satellite phones) are being added for emergency communication network. In this regard, an MoU was signed on 29 June 2024 with Bharat Sanchar Nigam Limited for operation of I-SAT phones for five years at a total cost of Rs 6.41 crore.

- Each of the 23 dam authorities has been directed to deploy 2 I-sat (satellite) phones per project, one at the dam site and one at the power house. Till date, 21 I-SAT phones have already been installed by the concerned dam authorities.
- 9 I-SATs (satellite phones) have been provided to State Disaster Response Force (SDRF). For this, an amount of Rs 35 lakh was made available to SDRF.
- 11 I-SATs (satellite phones) of the National Disaster Response Force have also been mapped for emergency communication and coordination.
- ITBP's 14th I-SAT has been mapped which is being used to disseminate information during emergency situations.
- An amount of Rs. 65 lakh has been sanctioned to the Technical Services Branch of the Police Department for purchase of Docking Station (I-SAT antenna for indoor use of I-SAT phones) to improve emergency communication.
- A sum of Rs 15 lakh has been sanctioned to the Police Department for purchase of 30 C-Band Pass Filters to improve the smooth functioning of V-SAT running in 5G network to improve emergency communication.
- After facing a shortage of boats in the lower part of Pong Dam during Kangra floods, the National Disaster Response Force has purchased 12 more boats, taking the total number of boats available to 33.
- The State Emergency Operation Center located in the Himachal Pradesh Secretariat has been shifted to an Integrated Command Control Center with better facilities for disaster management with the help of Call Management System(CMS).
- A team of 14 personnel from the Department of Environment (DoE) has been deployed at the State Emergency Operation Center to monitor the water level of the dam and implementation of the rule curve (adjusts excess discharge). This team is monitoring the management of dam operations round the clock.
- C-DAC, Pune has been selected as the lead technical agency to assess the sensitive glacial lakes in the state. In this regard, four glacial lakes have been flagged as potential risks, with site visits planned for August and September. So far, the Geepang Gath expedition and Baspadhkashang expedition has been completed. The Mantalai expedition has been rescheduled in september in view of the ongoing monsoon.
- Along with setting up three data centers at State Emergency Control Centre, District Emergency Control Center Hamirpur and Meteorological Centre, 48 Automatic

Meteorological Stations/Rain Gauge/Snowometer units are proposed in those blocks where meteorological observatories are not available. MOU has been signed with IMD for installation of these Stations. Keeping in mind the previous experience of Jal Shakti Department, the department has appointed Jal Shakti as the nodal agency for the implementation of the project.

- To improve emergency response, and reduce response time, the department has mapped 356 agencies dealing with emergencies that can be designated response centers located at various locations in the state. Each response center will be expected to play its own role and responsibility in dealing with such situations. In this regard, the department is in the process of setting up an equipment bank at all 356 locations. The bank will have basic rescue/life saving equipment to handle emergency situations.
- To address the vulnerabilities related to landslides and land subsidence during the last monsoon season, the Department has identified various experts and research institutes such as Central Building Research Institute - Roorkee, Wadia Institute of Himalayan Geology, Central University of Himachal Pradesh, Indian Institute of Technology - Mandi, Himachal Pradesh University - Shimla and National Institute of Technology, Hamirpur for preliminary studies.The preliminary study covers 109 sites with financial sanction of Rs. 36,56,800/-.
- In collaboration with the Geological Survey of India, landslide early warning is being conducted for Shimla and Kinnaur districts of the state. The system developed by the Geological Survey of India is designed to predict the probability of landslides based on rainfall data. An MoU has been signed on December 27, 2023 for the implementation of the project. The pilot project has been started in Shimla and Kinnaur districts from 15 June 2024.
- The National Center for Seismology, Ministry of Earth Sciences and State Disaster Management Authorities propose to establish an earthquake early warning system on a pilot basis. In this regard, the National Center for Seismology has undertaken field visits to Chamba, Kangra and Una districts for installation of 50 instruments (Strong Motion Array) within a year. In addition, National Center for Seismology will carry out such field studies for installation of instruments in the rest of the district.

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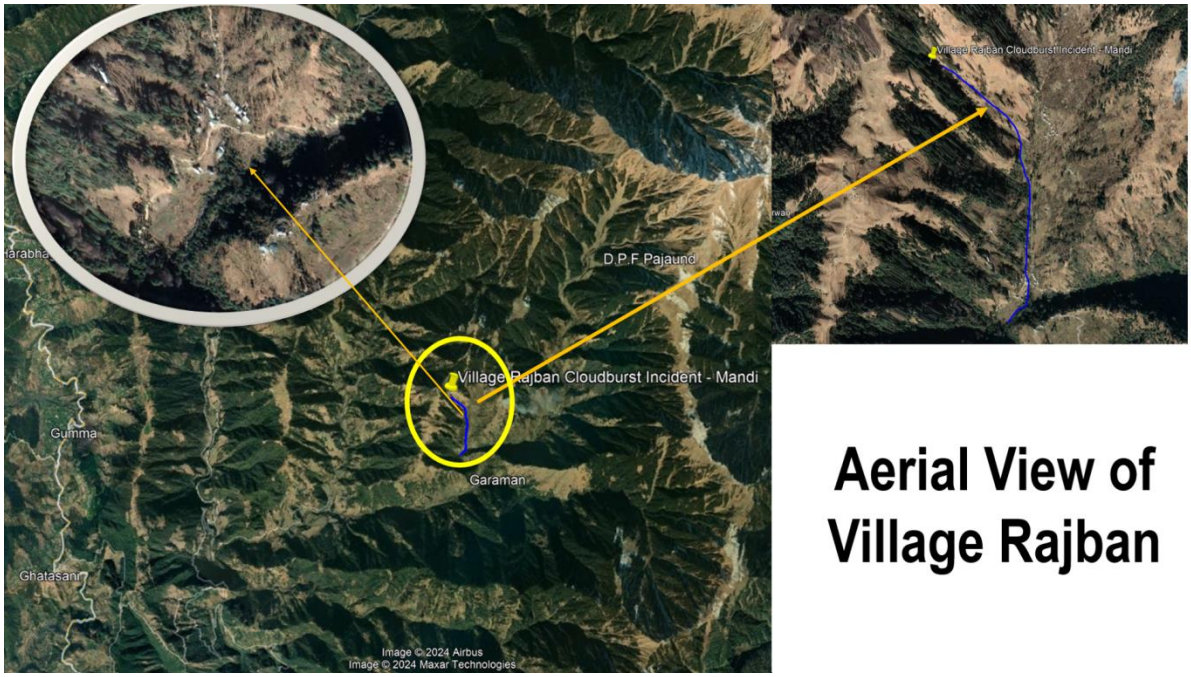
Chapter – 4

Brief Summary of Damages and Losses

Major Disaster Events that occurred in State of Himachal Pradesh

1.1 District Mandi

Date – 01.08.2024 Time – Approximately 11:00 PM Location – Rajvan Sub-Tehsil-Tikkan Sub-Division Padhar



The incident was reported by Tehsildar Padhar to the administration around midnight that a cloudburst had occurred in Rajvan Sub-Tehsil-Tikkan Sub-division Padhar at 11:47 PM and the information was transmitted immediately to the Fire Department, Police Control Room, SDRF. The SDRF, NDRF, Police, and Tehsildar Padhar rushed to the spot immediately. The Deputy Commissioner Mandi moved to the incident site to oversee the search and rescue operations. A medical team was also moved to the incident site for treatment and first aid. With the help of Police Personnel drone surveillance was conducted to assist in the operation.

Loss of Life and Property:

- 4 houses and one cowshed were damaged
- 10 persons were missing, out of which bodies of 9 have been recovered.
- 1 person is still missing.
- 2 animals have been perished.
- Connectivity to the area has been severely damaged.
- Total loss reported is Rs. 8.47 crore

District Kullu

1. Subdivision Nirmand
   a. Incident 1: Cloudburst at Shinghad,1st August 2024, approx. 01:05 am Connectivity at Baghipul has been cut off. Total 8 persons were missing. 2 bodies have been recovered. 8-9 houses have been washed away.
   b. Incident 2: Cloudburst at Samej,1st August 2024, approx. 03:30 am, 3 persons are missing. 3-4 houses have been washed away.

   Bridges have been lost. Connectivity to the areas has been affected. Essential services such as electricity and water supply network has been washed away.

Field Observations at Incident 1:

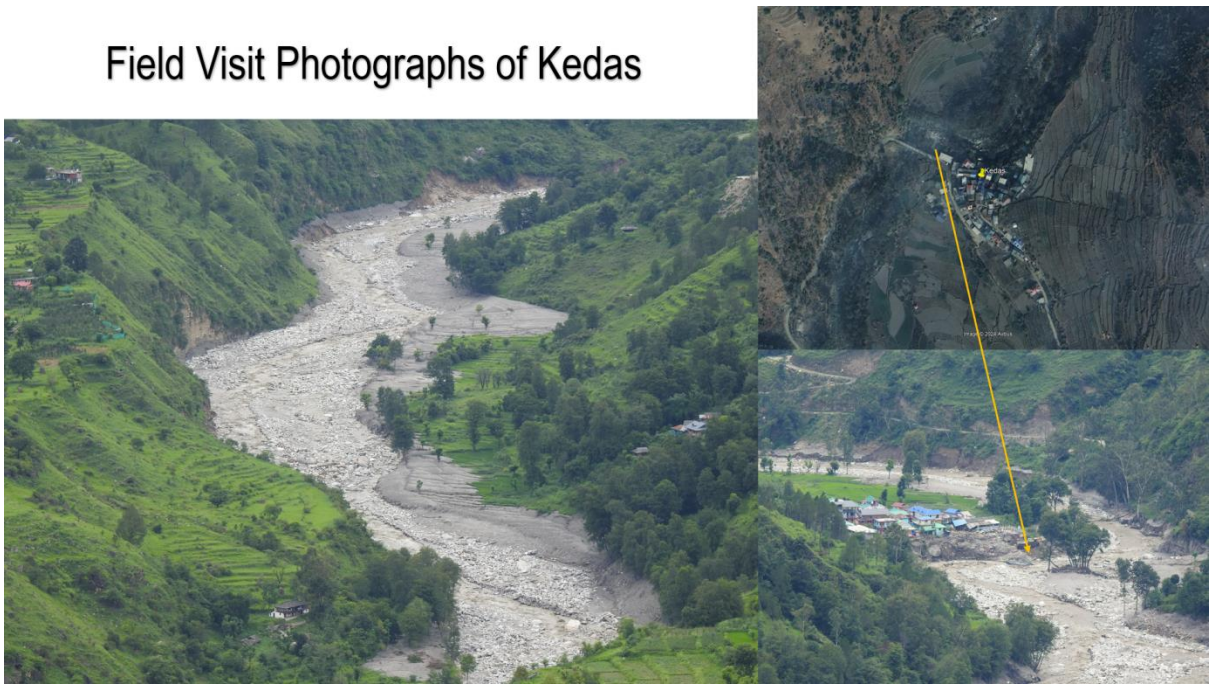
After the current disaster of 2024, a field visit was planned to the affected aeras of Kullu and Shimla district mainly at Samej and Bagipul on 6th& 7thAugust 2024. Based on the field visit, the following observations were made in respect of Bagipul: -

- Bagipul is mainly located on the downstream of Rampur and is along the KurpanKhad that joins the Satluj River on its right bank near village Dropa. Bagipul is coated at 1548 Mts. Above M.S.L and bounded by 31^0 31' 13.69'' N latitude and 77^0 33' 33.50'East longitude.
- Bagipul was also affected due to heavy floods on the intervening night of 31st July and Ist August 2024 midnight due to very heavy precipitation resulting flash floods in the areas that initiated from the upper catchment of the Kurpankhad.
- The built up area at the Bagipul where the devastation occurred is mainly situated on the flood plains formed along the Kurpankhad where the khad flows through a wide course.
- The discharge contributions were mainly from the left bank nala carrying very heavy load roughly of about 10-15 mt high damaged the infrastructure mainly the houses and bridge at Bagipul.
- The predominant damage was mainly on the right bank of the Kurpankhad at Bagipul where the infrastructure was mainly on the old flood plains of the Kurpankhad.

Summary of Damage and Losses

- Total 13 persons were missing, out of which 4 bodies have been recovered and 2 identified.
- More than 50 persons have been successfully evacuated.
- 60 houses and 18 cattle sheds have been damaged.
- 123 cattle have perished.
- 4 motorable bridges and 7 pedestrian bridges have been washed away severely affecting connectivity.
- 3 schools, 17 shops, and 12 vehicles have been washed away.

Field Visit Photographs of Bagipul



Tehsil Manali:-

A cloudburst incident had occurred in Paagal Naal near Anjani Mahadev, Tehsil Manali, District Kullu (Coordinates 32.31E, 77.17N).

MS03 Glacier Gallery Near BRO Café, Atal Tunnel

Around 12 mid night, cloud burst occurred in Anjani Mahadev area due to which water level in Sarehi Naala rose to a dangerous level. Huge boulders and debris from the Atal tunnel dumping site were flowing with the waters due to which the flow of the Naala

was changed and the course diverted towards the Palchan-Solang Naala road. Water entered the Kapil Mohan Beas Kund Hydro project and the house ofSh. Dhani Ram r/o Vill Palchan was completely washed away. One shop of Sh. Khoob Ram was partially damaged.

Palchan bridge

Damage incurred at Kapil Mohan Beas Kund Hydro power project

Damage to local residents

The water level in Naalas has receded to normal and no loss of life has been reported yet. Worthy DC Kullu visited the incident sites on 25.07.2024 along with all stakeholder departments.

Malana Village in Kullu District:

A cloudburst incident occurred above the higher peak of Malana Village. This resulted in a flash flood in Malana Khad, which feeds into the Parvati River. Due to the paraglacial zone's deep gorges, the Malana dam burst was similarly caused. While the upstream Phase 2 of Malana managed to open its gates in time, the failure to do so by the downstream Phase 1 project, located nearly 10 kilometres away, led to severe erosion of the soft sediment valley on its right end and a subsequent burst of water from the dam, though the main dam structure remained intact. Due to this nearly 200 people including tourists were stuck in village malana. Evacuation of these people was done by district administration and food ration was provided as the roads to the village were completely damaged.

Damage to Malana Stage-I and Stage-II Hydro Electric Project:

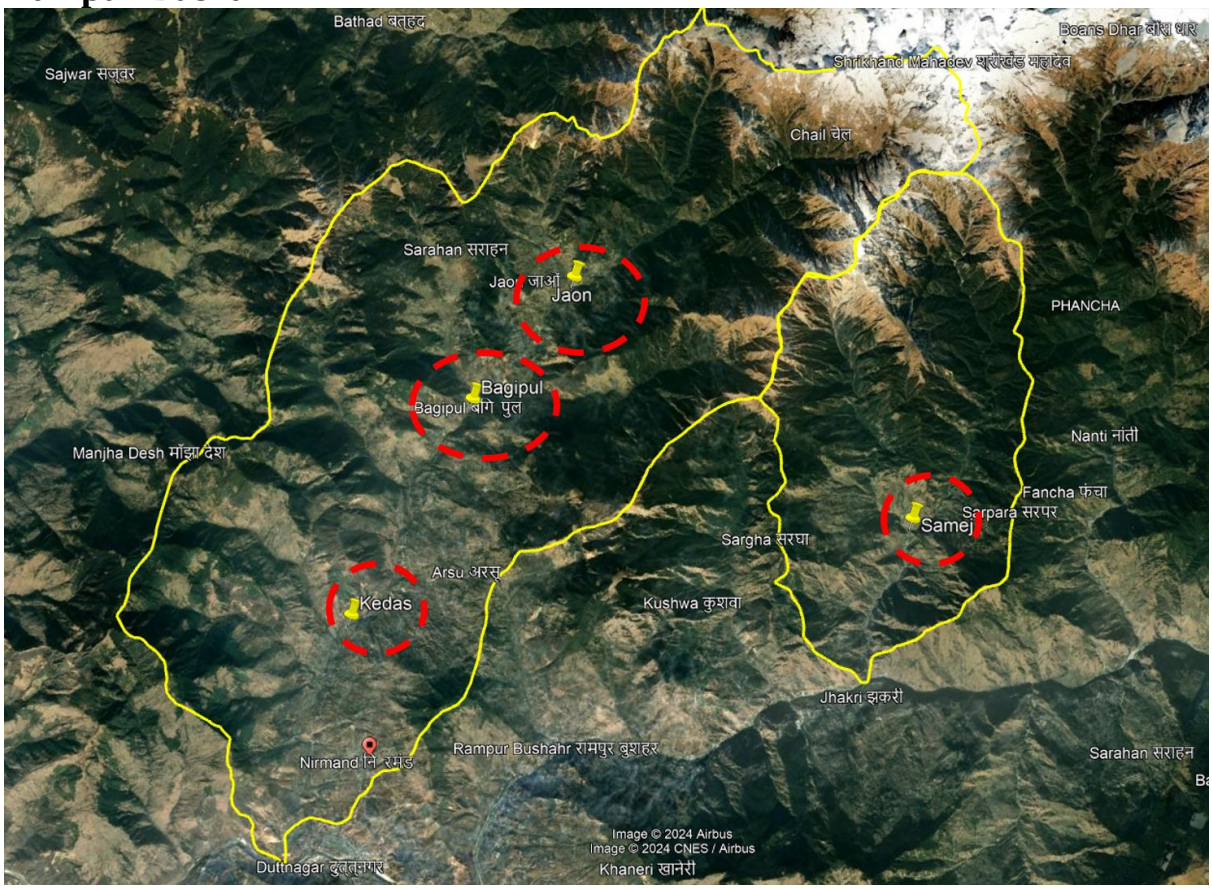
Malana-I:

Project Road at RD 6800 got completely washed out for a length of about 80 to 100 Mtrs Project Road at RD 8500 got completely washed out for a length of about 100 to 120 Mtrs The steel bridge and its abutments provided by MPCL (Malana - 1) near 8500 RD (down stream of reservoir) was also completely washed out. About 12 blocks of the Gravity Wall of reservoir near overflow structures have got settled and reservoir floor alongside has also completely damaged. Due to flash-flood and overflow, Barrage Control Room was damaged. Besides this, Intake Gates and HR Gates have also completely choked. Whole area including reservoir Desilting Chambers and Low Water Channel is filled with silt and muck. Channel for a length of app. 300 meters has been washed away. The water had overflown from the reservoir level resulting in scouring of the river DG Room with two numbers of DG sets got washed away There are damages to the Barrage Control Room, Operator Room Control Room approach is filled with stones and mud. Security Post has also washed out. 11 KV power supply at Barrage was completely disrupted with uprooting of

Malana-II:

Approach road between powerhouse and dam got damaged in the flood. Approach Bridge to Main access tunnel of powerhouse was washed away in the flood, led to no approach to powerhouse. 132 KV switchyard, its control room, 725 KV DG were washed away in the flood. Connecting bridge to Tail race tunnel cum cable tunnel was washed away in the flood. Main Admin building was washed away in the flood. Three tower Viz tower no: 01, 02 and 03 of 132 KV D/C transmission line were washed away in the flood. Flood Water back flows to the powerhouse via TRT, team inside the powerhouse confirmed that level went down after some time. 1 No. 30 Ton ropeway, 2 Nos 6 Ton Ropeways and 500 kG ropeway got damaged. Dam approach was damged at several places from the starting point of the project site to RD 4500.

District Shimla
DATE-1.08.2024TIME- Approximately3.30 AM, Samej Khad, Sub-Division: Rampur Bushahr



A cloudburst incident was reported to the Additional District Magistrate-cum-CEO-DDMA Shimla on 1077 (DEOC Shimla) around 3.30 AM at Samej Khad, Subdivision Rampur Bushar, District Shimla, H.P. Immediately the information was disseminated to District Magistrate –cum-Chairman, DDMA Shimla and Sub-Divisional Magistrate (Rampur Bushahr). Immediately DEOC started coordinating the field functionaries and got information from one of the worker of hydro Power Project ,Jhakri that around 12-15 persons are missing.

The District Magistrate, SP Shimla and SDM (Rampur Bushhar) rushed to the site to access the situation. As per the directions of District Magistrate, NDRF, Home Guard and Civil Defense 02nd BN & 03rd BN (46 personnels), SDRF (15 personnel's), Army, ITBP (25 personnel's), Police (36 personnel) CISF SJPNL along with volunteers were sent to the spot for rescue operations.

At 5:52 am the SDM reported that 10 people were shifted to nearby Shugga village. At 8:39 am it was reported that 36 people were missing and a total of 10 people were being evacuated. As of now,15 dead bodies are recovered and 18people are missing, and rescue operations are still going on.

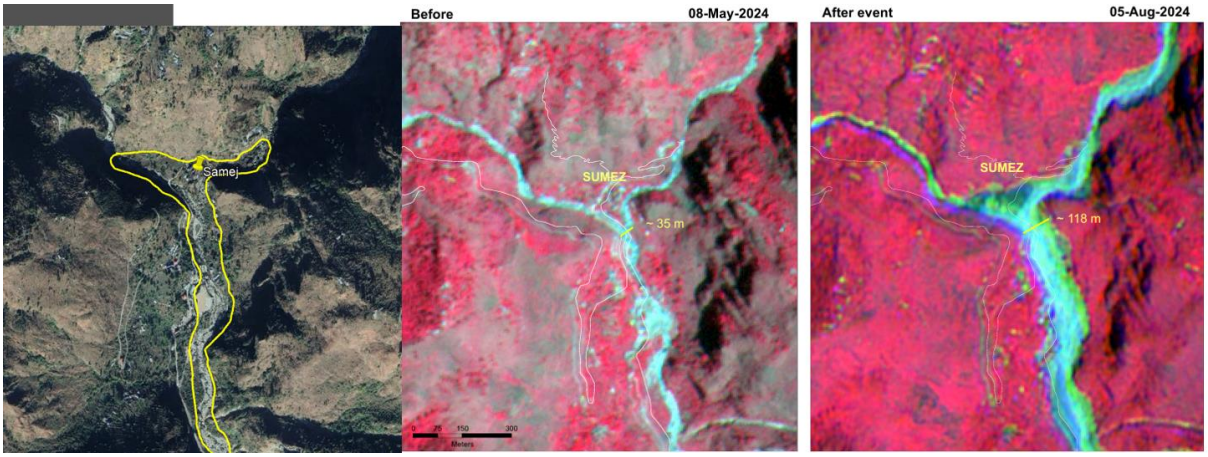


FiG.1: Pre and Post disaster Satellite data Analysis

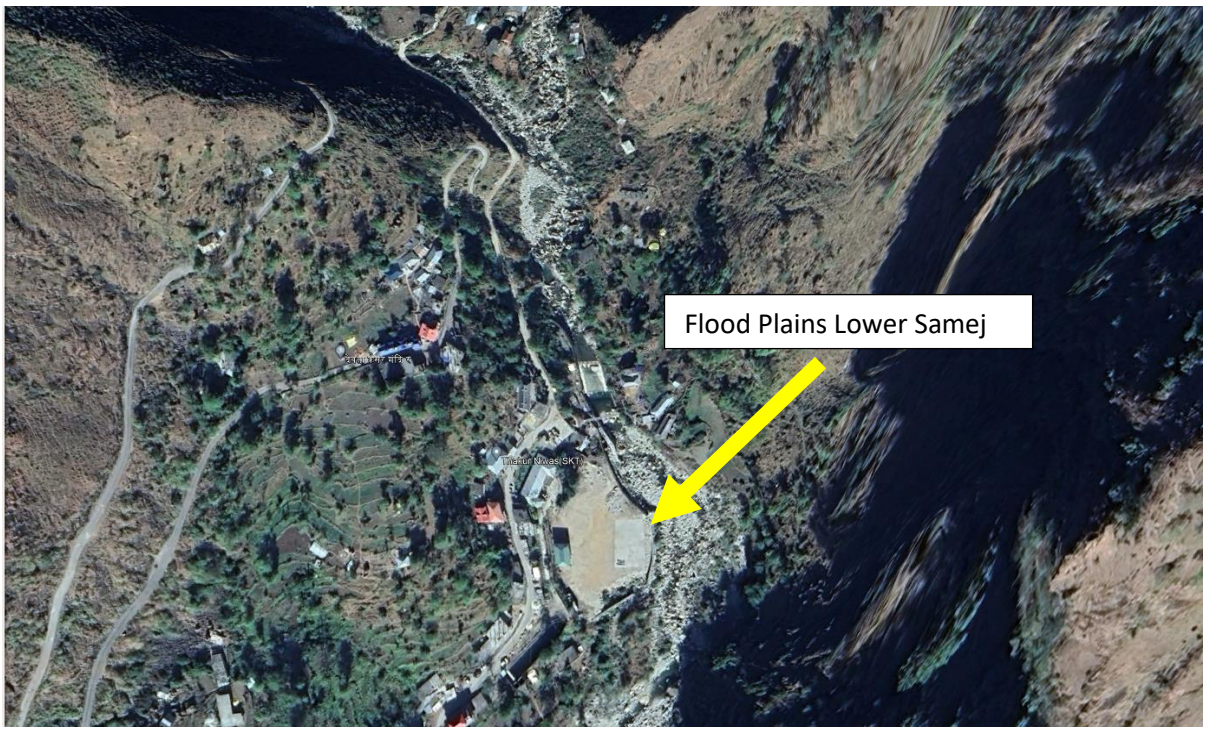
Field Observations at Samej village Rampur:

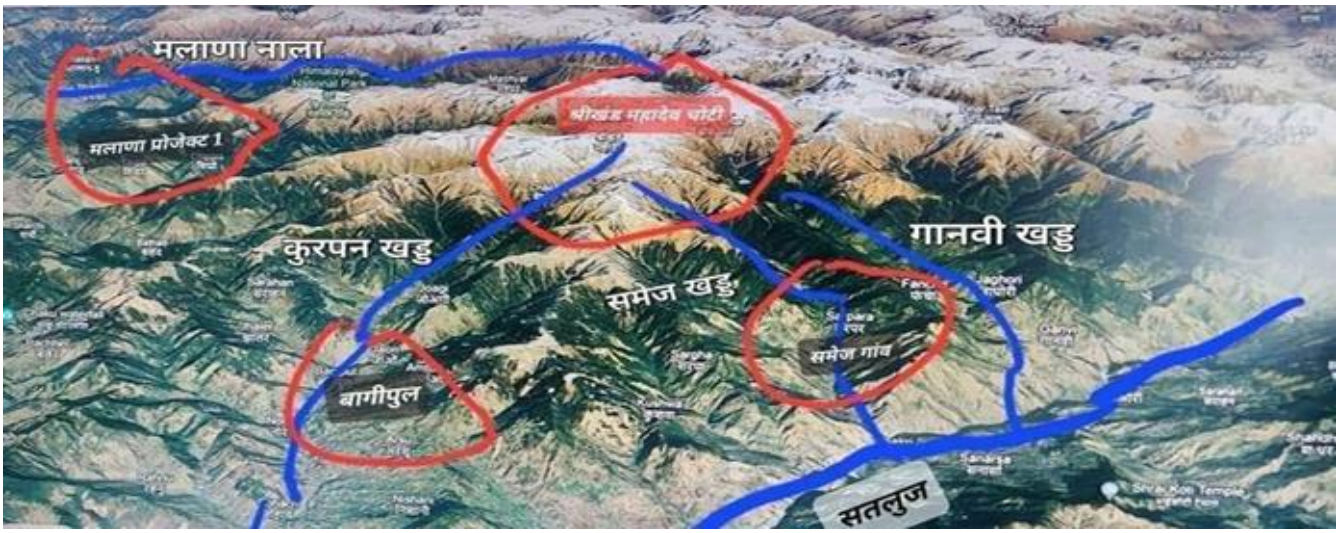
The second most affected site during current disaster visited was Samej village in Rampur Subdivision. The Samej village is located along the right bank of Satluj River which is approachable from Jhakri through a link road that connects the village which is about 15 Km from Jhakri. The village is located at an elevation of 1517Mts and at 31^0 32' 33.91'' N latitude and $77^0$41' 53.47''East longitude. Based on the field visit, the following observations were made: -

- The Samej village is located along a nala that flows through a deep gorge and is characterised by very high drainage density in the upper catchment.
- The village Samej is mainly spread in two parts i.e the old one is along the right bank of the Samej nala and new one is at about 100 mts upstream direction above the confluence of two streams which appears to be seasonal in nature.
- Geomorphologically the region is characterised by the older fluvial terraces having with an appox. height of 30-35 mts that appears to have been formed by virtue of the deposition of the material along the flood plains of the two nalas supporting the development of agriculture and built up mainly about 10-12 houses which have been

constructed post 2000. Besides this, the flood plains and the river terraces could be seen in the downstream aera along which a major part of the Samej village has been developed that too on the right bank.

