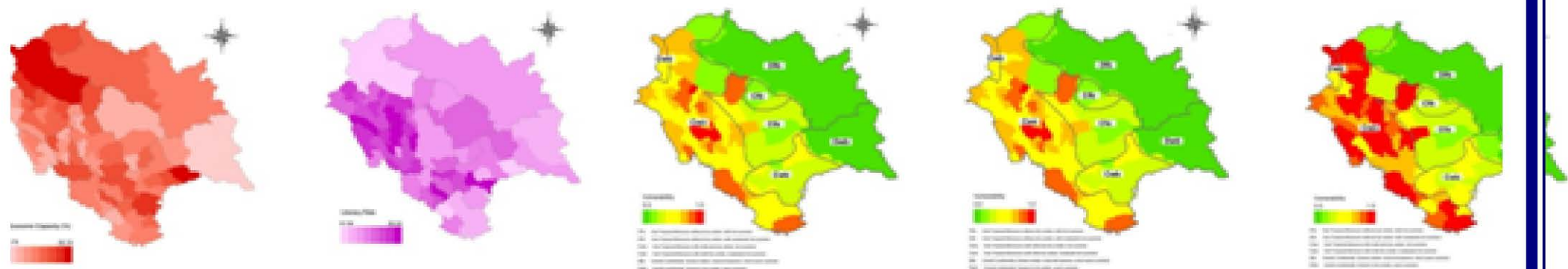
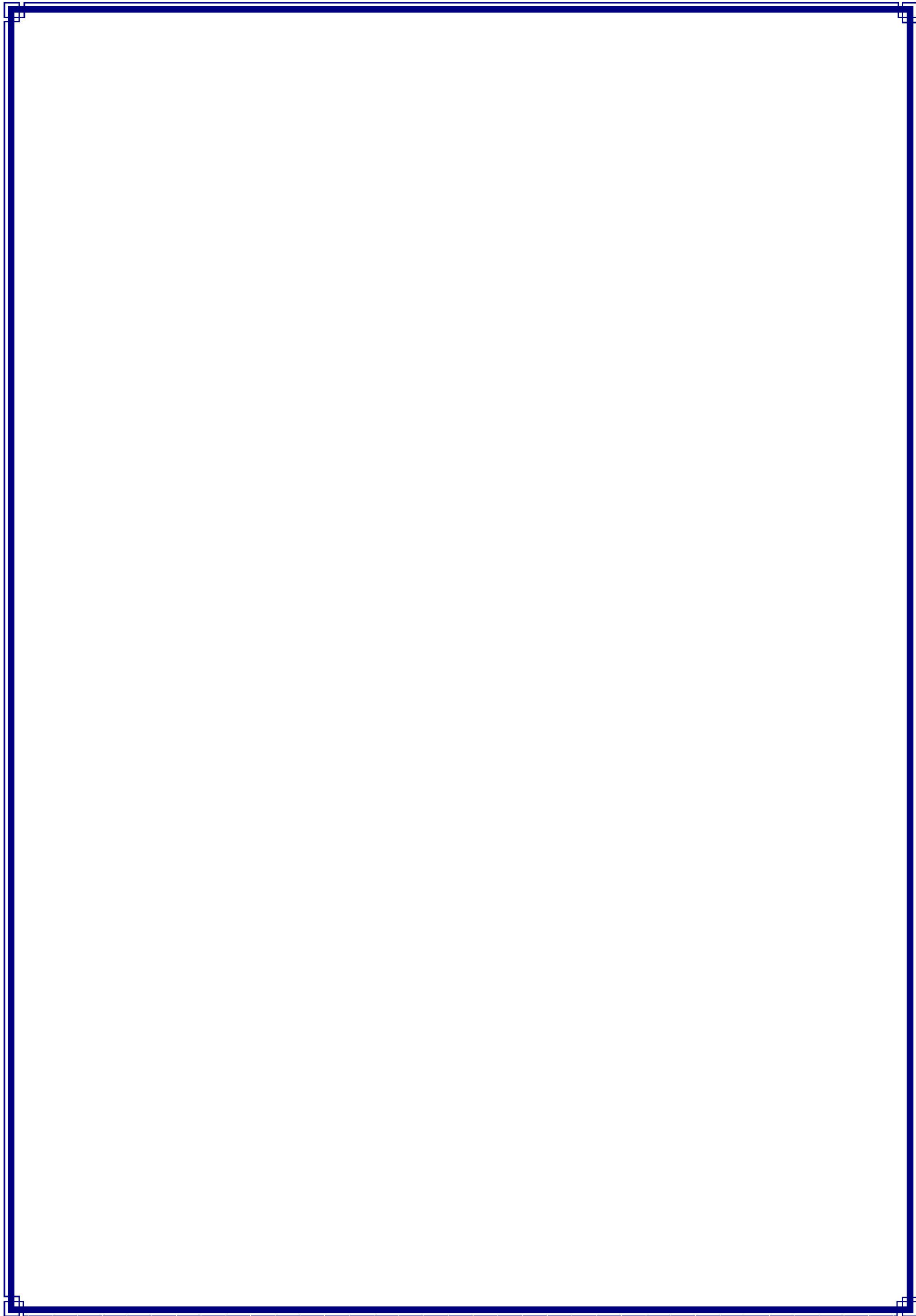


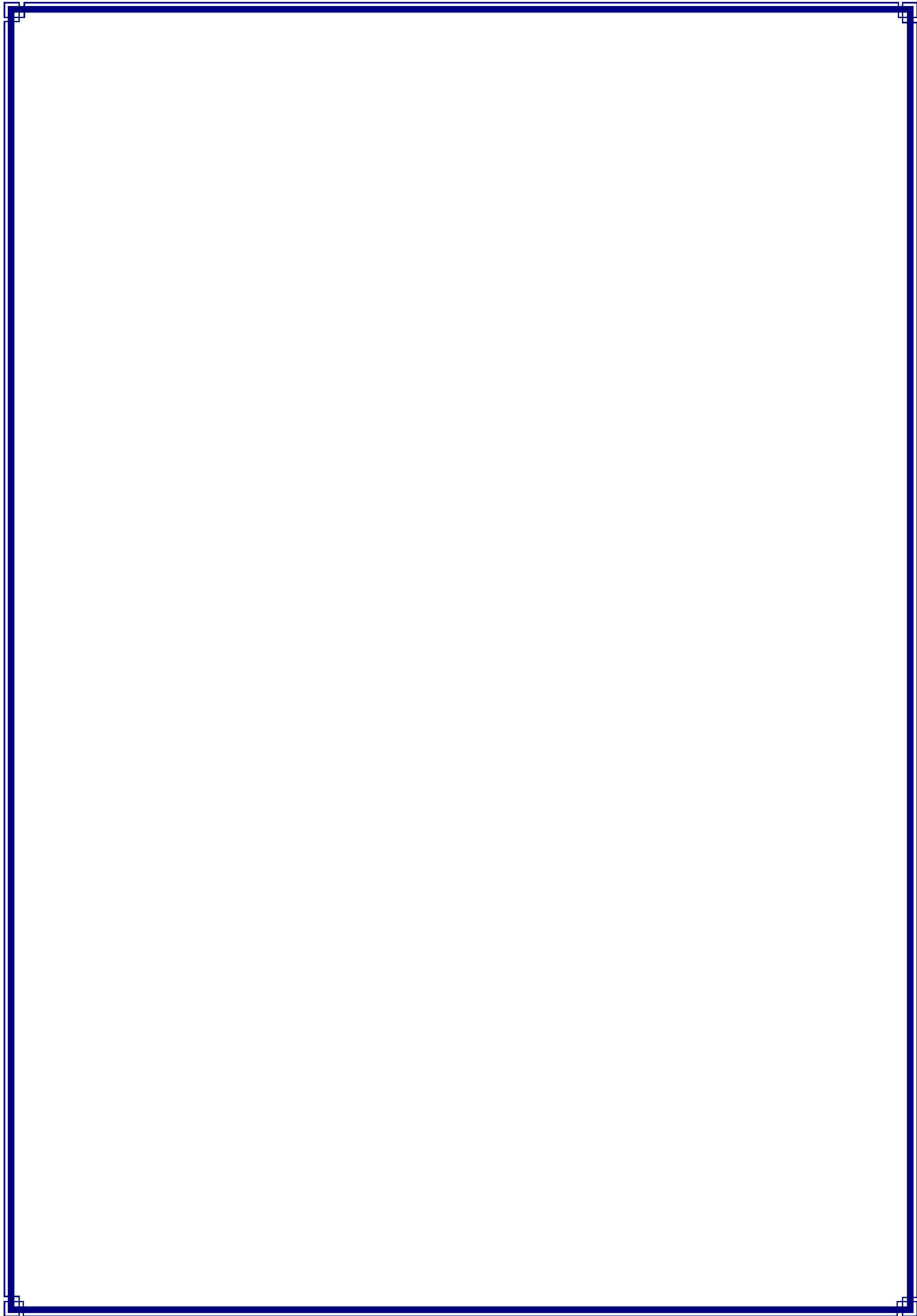
ENVIRONMENT MASTER PLAN VULNERABILITY ASSESSMENT (MAP VOLUME) HIMACHAL PRADESH



Government of Himachal Pradesh
Department of Environment, Science & Technology



Himachal Pradesh



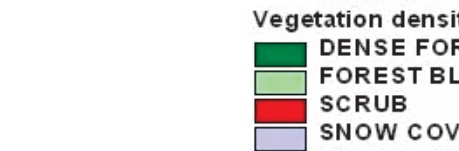
Introduction

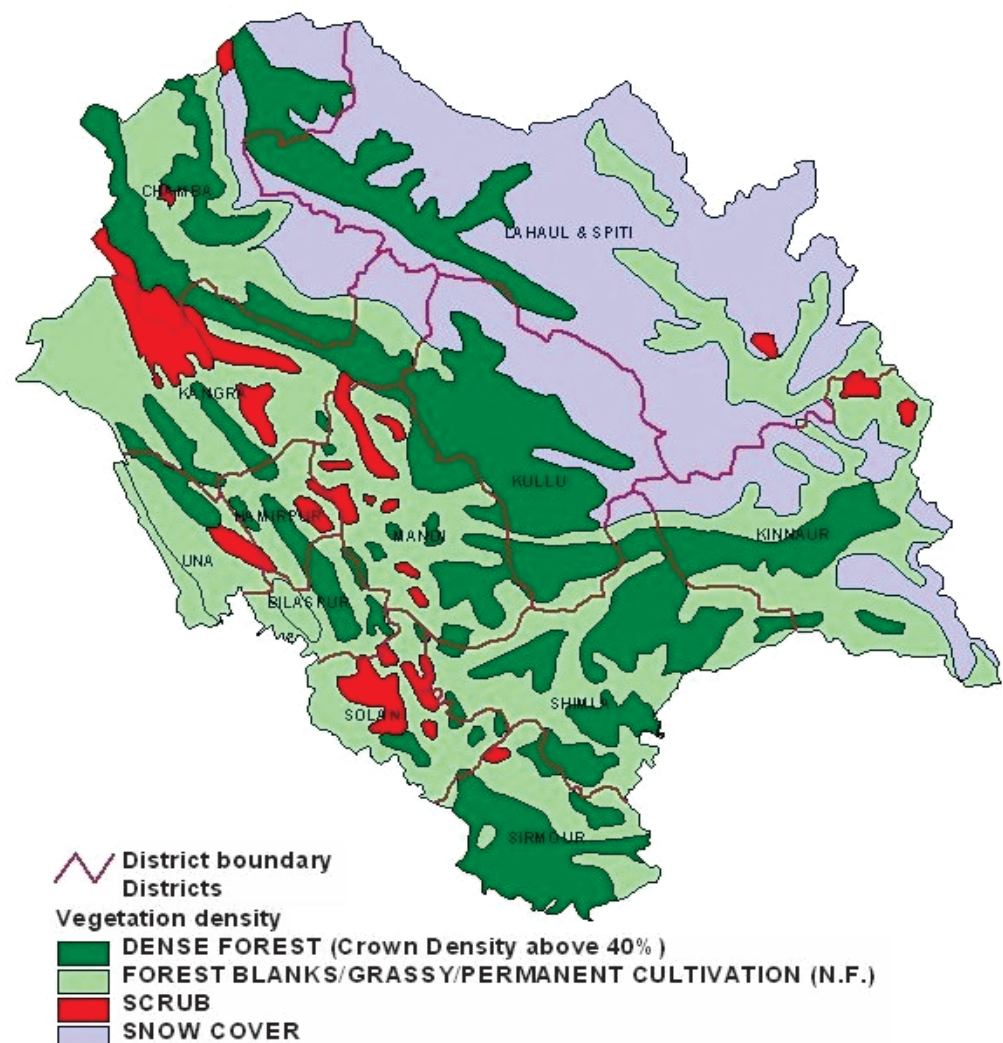
We all know the State Himachal Pradesh, is among one of the ecologically fragile destinations in Himalayan region having immense wealth of natural resources and biodiversity but currently slowly and steadily facing the pressures of development. It is an undisputed fact that the natural resources are the critical engine for accelerating the economic growth and with it, maintains the quality of life of the people, besides livelihoods of millions of people living even in the foothills of the State. Sustainability of economic growth and the resultant improvement in the quality of life of its people depends largely on the sustainability of its environmental heritage and natural resources.

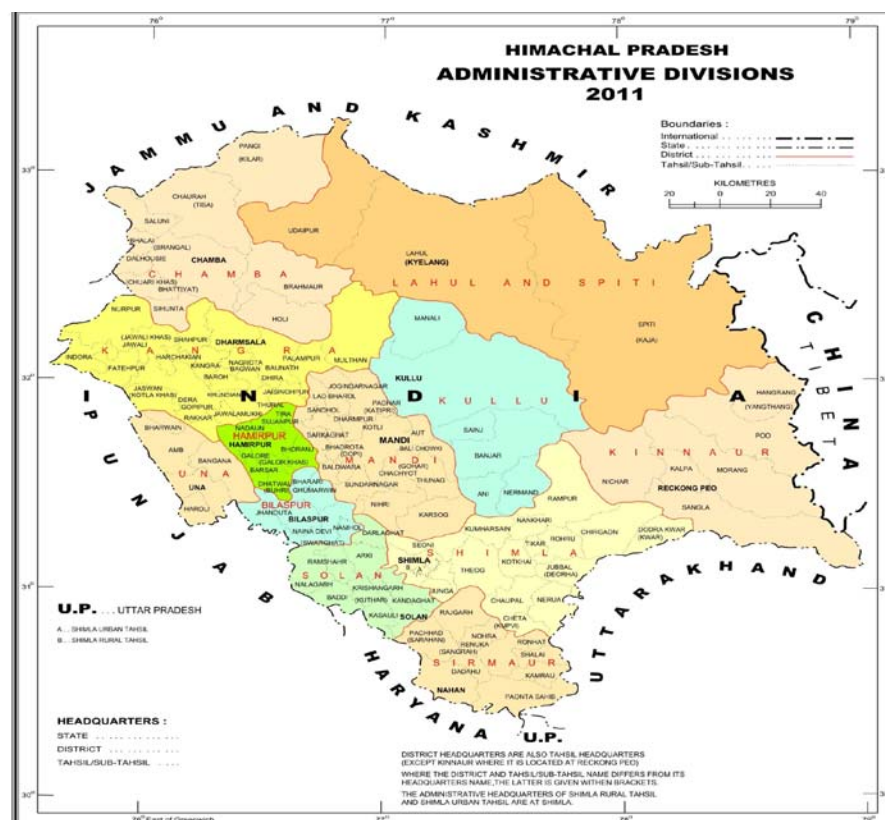
Himachal Pradesh is situated between latitude 30°22' to 33°12' N and longitude 75°45' to 79°04' E. The State wholly a mountainous region is nestled in the lap of Himalayas. It is surrounded by Jammu and Kashmir in the north, Tibet on north/ north east, Uttaranchal in the east/ south east; Haryana in south and Punjab in south west/ west. There are four agro-climatic zones viz. Shivalik Hill Zone, Mid Hill Zone, High Hill Zone and Cold Dry Zone.

The relative position of the State warrants that it plays proactive role in the National perspective. Himachal Pradesh is located in the western Himalayas covering an area of 55,673 kilometers. Himachal Pradesh is a mountainous state with elevation ranging from about 350 meters (1,148 ft) to 6,000 meters (19,685 ft) above the sea level.

A brief outline of HP's profile:

Total Geographic Area	55,673 KM ²	 Vegetation density DENSE FOREST (Crown Density 40% and above) FOREST BLANKS/GRASSY AREAS SCRUB SNOW COVER	
No. of Districts	12		
No. of Towns and cities	57		
Population	68,56,509		
Population Growth rate	12.81%		
Literacy Rate	83.78%		
Total Length of Roads	31,512 km		
Apple Production	592.57 MT	Fruit Production	712.84 MT
Total Forest Area	37,033 km ²	Reserved Forests	1,896 km ²
Area under Tree cover	14,679 km ²	Sub-Alpine & Alpine Forests	2,512 km ²
Dense Forests (Crown density 40%)	8,976 km ²	Himalayan Moist Temperate Forests	4,064 km ²
Unclassed Forests	976 km ²	Mohru Oak	35 km ²
Deodar	811 km ²	Kharsu	246 km ²
Kail	809 km ²	Flowering Plants	3120 species
Chil	1436 km ²	Conifers	13 species
Ban Oak	540 km ²	Orchids	38 species

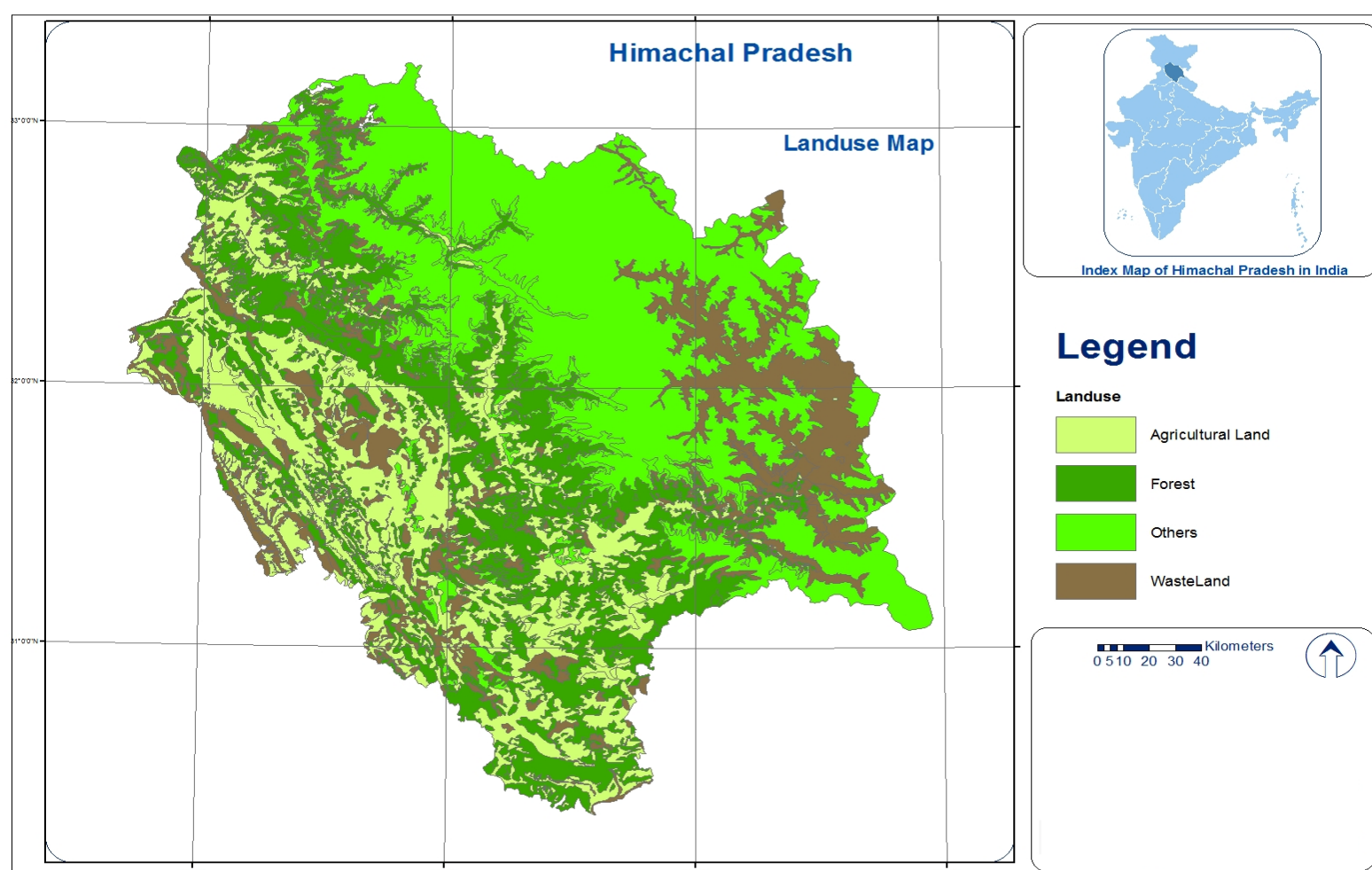




Himachal Pradesh has a total area of 55,673 sq. km. It has 12 districts, 75 tehsils, 52 Sub Divisions, 75 Blocks, 20118 Villages, 57 Towns, 4 Lok Sabha and 3 Rajya Sabha and 68 Assembly Constituencies. Density of Population (per sq. km.) is 123. Females per 1000 Males are 974, Birth Rate (per 1000) is 22.1 and Death Rate (per 1000) is 7.2.

The different agro climatic zones represent the diversity in land use as well. The land use pattern of the State is as under:

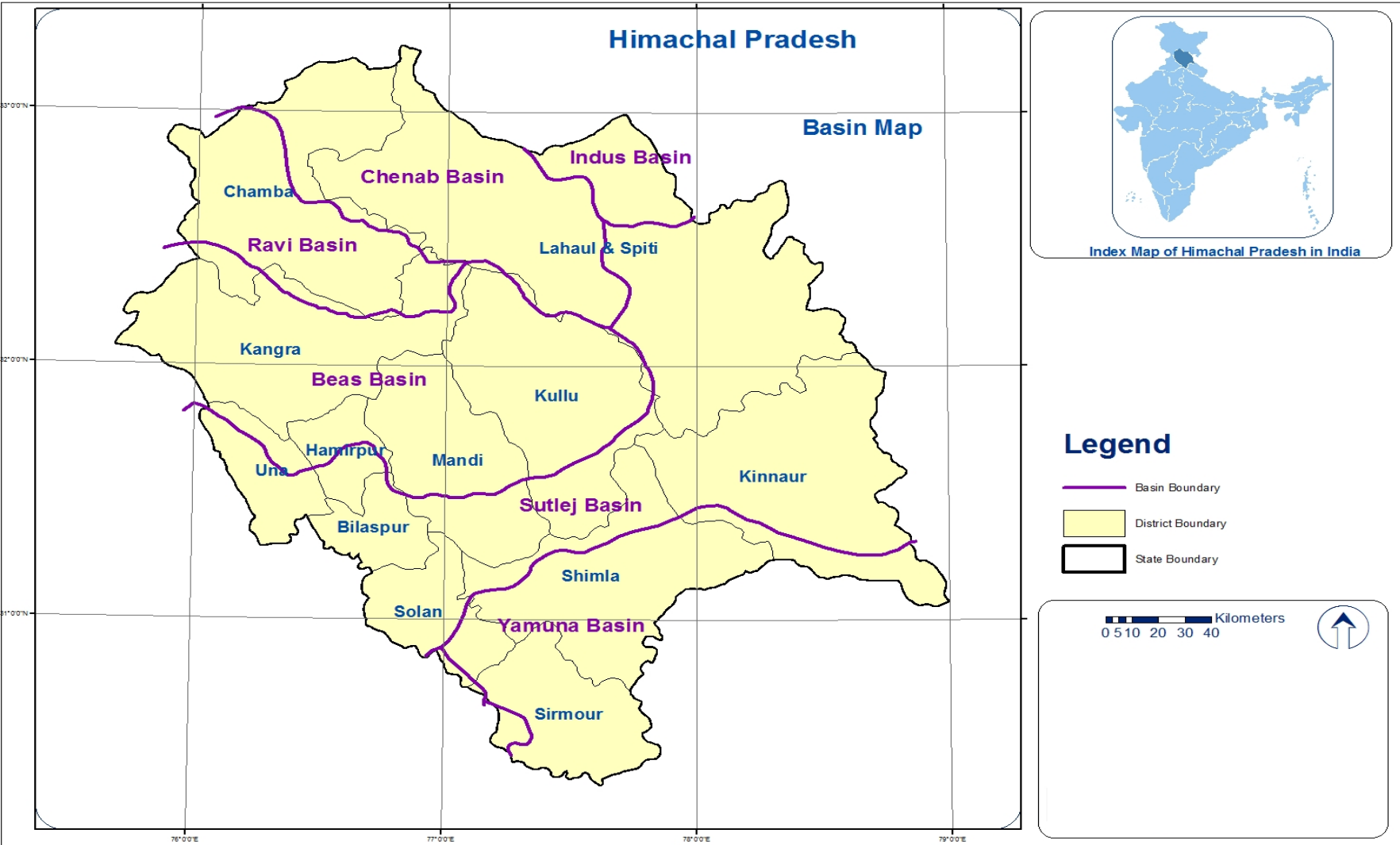
Land use	Area in '000 ha	Percentage
Total geographical area	5,567	-
Reporting area for land utilization	4,549	100.00
Forest	1,101	24.21
Not available for cultivation	1,129	24.82
Permanent pastures and other grazing lands	1,496	32.89
Land under misc, tree crops and groves	65	1.43
Cultivable wasteland	138	3.03
Fallow lands other than current fallows	15	0.33
Current fallows	64	1.41
Net area sown	541	11.90



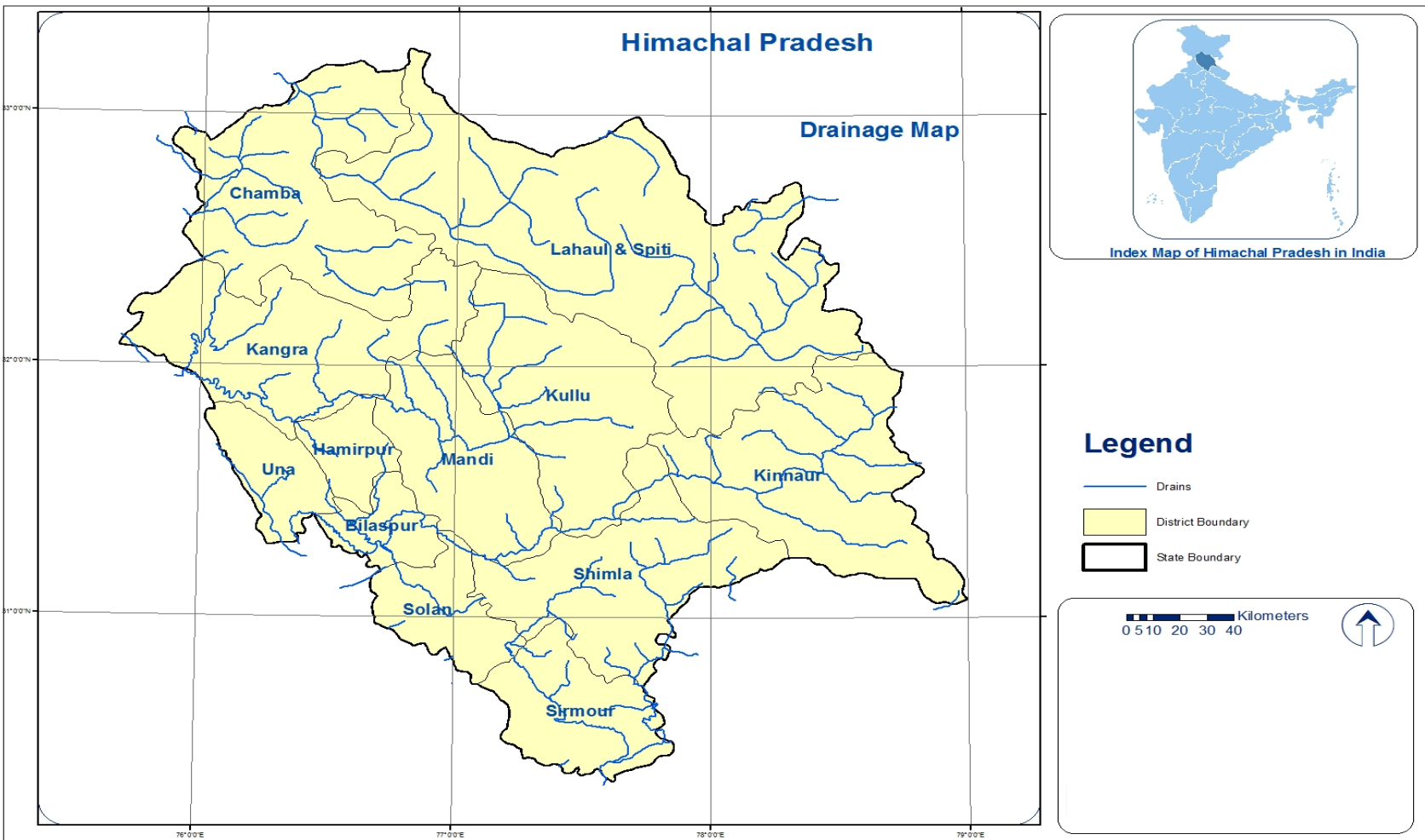
Land use Map of Himachal Pradesh

Himachal Pradesh is drained by five major systems, and has five major catchment areas. Satluj the largest among all constitutes 30.69% followed by Beas 24.5%, Chenab 14.2%, Yamuna 10.6% and Ravi 9.9%. These catchment areas are further sub divided into several river subsystems. The major rivers are snow fed and perennial in nature, and supplemented by seasonal rainfalls.

Most of the surface water resource of the Himachal Pradesh flows from Perennial Rivers which originate from glaciers. The flow in these rivers is further augmented by runoff from the catchment area. 90% of State’s drainage forms part of Indus River System. The rivers that actually originate from the State and flow through it are the Chenab, the Beas and the Ravi, the Satluj have their origin in Tibet and flows through Himachal Pradesh forming the largest river catchment in the state. The Yamuna crosses only the South eastern border but has some catchment area in the State of Himachal Pradesh.

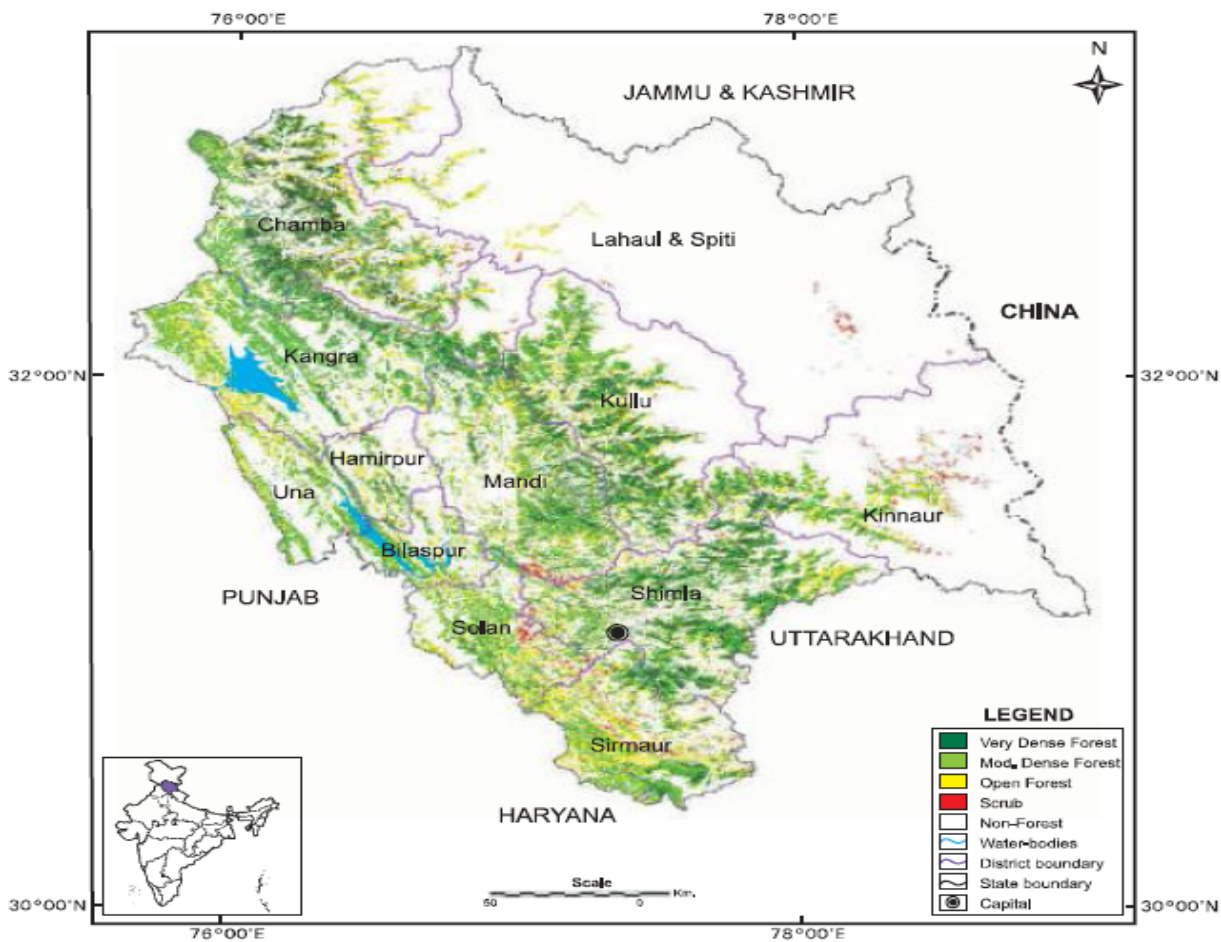


River Basin Map of Himachal Pradesh



Drainage map of Himachal Pradesh

The recorded forest area of the state is 37,033 km² which is 66.52% of its geographical area. Reserved Forests constitute 5.13%, Protected Forests 89.46% and Unclassed Forests 5.41% of the recorded forest area. About two third of the state’s geographical area is under recorded forests but a substantial part of this is not conducive for tee growth, being under permanent snow, glaciers and cold deserts. Himachal Pradesh has two National Parks and 33 Wildlife.



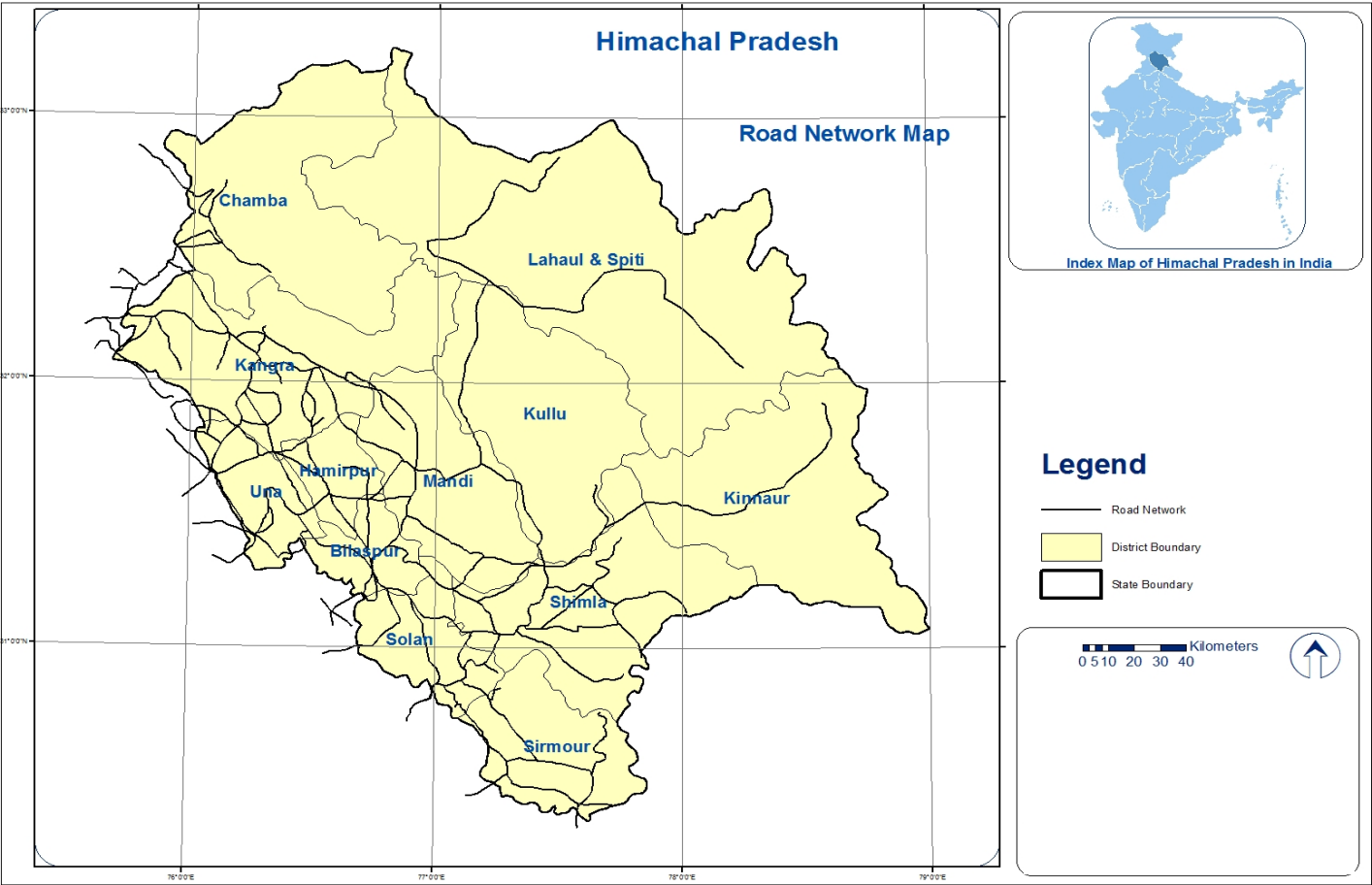
In total about 33, 722 km length road networking is available connecting all sub divisions, the breakup is elaborated as under with map on road network for connecting its cities, important towns, villages, industrial centres, places of tourist importance and other remote areas:

Road Connectivity in Himachal Pradesh

ROADS

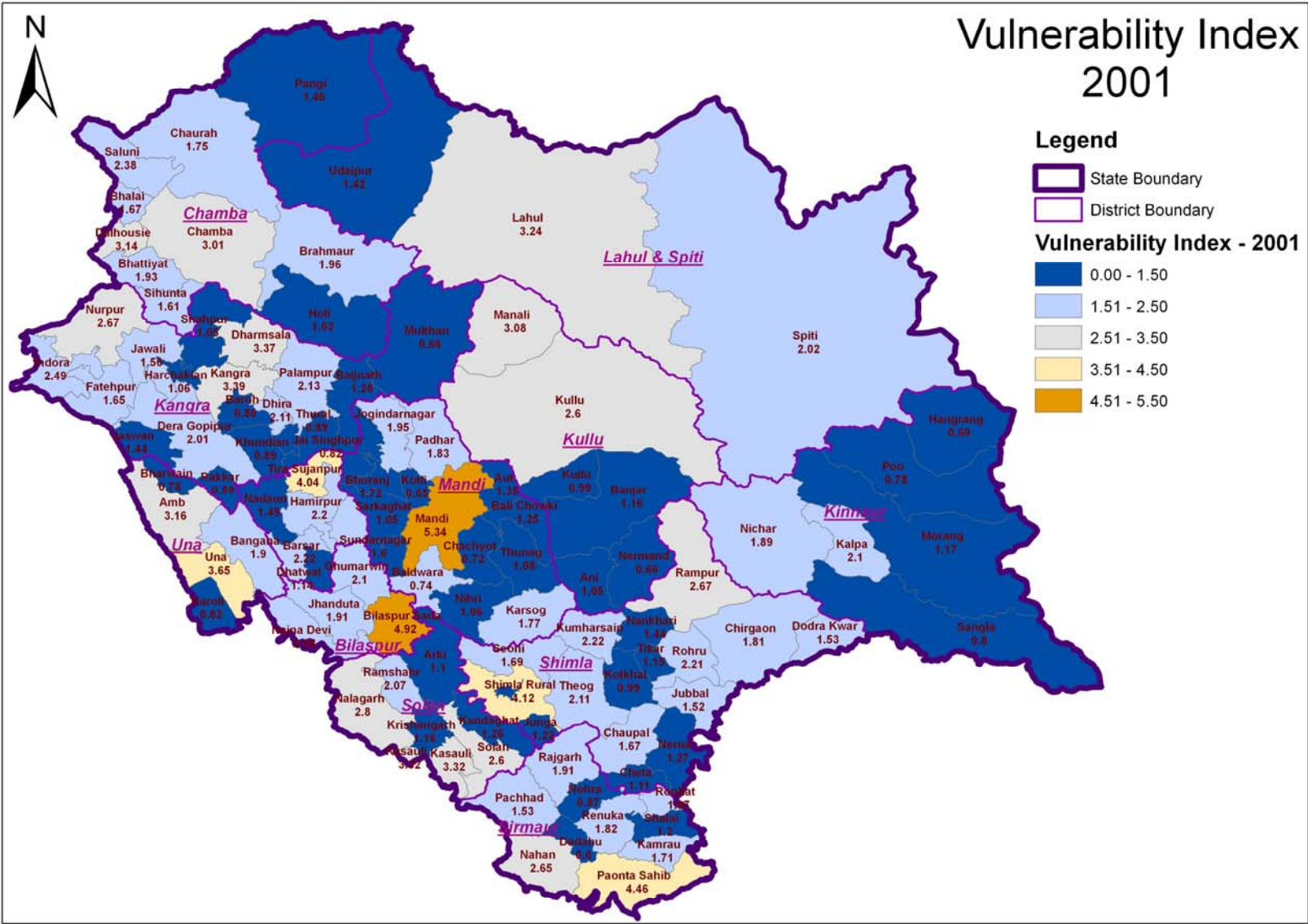
Type of road	(In Kilometer)				
	2007-08	2008-09	2009-10	2010-11	2011-12Up to Dec., 2011.
1.	2.	3.	4.	5.	6.
1.Motorable double lane	2,374	2,377	2,384	2,403	2,409
2.Motorable single lane	26,783	27,925	28,832	29,464	29,823
3.Jeepable	365	345	300	290	280
4.Less than Jeep able	1,990	1,803	1,655	1,565	1,488
Total	31,512	32,450	33,171	33,722	34,000

Source:-Public Works Department Himachal Pradesh.
 Note- Figures include National Highways also.

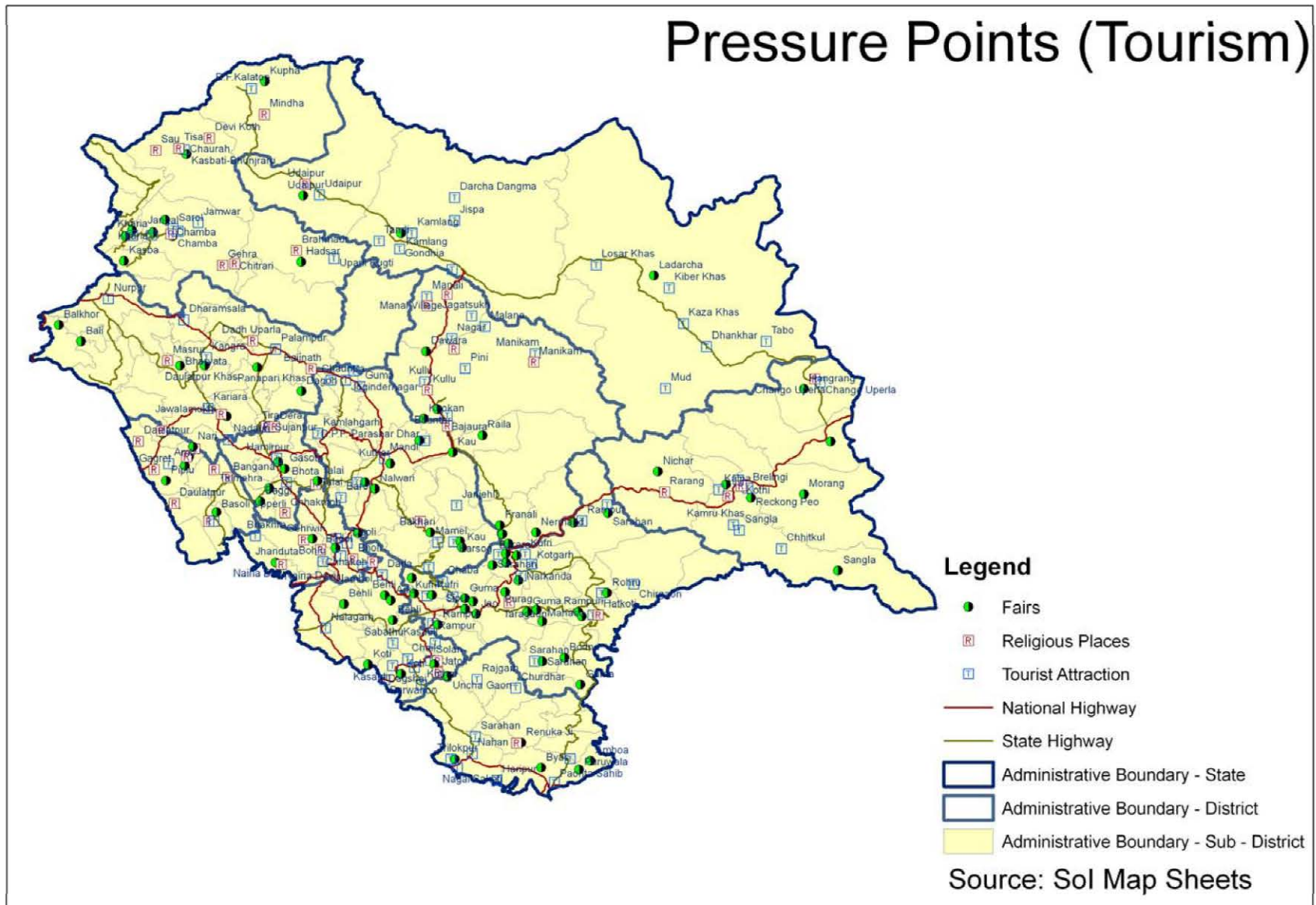


The Vulnerability Index has been categorized in six categories as under

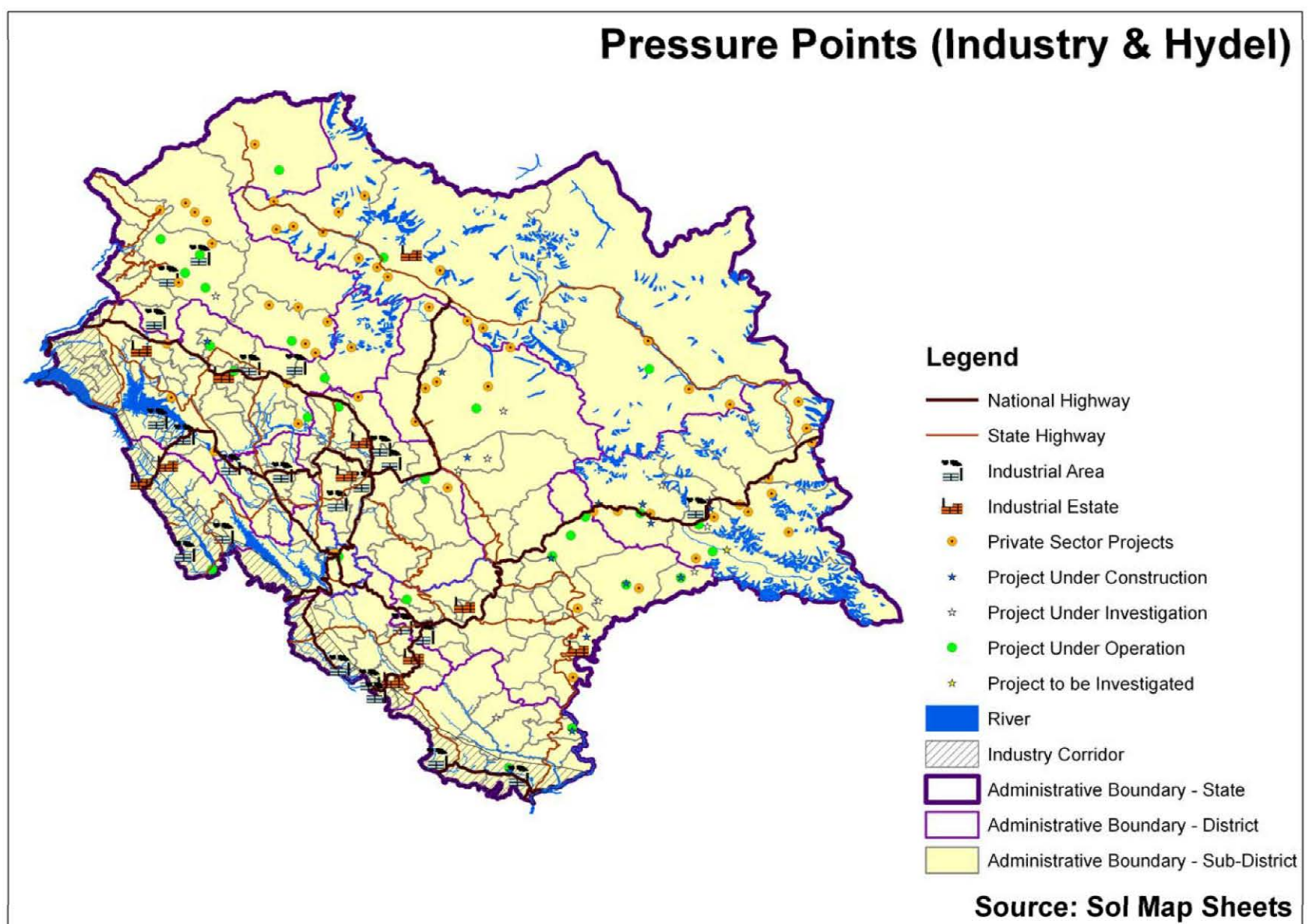
Vulnerability Index Range	Vulnerability Index Category	Color Code
Up-to 1.5	Very low vulnerability	
1.51- 2.5	Low vulnerability	
2.51- 3.5	Moderate low vulnerability	
3.51-4.5	Moderate high vulnerability	
4.51-5.5	High vulnerability	
≥5.51	Very High Vulnerability	



Pressure Points (Tourism)



Pressure Points (Industry & Hydel)



Bilaspur

Location

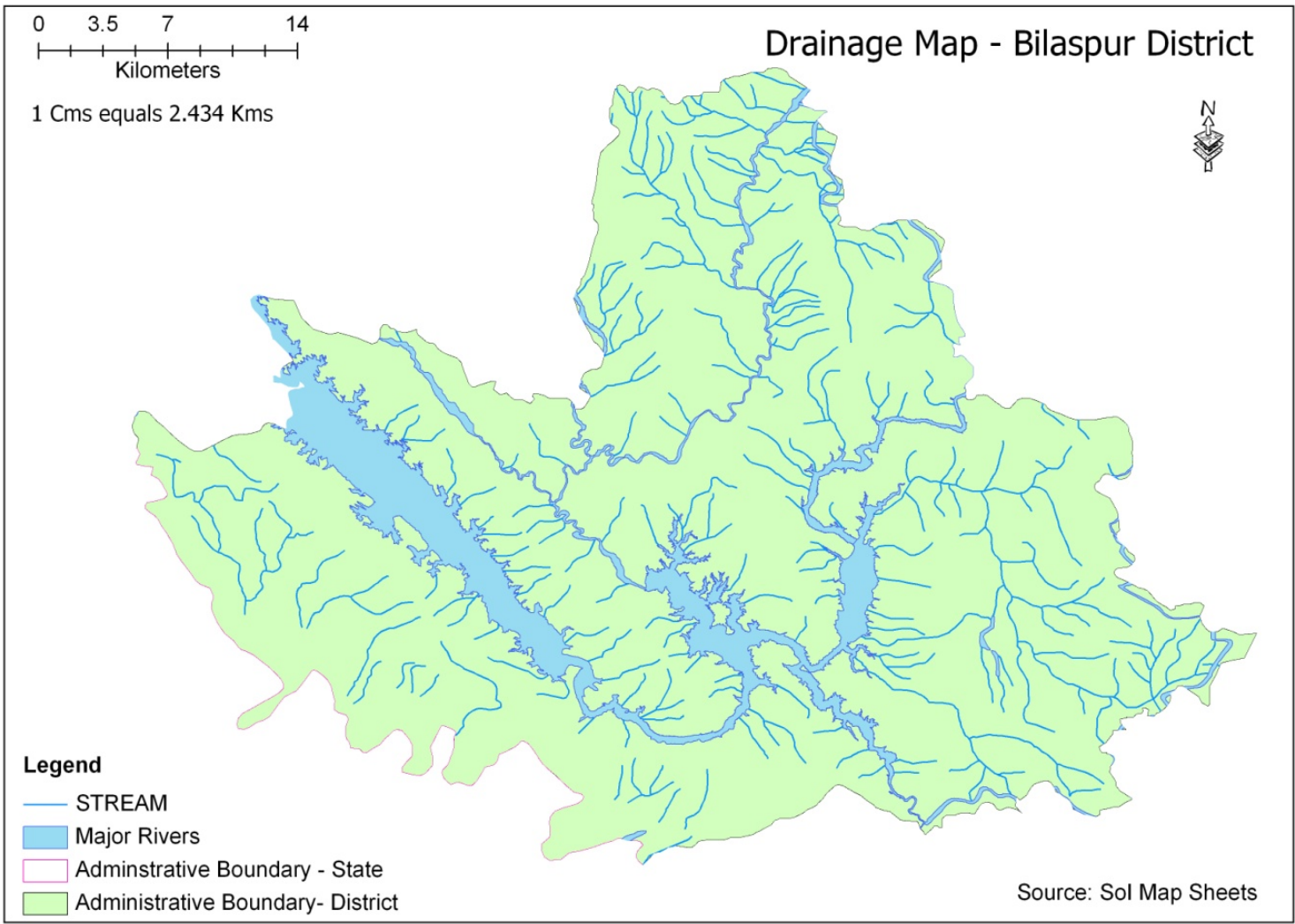
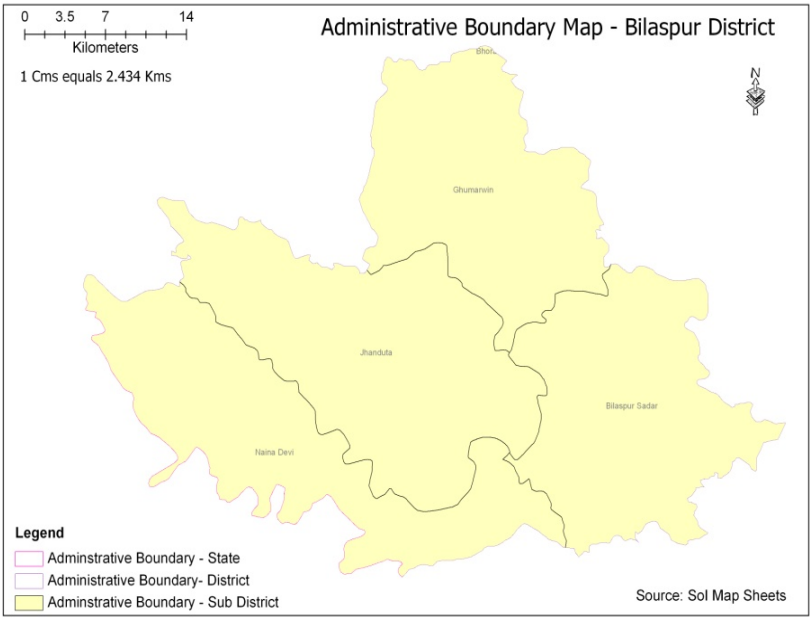
Bilaspur district is located between 31°12' 30" and 31°35' 45" north latitude and between 76°23' 45" and 76°55' 4" east longitudes. It is bounded Punjab in south west, Bangana Tehsil of Una district in the north west, Tehsils Barsar, Dhatiwal, Hamirpur and Bhoranj of Hamirpur district in north, Sundernagar, Baldwara Tehsils of Mandi district in east and Arki, Ramshehr and Nalagarh Tehsils of Solan district in the south. The district is one of the smallest districts in the State and covers an area of 1167 Sq.Km. which accounts for 2.1% of total area of state and ranks 11th amongst 12 districts of the State.

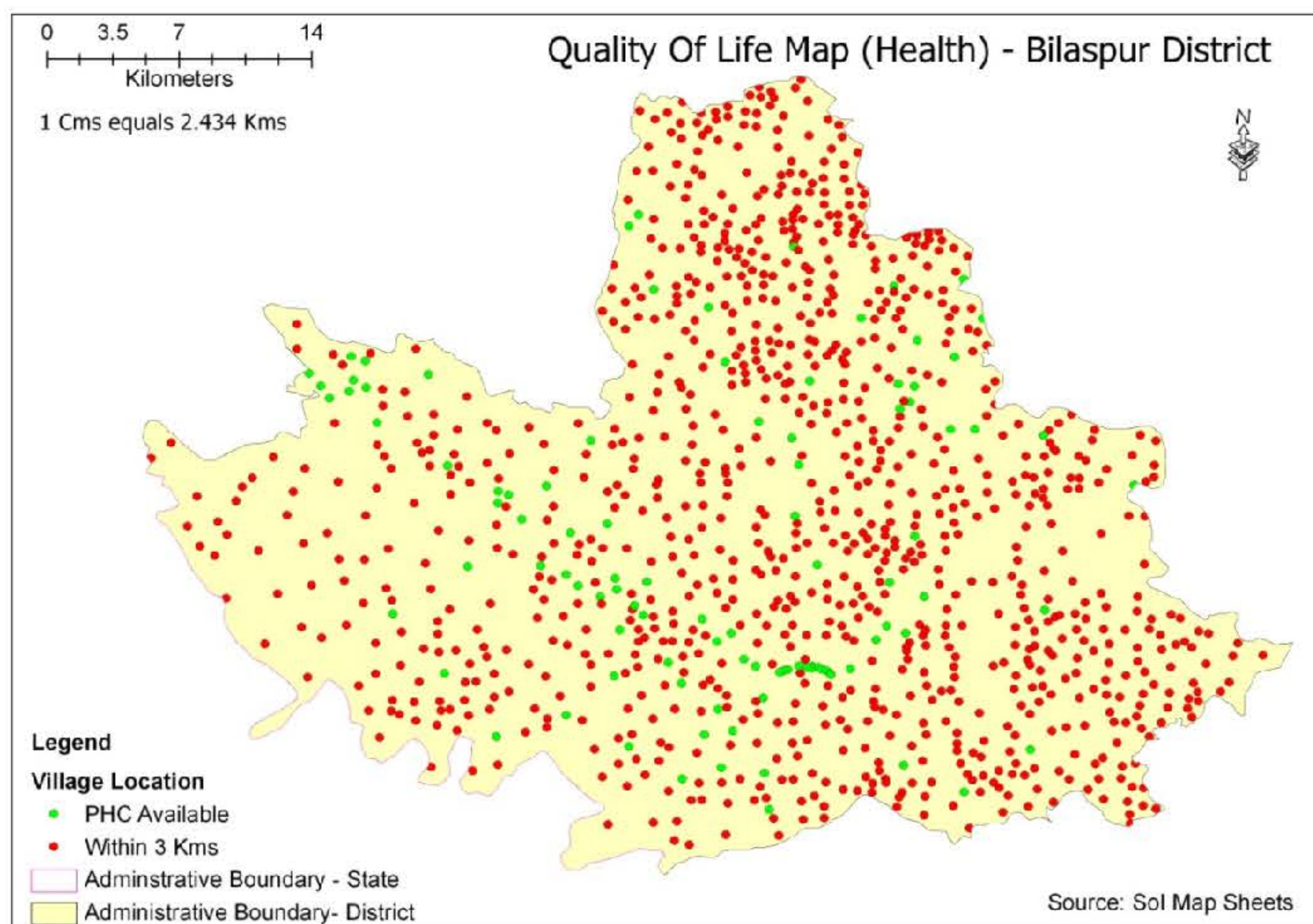
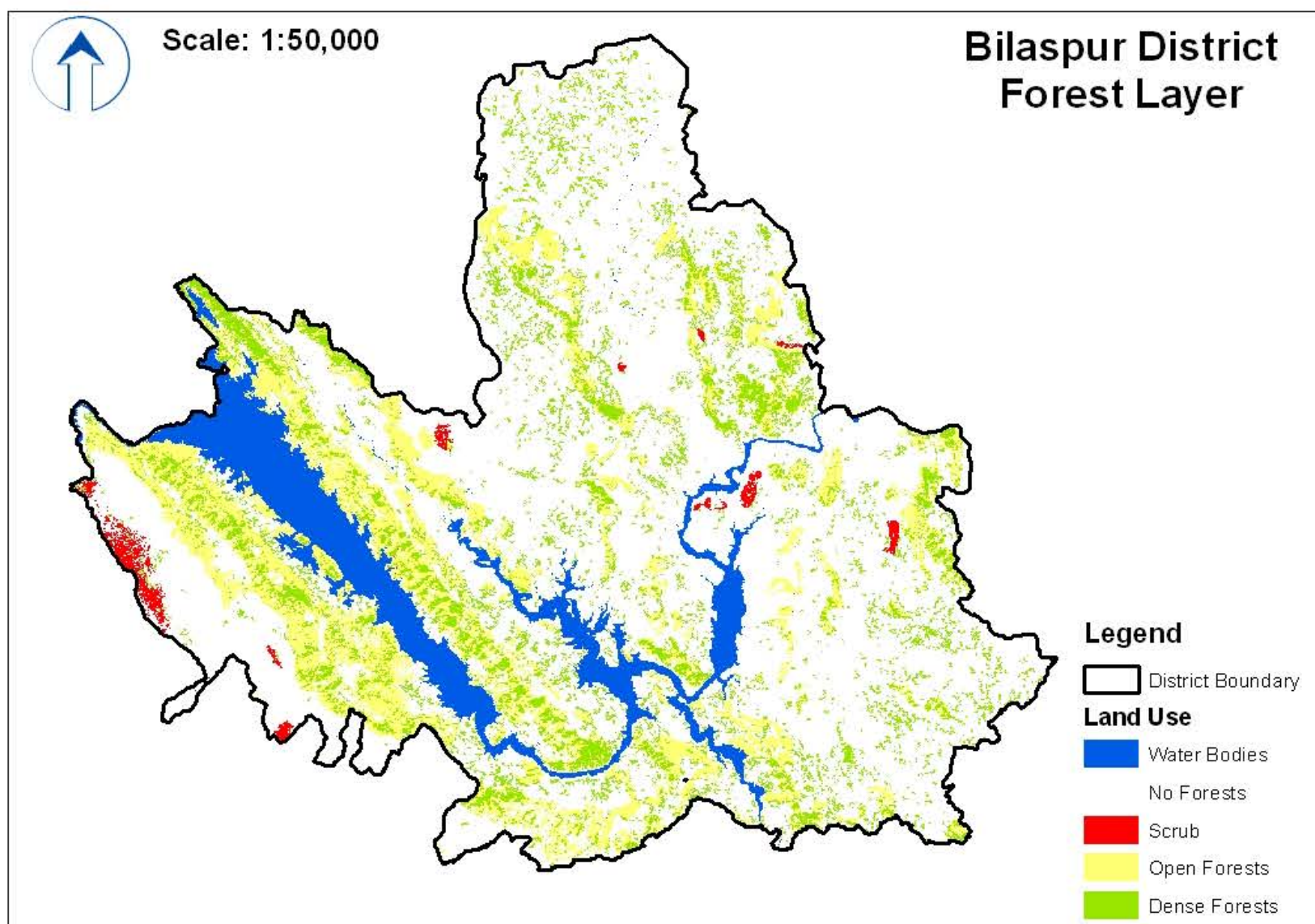
Initially there were only two Tehsils, in the district, namely, Ghumarwin & Bilaspur Sadar. In 1980 another Tehsil Naina Devi was created by State government with headquarters at Swarghat. In 1984 a new sub Tehsil Jhanduta was carved out of the Ghumarwin Tehsil.