- The damage occurred during the mid night was caused mainly due to very heavy discharge load from the left bank stream having very high-water column roughly around 30-35 mts. which is further evidenced by the traces of water that could be seen at very high level in the downstream area along the river course.
- The fluvial terrace was totally washed away bythe water flow eroding all the 10-12 houses which were constructed on this terrace and thereafter the damage had occurred in the downstream portion mainly on the right bank and further downstream till it joins the Satluj river on its right bank near Jhakri.
- Large scale destruction could be seen all along its course and has affected the infrastructure like power projects and agriculture on its way.





Damage to Samej Hydro Electric Project (HEP):

- Trench Weir including U/S & D/S raft completely washed away. Main intake gate alongwith civil structure washed away. Gravel gate alongwith civil structure washed away. D-tank alongwith flushing valve & trashrack washed away. Foot bridge over Sechi river washed away. TRC outfall protection completly washed away. Power house approach road alongwith bridge completly washed away. Water conductor system of Malova weir damaged.

Inferences: -

Based on the field observations made at two incidents sites i.e Bagipul and Samej, the following inferences could be made: -

- At Bagipul, the major destruction was due to very heavy discharge of the Kurpankhad rising by about 10-15 mts and spreading spatially up to the old flood plains which have been occupied by the people and have constructed houses along the old river course.
- Likewise at Samej, the destruction in the upper part along the fluvial terrace which was hit directly by the high velocity gushing water with deep water column from the upper catchment passing through deep gorges eroding the whole fluvial terrace and thereafter the damage was mainly along the flood plains and river terraces in the downstream area where destruction was observed.
- From the field evidence and the landform features developed, it is inferred that the in Samej area, the nala has the history of carrying very heavy discharge load because of which the fluvial terraces of such a magnitudeand the flood plains and the river terraces have been formed.
- The traces of water that could be seen along the river course downstream of Samej inferred that the height of the water column appears to be very high roughly around 30-40 mts resulting very heavy destructions in the area.
- The post disaster satellite data analysis also reveals that the water spread downstream of the Samej village has widened from 35 mts(pre disaster) to 118 mts (post disaster) reflecting that how the flood plains use to form after any event (Fig .1).
- In view of the nature of the damage and the destruction occurred, it is inferred that strict enforcement is required to avoid any type of development / constructions within the flood plains and the river terraces especially along those areas where the river/streams seem to have history of carrying heavy loads during the monsoon periods.

Summary of the Damage and Loss reported by the districts & SAR Measures

Damage /Loss Summary	Name of the District			Total
Damage/Loss	Kullu (Jaon/Bagipul)	Shimla (Samej)	Mandi (Tikkan)	
Total Missing	13	33	10	56
Body Recovered	4	15	9	28
Bodies identified	2	3	9	14
Evacuated	44	10	1	55
Stranded	0	0	0	0
House Fully Damaged	31	25	4	60
Houses Partially Damaged	30	6	0	36
Cattle shed	18	0	1	19
Cattle Loss	123	22	4	149
Motor able Bridges	4	1	0	5
Pedestrian Bridges	7	2	0	9
Shops	17	0	0	17
Schools	3	1	0	4
Health Infrastructure	0	1	0	1
Vehicles	12	4	0	16
Water Supply	5			
Fish Farm	3	0	0	3

Summary of Resources Deployed

Name of the Organization	Resources Deployed		
	Kullu (Jaon/Bagipul)	Shimla (Samej)	Mandi (Tikkan)
NDRF personnel	0	61	40
SDRF	11	--	11
Police	36	70	25
Home Guards	06	10	0
ITBP	0	42	0
ARMY	0	98	0
CISF	0	10	0
Other	0	77	16
Total	53	368	92

Machinery Deployed			
Earth remover JCB, Proclaim etc.	01 JCB, 01 LNT	01 JCB, 08 LNT	03 JCB, 02 Proclaim, 02 Tipper, 20 Laborer

Note:-*86person(33NDRF, 16-SDRF;Police-10,HG-15;ForestGuard-12)are deployed along the Satluj River (upto Sunni area) to trace the Samej Incident Victim.
*02 Dog & 03 Handler from 7th Bn NDRF, 02 Dog from Army Deployed in Shimla (Samej) and (02 Dogs & 03 Handler from 7th Bn NDRF) Deployed in Mandi Tikkan.

Loss to Hydro Projects

Sr. No.	Name of the Project	Power Generation Capacity	Damaged Components	Approx. Loss
1.	Upper Nanti Hydro Electric Project	13.5 MW	• Weir trashrack damaged. • LHS & RHS wing walls completely damaged. • Weir U/S and D/S raft damaged. • Conveyance channel damaged. • Staff accommodation completely damaged. • 35KVA DG washed away. • Protection in front staff accommodation and gravel channel outfall washed away. • 35 sq mm 500 mtrs LT cable washed away. • Traffic Bridge over P/H road washed away.	3 Cr Appx
2.	Sumez Hydro Electric Project	14 MW	• Trench Weir including U/S & D/S raft completely washed away. • Main intake gate along with civil structure washed away. • Gravel gate along with civil structure washed away. • D-tank along with flushing valve &trashrack washed away. • Foot Bridge over Sechi River washed away. • TRC outfall protection completely washed away. • Powerhouse approach road along with bridge completely washed away. • Water conductor system of Malova weir damaged.	6 Cr Appx
3.	Ascent Hydro Project Ltd.	(4.5 MW)	Powerhouse fully damaged	

Photographs of Ascent Hydro Project Ltd. (Samej)-4.5 MW

Cloudburst in Rampur-Taklech

On 16th August 2024, a cloudburst occurred in the Taklech area of the Rampur subdivision, Shimla district, damaging a 30-metre stretch of road. Heavy rainfall in the Damrali and Taklech villages led to the cloudburst in Damrali, causing the water levels of a nearby nallah to rise and create a flood-like situation.

Sub Divisional Magistrate (SDM) Rampur, immediately set out to assess the situation but was unable to reach the location due to the road damage. The district administration, however, contacted the local Panchayat Pradhan, who confirmed that no loss of life or property had occurred during the incident.

Additionally, the mobile tower in Damrali was affected, resulting in disrupted mobile signals for six nearby panchayats. The road connecting Taklech to Rampur was made through on 18th August, 2024 for vechiles.

Damage caused by cloud burst at Taklech Nala

Restoration of road from Taklech to Rampur

Damage at Ganvi Stage-I & II Hydroelectric Project

Incident overview:

Due to a cloud burst in the catchment area of Ganvi Khad during the intervening night of 31st July and 1st August 2024, a flash flood occurred in Ganvi Khad, resulting in an estimated discharge of about 670 cumecs, compared to the normal discharge of 15 cumecs. This sudden surge caused extensive damage to various components of the Ganvi Hydroelectric Projects Stage-I & II.

Consequently, a committee was constituted by the Office of the Chief Engineer (Generation), HPSEBL, Sundernagar, as per order no. HPSEBL/CEG/WP-108(6)/24-25-3704-07 dated 03.08.24 (Annex-A), to assess the extent of damage to various civil assets/components of the 2 x 11.5 MW Ganvi-I & 2 x 5 MW Ganvi-II HEP. In compliance with this order, the committee members visited the affected project sites on August 3rd, 2024, to evaluate the damage incurred during the flash flood.

The project-wise details of the damages are as follows:

Ganvi HEP Stage - I (22.5MW)

Intake site :-

Due to flash flood in Ganvi Khad, a discharge of about 670 cumecs has passed through the trench weir of Ganvi HEP stage-I alongwith huge quantity of silt, debris, big boulders , wooden logs etc. A foot bridge alongwith approach path to the intake structure towards upstream side of trench weir has been washed away . It is observed that trash racks in approximately 8 metres width of the trench weir have been washed away due to flood. The trench weir is filled with silt & debris and shingle flushing tunnel is choked due to entry of silt/debris. The outfall of the shingle flushing tunnel has also been damaged.

Power House Site: -

The approach road to the Power House of Ganvi HEP Stage-I has been damaged, with approximately 70 meters of the road near the bridge completely washed away. The abutments of the bridge over Ganvi Khad, along with the wing walls, have also been damaged. The protective works along the left bank of Ganvi Khad, from the upstream side of the bridge to the switchyard, have been washed away. Additionally, one 66 kV Double Circuit Transmission Tower has been damaged, which has further caused damage to the gantry structures of the 22 kV and 66 kV systems in the switchyard of Ganvi Stage-I HEP.

Ganvi HEP Stage-II (10 MW)

I) Intake site : - The trench weir of Ganvi Stage-II has been damaged. The upstream floor, downstream floor, trench weir & trash racks have been damaged. The protection works provided downstream of trench weir (RCC wall, cratewall etc.) has been washed away. The trench weir, conveyance channel and vortex type desilting chamber is filled with silt & debris. The chain link fencing provided along the reservoir area towards left side of Ganvi khad has been damaged. Approach road to intake site of Ganvi Stage-II near bridge on left bank of Ganvi Khad has been damaged. Stone pitching behind the trench weir gate has sustained damage as well.

II) Power House Site: - Approach road to power house of Ganvi HEP Stage-II near MAT has been damaged . The Panel fencing provided from left bank of Ganvi khad, from entrance gate to TRC outfall, has been damaged.

Photographs documenting the damages are attached (Annexure-I). The estimated cost of the damages is 345.35 lakhs detailed in Annexure-II**)**

Remedial measures and restoration works

a) Ganvi HEP stage I:-The following works of Ganvi HEP stage-I are required to be taken up on priority for restoration of the project. Total expenditure involved in immediate restoration of Ganvi HEP Stage 1 is 38.8 lakhs as per detail given below:-

S. No.	Name of Work	Estimated Amount
1.	Installation of aerial ropeway from approach road to the power house site.	Rs. 4.90 lakh
2.	Channelization of Ganvi Khad upstream of trench weir.	Rs. 4 lakh
3.	Restoration of approach road to Ganvi power house right bank of Ganvi Khad.	Rs. 20 lakh
4.	Restoration of damaged abutment of Bailey bridge.	Rs.9.9 lakh
	Total	Rs. 38.8 lakh

b) Ganvi HEP stage II:-The following works of Ganvi HEP stage-II are required to be taken up on priority for restoration of the project. Total expenditure involved in immediate restoration of Ganvi HEP Stage II is 70.97 lakhs as per detail given below:-

S. No.	Name of Work	Estimated Amount
1.	Repair of trench weir U/S and D/S of trash rack, C/O RCC beam upstream of trench weir including providing and fixing of washed away trash racks	Rs. 24.72 lakh
2.	Channelisation of Ganvi Khad to divert flow towards trench weir and filling of rut/ pot holes etc of intake road.	Rs. 4.93 lakh
3.	Removal of debris from vortex de silting tank and conveyance channel.	Rs. 1.42 lakh
4.	Removal and disposal of silt deposited in the reservoir of Ganvi Stage II.	Rs.39.9 lakh
	Total	Rs. 70.97 lakh

The above mentioned works of Ganvi HEP Stage-I&II are required to be carried out for immediate restoration of Ganvi HEP stage I&II and estimates for balance works/damages which are not critical for immediate restoration of projects will be framed subsequently.

Figure 1 Approach Road to Ganvi Power House Stage-I

Figure 2 Flow over trench weir of Ganvi Project Stage-I

Figure 3. One 66 KV Double Circuit Transmission Tower is damaged near power House of Stage-I

Figure 4 Damaged Diversion weir of Ganvi HEP-II

District Sirmaur:-

On 26th September, 2024 in the Paonta Sahib area of Sirmaur, torrential rains have caused cloudburst led flash floods, particularly in the Aanj Bhoj area of Giripar, where 11 panchayats have been cut off from communication. The bridge over Amboya Khad was partially damaged due to debris, and vehicular movement has been halted to prevent accidents. The obstruction of this vital link has left the local population stranded, affecting access to essential services. 1 Person died due to being buried under debris due to flood at village Hatwal (Amboya - Danda) Tehsil & Sub Division Paonta Sahib, Distt. Sirmaur.

Details of deceased: - 01. Sh. Rangi Lal S/o Sh. Kanshi Ram age 70 Years R/o Amboya, Tehsil Paonta Sahib, District Sirmaur.

Due to damage to cowshed, 05 Cows & 01 Buffalo died due to being buried under debris due to flood silt Bayen Kuan Toka Nagla Tehsil PaontaSahib & Sub Division Paonta-Sahib District Sirmaur. Owner Name: - Sh. Dharam Singh S/o Sh. Hari Singh R/o Bayen Kuan Tehsil Paonta-Sahib. 4 houses were also damaged.

Damages at Sub-Division Paonta Sahib, district Sirmaur

Detail Cloud Burst/ Flash Flood Events (Monsoon Season-2024)

Sr. No.	District	Date	Detail of Incident	Damage
1.	Chamba	06.07.2024	DEOC Chamba reported that due to torrential precipitation resulting into flash flood affected 01 house ,03 cow shed & 01 shop. Detailed of damage is as below . 1) Shop of Sh.Yasuf S/o Sh.Tajdeen r/o Village Nalu Muhal Bhalei is partially damaged. 2) 1 Pucca House of Sh.Om parkash s/o Sh.Tek Chand r/o village & muhal brangaal is partially damaged. 3) 01 Cowshed of Sh.Shankarpal s/o Sh.Chatro Ram r/o village & muhal brangal. 4) 1 Cowshed of Sh.Satish Kumar s/o Sh.Bal Krishan r/o village & muhal brangalCowshed of Sh.Hemraj s/o Sh.Sobhiya r/o village & muhal brangal.	Cowshed Damaged: -03 Shop Damage: -01 House Damaged: -01
2.	Hamirpur	11.08.2024	DEOC Hamirpur Informed an incident of Flash Flood occurred at Vill-Blokhar, Tehsil-Bhoranj in which One kachha house partially damaged.	House Damaged: 1
3.	Kinnaur	21.07.2024	DEOC Kinnaur nformed an incident of Flash Flood Near Village Themgrang, Tehsil Sangla, District Kinnaur. In the incident 2 Farm Irrigation System and 1 Water Supply Scheme was damaged due to flashflood. No injuries and casualties reported by DEOC.	Flood Irrigation Scheme Damaged: -02 WSS Irrigation Scheme Damaged: -01
4.		28.07.2024	DEOC Kinnaur reported a Flash Flood incident occurred Near Village Giabong Tehsil Pooh, District Kinnaur. In this incident, 4 irrigation Schemes and 3 Kuchha Houses were fully damaged, and debris came into the apple orchards causing damage to the apple plants of 4 orchardist. Following irrigation schemes were damaged: • Rekin Kuhal • Holi Yati Kuhal • Zangti Kuhal • Changmarmar Kuhal	House Damaged:-03 Irrigation Scheme:-04
5.		28.07.2024	DEOC Kinnaur conveyed a Flash Flood incident in Rispa Cherang Khad & Bhuvering Khad, Tehsil Moorang, District Kinnaur. In the incident, no loss of any kind is reported.	

6.		30.07.2024	DEOC Kinnaur reported a Flash Flood in Village Dubling, Tehsil Pooh, and District Kinnaur. As a result of this incident, the irrigation Kuhal was damaged.	One irrigation kuhal.
7.		13.08.2024	DEOC Kinnaur reported a cloudburst incident at Thikru Nallah, Panchayat Kilba, and Tehsil Sangla. No losses were reported.	No loss
8.		11.08.2024	DEOC Kinnaur reported a Flash Flood incident in Village Bhajun, PC Deoth, Tehsil Sadar. A cowshed of Sh. Kuldeep S/o Sh. Khjanu Ram was damaged.	One Cow Shed.
9.	Kullu	25.07.2024	DEOC Kullu reported a Flash Flood incident near BRO Cafe at the Atal Tunnel, Manali, Tehsil Manali, In the incident, slush from the upstream area resulted into blockage of National Highway-5. After 7 hrs. the Road was restored by the BRO for traffic.	Road Blocked:- NH-01
10.		25.07.2024	DEOC Kullu reported a Cloudburst incident at Pagal Nallah, close to Anjali Mahadev in Tehsil Manali, District Kullu.	Cattle Loss-20 House Fully Damaged-3 House Partially Damaged-2
11.		30.07.2024	DEOC Kullu reported a Cloudburst incident at Barshaini Tosh Nala in Kullu District. Consequently, the water levels of both the Barhm Ganga and Parvati river rose. In this incident 02 Shops & 01 Bridge were washed away & 01 home stay damaged due in Village Tosh.	House damaged:-01 Shop Damaged :-02
12.		31.07.2024	APMC Sabzi Mandi building in Shaat, Manikaran, District Kullu, Himachal Pradesh collapsed due to a cloudburst that caused the Parvati and Beas rivers to swell.	01 Building
13.		31.07.2024	A Flash Flood incident occurred at 2:30 A.M. in Village Palchan, Tehsil Manali, District Kullu.	01 House, 01 Café & 01 Shop (Fully)

14.		01.08.2024	DEOC Kullu has reported a Cloudburst near Village Jaon in Tehsil Nirmand, District Kullu. As a result, the water level of Kurpan Khad has risen significantly due to the cloudburst behind Singhad Base Camp, which is near the Shrikhand Mahadev Yatra route. Resources: Total 39 personnel (SDRF 02 teams, HHG and 3rd IRBN Police force from Pandoh & Local Police) along with 01 JCB 01 LNT were deployed at the incident site.	• Human Loss :- 02 Missing: - 10 • House- • 20 (Fully), • 5 (Partially) • Cattle shed-18 • Gharat-06 • Fish Farm 03 • Shops-17 • Motor able Bridge-04 • Pedestrian Bridegs-7 • Vehicle-6 • School-02 • Road Blocked: -01 • Cattle Loss:- 123
15.		01.08.2024	DEOC Kullu Informed an incident of Cloud Burst at sainj due which Water Level in Parvati River increased which resulted in damage to Bus Stand and Road.	Road Blocked: - 01 Bus washed away: - 01
16.		01.08.2024	DEOC Kullu Informed an incident of Cloud Burst at 05:42 AM Malana, Sub Tehsil Jari, District Kullu	• Malana Bridge: - 01 • Road Blocked: - 01 • Evacuated people- 33
17.	L&S	01.07.2024	DEOC Lahaul & Spiti reported a Flood incident that occurred at Tangti Kongma in Pin Valley, Sub Division Kaza, The rising water level at Kongma Nullah caused significant damage to all irrigation water heads (Kulah) at Kawang Nullah.	Kulah water heads was damaged
18.		01.07.2024 11:30 PM	DEOC Lahaul & Spiti Informed an incident of inundation of fields due to increasing water level in Rangrik village, Sub Division Kaza. Due to the incident, agriculture field was submerged in water and resulted in damaged to the crops of two farmer.s Detail of owners is given below:- 1. Dechen Dolma W/o Lobzang Chhondan Khasra No 620/621 R/o Rangrik	Crop damaged

			2. Cheering Chhodon W/o Dorje Sonam Khasra No. 612/614 R/o Rangrik	
19.		02.07.2024	An incident of Flash Flood occurred Near Zing zing Bar, Sub Division Lahaul, PS Keylong. In the incident the road from Darcha to Sarchu was closed which was restored by the BRO later.	Road Damaged:- 1
20.		05.07.2024	DEOC Lahaul & Spiti informed that an incident of Flash Flood near Zing Zing Bar, Sub Division Lahaul. In the incident road has been blocked which was restored by the BRO.	Road Damaged:- 01
21.		06.07.2024	DEOC Lahaul & Spiti reported a Flash Flood near Rohli at 79 KM in Sub Division Udaipur, District Lahaul & Spiti. The road was blocked due to the incident.	Road Damaged:- 01
22.		27.07.2024	DEOC Lahaul & Spiti reported a Flash Flood near Karpat Nullah in the Miyar Valley, Udaipur Sub Division, District Lahaul & Spiti. The floodwaters have reached Karpat Village and its farms, promptly villagers were evacuated to safer areas. A rescue team from Udaipur was dispatched to the site with rations, tents, and other essential supplies. • The flash flood incident caused damage to four main kulahs, • A veterinary building with equipment, the primary school and Two government toilets were damaged in the incident. • In addition to this, crops including Potatoes (4-5-0 Bighas), Cabbage (5-2-0 Bighas), Rajmah (0-9-0 bighas), Peas (0-16-0 Bighas), Kuth (0-4-0 bighas), and dang (1-9-0 Bighas) have also been damaged.	Public Toilets Damaged:-02
23.		28.07.2024	DEOC Lahaul & Spiti has informed that a Flash Flood occurred at Nipti nullah / Kaza. In the incident, water and debris choked the traffic due to which 15 vehicles were stranded in the incident site which were safely evacuated.	Vehicle stranded:-15 safely evacuated
24.		28.07.2024 20:00 Hrs	CWC Unit Gulling had informed that a Flash Flood incident was recorded in Kidul Nullah near Gulling Village, Sub Division Kaza, District Lahaul & Spiti. The DEOC-L&S confirmed that a flash flood causing road blockage which was restored by the District Administration.	Road damaged:- 01
25.		30.07.2024	DEOC Lahaul & Spiti had reported a Flash Flood incident near Malang Nullah in the Lahaul Sub Division. The flood has resulted in a road blockage.	Road damaged:- 01

26.		02.08.2024	DEOC Lahaul & Spiti has reported a Flash Flood incident near Sagnam Nalluh in Sub-Division Spiti. In the incident one woman was washed away and one vehicle also got buried under the debris. A rescue team from IPC 17th Corps and local police recovered the body of missing and the was restored by PWD. Details of Deceased person- • Late. Mrs. Yeshe Zangmo (55) w/o Padma dorje. • Resources deployed- 1 Ambulance & 1 JCB.	Human Loss :- 01 Road Damage :-01
27.		02.08.2024	DEOC Lahaul Spiti reported a Cloud Burst incident Near At 16 KM of Darcha - Sinkula Road near 18th KM BRO DTT/ Sub Division Lahaul/ PS Keylong. In the incident old bridge and the new bridge under construction were damaged due to which road was blocked.	Bridge damaged :- 02 Road damaged :- 01
28.		03.08.2024	DEOC Lahaul Spiti reported a Flash Flood incident Near Changut Nala Miyar valley/ Sub-Division Udaipur/ PS Udaipur. Due to flash flood link road from Changut to Tingret is closed. The flood washed away the Karpat (Dodhal) bridge, which is currently being repaired, making travel to Changut Village impossible. Villagers have reported that the flood also impacted local crops. Additionally, a wall of a house in Urgos collapsed, and an old government school building, which is not used for educational purposes but for other functions, also sustained damage.	Road blocked:- 01 House damage:- 01 Bridge damage:- 01 Government Building:- 01
29.		03.08.2024	DEOC Lahaul Spiti reported a Flash Flood incident at various locations from between Rankrik to Lossar on NH-505 (Kaza to Losar). Due to flash flood road has been blocked. Himachal Road Transport Corporation bus was also stuck between Sumling and Pangmo villages. There were 17 passengers in this bus which were rescued after the road was opened.	Road Blocked:- 01
30.		04.08.2024	DEOC Lahaul Spiti has reported a Cloudburst incident near Chicham Nullah, in the Sub Division of Spiti, under the jurisdiction of Police Station Kaza, District Lahaul & Spiti. As a result of the cloudburst, two vehicles were washed away.	Vehicle Damaged- 02

31.		04.08.2024	DEOC Lahaul Spiti reported a Flash Flood incident at Mane Dang Sub-Division Spiti / PS Kaza, District L & S. The flash flood caused the blockage of NH-505. Additionally, some fields and the surroundings of several houses in Shichling Village was inundated with flood debris. Furthermore, several vehicles were also stuck due to the flood.	Road Blocked:- 01
32.		05.08.2024	DEOC Lahaul Spiti reported a Flash Flood incident at Near Zing Zing Bar, Sub-Division Lahaul/PS Keylong. Due to the flood, the Darcha Sarchu road at 167.500 KM was blocked.	Road Blocked:- 01
33.		05.08.2024	DEOC Lahaul-Spiti reported a Cloudburst incident near Darcha- Sinkula Road near 126 RCC 18th KM BRO DETT/ Sub-Division Lahaul/ PS Keylong, District Lahaul & Spiti. As a result of this incident, the Darcha- Sinkula road was blocked.	Road Blocked:- 01
34.		05.08.2024	DEOC Lahaul-Spiti reported a Flash Flood incident near Hull to Sumling/ Sub-Division Kaza/ PS Kaza, District Lahaul & Spiti. As a result, of this incident the road was blocked.	Road Blocked:- 01
35.		05.08.2024	DEOC Lahaul Spiti reported an incident of a Flash Flood at Madgran Nullah, Sub-Division Udaipurl/PS Udaipur. Due to flood SKTT road was blocked. However, no loss was reported in this incident.	Road Blocked:- 01
36.		09.08.2024	DEOC Lahaul Spiti has reported a Cloud Burst incident Near At 16 KM of Darcha - Sinkula Road near 18th KM BRO DTT/ Sub-Division Lahaul/ PS Keylong. As a result, of this incident the road was blocked.	Road Blocked:- 01
37.		14.08.2024	As per the information received from DEOC L&S the SKTT Road was closed at Madgran Nullah, Sub-Division Udaipur due to Flash Flood.	Road Blocked:- 01
38.		15.08.2024	DEOC Lahual & Spiti reported an incident of Flash Flood at SKTT Road. Road has been closed at three locations due to flash floods: 1. Jungle camp nallah at Km 74.400, slide size 40x5x3m. 2. Fmn breach at Km 81.400 to 81.430 of size 30x2m. 3. Near Kadhu Nullah Km 82.250 to 82.300 slide of size 50x8x1.5m These flash floods caused blockage on the road. Road restoration work is currently under process. No loss reported yet in this incident.	

39.		25.9.2024	DEOC Lahaul & Spiti informed an incident of Flash Flood occurred at Near Telling Nullah /Lahaul/ PS Keylong, District Lahaul & Spiti. In this incident the Koksar to Tandi (NH-03) was blocked at Telling Nullah due to Flash Flood.	Road Block:- 01
40.	Mandi	01.08.2024	DEOC Mandi has reported a Cloudburst near Near Village Tikkan Thalukot, Tehsil Padhar, District Mandi. Police, fire brigade, and administration personnel are deployed to the incident site. The SAR Operation is still going on. Total 86 personnel were deployed (NDRF-33; SDRF-12; Police-25; NHAI-12, PWD-4). Details of deceased persons:- 1. Chandi Devi Age 75 year, W/O Shoju Ram, Vill. Rajban, P.O Thaltukhod, Tehsil Padhar, Distt. Mandi HP 2. Chetri Devi Age 90 year W/O Gorkhu Ram Vill. Rajban, P.O Thaltukhod, Tehsil Padhar, Distt. Mandi HP 3. Shoju Ram Age 80 year S/O Bajiru Ram Vill. Rajban, P.O Thaltukhod, Tehsil Padhar, Distt. Mandi HP 4. Aman Age 09 year S/O Gian Chand Vill. Rajban, P.O Thaltukhod, Tehsil Padhar, Distt. Mandi HP 5. Aryan Age 08 year S/O Khem Singh Vill. Rajban, P.O Thaltukhod, Tehsil Padhar, Distt. Mandi HP 6. Anamika Age 11year D/O Shesh Ram Vill. Smalag, P.O Thaltukhod, Tehsil Padhar, Distt. Mandi HP 7. Sonam Age 23 Years W/O Ram Singh Vill. Rajban, P.O Thaltukhod, Tehsil Padhar, Distt. Mandi HP 8. Manvi Age 3 Month D/O Sh. Ram Singh Vill. Rajban, P.O Thaltukhod, Tehsil Padhar, Distt. Mandi HP 9. Khudi Devi Age 46-year W/O Chandan Lal Vill. Rajban, P.O Thaltukhod, Tehsil Padhar, Distt. Mandi HP	Human Death- 09 Human Missing -01 Injured Person :-01 Road Blocked:- 01 House:- 4 (Fully) Cattle shed-01 Cattle Loss:-04 Cow-01 (Rescued Alive) Missing:- 5 (Approx.)
41.	Shimla	28.06.2024	DEOC Shimla reported an incident of Heavy Rainfall resulting into flood near Chamayana Shurala Sub-Division Shimla. In the incident, 3 vehicles buried under the debris and 01 link was road blocked.	Vehicle Damaged: -03 Road Block: - 01
42.		01.08.2024 12.30AM	An incident was reported in Ghanvi Village, Sub-division Rampur. In the incident, there was no human loss reported. However, 13 houses were damaged, one bridge was damaged and 3 vehicle were damaged.	House Damage-13 Bridge Damage-1 Vehicle-3

43.		01.08.2024 3:30 AM)	As per telephonic information received from the DEOC in Shimla/Kullu, a cloudburst has occurred near the Hydro Project in Jhakri, Tehsil Rampur, District Shimla. The incident has resulted approximately missing of 33 individuals in the Samej area near Jhakri. An NDRF team, ITBP, Police is currently en route to the site, and the Home guard team has also been notified to dispatch their rescue team to assist with the efforts. Resources: - Total 303 personnel were deployed (NDRF-67; Police-69; ITBP-32; Army-110, CISF-25) along with 1 LNT on the site of incident. Besides, : 84 personnel (33 NDRF, 14-SDRF; Police-10, HG-15; Forest Guard-12) were deployed along the Satluj River (up to Sunni area) to trace the Samej Incident Victims. Details of Deceased persons:- 1. Late Miss Reetika, D/o Sh. Ravinder 2. Late Smt Rachna, W/o Rajesh	(Shimla side Losses) Total Missing as dated:- 01.08.2024 (33) Missing Human Death-14 Human Missing -19 Road Blocked:- 01 Motorable Bridegs-01 Pedestrian Bridegs-02 House:- 25(Fully Damaged), 05 (Partially) PHC-01 School-01 Evacuated-10 From (Sarpara) Houses-22 Vehicle-04 Cattle Loss:- 22 (Kullu side Losses) Missing: - 03
44.		14.09.2024	DEOC Shimla reported a landslide at the SPM School Ground in Sanjouli. The landslide has caused damage to two vehicles, and the Mehta Building, which houses 14-15 families are now at risk. Fortunately, no human casualties have been reported. Authorities have instructed the residents to evacuate the building, and the Nayab Tehsildar of Shimla (Urban) has provided five tarpaulins to ensure the safety of the affected houses.	No major Loss House in Risk
45.		16.09.2024	The DEOC Shimla has reported a landslide at NH-5 near Matiana, Tehsil Theog, District Shimla, resulting in the blockage of Wangtoo Road. The blockage is due to a heavy landslide in the area.	Road Blocked :-01
46.	Sirmaur	20.07.2024	DEOC Sirmaur informed an incident of Flash Flood occurred at Dhada Aanjbhoj (Retua) Tehsil & Sub-Division Paonta Sahib. In the incident one person was missing. The body of the missing person was recovered by the Police team.	Human Loss-01

47.		11.08.2024	DEOC Sirmaur informed an incident of Flash Flood which occurred at Pipliwala, Paonta Sahib in which one house was damaged.	House Damaged: 1
48.		26.09.2024	DEOC Sirmaur reported a Flood Incident near Sodapul, Sub Tehsil Majra, District Sirmaur. In this incident, heavy water flow entered temporary sheds, leaving 50-60 people stranded. The District Administration successfully conducted a rescue operation to evacuate those affected.	Stranded Persons:- 50-60
49.		26.09.2024	DEOC Sirmaur reported a Flash Flood incident near Hatwal (Amboya - Danda) in Tehsil and Division Paonta Sahib, District Sirmaur. Tragically, one person lost their life after being buried under debris while sleeping in a Gharat. Detail of Deceased Person:- 1. Late Sh. Rangi Lal (Age 70 Years), S/o Kanshi Ram, R/o Amboya, Tehsil Paonta Sahib, District Sirmaur.	Human Loss:-01
50.	Solan	03.07.2024	DEOC Solan reported a Flash flood incident in Village Kandhar, Sub Tehsil Darlaghat, Sub-Division Arki, and District Solan. Due to the incident a cowshed was fully damaged. Details of the Affected is placed below for ready reference as :- 1. Sh. Babu Ram S/o Sh. Gulaba Ram, Village Kandhar, PC Mandhala Sub Tehsil Darlaghat, Sub- Division Arki, District Solan	Cowshed Damage :-01
51.		16.09.2024	As per the information received from NHAI, a massive landslide occurred near DAV School, Kumarhatti on NH-5. Traffic was diverted through Barog till the restoration of road was done.	Road Blocked :-01
52.	Una	11.08.2024	DEOC Una informed an incident of Flash Flood which occurred Near Preetika factory Bathri, Tehsil Haroli in which Total 04 persons were washed away. Body of the One 7-year-old girl, Rashi Kumari was identified as of now 02 bodies are yet to be identified and 1 person is missing. District Administration Una requisitus the SDRF Team for the incident site	Dead: 03 Body Recovered: -03
53.		11.08.2024	DEOC Una informed an incident of Flash Flood occurred at Village Jaijon Tehsil Mahilpur Dist. Hoshiarpur, Punjab in which Persons from village Dehlan belonging to district Una were going from Una to Mahilpur district Hoshiarpur Punjab to attend a wedding ceremony. 12 people were swept away in the water when their vehicle got stuck in flash flood in village Jaijon Tehsil Mahilpur District Hoshiarpur, Punjab and till now bodies of 9	09 life loss 02 Missing, 01 Hospitalized

			dead bodies have been recovered and the search for 2 person is going on.	
54.			DEOC Una informed an incident of Flash Flood due to which level of Local Khadd had risen.	No loss.
55.			DEOC Una informed an incident of Flash Flood due to • DTRs affected = 335 DTRs (Electricity Dept.) • 11 roads are affected • 56 JSV water supply and irrigation schemes are affected.	335 DTRs affected 11 roads 56 JSV schemes
56.			DEOC Una informed an incident of Flash Flood at Bathu-Bathri Industrial Area in which At Bela Bathri Bathu Industrial Area khad water entered in industrial Units and loss of machinery and material reported due to heavy flash flood.One Petrol Pump at Bathu-Bathri on Garhshankar Road near bridge washed away due to flash flood	Loss Awaited
57.			DEOC Una informed an incident of Flash Flood due to which • Water logging in vill.Rampur in the house of Amrit Lal. • Waterlogging reported in rakkar colony, have asked EXN PWD to depute a JCB for channelling. • Water logging due to rain water entered in house 99 Basant Vihar The Una Housing Co. Op Society Near Mount Carmel School, Rakkar colony Una. • Water logging condition in rain, Water entered in Dy. Director Agriculture Office Una. • Water logging due to rain water entered in house of Shweta VPO Jankaur Tehsil Una. • Water logged and going inside house. Kitchen submerged. Water level in rooms getting higher. Saroj Moudgil House near panchayat ghar lower kotla kalan. • Water logging condition in rain, Water entered in houses of Vill. Malookpur and Sanoli tehsil Una • Water logging reported in Gram Panchayat Abada Barana tehsil Una	Loss Awaited

District Wise Detail of Landslide (Monsoon Season-2024) 27 June, 2024 to till Date

Sr. No.	District	Date	Details of Landslide Incidents	Losses/Damages
1.	Chamba	27.07.2024	DEOC Chamba informed that due to heavy rainfall there is possibility of landslide in Jalu Village, Tehsil Tissa which may affects around 12 Houses, 1 GPS and Gram Panchayat Bhavan Mangli.	Threat to 12 Houses, 1 Govt. Primary School and Gram Panchayat Bhavan Mangli.
2.		11.08.2024	DEOC Chamba reported a Landslide at Village and Muhal Chakara, Tehsil & Dalhousie in which Cowshed of Jagdish damaged; 1 cow died, 1 cow injured.	Cowshed: 1 Cow Injured: 1
3.			DEOC Chamba has reported a Landslide at Village and Muhal Trahed, SubTehsil Dharwala in which Cowshed of Bindro was partially damaged.	Cowshed: 1
4.		12.08.2024	DEOC Chamba informed an incident of Shooting Stone which occurred Near Dibru Village, Othal Muhal, Parotha Tehsil & District Chamba. In this incident, two persons died due to felling of stones on them and another one got minor injuries. Details of Deceased Persons:- 1. Smt. Arpana (26 Years) W/o Pyaro R/o Village Othal Muhal Parotha Pargana Saho Tehsil & District Chamba. 2. Akshay S/o Chunni Lal (9 years). Details of Injured Person:- 1. Tarun S/o Pyaro Village Othal Muhal Parotha Pargana Saho Tehsil & District Chamba.	Human Loss:- 02 Injured:-01
5.		19.08.2024	The DEOC Chamba reported a landslide incident at Tikker Nallah on the Lahru-Nurpur road in Tehsil Bhattiyat. The incident involved 7 individuals traveling from Chamba to Nurpur in a Scorpio vehicle (HP 36B 8712). As the vehicle approached Tikker, a landslide occurred. Out of the 7 individuals, 6 managed to escape safely, while 1 person was struck by the landslide. The body of the deceased person was recovered. Details of Deceased Person:- Sh. Jassbir Singh age 34 years S/o Jeet Singh R/O Doultpur District Una	Total Person :-07 Human Loss :- 01
6.		19.08.2024	DEOC Chamba reported a Shooting Stone incident near Akhodu, Tehsil Tissa, District Chamba. A falling stone from a hill caused the immediate death of a woman traveling to the Khundi Marali Dal Yatra. The body was transported to the Civil Hospital Tissa for a post-mortem. Detail of Deceased Person:- Late Smt. Subhadra W/o Sh. Man Singh, Village Kokada, P.O. Kilod, Tehsil, District Chamba.	Human Loss:- 01

7.	Kinnaur	17.07.2024	DEOC Kinnaur reported a Shooting stone incident near Nigulsari sliding area on NH-05 in Tehsil Nichar. In the incident, one person was injured and was referred to Khaneri Hospital in Rampur Bhushar. Details of the Injured person :- Sh. Rakesh Kumar S/o Sh. Ram Singh (age 39), VPO Munish, Tehsil Rampur District Shimla.	Human Injured:- 01
8.		17.07.2024	DEOC Kinnaur reported a Shooting Stone incident at the Nigulsari Sliding Point on NH-05 in Tehsil Nichar, District Kinnaur. In this incident, the continuous falling of stones from the uphill side caused a blockage on NH-05 at Nigulsari.	Road Block:- 01
9.		18.07.2024	DEOC Kinnaur has reported a Landslide incident Near Nigulsari and Kashang Nallah District Kinnaur. In the incident NH-05 has been blocked.	Road Block:- 01
10.		28.07.2024	DEOC Kinnaur has reported a Landslide near Kaa Sub-Tehsil Yangthang in District Kinnaur. The incident had resulted in the blockage of the NH-05 road. Machinery was deployed and restore the traffic movement.	Road Block:- 01
11.		11.08.2024	DEOC Kinnaur reported a Landslide at (NH-05) Pooh to Kaurik, Tehsil Pooh in which Road blocked due to flash flood and landslide between km 435 to 444.	Road Block: 1
12.		16.08.2024	DEOC Kinnaur reported an incident of a Landslide near the Nigulsari sliding point on NH-05, Tehsil Nichar, District Kinnaur. In this incident, Tzhe road had completely collapsed at this location, resulting in NH-05 being closed to all vehicles.	Road Block: 1
13.	Kullu	11.08.2024	DEOC Kullu reported a Landslide at Village Bagashadi phati Gadaparli, Tehsil Banjar in which Horticulture and agriculture crops were damaged.	Crops damaged
14.		31.08.2024	DEOC Kullu informed an incident of Shooting Stone occurred Near Village Diyar Tehsil Bhunter District Kullu. In this incident, one person died on the spot due to falling of stones. Detail is Deceased Person:- Mr. Santosh Kumar S/o Sh. Inder Dev.	Human Loss:-01
15.	L & S	27.06.2024	DEOC Lahaul & Spiti reported a landslide at Selfie Point Sissu on NH 03 (Manali- Leh Highway) in the Lahaul Sub Division. The landslide blocked the road.	Road Block:- 07
16.		24/07/2024	DEOC Lahaul & Spiti reported a Landslide that occurred Near Kadhu Nallah Sub Division Lahaul. In the incident, SKTT road was blocked and the road restored on 25.07.2024.	Road Block:- 01
17.		30.07.2024	DEOC Lahaul Spiti informed an incident of Landslide near Kadhu Nallah Sub-Division Lahaul. In this incident, SKTT road was blocked which was restored on 31.07.2024.	Road Block:- 01
18.		11.08.2024	DEOC Lahaul Spiti informed an incident of Landslide reported at Kadhu Nullah, Subdivision Udaipur SKTT in which one road was blocked.	Road Block:- 01
19.		06.09.2024	DEOC Lahaul & Spiti reported a Landslide near Kadhu Nullah / Sub Division Udaipur, District Lahaul & Spiti. As a result, the SKTT road near Km 84.100 was blocked.	Road Block:- 01

20.		11.09.2024	DEOC Lahul Spiti informed that an incident of Landslide occurred at KM 82.300 and near Kadhu Nullah in Sub Division Udaipur. In this incident road was blocked for traffic movement. No other loss has been reported in this incident	Road Block:- 01
21.	Mandi	03.07.2024	DEOC Mandi reported a Landslide incident at Village Madwan, P.O. Talhyar. The landslide caused by road cutting, has put a nearby house at risk due to falling of continuous debris.	House at risk due to falling debris.
22.		21.07.2024	DEOC Mandi Informed an incident of landslide near 9 Mile tehsil Sadar. In the incident shooting stones fell on a HRTC bus due to which 02 person got minor injuries. Injured persons referred to zonal Hospital Mandi for medical treatment. Details of Injured Persons:- Sahil (Bus Conductor) & Ghanshyam	Injured :- 02 Road Block:- 01
23.		02.08.2024	DEOC Mandi reported a Landslide incident Near 9 Mile, Distt Mandi. In the incident NH-21 was blocked due to landslide.	Road Block:- 01
24.		08.08.2024	DEOC Mandi reported a Landslide at Near Village near 9 Mile, Distt Mandi. Due to landslide NH-21 was blocked.	Road damage :- 01
25.		11.08.2024	DEOC Mandi reported a Landslide at Randhara Tehsil Sadar Distt. Mandi HP in which 01 Cowshed damaged of sh. Fateh Chand S/o Led Ram.	01 Cowshed Partially damaged
26.			DEOC Mandi reported a Landslide at Nerdharwasda Tehsil Jogindernagar Distt. Mandi HP in which 01 Cowshed damaged sh. Gyan Chand S/o Prem Singh in which	01 Cowshed Partially damaged
27.			DEOC Mandi reported a Landslide at Kayon Tehsil Jogindernagar Distt. Mandi HP in which 01 kacha House of Vivek Kumar s/o Balbir.	01 Kaccha House Partially damaged
28.			DEOC Mandi reported a Landslide at Maseran Tehsil Padhar Distt. Mandi HP in which01 kacha House of Kubja Devi W/o Sunder.	01 Kaccha House Partially damaged
29.			DEOC Mandi reported a Landslide at saklan Tehsil Dharampur Distt. Mandi HP in whic1 kacha House of chamaru ram s/o naratru	01 Kaccha House Partially damaged
30.			DEOC Mandi reported a Landslide at Bagslana Tehsil Karsog Distt. Mandi HP in which01 kacha House of Jai ram s/o Jhadu	01 Kaccha House Partially damaged
31.		29.06.2024	DEOC Shimla informed an incident of landslide at Chalonthi, Shimla Rural, and District Shimla. Due to which one house was in danger. The house was vacated by Administration.	One House is in Danger

32.	Shimla	08.07.2024	DEOC Shimla informed an incident of Landslide reported near Rippon Hospital due to the cutting which was done for erecting a retaining wall. In the incident road was damaged. The SDM (Urban) and police officials visited the incident site and restored the road for traffic.	Road damage
33.		23/07/2024	DEOC Shimla reported a Landslide in Goro village, Near Shoghi, due to which one house was affected. The affected family was shifted to a homestay by the NHAI.	House Damage:- 01
34.		28.07.2024	DEOC Shimla informed that a landslide occurred on the Mehli-Shoghi bypass road, resulting in damaged a Maruti car with the registration number HP-09C-7145. No other losses were reported in this incident	Vehicle Damaged :-01
35.		04.08.2024	DEOC Shimla reported that due to continuous rain beside the house of Mr. Shadi Lal,waterlogging has occurred, affecting the residence of Amit Sharma, son of Prem Chand, at Neena Niwas, lower, Sagtai. If the rain persists, the house may sustain further damage. Additionally, nearby houses belonging to Shiv Singh, son of Chetram; Sunil Sharma, son of Hem Singh; and Mukesh Devi, wife of Sushil Kumar, are also at risk. All the houses have been evacuated for safety.	
36.		11.08.2024	DEOC Shimla informed an incident of Landslide reported at Tarapur village, Gram Panchayat Paudiyan, Subdivision Chaupal in which significant damage to fruit-bearing plants (including apple trees) and an apple shed had happened.	Damaged plants and apple shed
37.		19.08.2024	DEOC Shimla infrormed that an incident of Landslide occured at Boileauganj Shimla due to which the road near CMP Boileauganj District Shimla was blocked. Traffic was diverted Via Chakkar. Coordination was established with the Home Guard 3rd Battalion.	Road damage
38.		29.08.2024	DEOC Shimla reported an incident of landslide that occurred at Snail. Due to this Incident NH 707 has been blocked for all kind of vehicle Restoration work on progress.	Road Block: -01
39.		14.09.2024	DEOC Shimla reported a landslide at the SPM School Ground in Sanjouli. The landslide has caused damage to two vehicles, and the Mehta Building, which houses 14-15 families, is now at risk. Fortunately, no human casualties have been reported. Authorities have instructed the residents to evacuate the building, and the Nayab Tehsildar of Shimla (Urban) has provided five tarpaulins to ensure the safety of the affected houses.	No major Loss
40.		16.09.2024	The DEOC Shimla reported a landslide at NH-5 near Matiana, Tehsil Theog, District Shimla, resulting in the blockage of Wangtoo Road. The blockage is due to a heavy landslide in the area. Machinery has been deployed, and the road is expected to be cleared within an hour.	Road Block: -01
41.	Solan	29.07.2024	DEOC Solan informed that an incident of Shooting Stone occured near I love Himachal Park NH 05, Sub Division Kasauli. In the incident, a stone had fallen from a hill on to a vehicle in which a person died on the spot and one person was injured.	Human Loss:-01 Human Injured:- 01

42.		02.08.2024	DEOC Solan reported a Landslide incident Near Tambumod, On NH-05, In the incident NH-05 has been blocked on both side due to landslide. The NH was restored by the NHAI on the same day.	Road Blocked:-01
43.		11.08.2024	DEOC Solan informed an incident of Landslide reported at Village Jobi Tehsil Ramshehar sub-division Nalagarh in which In the incident a Cattle Loss reported.	Cattle Loss:-01
44.		03.09.2024	DEOC Solan reported a Landslide incident near the Kandaghat Main Market, Sub-Division Kandaghat and District Solan. Due to which, 01 person was buried under the debris but was safely rescued by a joint effort from the police, the home guard team, and local residents. The injured individual has been shifted to the nearest hospital for treatment. Details of Injured Person:- Sh. Lal Singh S/o Ajeet Singh R/o Shoghi Tehsil & District Shimla	Injured :- 01
45.		16.09.2024	Landslide Near DAV School: As per the information received from NHAI, a massive landslide occurred near DAV School, Kumarhatti on NH-5. Traffic was diverted through Barog.	Road Block :-01
46.		23.09.2024	DEOC Solan has reported a Landslide near Kararaghat to Shala Ghat in Sub-Division Arki, District Solan. As a result, the Kararaghat to Shala Ghat road has been blocked. Machinery has been deployed on both sides to remove the debris and restore the road.	Road Block :-01

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Chapter – 5
Use of Remote Sensing for Damage Assessment

Damage Assessment based on Satellite Data Analysis

Space borne platforms that provides repetitive and synoptic coverage of the area and proves to be very useful in extracting any information on the land surface. The high resolutions satellite data has been successfully utilized for making post disaster assessment of flood affected areas along Samej and its surroundings. The Samaj is small village at an altitude of 1515mts above MSL and is located at 31^0 32’ 32.84” N Latitude and 77^0 41’ 54.05” E Longitude along the Samej khad that is a small tributary of Satluj River and joins it on its right bank at an elevation of 1060mts opposite to Jhakri near Rampur in district Shimla at 31^0 30’ 07.69” N Latitude and 77^0 42’ 26.05” E Longitude (Fig-1).

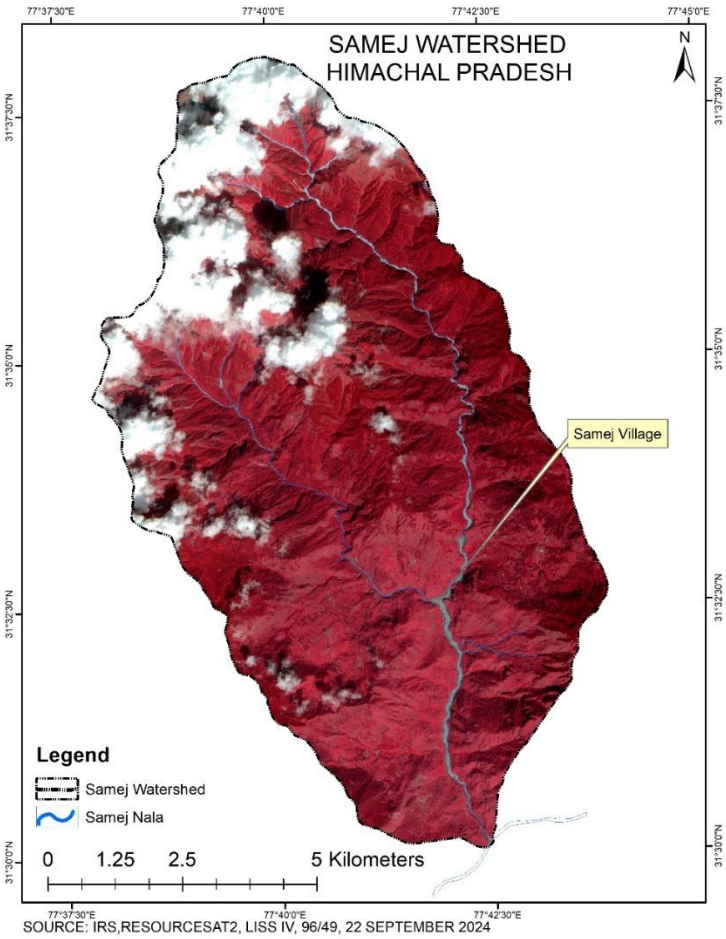

Fig-I

On the intervening night of 31st July and Ist August 2024, a flash flood occurred due to very heavy precipitation in the upper catchments of the Samej khad at an elevation of

about 5434mts above MSL from where it originates leading to very heavy flash floods in the Samej khad (Fig II-V) and its adjoining khads mainly the Kurpan Khad on its right and the Ghanvi khad on its left (Fig-----) . Since the event was occurred during the monsoon period, so data acquisition for the cloud free images is a very challenging in the mountainous regions. The preliminary damage assessment was carried out using best available IRS Resourcesat 2 LISS IV satellite image of 05th August 2024 having spatial resolution of 5.8 mts followed by Satellogic Satellite Image of 17 August 2024 having spatial resolution of 70cm.