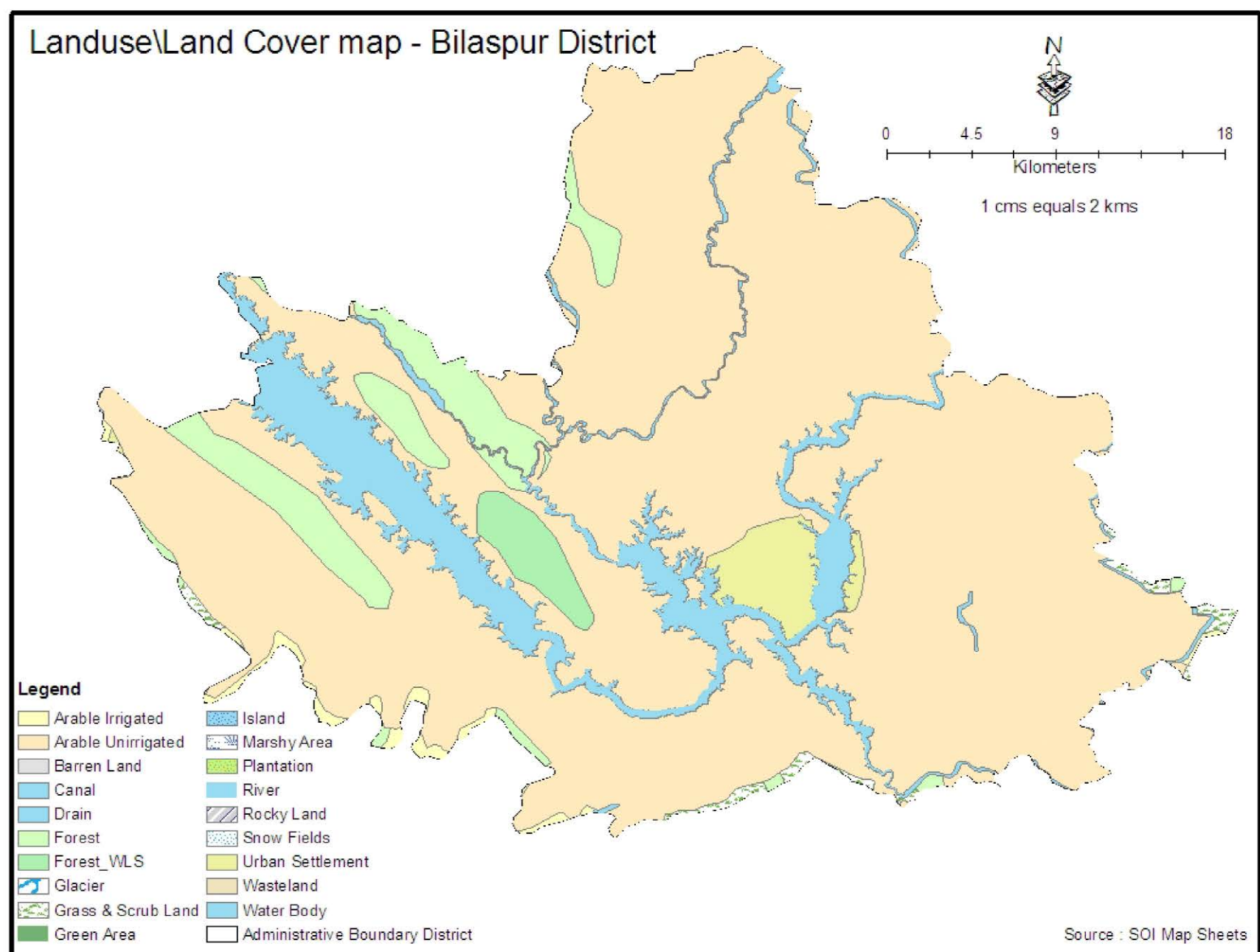
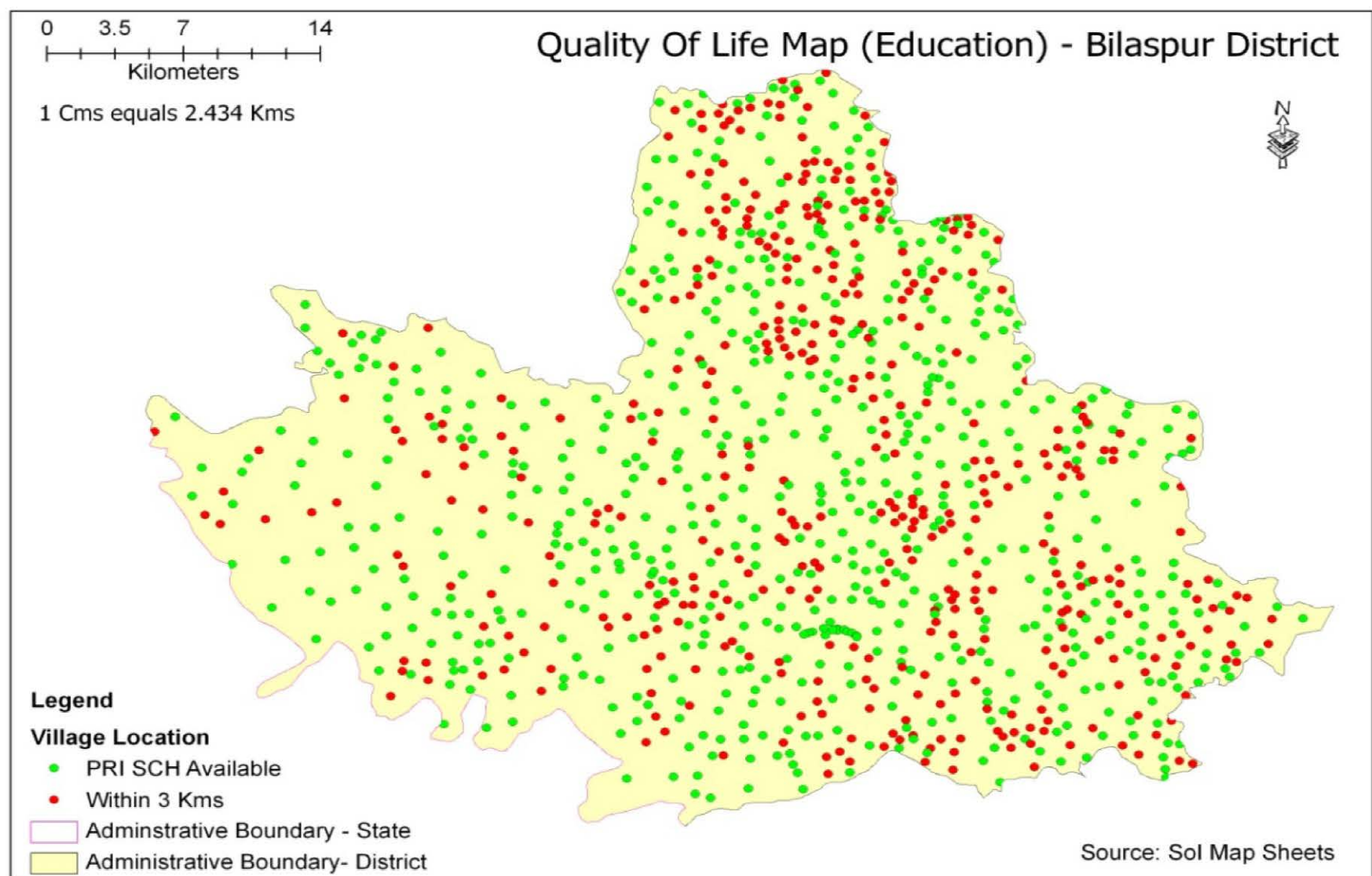


Administratively the district is divided into 3 Tehsils and, one Sub-Tehsil.

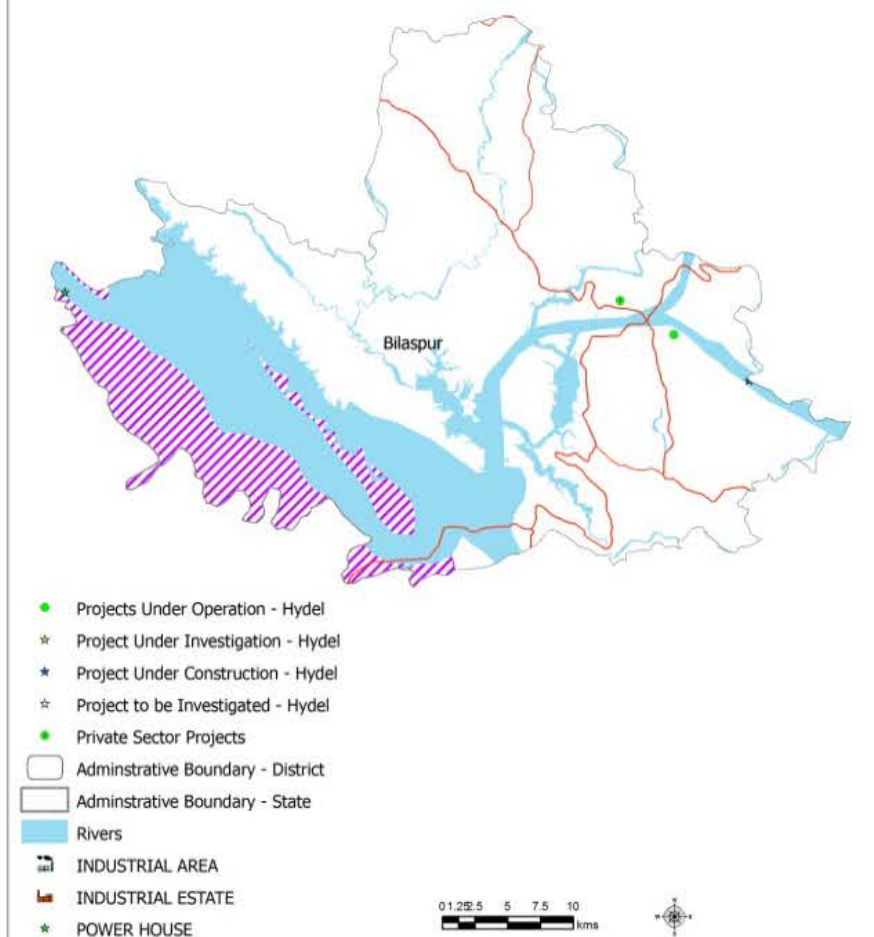
	Tehsil	Area in sq.kms
1	Ghumarwain	424.49
2	Bilaspur Sadar	287.33
3	Naina Devi	233.24
4	Jhanduta	182.11







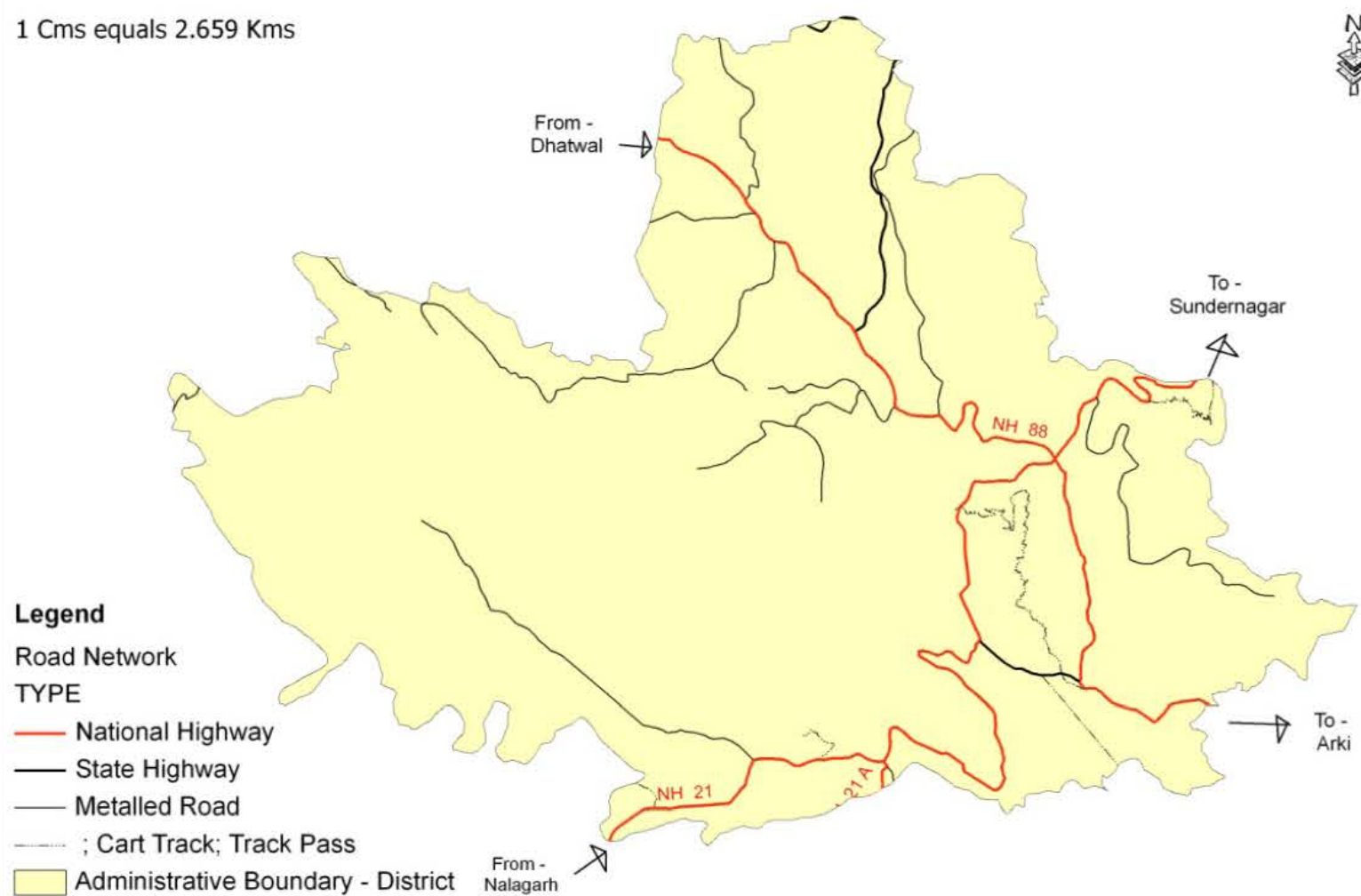
Major Investment Locations - Bilaspur District



0 3.75 7.5 15
Kilometers

1 Cms equals 2.659 Kms

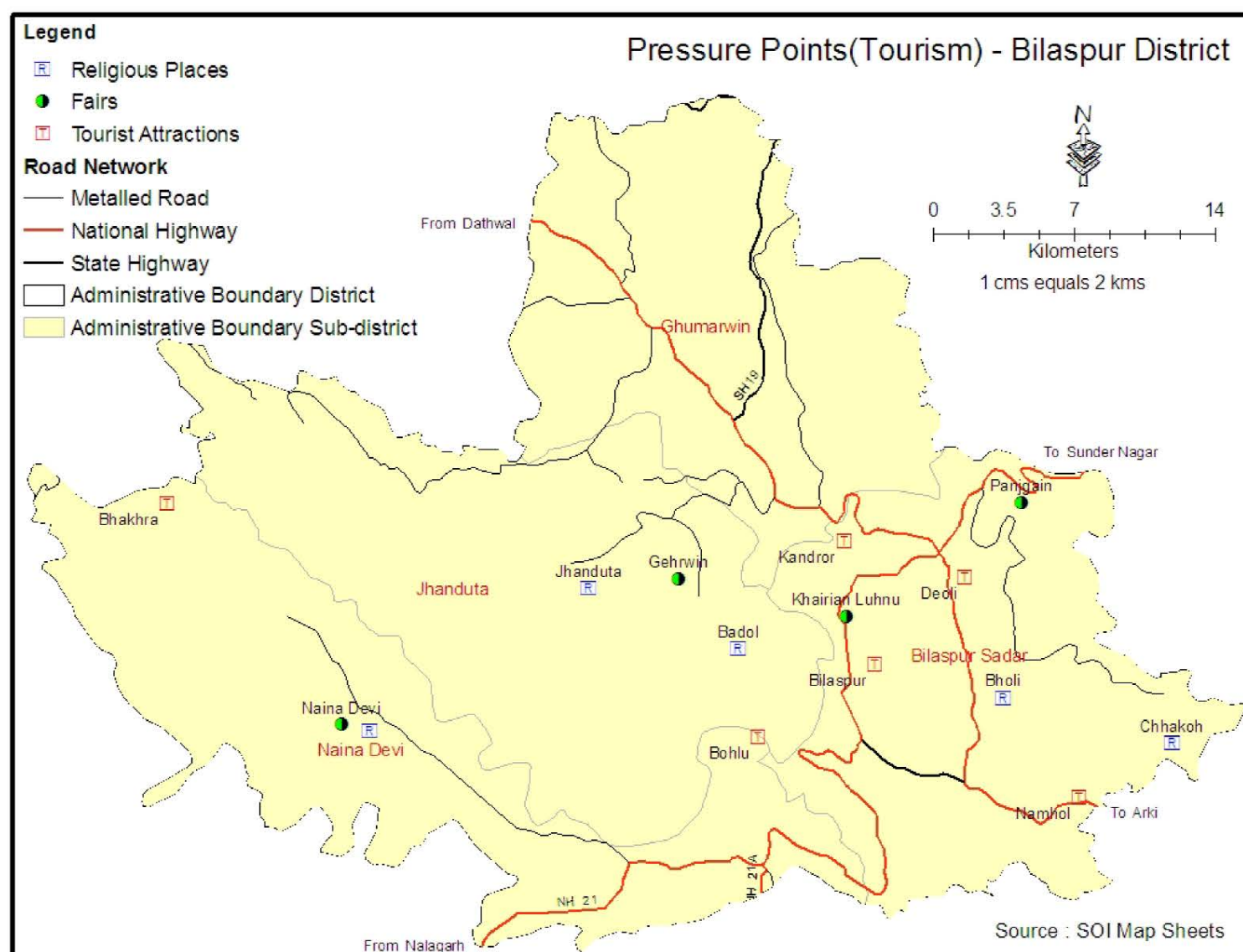
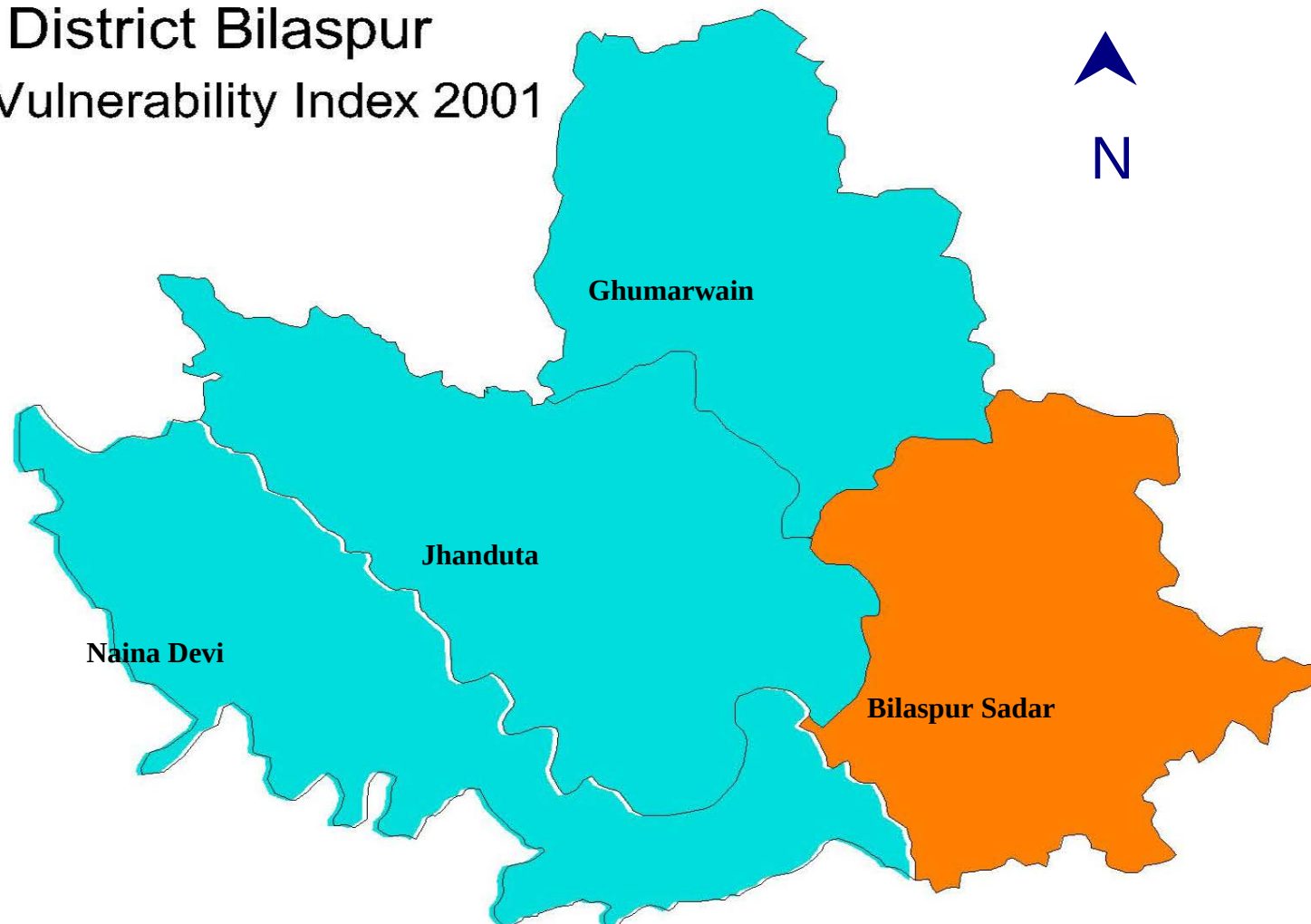
Road Network Map - Bilaspur District



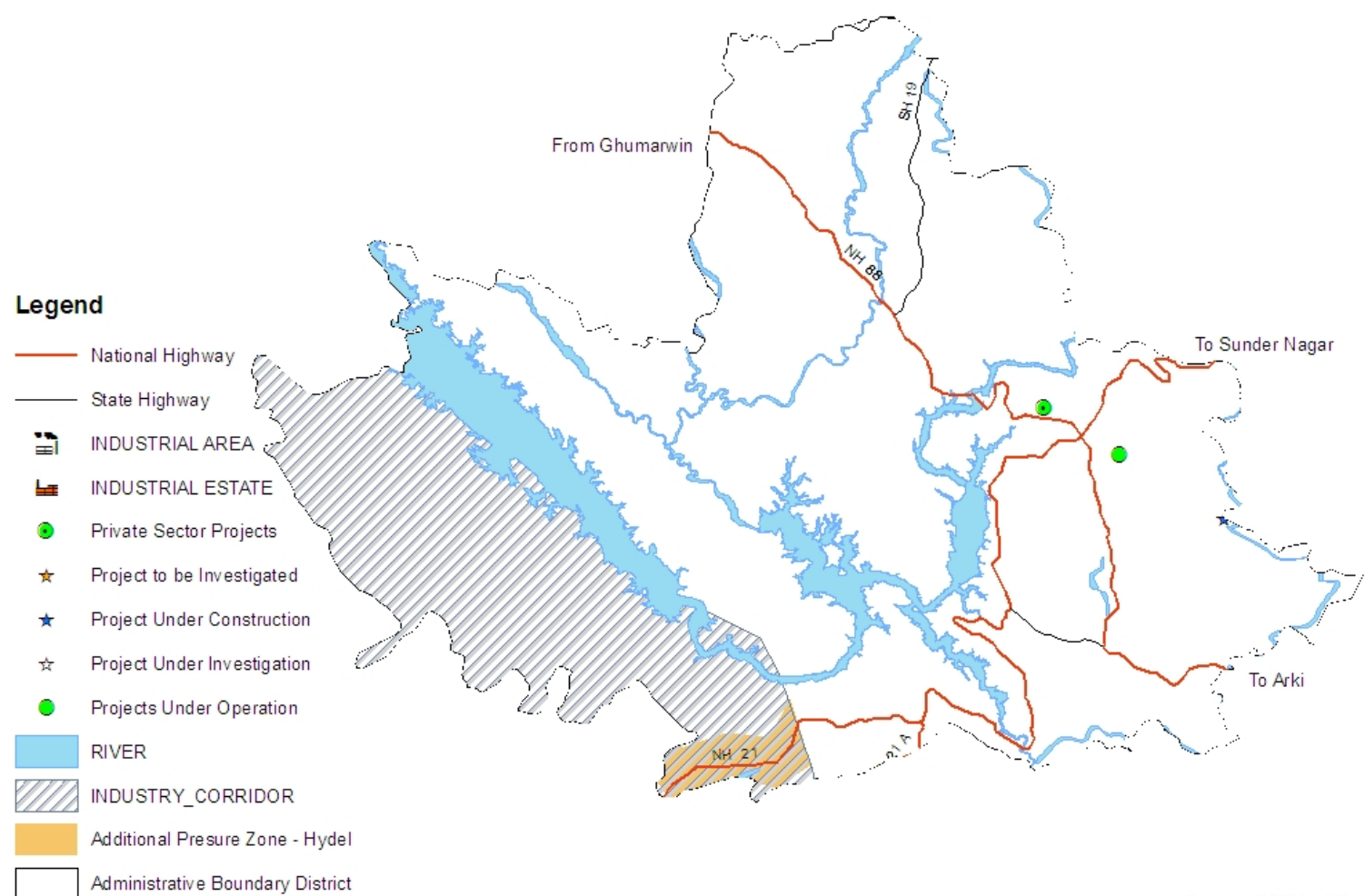
Source: Sol Map Sheets

	Ghumarwin	Jhanduta	Bilaspur Sadar	Naina Devi
VI	5149.37	4689.27	12070.36	5097.67
denominator = 57x43	2451			
Normalized VI	2.10	1.91	4.92	2.08

District Bilaspur Vulnerability Index 2001

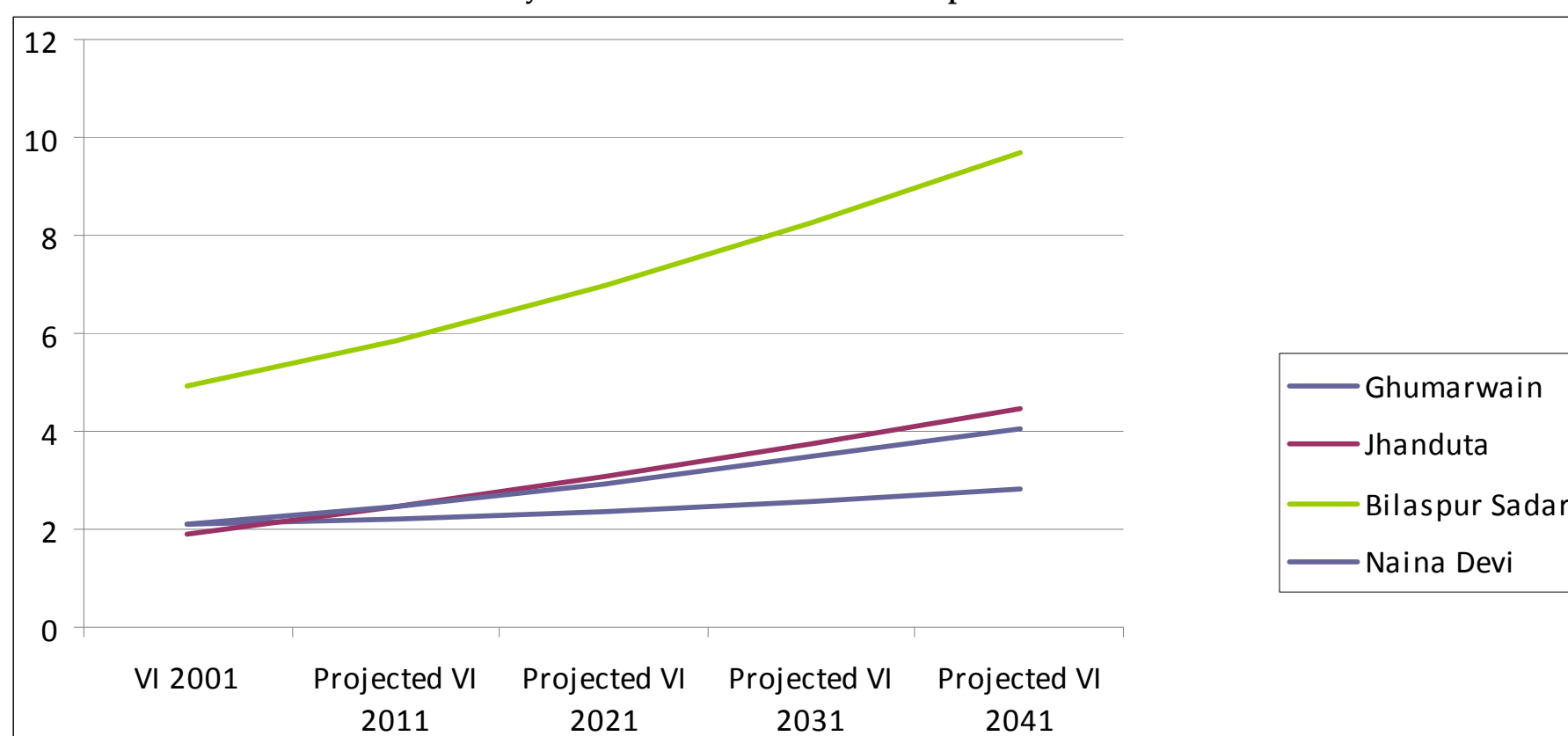


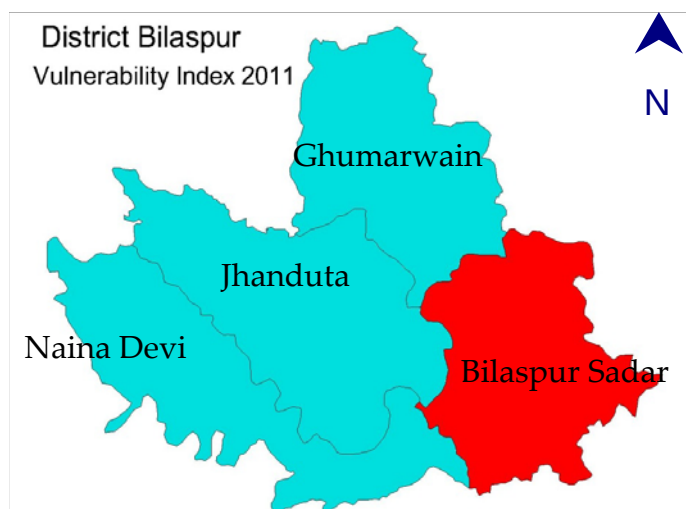
Pressure Points (Industry & Hydel) - Bilaspur District



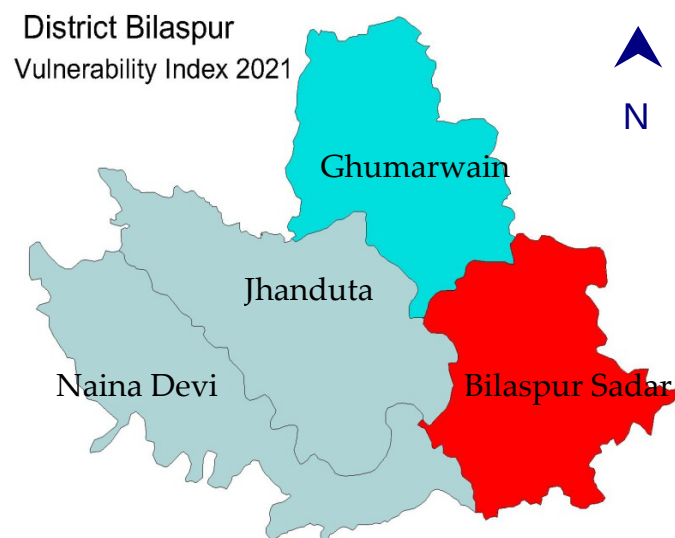
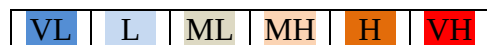
	VI 2001	Projected VI 2011	Projected VI 2021	Projected VI 2031	Projected VI 2041
Ghumarwain	2.1	2.19	2.34	2.55	2.80
Jhanduta	1.91	2.47	3.08	3.75	4.47
Bilaspur Sadar	4.92	5.87	6.99	8.27	9.71
Naina Devi	2.08	2.48	2.94	3.48	4.07

Vulnerability Index Scenarios – District Bilaspur at Tehsil Level

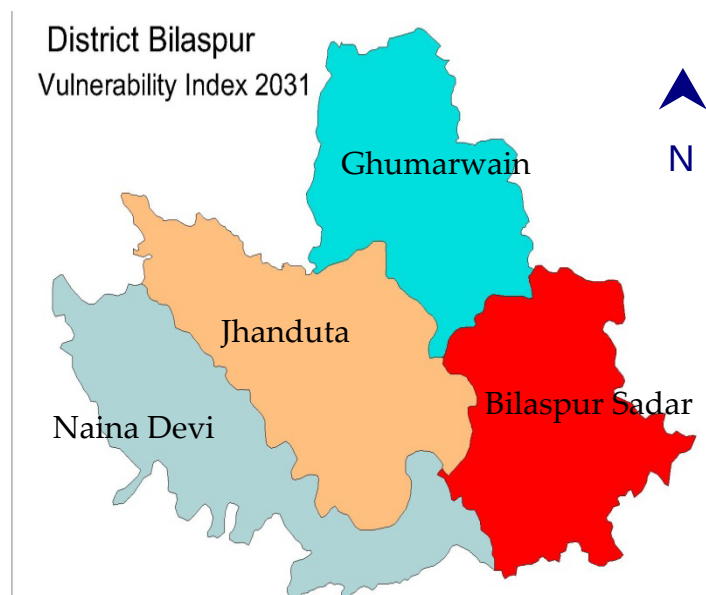
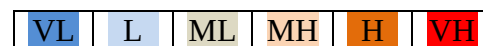




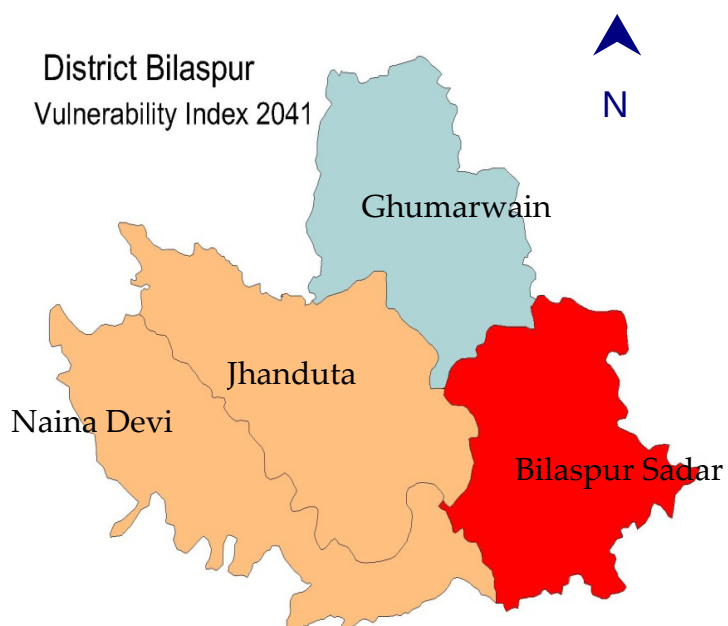
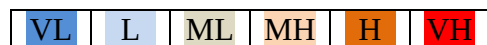
Bilaspur Sadar moves to very high and critical vulnerability segment while all the other three remain in the low vulnerability segment.



Ghumarwain remains in the low vulnerability segment while Jhanduta and Naina Devi both move to the next higher segment of marginally low vulnerability. Bilaspur Sadar remains critical.



Ghumarwain still remains in low vulnerability and so does Naina Devi in moderately low vulnerability segment. Jhanduta moves to the higher segment of moderately high vulnerability while Bilaspur Sadar remains critical.



Ghumarwain shifts to moderately low vulnerability. Jhanduta remains moderately high vulnerability and is joined by Naina Devi in this segment. Bilaspur Sadar retains the critical segment.



Chamba

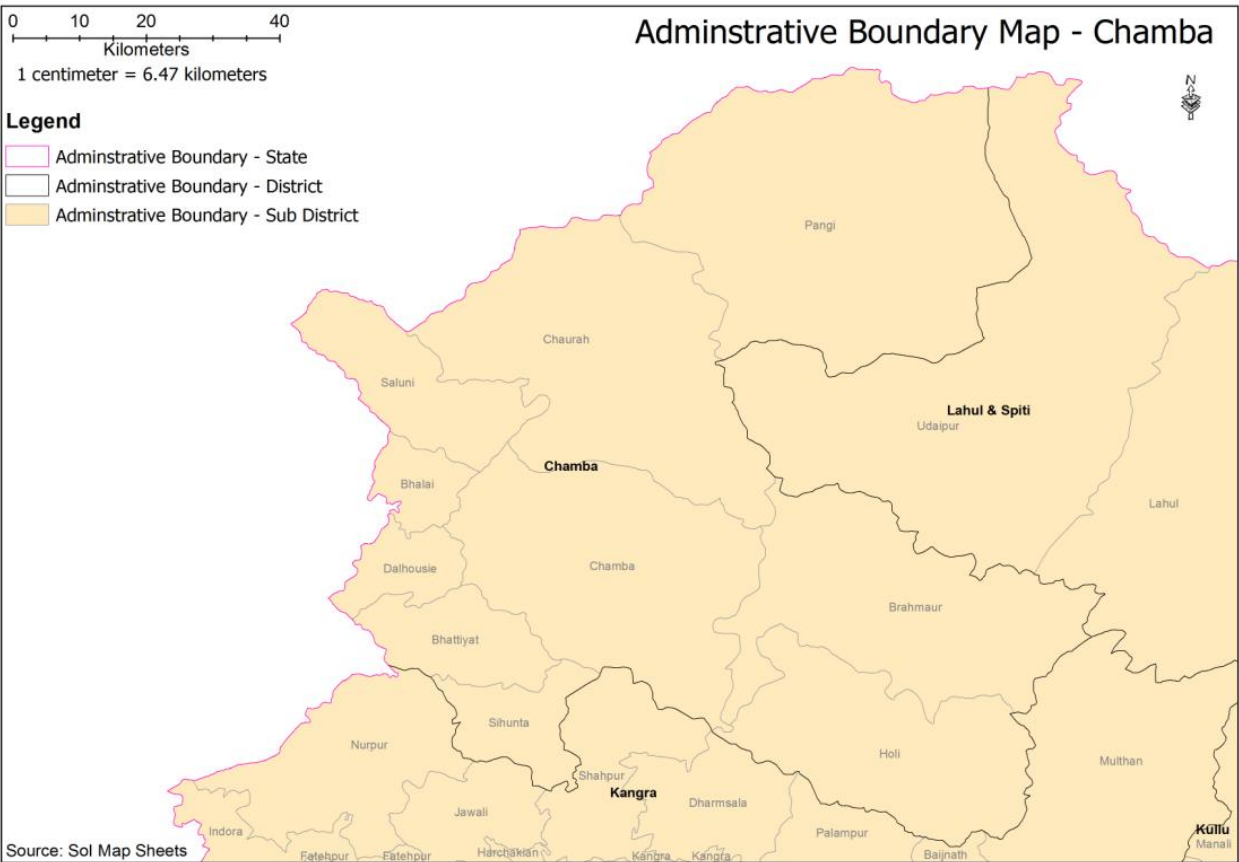
CHAMBA

Location

Chamba district is a part of the Northern Himachal Pradesh. The district is bounded on the north and west by Jammu & Kashmir state, on the south-west by Punjab state, on the south and south-east by Kangra district whereas Lahul & Spiti district encloses it from east.

It lies between 32°10' and 33° 13' north latitudes and 75°48' and 76°53' east longitudes and covers an area of 6,528 Sq. Kms. and ranks 2nd in terms of area occupying 11.72 per cent area of the state.

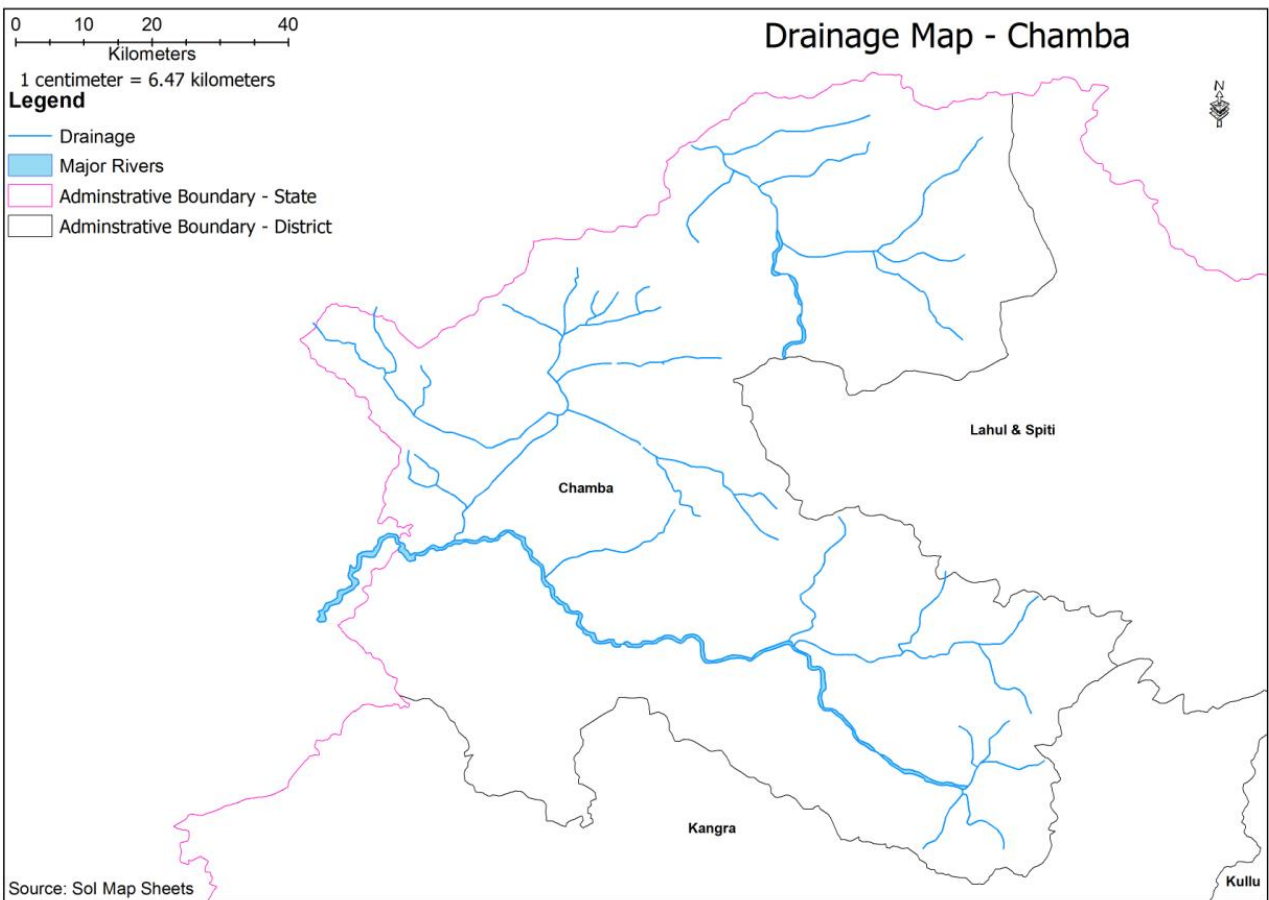
The entire district is mountainous with an altitude ranging from 559 meters to 6,162 meters above the mean sea level. The habitation is found only up-to a height of 3,000 meter

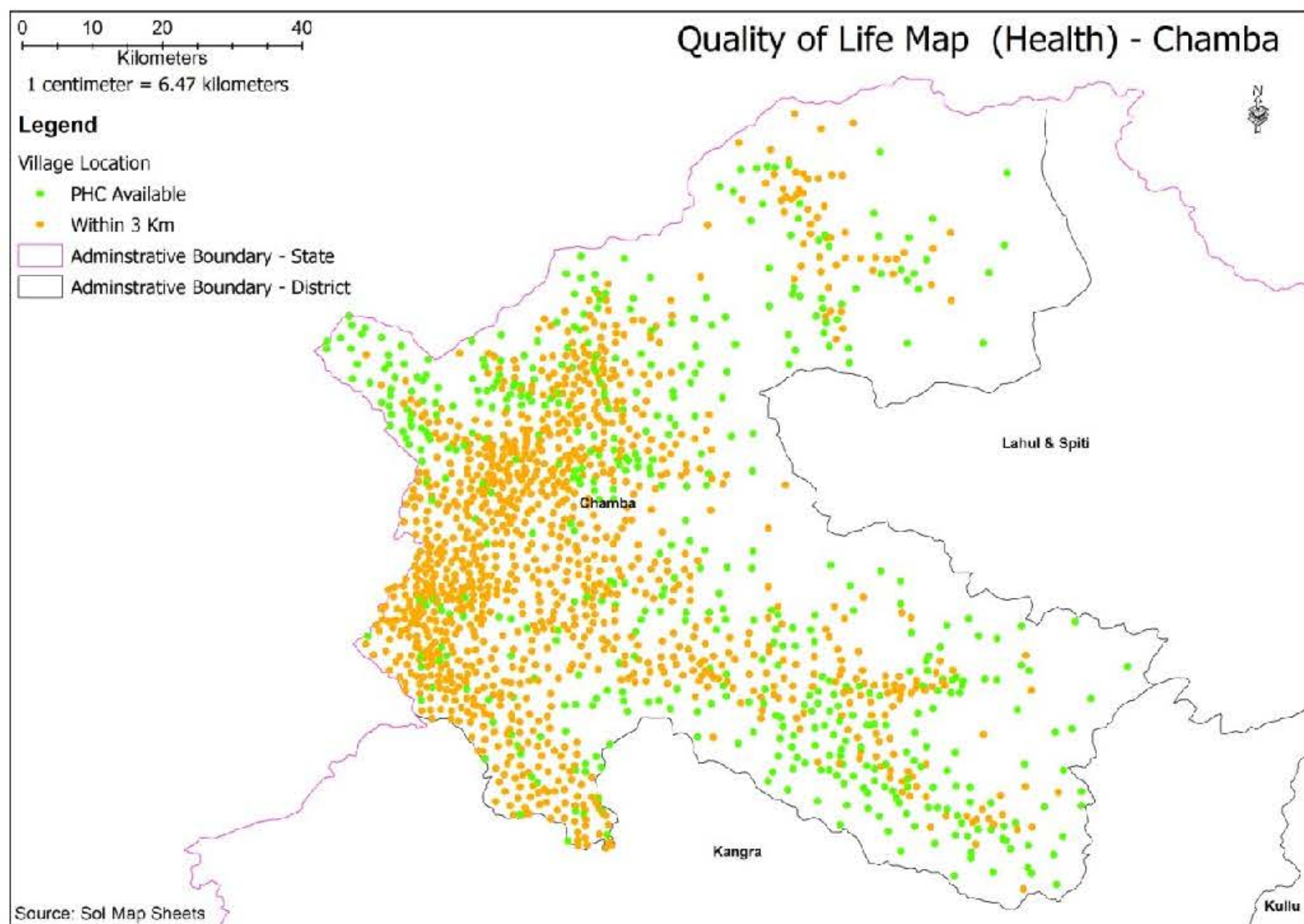
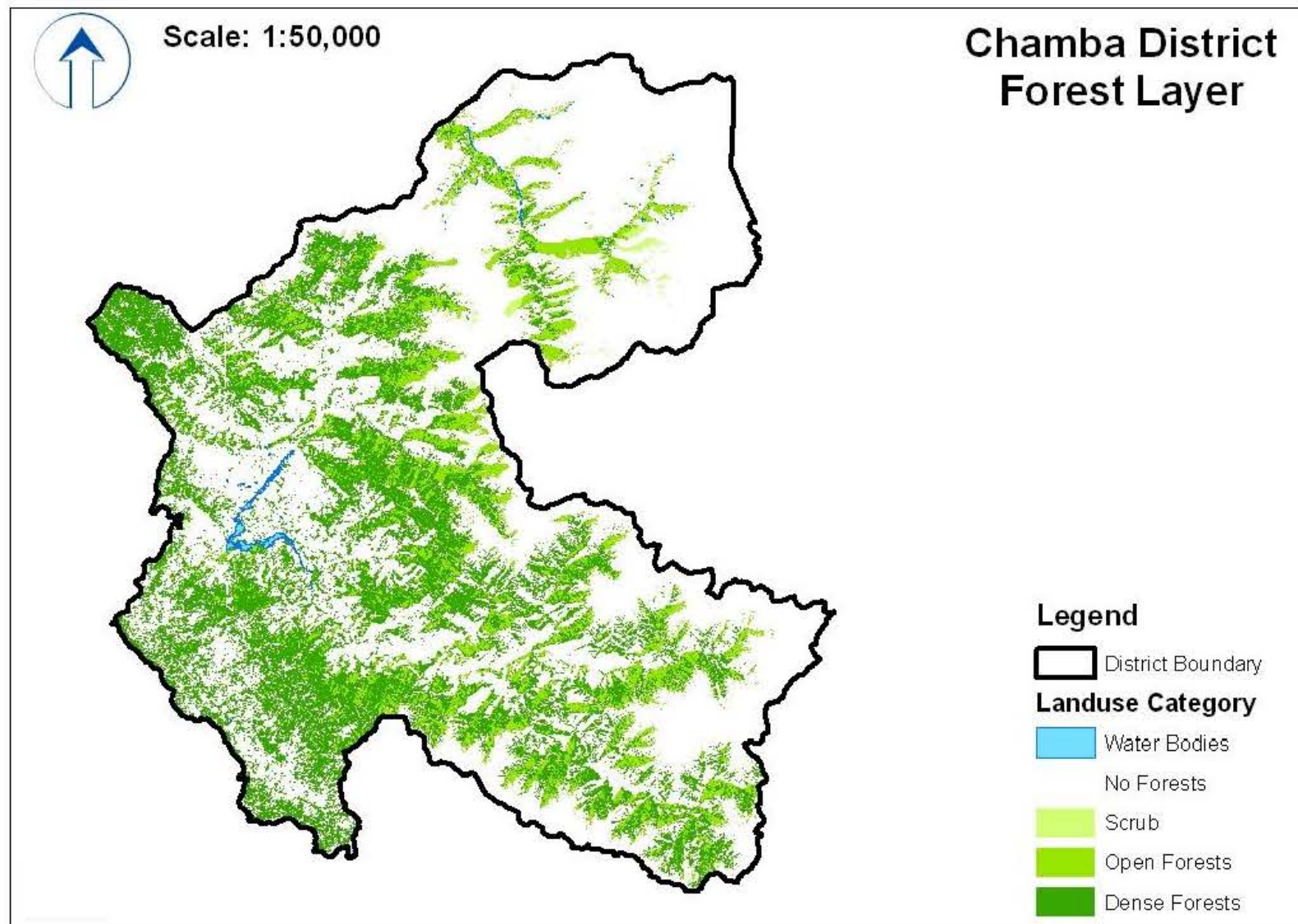


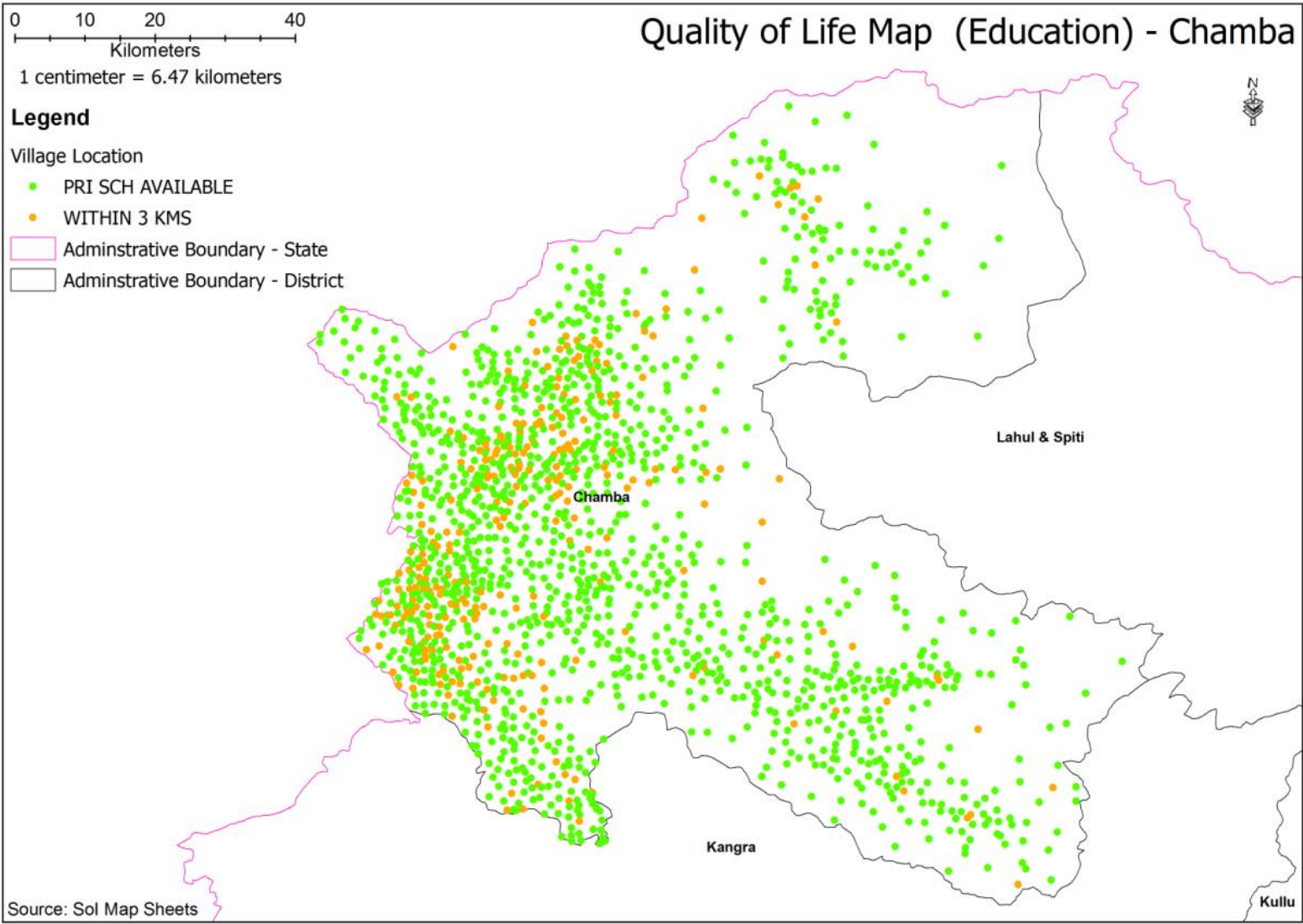
Administrative set up The District is divided in to 10 administrative units in terms of Tehsils or sub-tehsils as under-(in descending order of area covered in square kilometers)

Sl. No.	Tehsil	Area in sq.kms
1	Pangi	1600.5
2	Chamba	1271.9
3	Chauraha	1069.3
4	Holi	1062.8
5	Brahmaur	755.6
6	Saluni	372.7
7	Bhattiyat	249.6
8	Sihunta	246.9
9	Dalhousie	164.1
10	Bhalai	131.3

The top four units occupy almost three fourths of the area of the entire district, while the balance one fourth is being covered by rest eight units.