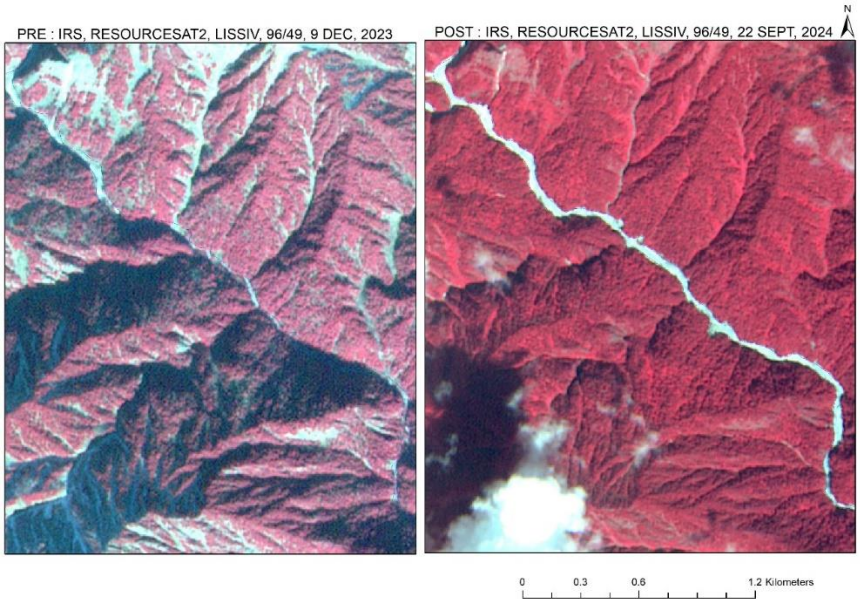

Fig-II

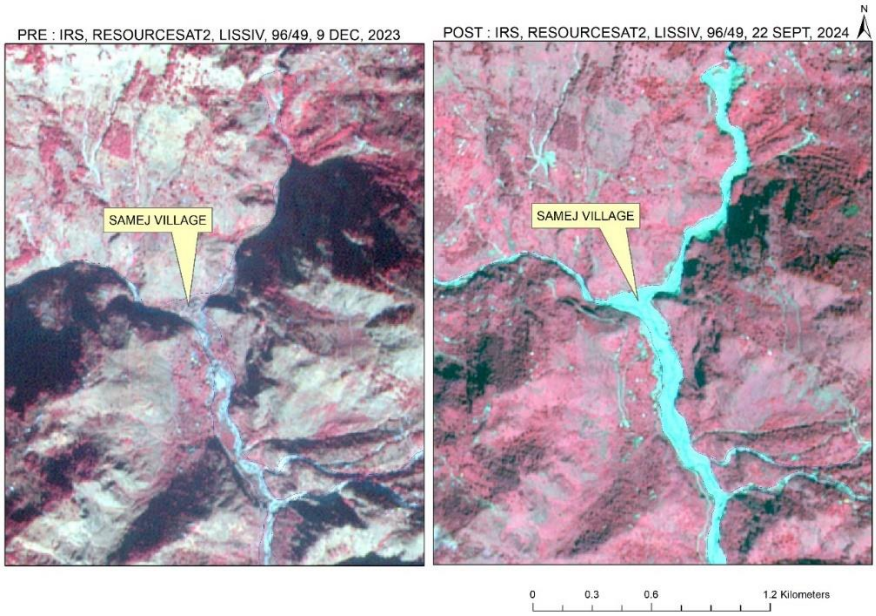

Fig-III

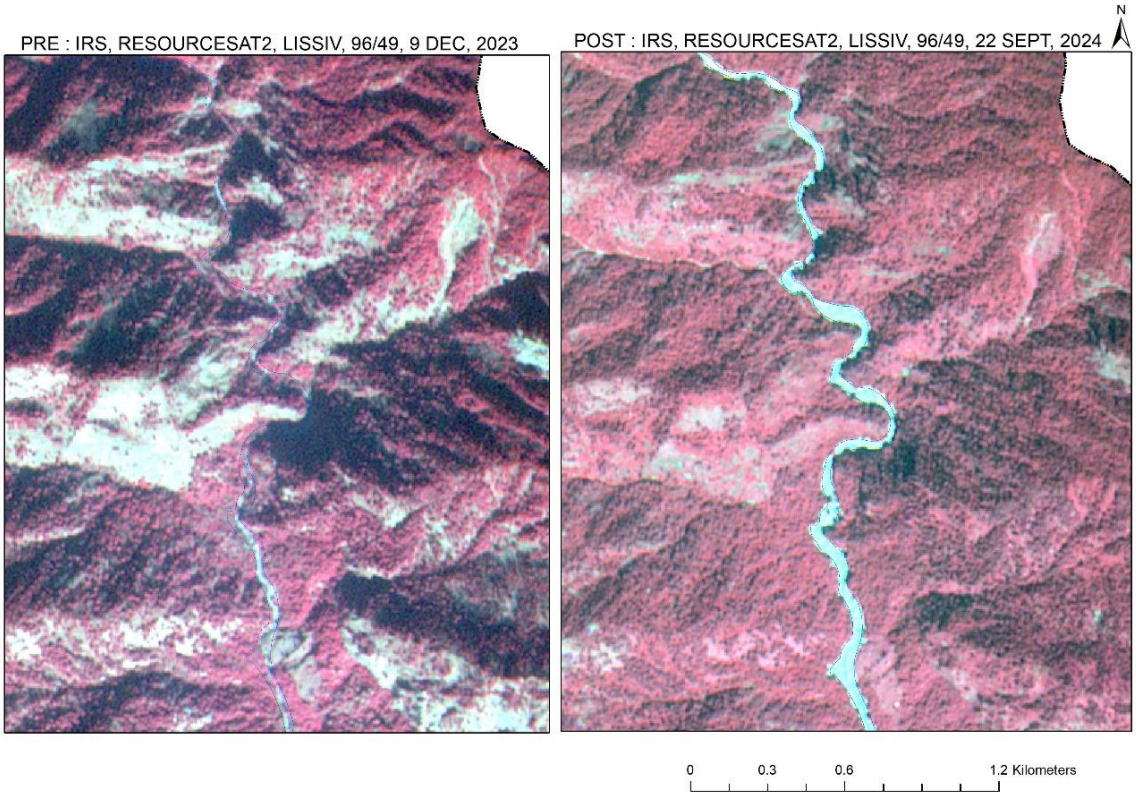

Fig-IV

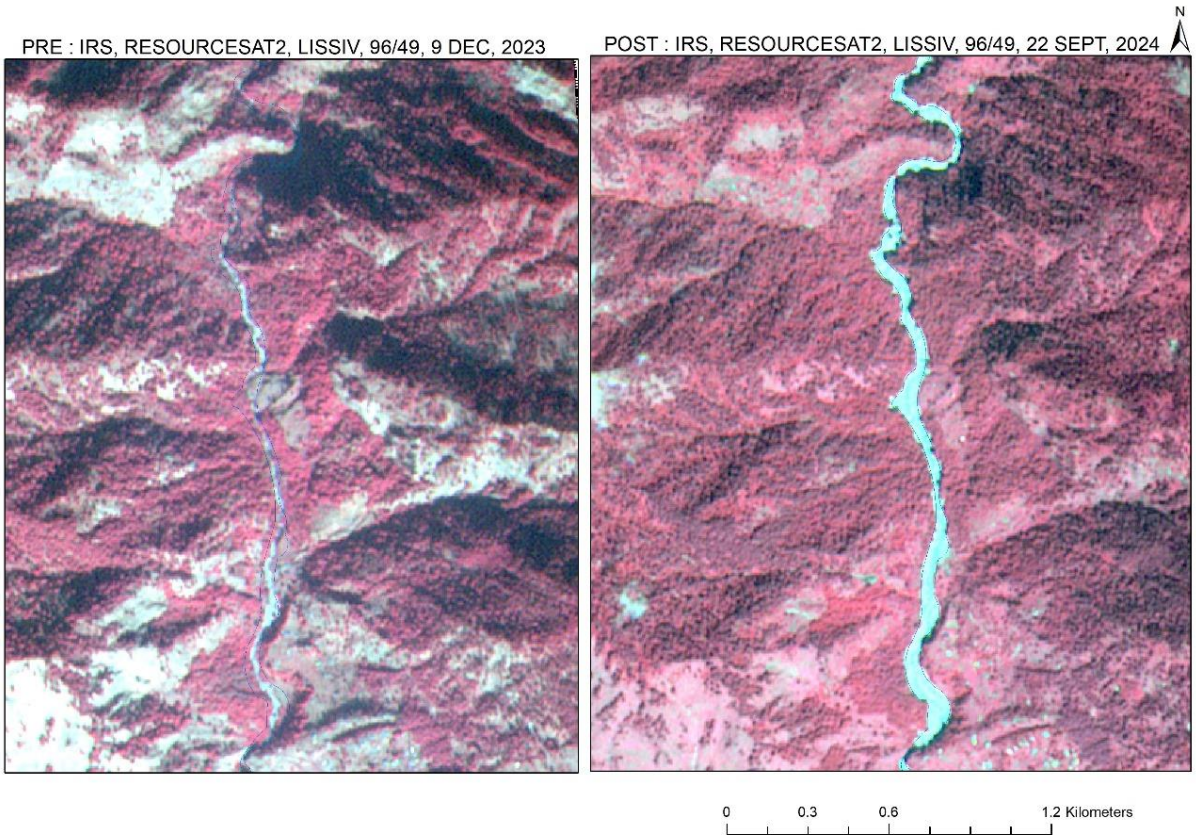

Fig:V: Samej Khad from upstream to downstream (Pre and Post Disaster)

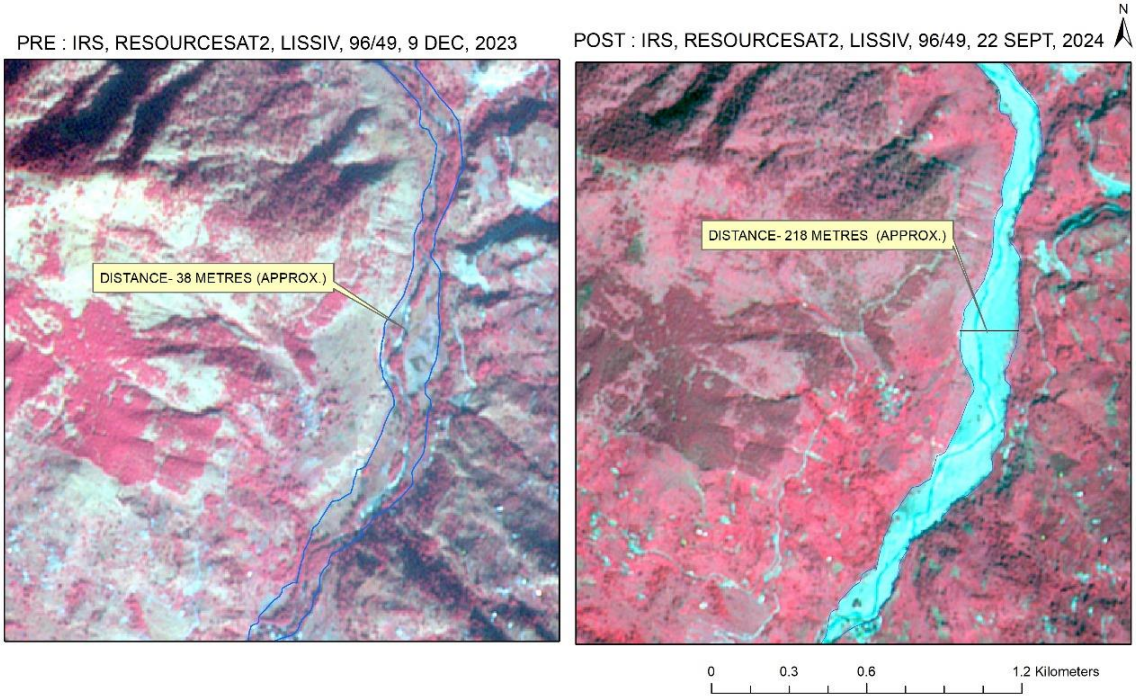

Fig-VI

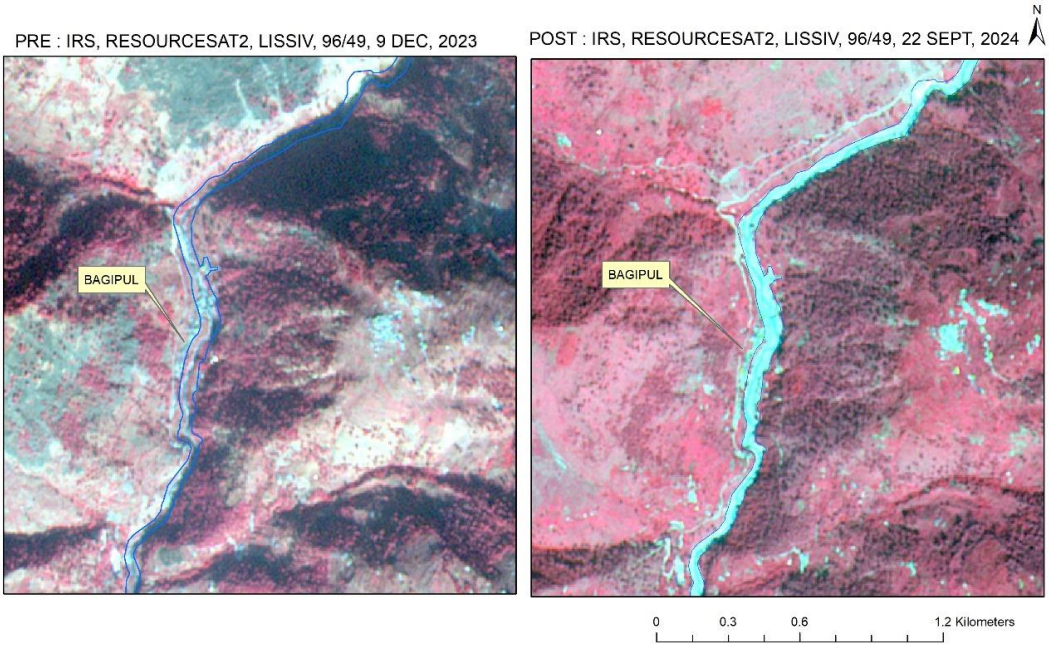

Fig-VII

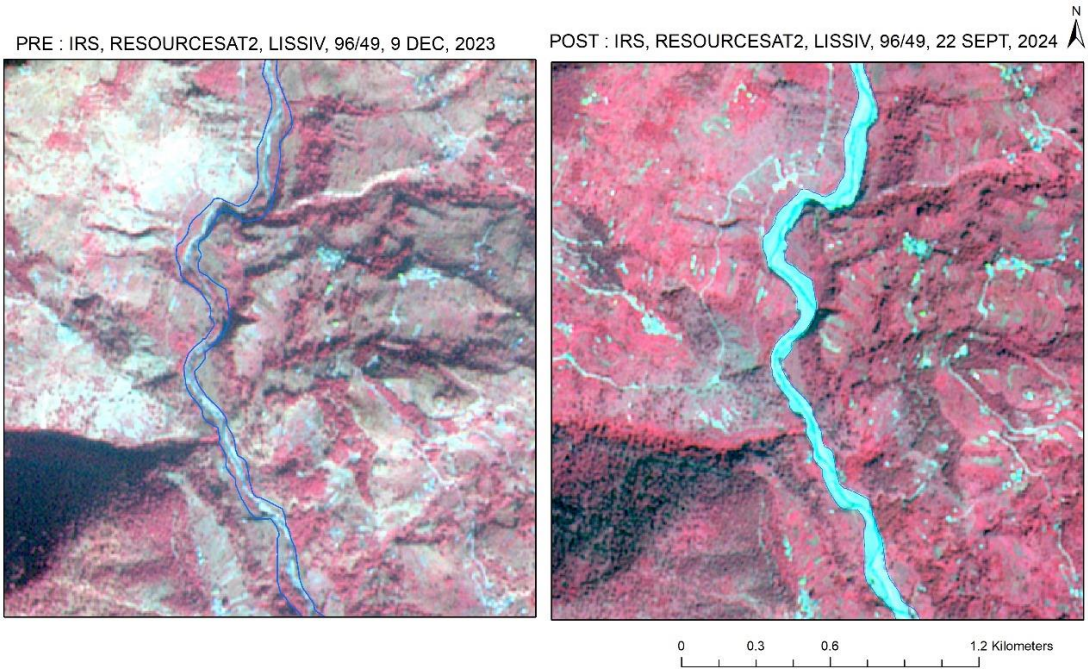

Fig-VIII : Kurpan Khad from upstream to downstream (Pre and Post Disaster)

Based on the satellite data analysis carried out by National Remote Sensing Centre (NRSC-ISRO) for 05th August having partial coverage of the affected aera and on 17th August 2024 having wide coverage of the affected area, the following observations are made:

- From the LISS IV satellite image of 05th August 2024, it is observed that major contribution of the inflow was from the left bank i.e along the Samej khad.
- The channel width observed to be enhanced from appox. 35mts (pre disaster) to appox. 118mts (Post disaster) (Fig-IX).
- From the analysis of high-resolution image of Satellogic Satellite having spatial resolution of 70Cm acquired on 17th August 2024, it is observed that the major destruction was to the built-up area that falls on the fluvial terrace near the confluence of two streams comely washing away about 15-16 houses along with heavy flow of water (Fig-X).
- Fig-XI reveals the extent of damage further downstream of the confluence reflecting the loss to the road sections and the houses along the riverbanks within the flood plains which were completely washed away.

- Fig-XII reflects that although the damage to the bult up was not much significant in this part, but the extent of water could be seen with its wide coverage along the either bank of the Samej khad.
- Fig-XII further reveals the wide flood extent all along the river course further downstream before its confluence with the Saltuj River.

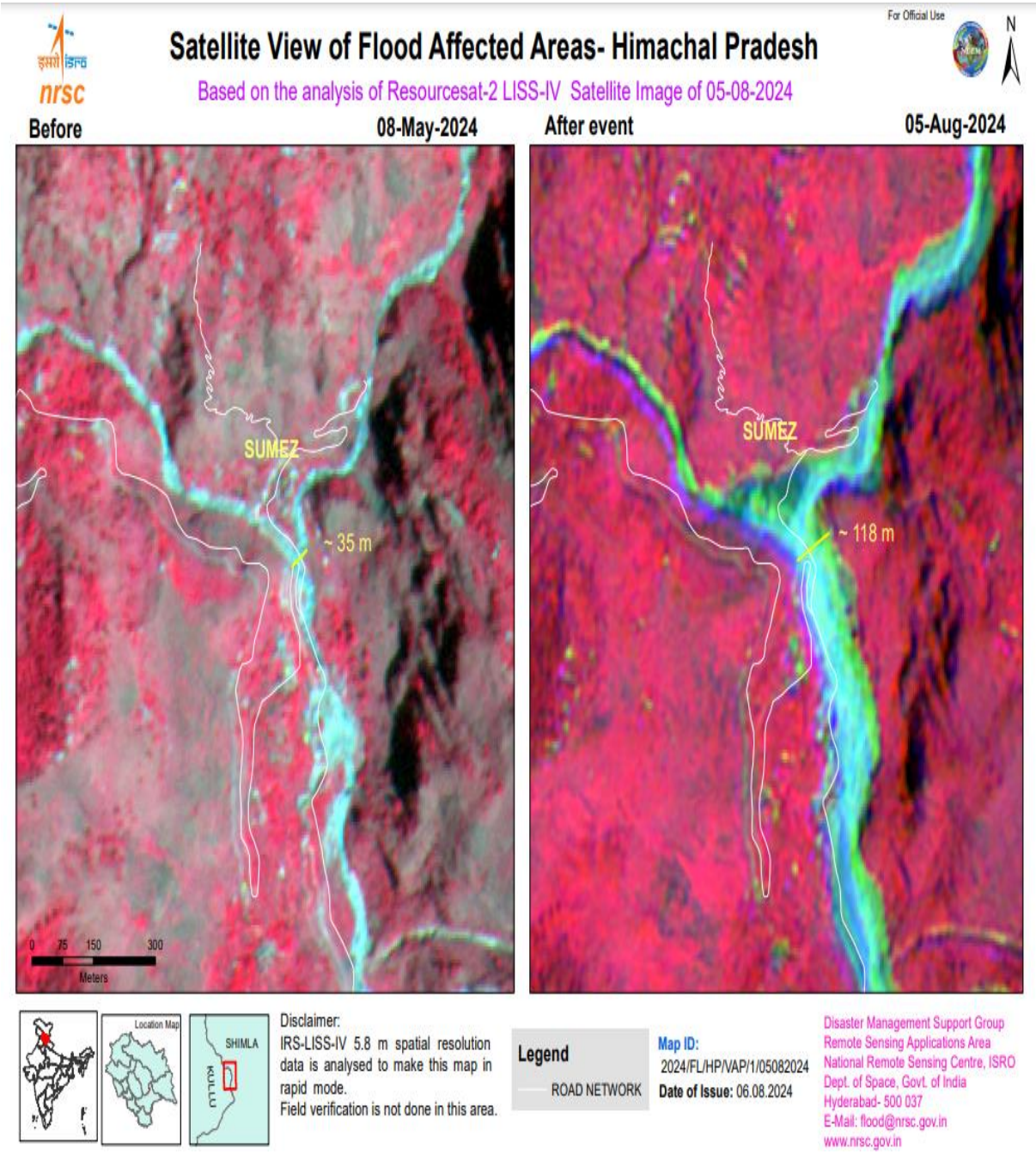

Fig-IX

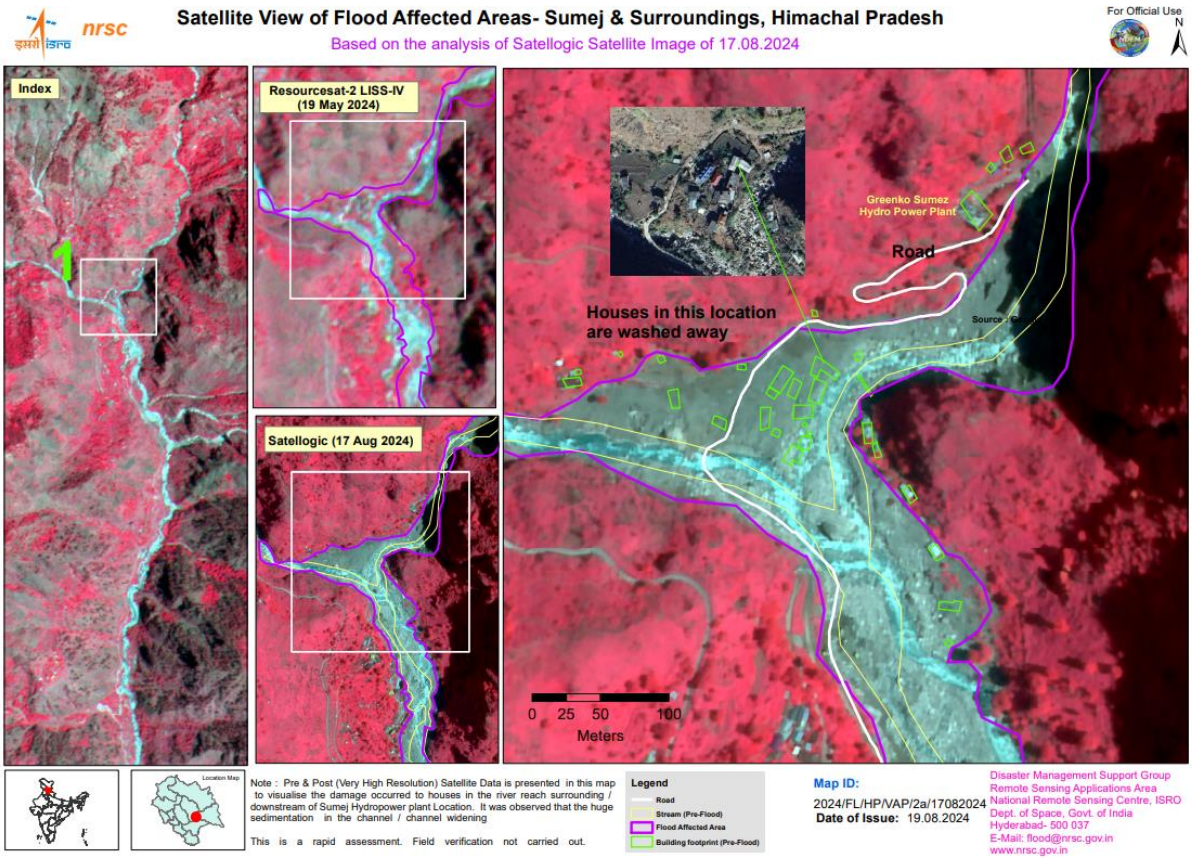
nrsc
Satellite View of Flood Affected Areas- Sumej & Surroundings, Himachal Pradesh
Based on the analysis of Satellogic Satellite Image of 17.08.2024
For Official Use
N
Index
1
Resourcesat-2 LISS-IV
(19 May 2024)
Satellogic (17 Aug 2024)
Greenko Sumez
Hydro Power Plant
Road
Houses in this location
are washed away
0 25 50 100
Meters
Note : Pre & Post (Very High Resolution) Satellite Data is presented in this map to visualise the damage occurred to houses in the river reach surrounding / downstream of Sumej Hydropower plant Location. It was observed that the huge sedimentation in the channel / channel widening
This is a rapid assessment. Field verification not carried out.
Legend
Road
Stream (Pre-Flood)
Flood Affected Area
Building footprint (Pre-Flood)
Map ID:
2024/FL/HP/VAP/2a/17082024
Date of Issue: 19.08.2024
Disaster Management Support Group
Remote Sensing Applications Area
National Remote Sensing Centre, ISRO
Dept. of Space, Govt. of India
Hyderabad- 500 037
E-Mail: flood@nrsc.gov.in
www.nrsc.gov.in

Fig-X

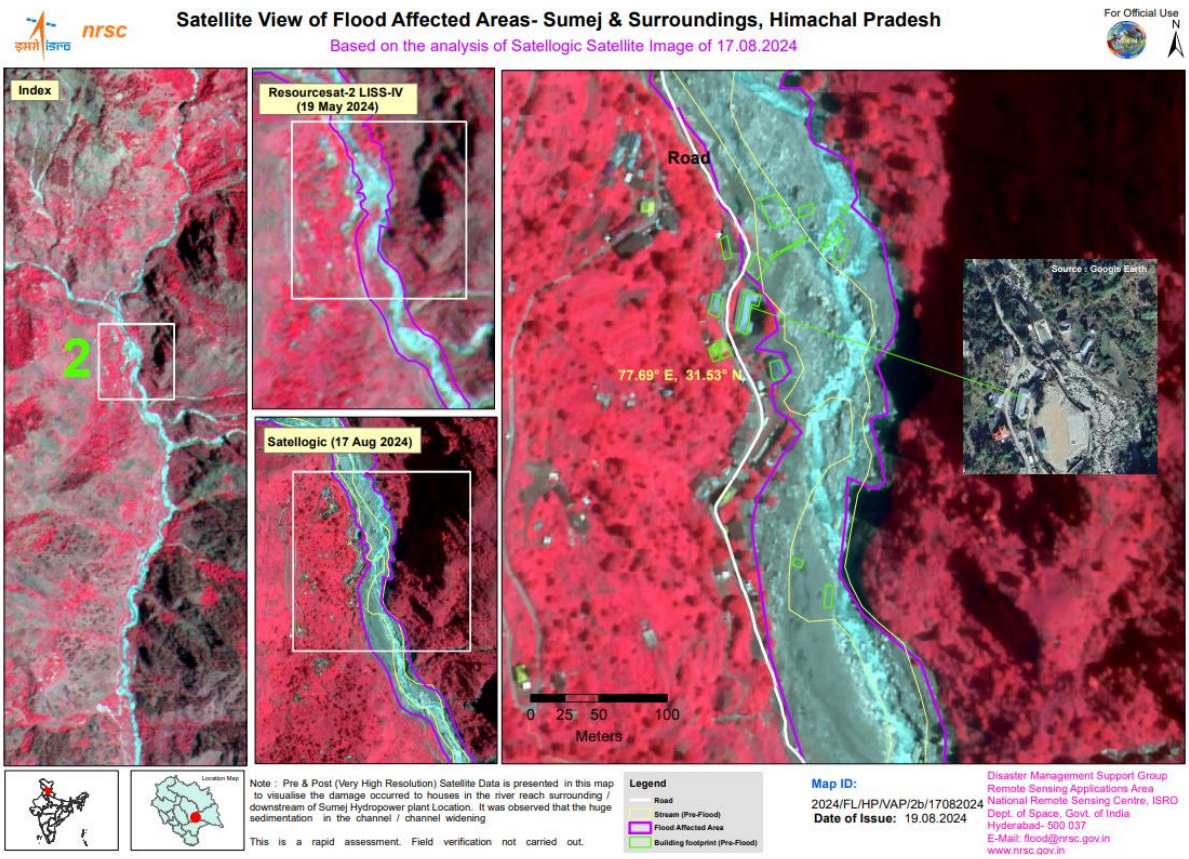
nrsc
Satellite View of Flood Affected Areas- Sumej & Surroundings, Himachal Pradesh
Based on the analysis of Satellogic Satellite Image of 17.08.2024
For Official Use
N
Index
2
Resourcesat-2 LISS-IV
(19 May 2024)
Satellogic (17 Aug 2024)
Road
77.69° E, 31.53° N
Source : Google Earth
0 25 50 100
Meters
Note : Pre & Post (Very High Resolution) Satellite Data is presented in this map to visualise the damage occurred to houses in the river reach surrounding / downstream of Sumej Hydropower plant Location. It was observed that the huge sedimentation in the channel / channel widening
This is a rapid assessment. Field verification not carried out.
Legend
Road
Stream (Pre-Flood)
Flood Affected Area
Building footprint (Pre-Flood)
Map ID:
2024/FL/HP/VAP/2b/17082024
Date of Issue: 19.08.2024
Disaster Management Support Group
Remote Sensing Applications Area
National Remote Sensing Centre, ISRO
Dept. of Space, Govt. of India
Hyderabad- 500 037
E-Mail: flood@nrsc.gov.in
www.nrsc.gov.in

Fig-XI

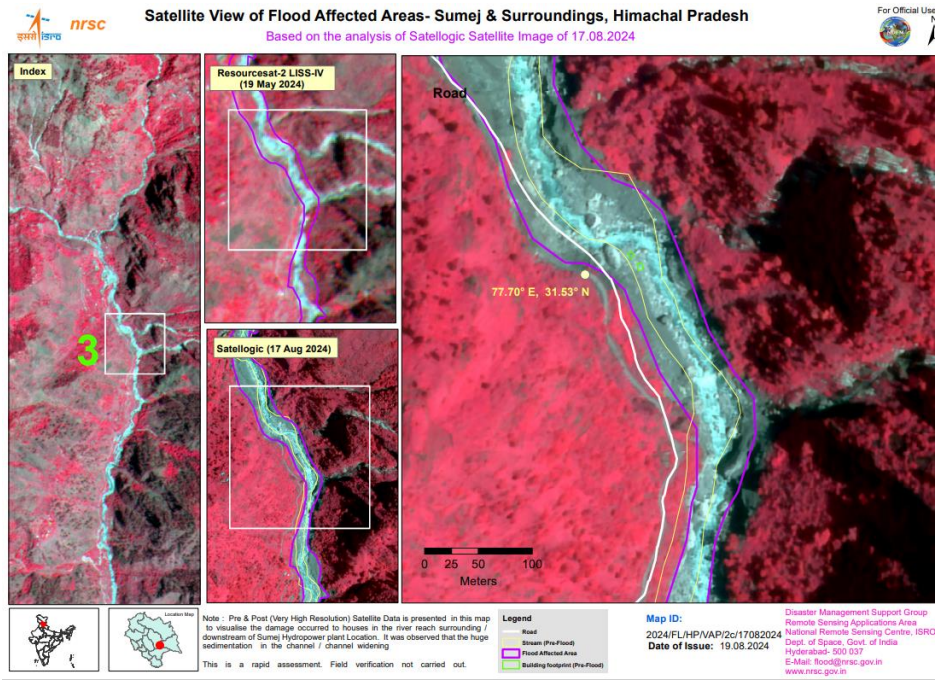

Fig-XII

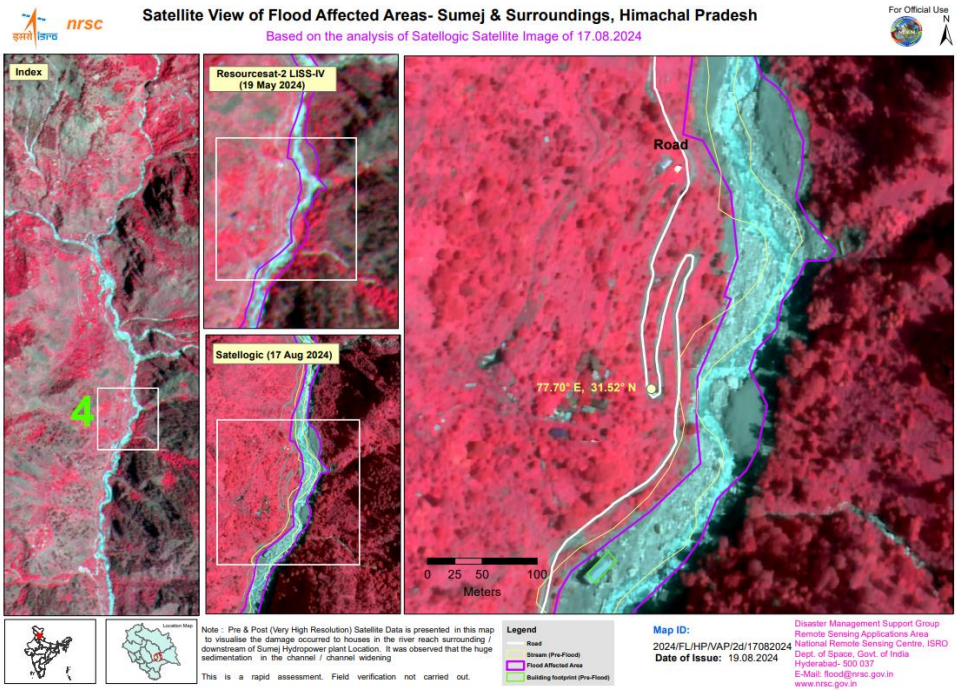

Fig-XII

Chapter -6

Relief Measures

On July 31, 2024, a series of cloudbursts in the Pir Panjal range resulted in devastating flash floods along the three valleys: Samej, Kurpan, and Ganvi Khad. These floods can be traced back to cloudbursts originating from the Shrikhand Mahadev mountain peak. A subsequent cloudburst over Malana led to further flooding in the Malana Khad area and the downstream villages.

Village Rajban Cloudburst incident:-

Step taken by District Administration-Mandi

- Relief Measures: ₹4 lakh relief given to the families of all 9 recovered bodies (total Rs. 36 Lakh) and 1 Injured - 15,000 rupees given (Total Rs 36.15 Lakh)
- The administration also distributed bedding (11 sets), blankets (11), gas cylinders (4), kitchen sets (4), and tarpaulins (10) to the affected families.
- Search and rescue operation is still going on and currently 92 personnel of NDRF, SDRF, Police, etc. working on the spot.
- Heavy machinery such as JCBs, Poclain, tippers and 20 labourers are assisting the relief operations.

- **Rescue Operation by NDRF - Village Rajban**

District Kullu:-

Two incidents of Cloudburst occurred at Shinghad and Samej on 1st August 2024.

Relief Measures taken by District Administration:

- Total loss reported – 11.05 Crore
- Relief Measures: Immediate Relief 8 lakh provided. Relief is being provided to other affected persons.
- The administration also distributed Rashan Kits-(40), and tarpaulins (50), hygiene kits (20) to the affected families.
- Deployed SAR Team comprises personnels from SDRF, ITBP and Home Guards and currently 53 personnel are working on the ground.
- Deployed earth removers such as JCB, LNT, etc.
- Efforts to restore connectivity and essential services in the affected area is going on.

Restoration Efforts :

District Shimla

Relief Measures taken by District Administration:

- An amount of Rs 20,15,000/- has been distributed to 31 person those houses were affected.
- Rashan Kit (27), Blanket (54) and tarpaulins (32) were distributed among the 36 families.

- To accelerate the pace of Search & Rescue Operation, Deputy Commissioner Shimla also requisitioned 06 excavators from Chairman & managing Director, SJVNL on 03rd August 2024.
- On 04th August 2024 NDRF team was deployed at Sunni (downstream) and assigned responsibility for searching and retrieving dead bodies of victims and Home Guard and Civil Defence deployed at Sunni (downstream) will be responsible to bring the bodies of victims via boat or by hand from river till road head and handover the bodies to SHO Sunni.
- District Administration Shimla coordinated with District Administration Kullu, Mandi, Kangra, Bialspur, Panchkula and Ambala for divers.
- District Administration has requisite 02 binoculars from District Forest Officer, Wildlife Shimla and also requisite 06 excavators from Chairman and managing Director, SJVNL.
- District Administration has ordered District Treasury Officer to remain open till 12 AM for distribution of emergency relief.
- District Administration has set up communication control room at Samej for smooth information dissemination.

Visit of the Hon'ble Chief Minister to the Affected Areas

Hon'ble Chief Minister visited the affected sites to assess the situation, supervise relief and rescue operations. The State Govt. issued directions for relief measures as under:-

- Each affected family will receive Rs. 50,000 as immediate assistance.
- Rs. 5,000 per month, for three months, for hiring rented accommodation for those who have been rendered houseless.
- Provide free essential items of basic needs such as ration, cooking gas, blankets and stoves.

Other relief measures taken by the State Government:-

- Allocation of Financial Resources: Funds amounting to Rs. 286 crore have been allocated for emergency response, relief and restoration efforts.
- Pre-Positioning of NDRF Teams: Placed NDRF teams strategically in Kullu Kinnaur and Shimla Districts to manage emergency situations.
- Emergency Helpline: floated emergency helpline numbers separate from the State/District Emergency Operations Centres.
- Search and Rescue Operations: Deployed teams to evacuate over 250 tourists from Malana, 300 Pilgrimises from Sri Khand Yatra.
- Specialized Rescue Team Formation: the State liaison with Army, Paramilitary forces, NDRF, CISF, SDRF, and local resources around 617 personnel (50 at Jaon/Bagipu in Kullu District; 481 in Samej affected Area of Shimla District and 86 in Tikkan affected area of Mandi Distrit) along with earth removers and necessary SAR equipment.
- Missing Persons Search Team: Established a specialized team comprising 84 personnel from NDRF, SDRF, Home Guards and Forest Guards to locate missing persons along the Satluj River.
- Requested State Government of Uttarakhand for providing assistance for tracing the missing persons.
- The Directorate of Forensic Services has been involved to conduct DNA based verification of the dead bodies.

- Liaoning with Electronics & Radar Development Establishment (LRDE-DRDO), Ministry of Defence for deployment of their Team along with equipment for tracing the missing persons.
- Liaison with National Remote Sensing Centre Hyderabad for providing satellite images before and after the Cloudburst event.

District Sirmaur:

On 26th September, 2024 in the Paonta Sahib area of Sirmaur, torrential rains have caused cloudburst led flash floods, particularly in the Aanj Bhoj area of Giripar, where 11 panchayats have been cut off from communication. The bridge over Amboya Khad was partially damaged due to debris, and vehicular movement has been halted to prevent accidents. The obstruction of this vital link has left the local population stranded, affecting access to essential services.

- Immediate Response: Sub-Divisional Officer (Civil), Paonta Sahib, Sh. Gunjit Singh Cheema, along with local officials, visited the affected areas and provided immediate assistance and relief.
- Relief Camps and Assistance: Local NGOs and the administration set up relief camps, distributing food, clothing, and other essentials. Approximately 100 affected individuals received immediate support.
- Restoration Efforts: Efforts are underway to restore damaged roads and infrastructure on a war footing. All officers and employees from various departments, including the Jal Shakti Department, Electricity Department, and Public Works Department, are actively engaged in restoration work.
- The situation is currently under control. The local administration is diligently working to restore normalcy in the affected areas, ensuring that all necessary support and assistance reach the affected population. An assessment reports along with News cutting and photographs of the affected areas were compiled by DEOC-Sirmaur as Annexure-A, B & C respectively.

District Wise details of Relief Camps is as under

Sr.No.	District	**Location of Relief Camp**	**Total number of beneficiaries**	**Description of Relief Camps**	**Duration of Relief Camp**	**Reason for running relief Camp**
1	Shimla	Vill Samej, Near Khad	Families : 37	Relief camp was equiped with food facility for 500-700 people on daily basis	01st August 2024 to 17th August 2024	Due to cloudburst incident at Samej, Rampur
2	Lahaul & Spiti	Vill Karpart/ Sub Division Udaipur	95	Flash Flood occurred at Karpat Nalluh on dated 27.07.2024 and due to which villager of Karpat was feared to come under its iimpact. therefore, relief camps were established in form of tempory tent shelter. One time food ration was provided to the villgers in camp.	27 July,2024 to 14 September, 2024	Flash Flood at Karpat Nalluh impacting the village of Karpat on dated 27.07.2024 & 03.08.2024
		Govt. Primary and Govt. Middle School Goharman, Panchayat Bhawan Goharman & Mahila Mandal Bhwan Goharman	36 (As a precuationary and preparedness measures the District Administration vide office order number 385/ DDMA dated 06-07-2024 for relief shelter were notified in village Goharman for the resident of Lindoor Villagers due to the land sinking, sliding & cracking issue in the village Lindoor.)	Govt. Primary and Govt. Middle School Goharman, Panchayat Bhawan Goharman & Mahila Mandal Bhwan Goharman	06-07-2024 to till further order	the land sinking, sliding & cracking issue in the village Lindoor
3	Kullu	Manali, District Kullu	13 (3 families)	GPS Kulang, Manali, District Kullu	25-07-2024 to till date	Cloudburst at Pagal Nala near Anjani Mahadev occured on dated 25.07.2024 in which House of Sh. Dhani Ram, Sh. Prem Chand and Sh. Jagdish were completely washed away. These families were shifted to the relief camp at GPS Kulang
4	Srimaur	Dhulakuan	100 person	Dhulakuan	26.07.2024	Provided with food and essestial items to victims of disaster.

Source: District Emergency Operation Centre

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Chapter – 7

Extent of Damages and Losses

The category wise losses/damages are detailed here under:

1. **Human lives lost**

   During this monsoon season 174 people lost their lives due to flash floods, landslides & fire. Ex-gratia amount of Rs 12.72 crores has been assessed for these human losses as per the prescribed relief norms (Rs.4.00 Lakh per deceased person). In addition, 144 people died due to various other reasons owing to heavy rainfall and disasters causing these deaths have been notified as State specific disaster. The ex-gratia for these deaths as per prescribed norms (4 lakhs per deseased) is being released by the state government under SDRF. In addition 31 people are missing (as on 19.09.2024) and 206 people were injured Ex-gratia amount of Rs 1.02 crores. Total loss on this account has been assessed to the tune of **Rs. 13.74 Crore**. (**Annexure-I**)

2. **Animal Husbandry**

   Total 222 animals including sheep, goats, cows, horses and buffaloes, died in incidents of flash floods across the state. 6500 Nos losses of poultry birds due to the flash flood in Una district. The monetary loss on this account has been assessed to Rs 0.46 crore. Other infrastructure (Damages to vertinary dispensary, hospital and Office of Deputy Director, Animal Husbandry) suffered a loss of Rs. 0.03 crore. In this season, the total of this sector loss has been assessed to **Rs. 0.49 Crore**. Detail is attached at **Appendix-IV**.

3. **Structures damaged (Houses, Huts, Cowsheds, etc.):**

   Due to the current disaster, a number of houses and others assets suffered moderate to severe damages. The details are as under:-

   - Fully damaged Kaccha and Pucca houses - 199
   - Partially damaged Kaccha & Pucca houses - 560
   - Cowshed, gharats, shops and laborsheds - 646

   Total - 1405

   Loss on this account has been assessed to the tune of **Rs. 23.29 Cr. (Annexure-V and Annexure-II)**

4. Damage to roads

Heavy incessant rains during the monsoon w.e.f. 27th June, 2024 to 23th September, 2024, rains have lashed almost the whole of the State and huge damages have taken place in the entire state. Many Districts especially Solan, Shimla, Kinnaur, Sirmour, Kullu, Mandi, Kangra and Chamba were the worst effected which received huge magnitude of rainfall which resulted in excessive damages to roads, bridges and culverts etc. Due to excessive rains, most of the roads got huge land slides, major stretches of roads were washed away, most of the culverts got blocked and even washed away due to sudden and huge inflow of rainy water carrying slush and big boulders. Retaining structures along the road, in thousands got washed away or extensively damaged. Due to blockage of cross-drainage & blocking of roadside drains with landslides the rain water mostly traversed on roads causing extensive damage to road crust.

The Department has assessed an estimated cost for restoration of damages as Rs. 621.77 crore. The Zone wise including National Highway and Circle wise details of damages caused to road conveying the quantum of damages and the amount required for immediate temporary restoration and also for permanent restoration is enclosed.

The total amount required for restoring the damages as per these details are as under:-

1. For immediate temporary restoration.

(a) for roads:	267.80 Cr
(b) for bridges and culverts	12.00 Cr.
Total Rs.	279.80 Cr.

2. For Permanent restoration

(a) for roads:	327.22 Cr
(b) for bridges and culverts:	14.75 Cr.
Total Rs.	341.97 Cr.

Grant Total: Rs. 621.77 crore

The Department has assessed the cost of restoration of roads and bridges to **Rs. 621.77 Crore.** The Zone and Circle wise detail of road damages and the amount required for immediate temporary restoration and for permanent restoration is given in **Annexure-III, Appendix VI and VII**.

5. Damage to Irrigation and water supply schemes

Himachal Pradesh is currently facing a severe crisis due to the extensive damage caused by incessant rains. The state's water-related infrastructure, including water supply systems, irrigation facilities, sewerage schemes, and flood protection works, has been significantly impacted by rivers in full spate.

From July 1, 2024, to date, a total of **6,943 schemes** have been reported damaged, comprising:

- **5,505 Water Supply Schemes**
- **1,213 Irrigation Schemes**
- **99 Sewerage Schemes**
- **69 Flood Protection Works**
- **57 Hand Pumps**

The total estimated financial loss is ₹540.88 crore. However, under the revised norms for assistance from the **National Disaster Response Fund (NDRF)** for natural calamities, the estimated eligible assistance for the Jal Shakti Vibhag comes to **₹134.42 crore**, as detailed below:

Items	Nature of Assistance	No. of Damaged Schemes/Hand Pumps	Total Cost of Assistance
Drinking Water Supply Schemes	₹2.00 lakh per damaged water supply scheme	5,505	₹110.10 crore
Repair of Hand Pumps	₹10,000 per damaged hand pump/Public Stand Post	57	₹5.70 lakh
Minor Irrigation Schemes	₹2.00 lakh per damaged minor irrigation scheme	1,213	₹24.26 crore
Total			**₹134.41 crore**

While the estimated total loss stands at ₹540.88 crore, the financial assistance from the NDRF based on Government of India norms is significantly lower at ₹134.41 crore, creating a shortfall in resources needed for recovery. The scheme wise detail of damages is given in **Annexure-IV**.

6. Damage to Agriculture Crops

Himachal Pradesh is a relatively small state in area and population and is geographically different from most Indian states in the plains. The State lies between 30˚22’40” and 33˚12’ 20” north latitude and 75˚45’ 55” and 79˚04’20” east longitude. Himachal Pradesh has relatively abundant water resources from major five river systems, mostly originating from glaciers. The five major river basins cover around 90% of the geographical area. The surface water resources of these river systems are perennial, originating from glaciers, and

the flow is further augmented by run-off from the downstream catchments. Most glaciers are small in size with length of 2-25 km and accumulation zone of 2-4 sq km. Due to the adverse effect of global warming phenomenon, constant recession phenomenon is recently hastening in these glaciers.

Climate and Agro-ecological Zones

Climatically, Himachal Pradesh is different from most plain states in India. In the State, three seasons such as Winter season (October to February), Summer season (March to June) and Monsoon season (July to September) are there. However, due to wide range in altitude, the climate of the State varies from sub-humid tropical (Elevation 350-1000 m) in the southern low tracts, warm and temperate (Elevation 1001-1,500 m), cool and temperate (Elevation 1,501-2,500 m), and cold alpine and glacial (Elevation 2,501- 6,975 m) in the northern and eastern mountain ranges.

Damage caused to Agricultural crops of Kharif, 2024 season due to heavy rainfall:

In the State of H.P., about 20% of area is sown in the month of April-May whereas 80% of area is sown in the month of June which is a peak Kharif sowing period. During July-August & Sept, 2024, the State of Himachal Pradesh received heavy rainfall in some pockets of the state due to which the Agricultural crops mainly Maize, Paddy & Vegetables were affected and substantial portion of cultivated land was washed away. As per the assessment, the total cropped area of 3503.83 Hectares was damaged and 228.92 Hectare land was washed away. The total damage including Crops, agriculture land, in terms of money value has been assessed around Rs. 1119.96 lakhs. District-wise information is as under

Sr. No.	District	Total Cropped Area affected in Ha.	Total Agriculture land washed away in Ha.	Total Losses (Crop+Land) Rs. In Lakhs
1.	Bilaspur	0.00	0.00	0.00
2.	Chamba	16.00	0.50	3.20
3.	Hamirpur	890.00	0.00	27.53
4.	Kangra	347.26	1.28	17.64
5.	Kinnaur	0.00	0.00	0.00
6.	Kullu	725.60	65.00	447.28
7.	L/Spiti	8.73	0.00	56.34
8.	Mandi	266.94	138.84	102.44
9.	Shimla	500.30	7.05	349.06
10.	Sirmour	588.00	16.25	72.39
11.	Solan	5.00	0.00	6.00
12.	Una	156.00	0.00	38.08
	Total	**3503.83**	**228.92**	**1119.96**

(The details of agriculture sector loss is given in Appendix-IIA and IIB and III)

7. Damage to Horticulture Crops

Horticulture is an important sector of economic development in the state contributing about Rs 5000 crore towards the states economy. This sector is major source of earning and employement in the state. Fruit crops covers about 2.29 lakh 89ectare of area of the state. Apple, mango, citrus and other stone fruits are major fruit crops grown in the state and constitute about 83 % of total fruit production. Apple is the dominating fruit crop of the State occupying about 48% of the total area under fruits & about 76.50 % of the total fruit production. About 5 lakh families are directly or indirectly involved in the Horticulture primarily fruit production & other allied activities like bee keeping, mushroom production, floriculture and fruit processing etc.

The current heavy rainfall has caused huge damges to the fruit orchards due to land slides and other scientific reasons.The abnormally high rainfall may cause various diseases in the fruit plants reducing the production to abysymally low levels. Size and colour of developing fruits is also affected greatly if rains are torrential. Transportation and marketing of the fruit produce has also been affected due to damages to roads. During the current heavy monsoon the fruit crops have suffered heavy losses to the tune of **Rs. 139.95 crores** till now and there is likelihood of further loss due to low production on account of various factors associated with the heavy rains. The detail of horticulture sector loss is given in **Annexure – VI**

8. Damage to Electricity Infrastructure

Incessant heavy rainfall and cloud bursts coupled with flash floods across the state during the monsoon season 2024, has caused massive damaged to the electrical infrastructure i.e. Transformers, Poles, HT & LT lines, Sub-Stations, towers and power stations being maintained by HPSEBL. In this regard, some following points are highlighted:

1. In the Operation wing, many transformers (including structures), HT & LT poles, HT & LT lines were buried in the soil and washed away in the river, due to which the route of HT/LT lines and transformers structure has to be changed and required shifting to other places.
2. At most places power has been restored through temporarily arrangements and alternative lines/sources.
3. In the Generation Wing, due to heavy rainfall/cloudburst in the catchment area of Ghanvi Khad on the night of 31.07.2024, a heavy flood occurred in Ghanvi Khad, causing extensive damage to various civil assets/components of the 2x11.25 MW Ghanvi Stage-I and 2x5 MW Ghanvi Stage-II Power Houses.
4. Besides this, properties of the Electrical Systems Wing were also damaged. Towers fromGhanvi Stage-l to Ghanvi Stage-II got damaged due to heavy flood occurred in Ghanvi Khad.

As of now the tentative damage to the electrical infrastructure of HPSEBL across the whole state during the monsoon season of 2024 (01.04.2024 to 22.09.2024) is Rs.12404.11lakh.A brief description of the damage is given below:

Sr. No.	Damage to the Electrical Infrastructure	Unit	Qty.	Amount (IN Lakh)	% of Reusable Materials
1	DTR	No.	363	801.51	2 to 5
2	Poles	No.	5600	744.12	2 to 5
3	LT Line	km	1675.43	5343.01	10 to 12
4	HT Line (11 kV & 22 kV)	km	951.88	3624.81	15 to 18
5	HT (up to 33 kV)	km	25.75	137.53	15 to 18
6	Damage to Retaining/Protection walletc. i/r Operation wing			272.87	0
7	Electrical System Wing			722.86	2 to 5
8	Generation Wing			757.40	2 to 5
Total Amount				12404.11	

The details of electric infrastructure sector is given in **Annexure – V**

9. Education

During the current disaster 77 buildings of government Schools were damaged. Many other have suffered minor damages. The total loss on this account has been assessed to **Rs 2.75 Crore.** The detail has been given in **Annexure-X.**

10. Urban Development

In this monsoon season there have been significant damages to the infrastructure of the Urban Development department. The total loss on this account has been assessed to **Rs 0.68 Crore**. The detail is given in **Annexure-VII.**

11. Rural Development

A lot of infrastructure like Panchayatghars, Mahila Mandal Bhawans, Community Centers etc. of the rural development department has sustained heavy damages during the current disaster. The total loss on this account has been assessed to **Rs 52.11 Crore.** The detail is given in **Annexure-VIII.**

12. Fisheries

Due to heavy rain and flood during the current monsoon season 2024 Rs. 0.90 Crore losses and damages has occurred in fisheries sector. The detail is given in **Annexure-XI.**

13. Health

The heavy rainfall during the monsoon period from 27 June to 25 September, 2024 has caused significant damage to the health infrastructure in the state. The estimated loss of **Rs. 1.98 Crore** indicates the severity of the impact on the state's healthcare facilities. The detail is given in **Annexure-IX.**

14. Removal of Debris in Community Areas

The removal of debris in the community area after a flash flood and landslide is a critical step in the recovery and rehabilitation process. Flash floods and landslides left behind a significant amount of debris, which caused a lot of obstruction in public places, roads, damage buildings, schools, agricultural land, houses and posed safety hazards to residents. Huge efforts in terms of machinery, manpower, etc. were mobilized to clear the debris. Details of expenditure/liability incurred are as under: -

Sr. No.	**Name of Districts/ Department**	**Quantum of debris (in Cubic meter approximated)**	**Rated as per cum for removal/dispose off.**	**Expenditure incurred (In Crore)**
1.	Shimla	114431.02	157.30	18.00
2.	Kullu	95359.18	157.30	14.50
3.	Public Work Department	222504.76	157.30	35.00
4.	Sirmaur	31786.40	157.30	0.50
Total				**68.00**

15. Relief Camps

Due to Cloudbrust and Flash flood situation in State, significant efforts were made to evacuate and rescue people stranded in the affected areas. Evacuation of about 1000 people and 250 people were rehabilitated to relief camp established in Samej and Bagipul. The people in relief camps were provided essential items. Expenditure incurred on relief and rehabilitation was **Rs. 10.12 Crore.**

Total Damages and losses are assessed at Rs 1613.50

Chapter 8
Summary of Claims
Summary of the total requirement of funds under NDRF

Sr No.	Items/Sectors	Amount required (Rs. In Crore)
1.	Gratuitous Relief (GR) Natural Calamity -174	13.74
2.	Removal of Debris from public places	68.00
3	Relief measures (for relief camps)- 7 Nos.	10.12
	Evacuation of stranded persons	-
4	Animal Husbandry- Assistance to small and marginal Farmers for loss of animals	0.46
(a)	Animal husbandry (structural loss)	0.03
5	Housing	23.29
6	PWD	621.77
7	Jal Shakti	540.88
8	Agriculture + Horticulture	
(a)	Agriculture crop loss	11.20
I	Loss of Agriculture land	1.60
(b)	Horticulture crop loss	139.95
I	Loss of horticultural land	
9	Power/Electricity	124.04
10	Education	2.75
11	Urban Development	0.68
12	Rural Development	52.11
13	Fisheries	0.90
14	Health	1.98
Grand Total		**1613.50**

Appendix-I

Extent of damages

STATE: HIMACHAL PRADESH

Nature and period of calamity: Cloud Burst, Flash floods, Landslides during Monsoon, 2024.

S.No.	Item			Detail
1	Total number of districts			**12**
2	Number and names of districts affected			12 (Bilaspur, Chamba, Hamirpur, Kangra, Kinnaur, Kullu, Lahaul&Spiti, Mandi, Shimla, Sirmaur, Solan, Una)
3	Number of villages affected			20690
4	Population affected (in lakh)			68.65 (as per 2011 census)
5	Total land area affected			55.673 sq. km
6	Cropped area affected			
	(i)	Total cropped area affected	Agriculture	**3503.83 hectares**
			Horticulture	
	(ii)	Estimated loss to crops	Agriculture:	**12.80**
			Horticulture :	**139.95**
			Loss of Agriculture land:	
	(iii)	Area where cropped damages was more than 33%	Agriculture	2567.80
			Horticulture	-
7	Percentage of area held by SMF:			
	(i)	In the State as a whole		87.95 %
	(ii)	In the affected districts		**12**
8	Houses damaged: -			
	No. of houses damaged :-			
	(i)	Fully damaged Pucca houses		81
	(ii)	Fully damaged kuccha houses		118
	(iii)	Severely /Partially damaged houses (Pucca+kuccha)		155+405

	(iv) No. of huts/cowsheds/Gharat etc. damaged	646
	(a) Estimated value of damage to houses	**23.29**
9.	No. of human lives lost	318(31 Missing)
10	No. of persons with grievous injuries	495
11	No. of persons with minor injuries	-
12	Animals lost:-	
	(a) No. of big Animals lost	103
	(b) No. of small Animals lost	106
	(c) No. of Poultry (birds) lost	6500
13	(a) Damage to public properties: - (1) PWD roads (sector wise detail should be given- e.g. length of state roads damaged, length of district roads damaged, length of village roads damaged. No of bridges damaged, No. of culverts damaged, No. of school building damaged etc) State Highways =0 km Major Distt. Roads= 640 km out of 4768Km Rural Road = 15235 km out of 33657 km Bridges = 17 Culverts = 459	**Rs. 621.77**
	(2) Irrigation & Public Health Rural and urban water supply schemes =5505 Irrigation schemes damaged =1213	**Rs. 540.88**
	(3) Power Damage to transformers, HT and LT lines, substation, EHB/HB line, and power houses of HPSEBL.	**Rs.124.04**
	(4) Animal Husbandry:	**Rs.0.49**
	(5) Health: Damage to various health institution buildings.	
	(6) Community assets: Damage to various community assets like village paths, MahilaMandalBhawans, YuvakMandalBhawans, PanchayatGhars etc.	**Rs. 52.79**
	(7) Fisheries	**Rs. 0.90**
	(8) Education	**Rs. 2.75**
	(9) Health	**Rs. 1.98**
	(10) Removal of debris	**Rs. 68.00**
	(11) Relief, Search and Rescue Operation	**Rs. 10.12 Crore**
14	Estimated total damage to Human lives, Houses, Crops and public properties.	**Rs. 1599.76**

Appendix – IIA

Statement showing loss assessment in terms of Money Value to Kharif crops in Himachal Pradesh during Monsoon, 2024.