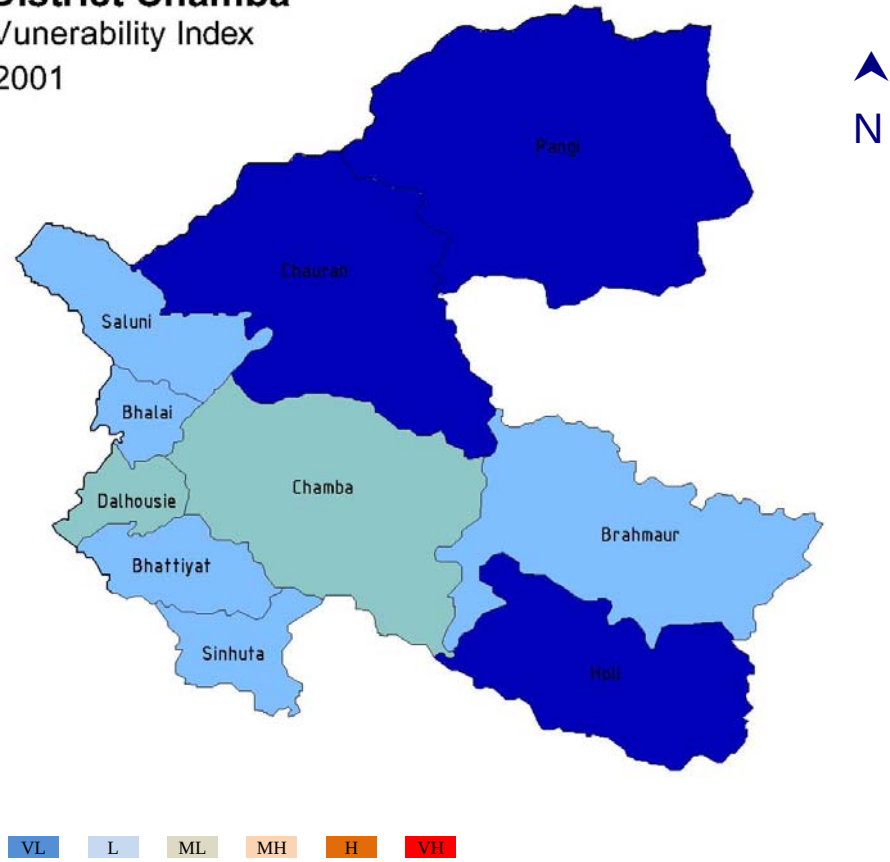




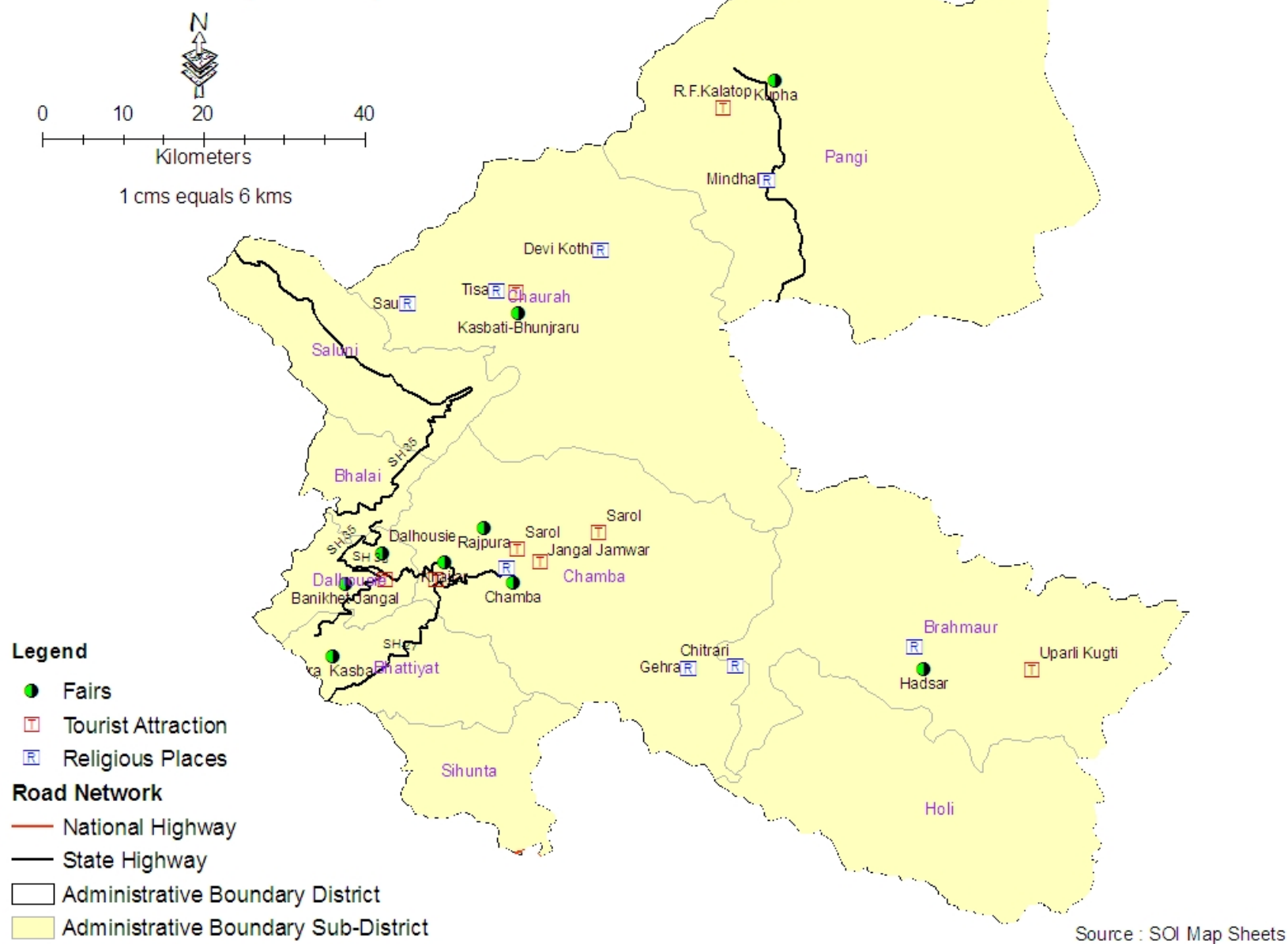


	Pangi	Chaurah	Saluni	Bhalai	Chamba	Bhattiyat	Holi	Brahmaur	Sihunta	Dalhousie
VI	3584.10	4286.67	5831.51	4104.99	7382.41	4737.7	2530.05	4793.06	3956.83	7700.02
denominator = 57x43	2451									
Normalized VI	1.46	1.75	2.38	1.67	3.01	1.93	1.03	1.96	1.61	3.14

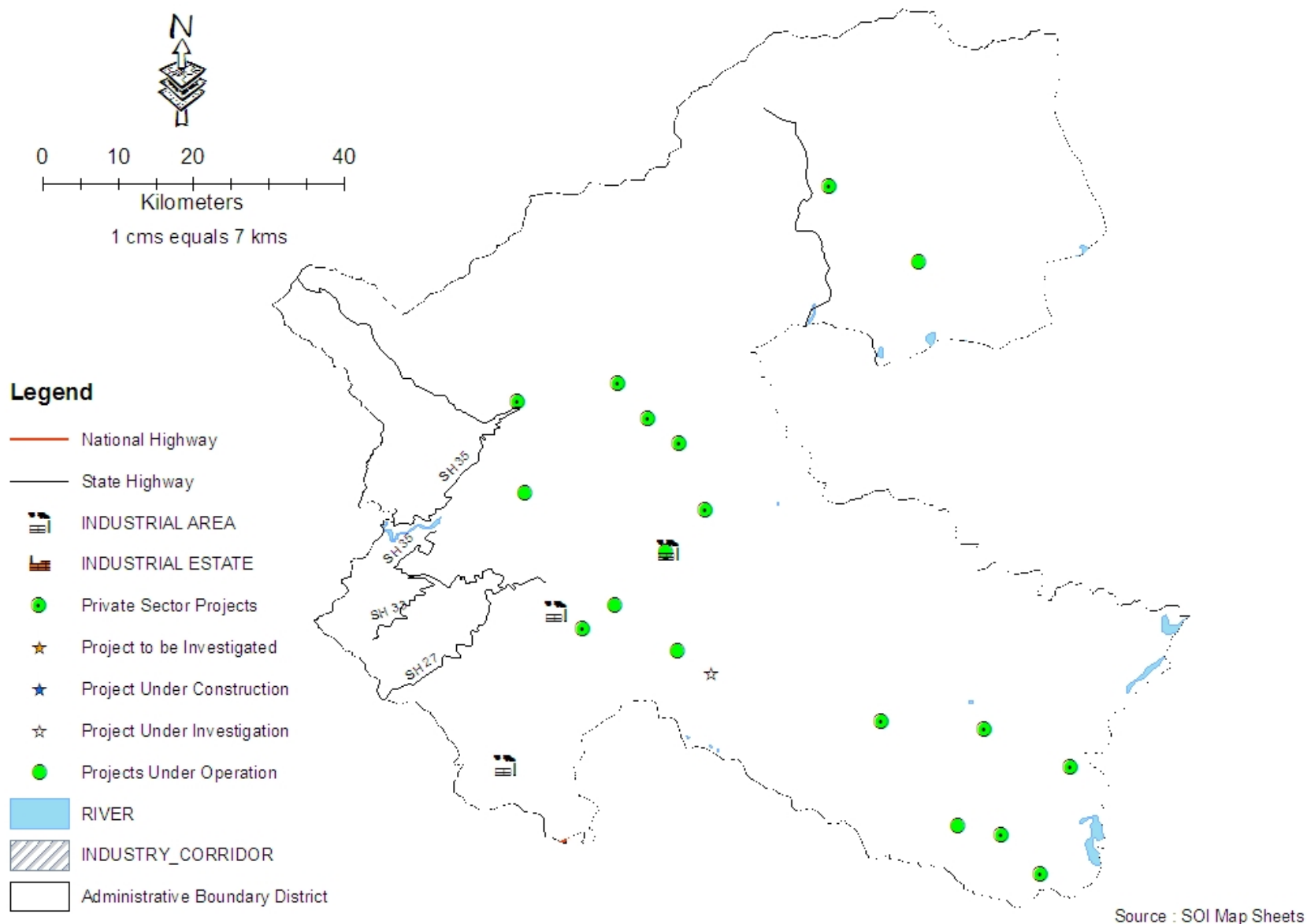
District Chamba
Vunerability Index
2001



Pressure Points(Tourism) - Chamba District



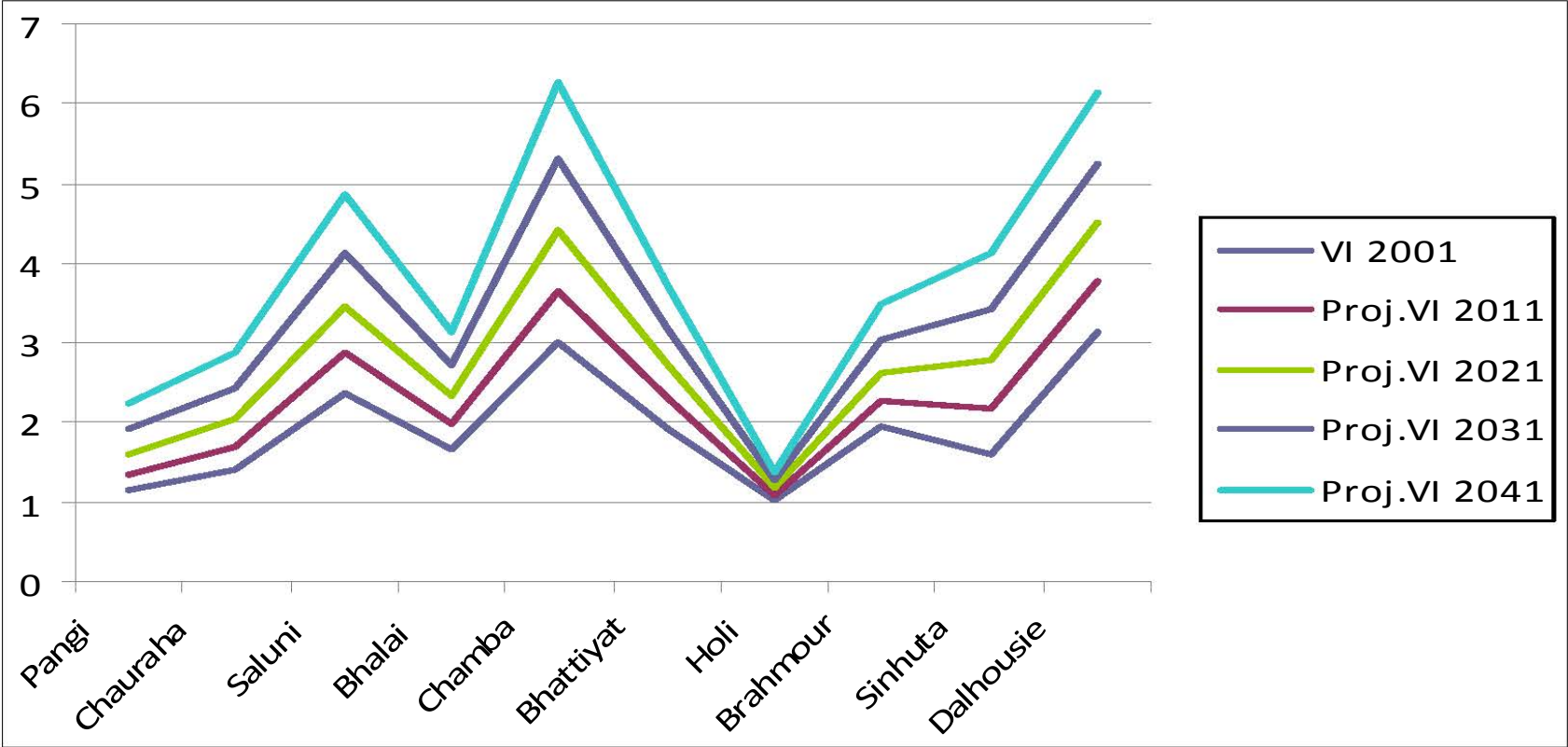
Pressure Points (Industry & Hydel) - Chamba District



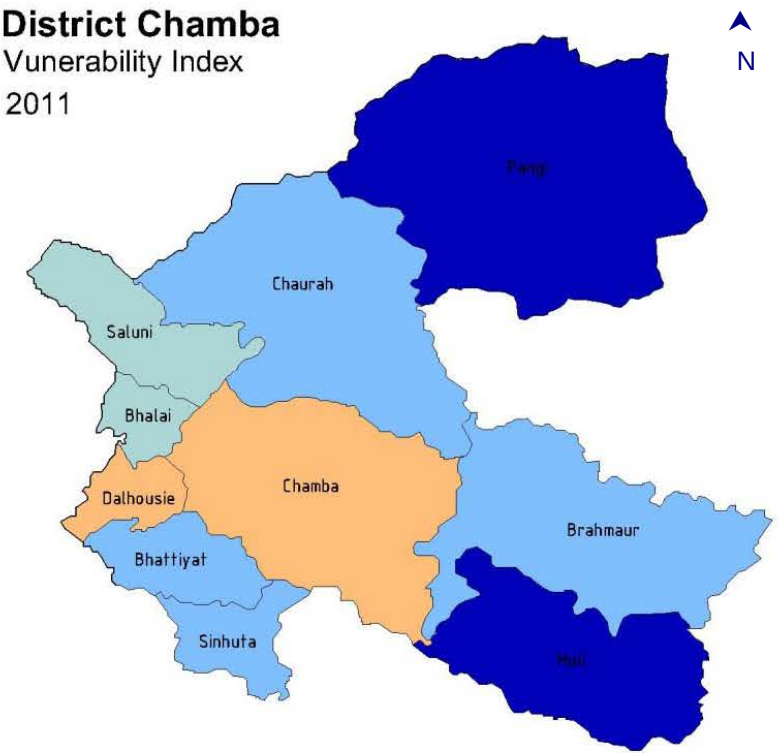
Projected Vulnerability Index

Tehsil	VI 2001	Proj.VI 2011	Proj.VI 2021	Proj.VI 2031	Proj.VI 2041
Pangi	1.14	1.36	1.61	1.90	2.23
Chauraha	1.42	1.71	2.05	2.44	2.87
Saluni	2.38	2.88	3.46	4.12	4.85
Bhalai	1.67	1.98	2.33	2.72	3.14
Chamba	3.01	3.65	4.42	5.30	6.28
Bhattiyat	1.93	2.29	2.71	3.18	3.69
Holi	1.03	1.10	1.18	1.27	1.37
Brahmour	1.96	2.26	2.62	3.02	3.48
Sinhuta	1.61	2.16	2.77	3.41	4.11
Dalhousie	3.14	3.78	4.50	5.26	6.12

Vulnerability Index Scenarios – District Chamba at Tehsil Level



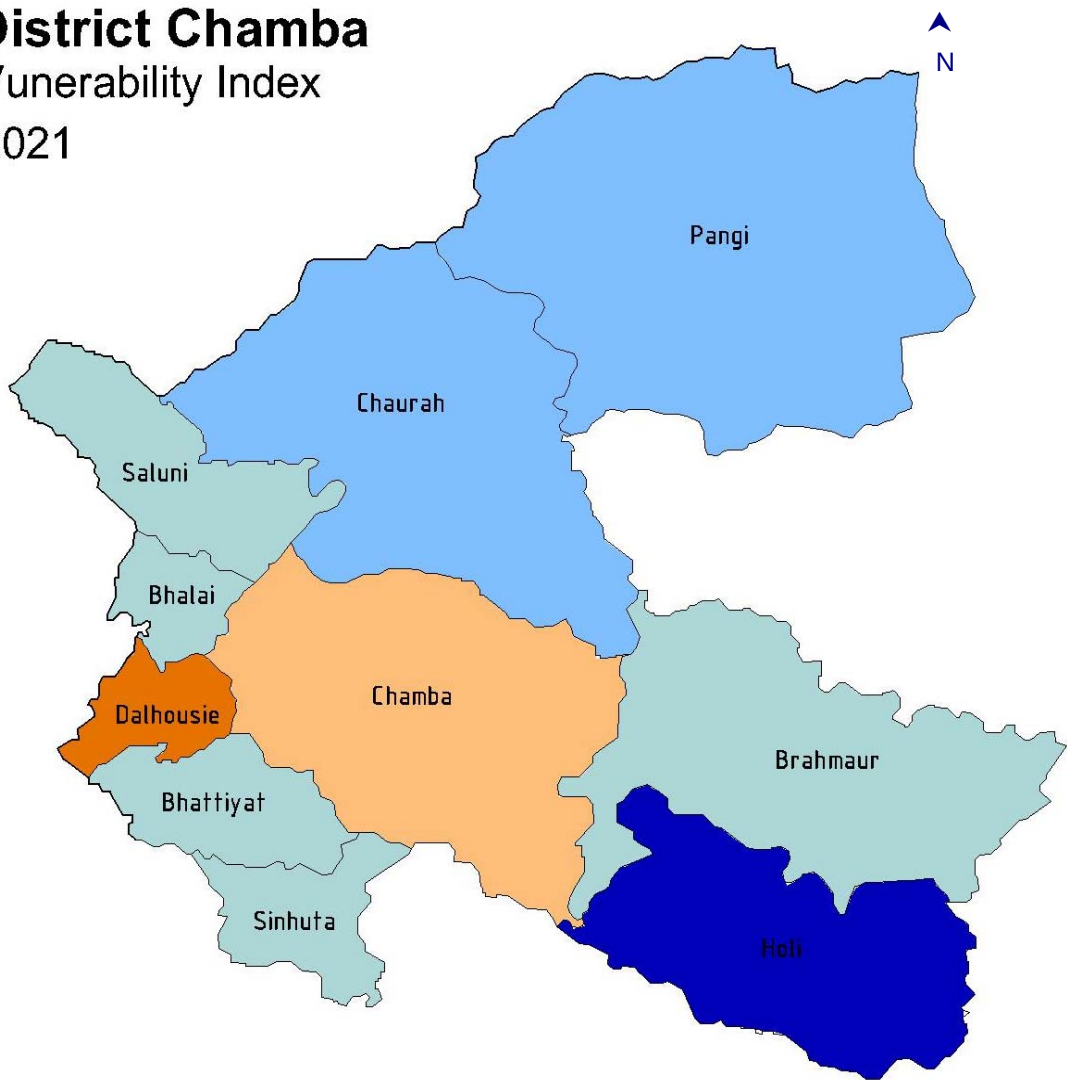
2011



Pangi and Holi remain in the very low vulnerability segment. Bharmaur, Bhattiyat and Sinhuta retain their low vulnerability and are joined by Chaurah. Saluni and Bhalai move to moderately low vulnerability segment. Dalhousie and Chamba move to the moderately high vulnerability segment.

2021

District Chamba
Vunerability Index
2021

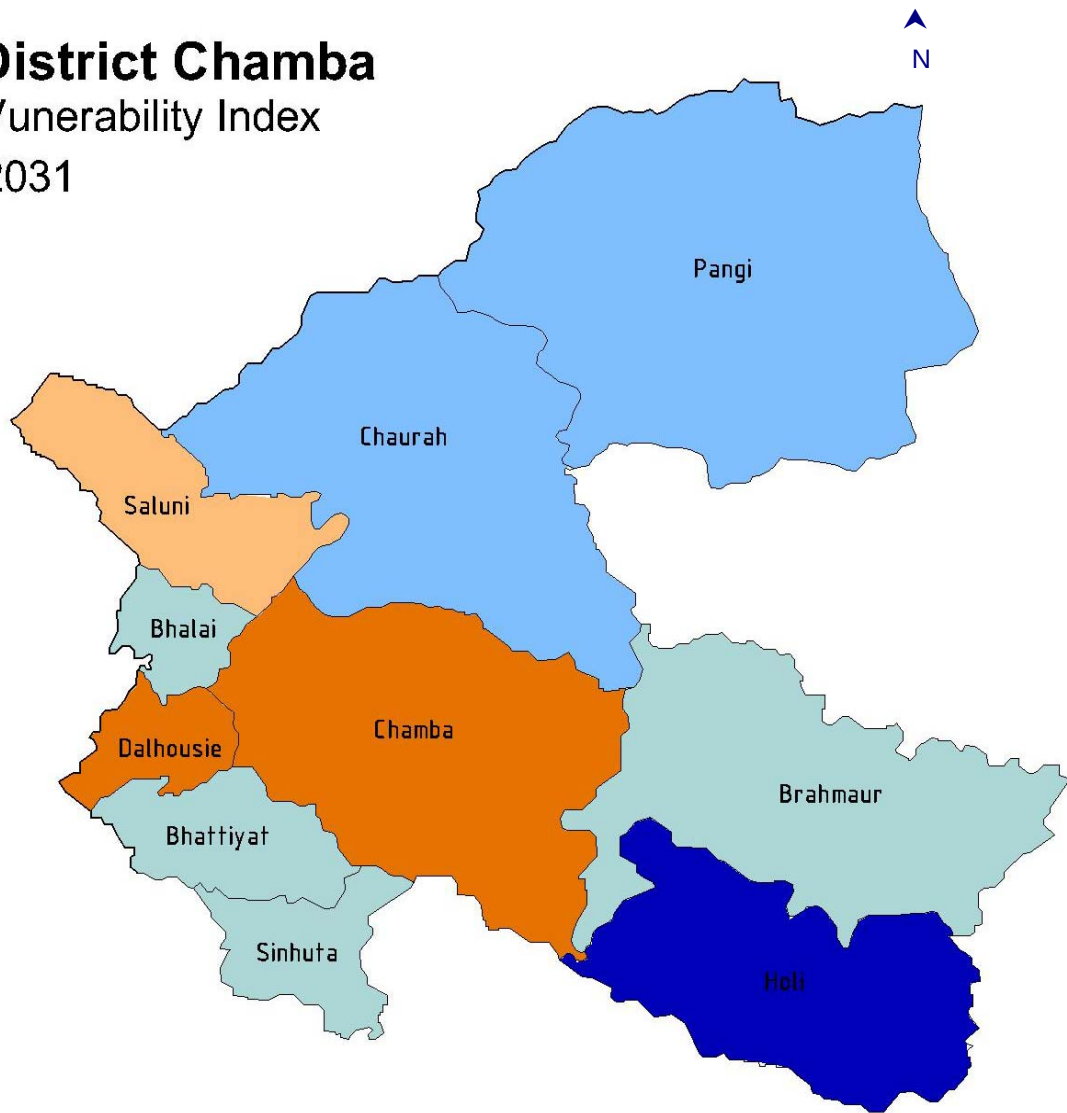


Holi remains in the very low vulnerability segment. Pangi joins Chaurah in the low vulnerability segment. Saluni and Bhalai, in the moderately low vulnerability segment are joined by Bhattiyat, Sinhuta and Bharmaur. Chamba retains the moderately high vulnerability but Dalhousie moves up to High vulnerability segment.

VL L ML MH H VH

2031

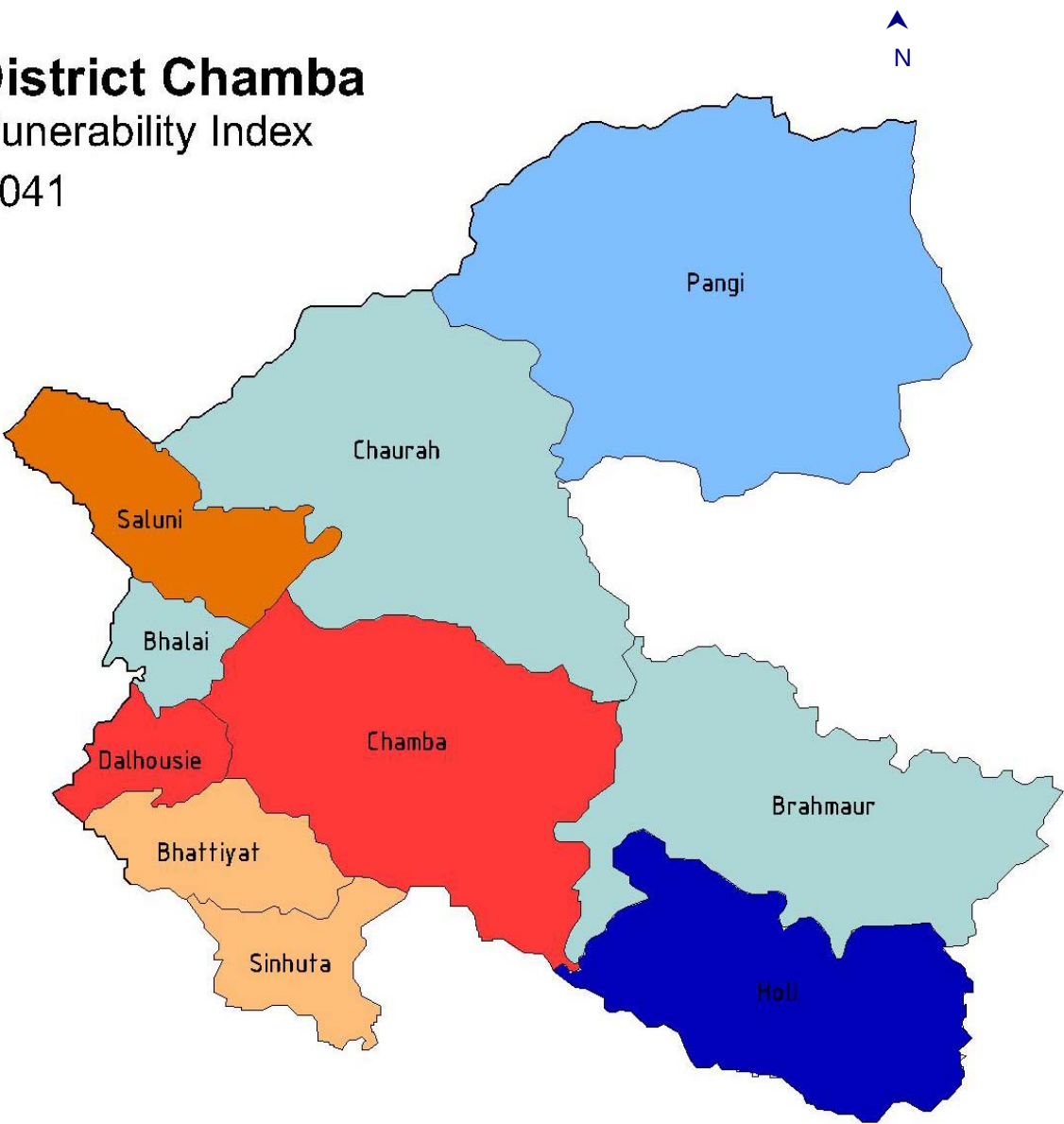
District Chamba
Vunerability Index
2031



Holi still retains very low vulnerability segment. Pangi and Chaurah retain their low vulnerability segment. Bharmaur, Bhalai, Bhattiyat and Sinhuta retain their moderately low vulnerability Saluni moves to moderately high vulnerability segment. Dalhousie retains its high vulnerability segment and is joined by Chamba.

VL L ML MH H VH

District Chamba
Vunerability Index
2041



Holi remains very low vulnerable. Pangi retains its low vulnerability. Chaurah joins Bharmaur and Bhalai in the moderately low vulnerability segment. Bhattiyat and Sinhuta move to the moderately high vulnerability segment. Saluni moves to the high vulnerability segment. Dalhousie and Chamba both move to the very high and critical vulnerability segment.

VL L ML MH H VH

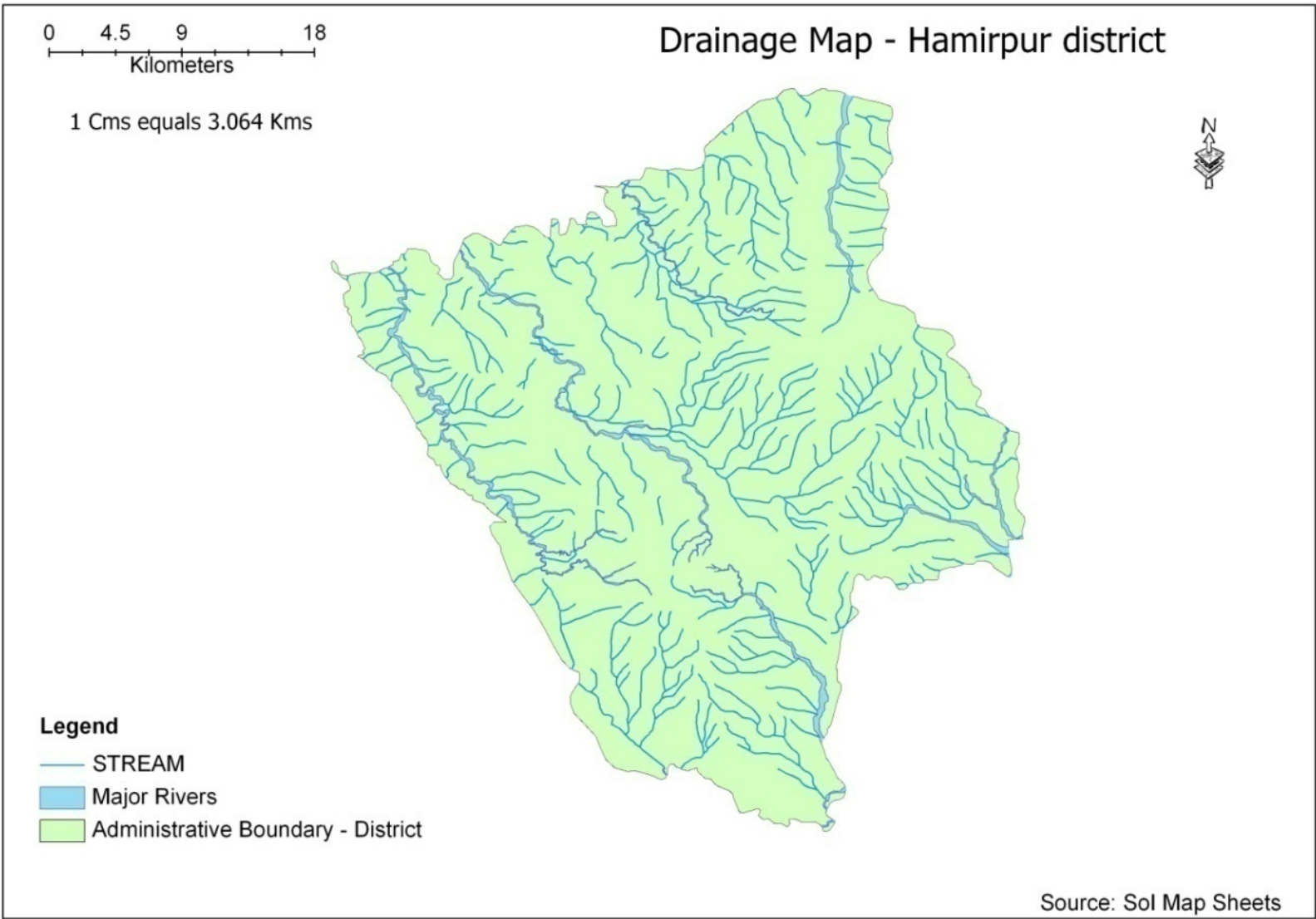
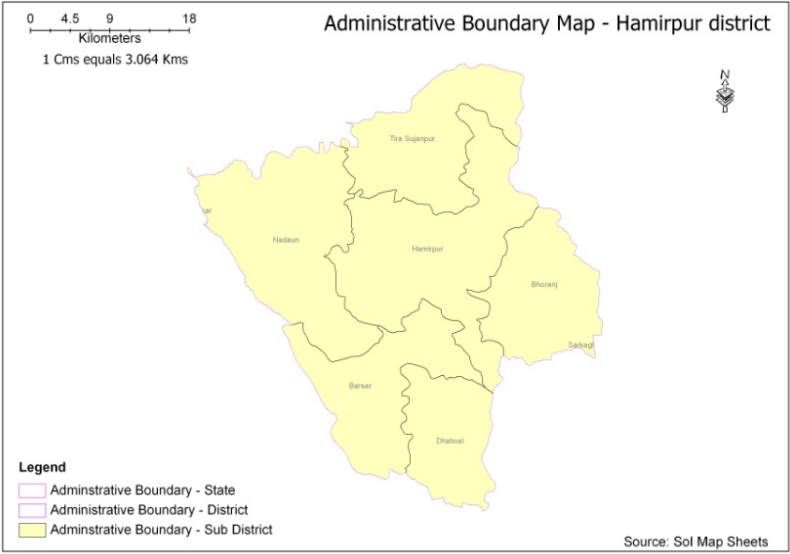
Hamirpur

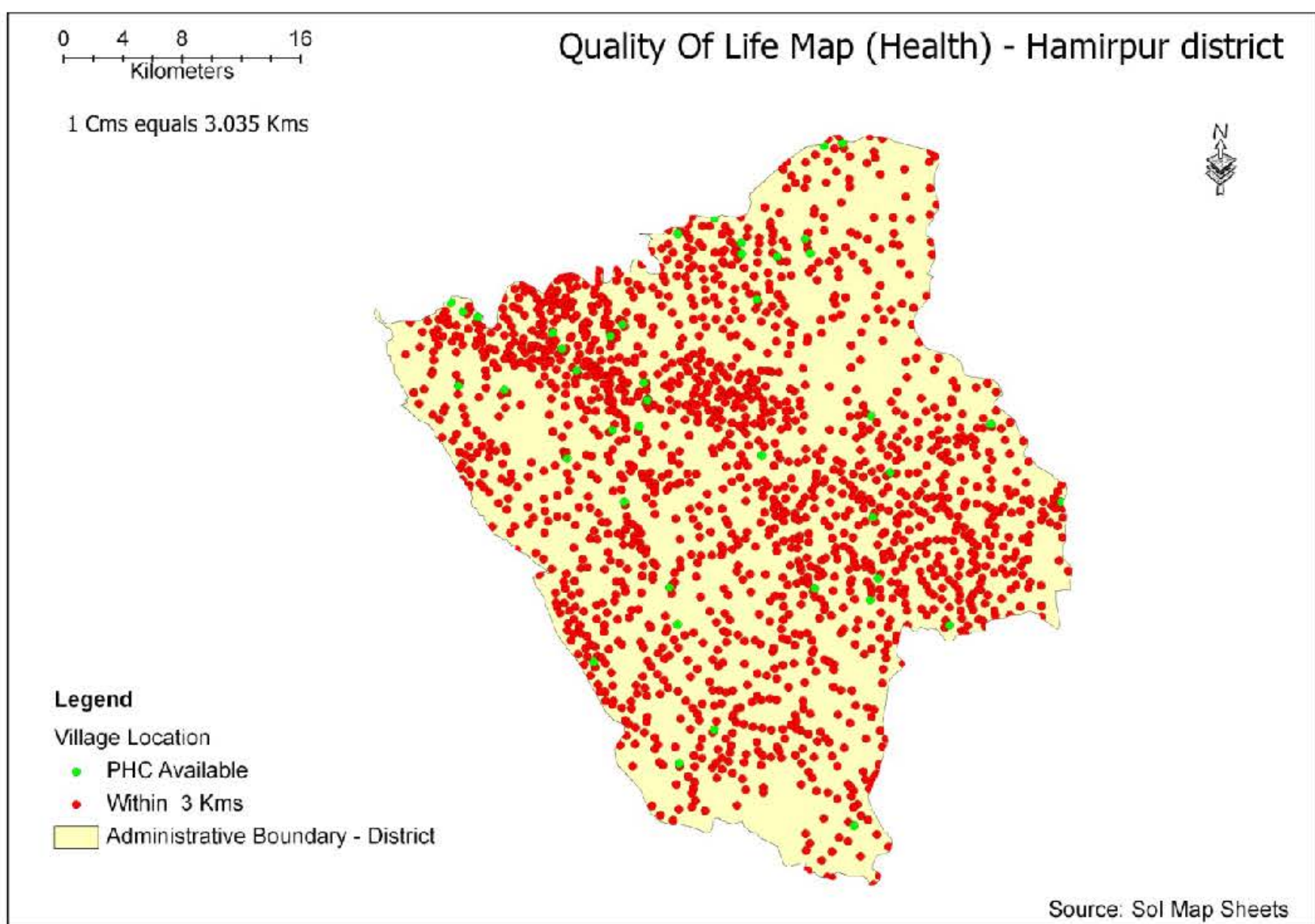
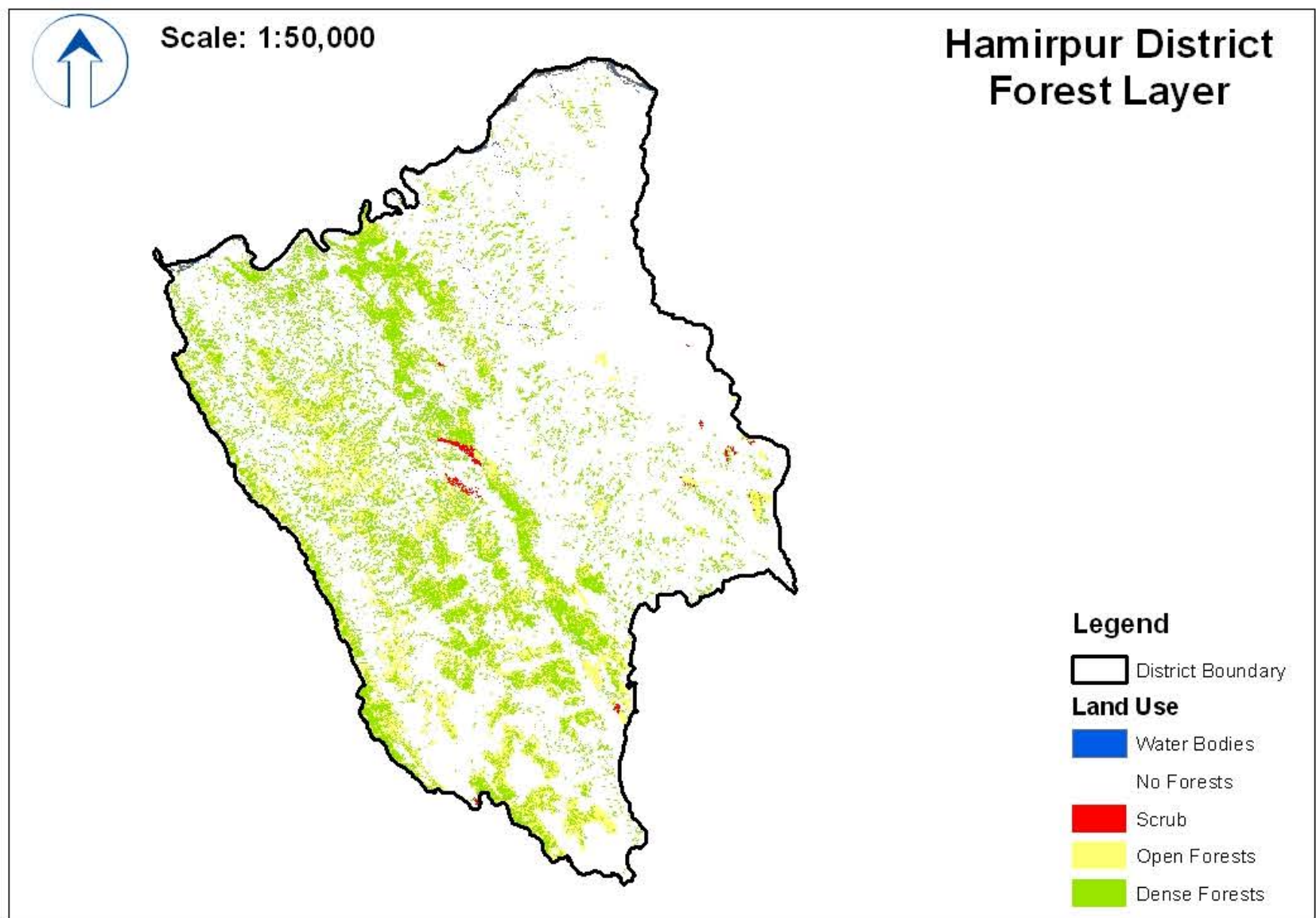
Location:

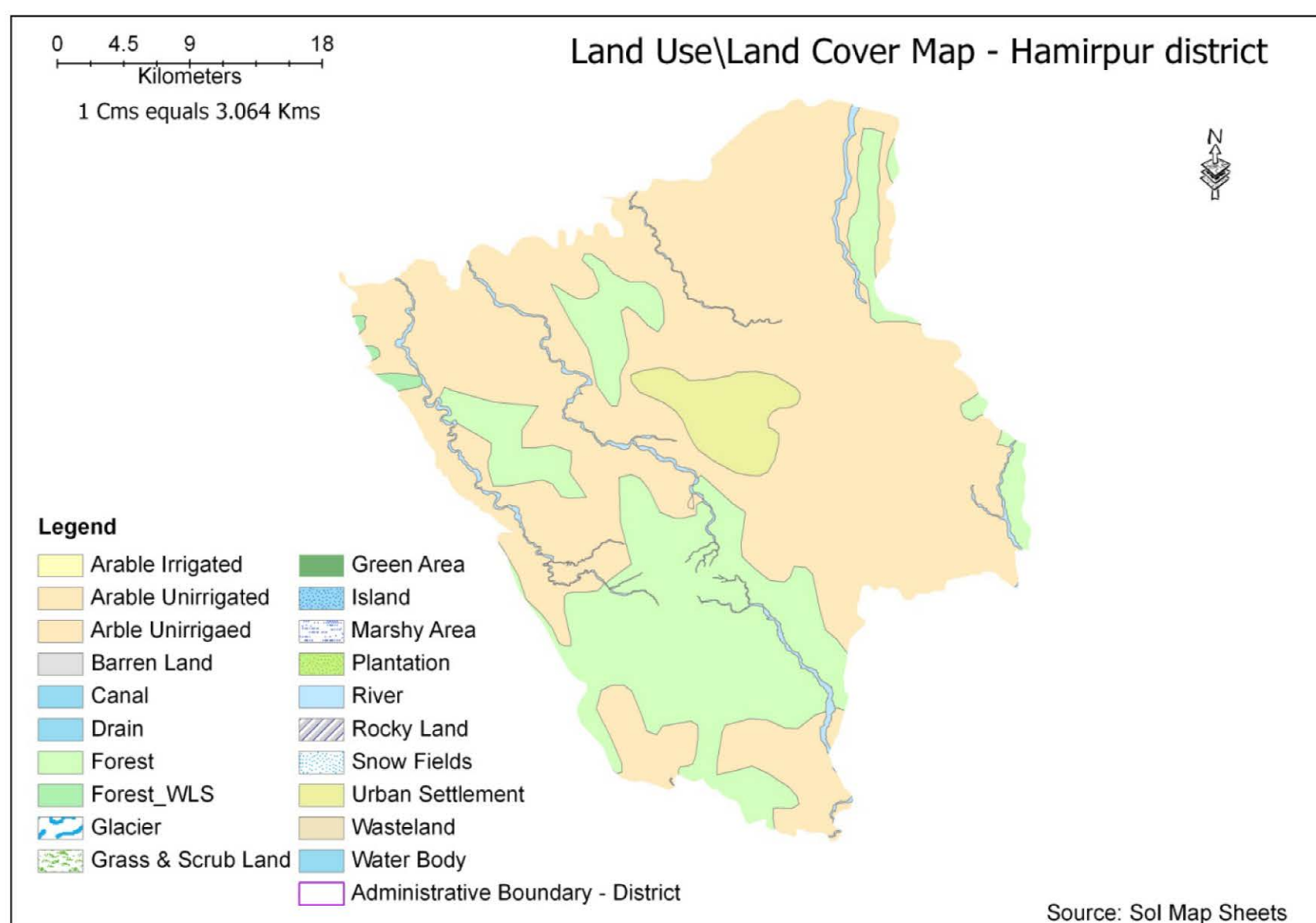
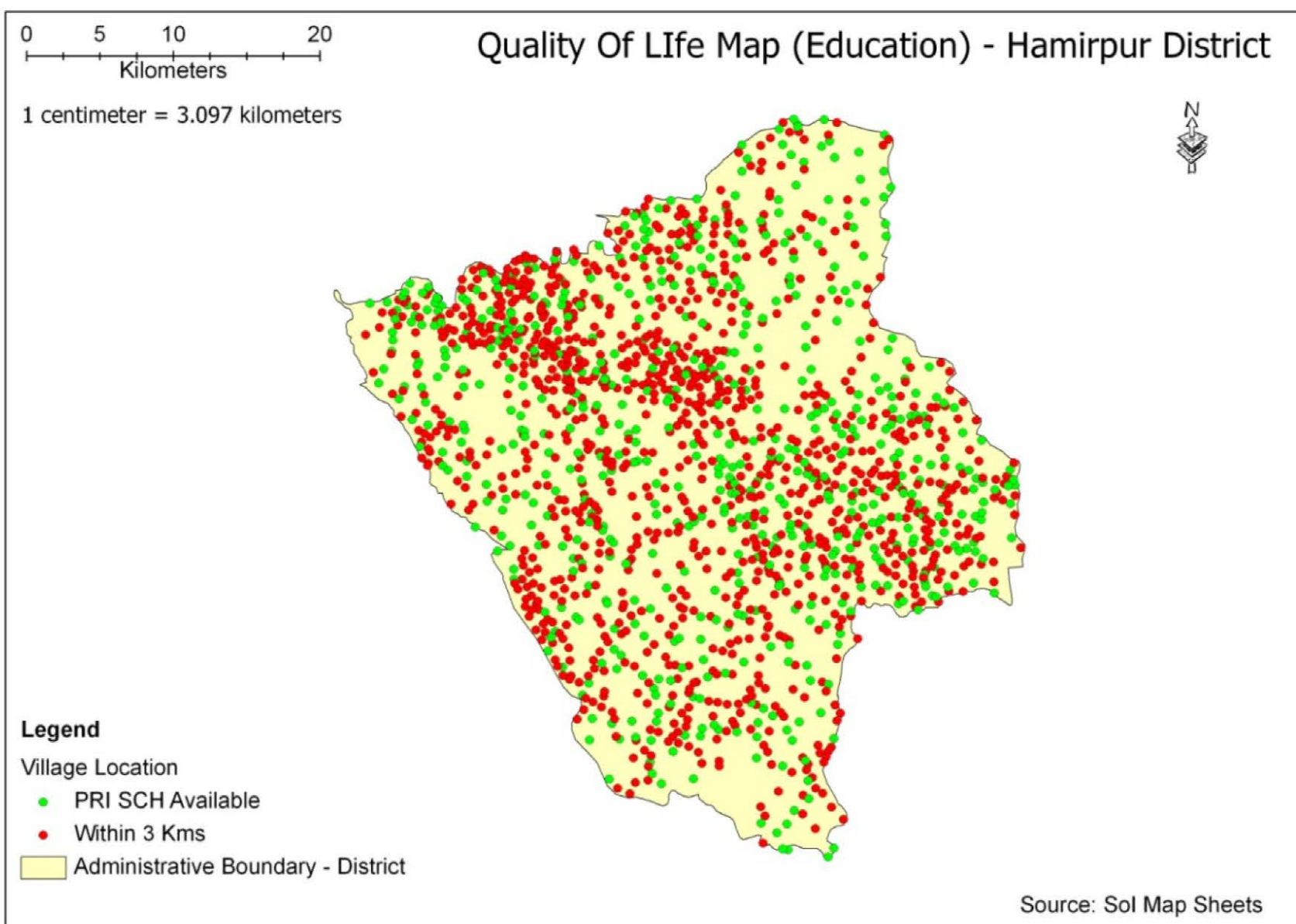
Hamirpur district is situated between 76°17'50"east to 76°43'42" east longitude and between 31°24'48" north to 31°53'35" north latitudes. It is located in the south western part of Himachal Pradesh. It is covered by lower Himalayas; the elevation varies from the 400 meters to 1,100 meters. Hamirpur district is bounded in the north by river Beas which separates it from Kangra district in Jaisinghpur, Khundian and Dera Baba Gopipur Tehsils of the Kangra district. In the east Bakar and Seer Khads in Lad bharol and Sandhol Tehsils of Mandi district create the boundary with Hamirpur. In the south, it is bounded by Ghumarwain and Jhanjhuta Tehsils of Bilaspur district and in the west by Bangana Tehsil of Una district.

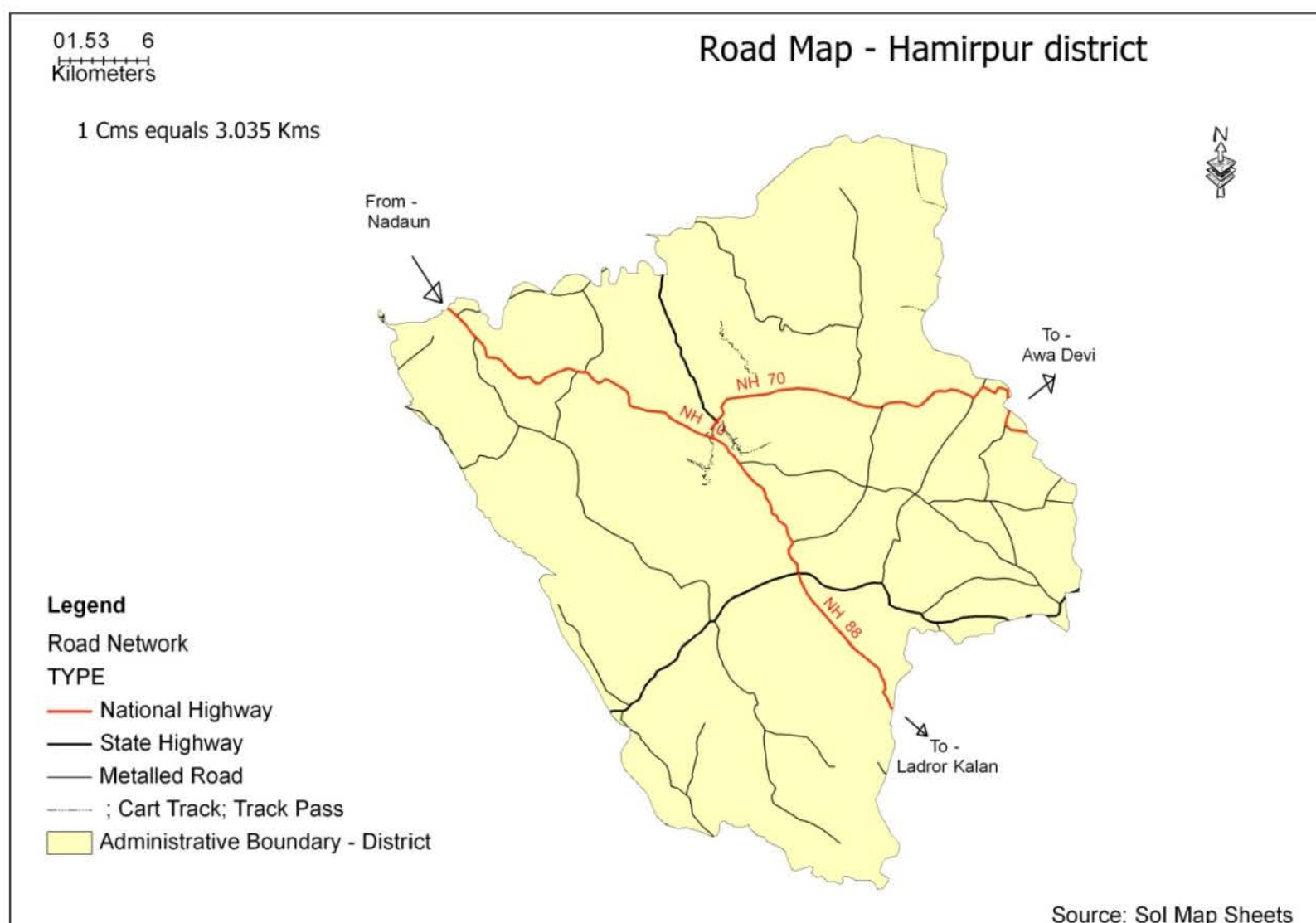
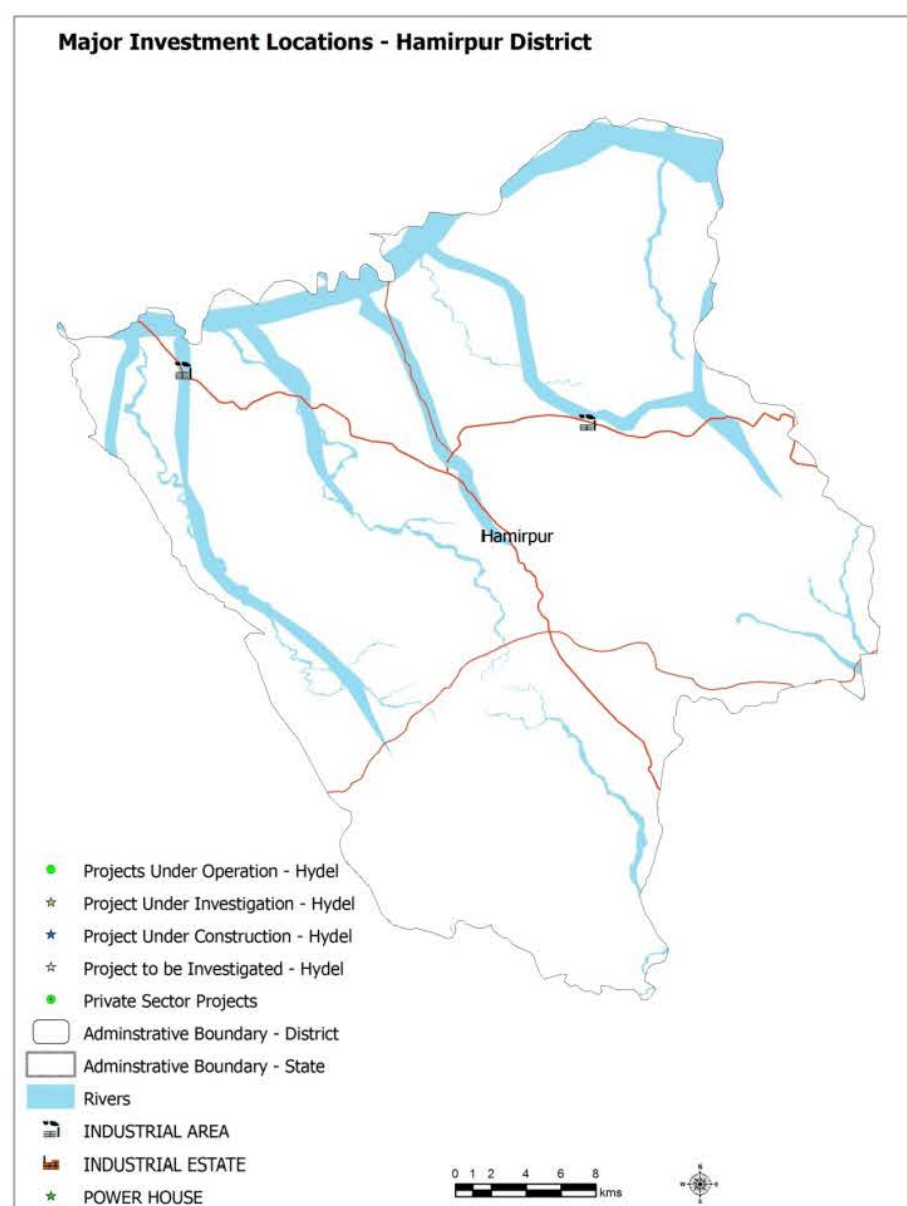
It is divided into six administrative units as Tehsil/Sub-Tehsil (area in descending order as follows):

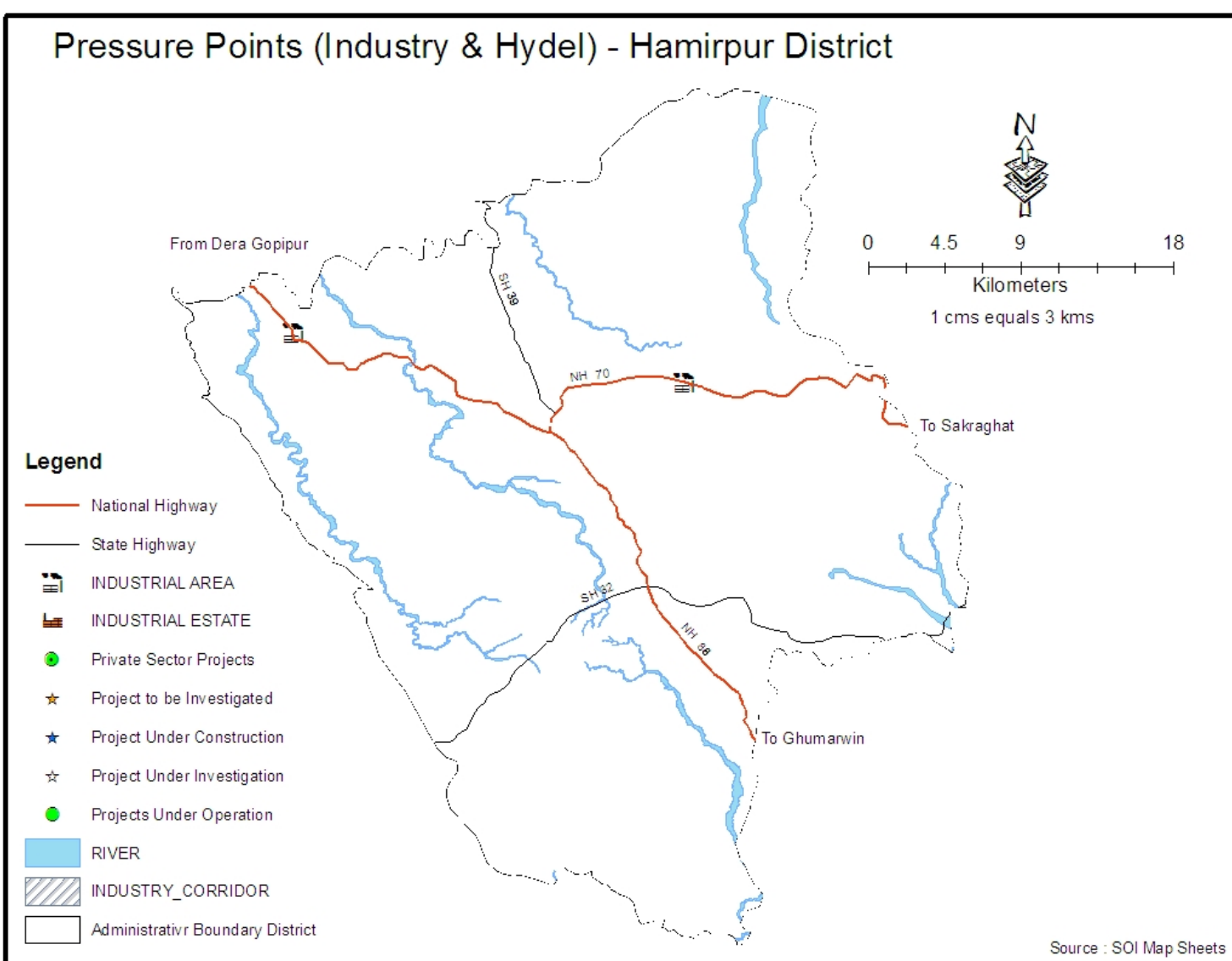
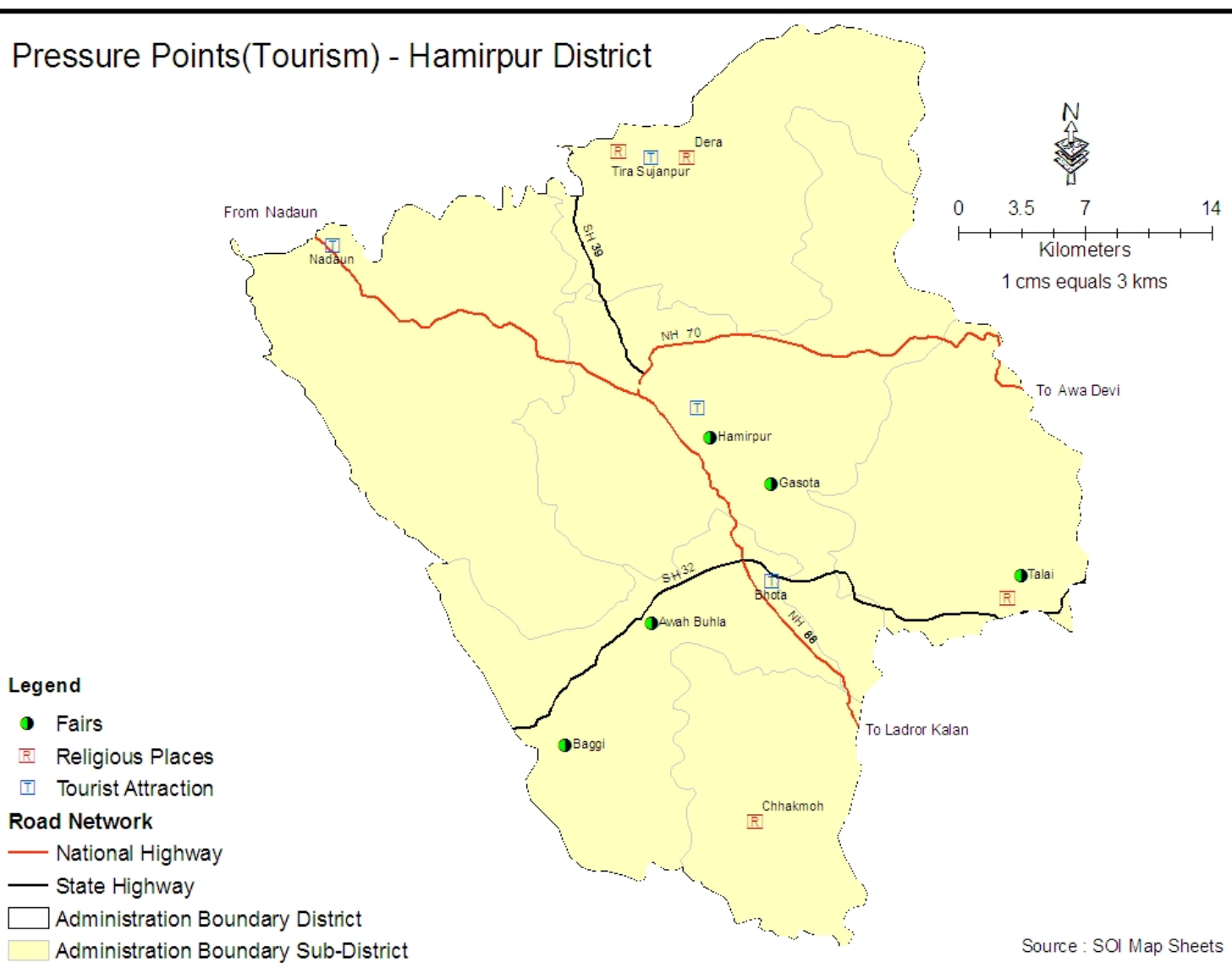
S.No.	Tehsil/Sub-Tehsil	Area (Sq.Km)
1	Nadaun	247.40
2	Hamirpur	247.40
3	Tira Sujanpur	180.40
4	Barsar	153.30
5	Bhoranj	150.90
6	Dhatwal	121.30