Crop-wise Report of damages due to Heavy Rains/Flash Floods/Cloud Burst in respect of District/STATE for the season Kharif: 2024 as on 23.09.2024										HP STATE
Sr. No	**Name of Crops**	**Area (in Hectares)**		**Extent of area damaged under crops (in Hactares)**			**Damages of area under crops in terms of money value (Lacs.)**	**Land washed away/silted (Ha.)**	**Damages of Land washed away/silted in terms of money value (Lacs.)**	**Total Damages in terms of money value. (8+10) (in Lacs**
		Sown	**Damaged**	**Less than 33%**	**33% and above**	**Total (5+6)**				
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
A. Cereals										
1	Maize	270444.00	2147.70	1849.06	298.64	2147.70	147.87	60.90	97.87	245.74
2	Paddy	76004.00	150.08	132.54	17.54	150.08	16.99	67.58	89.51	106.50
3	Ragi	526.00	9.50	6.50	3.00	9.50	1.73	0.00	0.00	1.73
4	Millets	3083.00	25.20	18.20	7.00	25.20	1.98	0.00	0.00	1.98
5	Kharif Pulses	13425.00	133.20	71.20	62.00	133.20	14.13	21.40	40.34	54.47
Total (Cereals)		**363482.00**	**2465.68**	**2077.50**	**388.18**	**2465.68**	**182.70**	**149.88**	**227.72**	**410.42**
B. Commercial Crops										
1	Vegetables	41536	1016.82	477.80	539.02	1016.82	537.53	65.60	134.43	671.96
2	Potato	6157	17.33	8.50	8.83	17.33	21.21	13.44	15.53	36.74
3	Ginger	2642	2.00	2.00	0.00	2.00	0.34	0.00	0.00	0.34
4	Oil Seeds	2870	2.00	2.00	0.00	2.00	0.50	0.00	0.00	0.50
Total (Comm. Crops)		**53205**	**1038.15**	**490.30**	**547.85**	**1038.15**	**559.58**	79.04	149.96	709.54
Grand Total (A+B)		**416687**	**3503.83**	**2567.80**	**936.03**	**3503.83**	**742.28**	**228.92**	**377.68**	**1119.96**

Appendix – II B

Calculation of assistance for agriculture inputs subsidy- Small & Marginal Farmers (SMF)

Total Assistance for Agriculture crop loss of Kharif, 2024 season as per Norms of SDRF/NDRF as on 23.09.2024										
	Name of the affected District.	**Total Area Sown (in Hac.)**	**Total Agricultural area where Crop loss is >33% (in Hac.)**	**Out of (4) area belonging to SMF**			**Assistance sought for different categories of crops (Rs. In Lacs)**			**Total Assistance sought (Rs. In lacs)**
				Rainfed (in Hac.)	**Irrigated (in Hac.)**	**Perennial (in Hac.)**	**Rainfed (Rs. 8500x col.5A) (In lacs)**	**Irrigated (Rs.17000 x col.5B) (in lacs)**	**Perennial (Rs. 22500(x col.5C)**	
1	2	3	4	5A	5B	5C	6A	6B	6C	7(6A+6B+6C)
1	Bilaspur	29980	0.00	0	0	0	0.00	0.00	0.00	0.00
2	Chamba	30486	10.00	8	2	0	0.68	0.34	0.00	1.02
3	Hamirpur	33160	0.00	0	0	0	0.00	0.00	0.00	0.00
4	Kangra	110060	2.22	2	0	0	0.19	0.00	0.00	0.19
5	Kinnaur	2250	0.00	0	0	0	0.00	0.00	0.00	0.00
6	Kullu	17445	436.00	349	87	0	29.67	14.79	0.00	44.46
7	L/Spiti	2633	8.73	7	2	0	0.57	0.34	0.00	0.91
8	Mandi	68520	201.94	162	40	0	13.76	6.80	0.00	20.56
9	Shimla	14110	110.30	88	22	0	7.51	3.74	0.00	11.25
10	Sirmour	41820	155.84	125	31	0	10.61	5.27	0.00	15.88
11	Solan	32650	0.00	0	0	0	0.00	0.00	0.00	0.00
12	Una	33573	11.00	9	2	0	0.77	0.34	0.00	1.11
	Total	**416687**	**936.03**	**750**	**186**	**0**	**63.76**	**31.62**	**0.00**	**95.38**

Appendix-III

Total Assistance for Agricultural area damaged during Kharif, 2024 season as per Norms of SDRF/NDRF as on 23.09.2024					
Sr. No	**Name of the affected District.**	**Nature of Loss**	**Extent of loss (Area in Hac).**	**Rate per Hec. (Rs.)**	**Loss in money value (in Lacs)**
1	H.P. State	Cultivated Area washed away/damaged by land slides avalances and change of course of rivers	228.92	47000.00	107.59

Summary of Claim

1. **Loss of Agriculture Land : 1.08 Crore**
2. **Loss of Crops: 11.20 Crore**
3. **Cost of De-silting : 0.52 Crore**

Total: 12.80 Crore

Appendix-IV

Animal Husbandry (Replacement of animals)

	Name of the District	No. of Cattle lost				No. of animals qualifying for relief grant (i.e. subject to ceillling of 1 large milch animal or 4 small milch animals or 1 large draught animals or 2 small draught animal per household)				Assistance sought (Milch @ Rs. 37,500/- /Rs. 4000/- per animal and draught Animals @ Rs 32,000 and Rs. 20,000/- per animal				Total Rs.
		Milch Animal		Draught Animals		Milch Animal		Draught Animals		Milch Animal		Draught Animals		
		Buffalo/ Cow/ Camel	Sheep/ Goat	Camel/ Horse/ Bullock	Calf Donkey & Pony	Buffalo/ Cow/ Camel	Sheep/ Goat	Camel Horse/ Bullock	Calf Donkey & Pony	Buffalo/ Cow/ Camel	Sheep/ Goat	Camel/ Horse/ Bullock	Calf Donkey & Pony	
1.	BILASPUR	0	7	0	0	0	7	0	0	0	28000	0	0	28000
2.	CHAMBA	0	0	0	0	0	0	0	0	0	0	0	0	0
3.	HAMIRPUR	1	1	0	1	1	1	0	1	37500	4000	0	20000	61500
4.	KANGRA	11	0	0	0	11	0	0	0	412500	0	0	0	412500
5.	KULLU	39	53	3	7	39	53	3	7	1462500	212000	96000	140000	1910500
6.	KINNAUR	0	5	0	0	0	5	0	0	0	20000	0	0	20000
7.	LAHAUL & SPITI	0	0	0	0	0	0	00	0	0	0	0	0	0
8.	MANDI	6	13	0	3	6	13	0	3	225000	52000	0	60000	230000
9.	SHIMLA	20	25	0	1	20	25	0	1	750000	100000	0	20000	870000
10.	SIRMAUR	13	1	4	1	13	1	4	1	487500	4000	128000	20000	639500
11.	SOLAN	0	0	0	0	0	0	0	0	0	00	0	0	0
12.	UNA	6	1	0	0	6	1	0	0	225000	4000	0	0	229000
Total		96	106	7	13	96	106	7	13	3600000	424000	224000	260000	4508000

Total Nos. of Poultry Birds @6500 in Una district = Rs. 20000

Total claim as per MHA norms comes to Rs 0.46Cr

Appendix-V

Assistance sought for repair/restoration of damaged houses.

No. of houses damaged														
Sr. No.	Name of affected district	Fully damaged Pucca houses @ Rs.1,30,000 per houses		Fully damaged kutcha houses @ Rs. 1,30,000 per house		Partially damaged Pucca houses @ Rs.6500 per houses		Partially damaged kutcha houses @ Rs.4000 per house		Huts/ Gharats/ Business Premises@ Rs. 8,000 per Unit		Cowshed Sheds @ Rs.3000 per Shed		Total Amount in Crores
		No	**Amount (Lacs)**	**No**	**Amount (Lacs)**	**No**	**Amount (Lacs)**	**No**	**Amount (Lacs)**	**No**	**Amount (Lacs)**	**No**	**Amount (Lacs)**	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2	**BILASPUR**	4	0.052	5	0.065	7	0.00455	10	0.004		0	33	0.0099	**0.13545**
3	**CHAMBA**		0	1	0.013	6	0.0039	40	0.016		0	36	0.0108	**0.0437**
4	**HAMIRPUR**		0	6	0.078	1	0.00065	22	0.0088		0	14	0.0042	**0.09165**
5	**KANGRA**	4	0.052	29	0.377	17	0.01105	162	0.0648	2	0.0016	189	0.0567	**0.56315**
6	**KULLU**	1	0.013		0		0	5	0.002		0	3	0.0009	**0.0159**
7	**KINNAUR**	25	0.325	41	0.533	36	0.0234	15	0.006	1	0.0008	42	0.0126	**0.9008**
8	**LAHAUL & SPITI**		0		0	5	0.00325	1	0.0004		0		0	**0.00365**
9	**MANDI**	3	0.039	16	0.208	4	0.0026	83	0.0332		0	134	0.0402	**0.323**
10	**SHIMLA**	39	0.507	12	0.156	33	0.02145	21	0.0084	3	0.0024	24	0.0072	**0.70245**
11	**SOLAN**	2	0.026	4	0.052	26	0.0169	20	0.008		0	29	0.0087	**0.1116**
12	**SIRMOUR**	1	0.013	4	0.052	4	0.0026	6	0.0024		0	11	0.0033	**0.0733**
13	**UNA**	2	0.026	2	0.026	21	0.01365	22	0.0088	26	0.0208	14	0.0042	**0.09945**
TOTAL		**81**	**1.053**	**120**	**1.56**	**160**	**0.104**	**407**	**0.1628**	**32**	**0.0256**	**529**	**0.1587**	**3.7241**

Total Claim as per the MHA Norms –Rs. 3.72 Crore

Appendix-VI

Format for working out the requirements under the head of repair of damaged infrastructure of immediate nature
(Year 2024-25 w.e.f. 27-6-2024 to 23-9-2024)

Sr No.	Damage in physical terms	Infrastructure	Prescribed rates	Amount Required for restoration of immediate nature (Rs. in Cr.)
1	2	3	4	5
	Total Length = 7125 kms. out of 38425 Kms. (Excluding NH/NHAI) State Highways = 0 km out of 0 Km. Major Distt. Roads = 640 km (out of 4768 Km. Rural Road = 6485 kms. out of 33657 Kms. No. of RCC Culverts = 459 Nos. Bridges Washed Away = 5 Nos. Bridge Damaged = 12 Nos.	(i) Filling up of 'breaches and potholes, use of pipe for creating water way, repair and stone pitching of embankments. (ii) Repair of breached culverts (iii) Providing diversion to damaged/ washed out portion of bridge to restore immediate connectivity. (iv) Temporary repair of approaches to bridges/ embankment of bridge, repair of damaged railing	➢ Repair of State Highways/Major Distt. Road - in normal areas @ Rs. 1.00 lacs / Km. - In Hilly areas @ Rs.1.25 lacs / Kms. ➢ Repair of Rural/ Village roads with culverts. - in normal areas @ Rs. 60,000/- per Km. - in Hilly areas @ Rs.75,000/- per Kms. ➢ Repairs of RCC Culverts/Bridge - in normal areas @ Rs. 60,000/- per Km. - in Hilly areas @ Rs.75,000/- per Kms. in Hilly areas @ Rs.75,000/-per Kms.	Major Distt. Road. 640x1.25=800.00 Lacs **Say Rs.8.00 Cr**. Rural Road 6485x 0.75=4863.75 lacs **Say Rs.48.64 Cr.** Culvert 459x 0.75=344.25 lacs **Say Rs.3.44 Cr** 5x0.75=3.75 Lacs **Say Rs. 0.04 Cr.** 12x0.75= 9.00 Lacs **Say Rs.0.09 Cr.**

	Clear of debris in Public Places/ Road side through private and departmental machinery.	bridges, repair of cause way to restore to immediate connectivity, granular sub base, over damaged stretches of roads to restore traffic.	in Hilly areas @ Rs.75,000/-per Kms.	**Rs. 150.00** **Total:-210.21 Cr.**

Total Claim of Public Works as per the MHA Norms - Rs. 210.21

Appendix-VII

Format for working out the requirements under the head of repair of Damaged infrastructure of immediate nature(w.e.f 27-6-2024 to 23-9-2024)

Sector	Damage in physical terms	Requirement of funds for repair of immediate nature (Rs. In Cr.)	Out of (3), amount available from annual maintenance budget (Rs. In Cr.)	Out of (3), amount available from related schemes/programmers/other sources. (Rs. In Cr.)	Out of (3), amount proposed to be met from SDRF/NDRF in accordance with list of works indicated in the Appendix to the revised items and norms. (Rs. In Cr.)
1	2	3	4	5	6
Roads & Bridges	Total Length = 7125 km out of 38425 Km. State Highways = 0 km out of 0 Km. Major Distt. Roads = 640 km out of 4768 Km. Rural Road = 6485 km out of 33657 Km. Bridges Washed Away= 5 Nos. Bridge Damaged=12 No. No. of Culverts = 459 Nos. Slips-9375.00 thousand cum.	Rs. 279.80 Cr. for temporary restoration Rs.341.97 Cr for permanent restoration	-	Rs.37.00 Cr.	Rs. 621.77 (-) 37.00=584.77 Cr. Amount of damages has been calculated as per Scheduled of Rate (SOR) 1. Slip 157.30 per cum. 2. R/Wall =40000 per Rmt. 3. B/wall = 32000 per Rmt. 4. Culvert 4305 per Mts.

Appendix-VIII

Profile of the State

S.No.	Name of District	Total land area Sq.Km.)	Number of villages	Population Rate (in lakh)	Literacy Rate (in percent)	Total Cropped area (In ha.) 2015-16	% of SMF* (Holdings)	Inter-state rivers	Normal annual rainfall (mm)
1	2	3	4	5	6	7	8	9	10
1.	**BILASPUR**	1167	1061	3.82	84.59	56901	30.25	Satluj	981.2
2.	**CHAMBA**	6522	1591	5.19	72.17	67775	26.40	Ravi	1177.3
3.	**HAMIRPUR**	1118	1725	4.55	88.15	67710	30.70	Bias	1303.7
4.	**KANGRA**	5739	3869	15.10	85.67	213283	23.28	Bias	1522.3
5.	**KINNAUR**	6401	660	0.84	80.00	10646	41.42	Satluj	432.2
6.	**KULLU**	5503	326	4.38	79.40	59597	14.66	Bias	1191.6
7.	**LAHAUL-SPITI**	13841	521	0.32	76.81	3517	56.74	ChanderBhaga	550.9
8.	**MANDI**	3950	3338	10.00	81.53	160610	27.58	Bias	1625.1
9.	**SHIMLA**	5131	3231	8.14	83.64	86468	34.47	Satluj	1076.7
10	**SIRMAUR**	2825	976	5.30	78.80	75638	48.63	Jamuna	356.6
11	**SOLAN**	1936	2544	5.80	83.68	62455	52.87	Satluj	1344.2
12	**UNA**	1540	848	5.21	86.53	74025	34.38	Sawan	1243.2
Total	**HP**	**55673**	**20690**	**68.65**	**82.80**	**938625**	**29.88**	**-**	**1021.5**

Source: Economics and Statistics Department

Appendix-IX

Monthly Statement of expenditure from SDRF/NDRFYear: 2024-25 (Monsoon).

1. Opening balance at the beginning of the Month :**Rs. 114.37 Cr**
2. Releases during the Month, if any, from SDRF :**Rs. 210.00 Cr**
2.1 Central Share :**Rs. 189.20 Cr**
2.2 State Share :**Rs. 20.80 Cr**
3. Release during the Month , if any, from NDRF : **Rs. 60.10 Cr**
4. Interest on investments : **Rs. 0.00 Cr**
5. Total Availability of Funds(Sum of 1 to 4) : **Rs. 384.47 Cr**
6. Expenditure/Releases to the Distt. & Line Deptt. During this month : **Rs. 342.77 Cr**
7. Closing balance at the end of month(5-6) : **Rs. 41.70 Cr**

(in crore)

Code No.	Items	Calamity											
		Avalanche	Cloud burst	Cyclone	Drought	Earthquake	Fire	Flood	Hailstorm	Landslide	Pest Attack	Tsunami	Cold wave/Frost
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.	**Gratuitous Relief**				**74.41Crore**								
(a)	Ex-Gratia Payment to families of deceased persons												
	(i) As per SDRF/NDRF norms							24.41		20			
	(ii)Outside the Norms												
	(iii)Total no. of beneficiaries	443 No.s											
(b)	Ex-Gratia Payment for loss of a limb or eyes												
	(i)As per SDRF/NDRF Norms	-											
	(ii)Outside the norms	-											
	(iii)Total no. of beneficiaries	-											
(c)	Grievous injury requiring hospitalization												
	(i)As per SDRF/NDRF Norms							10.00		10.00			
	(ii)Outside the norms												
	(iii)Total no. of beneficiaries	771 No.s											

Code No	Items	Calamity											
		Avalanche /Snowfall	Cloud burst	Cyclone	Drought	Earthquake	Fire	Flood	Hailstorm	Landslide	Pest attack	Tsunami	Cloud wave/frost
1	2	3	4	5	6	7	8	9	10	11	12	13	14
(d)	Clothing and utensils /house hold goods for families whose house have been washed away/fully damaged /severely inundated for more than a week due to a natural calamity.												
	(i) as per SDRF/NDRF norms	-						5		5.00			
	(ii) outside the norms	-											
	(iii) Total no. of beneficiaries	-											
(e)	Gratuitous relief for families in dire need of immediate sustenance after a calamity. (GR to be provided to those who have no feed reserves, or whose food reserves have been wiped out in a calamity, and who have no other immediate means of support.)	-											
	(i) as per SDRF/NDRF norms												
	(ii) outside the norms												
	(iii) Total no. of beneficiaries												
2.	**Search & rescue operations**	**10.00 Crore**											
(a)	Cost of search and rescue measures/evacuation of people affected/likely to be affected												
	(i) as per SDRF/NDRF norms							5		5			
	(ii) outside the norms												
	(iii) Total no. of beneficiaries												
(b)	Hiring of Helicopter and Dozer for carrying immediate relief and saving lives.												
	(i)as per SDRF/NDRF	IAF Helicopters were hired for carrying out the recce of the affected areas and to carry out SAR operations, but the bills are still to be raised by the India Airforce.											
	(ii) outside the norms												
	(iii) Total no. of beneficiaries												
3.	**Relief Measures**	**11.76Crore**											
(a)	Provision for temporary accommodation ,food, clothing , medical care, etc. for people affected/ evacuated and sheltered n relief camps												
	(i) as per SDRF/NDRF norms							5		6.76			
	(ii) outside the norms												
	(iii) Total no. of beneficiaries												
(b)	Air dropping of essential supplies (Yes)												
	(i) as per SDRF/NDRF norms	-											
	(ii) outside the norms	-											
	(iii) Total no. of beneficiaries	-											
I	Provision of emergency supply of drinking water in rural areas and urban areas												
	(i) as per SDRF/NDRF norms	-											
	(ii) outside the norms	-											

Code No	Items	Calamity											
		Avalanche/Snowfall	Cloud burst	Cyclone	Drought	Earthquake	Fire	Flood	Hailstorm	Landslide	Pest attack	Tsunami	Cloud wave/frost
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	(iii)No of beneficiaries												
4.	**Clearance or affected areas**												
(a)	Clearance of debris in public areas.												
	(i) as per SDRF/NDRF norms												
	(ii) Outside the norms												
	(iii) Total eligible area(Ha.)	40000 square meter											
	(iv) No. of S&M farmers												
(b)	Draining off flood water in affected areas	-											
	(i) as per SDRF/NDRF norms	-											
	(ii) Outside the norms	-											
	(iii) Total eligible area(Ha.)	-											
	(iv) No. of S&M farmers	-											
I	**Disposal of dead bodies /Carcases**												
	(i) as per SDRF/NDRF norms	-											
	(ii) Outside the norms	-											
	(iii) Total eligible area(Ha.)	-											
	(iv) No. of S&M farmers	-											
5	**Agriculture/Horticulture**												
(i)	**Assistance to small and marginal farmers.**												
(A)	**Assistance for land and other loss**												
(a)	**De-silting of agricultural land (where thickness of sand /silt deposit is more than 3'' to be certified by the competent authority of the State Government)**												
	(i) as per SDRF/NDRF norms	-											
	(ii) Outside the norms	-											
	(iii) Total eligible area(Ha.)	-											
	(iv) No. of S&M farmers	-											
(b)	Removal of debris on agricultural and in hilly areas												
	(i) as per SDRF/NDRF norms	-											
	(ii) Outside the norms	-											
	(iii) Total eligible area(Ha.)	-											
	(iv) No. of S&M farmers	-											

Code No	Items	Calamity											
		Avalanche/Snowfall	Cloud burst	Cyclone	Drought	Earthquake	Fire	Flood	Hailstorm	Landslide	Pest attack	Tsunami	Cloud wave/frost
1	2	3	4	5	6	7	8	9	10	11	12	13	14
I	De-silting/Restoration/Repair of fish farms												
	(i) as per SDRF/NDRF norms	-											
	(ii) Outside the norms	-											
	(iii) Total eligible area(Ha.)	-											
	(iv) No. of S&M farmers	-											
(d)	Draining off flood water in affected areas												
	(i) as per SDRF/NDRF norms	-											
	(ii) Outside the norms	-											
	(iii) Total eligible area(Ha.)	-											
	(iv) No. of S&M farmers	-											
B	**Input subsidy (where crop loss is 50% and above)**												
(a)	**For agriculture crop, horticulture crops and annual plantation crops**												
	(i) as per SDRF/NDRF norms												
	(ii) Outside the norms												
	(iii) Total eligible area(Ha.)												
	(iv) No. of S&M farmers												
(b)	**Perennial Crops**												
	(i) as per SDRF/NDRF norms	-											
	(ii) Outside the norms	-											
	(iii) Total eligible area(Ha.)	-											
	(iv) No. of S&M farmers	-											
I	Sericulture												
	(i) as per SDRF/NDRF norms	-											
	(ii) Outside the norms	-											
	(iii) Total eligible area(Ha.)	-											
	(iv) No. of S&M farmers												
(ii)	Input subsidy to farmers other than small and marginal farmers												
	(i) as per SDRF/NDRF norms	-											
	(ii) Outside the norms	-											
	(iii) Total eligible area(Ha.)	-											
	(iv) No. of S&M farmers												

Code No	Items	Calamity											
		Avalanche /Snowfall	Cloud burst	Cyclone	Drought	Earthquake	Fire	Flood	Hailstorm	Landslide	Pest attack	Tsunami	Cloud wave/frost
1	2	3	4	5	6	7	8	9	10	11	12	13	14
6.	**Animal husbandry-Assistance to small and marginal farmers (Ex-Gratia)**												
(i)	Replacement of milchanimals drought animals or animals used for haulage.												
(ii)	(i) as per SDRF/NDRF norms												
	(ii) outside the norms												
	(iii)No. of beneficiaries												
(iii)	**Provision of fodder/feed concentrate cattle camps**												
(iv)	(i) as per SDRF/NDRF norms												
	(ii) outside the norms												
	(iii)No. of beneficiaries												
(v)	**Water supply in cattle camps**												
	(i) as per SDRF/NDRF norms												
	(ii) outside the norms												
	(iii)No. of beneficiaries												
	Additional cost of medicines and vaccine												
	(i) as per SDRF/NDRF norms												
	(ii) outside the norms												
	(iii)No. of beneficiaries												
	Transport of fodder to cattle outside cattle camps												
	(i) as per SDRF/NDRF norms												
	(ii) outside the norms												
	(iii)No. of beneficiaries												
(7)	**Fishery**												
(i)	**Assistance to Fisherman for repair/ replacement of boats, nets-damaged or lost**												
(ii)	(i) as per SDRF/NDRF norms												
	(ii) outside the norms												
	Input subsidy for fish seed farm												
	(i) as per SDRF/NDRF norms												
	(ii) outside the norms												
	(iii) Total eligible area (Ha.)												
	(iii) No. of fish farmers												

Code No	Items	Calamity											
		Avalanche/Snowfall	Cloud burst	Cyclone	Drought	Earthquake	Fire	Flood	Hailstorm	Landslide	Pest attack	Tsunami	Cloud wave/frost
1	2	3	4	5	6	7	8	9	10	11	12	13	14
8.	**Handicrafts/Handloom-Assistance to Artisans**												
(i)	**For replacement of damaged tools /equipment**												
	(i) as per SDRF/NDRF norms												
	(ii) outside the norms												
	(iii)No. of equipments												
	(iv) No. of beneficiaries												
(ii)	**For loss of raw material /goods in process/finished goods**												
	(i) as per SDRF /NDRF norms												
	(ii) outside the norms												
	(iii)Qty. of materials (Qtls.)												
	(iv) no of beneficiaries												
9.	**Housing**					**31.91 Crore**							
(a)	**Fully damaged/destroyed houses**												
(i)	**Pucca house**												
	(i) as per SDRF/NDRF norms**(Crore)**							6.00		5.00			
	(ii) outside the norms												
	(iii)Number	330											
(ii)	**Kuchha House**												
	(i) as per SDRF/NDRF norms**(Crore)**							5.00		5.00			
	(ii) outside the norms												
	(iii)Number	369											
(b)	**Severely damaged housed**												
(i)	**Pucca House**												
	(i) as per SDRF/NDRF norms												
	(ii) outside the norms												
	(iii)Number												
(ii)	**Kutcha House**												
	(i) as per SDRF/NDRF norms												
	(ii) outside the norms												
	(iii)Number												

Code No	Items	Calamity											
		Avalanche /Snowfall	Cloud burst	Cyclone	Drought	Earthquake	Fire	Flood	Hailstorm	Landslide	Pest attack	Tsunami	Cloud wave/frost
1	2	3	4	5	6	7	8	9	10	11	12	13	14
I	**Partially damaged housed-both pucca/kuccha (other than huts)where the damage is at least 15 %**												
	(i) as per SDRF/NDRF norms**(Crore)**							4.00		3.91			
	(ii) outside the norms												
	(iii)Number	3808 Pucca House, 3285 Kutcha House											
(d)	**Damaged/destroyed huts:**												
	(i) as per SDRF/NDRF norms							1.0					
	(ii) outside the norms												
	(iii)Number	103											
(e)	**Cattle shed attached with house**												
	(i) as per SDRF/NDRF norms							2.0					
	(ii) outside the norms												
	(iii)Number of cattles	2181											
10.	**Infrastructure**												
	Repair /restoration (of immediate nature) of damaged infrastructure												
(1)	**Road & bridges**							**102.07 Crore**					
(a)	Roads & Bridges**(Crores)**		25.00					45.00		32.07			
	(i) as Per SDRF /NDRF norms												
	(ii) Outside the norms												
	(iii) Cumulative length of roads repaired	18024 Km											
(b)	**Drinking water supply works and irrigation**							**73.75 Crore**					
	(i) as per SDRF/NDRF norms							22.0		21.0			
	(ii) outside the norms												
	(iii)Total of schemes							3123		4712			
I	**Irrigation**			**As per Col(B) above.**									
	(i) as per SDRF/NDRF norms							15.0		15.75			
	(ii) outside the norms												
	(iii) Total no. of schemes							982		746			
(d)	**Power(only limited to immediate restoration of electricity supply in**							**2.50 Crore**					
	(i) As per SDRF/NDRF norms		1.0					1.0		.50			
	(ii) Outside the norms												

Code No	Items	Calamity											
		Avalanche /Snowfall	Cloud burst	Cyclone	Drought	Earthquake	Fire	Flood	Hailstorm	Landslide	Pest attack	Tsunami	Cloud wave/frost
1	2	3	4	5	6	7	8	9	10	11	12	13	14
(e)	**School**												
	(i) as per SDRF/NDRF norms												
	(ii) outside the norms												
	(iii) No of School Buildings repaired												
(f)	**Primary Health Centers**												
	(i) as per SDRF/NDRF norms												
	(ii) outside the norms												
	(iii)No. of Primary Health Centers Buildings repaired												
	(iv)Repair of Public Buildings												
(g)	**Community assets owned by local bodies**				**25.73Crore**								
	(i) as per SDRF/NDRF norms		7.73					15.0		6.0			
	(ii) outside the norms												
	(iii)No of Community assets repaired	209 Nos., 14237 Kms											
11.	**Preparedness& capacity Buiding - 7.64 Crore**												
	Gross Total:-						**Rs. 342.77Crore**						

*(The details of expenditure, component wise is not available. The funds have been released to various departments as per their requirement. The figures shall be consolidated after the expenditure figures are available.)

Annexure -I

DISTRICT WISE DEATH DETAILS DURING THE MONSOON SEASON-2024

Sr.No.	District	Landslide	Flash Flood	Cloudburst	Accidental Drowning	Fire	Snake Bite	Electrocution	Fall from Tree/ Steep-Rock	Other*	Total Deaths
1	Bilaspur				4			3	1	1	9
2	Chamba	5			1				1	9	17
3	Hamirpur				5			1	4		11
4	Kangra				9			10	1	8	29
5	Kinnaur									2	3
6	Kullu		2		1				3	2	9
7	L & S		1		1						3
8	Mandi			9	4			2		9	26
9	Shimla			14	1				1	6	22
10	Sirmaur		1		3	1		6		5	17
11	Solan	1	1		2				1		9
12	Una		3		2			7	7		19
Total	TOTAL	**6**	**8**	**23**	**33**	**1**	**0**	**29**	**19**	**42**	**174**

Loss of Lives due to Road Accident

District	Bilaspur	Chamba	Hamirpur	Kangra	Kinnaur	Kullu	L & S	Mandi	Shimla	Sirmaur	Solan	Una	TOTAL
Death	9	14	5	22	5	10	0	19	20	8	22	10	144

Annexure-II

District	Loss to Private Property								
	Loss to Houses				Shops/Factory	Labour Sheds /Bridge/ Huts	Cow Sheds	Gharats/ ShamshanGhat	Monetary loss (Rs in Lakh)
	Fully Damaged		Partially Damaged						
	Pucca House	Kaccha House	Pucca House	Kaccha House					
Bilaspur	4	5	7	10	1		33		58.45
Chamba		1	6	39	2		36		48.86
Hamirpur		6	1	22			13		28.95
Kangra	4	27	17	162	5	2	186		192.228
Kinnaur	1			5			3		12.15
Kullu	25	41	36	15	36	1	42	27	1058
L&P			5						0.6
Mandi	3	16	4	83	1		134		187.155
Shimla	39	12	28	21	1	3	24		500.28
Sirmour	2	4	26	20	4		28		94.08
Solan	1	4	4	6			11		24.1
Una	2	2	21	22	14	26	13		124.555
Total	**81**	**118**	**155**	**405**	**64**	**32**	**523**	**27**	**2329.408**

Total Claim of Houses - Rs. 23.29 Crore

Annexure-III

HP Public Works Department

Zone wise/Circle wise detail of Rain/ Snow damages & machinery deployed on 28-07-2024

Sr. No.	Name of Zone/Circle	Total No. of roads closed.	Likely date of opening of roads			Total damaged amount. (in lacs)	Detail of Machinery deployed				Total machinery deployed	Bridges Damaged		Remarks
			09-10-2024	09-11-2024	After 11-9-2024		JCB			Dozer/Robot	Tipper		Damages	Washed Away
							Depdt.	Hired						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	Shimla Zone													
1	3rd Circle Solan	0	0	0	0	4084.19	10	48	2	7	67	0	0	
2	4th Circle Shimla	5	5	0	0	922.65	15	11	11	7	44	0	0	
3	11th Circle Rampur	9	3	3	3	3261.20	2	10	1	1	14	0	4	
4	12th Circle Nahan	3	2	0	1	4704.39	6	22	4	10	42	0	0	
5	14th Circle Rohru	22	22	0	0	2393.66	2	10	1	1	14	0	0	
	Total of Shimla Zone	39	32	3	4	15366.09	35	101	19	26	181	0	4	
	Mandi Zone													
1	1st Circle Mandi	9	7	0	2	5240.04	18	13	2	13	46	3	0	
2	6th Circle Kullu	0	0	0	0	2759.96	5	7	0	0	12	0	0	
3	Joginder Nagar	1	1	0	0	6485.92	4	11	0	5	20	0	0	
	Total of Mandi Zone	10	8	0	2	14485.92	27	31	2	18	78	3	0	
	Hamirpur Zone													
1	8th Circle Hamirpur	0	0	0	0	3331.51	1	3	0	0	4	0	0	

2	10th Circle Bilaspur	0	0	0	0	3794.29	2	1	0	0	3	0	0	
3	Dharmpur Circle	7	0	0	7	2281.16	5	5	0	9	19	0	0	
4	15th CirlceUna	0	0	0	0	6522.03	5	7	0	6	18	0	0	
	Total of Hamirpur Zone	7	0	0	7	15928.99	13	16	0	15	44	0	0	
	Kangra Zone													
1	5th Circle Palampur	10	0	0	10	10068.57	0	0	0	0	0	0	0	
2	9th Circle Nurpur	3	0	0	3	2172.81	0	0	0	0	0	0	0	
3	7th Circle Dalhousie	0	0	0	0	3024.40	0	0	0	0	0	0	0	
	Total of Kangra Zone	13	0	0	13	15265.78	0	0	0	0	0	0	0	
	National Highway													
1	SE (NH) Shimla	0	0	0	0	1089.90	1	1	1	1	4	0	0	
2	SE (NH) Shahpur	0	0	0	0	1184.73	5	7	3	10	25	0	0	
	Total of CE (NH)	0	0	0	0	2274.63	6	8	4	11	29	0	0	
	G. Total of State	**69**	**40**	**3**	**26**	**621.77**	**81**	**156**	**25**	**70**	**332**	**3**	**4**	
				G. Total		**621.77 Cr**								

Total loss of PWD infrastructure: 621.77 Crore

Annuxure-IV

Jal Shakti Vibhag

Rain Damage Abstract Division Wise 2024

Sr. No.	Name of Circle		Water Supply Scheme		Irrigation		Flood		Sewerage		Handpump		Total	
		Name of Division	Total No. of Water Supply Scheme Damaged	Approx. Amount (in Lakh)	Total No. of Irrigation Scheme Damaged	Approx. Amount (in Lakh)	Total No. of scheme damaged	Approx. Amount (in Lakh)	Total No. of STP Damaged	Approx. Amount (in Lakh)	Hand Pump affected	Approx. Amount (in Lakh)	Total No. of Scheme damaged	Approx. Amount (in Lakh)
1	**Dharamshala**	Dharamshala	30	647.70	15	370.40	5	20.00	29	274.50	21	20.00	100	1332.60
		Palampur	28	722.29	21	799.50	1	8.50	1	91.00	0	0.00	51	1621.29
		Sahpur	74	2024.45	8	181.25	2	30.00	1	38.00	0	0.00	85	2273.70
		Thural	38	1425.50	36	922.50	0	0.00	0	0.00	0	0.00	74	2348.00
		Dehra	18	584.69	4	94.80	0	0.00	1	28.00	0	0.00	23	707.49
		Nagrota Bagwan	38	793.50	14	288.00	1	42.00	3	175.00	0	0.00	56	1298.50
		Pragpur	25	156.35	6	44.00	0	0.00	0	0.00	0	0.00	31	200.35
		Baijnath	28	939.30	12	333.50	0	0.00	0	0.00	0	0.00	40	1272.80
		Jaisinghpur	31	1946.60	24	875.90	0	0.00	0	0.00	0	0.00	55	2822.50

		Jawalamukhi	5	249.60	2	64.00	1	35.50	1	15.00	0	0.00	9	364.10
	-	**Total**	**315**	**9489.98**	**142**	**3973.85**	**10**	**136.00**	**36**	**621.50**	**21**	**20.00**	**524**	**14241.33**
2	**Chamba**	Chamba	41	145.50	2	15.00	0	0.00	2	13.00	0	0.00	45	173.50
		Chowari	173	836.70	129	746.85	0	0.00	0	0.00	0	0.00	302	1583.55
		Salooni	125	406.00	11	48.55	0	0.00	1	24.00	0	0.00	137	478.55
		Churah	77	183.30	0	0.00	0	0.00	0	0.00	0	0.00	77	183.30
		Bharmour	43	183.25	2	17.00	0	0.00	0	0.00	0	0.00	45	200.25
	-	**Total**	**459**	**1754.75**	**144**	**827.40**	**0**	**0.00**	**3**	**37.00**	**0**	**0.00**	**606**	**2619.15**
3	**Nurpur**	Nurpur	93	539.60	3	11.25	0	0.00	3	16.00	0	0.00	99	566.85
		Jawali	34	83.90	1	10.00	0	0.00	0	0.00	0	0.00	35	93.90
		Fatehpur	31	172.00	10	39.90	0	0.00	0	0.00	0	0.00	41	211.90
		Indora	22	155.55	6	35.35	0	0.00	0	0.00	0	0.00	28	190.90
		S/Terrace	0	0.00	1	414.00	0	0.00	0	0.00	0	0.00	1	414.00
		PSMIP Sadwan	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	-	**Total**	**180**	**951.05**	**21**	**510.50**	**0**	**0.00**	**3**	**16.00**	**0**	**0.00**	**204**	**1477.55**
4	**Sundernagar**	Sunderngar	201	539.94	0	0.00	0	0.00	1	11.50	0	0.00	202	551.44
		Mandi	127	681.23	7	38.50	0	0.00	2	86.75	0	0.00	136	806.48
		Baggi	97	342.55	15	308.25	0	0.00	0	0.00	0	0.00	112	650.80
		Padhar	62	486.05	7	20.80	0	0.00	0	0.00	0	0.00	69	506.85
		Karsog	150	471.35	19	134.40	0	0.00	0	0.00	0	0.00	169	605.75

		Thunag	180	325.83	1	3.00	0	0.00	0	0.00	0	0.00	181	328.83
	-	**Total**	**817**	**2846.95**	**49**	**504.95**	**0**	**0.00**	**3**	**98.25**	**0**	**0.00**	**869**	**3450.15**
5	**Kullu**	Kullu	47	469.70	6	45.00	0	0.00	4	98.70	0	0.00	57	613.40
		Larji	170	1013.50	25	252.50	0	0.00	0	0.00	1	6.00	196	1272.00
		Anni	180	2069.70	45	699.50	0	0.00	0	0.00	1	6.00	226	2775.20
		Katrain	105	669.60	24	339.00	3	60.00	0	0.00	0	0.00	132	1068.60
		Keylong	88	584.00	85	918.00	7	230.00	0	0.00	**0**	0.00	180	1732.00
			590	**4806.50**	**185**	**2254.00**	**10**	**290.00**	**4**	**98.70**	**2**	**12.00**	**791**	**7461.20**
6	**Hamirpur**	Hamirpur	110	979.20	13	117.00	2	67.00	3	61.00	0	0.00	128	1224.20
		Nadaun	79	365.85	12	59.30	0	0.00	0	0.00	0	0.00	91	425.15
		Barsar	71	332.15	0	0.00	0	0.00	0	0.00	0	0.00	71	332.15
		Bhoranj	86	349.97	0	0.00	1	20.00	0	0.00	11	1.65	98	371.62
	-	**Total**	**346**	**2027.17**	**25**	**176.30**	**3**	**87.00**	**3**	**61.00**	**11**	**1.65**	**388**	**2353.12**
7	**Bilaspur**	Bilaspur	120	530.71	4	37.94	0	0.00	2	20.00	0	0.00	126	588.65
		Ghumarwin	95	284.50	1	2.50	0	0.00	6	24.60	0	0.00	102	311.60
		Jhandutta	48	403.25	3	38.50	0	0.00	0	0.00	0	0.00	51	441.75
	-	**Total**	**263**	**1218.46**	**8**	**78.94**	**0**	**0.00**	**8**	**44.60**	**0**	**0.00**	**279**	**1342.00**
8	**Una**	Una	40	293.00	31	182.00	0	0.00	7	130.00	0	0.00	78	605.00
		Haroli	45	468.70	65	503.27	0	0.00	0	0.00	0	0.00	110	971.97
		Thanakalan	30	404.80	12	53.55	0	0.00	1	45.00	0	0.00	43	503.35

		Gagret	65	281.20	65	439.55	0	0.00	0	0.00	0	0.00	130	720.75
		Amb	24	178.37	7	31.80	0	0.00	0	0.00	0	0.00	31	210.17
	-	**Total**	**204**	**1626.07**	**180**	**1210.17**	**0**	**0.00**	**8**	**175.00**	**0**	**0.00**	**392**	**3011.24**
9	**Dharampur**	Chauntra	92	713.10	29	321.50	0	0.00	1	24.50	0	0.00	122	1059.10
		Dharampur	85	977.49	29	230.10	2	45.00	1	17.00	0	0.00	117	1269.59
		Sarkaghat	146	916.25	10	119.00	0	0.00	1	10.00	0	0.00	157	1045.25
	-	**Total**	**323**	**2606.84**	**68**	**670.60**	**2**	**45.00**	**3**	**51.50**	**0**	**0.00**	**396**	**3373.94**
10	**Shimla-9**	Kasumpti	40	484.00	11	162.00	0	0.00	0	0.00	0	0.00	51	646.00
		Sunni	95	543.30	14	155.00	0	0.00	2	81.00	0	0.00	111	779.30
		Matiana	326	1339.30	28	84.00	0	0.00	4	58.60	0	0.00	358	1481.90
		Nerwa	190	407.20	22	107.00	2	28.00	0	0.00	0	0.00	214	542.20
	-	**Total**	**651**	**2773.80**	**75**	**508.00**	**2**	**28.00**	**6**	**139.60**	**0**	**0.00**	**734**	**3449.40**
11	**Rohroo**	Rohru	209	716.00	36	244.00	12	84.00	1	39.00	0	0.00	258	1083.00
		Jubbal	126	429.70	11	46.00	1	7.00	3	4.50	0	0.00	141	487.20
	-	**Total**	**335**	**1145.70**	**47**	**290.00**	**13**	**91.00**	**4**	**43.50**	**0**	**0.00**	**399**	**1570.20**
12	**Reckong-Peo**	Rampur	88	1673.30	13	132.00	0	0.00	3	160.00	0	0.00	104	1965.30
		Reckongpeo	33	226.50	13	182.80	0	0.00	0	0.00	0	0.00	46	409.30
		Pooh	14	54.50	14	208.44	0	0.00	0	0.00	0	0.00	28	262.94
		Kaza	22	142.00	24	275.00	4	40.00	0	0.00	0	0.00	50	457.00
	-	**Total**	**157**	**2096.30**	**64**	**798.24**	**4**	**40.00**	**3**	**160.00**	**0**	**0.00**	**228**	**3094.54**

13	**Nahan**	Nohradhar	72	354.00	24	146.00	0	0.00	0	0.00	0	0.00	96	500.00
		Paonta Sahib	54	232.80	10	63.60	0	0.00	0	0.00	0	0.00	64	296.40
		Rajgarh	50	422.00	9	51.00	0	0.00	0	0.00	0	0.00	59	473.00
		Nahan	69	297.17	0	0.00	0	0.00	0	0.00	20	6.50	89	303.67
		Shillai	138	428.00	26	219.00	0	0.00	0	0.00	0	0.00	164	647.00
	-	**Total**	**383**	**1733.97**	**69**	**479.60**	**0**	**0.00**	**0**	**0.00**	**20**	**6.50**	**472**	**2220.07**
14	**Solan**	Solan	97	959.70	19	132.00	0	0.00	4	64.40	0	0.00	120	1156.10
		Arki	45	229.25	10	47.40	0	0.00	1	10.00	0	0.00	56	286.65
		Nalagarh	143	532.65	46	165.30	0	0.00	3	13.25	0	0.00	192	711.20
		Baddi	154	786.53	57	262.82	0	0.00	6	51.35	3	3.50	220	1104.20
	-	Dharampur	43	691.00	4	28.00	0	0.00	1	25.00	0	0.00	48	744.00
	-	**Total**	**482**	**3199.13**	**136**	**635.52**	**0**	**0.00**	**15**	**164.00**	**3**	**3.50**	**636**	**4002.15**
15	**SRFMP Una**	**FPD Gagret**	**0**	**0.00**	**0.00**	**0.00**	**25**	**422.00**	**0**	**0.00**	**0**	**0.00**	**25**	**422.00**
-	**Total:-**	-	**5505**	**38276.67**	**1213**	**12918.07**	**69**	**1139.00**	**99**	**1710.65**	**57**	**43.65**	**6943**	**54088.04**

Total Claim of Jal Shakti Vibhag- Rs. 540.88 Crore

Annexure-V

Himachal Pradesh State Electricity Board

Report of Tentative damages to the electrical infrastructure due to Heavy Rain/Cloud burst/Flash Flood in r/o of HPSEBL during Monsoon Season 2024.																
Sr. No.	**Name of Zone (Op.)**	**Name of Circle**	**HT (33 kV) Damaged (In km)**	**Amount (Rs. in Lakh)**	**HT (22 kV) Damaged (In km)**	**Amount (Rs. in Lakh)**	**HT (11kV) Damaged (In km)**	**Amount (Rs. in Lakh)**	**LT Damaged (In km)**	**Amount (Rs. in Lakh)**	**LT/HT Poles Damaged (In No.)**	**Amount (Rs. in Lakh)**	**DTR (In No.)**	**Amount (Rs. In Lakh)**	**Damage to Retaining/Protection walletc. Amount (Rs in Lakh)**	**Total Funds Required (A+B+C+D+E+F+G) (Rs. in Lakh)**
				A		B		C		D		E		F	G	
1	Shimla	Shimla	0.00	0.00	25.99	77.97	9.07	18.14	63.64	127.28	216	21.60	8	8.00	20.00	272.99
		Rohru	0.00	0.00	17.54	52.61	0.00	0.00	31.92	63.84	134	13.40	2	2.00	15.00	146.85
		Rampur	0.00	0.00	29.20	87.60	0.00	0.00	49.40	98.80	365	36.50	10	10.00	50.00	282.90
		Nahan	0.00	0.00	0.00	0.00	258.45	516.90	630.80	1261.60	1199	119.90	96	96.00	40.00	2034.40
		Solan	0.00	0.00	0.00	0.00	205.84	411.67	257.22	514.44	801	80.10	12	12.00	30.00	1048.21
		Sub Total	**0.00**	**0.00**	**72.73**	**218.18**	**473.36**	**946.71**	**1032.98**	**2065.96**	**2715.00**	**271.50**	**128.00**	**128.00**	**155.00**	**3785.35**
2	Kangra	Kangra	5.85	2.93	0.00	0.00	83.40	41.70	167.76	83.88	701	35.05	111	111.00	9.52	284.08
		Dalhousie	3.80	1.90	0.00	0.00	75.19	37.60	60.10	30.05	373	18.65	36	36.00	29.85	154.05
		Sub Total	**9.65**	**4.83**	**0.00**	**0.00**	**158.59**	**79.30**	**227.86**	**113.93**	**1074.00**	**53.70**	**147.00**	**147.00**	**39.37**	**438.13**
3	Mandi	Mandi	2.10	50.88	10.70	112.35	22.31	211.05	116.90	993.61	487	97.40	27	56.96	17.50	1539.76
		Kullu	3.00	72.69	0.00	0.00	166.45	2017.37	179.73	2102.84	984	246.00	17	59.70	0.00	4498.61
		Sub Total	**5.10**	**123.57**	**10.70**	**112.35**	**188.76**	**2228.43**	**296.63**	**3096.45**	**1471.00**	**343.40**	**44.00**	**116.66**	**17.50**	**6038.36**
4	Hamirpur	Hamirpur	11.00	9.13	0.00	0.00	19.70	16.35	68.57	38.40	135	30.56	6	10.35	0.00	104.79
		Bilaspur	0.00	0.00	0.00	0.00	0.53	0.38	1.55	1.00	29	6.24	4	5.80	0.00	13.41
		Una	0.00	0.00	0.00	0.00	27.52	23.12	47.84	27.27	176	38.72	34	393.70	61.00	543.81

		Sub Total	**11.00**	**9.13**	**0.00**	**0.00**	**47.75**	**39.85**	**117.96**	**66.67**	**340.00**	**75.52**	**44.00**	**409.85**	**61.00**	**662.01**
	Total		**25.75**	**137.53**	**83.43**	**330.53**	**868.46**	**3294.28**	**1675.43**	**5343.01**	**5600.00**	**744.12**	**363.00**	**801.51**	**272.87**	**10923.85**

	Name of Zone/Wing	**Name of Circle/Power House**	**Description**	**Tatal Funds Required (In Lakh)**
5	Electrical System (ES) Wing	ES Circle, Hamirpur	Damage to Retaining wall, Tower foundation, crate wall, wire crate wall etc.	297.01
		ES Circle, Totu, Shimla-11	Damage to Retaining Wall/Protection Wall, Boundary wall, Breast Wall etc	425.85
		Sub Total		**722.86**
6	Generation Wing	2x11.25 MW Ganvi Power House Stage-I	Approach road to Power House - damage to wire crate wall / c.conc. d/s of baily bridge left bank of Ganvi Khad & witchyard protection work - damaged to wire crate wall / Concrete/ stone pitching etc.	151.00
		2x5 MW Ganvi Power House Stage-II	Damage to spur crate/ crates left bank up stream of Ganvi khad & Damaged to fencing along the road towards control structure/ reservoir etc.	265.30
		Nogli Power House 2.5 MW	Damage to temp. Diversion channel, Damage to temp. Diversion channel & Damaged to stone masonry at top of channel	8.00
		Thirot Power House	damaged to the path on different point including cutting/ removal of boulder on rocky portion from fore bay to intake	10.50
		Billing Power House	leakage in the HDPE water conductor pipe system and filling of earth for covering these pipes from intake, damaged to the construction of RCC bed at the intake	40.50
		Rongtong Power House	Damaged to trench weir, cement concrete protction provided downstream trench weir & weir crate protection works provided at intake of rongtong HEP	100.00
		Bassi Power House	Lower side of Retaining wall for Center Store of Bassi Power House adjoining to Neri Khad has been fallen and washed away in Khad, Retaining wall of Sub-ordinate Rest House lawn fallen	10.80

		Baner Power House	Damaged to switch yard area &drains / cable trenches, Approach road Diala to Power House slided/eroded earthen portion on left side of road etc.	112.10
		Chaba Power House	Damage to intake raised weir right side portion eroded due to flood in Nauty Khad.	4.20
		Sub Total		**702.40**
7	Kangra Zone (Op.) Power House	Purthi MHEP	Civil work damage :- Tras rack, Disilting tank, Fornay tank, Spill way Channel damaged due to heavy rain Purthi & Killar Power House	35.00
		Killar MHEP	Civil work damaged:-Water conducting system ,Trash rack , Disilting tank, Forbay tank , Spill way Channel damaged due to heavy rain Purthi, & Killar Power House	20.00
		Sub Total		**55.00**
		Grand Total		**12404.11**

Total Claim of Electric Infrastructure - Rs. 124.04 Crore

Annexure-VI

Horticulture Department

Assessment of Horticulture Cropped Area Affected due to Natural Calamity																								
Name of Calamity : Hails/ Heavy Rains/ Thunder Storms/ etc.																								
Report from dated 27-06-2024 to 18-07-2024																								
Sr. No.	**Name of District**	**Name of Horticulture crop affected**	**Category wise number of farmers affected**				**Category wise area affected (in hect.)**				**Loss to Nursery**			**Loss to progeny/ fruit Trees**			**Expected loss to fruit crop**				**Total Value (in lakh) (14+17+19+21)**	**Total area affected where crop loss is <33 %**	**Total area affected where crop loss is >33 %**
			No. of marginal farmers affected	**No of small farmers affected**	**No. of other farmers affected**	**Total no. of farmers affected**	**Marginal farmers**	**Small farmers**	**Other farmers**	**Total area affected**	**No. of plants completely destroyed**	**No. of plants partially damaged**	**Value (in Lakh Rs.)**	**No. of trees completely destroyed**	**No. of trees partially damaged**	**Value (in Lakh Rs.)**	**Quantitative loss (MT)**	**Value (in Lakh)**	**Qualitative loss (MT)**	**Value (in lakh)**			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	**Bilaspur**	Apple	20	9	2	**31**	0.6	0.2	0.2	**1**	0	0	0	0	0	0	1.984	1.3	0	0	**1.3**	**0**	1
		Galgal	151	88	22	**261**	15.7	10.4	2	**28.1**	0	0	0	0	0	0	28.7	6.02	5.4	0.81	**6.83**	1.8	26.3
		Guava	84	32	6	**122**	7.5	4.85	1.1	**13.45**	0	0	0	0	0	0	49.31	36.98	2.31	0.36	**37.34**	12.5	0.95
		K.	168	108	28	**304**	10.5	7.8	1.5	**19.8**	0	0	0	0	0	0	27.95	10.4	8.4	1.8	**12.27**	3.8	16

		Liime																7					
		Kinnow	121	62	15	**198**	7.5	3.5	1.5	**12.5**	0	0	0	0	0	0	20.75	6.12	1.4	0.21	**6.33**	1.3	11.2
		Litchi	232	112	35	**379**	38.5	11.4	2	**51.9**	0	0	0	0	0	0	104	57.2	5.55	0.78	**57.98**	16.7	35.2
		Mango	512	260	76	**848**	108.25	28	2.23	**138.48**	0	0	0	0	0	0	980	291.06	38	3.46	**294.52**	102	36.48
		Mausami	124	152	12	**288**	4.44	4.4	0.5	**9.34**	0	0	0	0	0	0	42.5	9.97	0.9	0.15	**10.12**	2.4	6.94
		Papaya	80	18	3	**101**	8	4.5	0.8	**13.3**	0	0	0	0	0	0	26.87	7.9	0.5	0.08	**7.98**	2.3	11
		Peach	12	2	0	**14**	0.16		0.6	**0.76**	0	0	0	0	0	0	1.212	0.31	0	0	**0.31**	0	0.76
		Pear	6	6	0	**12**	0.38	0.04		**0.42**	0	0	0	0	0	0	13.26	3.98	0	0	**3.98**	1.2	-0.78
		Plum	8	1	2	**11**	0.18		0.2	**0.38**	0	0	0	0	0	0	1.49	0.44	0	0	**0.44**	0.21	0.17
		Pomegranate	35	18	6	**59**	6.2	4.6	1.5	**12.3**	0	0	0	0	0	0	15.204	12.467	1	0.15	**12.617**	5.4	6.9
		Santra	128	60	14	**202**	9.2	7.5	0.5	**17.2**	0	0	0	0	0	0	18.655	6.44	1.15	0.18	**6.62**	1.7	15.5
		Others	184	72	12	**268**	0.5	0.028		**0.528**	0	0	0	0	0	0	18.265	3.945	0.67	0.1	**4.045**	0	0.528
		Total	**1865**	**1000**	**233**	**3098**	**217.61**	**87.218**	**14.63**	**319.458**	**0**	**0**	**0**	**0**	**0**	**0**	**1350.15**	**454.602**	**65.28**	**8.08**	**462.682**	**151.31**	**168.148**
2	**Hamir**	All	202	198	73	**473**	33.39	19.2	8.3	**60.9**	0	0	0	2285	5019	3.3	316.2	145.	0.15	1.6	**150.3**	27.0	2.32

	pur	Fruits						71		**61**						5		4			**5**	8	3
	Total		**202**	**198**	**73**	**473**	**33.39**	**19.271**	**8.3**	**60.961**	**0**	**0**	**0**	**2285**	**5019**	**3.35**	**316.2**	**145.4**	**0.15**	**1.6**	**150.35**	**27.08**	**2.323**
3	**Kullu**	Apple	1440	750	12	**2202**	368.2	147.7	1.3	**517.2**	0	0	0	0	0	0	375.48	88.13	407.27	111.66	**199.79**	452.1	65.1
		Pear	840	395	16	**1251**	161.2	66.2	0.7	**228.1**	0	0	0	0	0	0	164.8	28.67	206.4	48.39	**77.06**	221.7	6.4
		Plum	570	238	12	**820**	158.1	41.1	0.3	**199.5**	0	0	0	0	0	0	153.18	25.14	167.9	34.34	**59.48**	172.7	26.8
	Total		**2850**	**1383**	**40**	**4273**	**687.5**	**255**	**2.3**	**944.8**	**0**	**0**	**0**	**0**	**0**	**0**	**693.46**	**141.94**	**781.57**	**194.39**	**336.33**	**846.5**	**98.3**
4	**Mandi**	Apple	21	0	0	**21**	0.56	0	0	**0.56**	0	0	0	0	0	0	20	6	0	0	**6**	0.56	0
		Stone Fruits	4	0	0	**4**	0.08	0	0	**0.08**	0	0	0	0	0	0	5	1.25	0	0	**1.25**	0.08	0
		Flowers	1	0	0	**1**	0.03	0	0	**0.03**	0	0	0	750	0	0.083	0	0	0	0	**0.083**	0.03	0
	Total		**26**	**0**	**0**	**26**	**0.67**	**0**	**0**	**0.67**	**0**	**0**	**0**	**750**	**0**	**0.083**	**25**	**7.25**	**0**	**0**	**7.333**	**0.67**	**0**
5	**Shimla**	Apple	17416	5985	477	**23878**	6786.76	6678.72	951	**13416.5**		564	3	5730	1378	5876.8	25690.7	6215.43	5715.8	776.19	**12871.2**	13316.5	100
	Total		**17416**	**5985**	**477**	**23878**	**6786.76**	**6678.72**	**951**	**13416.5**	**0**	**564**	**3**	**5730**	**1378**	**5876.8**	**25690.7**	**6215.43**	**5715.8**	**776.19**	**12871.2**	**13316.5**	**100**
6	**Sirmour**	All Fruits	1025	1192	112	**2329**	419	314	97	**830**	0	0	0	27	0	0.34	615	99	201	9.2	**108.54**	836	13
	Total		**1025**	**1192**	**112**	**2329**	**419**	**314**	**97**	**830**	**0**	**0**	**0**	**27**	**0**	**0.3**	**615**	**99**	**201**	**9.2**	**108.5**	**836**	**13**