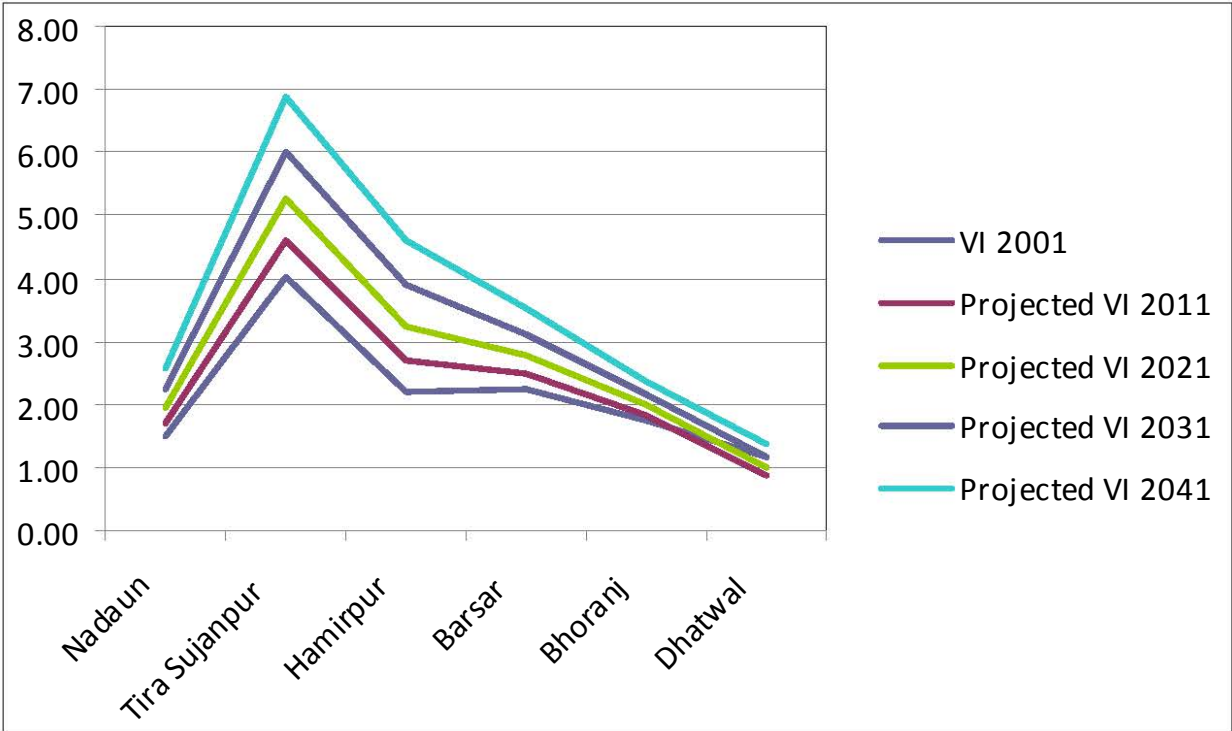






	VI 2001	Projected VI 2011	Projected VI 2021	Projected VI 2031	Projected VI 2041
Nadaun	1.49	1.70	1.96	2.25	2.58
Tira Sujanpur	4.04	4.59	5.25	6.02	6.89
Hamirpur	2.20	2.68	3.24	3.88	4.60
Barsar	2.22	2.48	2.78	3.12	3.51
Bhoranj	1.74	1.84	1.98	2.15	2.34
Dhatwal	1.14	0.87	1.00	1.17	1.36

Vulnerability Index Scenarios – District Hamirpur at Tehsil Level

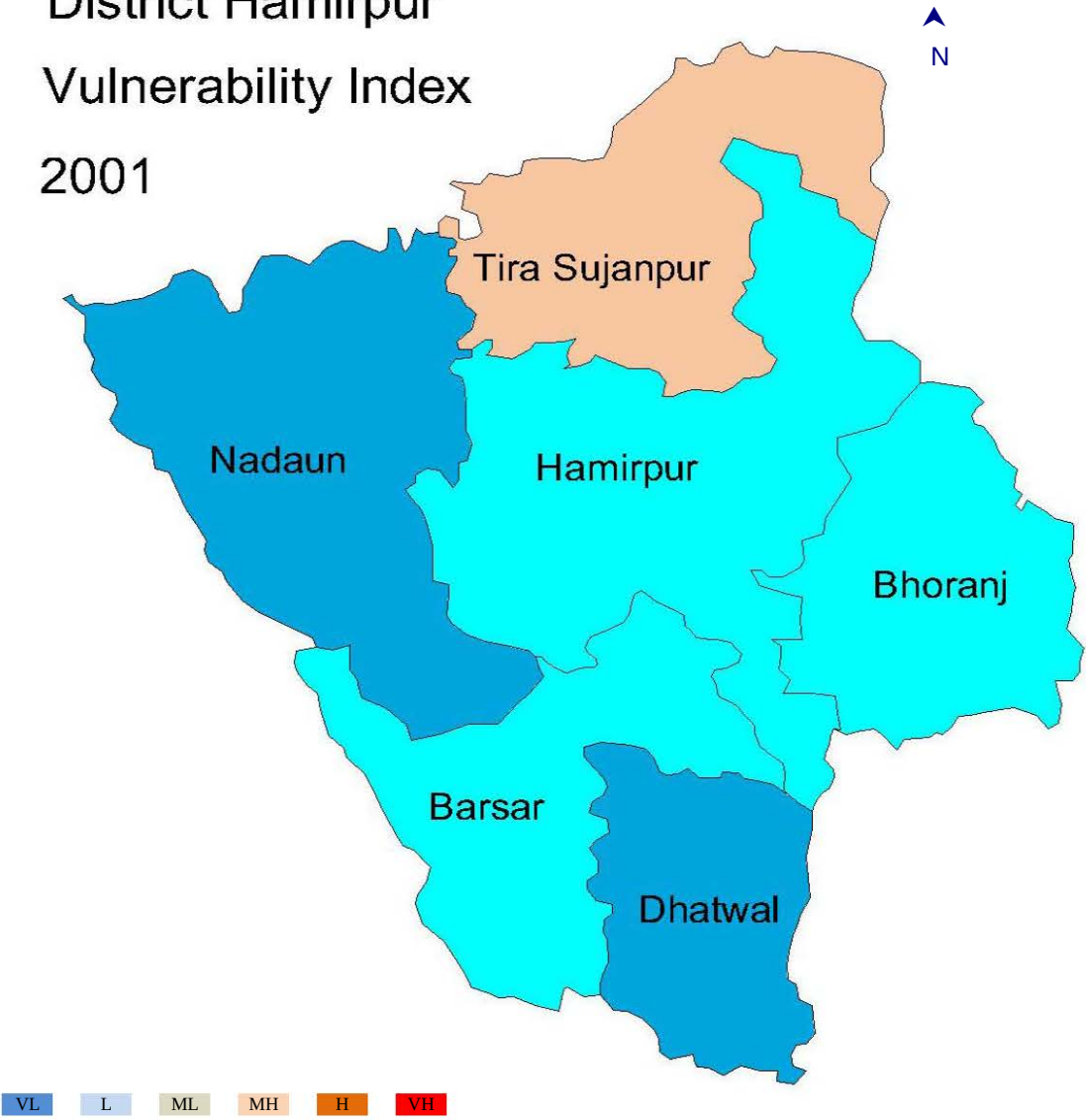


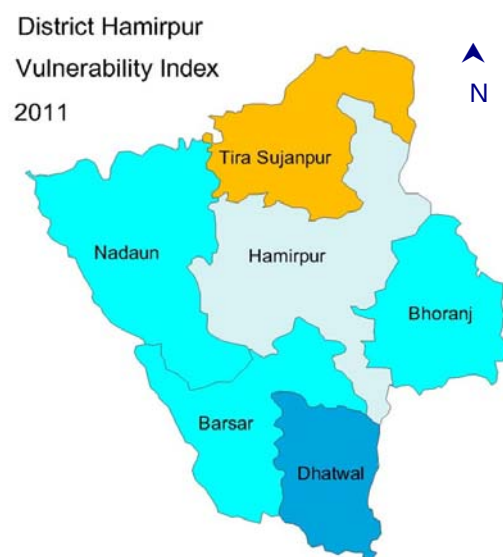
	Nadaun	Tira Sujanpur	Hamirpur	Barsar	Bhoranj	Dhatwal
VI	3656.93	9890.36	5401.88	5449.13	4220.35	2804.23
denominator = 57x43	2451					
Normalized VI	1.49	4.04	2.20	2.22	1.72	1.14

District Hamirpur

Vulnerability Index

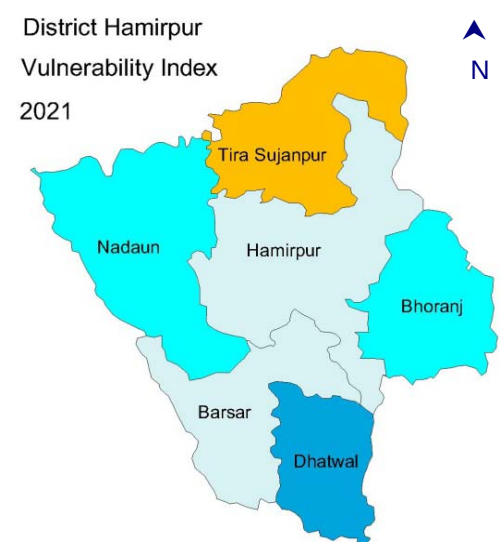
2001





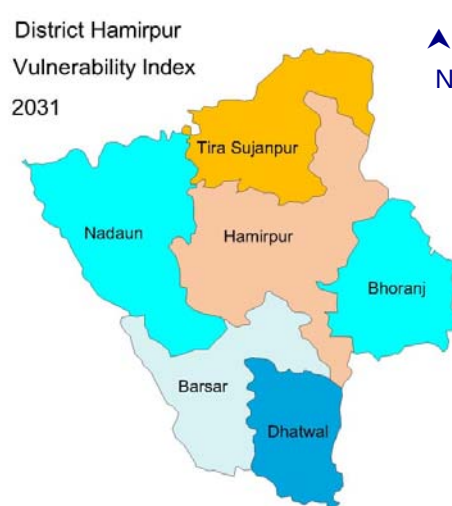
Tira Sujanpur moves to high vulnerability sector while Hamirpur moves up to moderately low vulnerability segment. Rest of the Tehsils retain their low or very low vulnerability segments.

VL L ML MH H VH



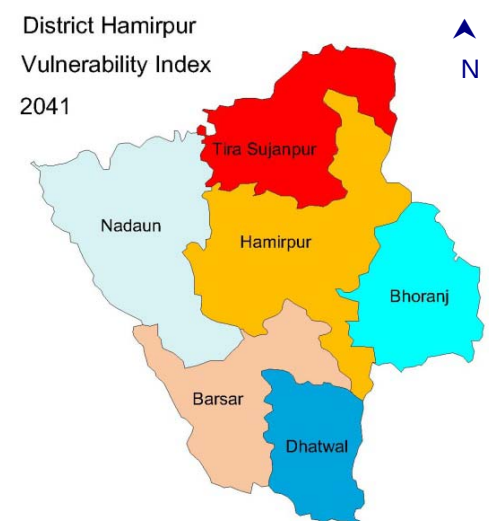
Tira Sujanpur and Hamirpur retain their high and moderately low vulnerability segment. Barsar now joins in the moderately low vulnerability segment from the low vulnerability segment. The other three remain in their segments.

VL L ML MH H VH



Tira Sujanpur remains high vulnerability, Hamirpur now moves up to moderately high vulnerability segment while Barsar remains moderately low vulnerability segment. Rest three retain their segments.

VL L ML MH H VH



Tira Sujanpur goes critically vulnerable, Hamirpur becomes highly vulnerable. Barsar moves up to moderately high vulnerability segment while Nadaun moves up to moderately low vulnerability segment from low vulnerability segment. Bhoranj remains low vulnerable and Dhatwal retains its very low vulnerability segment.

VL L ML MH H VH

Kangra

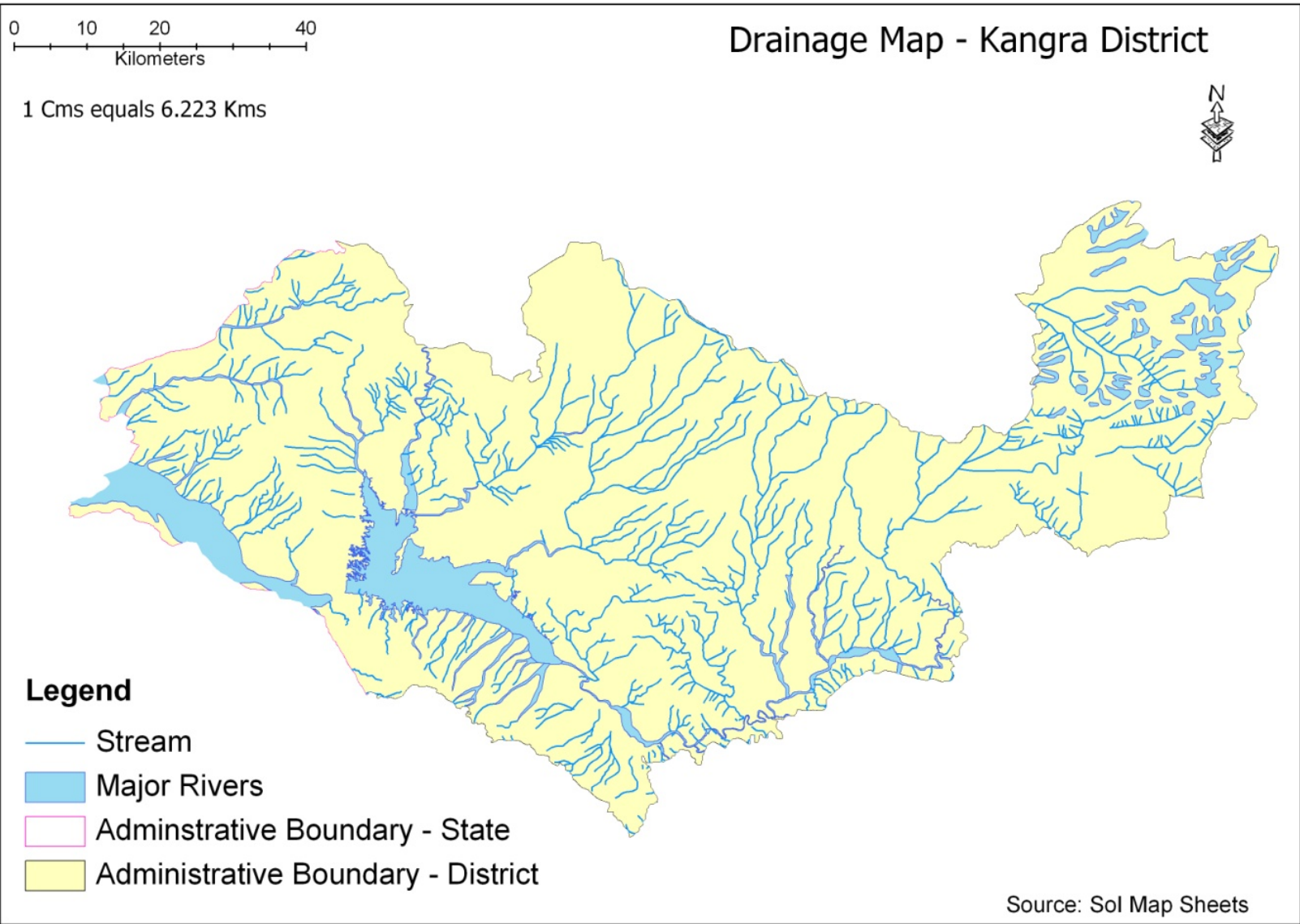
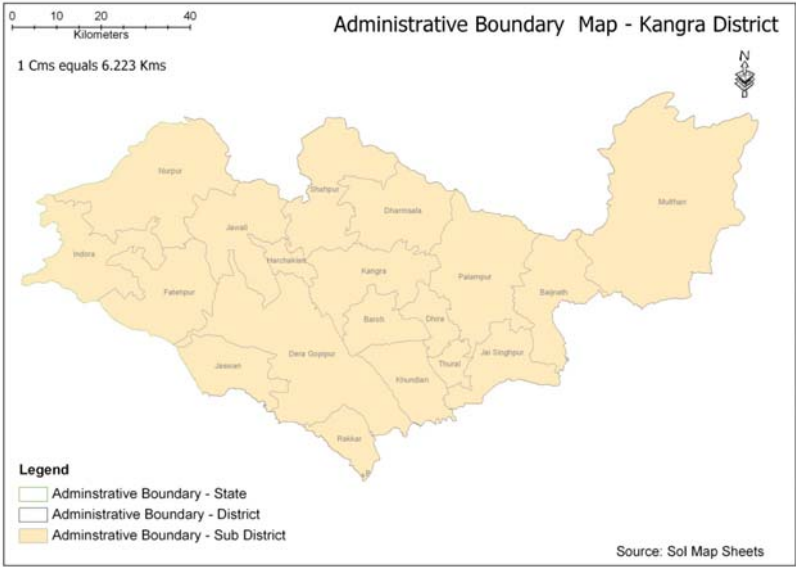
Location: Kangra district forms a north-western part of the Himachal Pradesh. Kangra district is bounded in the north by Chamba district, on the north-east it touches Lahaul & Spiti district, on the east it is bounded by Kullu district, on the South by Mandi, Hamirpur and Una district and on the west by Punjab state. The district lies between 31° 41' 0" and 32° 28' 05" in North latitudes and 75° 35' 34" and 77° 04' 46" in east longitudes. The district has a total area of 5739 Sq.Km and constitutes 10.31% area of State. The district ranks first in population while fourth among area in all districts of state.

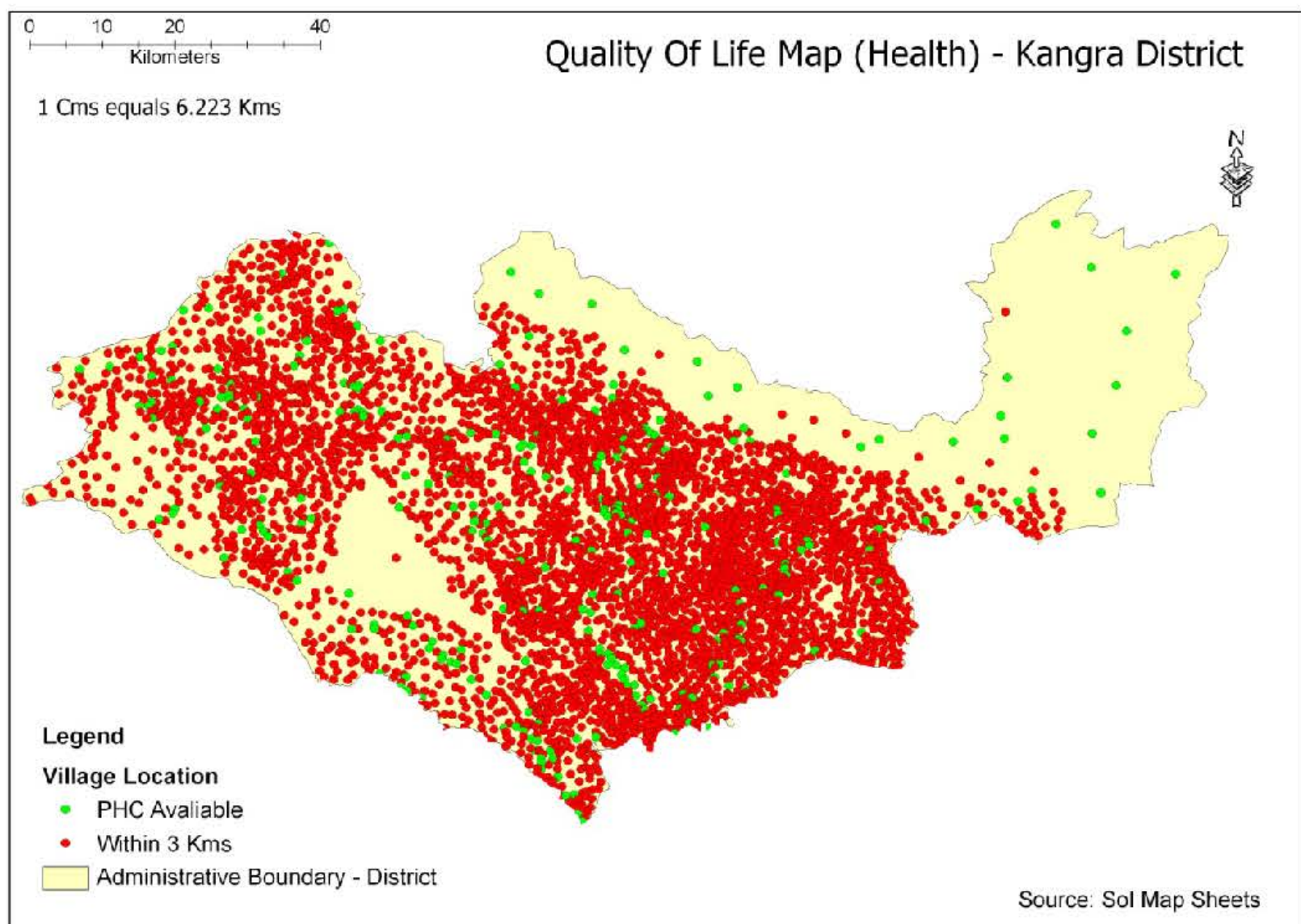
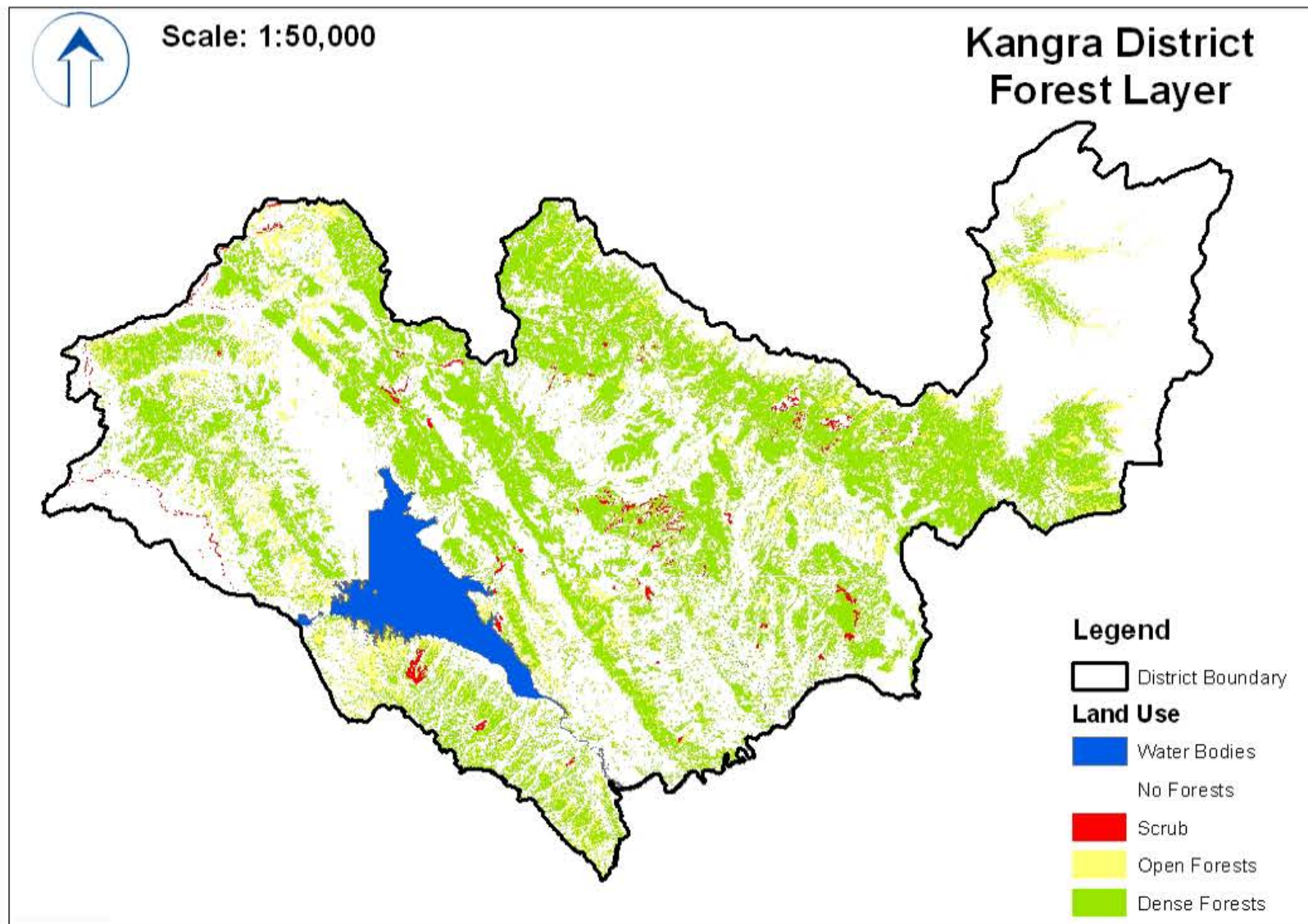
The district lies in the Shivalik lesser Himalayan zone and its topography is well defined by a series of almost parallel hill ranges which rise in height towards north-east. The altitudes generally vary from 400 meters to over 6,000 meters.

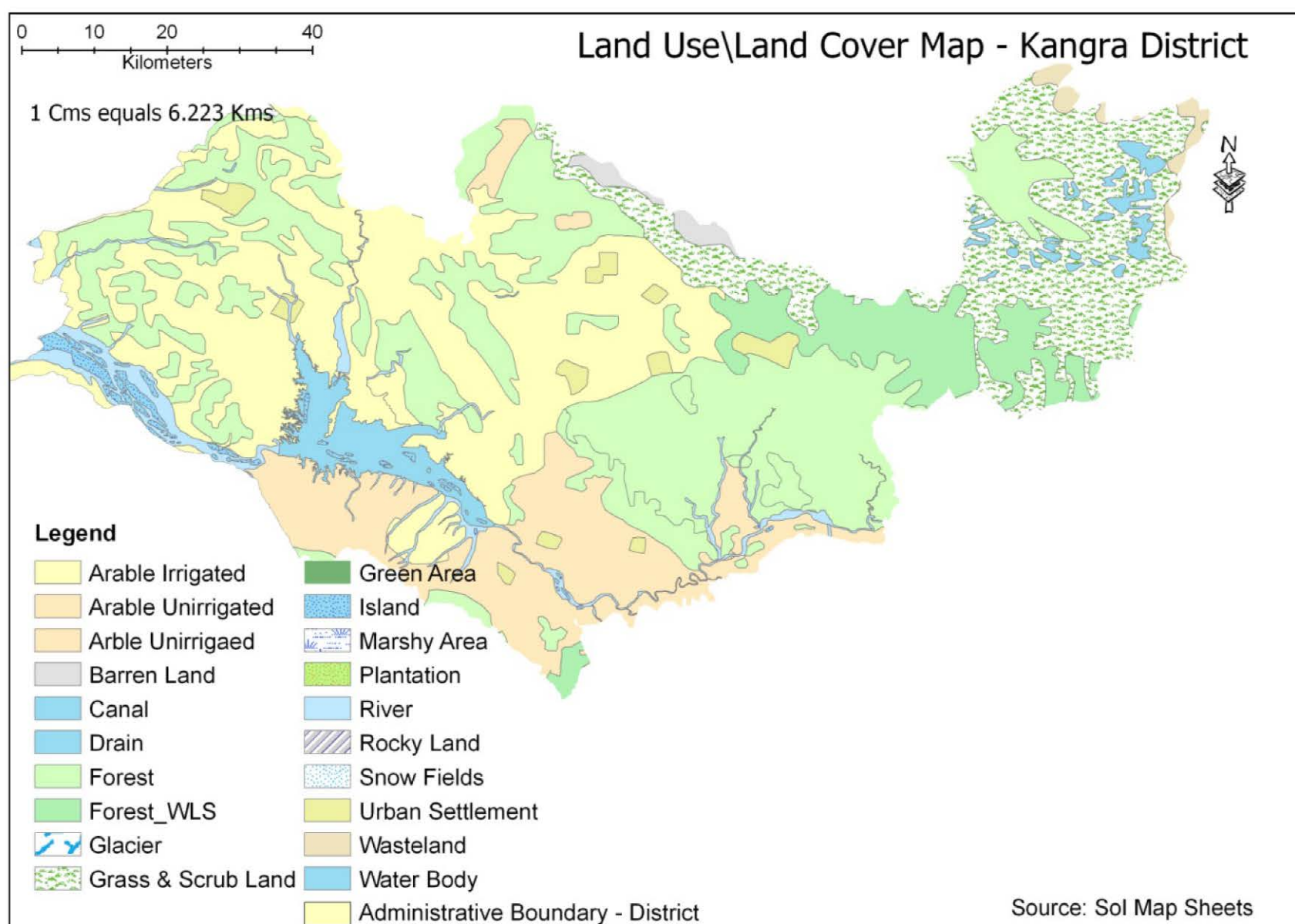
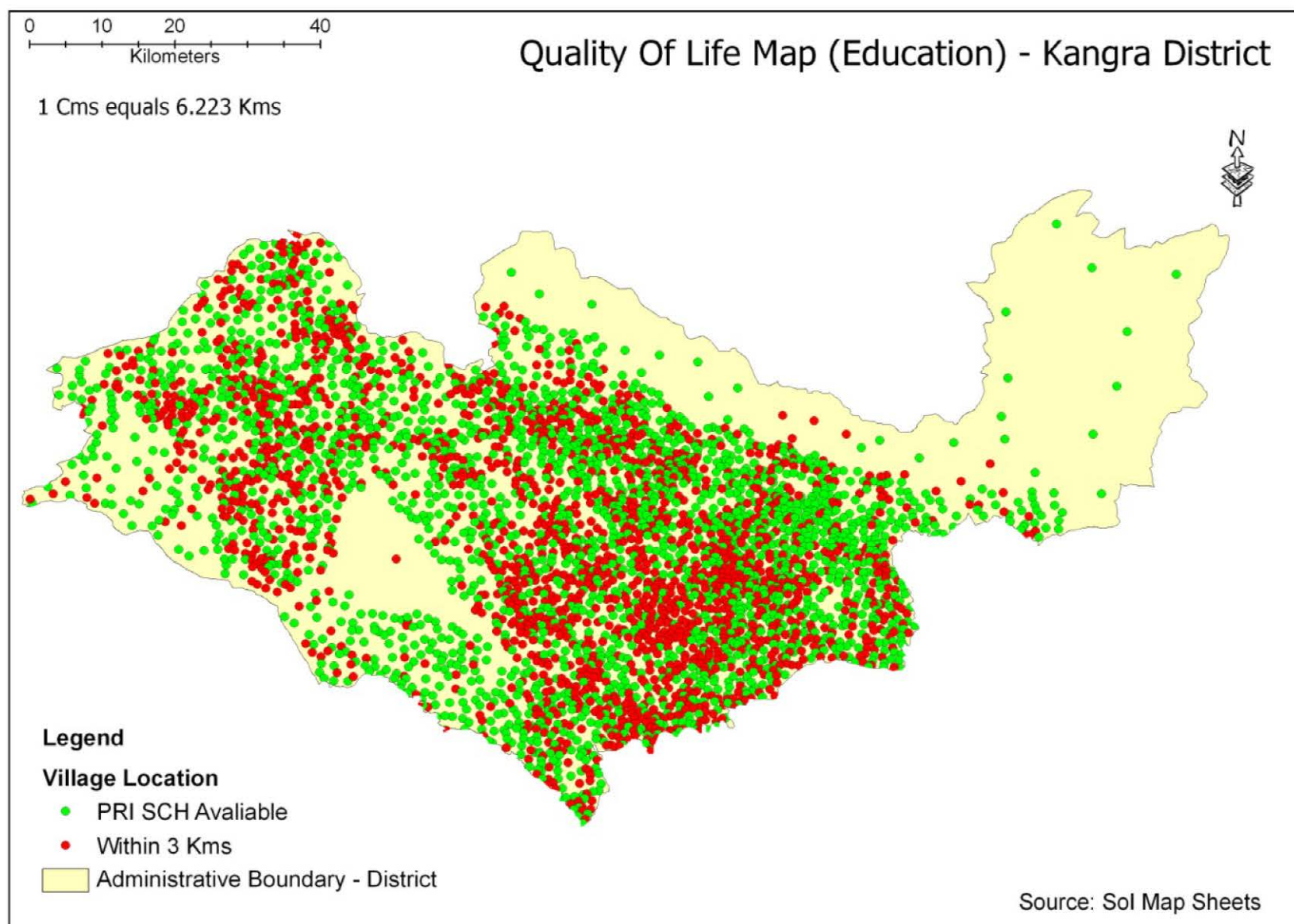
The district is divided into 19 administrative units in terms of Tehsil/Sub Tehsil as follows (in descending order of area covered in Sq.Km)



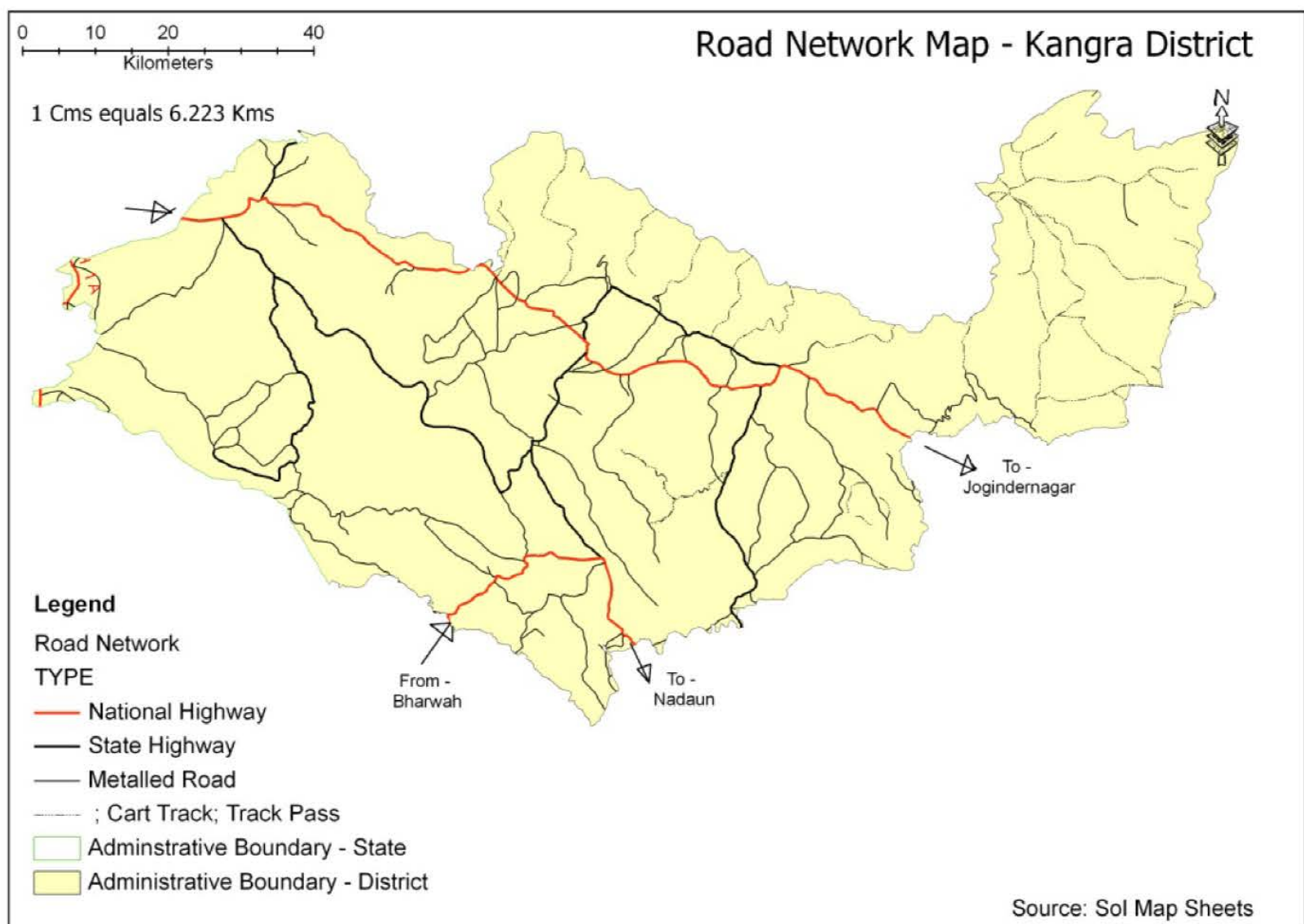
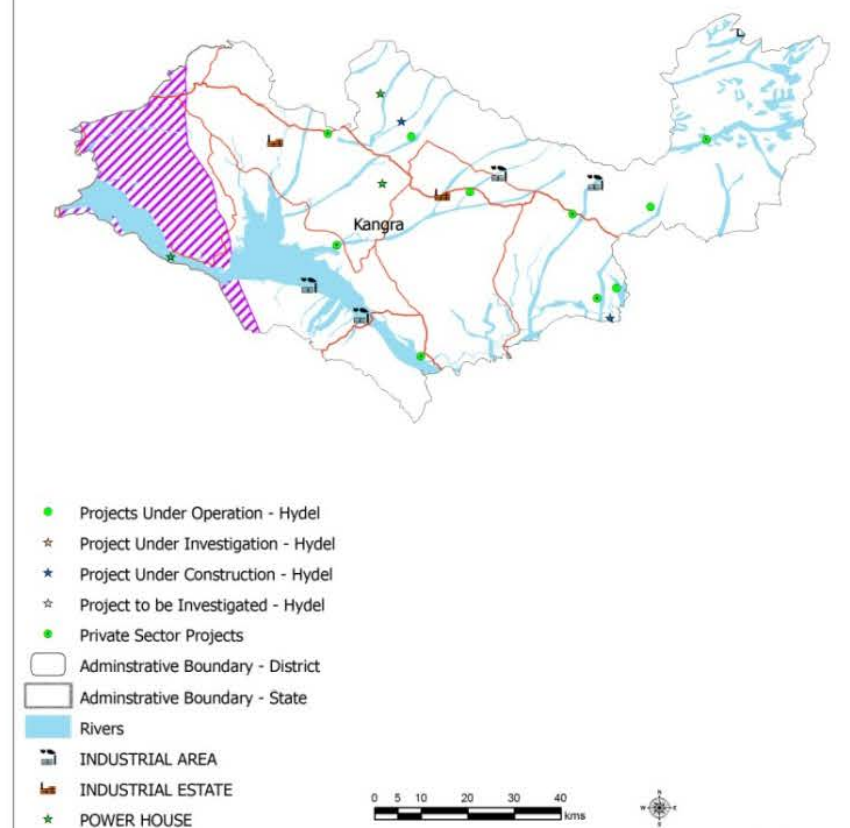
S.No.	Tehsil/Sub Tehsil	Area (Sq.Km)
1	Multhan	1014.8
2	Deragopipur	723.4
3	Nurpur	538.4
4	Palampur	433.3
5	Dhramshala	350.9
6	Jawali	303.8
7	Indora	301.6
8	Baijnath	288.1
9	Fatehpur	285.6
10	Kangra	275.0
11	Shahpur	249
12	Jaisinghpur	190.9
13	Khundian	190.1
14	Jaswan	172.1
15	Baroh	133.5
16	Rakkar	114
17	Dhira	82.4
18	Harchakain	72.5
19	Thural	58.2



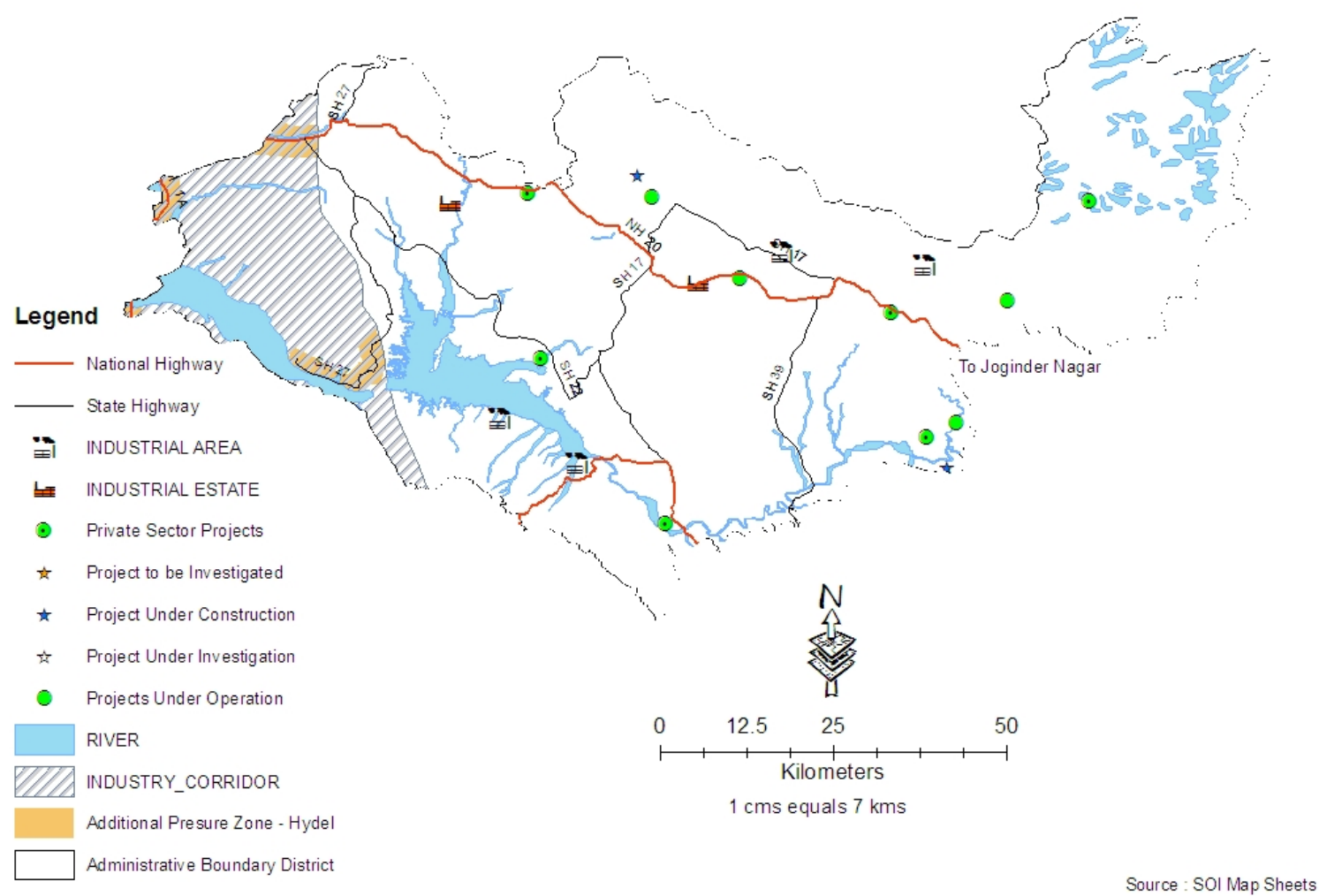




Major Investment Locations - Kangra District

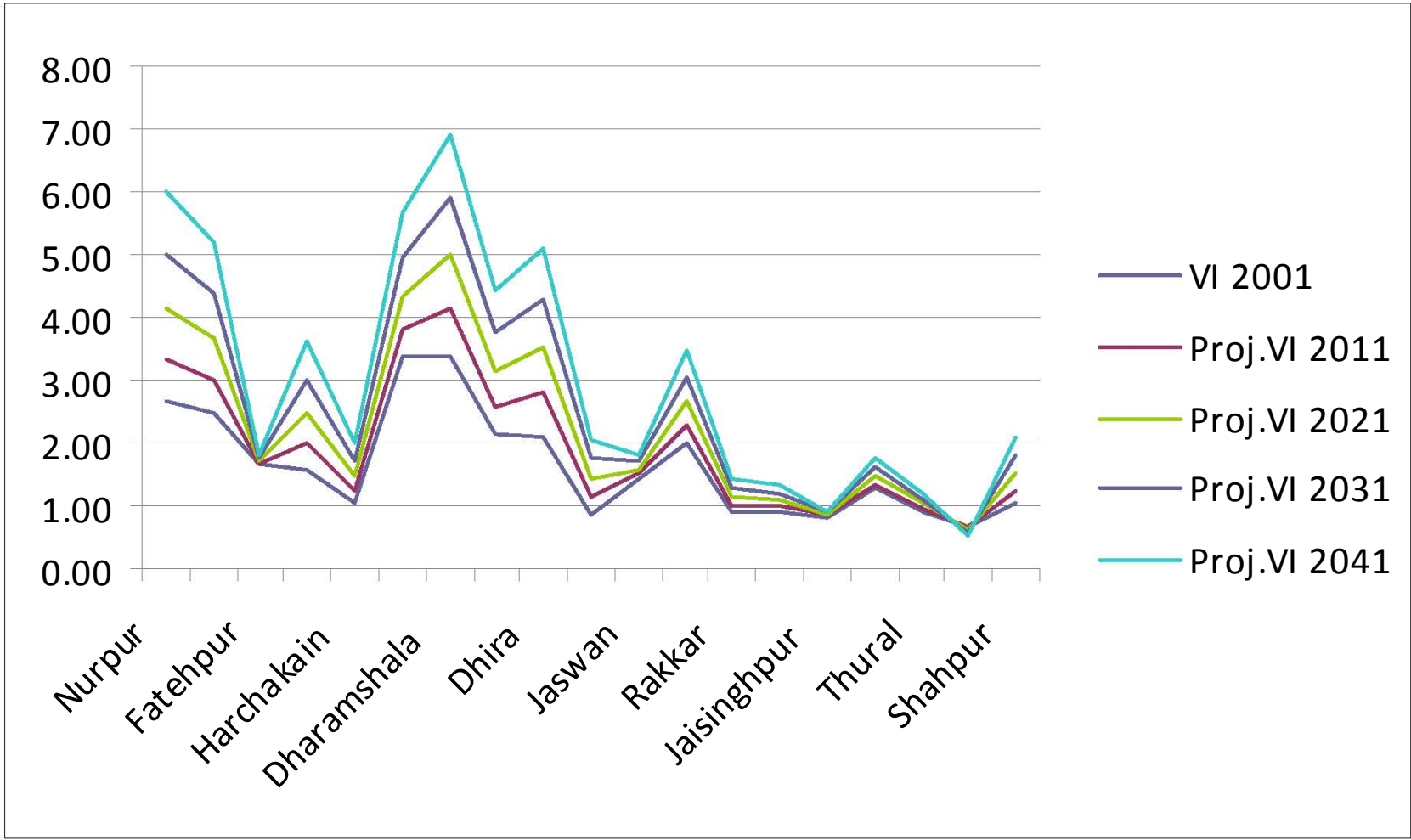


Pressure Points (Industry & Hydel) - Kangra District

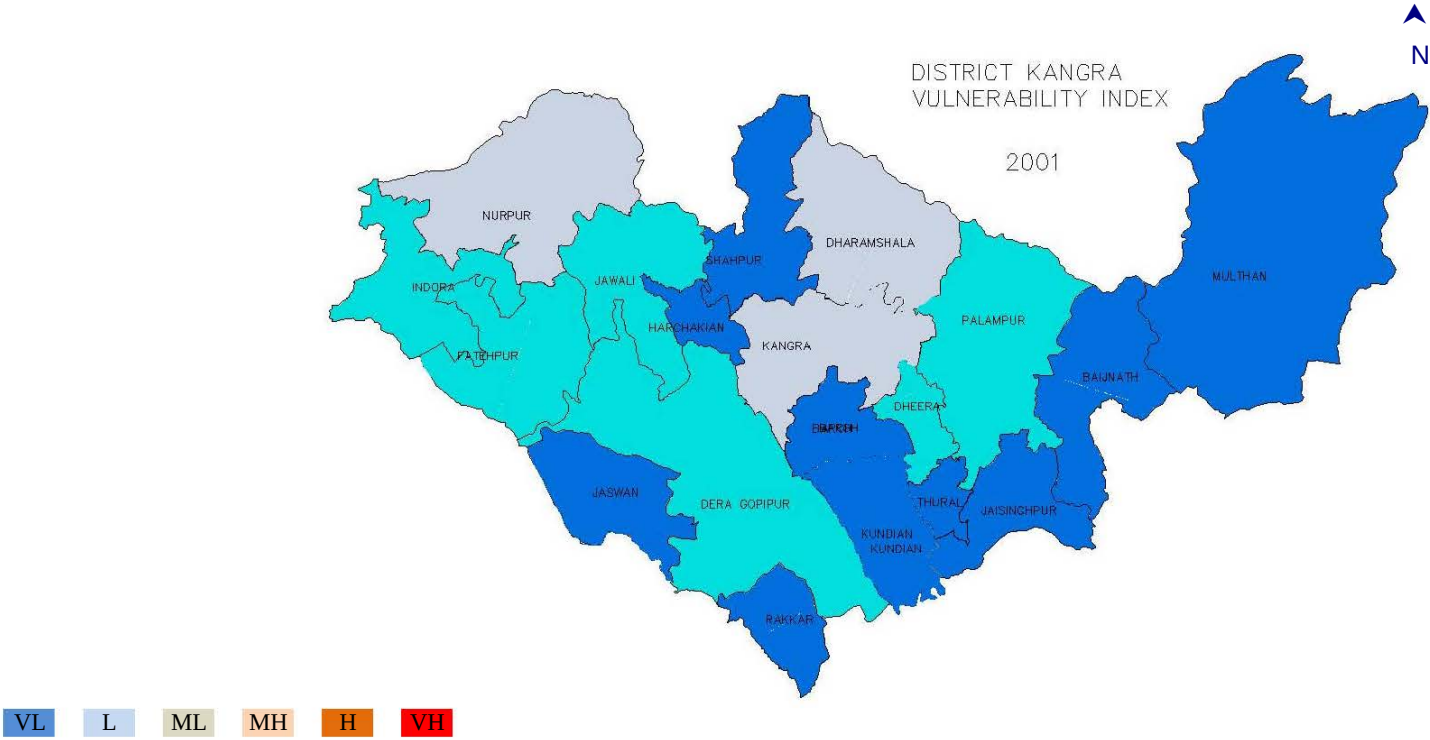


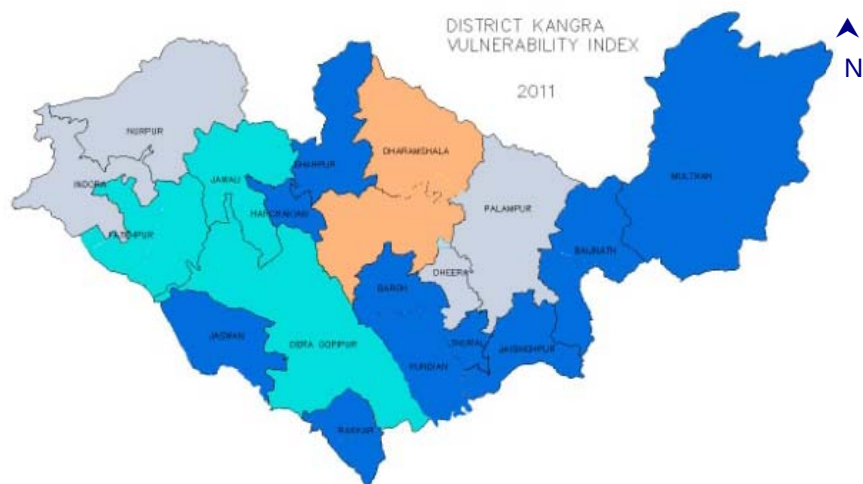
Tehsil	VI 2001	Proj.VI 2011	Proj.VI 2021	Proj.VI 2031	Proj.VI 2041
Nurpur	2.67	3.34	4.12	5.02	6.01
Indora	2.49	3.02	3.64	4.37	5.17
Fatehpur	1.65	1.68	1.71	1.75	1.79
Jawali	1.56	2.00	2.49	3.02	3.60
Harchakain	1.06	1.26	1.48	1.72	1.99
Kangra	3.39	3.81	4.34	4.96	5.67
Dharamshala	3.37	4.13	4.98	5.91	6.92
Palampur	2.13	2.59	3.14	3.75	4.42
Dhira	2.11	2.80	3.52	4.28	5.08
Baroh	0.86	1.14	1.44	1.75	2.07
Jaswan	1.44	1.50	1.59	1.70	1.83
Deragopipur	2.01	2.30	2.65	3.04	3.48
Rakkar	0.89	1.01	1.14	1.28	1.44
Khundian	0.89	0.98	1.08	1.19	1.32
Jaisinghpur	0.82	0.84	0.86	0.89	0.93
Baijnath	1.28	1.36	1.47	1.61	1.79
Thural	0.89	0.95	1.03	1.11	1.20
Multhan	0.66	0.64	0.62	0.59	0.55
Shahpur	1.05	1.26	1.51	1.79	2.09

Vulnerability Index Scenarios – District Kangra at Tehsil Level

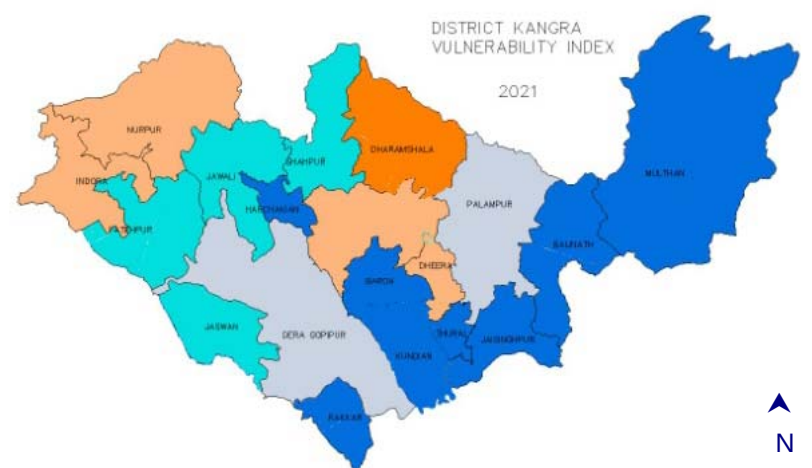


	Nurpur	Indora	Fatehpur	Jawali	Harchakain	Kangra	Dhramshala	Palampur	Dhira	Baroh	Jaswan	Deragopipur	Rakkar	Khundian	Jaisinghpur	Bainath	Thural	Multhan	Shahpur
VI	6552.41	6109.03	4035.05	3830.96	2605.65	8319.54	8254.22	5216.81	5168.96	2103.43	3521.32	4933.32	2185.18	2186.23	2004.14	3136.35	2172.34	1608.23	2564.81
denominator = 57x43	2451																		
Normalized VI	2.67	2.49	1.65	1.56	1.06	3.39	3.37	2.13	2.11	0.86	1.44	2.01	0.89	0.89	0.82	1.28	0.89	0.66	1.05

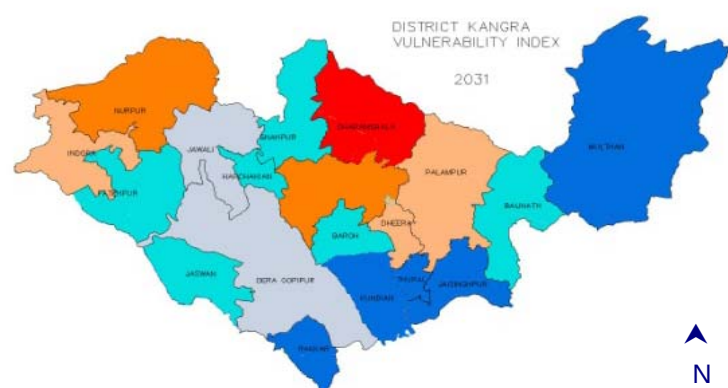




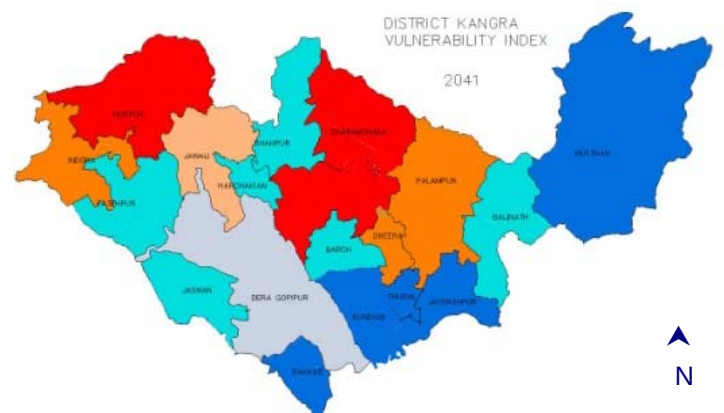
As can be seen, Kangra and Dharmashala have moved from the moderately low vulnerability segment to moderately high vulnerability segment. Palampur, Dhira and Indora have moved from low vulnerability segment to moderately low vulnerability segment. All other Tehsils retain their low or very low vulnerability segments



While Kangra retains its moderately high vulnerability, it is joined in the segment by Nurpur, Indora and Dhira. Dharmashala have moved from the moderately high vulnerability segment to high vulnerability segment. Palampur, in the moderately low vulnerability segment is joined by Dera Gopipur. Shahpur joins in the low vulnerability segment. All other Tehsils retain their low or very low vulnerability segments



Dharamshala moves to the critical stage of vulnerability. Kangra and Nurpur move to high vulnerability. Palampur joins Indora and Dhira in the moderately high vulnerability segment. Jawali joins Dera Gopipur in the moderately low vulnerability segment. Baijnath moves from the very low vulnerability segment to the low vulnerability segment. All other Tehsils retain their low or very low vulnerability segments



Dharamshala remains in the critical stage of vulnerability and is joined by Kangra and Nurpur in the segment. Palampur, Indora and Dhira move to the high vulnerability segment. Jawali joins moves to the moderately high vulnerability segment from the moderately low vulnerability segment. Baijnath, Fatehpur, Jaswan and Shahpur are joined by Harchakian and Baroh in the low vulnerability segment. Rakkar, Khundian, Thural, Jaisinghpur and Multhan remain in the very low vulnerability segment

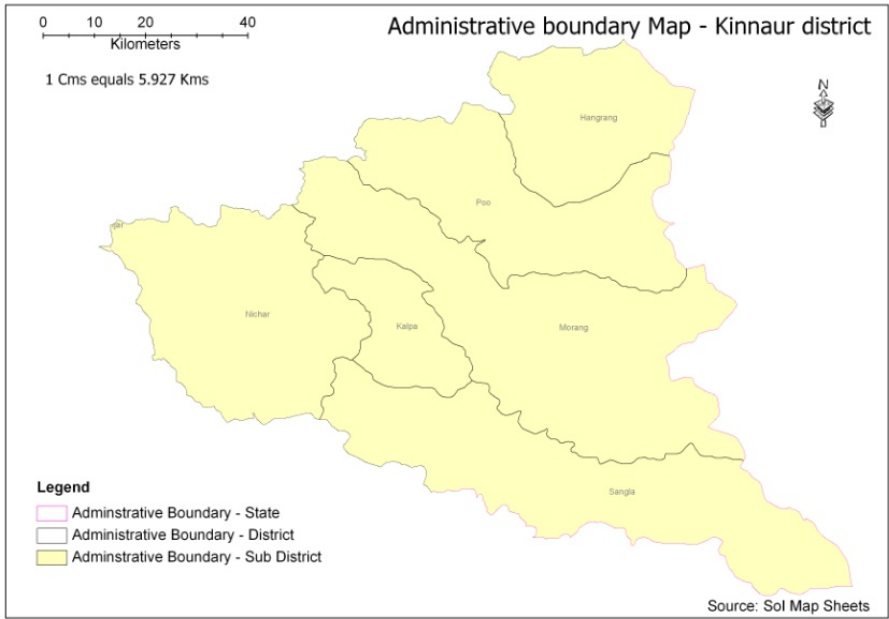
Kinnaur

Location

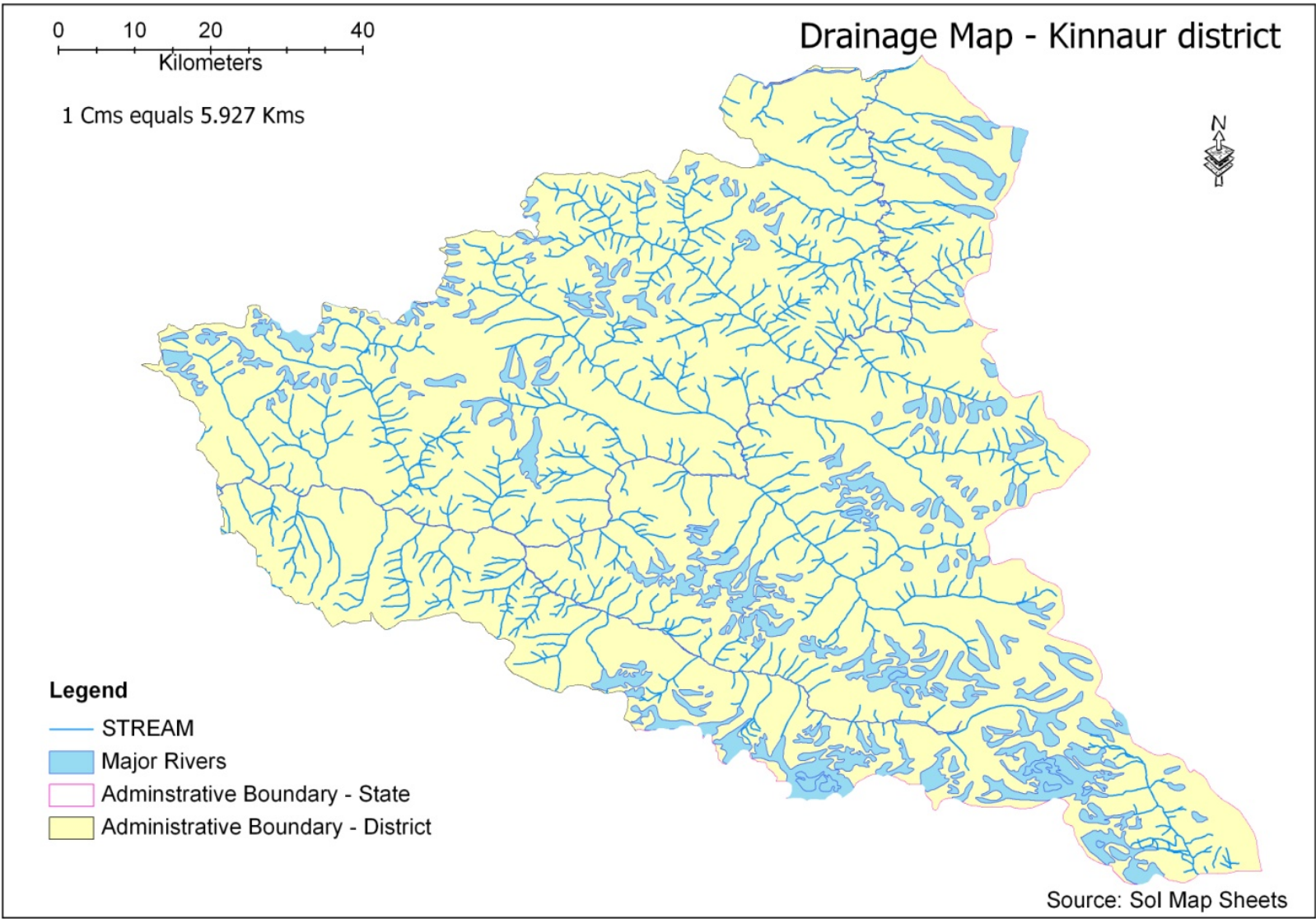
Kinnaur district constitutes the southern part of Trans Himalayas Zone. It lies between 31⁰ 05' 55" and 32⁰ 5' 20" north latitudes and 77⁰ 45' 0" and 79⁰ 10' 50" east longitudes. The district is bounded by the Spiti Tehsil of Lahaul & Spiti district in the north, Kullu and Banjar Tehsils of Kullu district in the north-west, Rampur, Chirgaon and Dodra Kwar Tehsils of Shimla district in the west, state of Uttaranchal in the south while the International boundary with China is its eastern boundary. The total area of the district is 6,401 sq. kms and ranks 3rd in terms of area in the state.

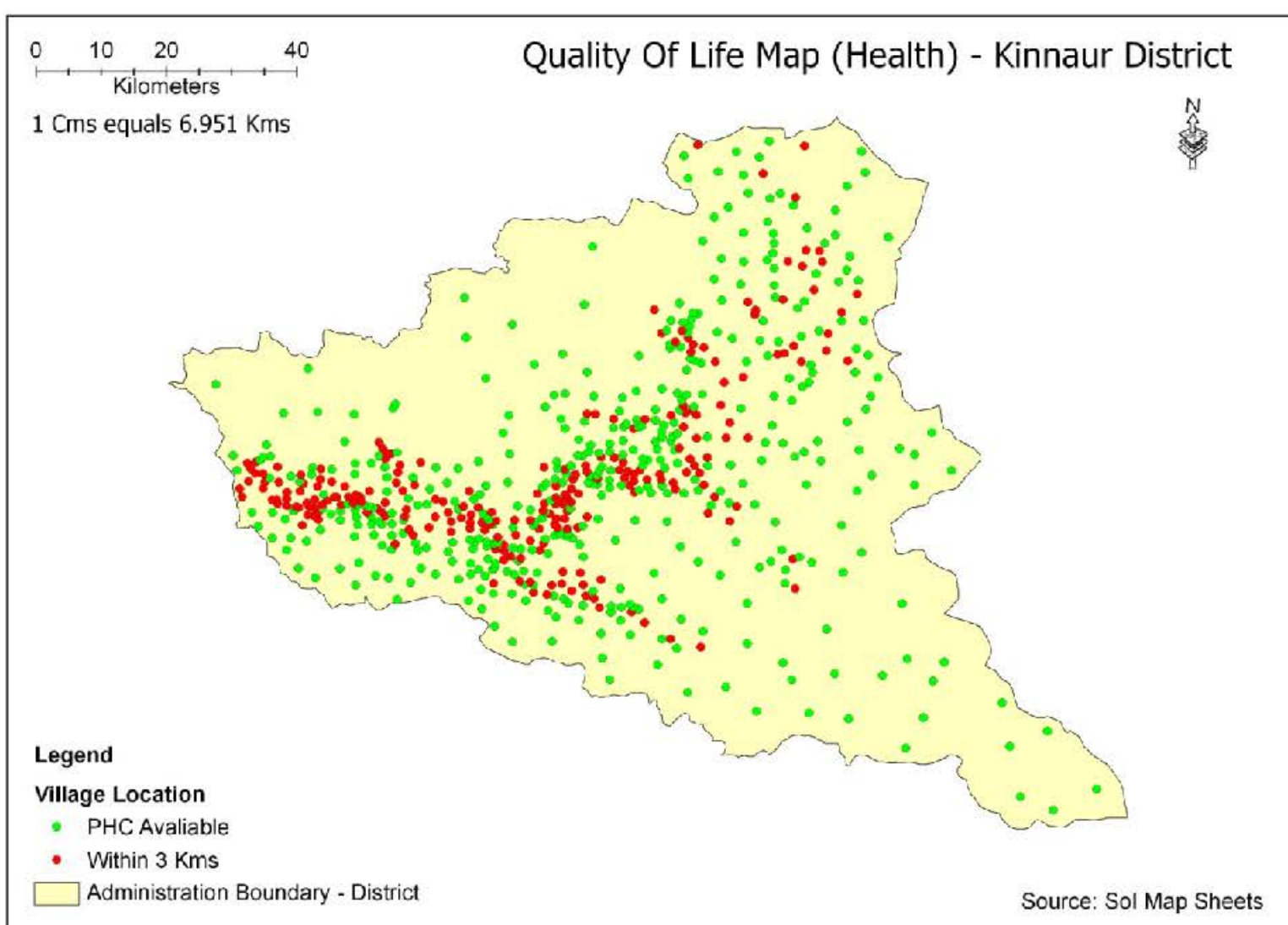
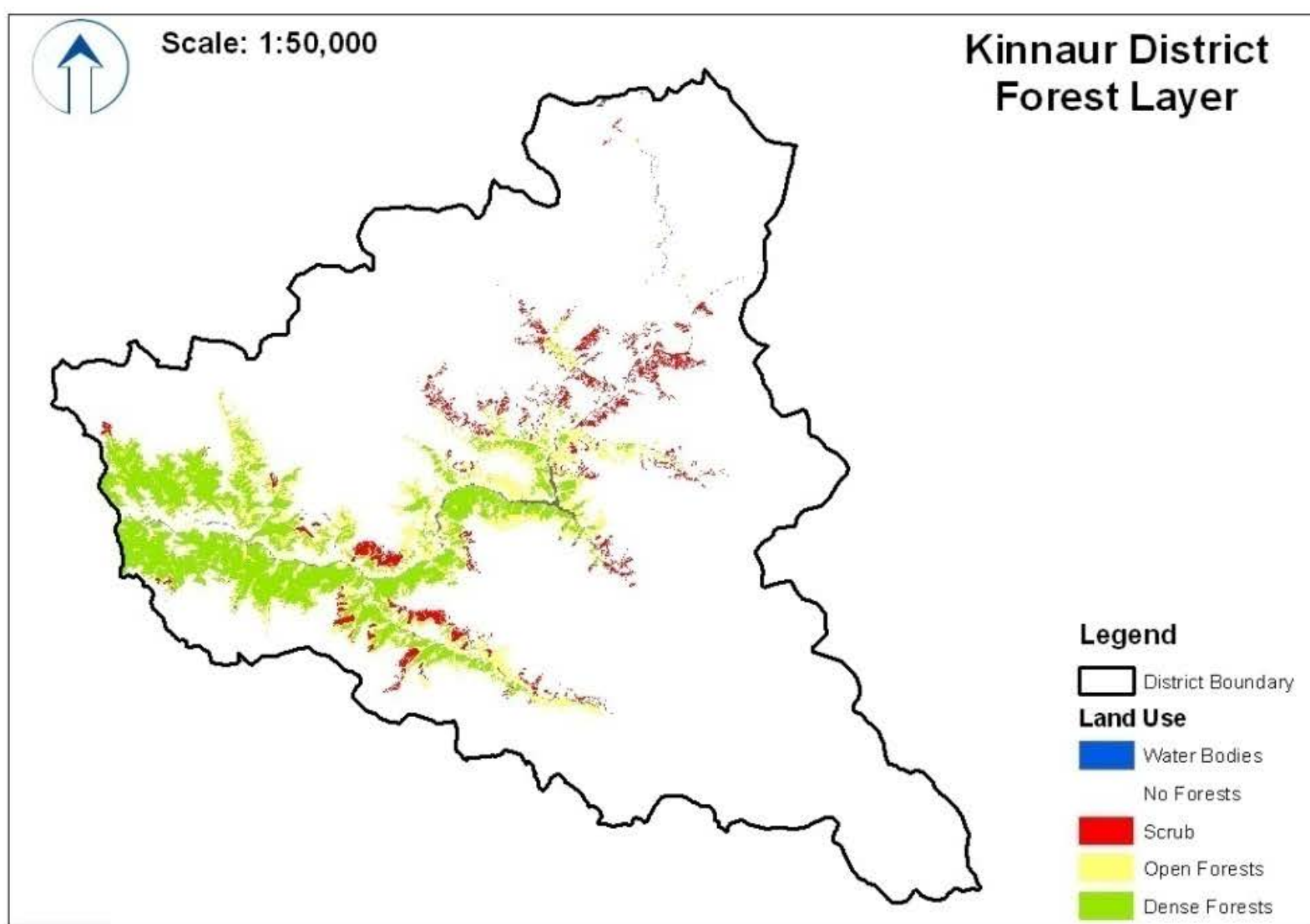
Kinnaur is called the Dev Bhumi, or the land of the gods in local belief and parlance. Kinnaur has been a district since long. Since its borders coincide with the International Border with China, it achieves a strategic importance.

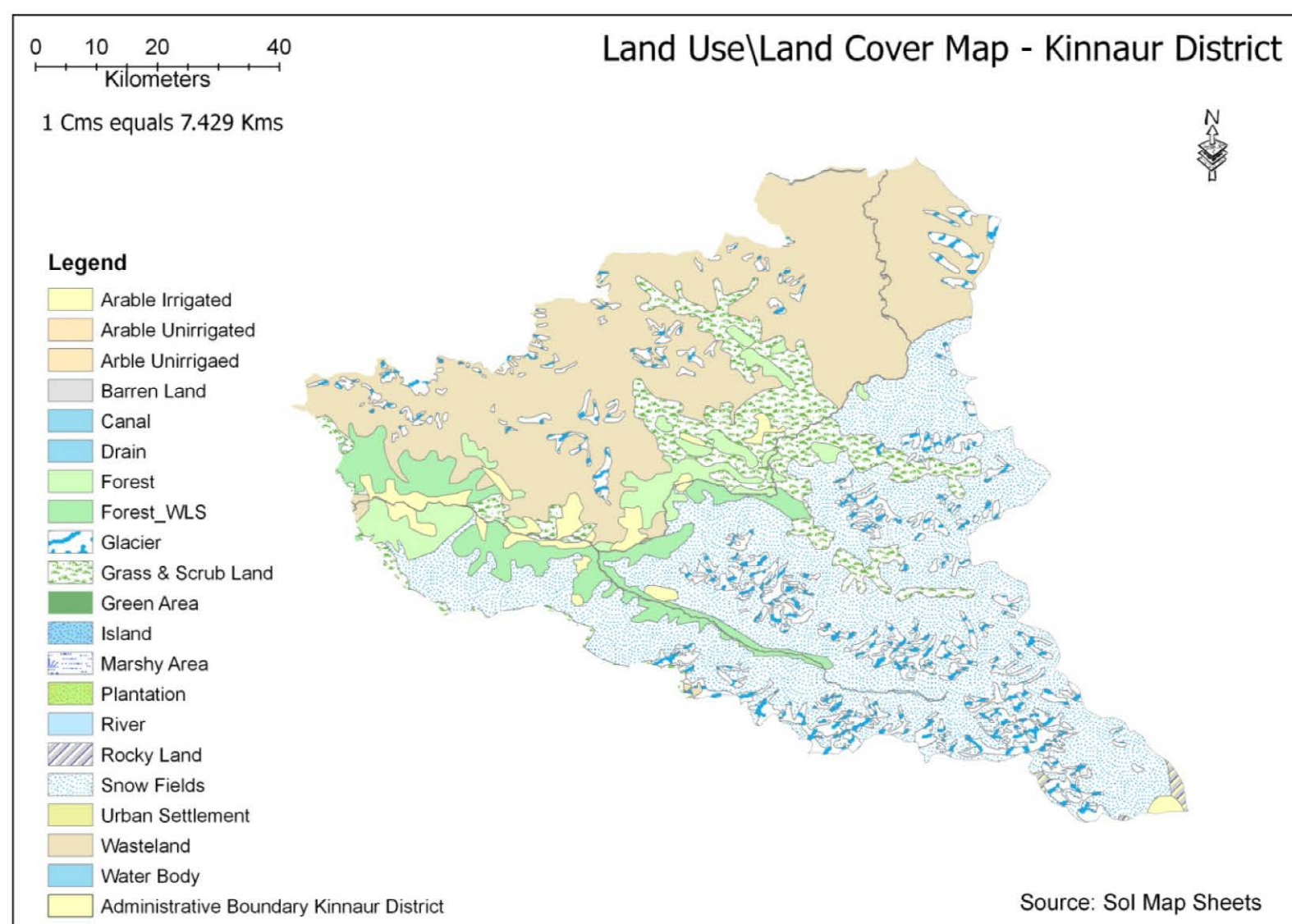
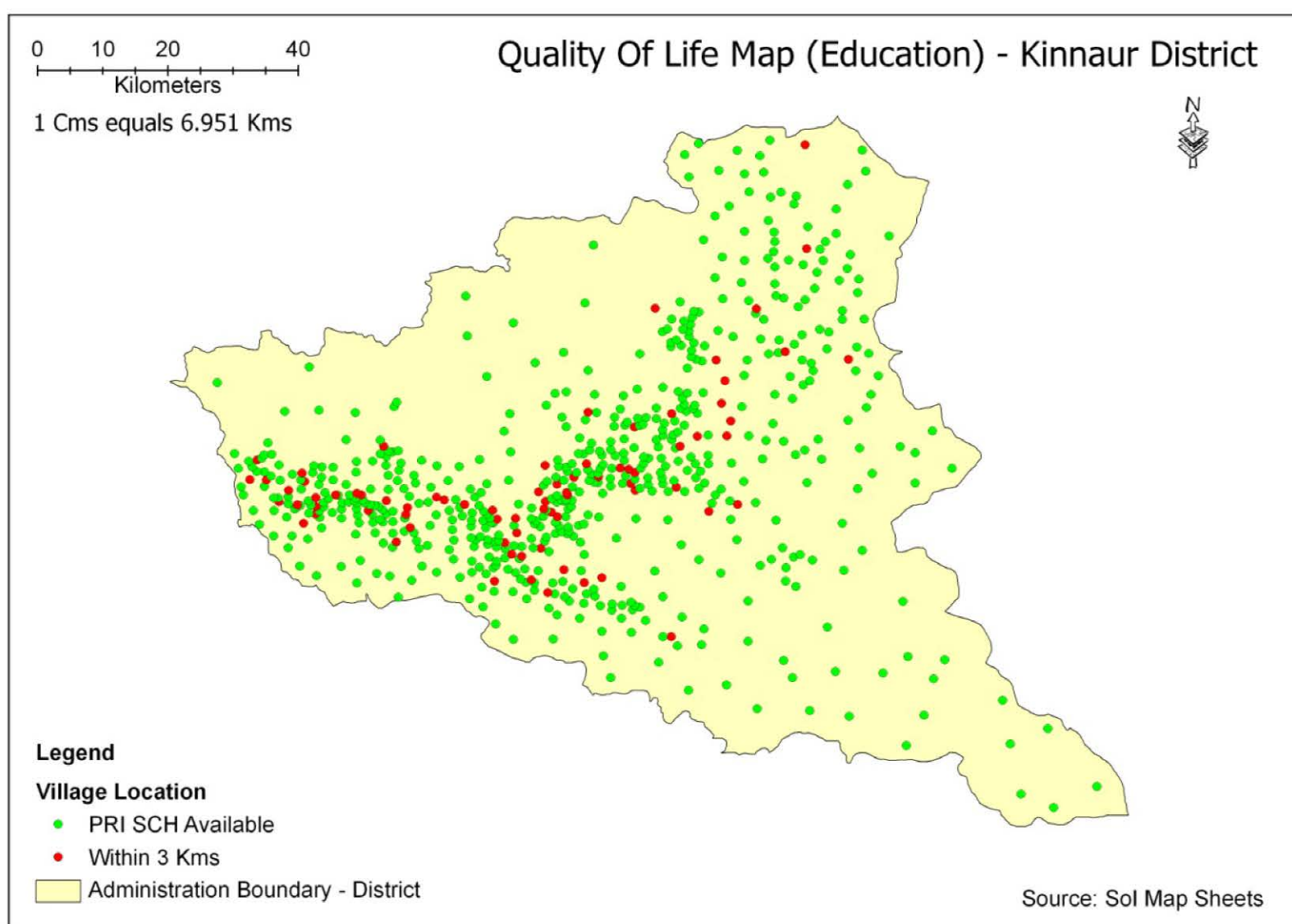
The district is divided into 6 administrative units as Tehsil/Sub-Tehsil (area in descending order) as follows:

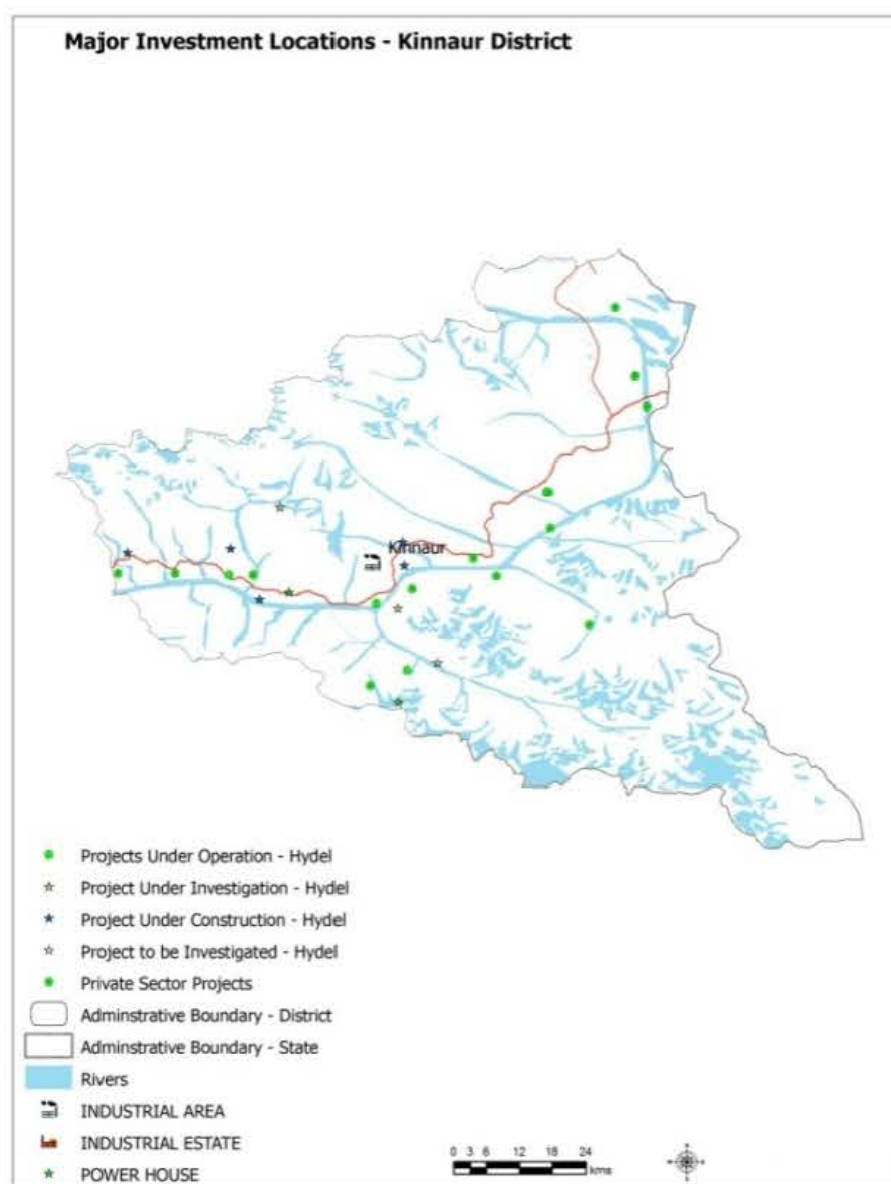
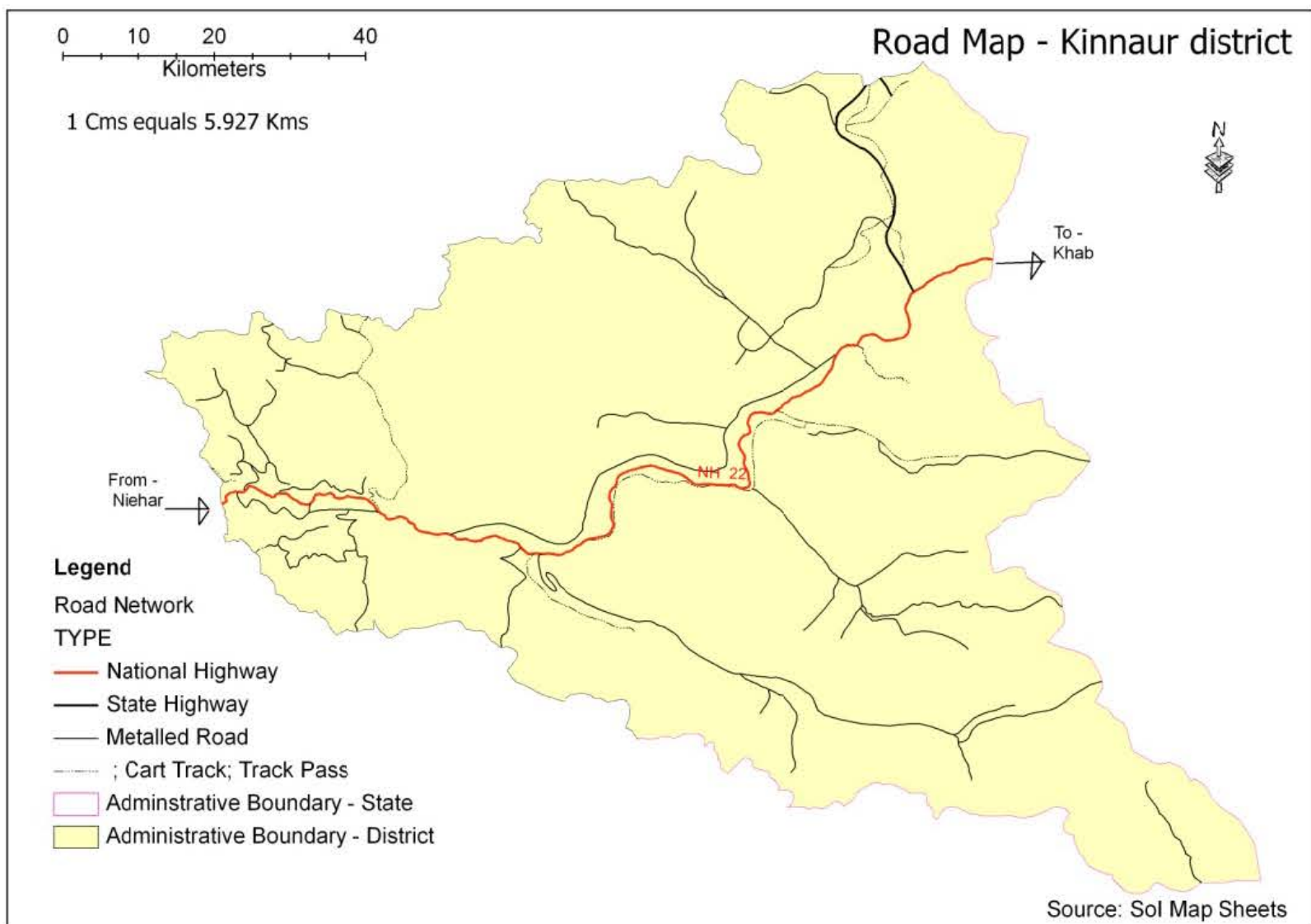


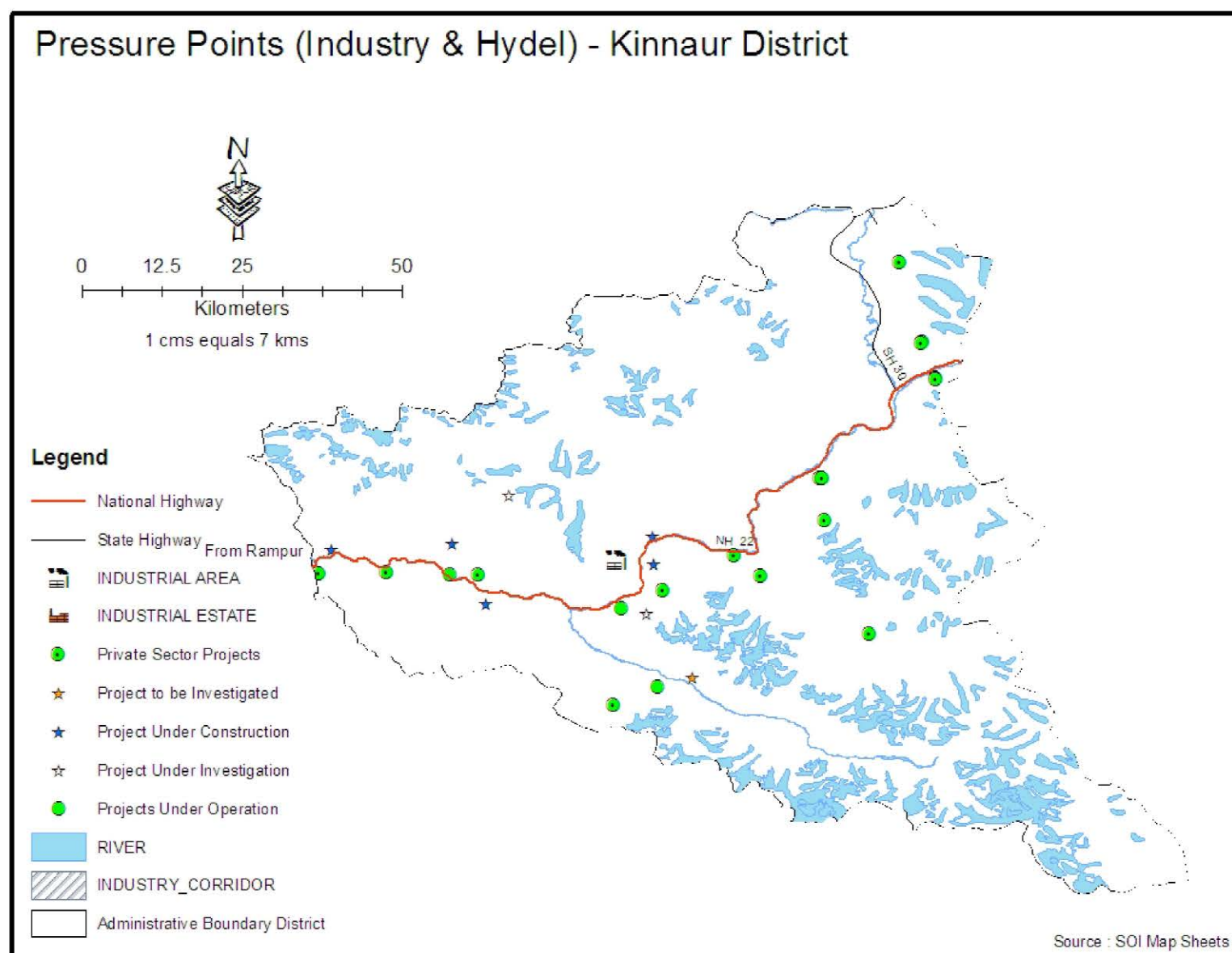
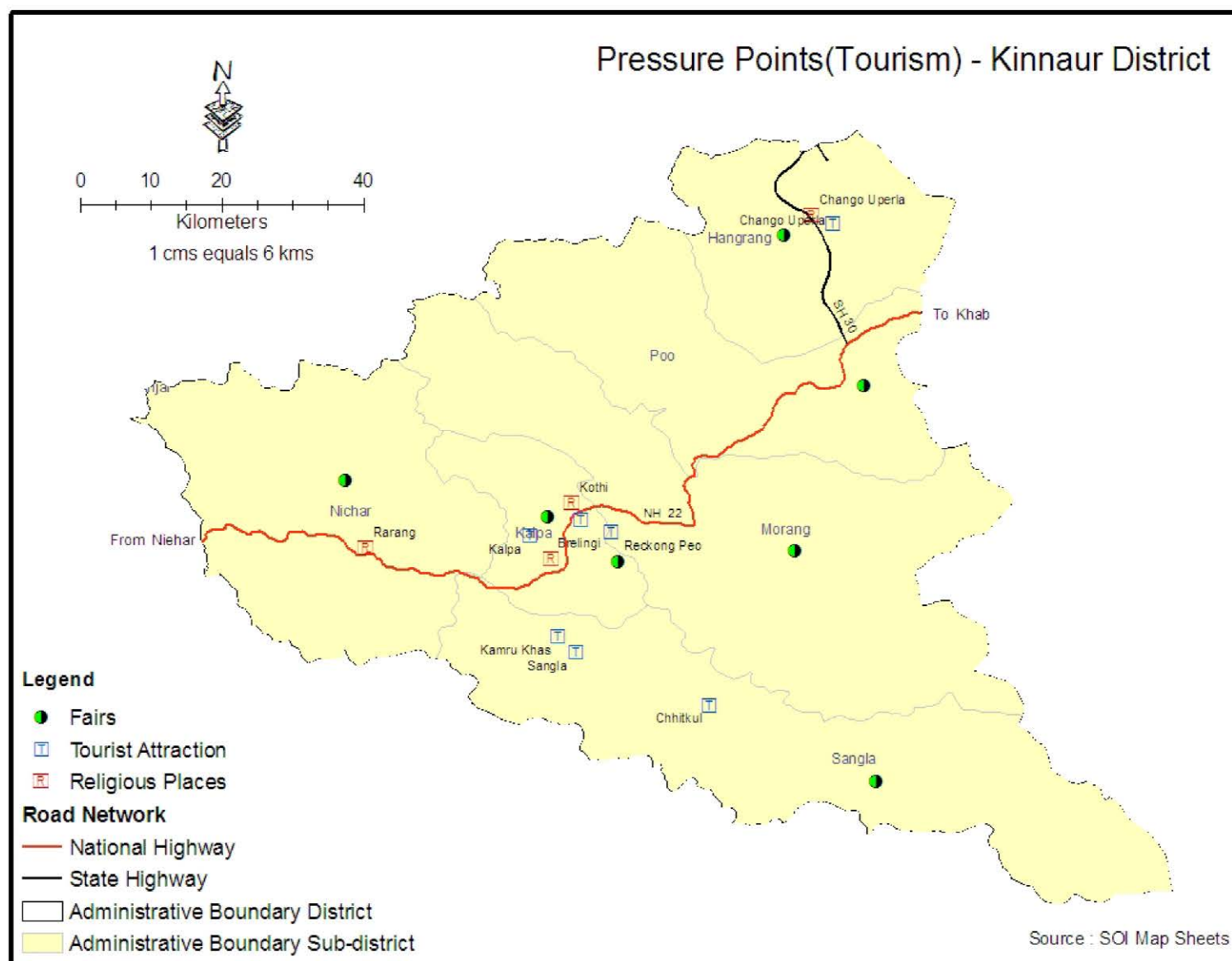
S.No.	Tehsil/Sub Tehsil	Area (Sq.Km)
1	Morang	1628.6
2	Sangla	1282.2
3	Nichar	1183.6
4	Poo	1021.70
5	Kalpa	390.9
6	Hangrang	72.4





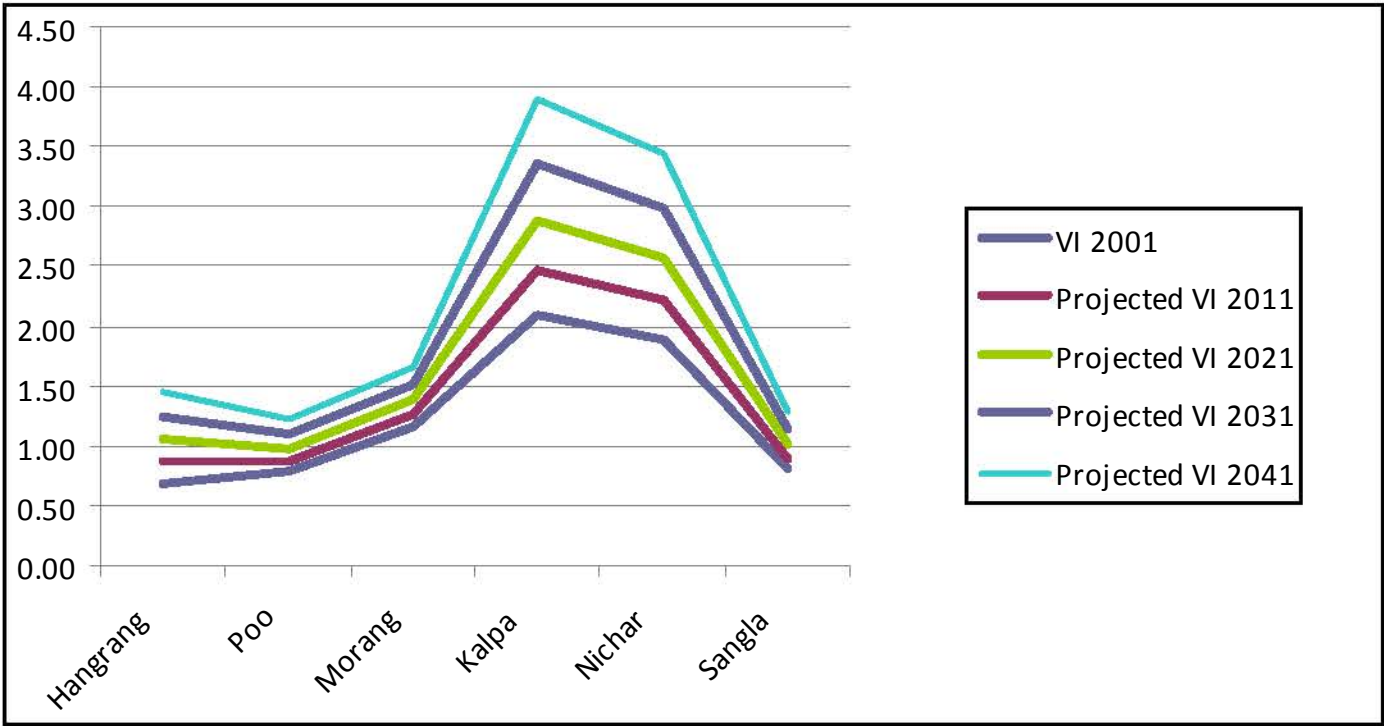






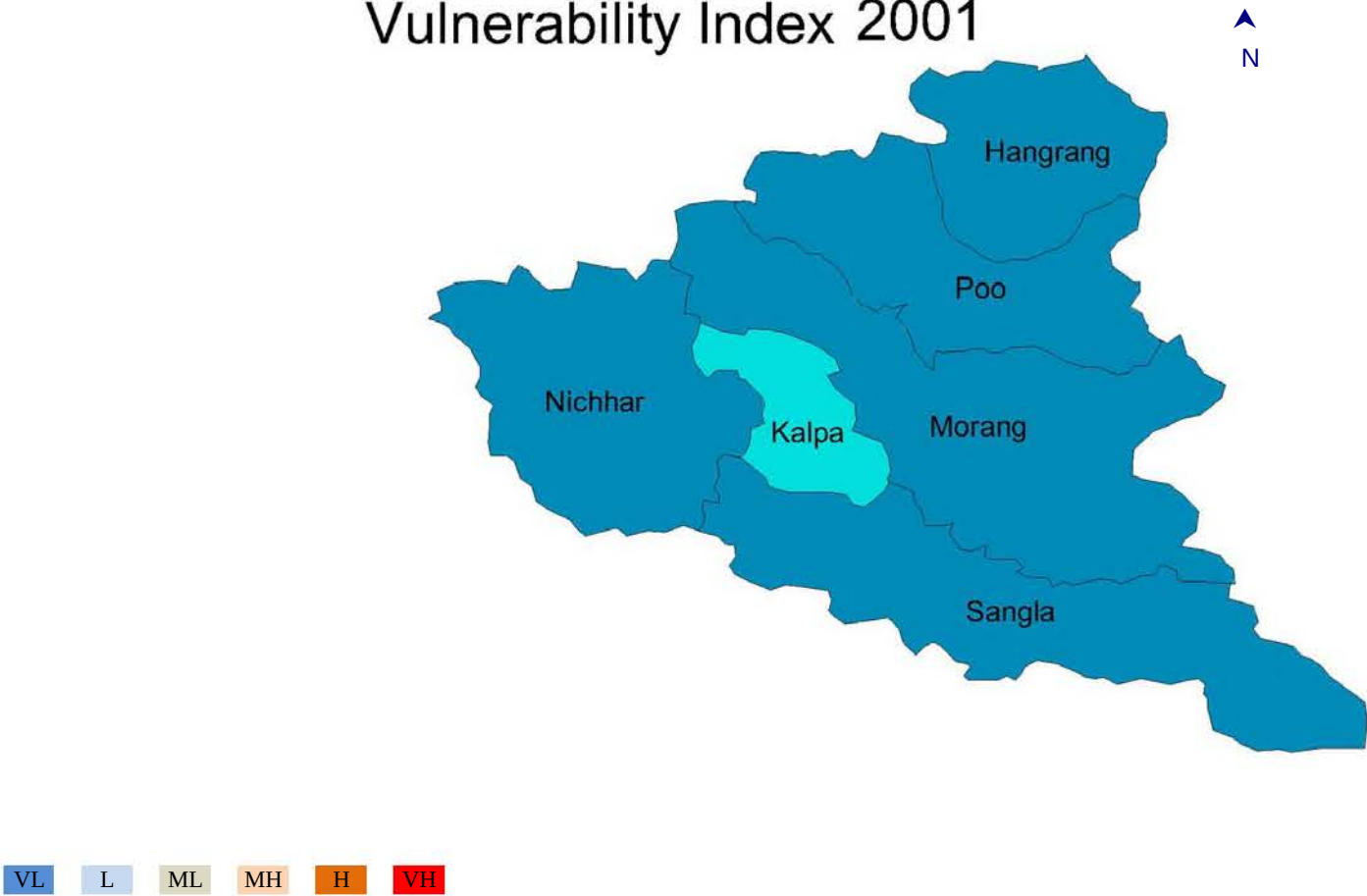
	VI 2001	Projected VI 2011	Projected VI 2021	Projected VI 2031	Projected VI 2041
Hangrang	0.69	0.86	1.05	1.25	1.45
Poo	0.78	0.88	0.98	1.10	1.22
Morang	1.17	1.27	1.39	1.52	1.67
Kalpa	2.10	2.46	2.89	3.37	3.90
Nichar	1.89	2.21	2.58	2.99	3.45
Sangla	0.80	0.90	1.01	1.14	1.28

Vulnerability Index Scenarios – District Kinnaur at Tehsil Level



	Hangrang	Poo	Morang	Kalpa	Nichhar	Sangla
VI	1684.651	1917.92	2856.51	5158.49	4627.98	1968.45
denominator = 57x43	2451					
Normalized VI	0.69	0.78	1.17	2.10	1.89	0.80

District Kinnaur
Vulnerability Index 2001



District Kinnaur
Vulnerability Index 2011



Nichhar moves from very low vulnerability to the Low vulnerability segment. Hangrang, Poo, Morang & Sangla remain in the very low vulnerability segment while Kalpa remains in the Low vulnerability segment.

VL L ML MH H VH

District Kinnaur
Vulnerability Index 2021



Kalpa & Nichhar, both move up to the moderately low vulnerability segment while all the other four Tehsils remain in the very low vulnerability segment.

VL L ML MH H VH

District Kinnaur
Vulnerability Index 2031



All Tehsils retain their segments.

VL L ML MH H VH

District Kinnaur
Vulnerability Index 2041



Nichhar retains the moderately low vulnerability segment while Kalpa moves up to moderately high vulnerability segment. Other four Tehsils remain very low vulnerable.

VL L ML MH H VH

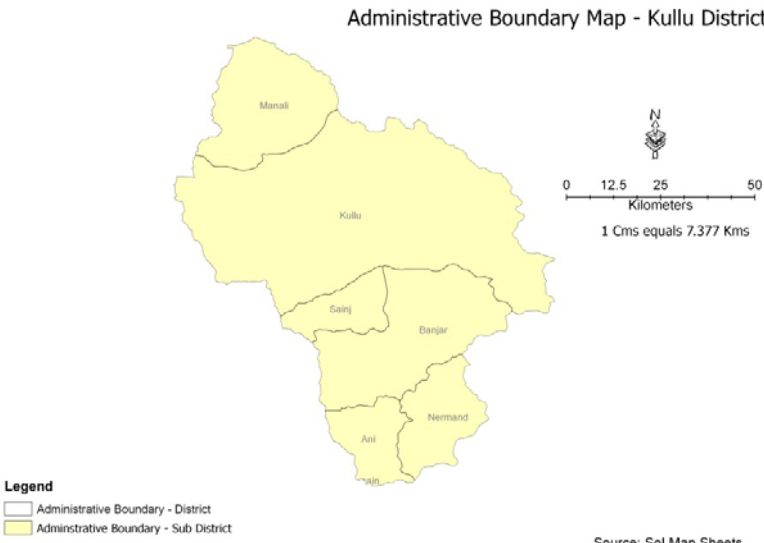
Kullu

Location:

Kullu district is located in the eastern part of central Himachal Pradesh. The district lies between 31°20'25" to 32°25'0" north latitude and 76°56' 30" to 77°52' 20" east longitude. It is bounded on the north and east by Lahaul & Spiti district, on the south east by Kinnaur district, on the south by Shimla district, on the south-west and west by Mandi district and on the north-west by Kangra district. The headquarters of the district is situated at an altitude of 1,200 meters above the mean sea level on the confluence of Sarvary rivulet and Beas River. The total area of the district is 5,503 Sq. kms. District ranks 5th in order of area and constitutes 9.88 per cent of the total area of the state.



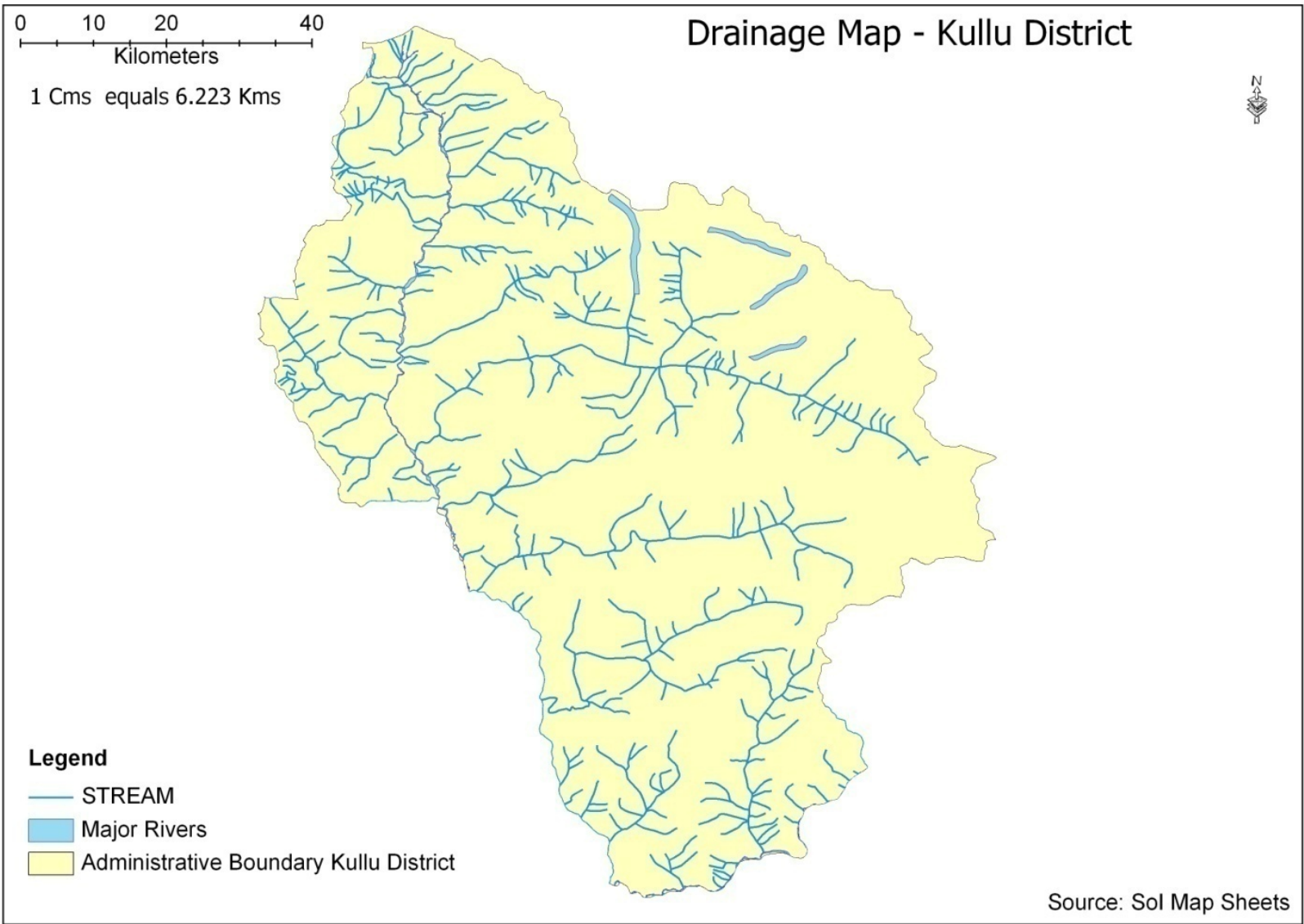
District is divided into 6 administrative units as Tehsil/Sub-Tehsil (area in descending order as follows):

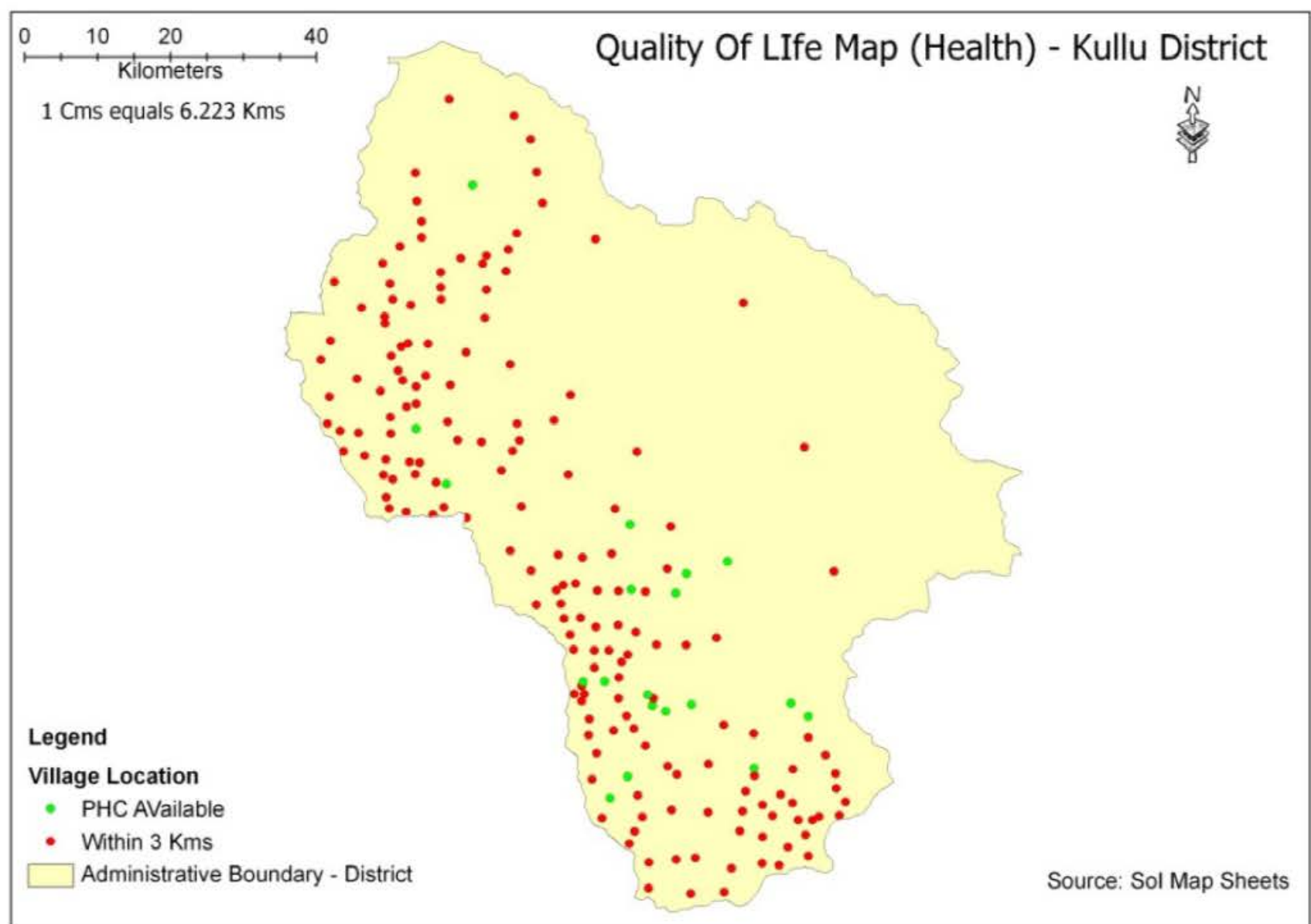
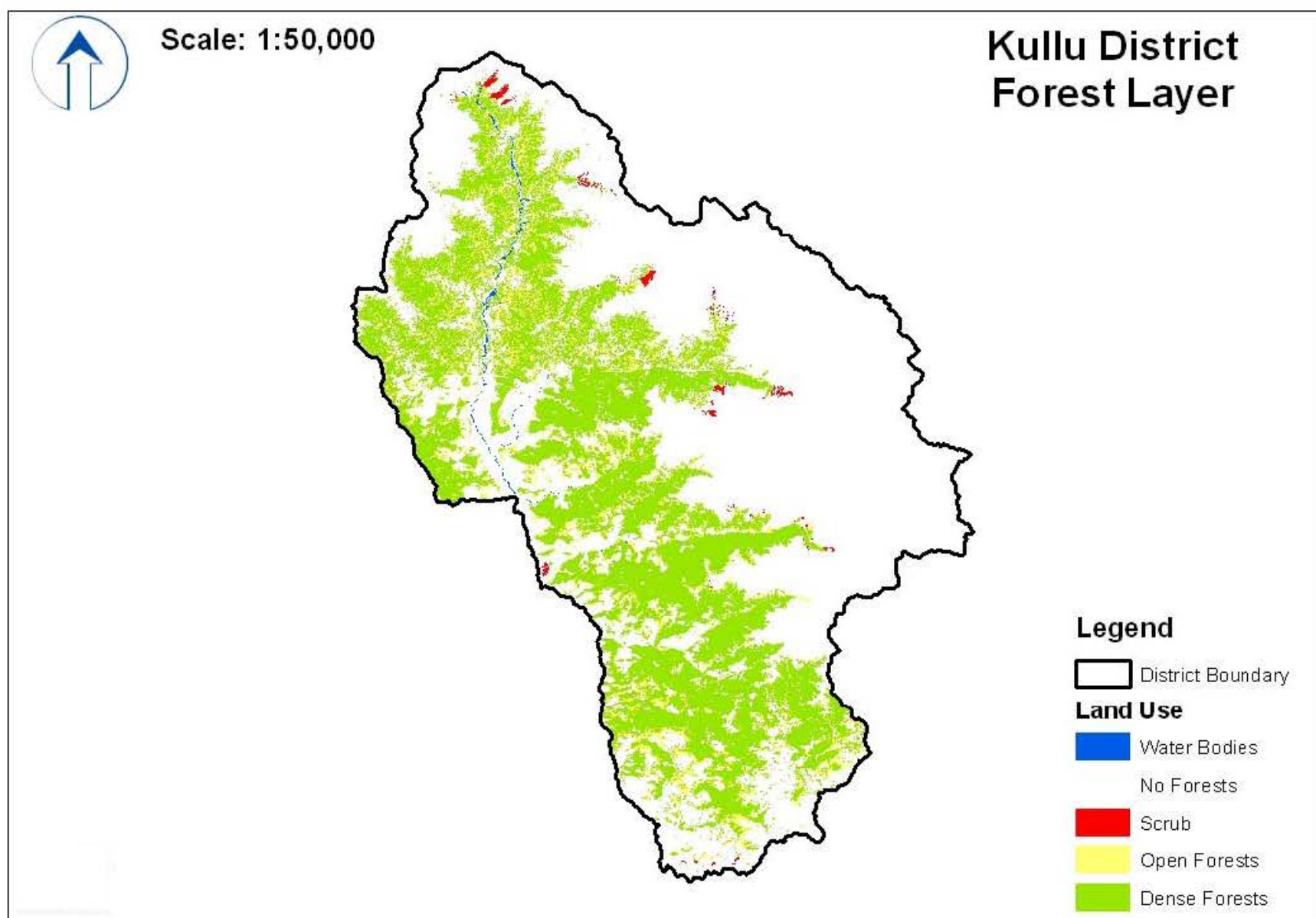