																4					**4**		
7	**Solan**	Apple	70	72	25	**167**	20.4	3.2	7.2	**30.8**	0	0	0	0	0	0	25.7	20.5	0	0	**20.5**	1	29.8
		Apricot	29	20	5	**54**	3	3	1	**7**	0	0	0	0	0	0	1.5	0.9	0	0	**0.9**	0	7
		Plum	55	60	30	**145**	33.2	12.3	3.2	**48.7**	0	0	0	0	0	0	9.9	7.86	0	0	**7.86**	0	48.7
		Peach	28	14	5	**47**	3	2	1.5	**6.5**	0	0	0	0	0	0	0.8	0.4	0	0	**0.4**	0	6.5
	Total		**182**	**166**	**65**	**413**	**59.6**	**20.5**	**12.9**	**93**	**0**	**0**	**0**	**0**	**0**	**0**	**37.9**	**29.66**	**0**	**0**	**29.66**	**1**	**92**
8	**Una**	Mango	190	10	0	200	30	3	0	33	0	0	0	0	0	0	111	22.2			**22.2**	33	0
		Citrus	80	0	0	80	10.7	1	0	11.7	0	0	0	0	0	0	35	5.25			**5.25**	11.7	0
		Other	36	0	0	36	4.2	0	0	4.2	0	0	0	0	0	0	8	2.25			**2.25**	4.2	0
	Total		**306**	**10**	**0**	**316**	**44.9**	**4**	**0**	**48.9**	**0**	**0**	**0**	**0**	**0**	**0**	**154**	**29.7**	**0**	**0**	**29.7**	**48.9**	**0**
Grand Total of All Districts :-			**23872**	**9934**	**1000**	**34806**	**8249.43**	**6378.71**	**1086.13**	**15714.3**	**0**	**564**	**3**	**8792**	**6397**	**5880.57**	**28882.4**	**7122.98**	**6763.8**	**989.46**	**13995.835**	**15227.9**	**473.771**

Total Loss of horticulture crops : 139.95 Crore

Annexure-VII

Urban Development Department

Report On Urban Department For The Period Of (27/06/2024 TO 25/09/2024)																		
Sr.No	Name Of District	ULB Name	Damage Of Internal Roads		Removal Of Debris From Road/ Drainage/ Sewerage Lines.(Brief Detail With Cost (In Lakh)		Electric Poles.		Electric Wires.		Damage Of Internal Water Supply Lines.		Damage Of Street Lights.		Damage Of Panchayat Ghars, Community Halls, Anganwadi, Etc.		Grand Total
			Length(In Mts)	Loss(In Lakh)	Description	Cost(In Lakh)	(In Nos)	Loss(In Lakh)	Length (In KM)	Loss(In Lakh)	Length (In Mts)	Loss (In Lakh)	Nos.	Loss (In Lakh)	Name Of Building.	Loss (In Lakh)	
1	BILASPUR	Municipal Council,Sri Naina Devi (Municipal Council)	0.2	1.95	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	-	0.00	1.95
2	BILASPUR	Municipal Council,Sri Naina Devi (Municipal Council)	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	Damage To 2 Existing Retaining Walls In W.N. 4 And 6	4.70	0.00
3	BILASPUR	Nagar Panchayat Talai (Nagar Panchayat)	4.38	32.00	Removal Of Debris	0.60	0	0.00	0	0.00	0	0.00	3	0.45	0	0.00	33.05
4	BILASPUR	Municipal Council Ghumarwin (Municipal Council)	0.95	26.00	Removal Of Debris And Damage To Drains	5.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	31.00
5	BILASPUR	Municipal Council,Sri Naina Devi (Municipal Council)	0	0.00	Removal Of Debris And Damage To Drains Of 100 Mtrs	0.80	0	0.00	0	0.00	0	0.00	0	0.00	-	0.00	0.80

6	BILASPUR	Nagar Panchayat Talai (Nagar Panchayat)	6.75	40.00	Removal Of Slip	0.50	0	0.00	0	0.00	0	0.00	6	0.90	0	0.00	41.40
7	HAMIRPUR	Municipal Council Sujanpur (Municipal Council)	0.6	3.00	Removal Of Debris From Road/ Drainage	0.50	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	3.50
8	HAMIRPUR	Municipal Council Sujanpur (Municipal Council)	0	0.00	Removal Of Debris From Road/ Drainage In Ward 8	0.70	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0.70
9	KANGRA	Municipal Council,Nurpur (Municipal Council)	0.42	21.84	Housing Board Colony Ward No 2, Kudi Ward No 5 & Near Kali Mata Mandir Bodh Ward No 7	15.00	3	0.40	0	0.00	0	0.00	3	0.24	0	0.00	37.48
10	MANDI	Municipal Council,Mandi (Municipal Council)	0	0.00	C/O Retaining Wall Near H/O Jagdish In W. No. 13 Thanehra	350000.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	350000.00
11	MANDI	Municipal Council,Mandi (Municipal Council)	2	5.00	REMOVAL OF DEBRIS AND CLEARANCE OF DRAINS	0.50	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	5.50
12	MANDI	Nagar Panchayat Sarkaghat (Municipal Council)	0.8	16.00	Removal Of Debris And Damage To Drains	4.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	20.00

13	MANDI	Nagar Panchayat Rewalsar (Nagar Panchayat)	1.5	2.00	Removal Of Debris From Drains And Road	0.50	0	0.00	130	0.10	0	0.00	2	0.05	0	0.00	2.65
14	MANDI	Nagar Panchayat Karsog (Nagar Panchayat)	1	1000000.00	Removal Of Debris From SWM Site	500000.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1500000.00
15	SHIMLA	Municipal Corp., Shimla (Municipal Council)	2.078	760.34	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	760.34
16	SHIMLA	Nagar Panchayat Sunni (Nagar Panchayat)	2	40.00	Land Slide Slips, Damages To Road, Drain In Ward No. 1,4,6	40.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	80.00
17	SHIMLA	Municipal Council, Rampur (Municipal Council)	0.4	20.00	R/O Path And R/Wall In Ward No. 2 Near HRTC Workshop	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	20.00
18	SHIMLA	Municipal Council, Rampur (Municipal Council)	0.3	25.00	R/O Path And Wall In Ward No. 8 And 9 At Rampur Bsr.	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	25.00
19	SHIMLA	Municipal Council, Rampur (Municipal Council)	0.01	6.00	Restoration Of Path Leading Towards Jaghatkhana Poll In Ward No. 3 At Rampur Bsr.	0.00	5	0.00	300	0.00	0	0.00	0	0.00	0	0.00	6.00

20	SHIMLA	Nagar Panchayat Sunni (Nagar Panchayat)	2.2	50.00	SWM Site Damages Due To Flood	50.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	100.00
21	SHIMLA	Municipal Council, Rampur (Municipal Council)	0.1	40.00	Ward 3Near House Of Deshraj And Rajeev Kumar No.3 Near House Of De	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	40.00
22	SIRMAUR	Municipal Council,Nahan (Municipal Council)	1.25	25.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	Damage Of Road Due To Heavy Rain From Ramkundi Towards Bankuwala Ward No. 1	0.00	25.00
23	SIRMAUR	Municipal Council,Nahan (Municipal Council)	0.196	3.92	Damage Due To Heavy Rain Path Mc Toilet To SDM Residence E.No. 9	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	3.92
24	SIRMAUR	Municipal Council,Nahan (Municipal Council)	0.8	16.00	Damage Due To Heavy Rain Path Nahan Kalaamb Road Towards The Chidawali Primary School W.No. 12	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	16.00

25	SIRMAUR	Municipal Council,Nahan (Municipal Council)	0.188	3.75	Damage Due To Heavy Rain Path Near Balmiki Basti W.No. 13 Nahan	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	3.75
26	SIRMAUR	Municipal Council,Nahan (Municipal Council)	0.19	3.75	Damage Due To Heavy Rain Path Ranital Gate To MC Toilet Near Nallah W.No.8	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	3.75
27	SIRMAUR	Municipal Council,Nahan (Municipal Council)	0.125	2.50	Damage Due To Heavy Rain Path Ravidas Mohalla W.No. 11	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2.50
28	SIRMAUR	Municipal Council,Nahan (Municipal Council)	1.4	2.00	Damage Due To Heavy Rain Path Smt. Madhu Attri To Shiv Mandir Shivpuri W.No. 5	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2.00
29	SIRMAUR	Municipal Council,Nahan (Municipal Council)	0.7	14.00	Damage Due To Heavy Rain Road Bharmkumari Ashram To Mc Park W.No. 4	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	14.00

30	SIRMAUR	Municipal Council,Nahan (Municipal Council)	0.45	9.00	Damage Due To Heavy Rain Road Co-Op Bank Near Chaugan To AVN School Ward No. 3	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	9.00
31	SIRMAUR	Municipal Council,Nahan (Municipal Council)	0.4	8.00	Damage Due To Heavy Rain Road Near The Luck General Store Towards The Sh. Vishal Tomar W.No. 6	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	8.00
32	SIRMAUR	Municipal Council,Nahan (Municipal Council)	0.55	11.00	Damage Due To Heavy Rain Road Yashwant Chowk To Home Guard Office W.No. 7	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	11.00
33	SIRMAUR	Nagar Panchayat Rajgarh (Nagar Panchayat)	0	0.00	Damage Of Ambedkar Bhawan Due To Settlement Of Soil/Foundation	5.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	5.00
34	SIRMAUR	Nagar Panchayat Rajgarh (Nagar Panchayat)	0	0.00	Damage Of Ambulance Road In W.No.6	15.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	15.00

35	SIRMAUR	Nagar Panchayat Rajgarh (Nagar Panchayat)	0	0.00	Damage Of Boundary Wall Of SDM Residence In W.No.1	3.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	3.00
36	SIRMAUR	Nagar Panchayat Rajgarh (Nagar Panchayat)	0	0.00	Damage Of Main Nallah From H/O Sh. Avinash Dani To Bhagta Village In W.No.5	4.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	4.00
37	SIRMAUR	Nagar Panchayat Rajgarh (Nagar Panchayat)	0	0.00	Damage Of Main Nallah In W.No.2	10.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	10.00
38	SIRMAUR	Nagar Panchayat Rajgarh (Nagar Panchayat)	0	0.00	Damage Of Main Nallah In W.No.4	10.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	10.00
39	SIRMAUR	Nagar Panchayat Rajgarh (Nagar Panchayat)	0	0.00	Damage Of Naali From H/O Sh. Bhoop Singh To Main Nallah In W.No.2	2.50	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2.50
40	SIRMAUR	Nagar Panchayat Rajgarh (Nagar Panchayat)	0	0.00	Damage Of Naali From SVN School To Main Nallah In W.No.4	3.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	3.00
41	SIRMAUR	Nagar Panchayat Rajgarh (Nagar Panchayat)	0	0.00	Damage Of Naali Near Radha Krishan Mandir In W.No.3	1.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1.00

42	SIRMAUR	Nagar Panchayat Rajgarh (Nagar Panchayat)	0	0.00	Damage Of Nallah Near H/O Sh. Satish Kumar Ex-President	2.50	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2.50
43	SIRMAUR	Nagar Panchayat Rajgarh (Nagar Panchayat)	0	0.00	Damage Of Path Behind H/O Sh. Sunil In W.No.6	2.50	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2.50
44	SIRMAUR	Nagar Panchayat Rajgarh (Nagar Panchayat)	0	0.00	Damage Of Path From Patwar Bhawan To Arya Samaj Mandir	5.85	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	5.85
45	SIRMAUR	Nagar Panchayat Rajgarh (Nagar Panchayat)	0	0.00	Damage Of Path Near H/O Miya Lal And H/O Jag Mohan In W.No.6	2.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2.00
46	SIRMAUR	Nagar Panchayat Rajgarh (Nagar Panchayat)	0	0.00	Damage Of Path Near H/O Sh. Krishan At Boundary Of W.No.2	3.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	3.00
47	SIRMAUR	Nagar Panchayat Rajgarh (Nagar Panchayat)	0	0.00	Damage Of Path Near H/O Sh. Rajender Sood In W.No.3	1.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1.00
48	SIRMAUR	Nagar Panchayat Rajgarh (Nagar Panchayat)	0	0.00	Damage Of Path Near H/O Smt. Reema In	2.50	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2.50

					W.No.7												
49	SIRMAUR	Nagar Panchayat Rajgarh (Nagar Panchayat)	0	0.00	Damage Of Path Near H/O Tara Chand In W.No.6	1.50	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1.50
50	SIRMAUR	Nagar Panchayat Rajgarh (Nagar Panchayat)	0	0.00	Damage Of Public Path From Sabji Mandi To ADM/DSP Office In W.No.1	2.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2.00
51	SIRMAUR	Nagar Panchayat Rajgarh (Nagar Panchayat)	0	0.00	Damage Of R/Wall Of Kanungo Office	3.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	3.00
52	SIRMAUR	Nagar Panchayat Rajgarh (Nagar Panchayat)	0	0.00	Damage Of Road And Retaining Wall Near Water Baory To H/O Shrikant In Purani Kotli Road In W.No.6	5.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	5.00
53	SIRMAUR	Municipal Council,Nahan (Municipal Council)	2.6	5000000.00	Damage Of Road Due To Heavy Rain CMO Office Towards Police Chowki Gunnughat Hospital Round Ward	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	5000000.00

					No. 2												
54	SIRMAUR	Municipal Council,Nahan (Municipal Council)	1.25	25.00	Damage Of Road Due To Heavy Rain From Ramkundi Towards Bankuwala Ward No. 1	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	25.00
55	SIRMAUR	Municipal Council,Nahan (Municipal Council)	0.4	8.20	Damage Of Road Due To Heavy Rain Near The Petrol Pump Sh. Pradeep Sahotra Up To The Nallah Rakesh Saini W.No. 12	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	8.20
56	SIRMAUR	Nagar Panchayat Rajgarh (Nagar Panchayat)	0	0.00	Damage Of Road From Maini Hardware To H/O Sh. Dinesh Thakur In W.No.7	8.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	8.00
57	SIRMAUR	Municipal Council,Nahan (Municipal Council)	2.65	53.00	Damaged Due To Heavy Rain CMO Office To Police Chowki Gunnughat Hospital Round W.No. 2	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	53.00
58	SIRMAUR	Nagar Panchayat Rajgarh (Nagar Panchayat)	0	0.00	Nallah Near H/O Smt. Prem Devi In W.No.6	4.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	4.00

59	SIRMAUR	Nagar Panchayat Rajgarh (Nagar Panchayat)	0	0.00	Path And Nallah Near H/O Shweta In W.No.5	3.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	3.00
60	SIRMAUR	Nagar Panchayat Rajgarh (Nagar Panchayat)	0	0.00	Path From H/O Som Raj To Water Tank Purani Kotli Village In W.No.7	2.50	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2.50
61	SIRMAUR	Nagar Panchayat Rajgarh (Nagar Panchayat)	0	0.00	Path Near H/O Sh. Balbir In W.No.1	4.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	4.00
62	SIRMAUR	Nagar Panchayat Rajgarh (Nagar Panchayat)	0	0.00	Path Near Water Baory In W.No.1	6.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	6.00
63	SIRMAUR	Nagar Panchayat Rajgarh (Nagar Panchayat)	0	0.00	Path, Railing And Naali Behind Horticulture Office In W.No.1	5.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	5.00
64	SIRMAUR	Nagar Panchayat Rajgarh (Nagar Panchayat)	0	0.00	Path, Railing And Naali Below H/O Smt. Sunita And H/O Smt. Jaymanti Hiteshi In W.No.1	5.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	5.00
65	SIRMAUR	Nagar Panchayat Rajgarh (Nagar Panchayat)	0	0.00	Tehsildar Road Near Tourism Rest House In W.No.1	3.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	3.00

66	SOLAN	Municipal Council,Parwanoo (Municipal Council)	2	12.00	Land Slide In Ward No 7 Nala Infront Of Block No. 21 To 24 And Infront Residential Block House No. 246 In Sukhna Nala And Sewer Line Behind Sh. Modgil House Near Temple And Road Damaged Near Hpmc Factory Towards Stp Plant Sector 2 Land Slide In Nal Behind Gausahal And Mc Shops Sector-1 Parwanoo	55.00	0	0.00	0	0.00	0	0.00	4	2.00	0	0.00	69.00
67	SOLAN	Municipal Council,Parwanoo (Municipal Council)	5.75	65.00	Removal Of Slips , Sewerage And Roads Due To Land Slide In All 9 Wards Mc Parwanoo	75.00	7	2.00	1200	3.00	0.5	12.00	6	3.00	0	0.00	160.00

68	SOLAN	Municipal Council,Parwanoo (Municipal Council)	5	55.00	Road Damaed Due To Heavy Rain From Msw Site Towads Railway Track And Sewer Line Damaged In Front Of Block No 25-26nad Bridge Of Gaberial Road Has Partially Damged In This Heavy Rain	45.00	0	0.00	0	0.00	0	0.00	7	3.50	0	0.00	103.50
69	SOLAN	Municipal Council,Parwanoo (Municipal Council)	3	32.00	Road Damged In Heavy Rain From Njpc Chowk To Rehan Basera And Om Sons Chowk To Pure Later With Nala Sector-1 Parwanoo	33.00	0	0.00	0	0.00	0	0.00	3	1.50	0	0.00	66.50
	Total		**54.587**	**6001438.25**		**850450.95**	**15**	**2.40**	**1630**	**3.10**	**0.5**	**12.00**	**34**	**11.64**		**4.70**	**6851918.34**

Total Claim of Urban Local Bodies - Rs. 0.68 Crore.

Annexure-VIII

Rural Development Department

Sr.No.	District /Block	Damage of village internal roads		Removal of debris from road/ drainage / sewerage	Damage of internal water supply lines		Damage of street lights Poles		Damage of Panchayat Ghar, community, Anganwadi etc.		Total loss in lakhs
		Length in KM	Loss in lakhs	line(Brief details with cost(In Lakh))	Length in Mtr	Loss in lakhs	Nos	Loss in lakhs	Number of building damaged	Loss in lakhs	
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
1	**Shimla**	2660.8	199.56	536	26	0.52	12	0.06	12	3	**739.14**
2	**Sirmour**	502.62	37.6965	236.1	23	0.46	10	0.05	0	0	**274.3065**
3	**Chamba**	4055.2	304.14	236.55	2356	47.12	2	0.01	6	1.5	**589.32**
4	**Mandi**	3299	247.425	300.1	1035	20.7	12	0.06	23	5.75	**574.035**
5	**Kangra**	3690	276.75	23.03	0.5	0.01	26	0.13	0	0	**299.92**
6	**Kullu**	2635	197.625	1025	14563	291.26	23	0.115	89	22.25	**1536.25**
7	**Solan**	2369	177.675	111.02	2003	40.06	10	0.05	0	0	**328.805**
8	**Una**	698	52.35	26	0	0	13	0.065	12	3	**81.415**
9	**Bilaspur**	236	17.7	13	0	0	0	0	2	0.5	**31.2**
10	**Hamirpur**	2369	177.675	52	10	0.2	0	0	0	0	**229.875**
11	**Kinnaur**	3693.3	276.9975	120	2303	46.06	12	0.06	42	10.5	**453.6175**
12	**Lahaul & Spiti**	233	17.475	20	0	0	0	0	1	0.25	**37.725**
	Total	**26443.92**	**1987.069**	**2703.8**	**22325.5**	**453.39**	**128**	**9.6**	**197**	**57.75**	**5211.609**

Total Claim of Panchayati Raj Institution - Rs 52.11Crore

Annexure-IX

Health and Family Welfare Department

Sr. No.	District	Health Center	Nos. Of Health Centre	Loss (in Lac)
1.	Kangra	CHC	4	60.49
2.	Kangra	PHC	10	50.60
3.	Shimla	PHC	2	5.00
4.	Kullu	PHC	9	7.00
5.	Mandi	PHC	12	36.00
6.	Solan	PHC	7	18.00
7.	Sirmour	CHC	1	3.00
8.	Una	PHC	8	18.00
Total			**53**	**198.09**

Total of Health infrastructure: 1.98 Crore

Annexure-X

Education Department

Sr. No.	District	Name of School	Loss (in Lac)
1	Chamba	Govt. High School Saloh	2.25
2	Chamba	Govt. Sr. Sec. School Baneta	2.15
3	Chamba	Govt. Sr. Sec. School Thulel	2.5
4	Chamba	Govt. Sr. Sec. School Hatli	2.5
5	Chamba	Govt. Sr. Sec. School Ghatasni	8.50
6	Mandi	GPS RAJBAN TERANG	2.50
7	Mandi	GPS Gangh	2.00
8	Mandi	GCPS Ropa	2.50
9	Mandi	GPS Deharu	4.00
10	Mandi	GPS Deharu GPS Sachan	4.00
11	Mandi	GPS BadiJhukan	2.00
12	Mandi	GCPS Thartukhod	2.50
13	Mandi	GCPS BHARAPATT	2.00
14	Mandi	GPS Sianji	2.00
15	Mandi	GMS Tikrimushera	2.00
16	Mandi	GPS Karkuhi	2.00
17	Mandi	GCPS Ropa	2.00
18	Mandi	GPS Bullang	2.50
19	Mandi	GCPS Deori	22.50
20	Mandi	GMS Fegal	5.00
21	Mandi	GPS Rosso	3.00
22	Mandi	GMS MehapBrahog	3.00
23	Mandi	GPS BagraGaloo	2.00
24	Mandi	GPS Ghanrtar	2.00
25	Mandi	GCPS Keolidhar	2.00
26	Mandi	GPS Khurahal	2.50
27	Mandi	GCPS Pressi	5.00
28	Mandi	GPS Khudhan	2.00
29	Mandi	GPS Ghain	6.00
30	Mandi	GCPS Sadhot	2.00
31	Mandi	GPS Chakli	3.00
32	Mandi	GPS Mandap	4.00
33	Mandi	GCPS KahnooSarech	2.00

34	Mandi	GCPS Bagshar	2.00
35	Mandi	GPS Shandal	3.00
36	Mandi	GPS Hawani	3.00
37	Mandi	GPS Gamohu	3.00
38	Mandi	GPS Jachh	2.00
39	Mandi	GPS Jyog	2.00
40	Mandi	GPF Tawarafi	2.50
41	Mandi	GPS Dhua Devi	2.12
42	Mandi	GPS Maddhar	2.30
43	Mandi	GPS Lusaikhad	2.25
44	Mandi	GPSHellan	2.00
45	Mandi	GCPS Gharwasra	5.00
46	Mandi	GPS Jodhan-2	5.00
47	Mandi	GPS Behna	4.00
48	Mandi	GCPSTebban	3.00
49	Mandi	GPS Patharon	3.00
50	Mandi	GPS KARSAN	4.00
51	Mandi	GPS Bharelan	2.60
52	Mandi	GMS Manal	3.00
53	Mandi	GPS Madhran	2.00
54	Mandi	GPS Ranidhar	3.00
55	Mandi	GPS Refal	2.50
56	Mandi	NASLOH	2.50
57	Mandi	MANDAP	2.00
58	Mandi	TARSWAN	2.50
59	Mandi	KHANI	2.00
60	Mandi	BIJAN DHALWAN	2.00
61	Mandi	DHARMEHAR	12.00
62	Mandi	LAPAS	4.00
63	Mandi	GAHANG	8.00
64	Mandi	BAAGPANDOL	2.50
65	Mandi	SARAUNJH	2.00
66	Mandi	GSSS Dassehra	5.00
67	Mandi	GHS PANJAN	3.00
68	Mandi	BALH	2.50
69	Mandi	JHANGI	15.00
70	Mandi	GUMMA	3.00
71	Mandi	Sari	3.50

72	Mandi	Narwandhi	8.00
73	Mandi	SERLAKHABOO	2.00
74	Shimla		2.35
75	Sirmaur	GHS Bhatanwali	2.5
76	Una	GSSS MawaKohlan	5.0
77	Una	GSSS Pubowal	5.0
78	Una	GSSS Heeran	2.0
Total			**277.52**

Total Loss of education infrastructure: 2.77 Crore.

Annexure-XI

Fisheries Department

Sr.No.	Name of District	Details of Department Losses	Losses		Total Loss(In Rupees)	Remarks
			Livestock Loss	Infrastructure damage		
1	**Distt. Solan (04.08.2024)**					
1.1	Carp Fish Farm Nalagarh	01 RAS culture Tank and water supply line damaged and 20.00 lakh Spawn	200000	1000000	1200000	Loss reported in DDMA Portal
2	**Distt. Kullu (31.07.2024m & 01.08.2024**					
2.1	Jia lal S/O Sh Daulat Ram, village barigcha, P.o. Jaon, Teh. Nirmand Distt kullu, HP	02 NO. Raceways	Approximate 9000 No. Saleable Stock, Average Weight 350g	Complete Loss of All Assets	2332500	Loss reported in SDMA Portal
3.1	Santosh Kumar S/O Sh Sesh Ram, Vill Bagipul P.O. Biuni. Teh. Nirmand, Distt Kullu, H.P.	2	Approximate 7000 No. Saleable Stock, Average Weight 300g	Complete Loss of ENTIRE LIVE STOCK	1155000	
3.2	Juna Singh S/O Sh Budhi Singh, Vill. Bagipul. Teh. Nirmand, Distt Kullu, H.P.	2	Approximate 1000 No Average Weight 250g	Complete Loss of All Assets	620000	
3.3	Puran Chand S/O Sh. Ugham Ram, Vill. Sawah Bagipul. P.O. Biuni, Teh. Nirmand, Distt Kullu, H.P.	2	Approximate 1000 No. Saleable Stock, Average Weight 300g	Complete Loss of ENTIRE LIVE STOCK	289000	

3.4	Prakash Chand S/O Ugham Ram, Vill Sawah Bagipul, P.O. Biuni, Teh. Nirmand, Distt Kullu, H.P.	2	1500 No. Saleable Stock, Average Weight 250g	Complete Loss of ENTIRE LIVE STOCK	247500	
3.5	Sarvdyal S/O Sh. Daya Ram, Vill, Tharla, P.O. Jaon, Teh. Nirmand, Distt Kullu, H.P.	2	2700 No. Saleable Stock, Average Weight 250g	Complete Loss of ENTIRE LIVE STOCK	971250	
3.6	Gobind Ram S/O Sh. Chet Ram, Vill. Bashahal, P.O. Sainj Teh Sainj, Distt. Kullu, H.P.	2	Approximate 6000 No. Saleable Stock, Average Weight 250g	Complete Loss of ENTIRE LIVE STOCK	1425000	
4	**Distt. Mandi (20.07.2024**					
4.1	Sh. Khube Ram S/O Sh. Chet ram. Vill. Gauni, PO Mahogi, Tehsil Balichowki, Distt Mandi. HP	2 No Raceways	8000 No. Rainbow Trout Live Stock, Average Weight 100g	Trout Raceways partially damaged and complete loss of live stock	440000	Loss reported in SDMA Portal
5	**District Una (11.08.2024)**					
5.1	Sh. Rajinder Singh Jaswal S/o Late Sh. Dalip Singh, Village Dagoh Khas, Ward No. 09, tehsil Ghanari District Una	Pond	1200 No. fish average weight 2,100 KG per fish washed away form the fist pond. Total weight of fish is 2520KG	**Loss of live stock**	**378000**	
Grand Total					**9058250**	

Total Loss of fisheries infrastructure = 0.91 Crore.