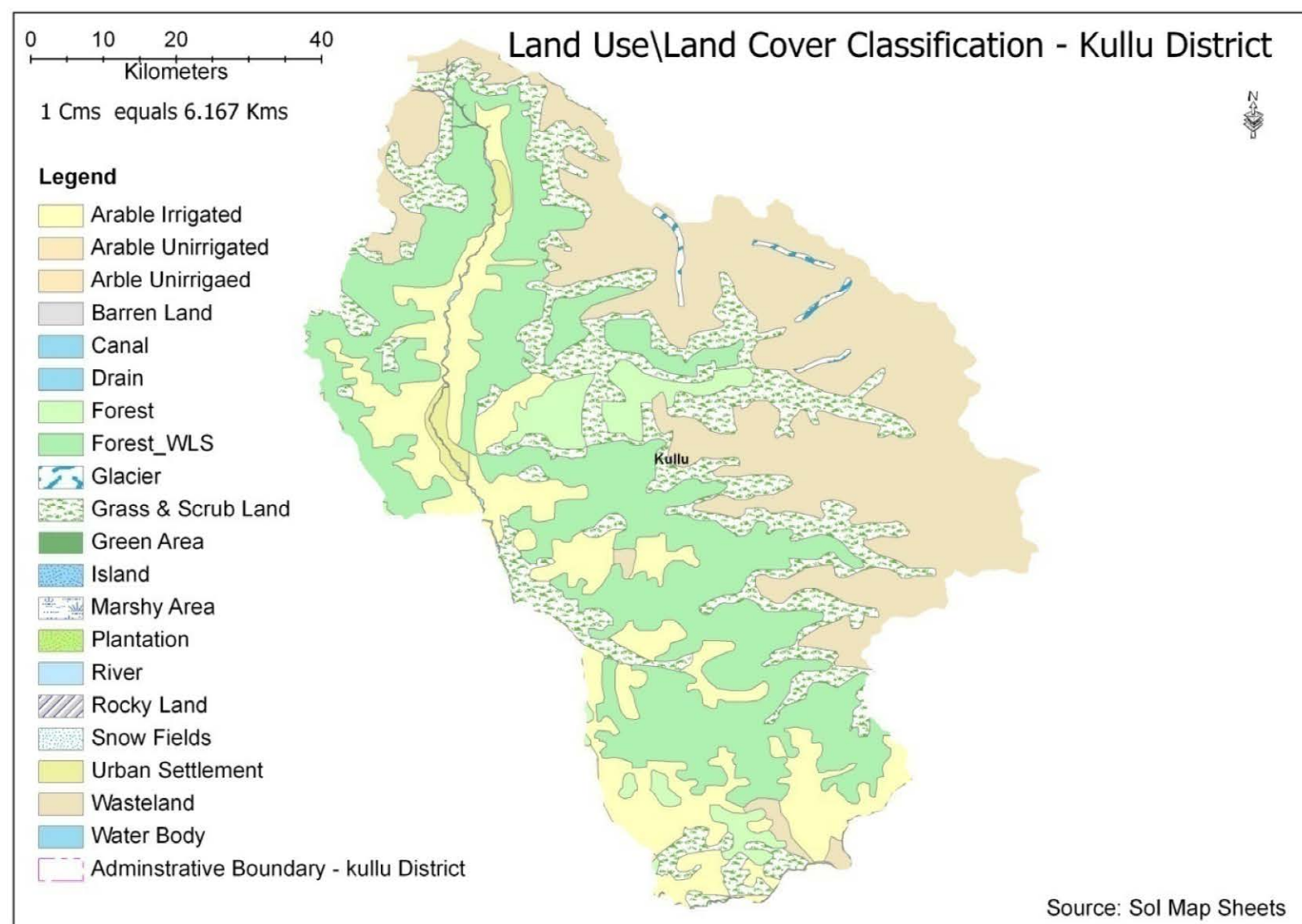
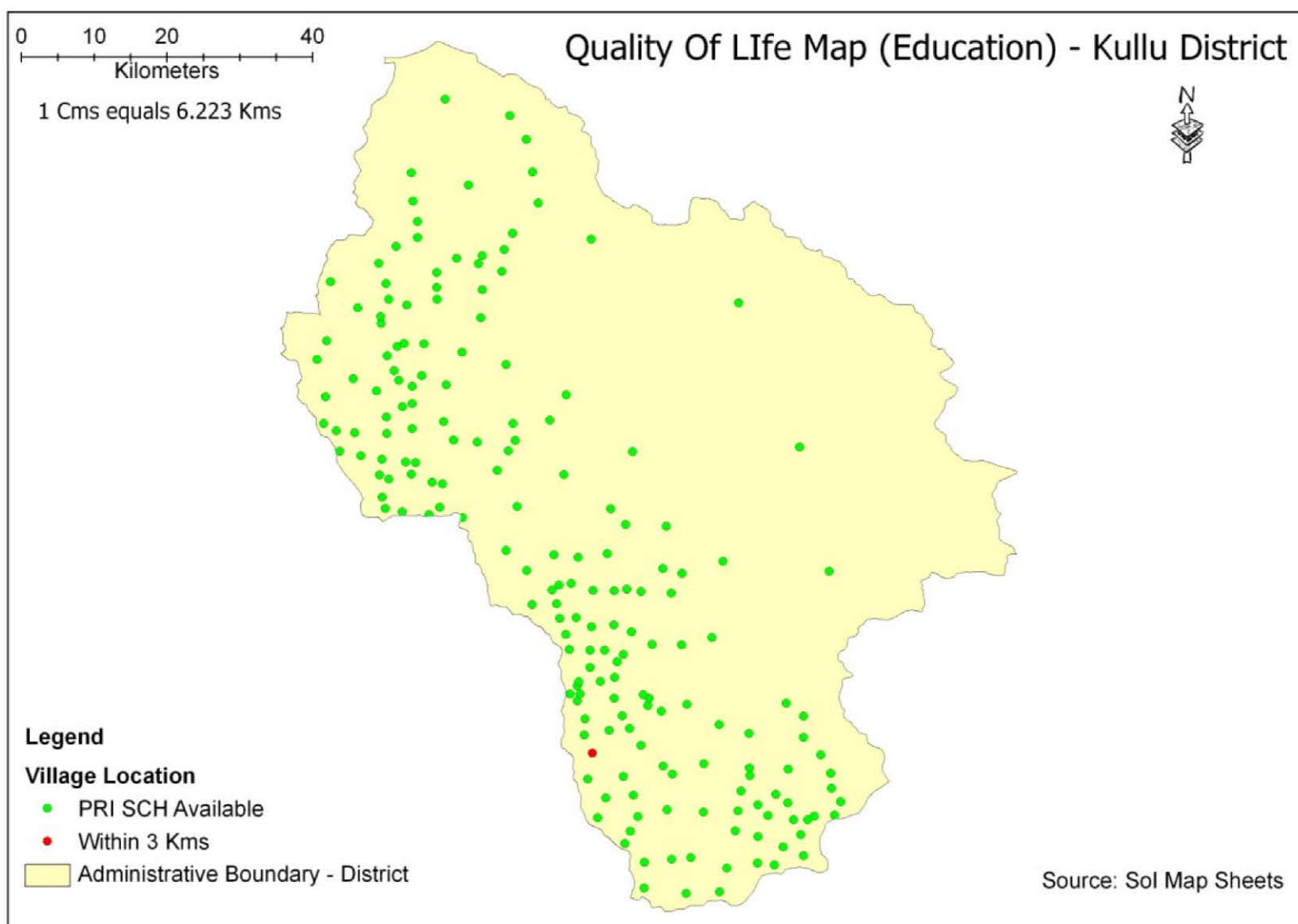
Kullu is the largest sub unit at about 208 sq.km, while Manali is the smallest at just about 36 sq.km

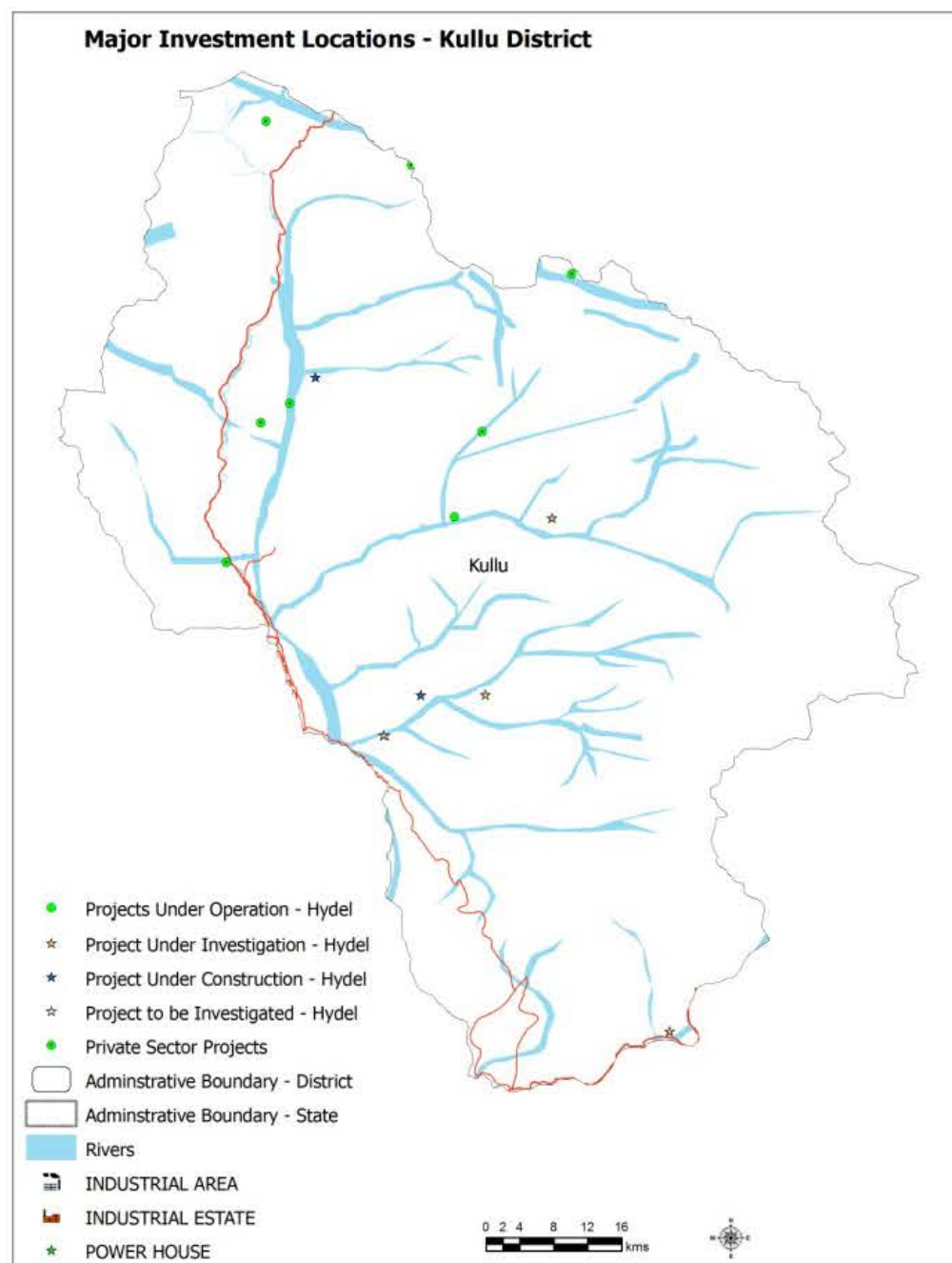
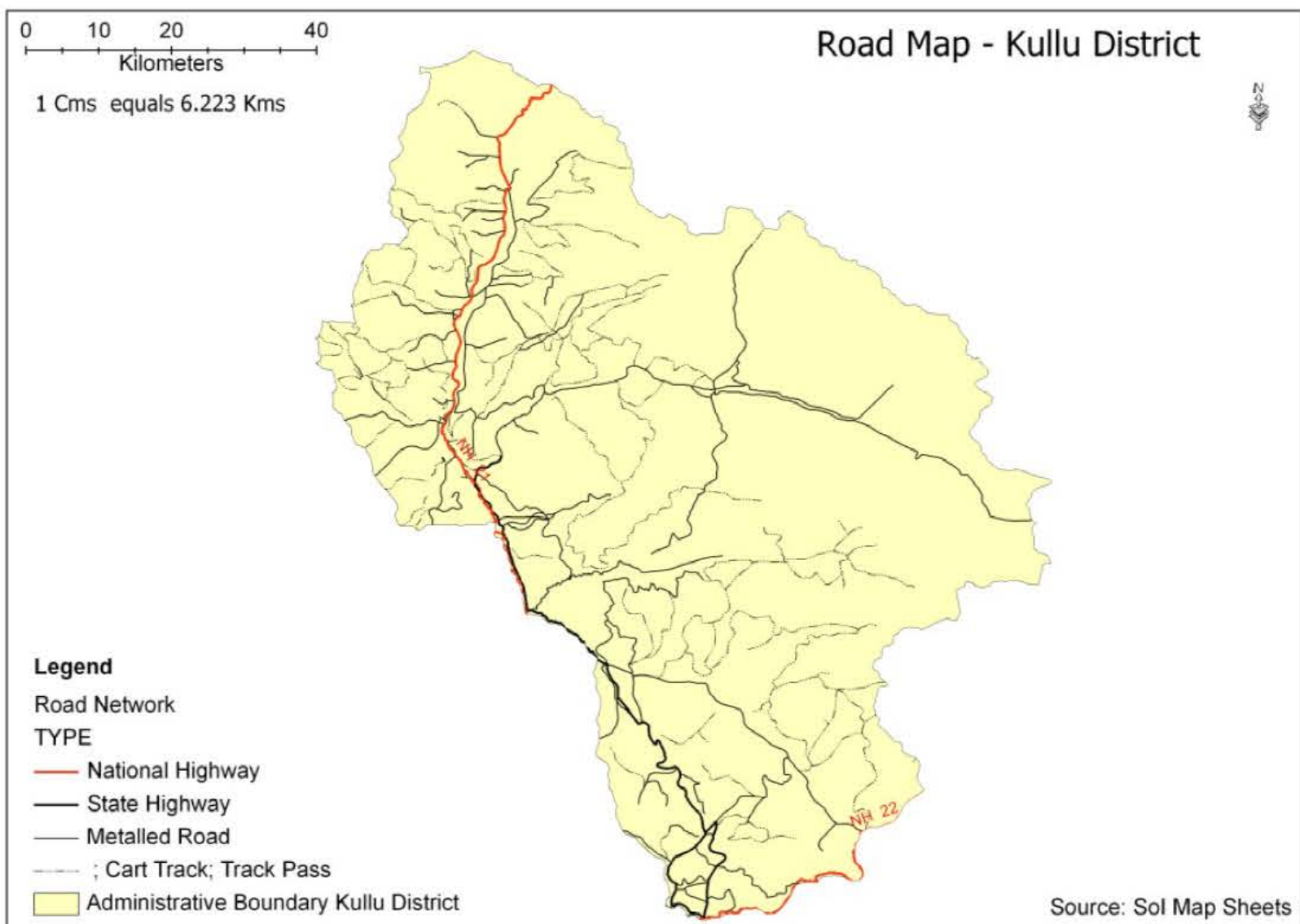
S.No	Tehsil/Sub-Tehsil	Area (Sq.Km)
1	Kullu	207.92
2	Ani	78.50
3	Nermand	78.44
4	Banjar	62.67
5	Manali	35.51
6	Sainj	37.89

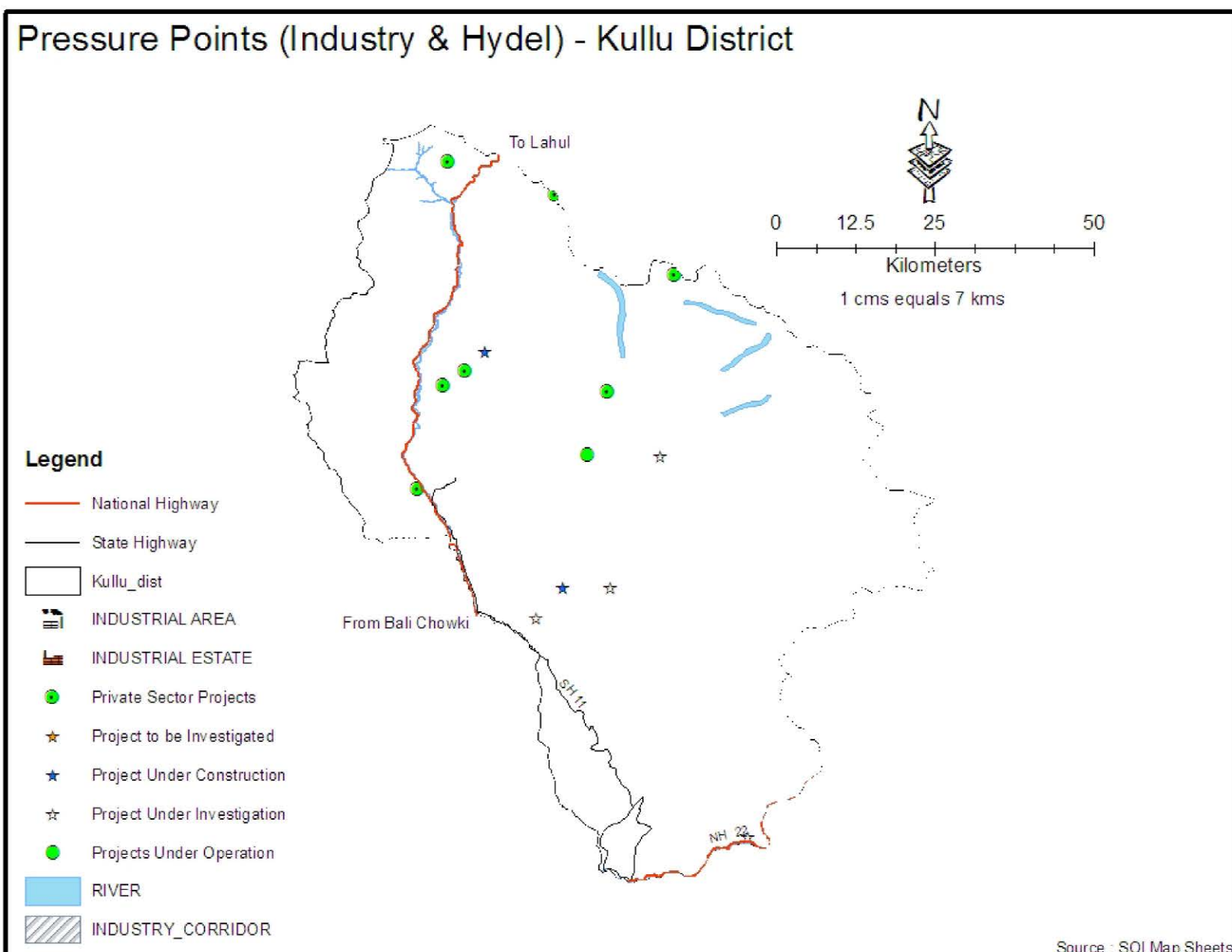
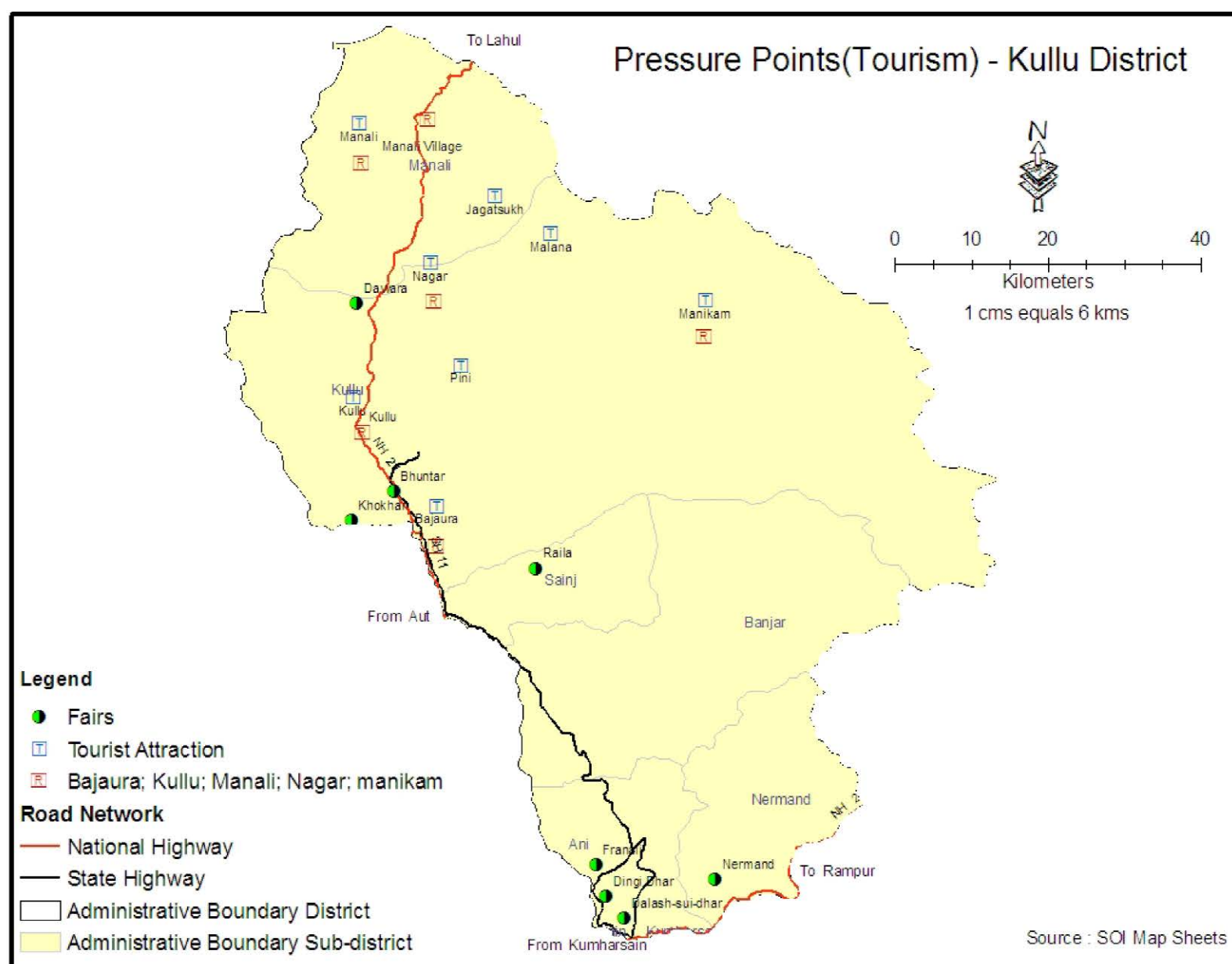
It is very interesting to observe that the areas stated above are the areas for the revenue villages and do not include the forests, glacial, grasslands areas which account for 5002 sq.km area out of a total of 5503 sq.km.





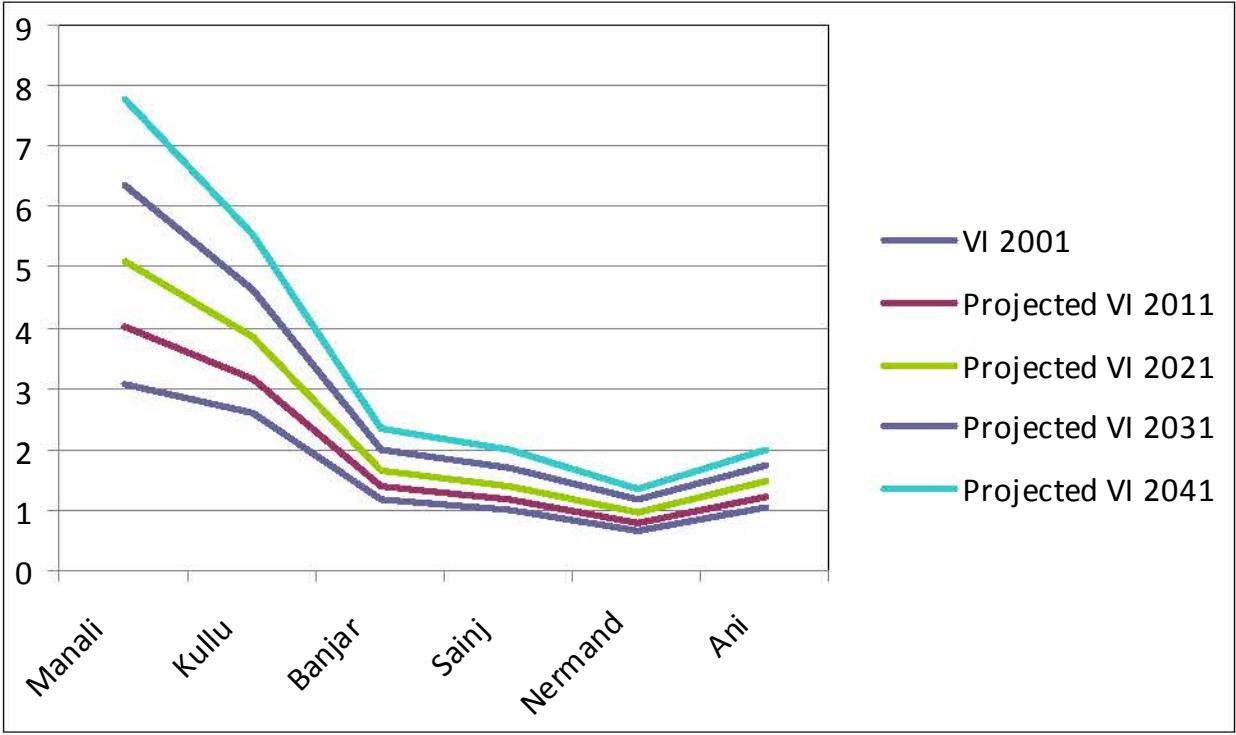




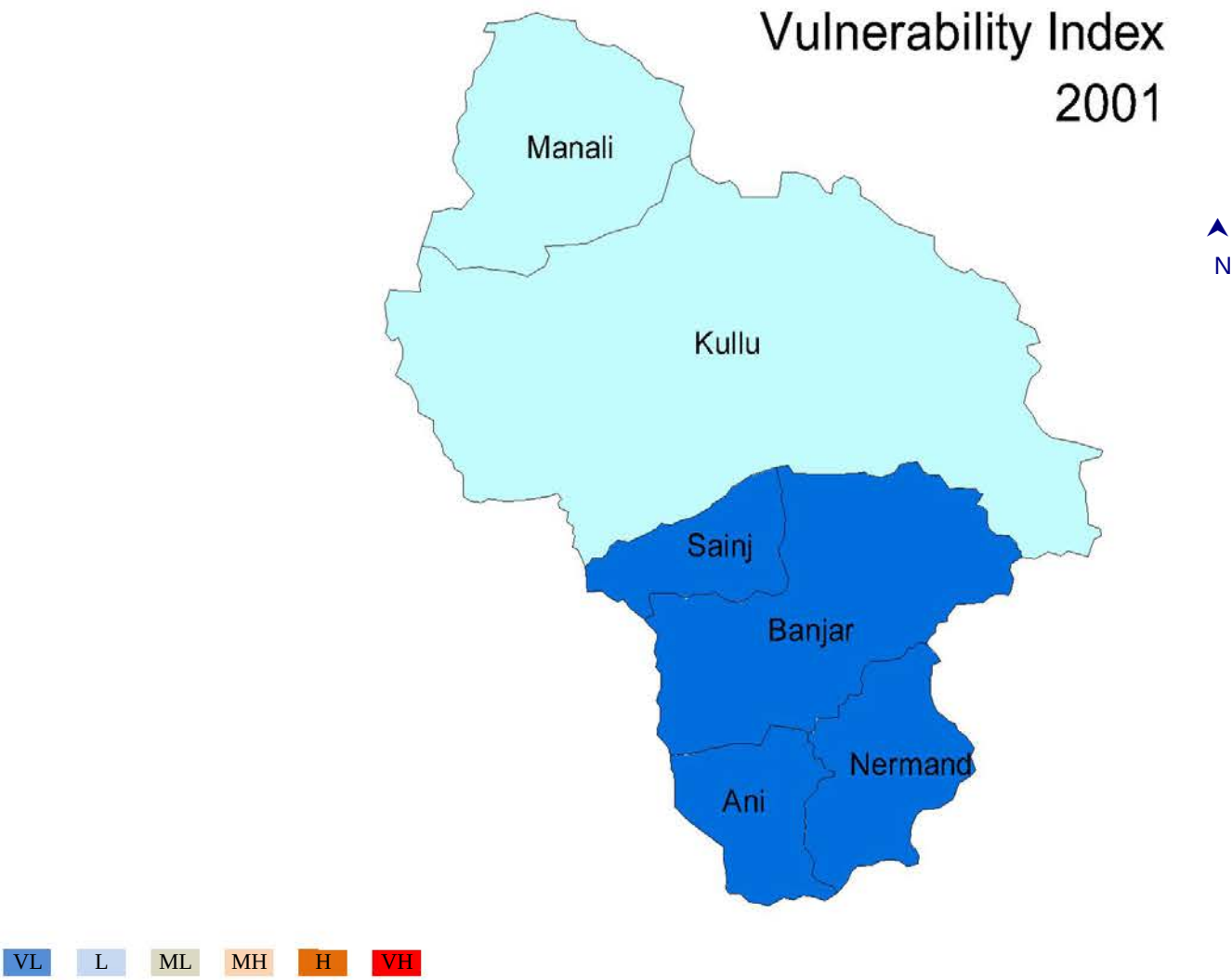


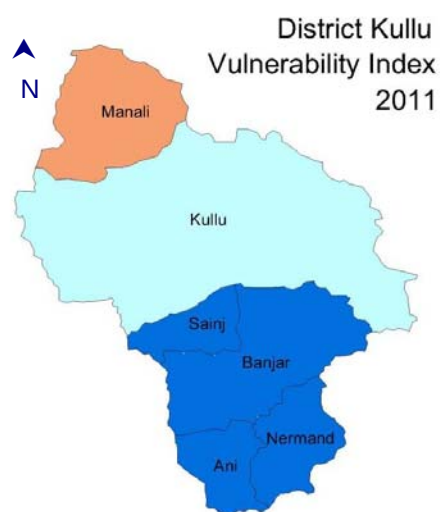
	VI 2001	Projected VI 2011	Projected VI 2021	Projected VI 2031	Projected VI 2041
Manali	3.08	4.01	5.12	6.38	7.77
Kullu	2.6	3.16	3.85	4.64	5.54
Banjar	1.16	1.39	1.66	1.97	2.32
Sainj	0.99	1.17	1.4	1.67	1.99
Nermand	0.66	0.8	0.96	1.15	1.35
Ani	1.05	1.23	1.46	1.71	2

Vulnerability Index Scenarios – District Kullu at Tehsil Level



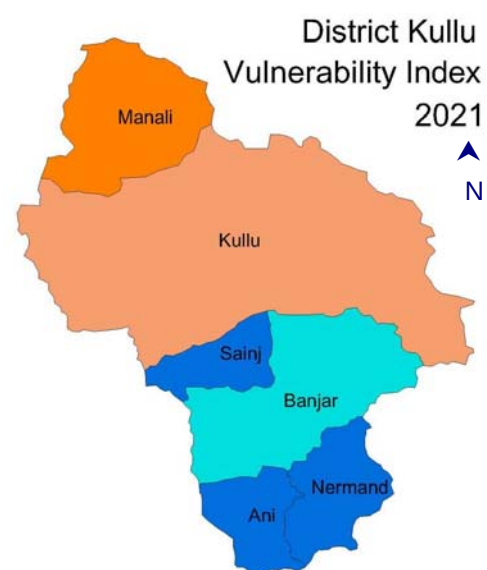
	Manali	Kullu	Banjar	Sainj	Nermand	Ani
VI	7539.86	6367.04	2850.92	2434.63	1621.03	2570.5
denominator = 57x43	2451					
Normalized VI	3.08	2.60	1.16	0.99	0.66	1.05





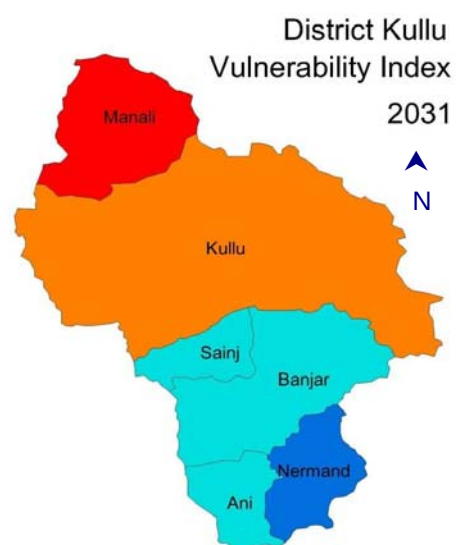
Manali moves to the Moderately High Vulnerability segment from the Moderately low vulnerability segment while Kullu, remains in the Moderately Low vulnerability segment. All the other four Tehsils, namely Banjar, sainj, Nermand and Ani remain in the very low vulnerability segment

VL L ML MH H VH



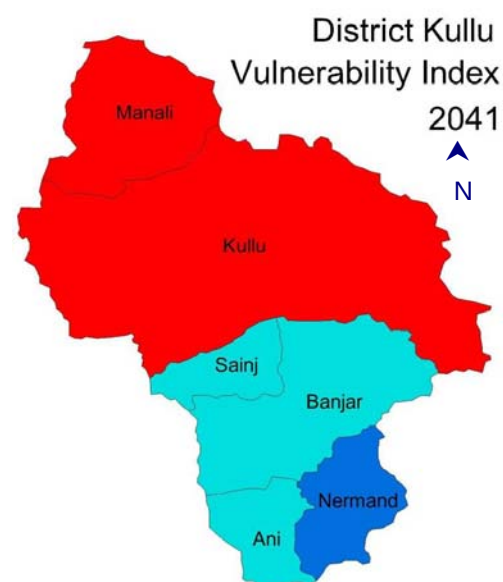
Manali moves to the High Vulnerability segment from the Moderately high vulnerability segment while Kullu, moves to the Moderately High vulnerability segment from a Moderately low vulnerability segment. Banjar moves from very low vulnerability segment to low vulnerability segment. The other three Tehsils, namely Sainj, Nermand and Ani remain in the very low vulnerability segment

VL L ML MH H VH



Manali moves to the Very High and critical vulnerability segment from High Vulnerability segment. Kullu moves to the High vulnerability segment from the Moderately High vulnerability segment. Banjar remains in the low vulnerability segment and is joined by Sainj and Ani in the segment. Nermand, however remains in the very low vulnerability segment

VL L ML MH H VH



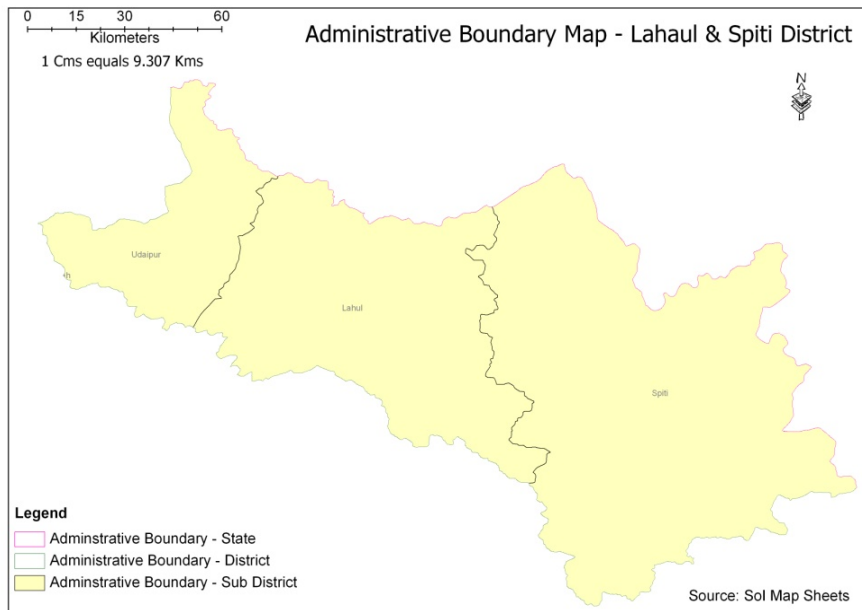
Manali retains its criticality with Kullu also joining it in the very high and critical vulnerability segment. All the other four Tehsils retain their segments

VL L ML MH H VH

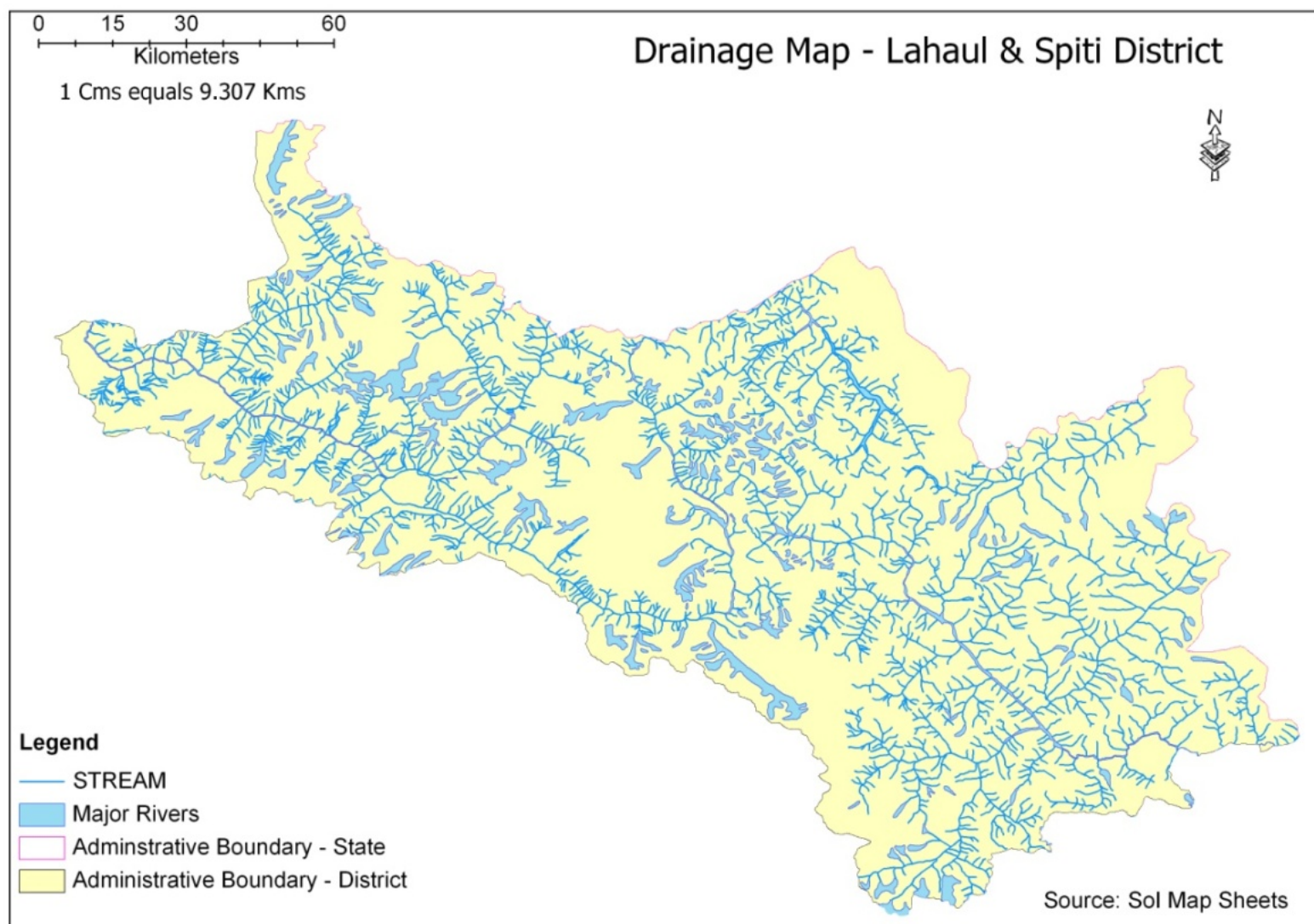
Lahaul & Spiti

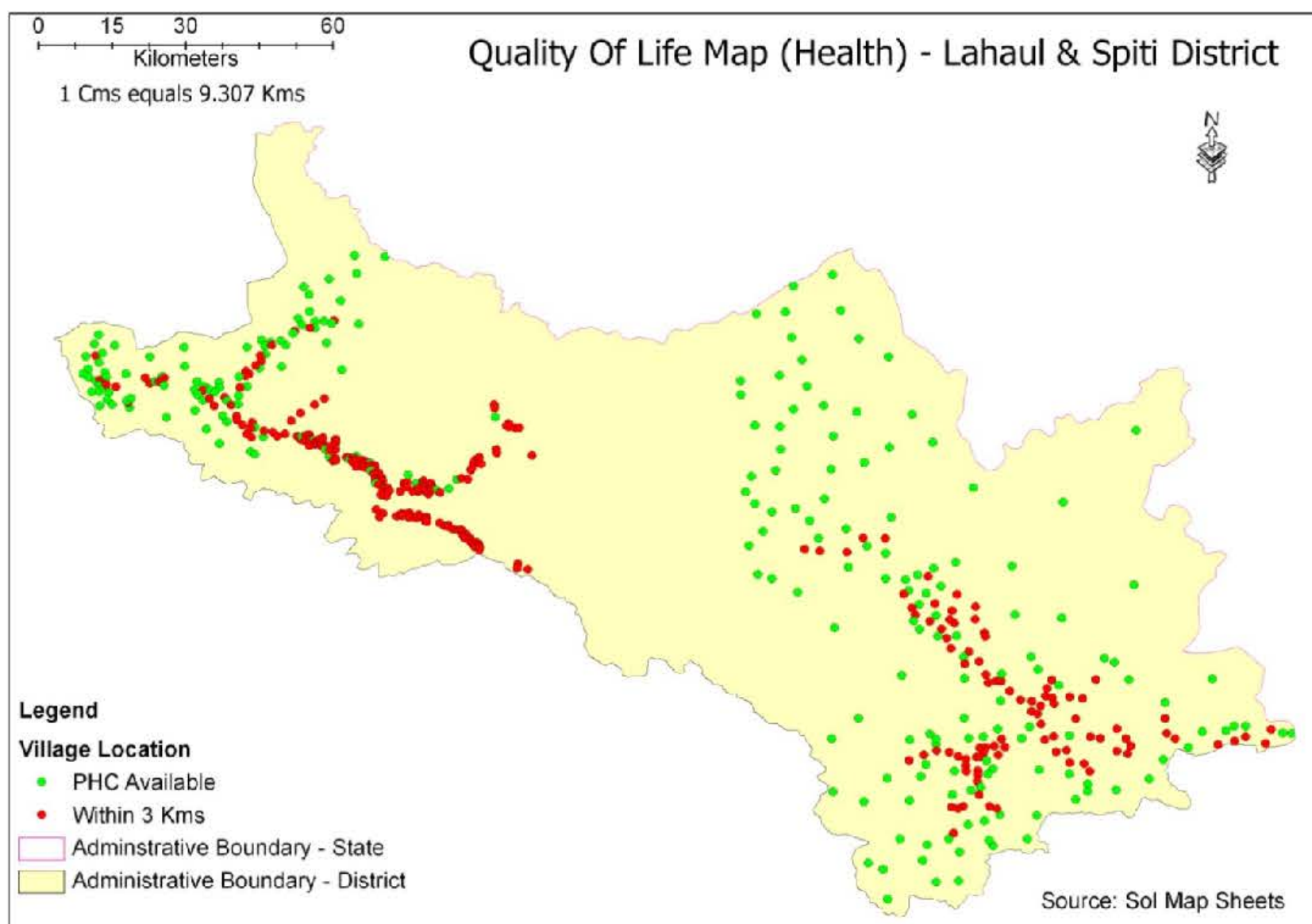
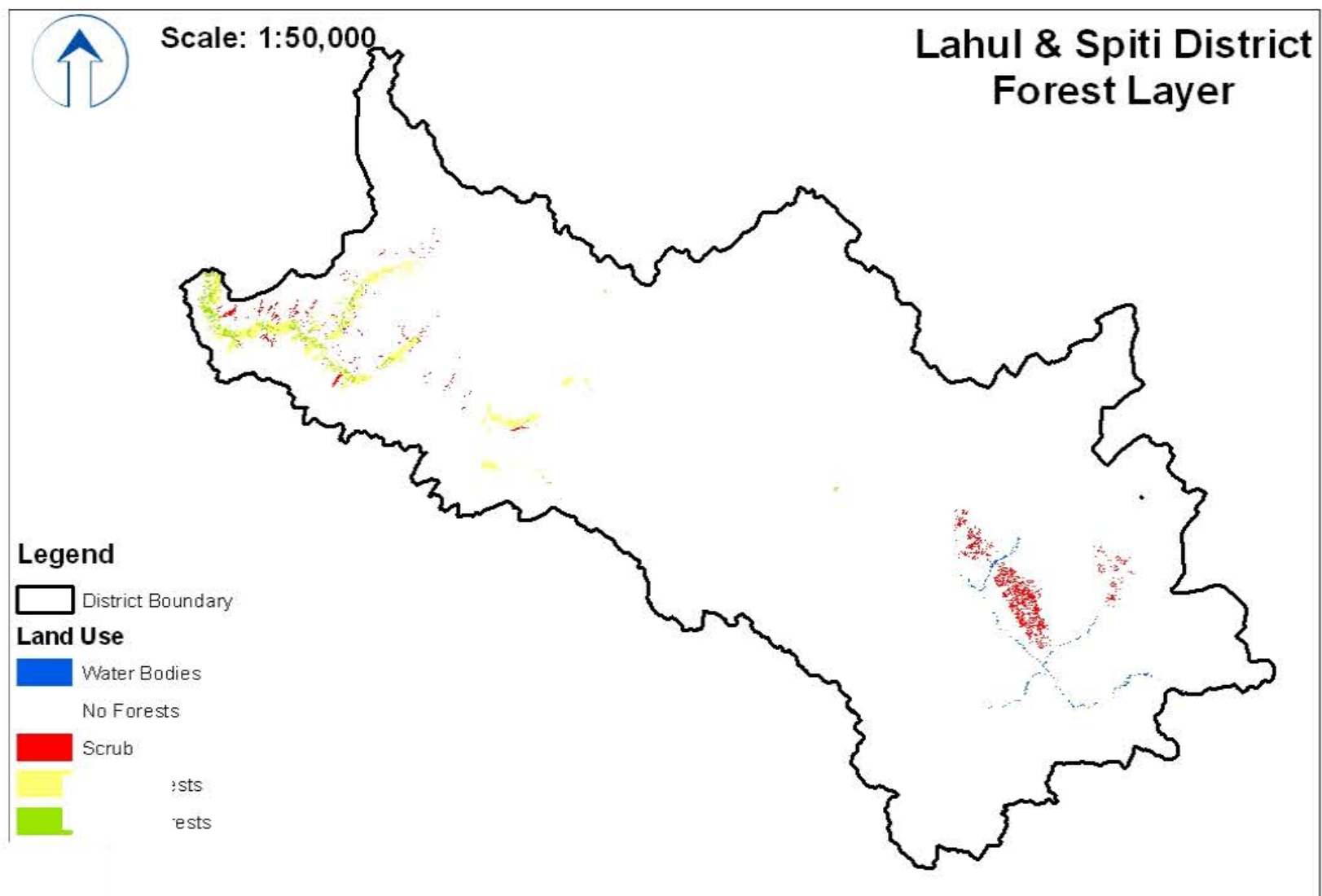
Location

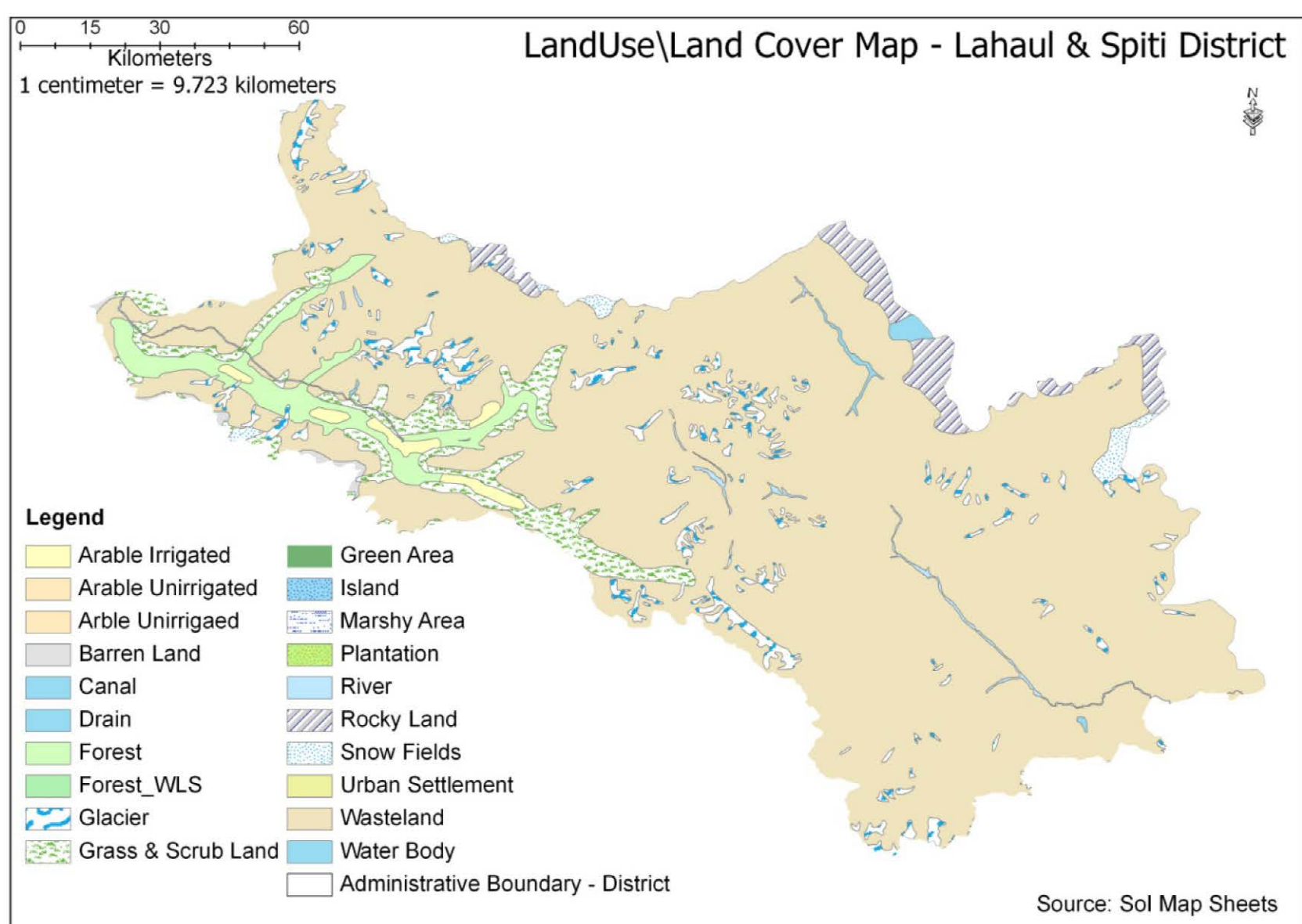
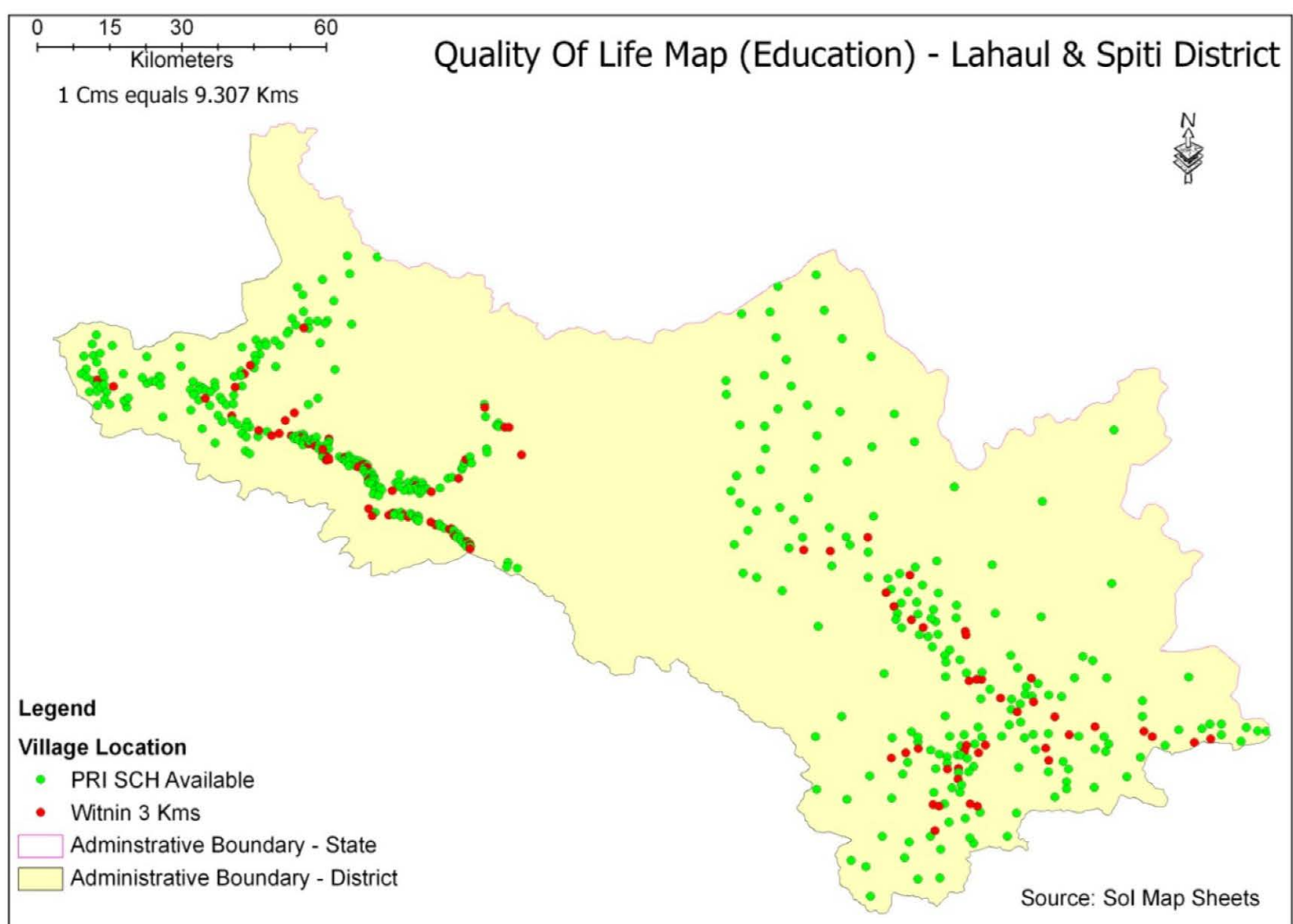
Lahaul & Spiti is located between latitudes of 31°44'57" & 32°59'57" in North and between 76°46'29" and 78°41'34" east longitudes. It is situated in Northern & north eastern part of Himachal Pradesh. It touches Tibet on Eastern border, Ladakh on Northern side; Chamba, Kangra & Kullu on western & Southern side while on south eastern side is Kinnaur. The general elevation in the district is above 2,700 metres with the greater part of the district having elevations ranging from about 4,000 metres. to 6,000 metres and some of the peaks are above 6,400 metres. Lahaul and Spiti is the largest district in the State

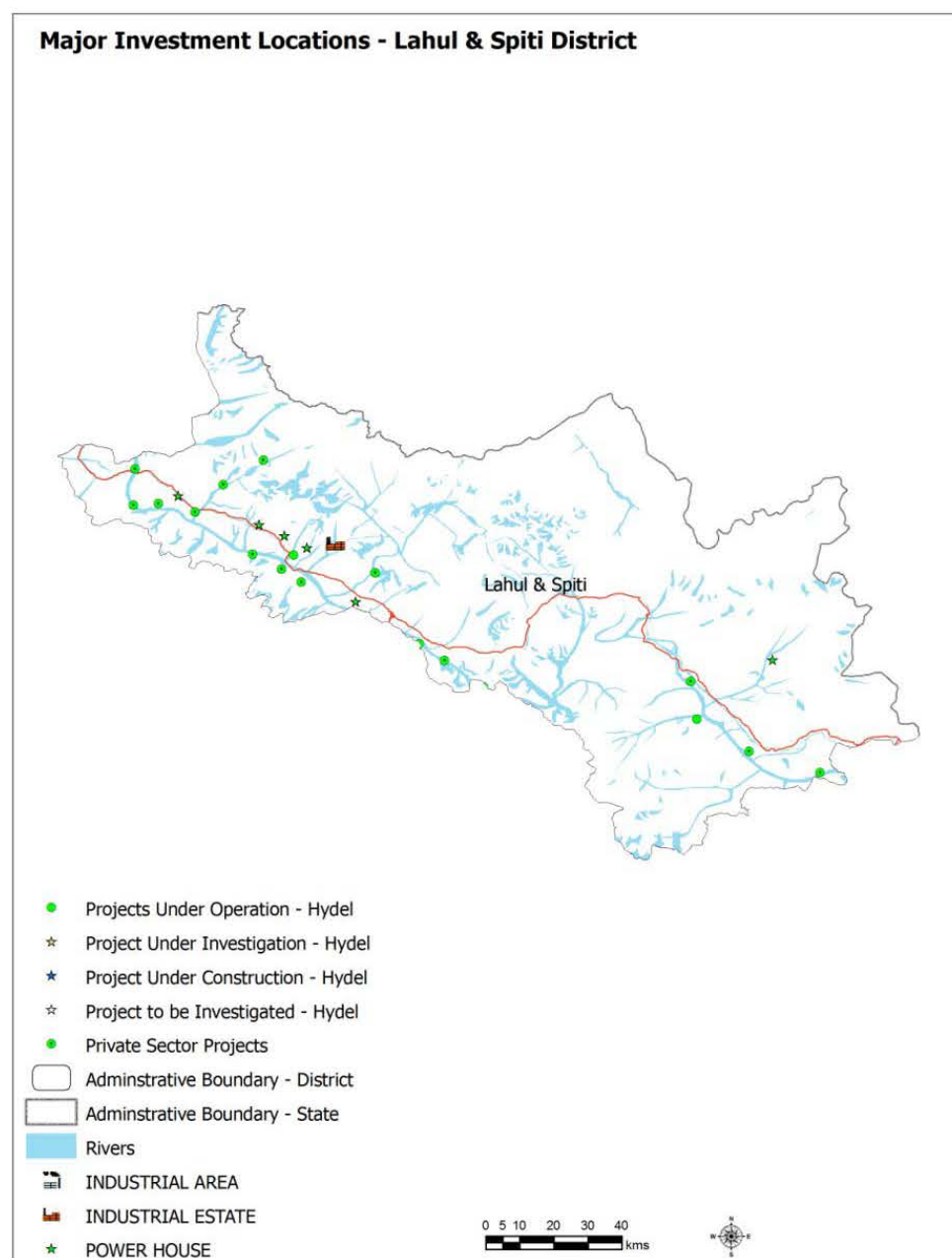
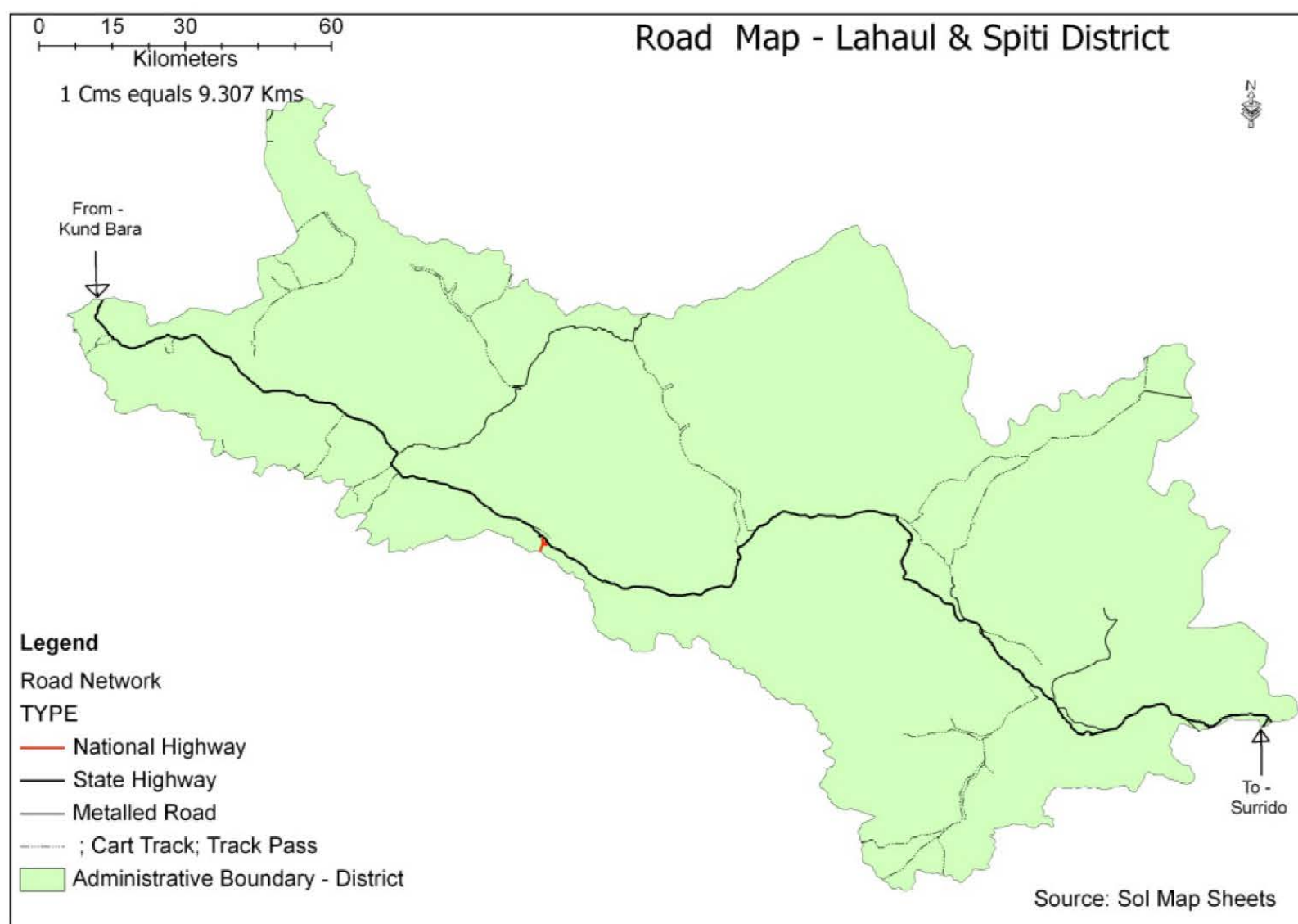


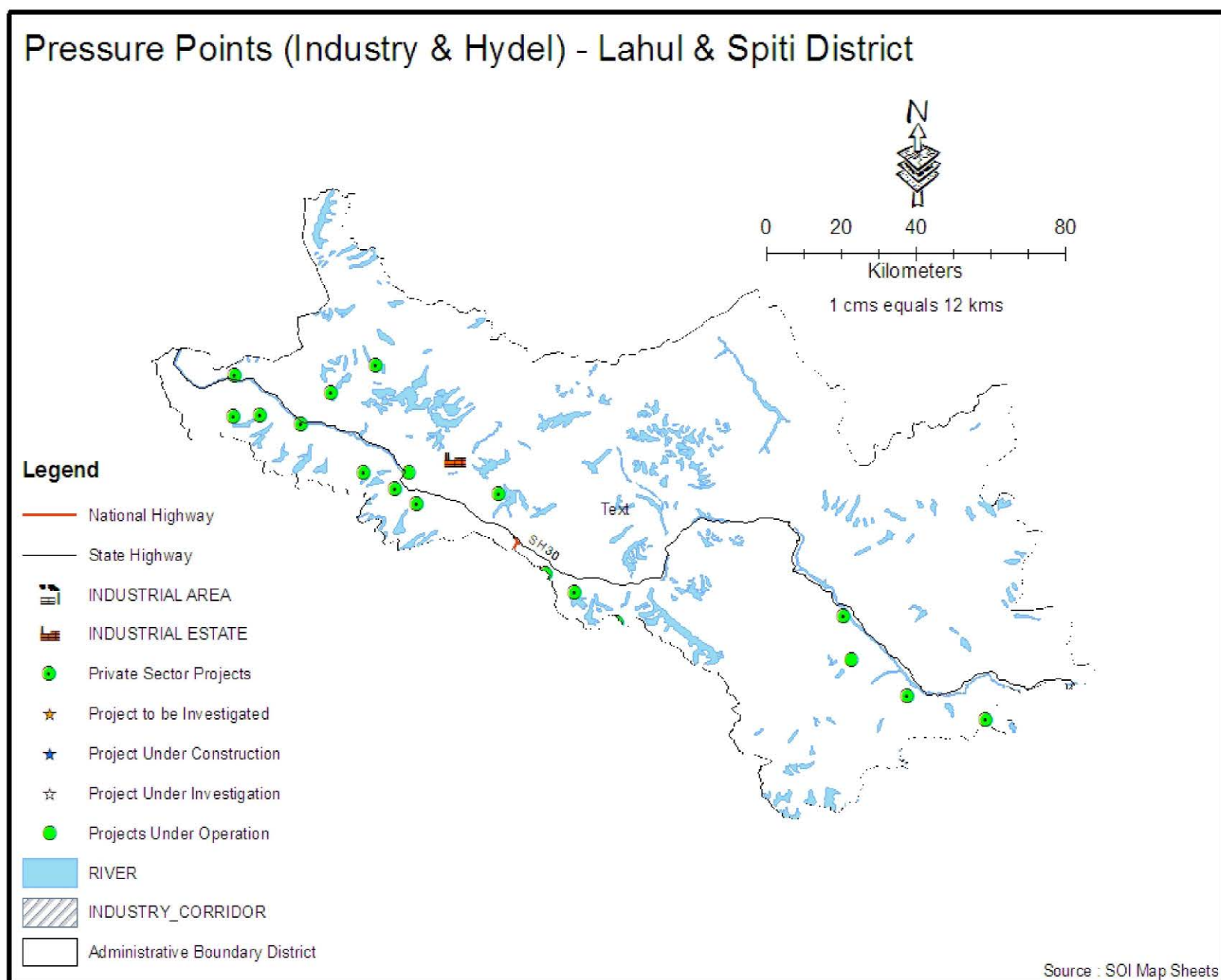
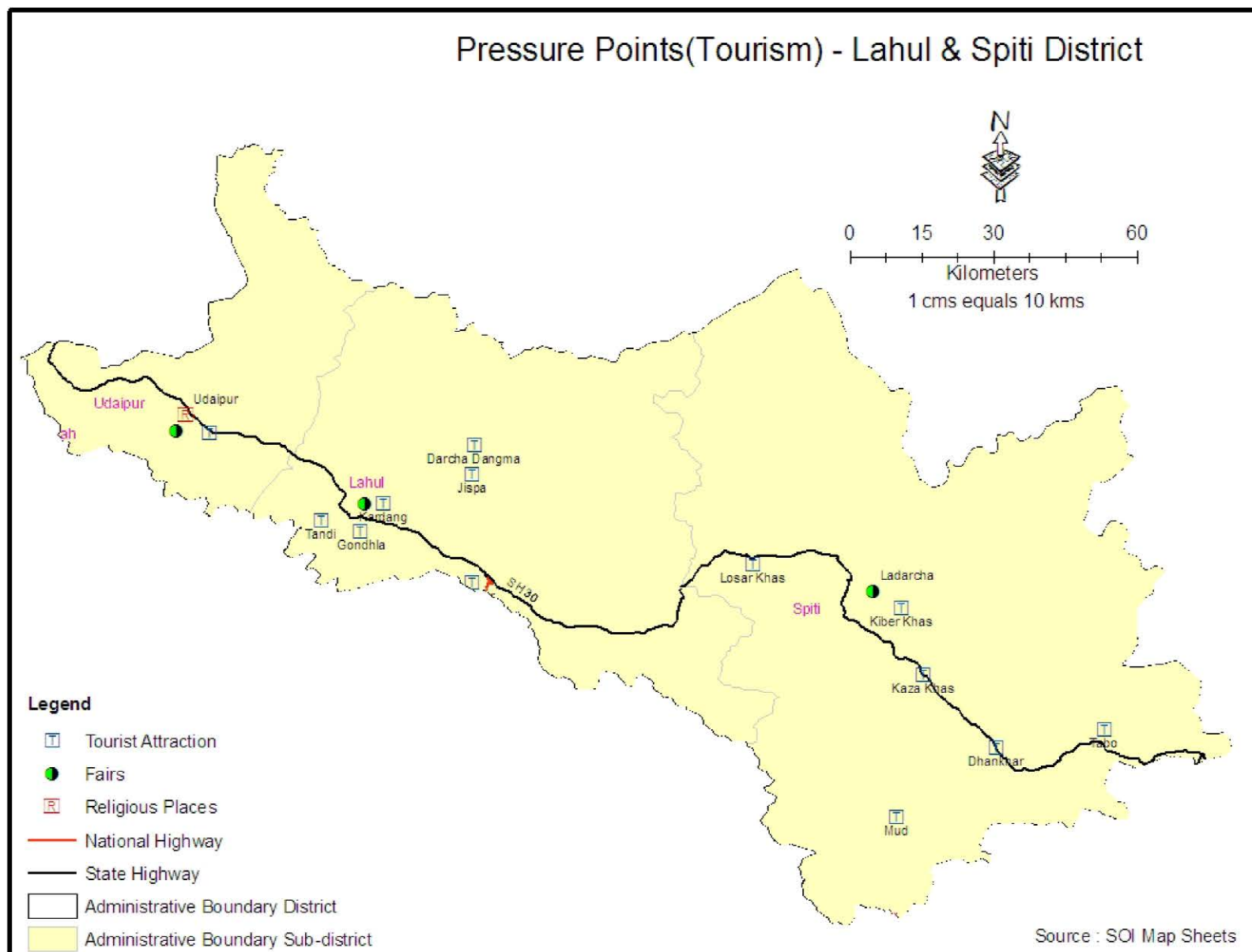
Lahaul & Spiti district has an area of 13,835 sq. kms which constitutes 24.85 per cent of total geographical area of the state. Administratively district is divided into 2 Tehsil & one Sub-Tehsil. Spiti is the largest entity with area of 7100.5 Sq.Km followed by Lahaul with area of 3759.4 Sq.Km. while the smallest unit is Udaipur at 1976.1 Sq.Km





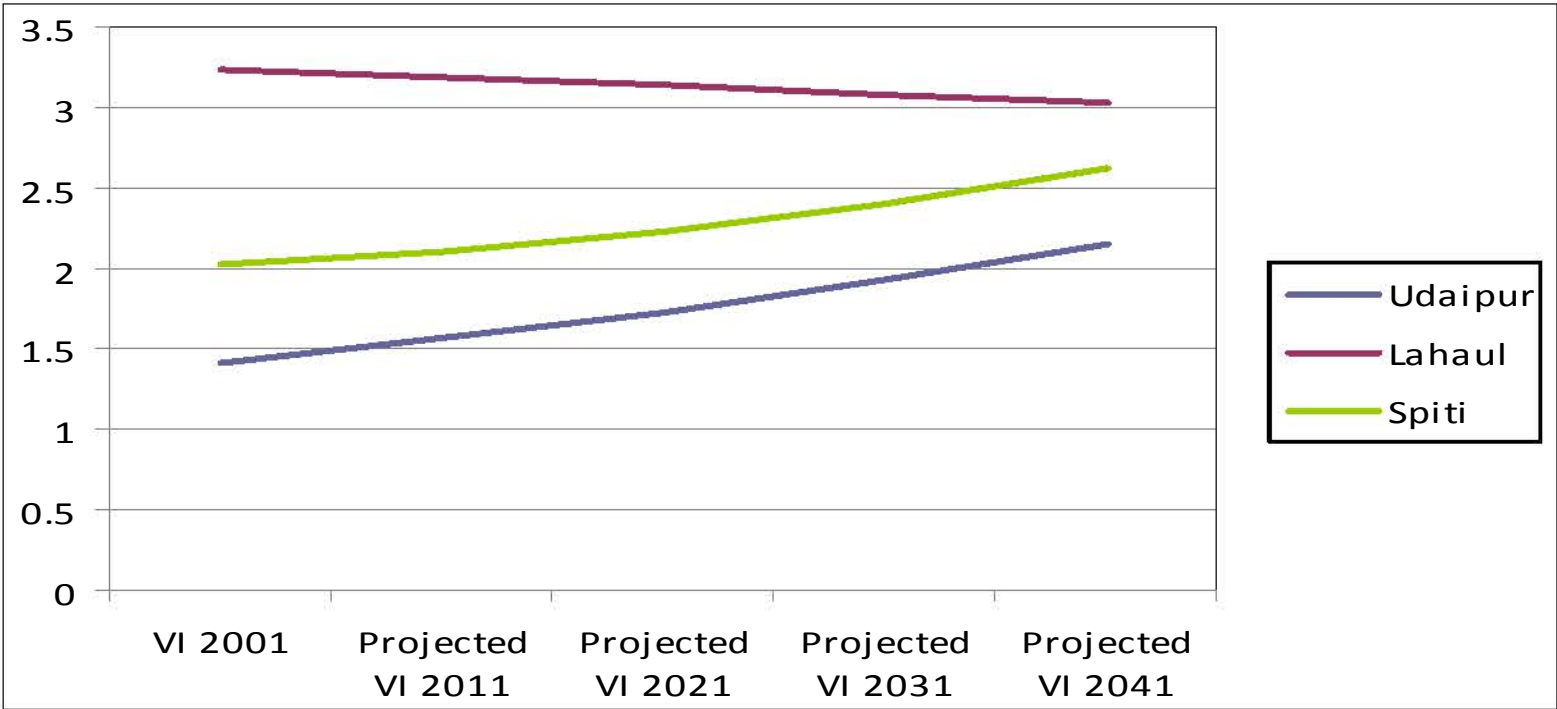




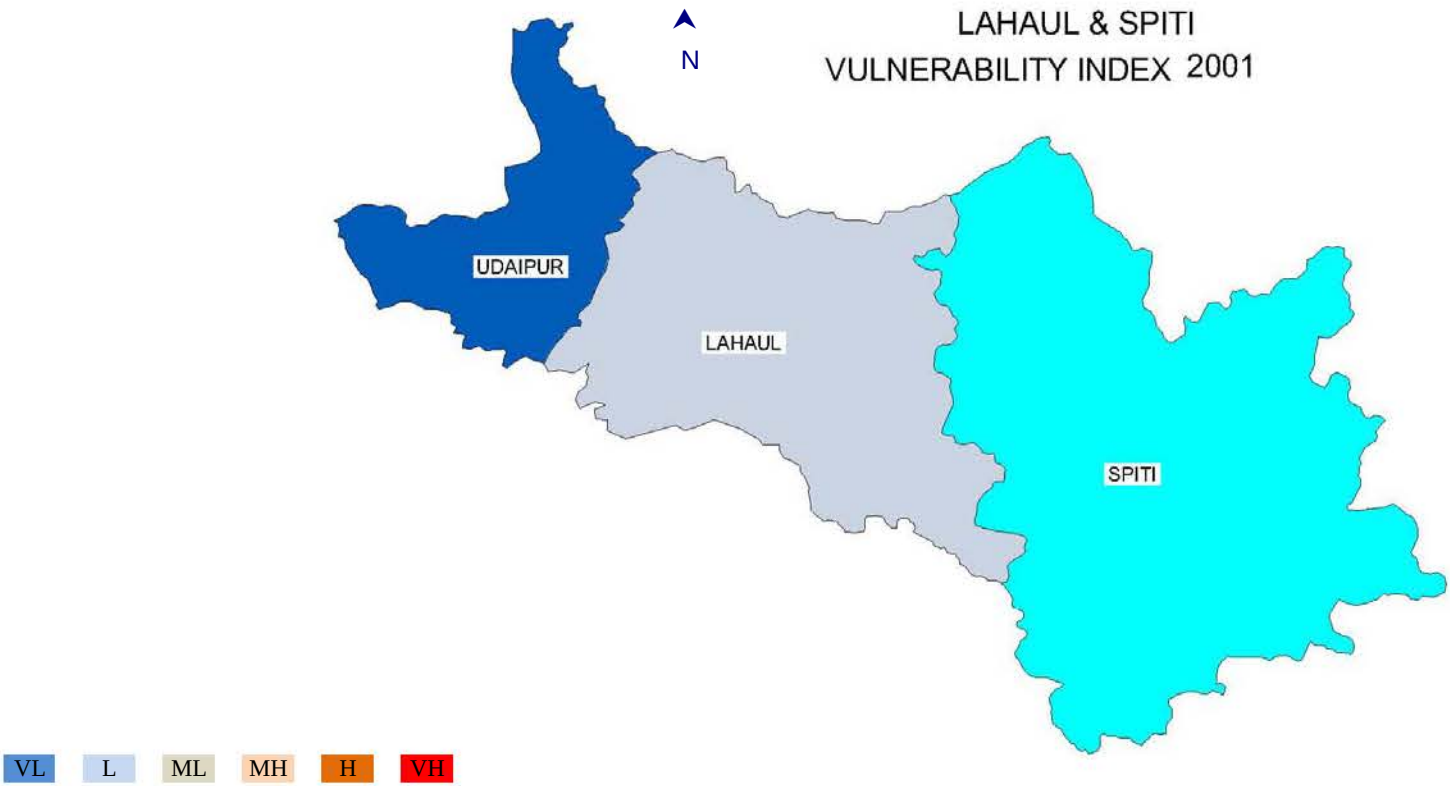


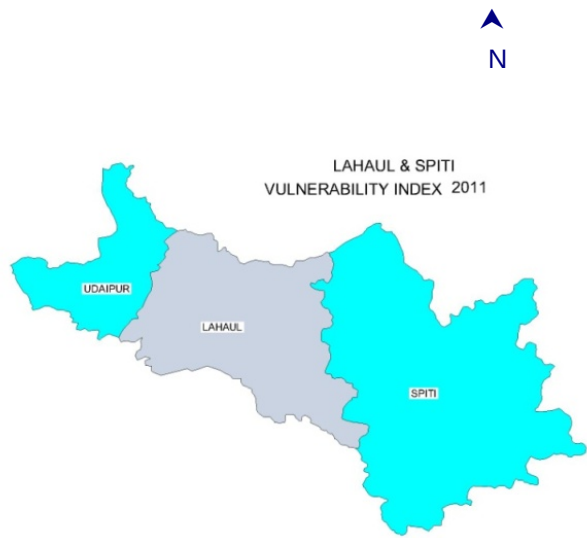
	VI 2001	Projected VI 2011	Projected VI 2021	Projected VI 2031	Projected VI 2041
Udaipur	1.42	1.56	1.73	1.93	2.15
Lahaul	3.24	3.19	3.13	3.08	3.03
Spiti	2.02	2.10	2.23	2.41	2.62

Vulnerability Index Scenarios – District Lahaul & Spiti at Tehsil Level



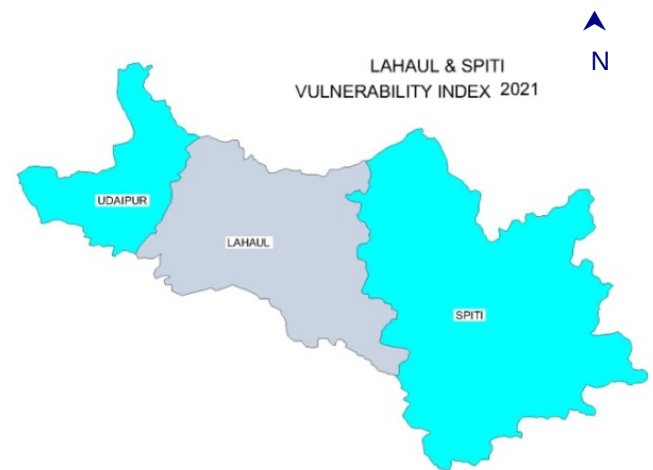
	Udaipur	Lahaul	Spiti
VI	3485.51	7952.12	4951.58
denominator = 57x43	2451		
Normalized VI	1.42	3.24	2.02





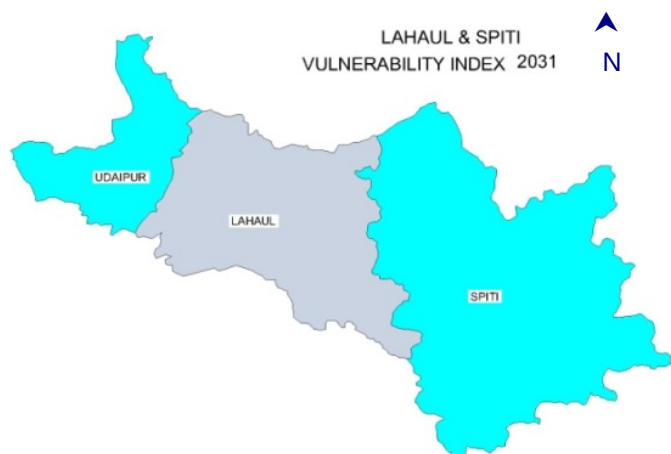
Udaipur moves from very low vulnerability to the Low vulnerability segment. Lahaul & Spiti retain their segments.

VL L ML MH H VH



All three Tehsils remain in their segments of Udaipur & Spiti in low vulnerability and Lahaul in moderately low vulnerability.

VL L ML MH H VH



All three Tehsils remain in their segments of Udaipur & Spiti in low vulnerability and Lahaul in moderately low vulnerability.

VL L ML MH H VH



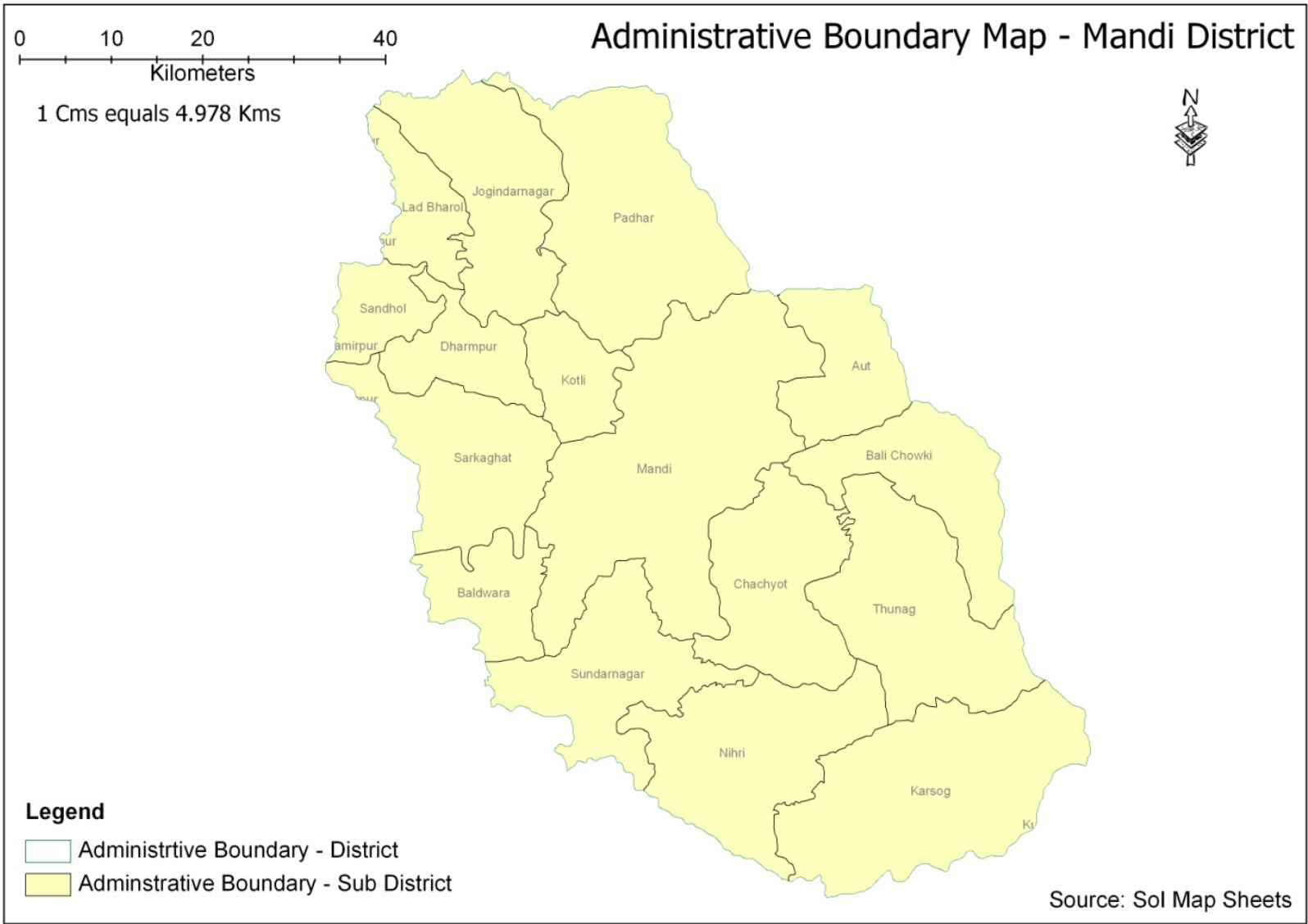
Udaipur and Lahaul retain their segments of low and moderately low vulnerability while Spiti moves to moderately low vulnerability segment from the low vulnerability segment.

VL L ML MH H VH

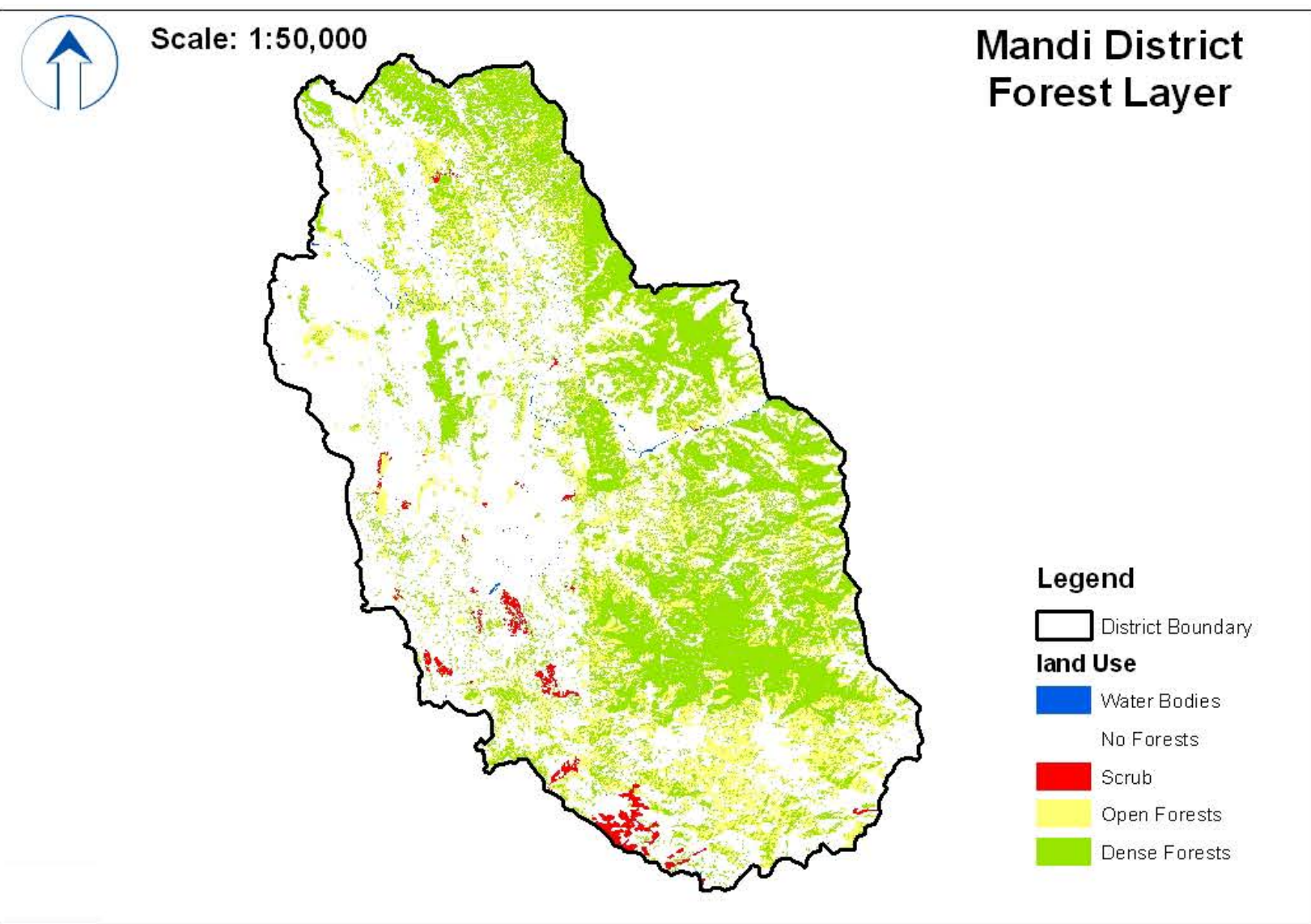
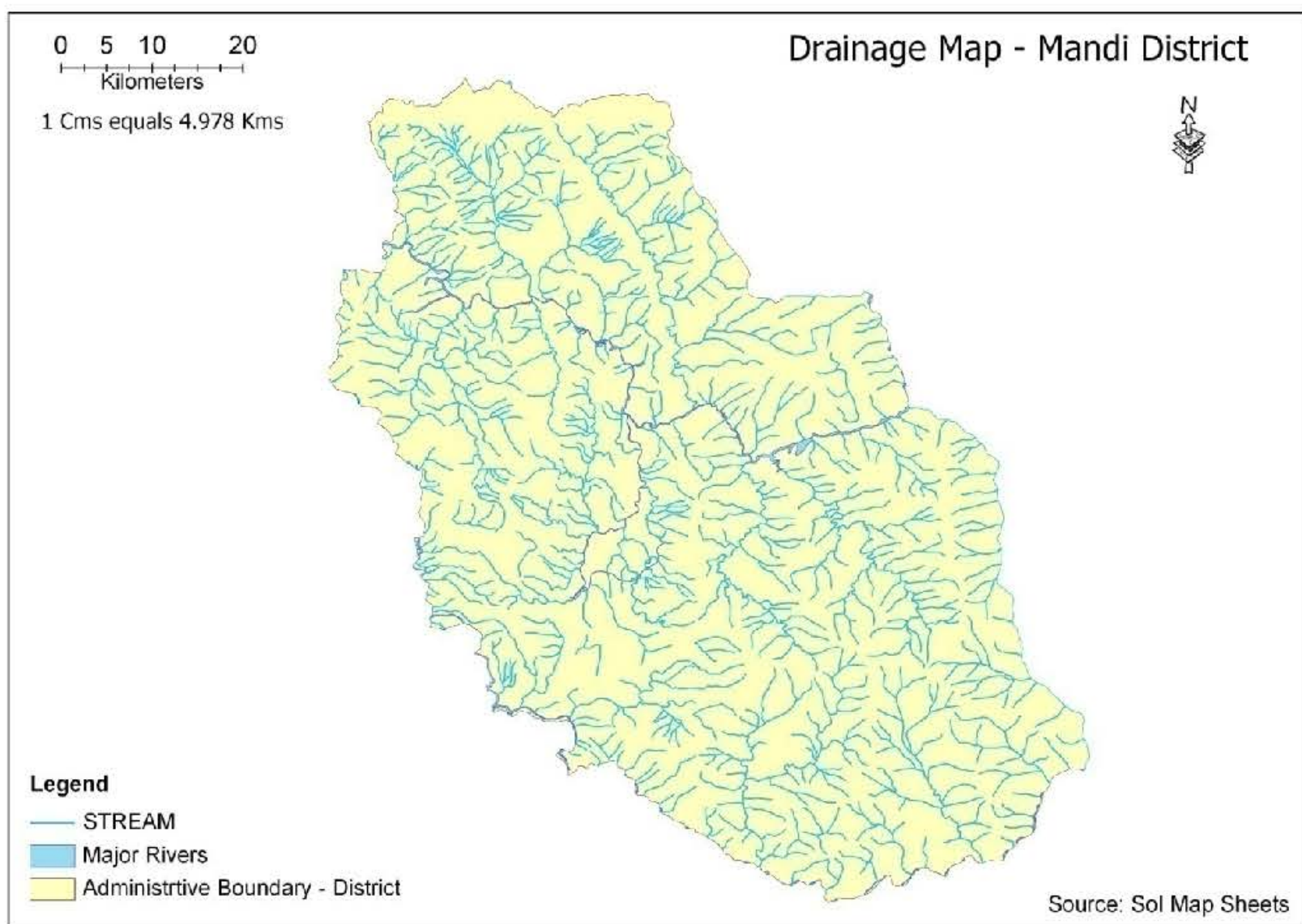
Mandi

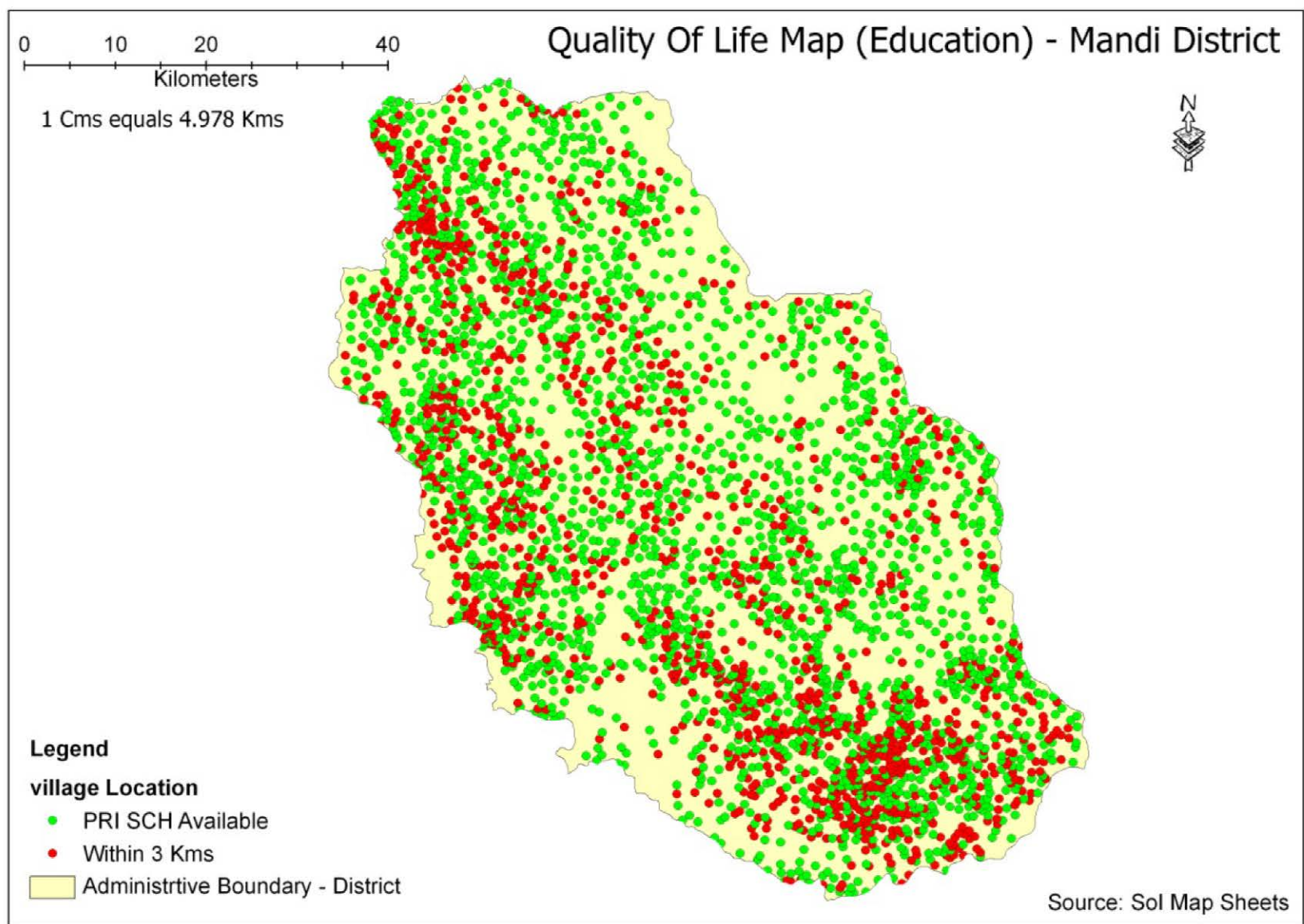
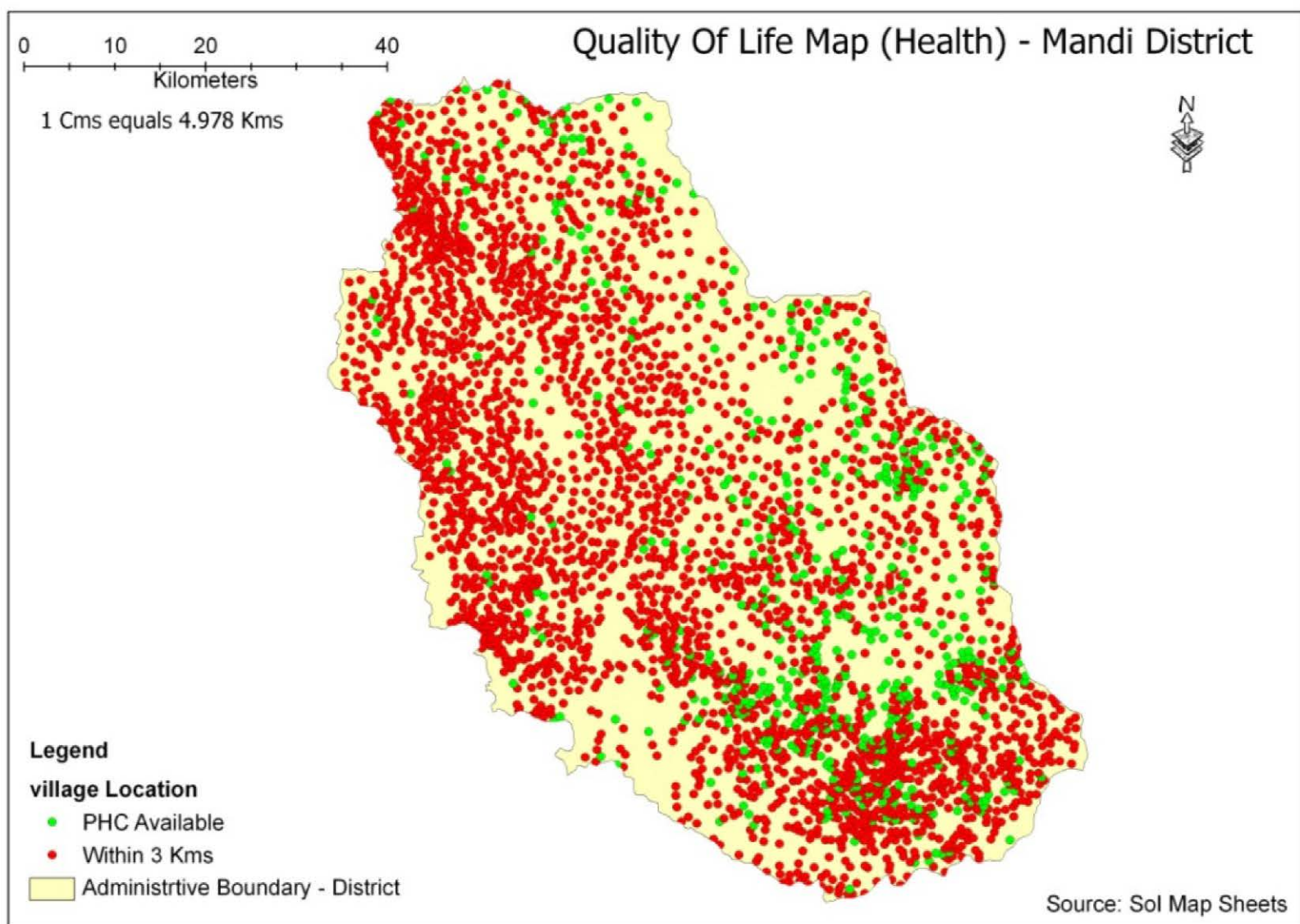
Location: Mandi district is situated in the central portion of Central Himachal Pradesh. It lies between 31° 13' 30" and 32° 04' 22" north latitudes and 76° 36' 08" and 71° 23' 26" east longitudes and is bounded by Kangra district in the north and North West, Hamirpur and Bilaspur districts in the west, by Solan and Shimla districts in the south and by Kullu district in the east. The district has an area of 3,950 Sq.Km out of the total area of 55,673 km.² of Himachal Pradesh according to the Surveyor General of India. It occupies seventh rank among the districts in terms of area which constitutes 7.10 per cent area of the state.

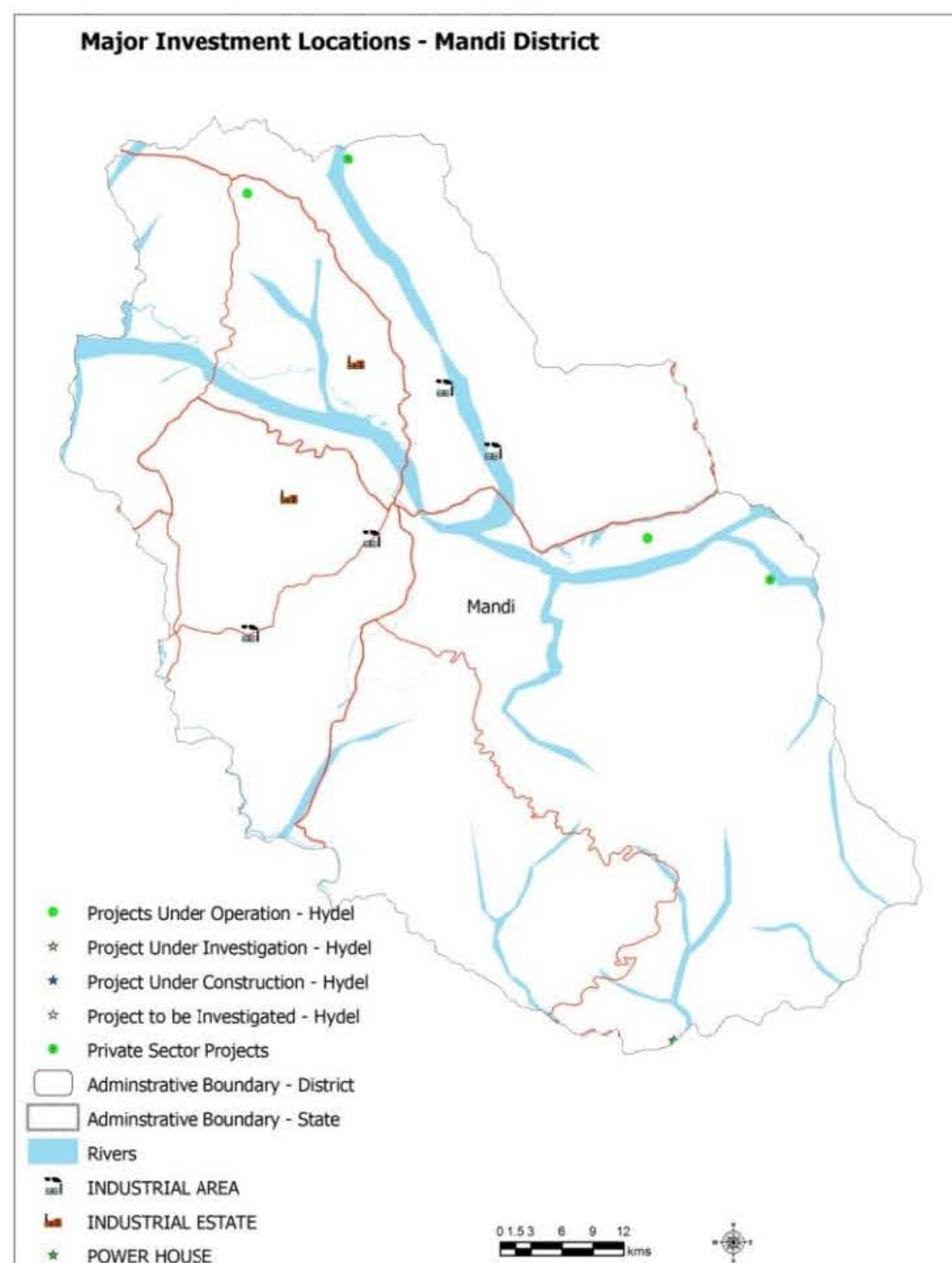
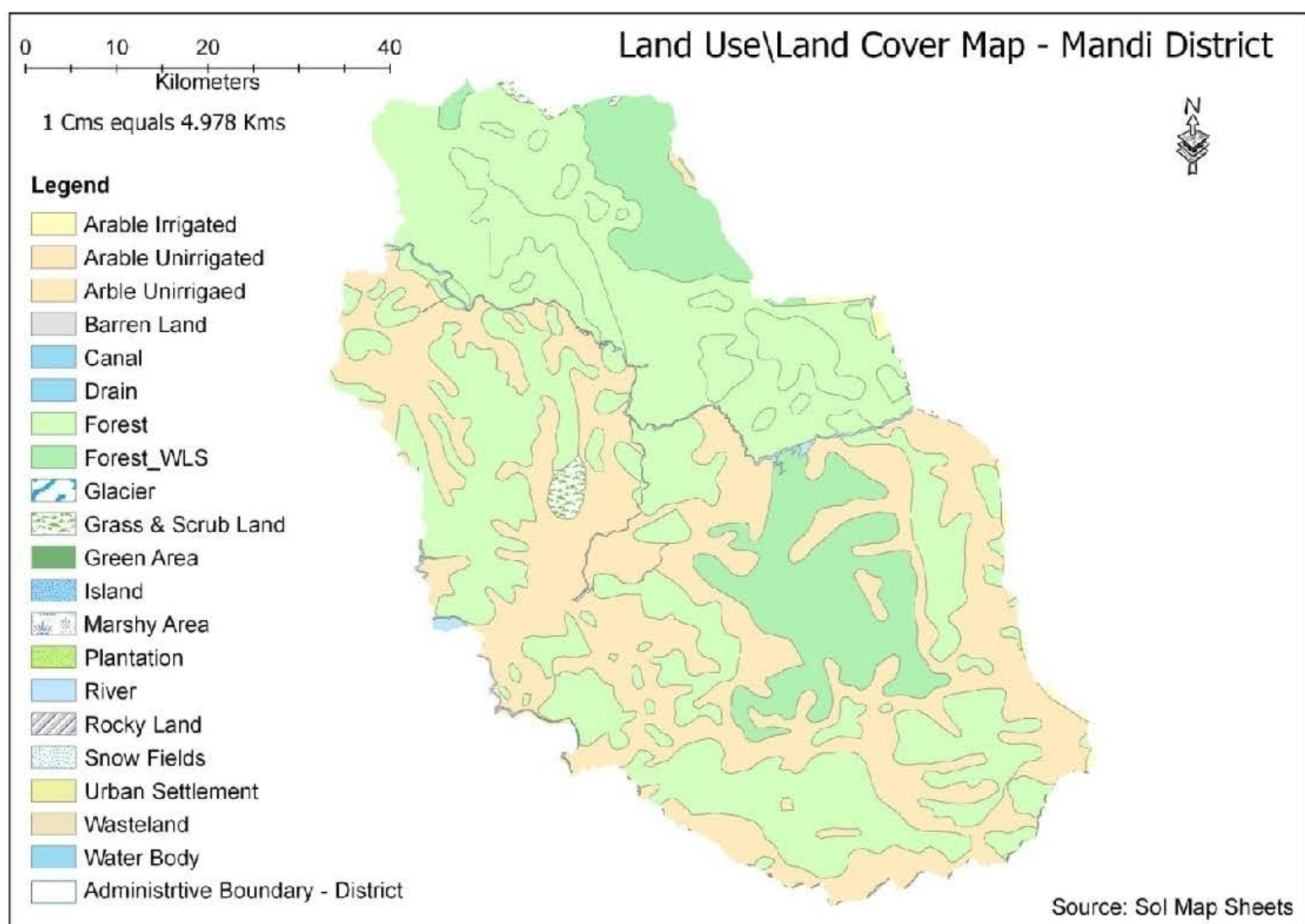
Mandi district is divided into 16 administrative units as Tehsil/Sub-Tehsil (area in descending order) as follows:

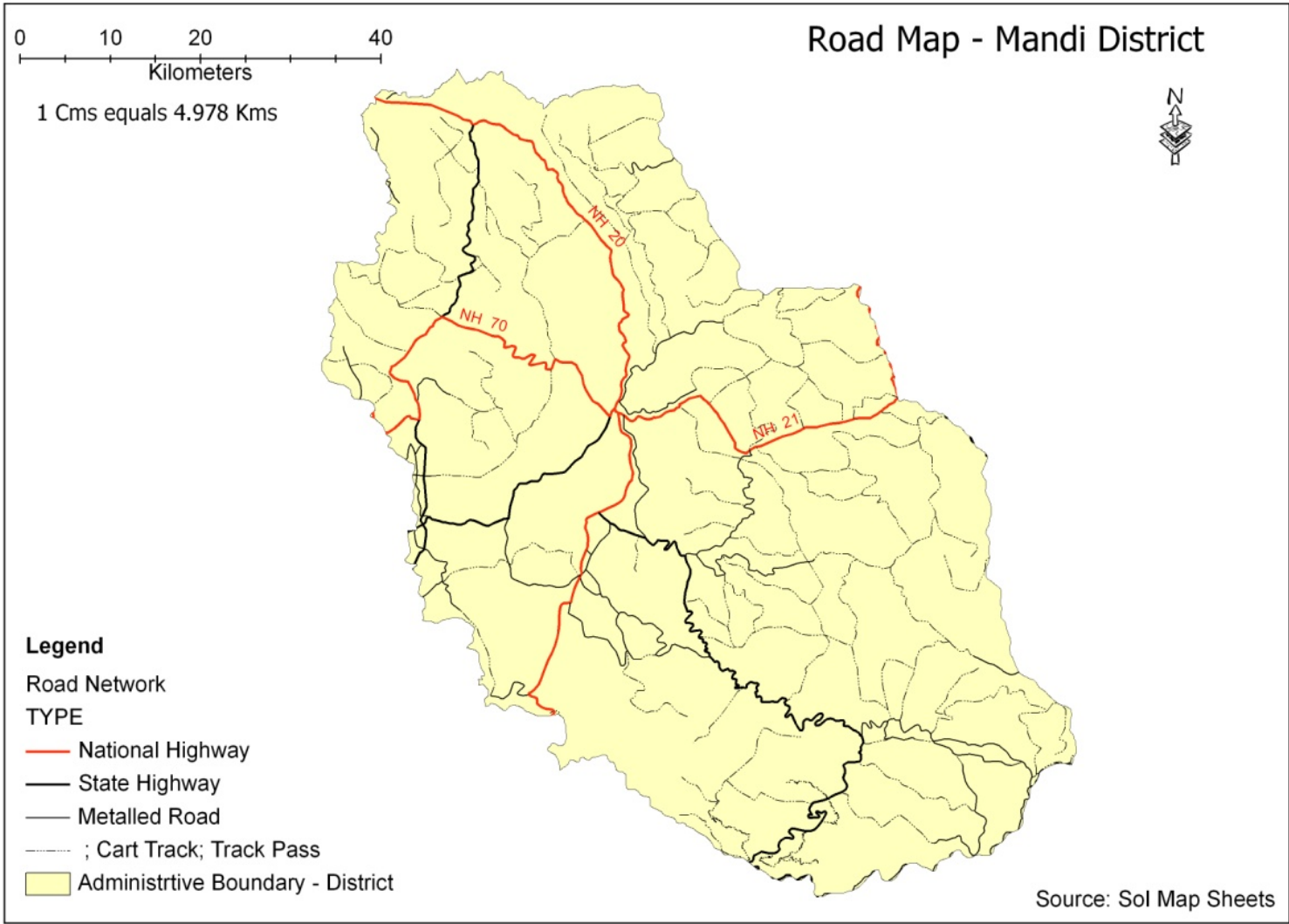


S. No.	Tehsil/Sub-Tehsil	Area (Sq.Km)
1	Mandi	583.8
2	Karsog	531.6
3	Padhar	413.8
4	Nihri	341.4
5	Thunag	324.7
6	Jogindernagar	260.1
7	Chachyot	247
8	Sundernagar	233.5
9	Sarkaghat	215.2
10	Balichowki	202.7
11	Aut	154.3
12	Dhrampur	119.1
13	Lad Bharol	93.2
14	Baldwara	92.4
15	Kotli	91.0
16	Sandhol	65.4

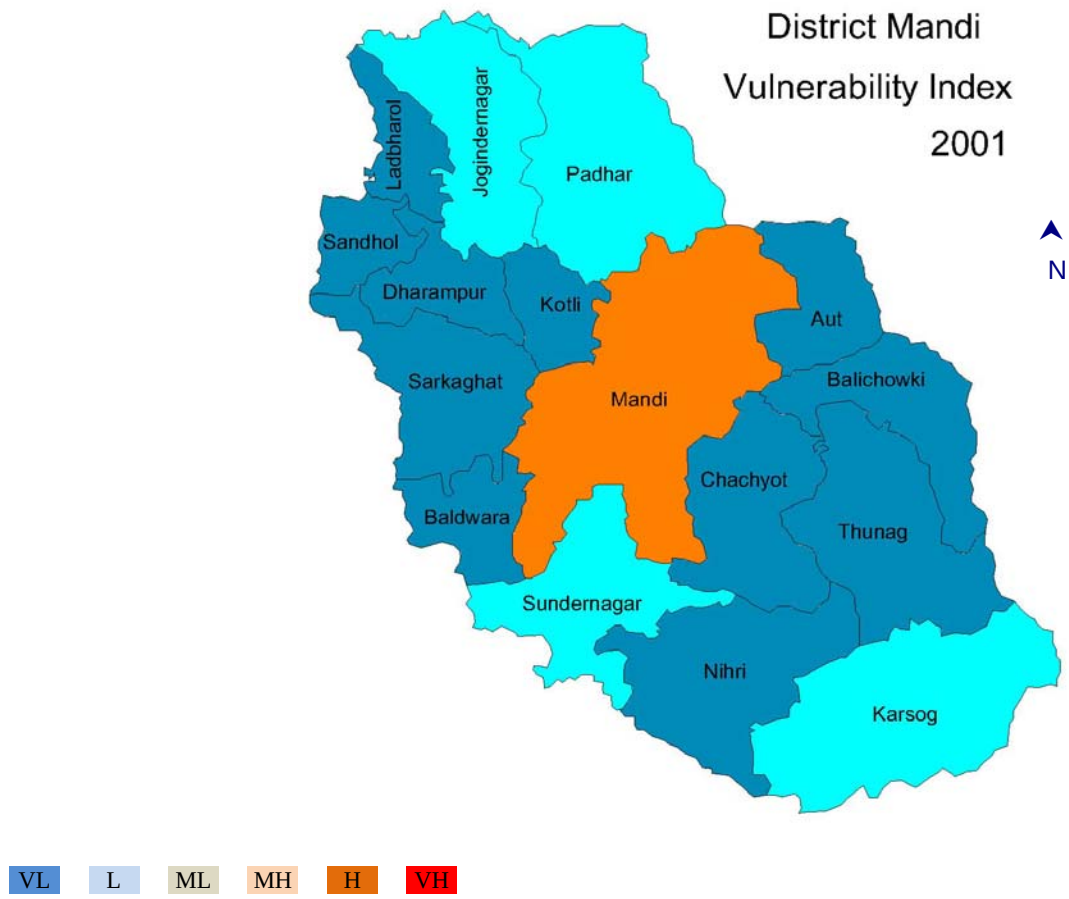


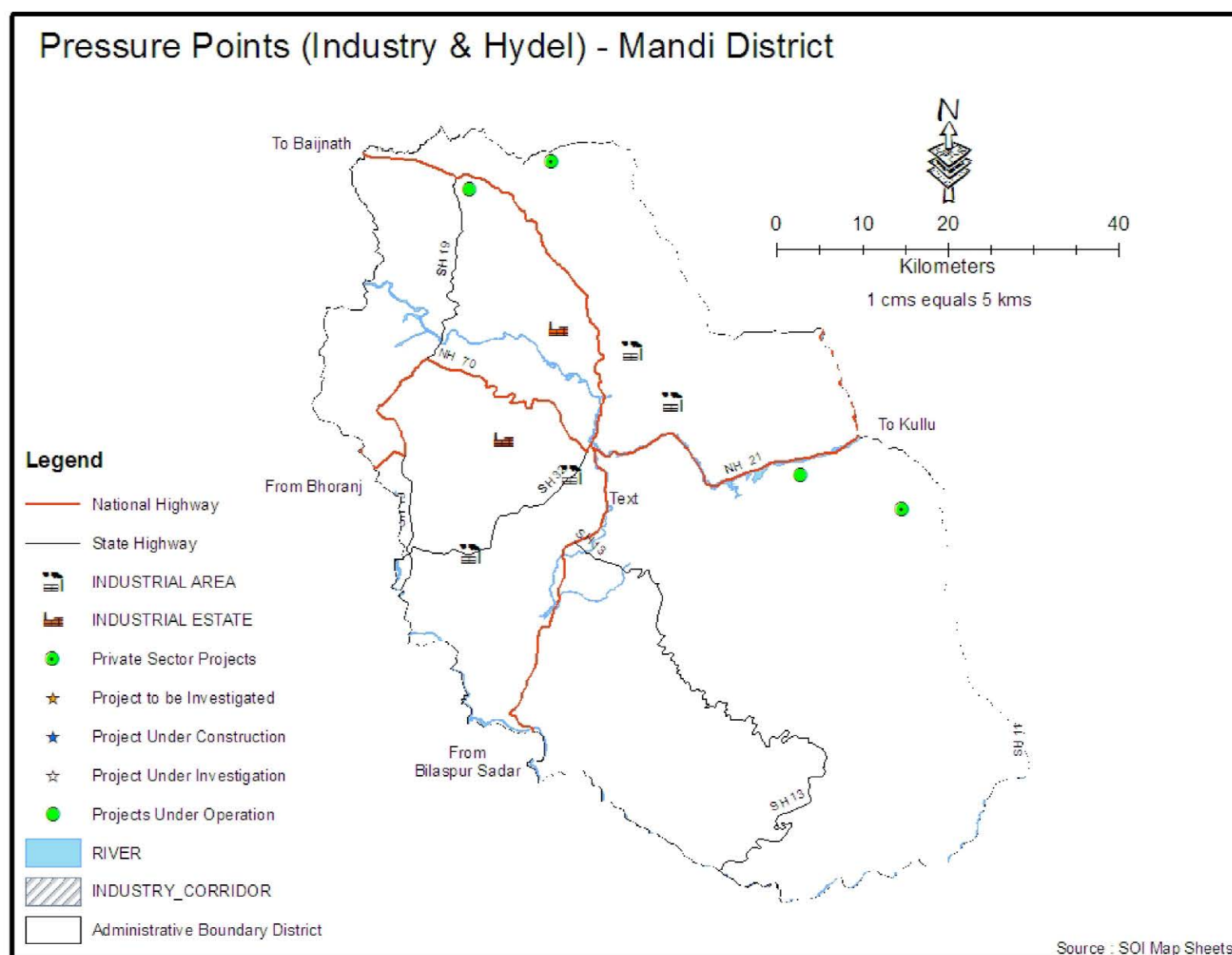
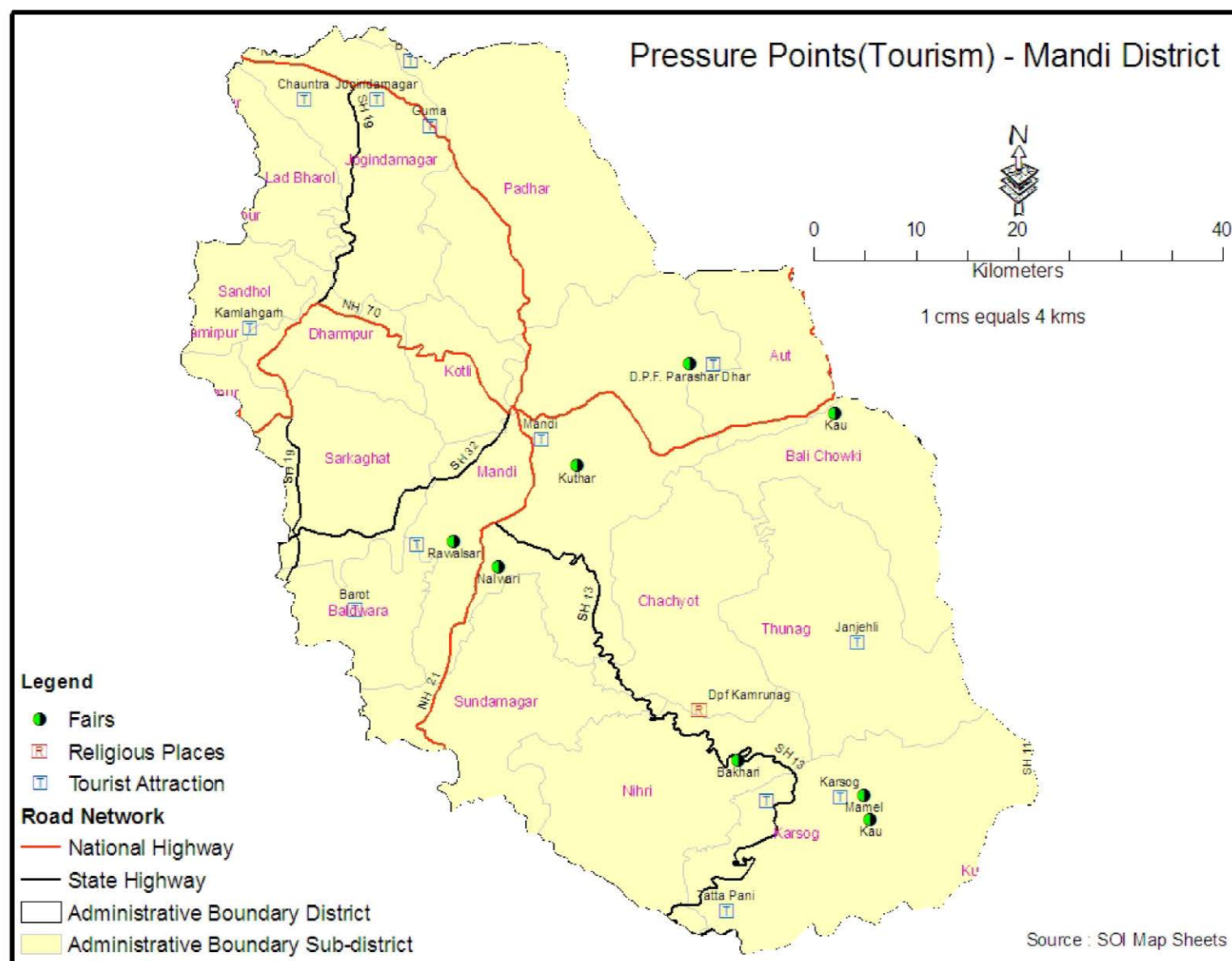






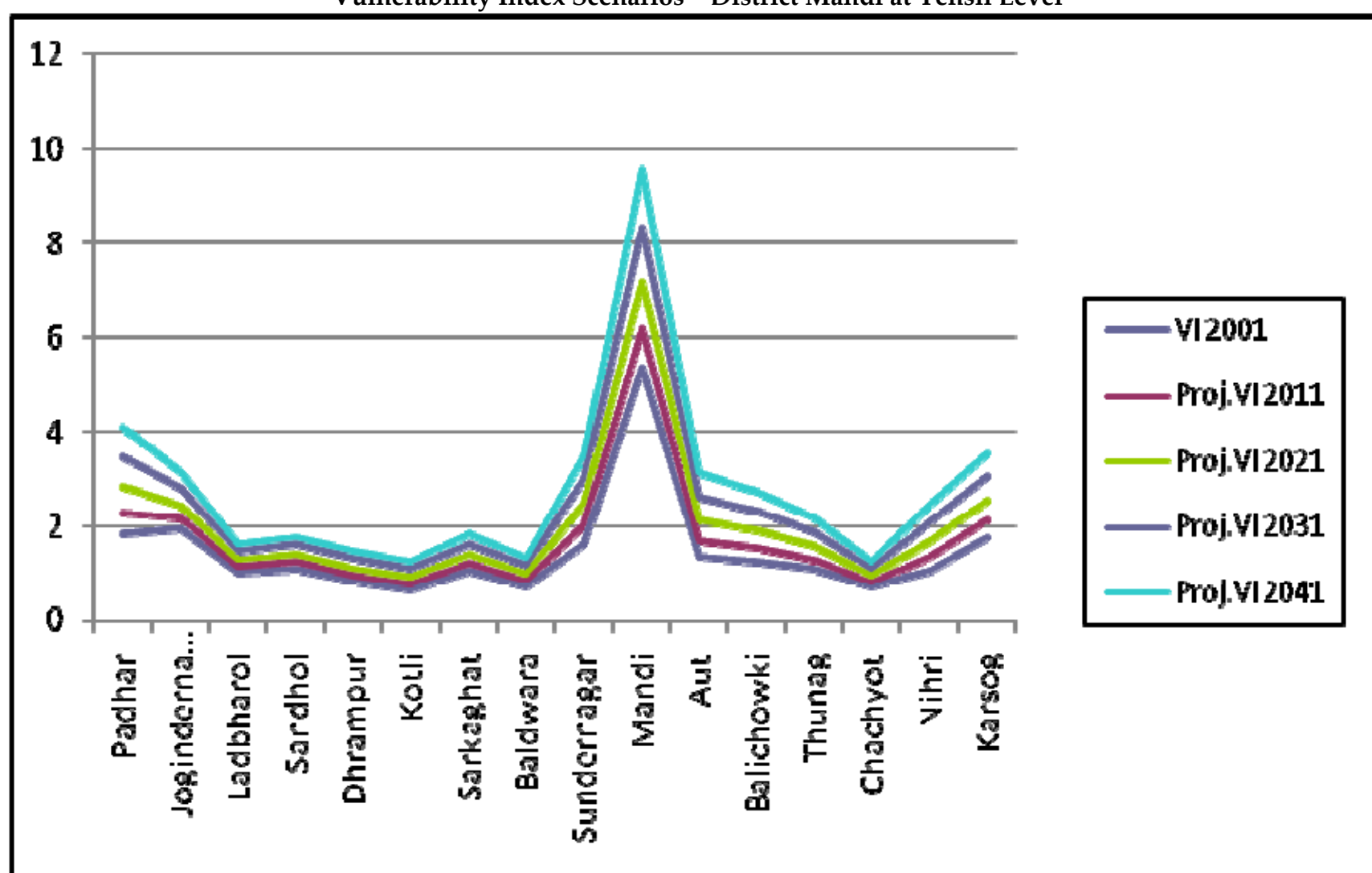
	Padhar	Jogindernagar	Ladbharol	Sandhol	Dharampur	Kotli	Sarkaghat	Baldwara	Sundernagar	Mandi	Aut	Balichowki	Thunag	Chachyot	Nihri	Karsog
VI	4491.85	4786.17	2505.91	2660.77	2092.09	1592.3	2565.11	1808.51	3924.63	13086.31	3312.00	3065.37	2652.21	1776.00	2605.64	4343.90
denominator = 57x43	2451															
Normalized VI	1.83	1.95	1.02	1.09	0.85	0.65	1.05	0.74	1.60	5.34	1.35	1.25	1.08	0.72	1.06	1.77



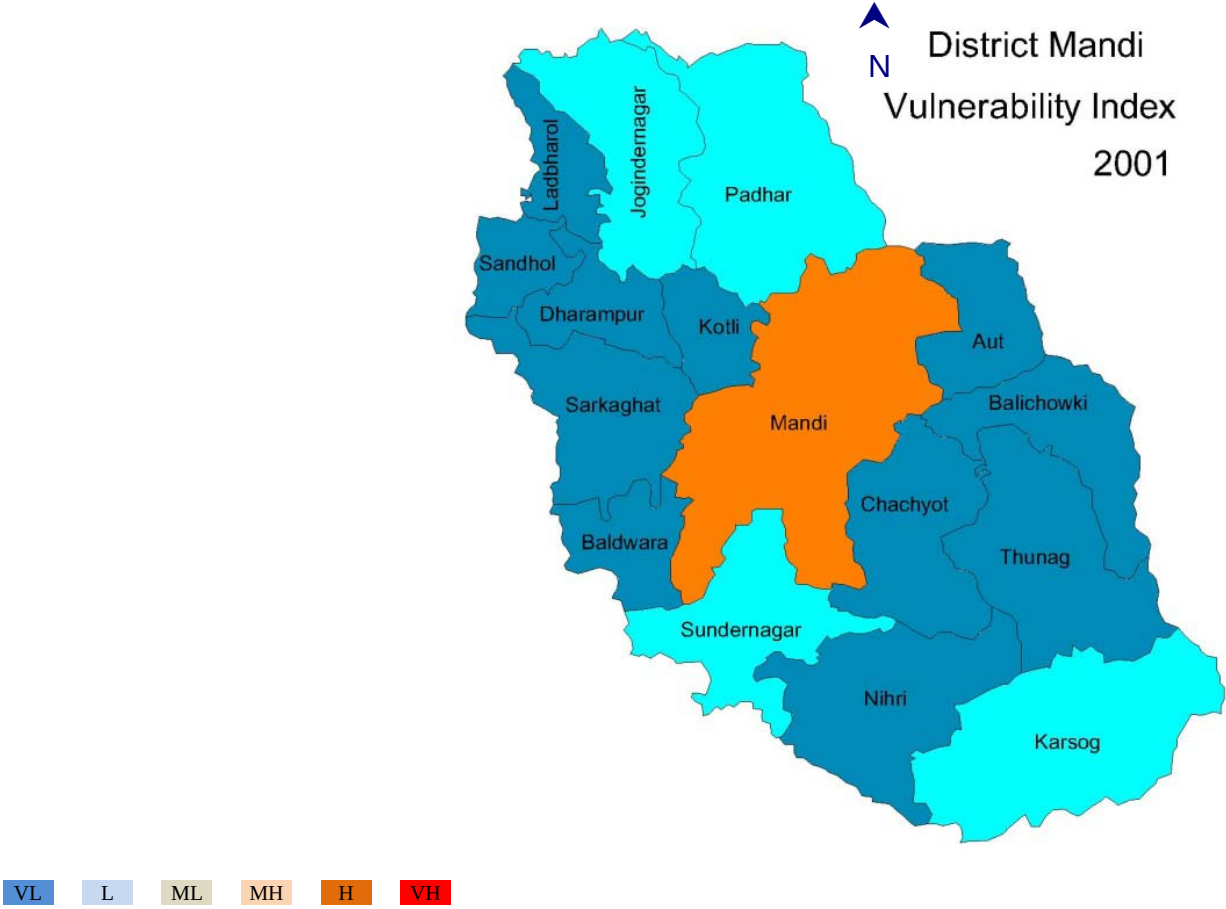


Tehsil	VI 2001	Proj.VI 2011	Proj.VI 2021	Proj.VI 2031	Proj.VI 2041
Padhar	1.83	2.30	2.84	3.44	4.09
Jogindernagar	1.95	2.17	2.45	2.78	3.15
Ladbharol	1.02	1.14	1.29	1.46	1.64
Sandhol	1.09	1.24	1.41	1.59	1.79
Dhrampur	0.85	0.97	1.11	1.28	1.47
Kotli	0.65	0.77	0.91	1.07	1.25
Sarkaghat	1.05	1.21	1.39	1.61	1.84
Baldwara	0.74	0.85	0.99	1.15	1.32
Sundernagar	1.6	2.02	2.47	2.96	3.48
Mandi	5.34	6.19	7.18	8.31	9.56
Aut	1.35	1.70	2.12	2.61	3.14
Balichowki	1.25	1.55	1.90	2.30	2.74
Thunag	1.08	1.31	1.57	1.86	2.18
Chachyot	0.72	0.82	0.94	1.09	1.25
Nihri	1.06	1.36	1.69	2.06	2.46
Karsog	1.77	2.13	2.55	3.03	3.56

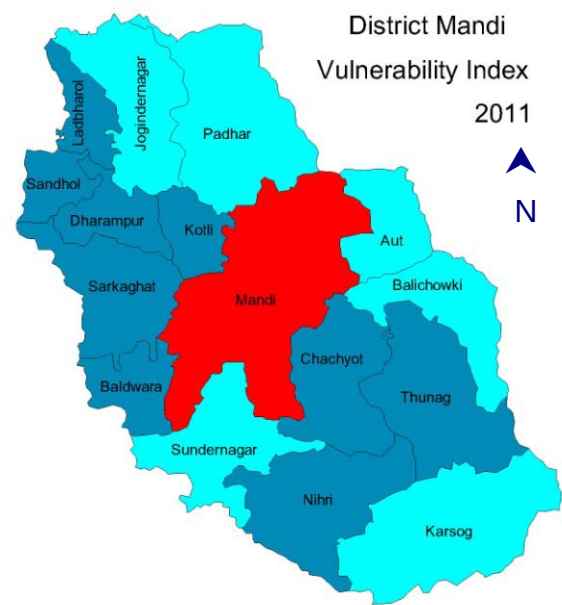
Vulnerability Index Scenarios – District Mandi at Tehsil Level



2001



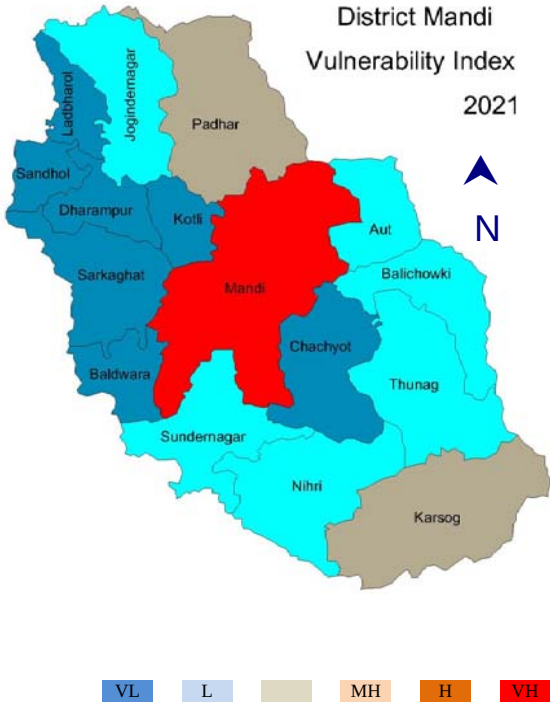
2011



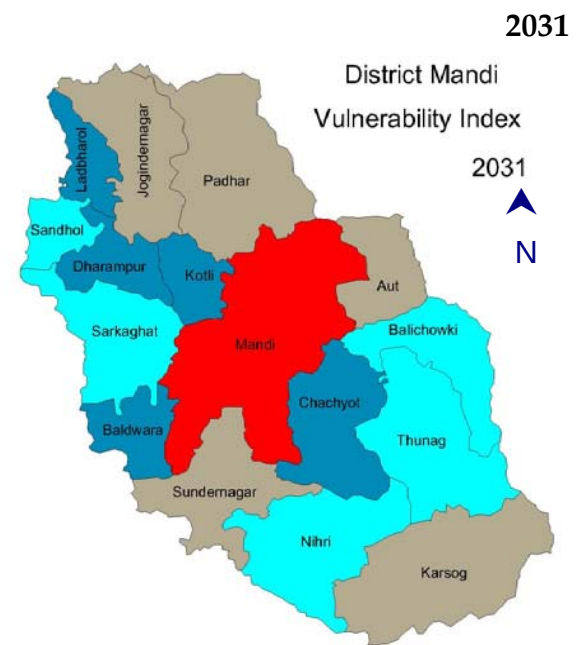
Mandi, which was in the high vulnerability segment moves to the very high and critical vulnerability segment. Aut and Balichowki, both initially in the very low vulnerability segment move up to the low vulnerability segment. All other Tehsils retain their low or very low vulnerability segments.

VL L ML MH H VH

2021



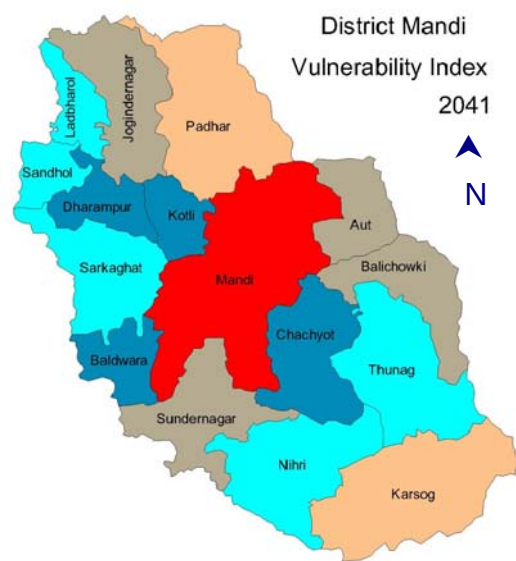
Mandi remains critical while Padhar and Karsog move from low vulnerability to moderately low vulnerability. Nihri and Thunag move to low vulnerability segment from the very low vulnerability segment.



Mandi retains its critical stage and so do Padhar and Karsog. Jogindernagar, Aut and Sundernagar move from low vulnerability to moderately low vulnerability segment. Sandhol and Sarkaghat move from very low vulnerability to low vulnerability.

VL L ML MH H VH

2041



Mandi retains critical. Padhar and Karsog move to moderately high vulnerability. Ladbharol moves from very low vulnerability to low vulnerability. Dharampur, Kotli, Baldwara and Chachyot remain in the very low vulnerability right throughout.

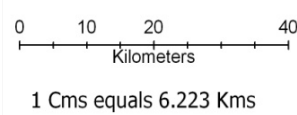
VL L ML MH H VH

Shimla

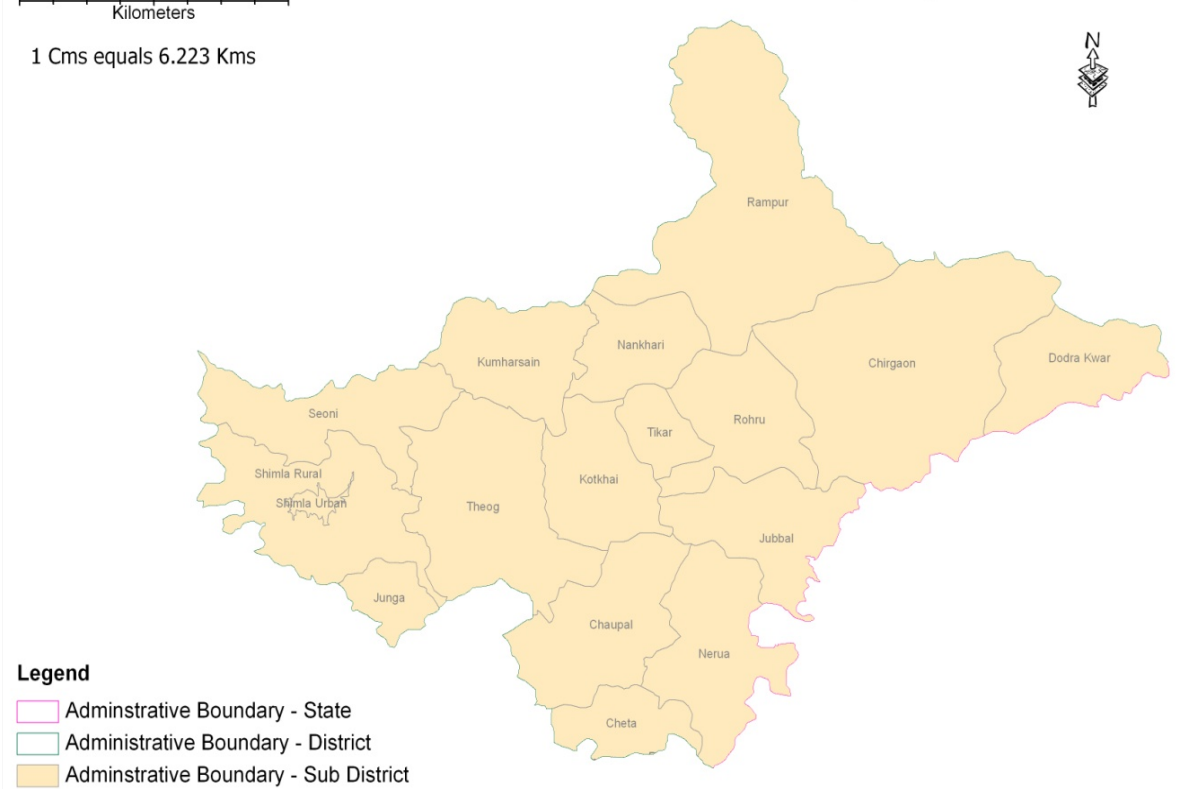
Location:

Shimla district forms a part of southern Himachal Pradesh. The district lies between the longitudes 77°0' and 78°19' east and latitudes 30°45' and 31°44' north and is bounded by Mandi and Kullu district in the north, Kinnaur in the east, the state of Uttaranchal and Sirmaur district in the south and by Solan district in the west. The shape of the district is somewhat rectangular with slight bulges on the western side intruding towards Solan district and on the northern side towards Kullu district. The district has an area of 5,131 Sq. kms. out of total area of 55,673 Sq. kms. of Himachal Pradesh according to the Surveyor General of India.

Entire district is divided into 17 administrative units as Tehsil/sub-Tehsil (area in descending order as follows):

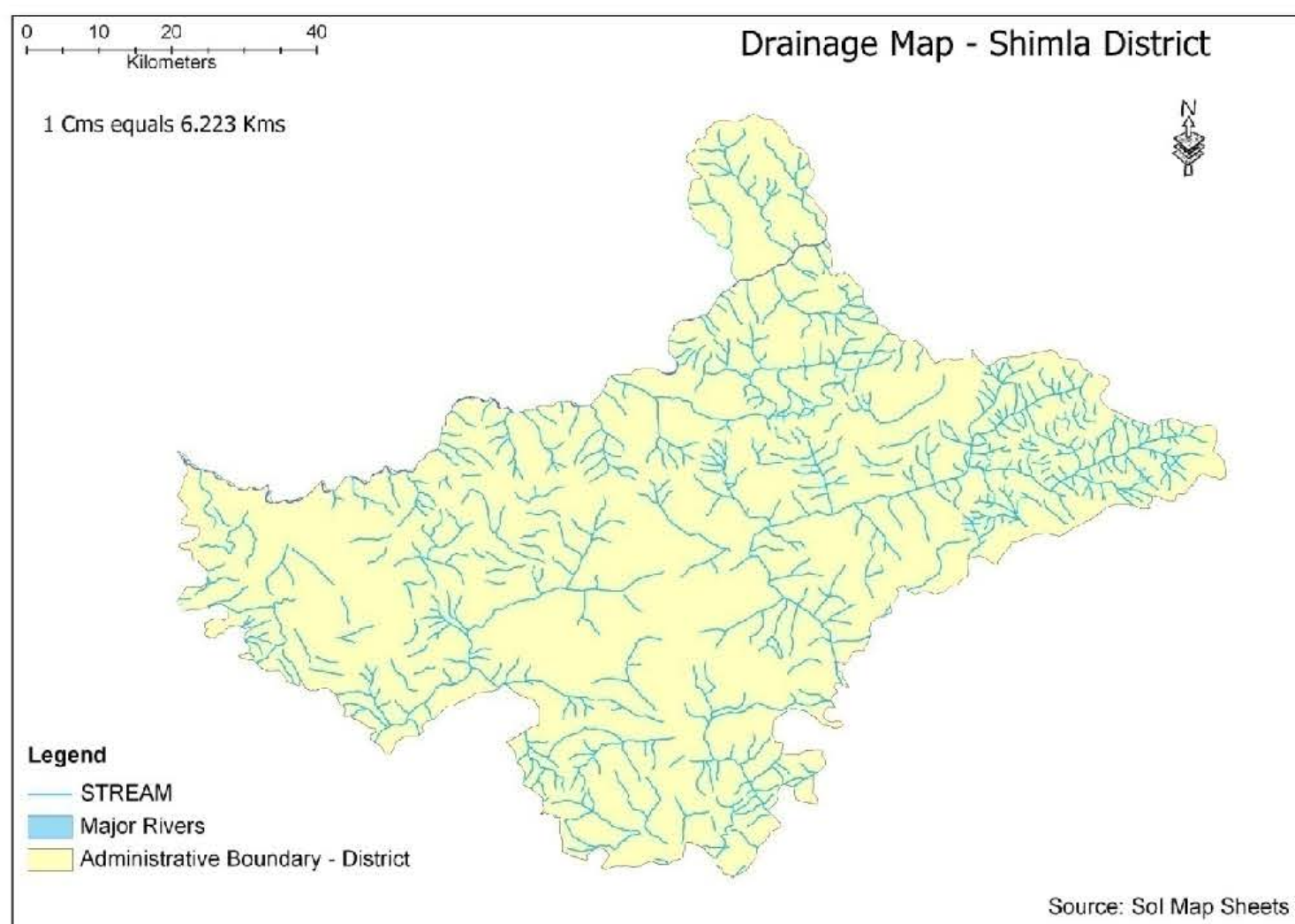


Administrative Boundary Map - Shimla District



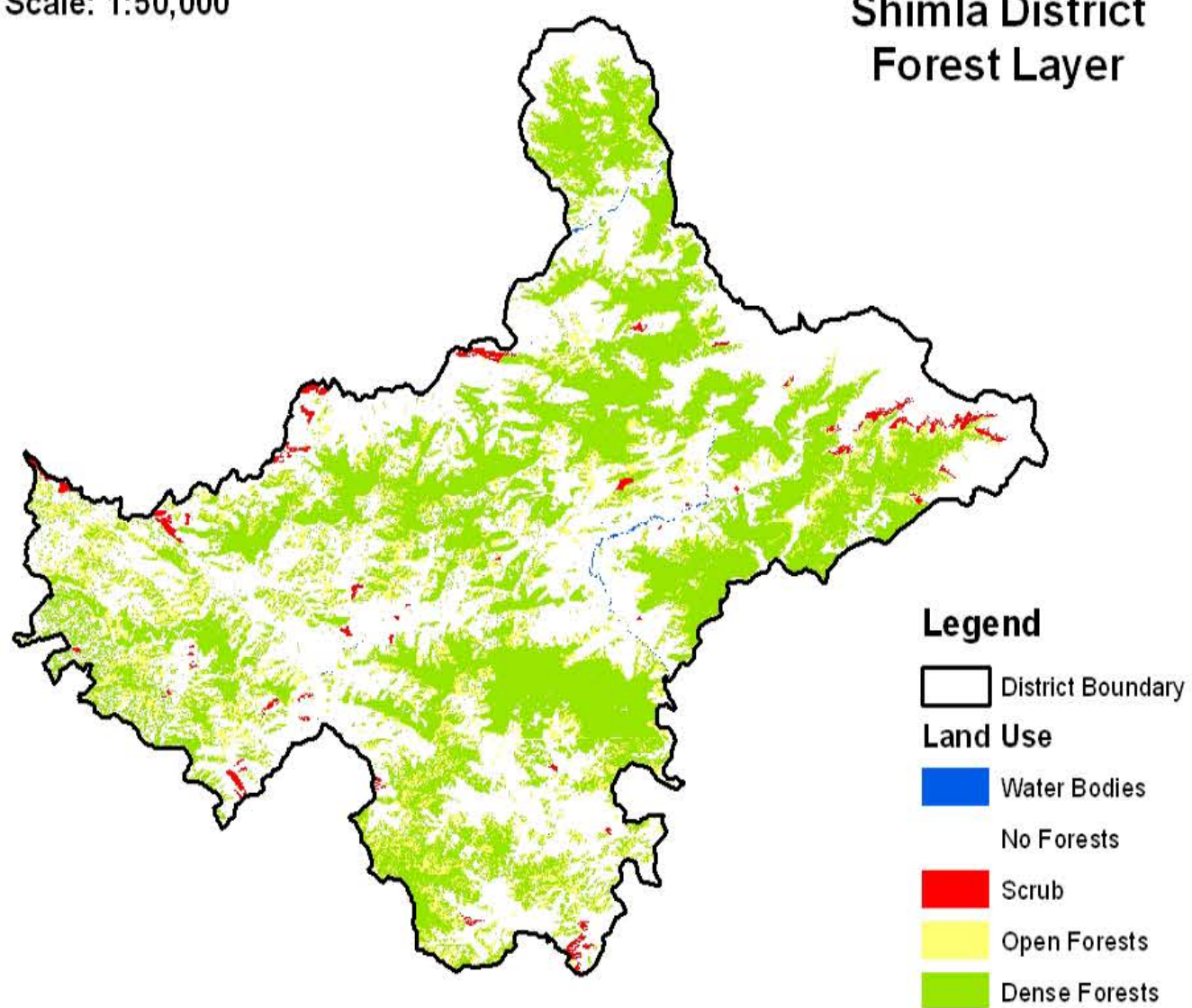
Source: Sol Map Sheets

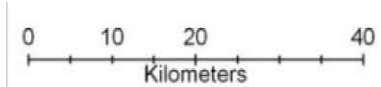
S.No.	Tehsil/Sub Tehsil	Area (Sq.Km)
1	Rampur	865.40
2	Chirgaon	771.00
3	Theog	471.35
4	Dodrakwar	367.00
5	Shimla (Rural)	353.90
6	Nerua	310.00
7	Jubbai	298.00
8	Seoni	243.70
9	Kumaharsain	238.10
10	Rohru	225.30
11	Kothkai	203.20
12	Chaupal	178.30
13	Nankhari	157.20
14	Junga	112.80
15	Cheta	96.83
16	Tikar	78.50
17	Shimla (Urban)	28.50



Scale: 1:50,000

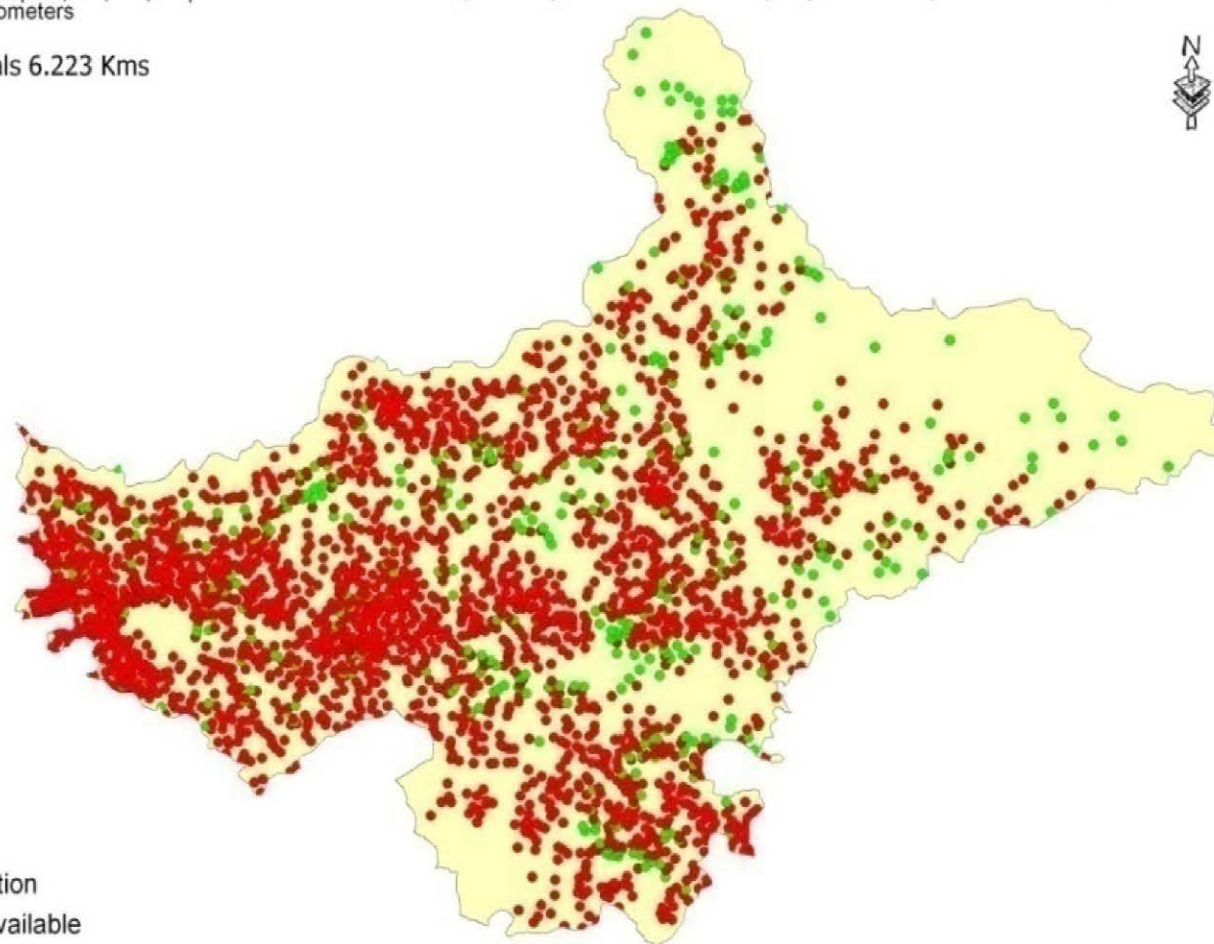
Shimla District Forest Layer





1 Cms equals 6.223 Kms

Quality Of Life Map (Health) - Shimla District



Legend

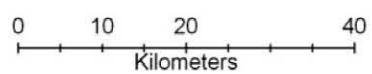
Village Location

● PHC Available

● Within 3 Kms

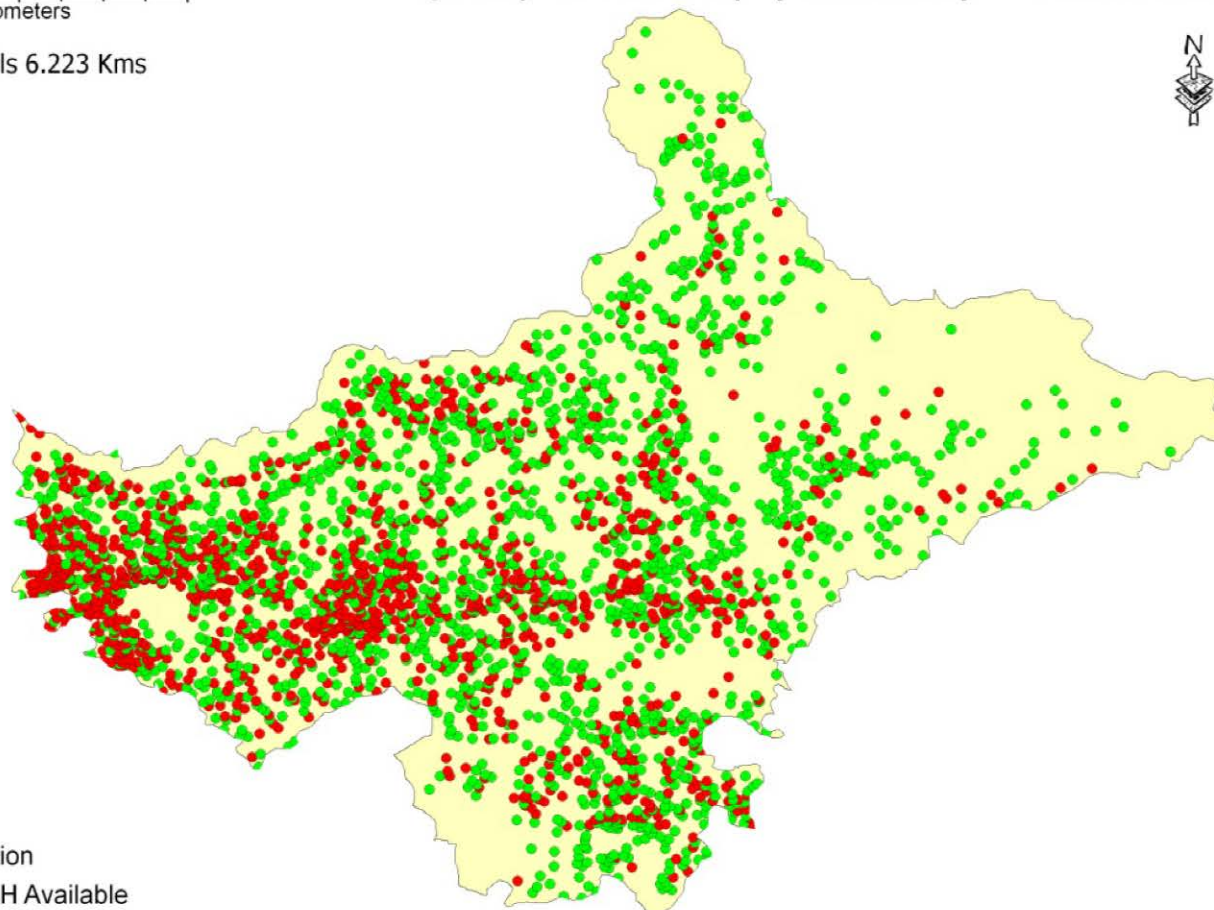
■ Administrative Boundary - District

Source: Sol Map Sheets



1 Cms equals 6.223 Kms

Quality Of Life Map (Education) - Shimla District



Legend

Village Location

● PRI SCH Available

● Within 3 Kms

■ Administrative Boundary - District

Source: Sol Map Sheets

0 10 20 40
Kilometers

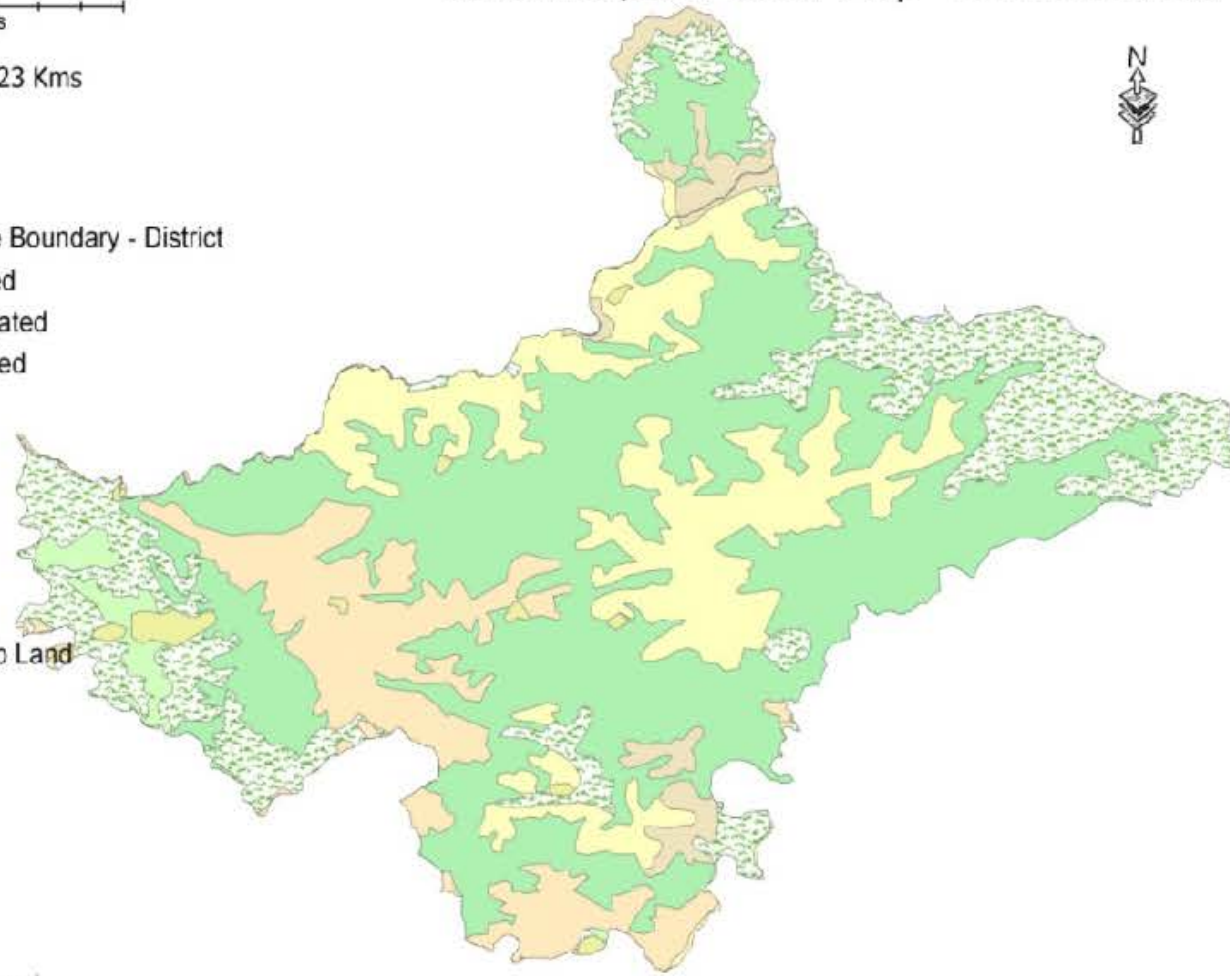
1 Cms equals 6.223 Kms

Land Use\Land Cover Map - Shimla District



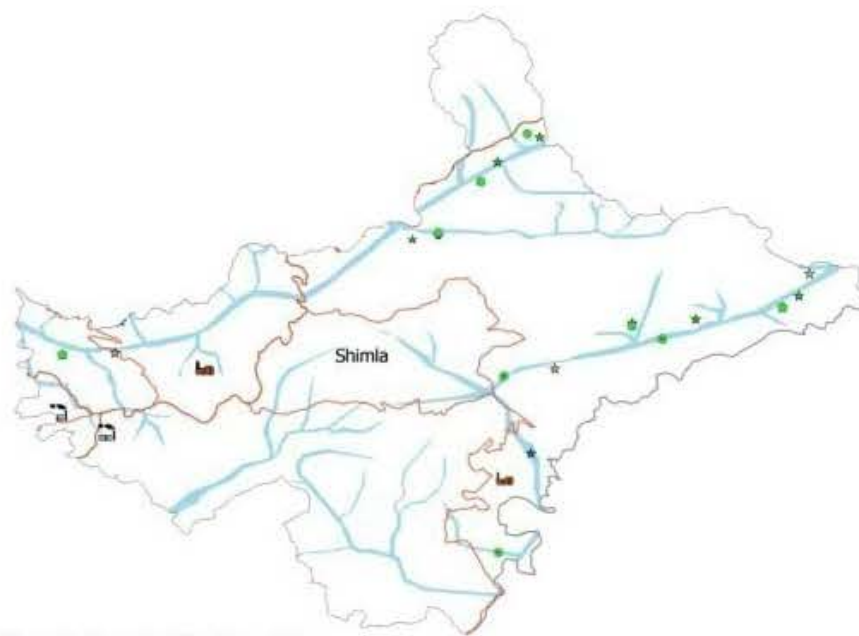
Legend

- Administrative Boundary - District
- Arable Irrigated
- Arable Unirrigated
- Arble Unirrigaed
- Barren Land
- Canal
- Drain
- Forest
- Forest_WLS
- Glacier
- Grass & Scrub Land
- Green Area
- Island
- Marshy Area
- Plantation
- River
- Rocky Land
- Snow Fields
- Urban Settlement
- Wasteland
- Water Body



Source: Sol Map Sheets

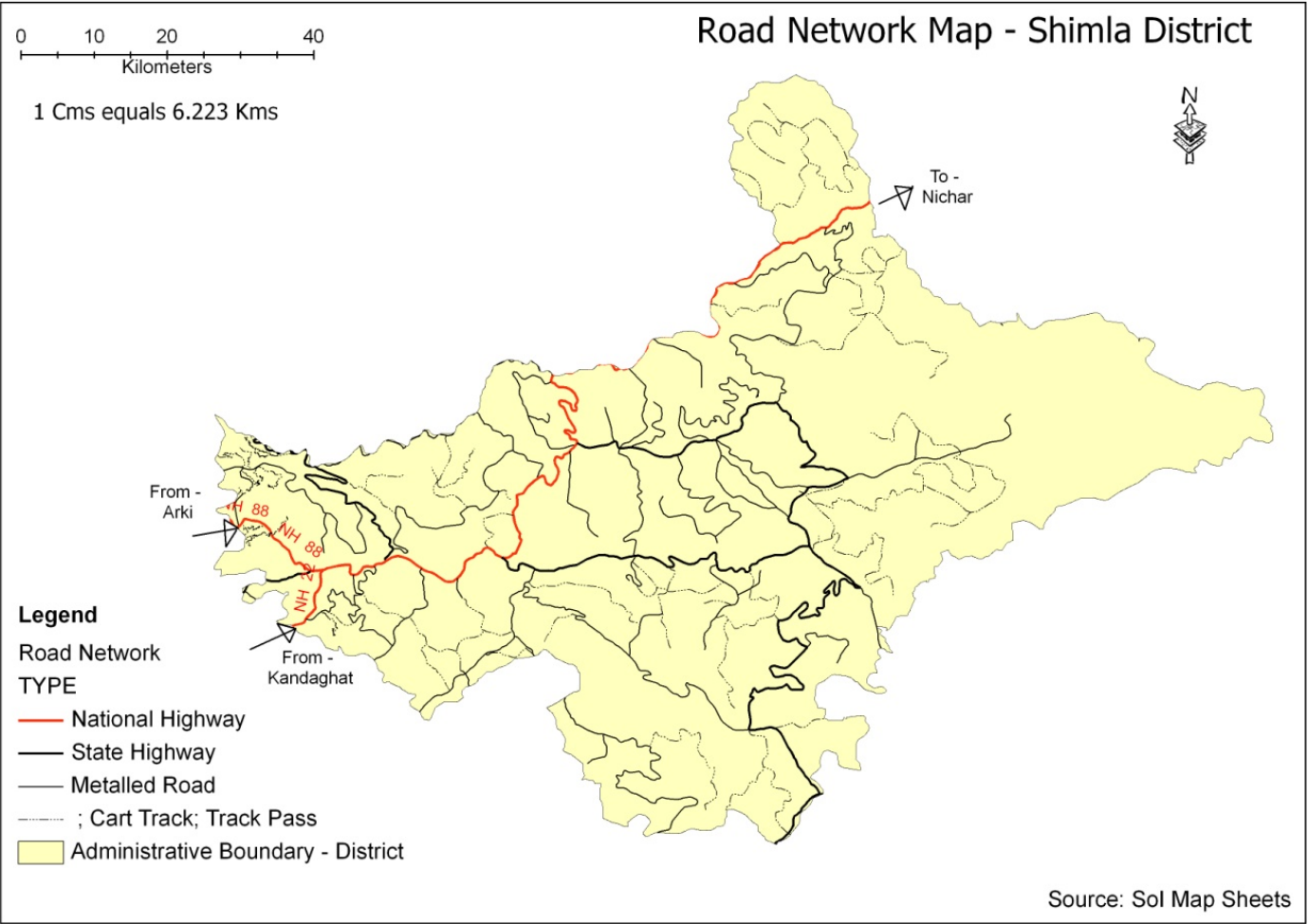
Major Investment Locations - Shimla District



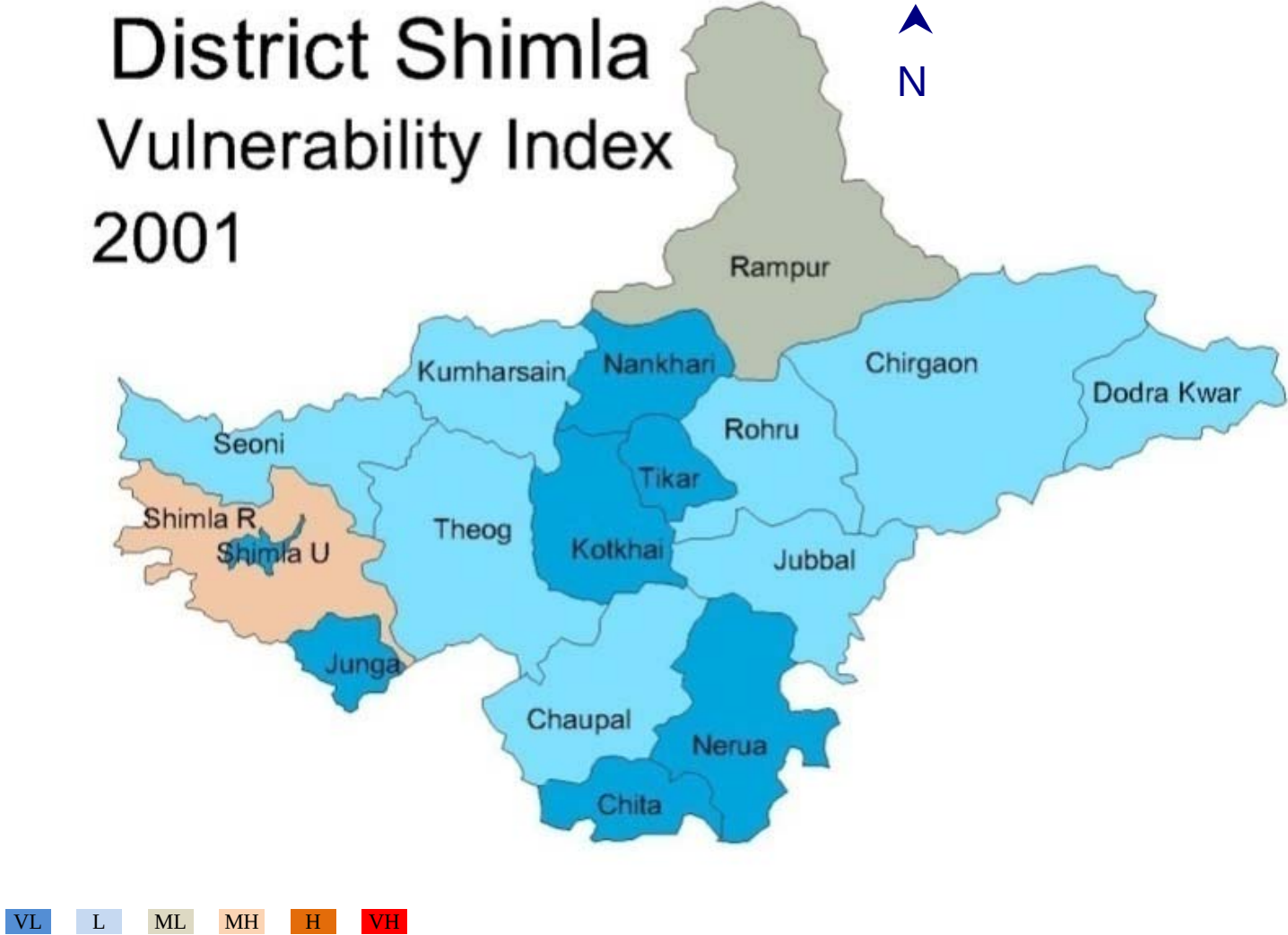
- Projects Under Operation - Hydel
- Project Under Investigation - Hydel
- Project Under Construction - Hydel
- Project to be Investigated - Hydel
- Private Sector Projects
- Administrative Boundary - District
- Administrative Boundary - State
- Rivers
- INDUSTRIAL AREA
- INDUSTRIAL ESTATE
- POWER HOUSE

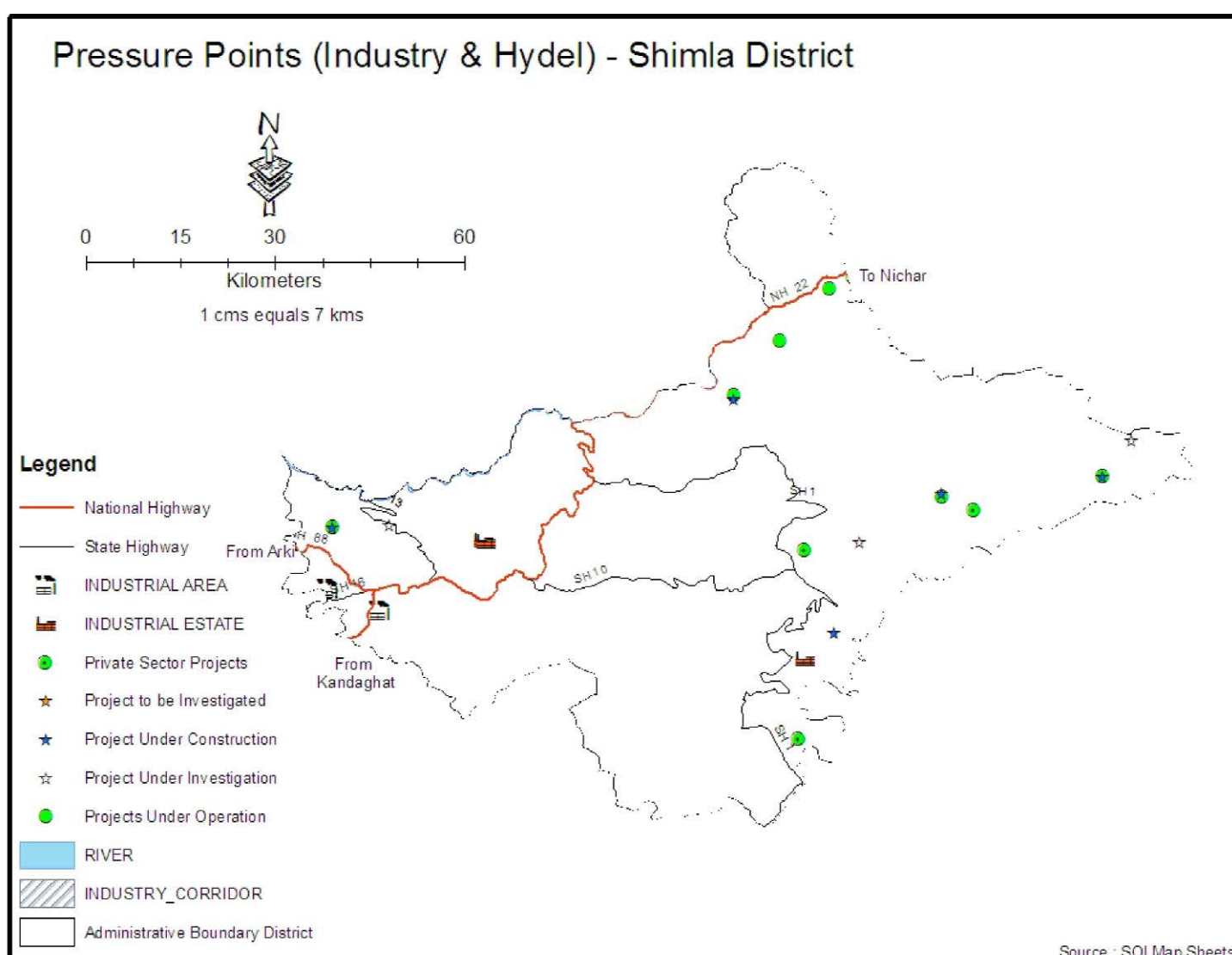
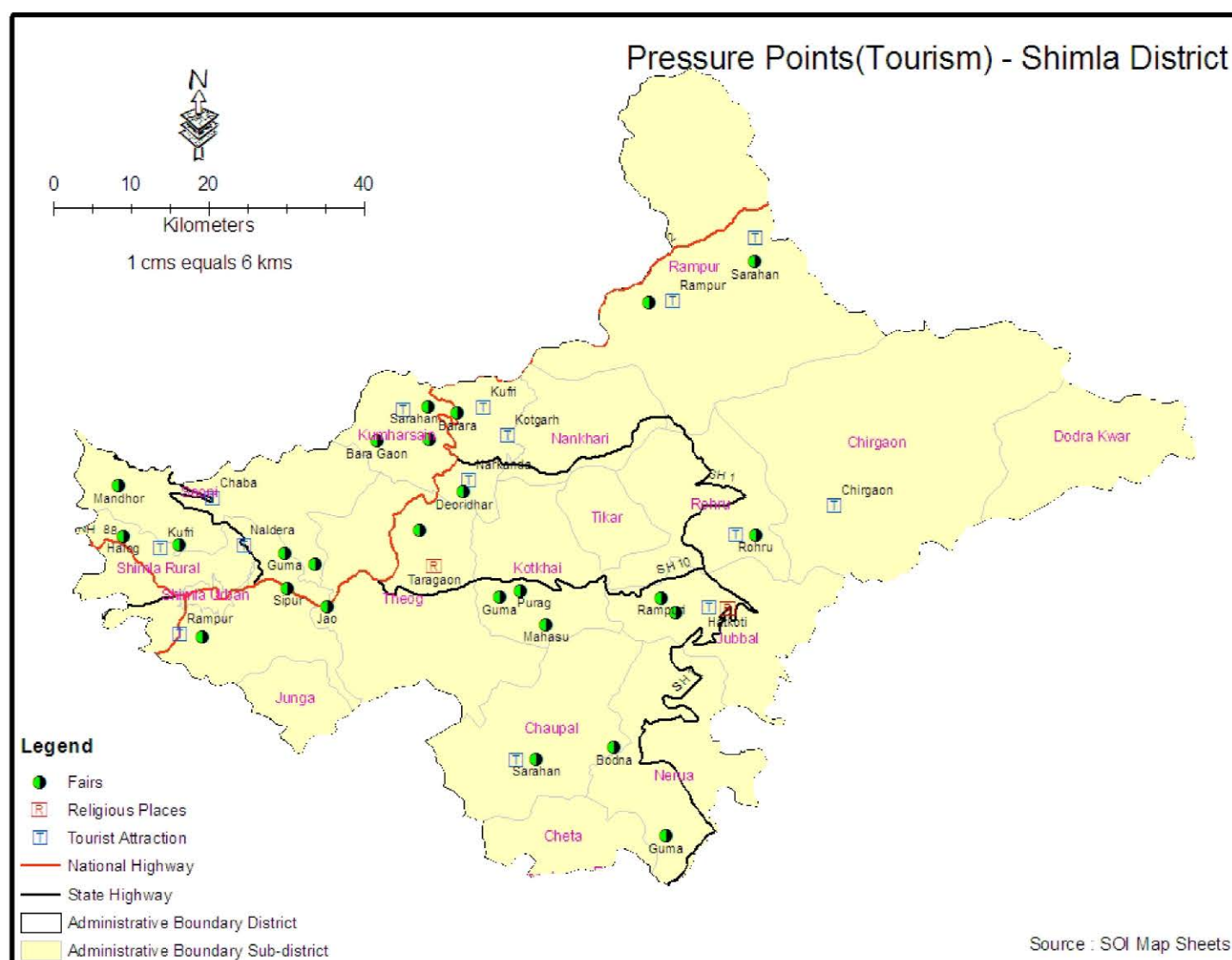
0 3 6 12 18 24
kms





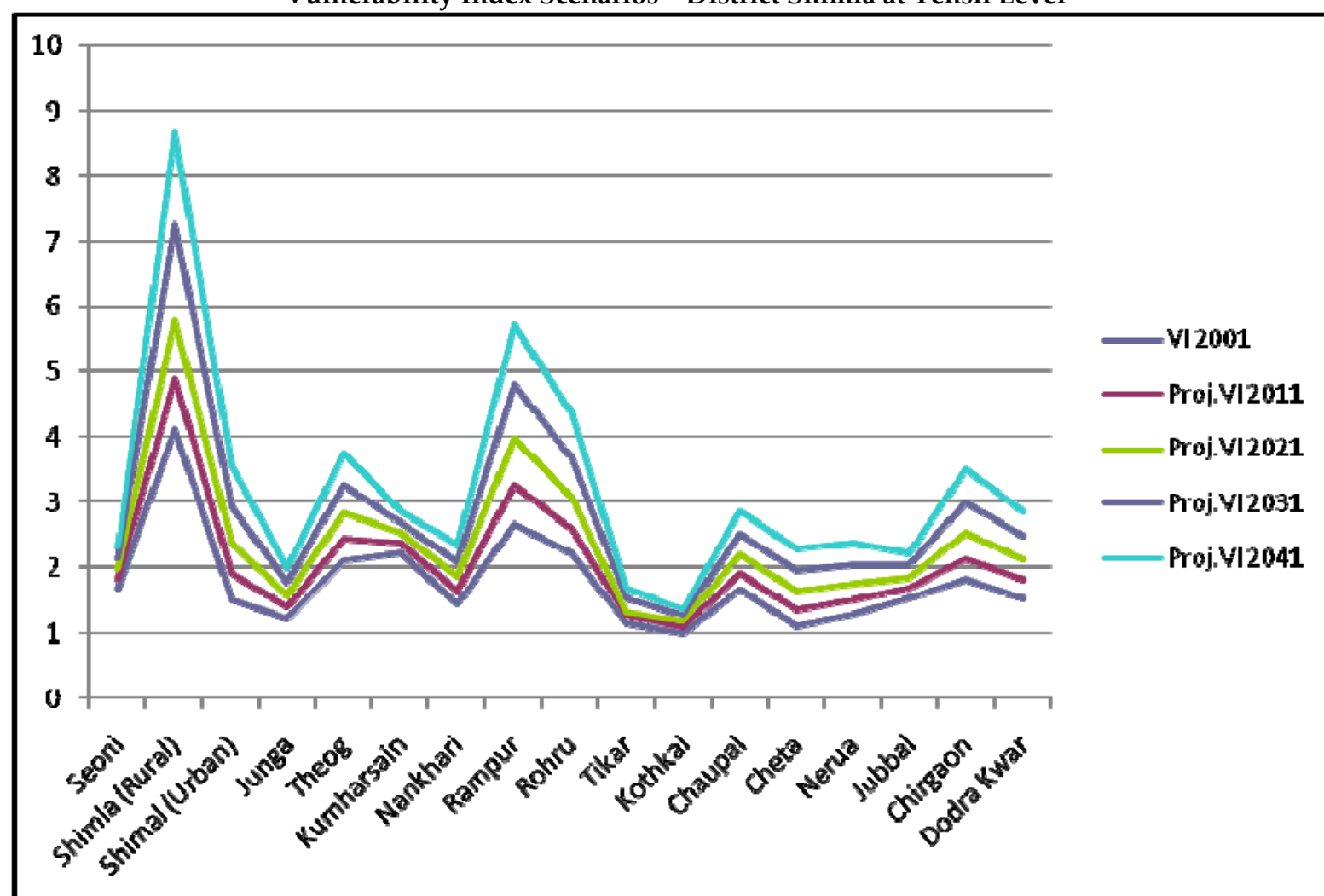
	Seoni	Shimla (Rural)	Shimla (Urban)	Junga	Theog	Kumharsain	Nankhari	Rampur	Rohru	Tikar	Kotkhai	Chaupal	Cheta	Nerua	Jubbal	Chirgaon	Dodra Kwar
VI	4132.91	10092.86	3677.33	2988.61	5180.18	5436.21	3528.61	6543.12	5426.83	2818.01	2424.43	4087.47	2718.14	3118.20	3713.74	4432.65	3743.27
denominator r = 57x43	2451																
Normalized VI	1.69	4.12	1.50	1.22	2.11	2.22	1.44	2.67	2.21	1.15	0.99	1.67	1.11	1.27	1.52	1.81	1.53





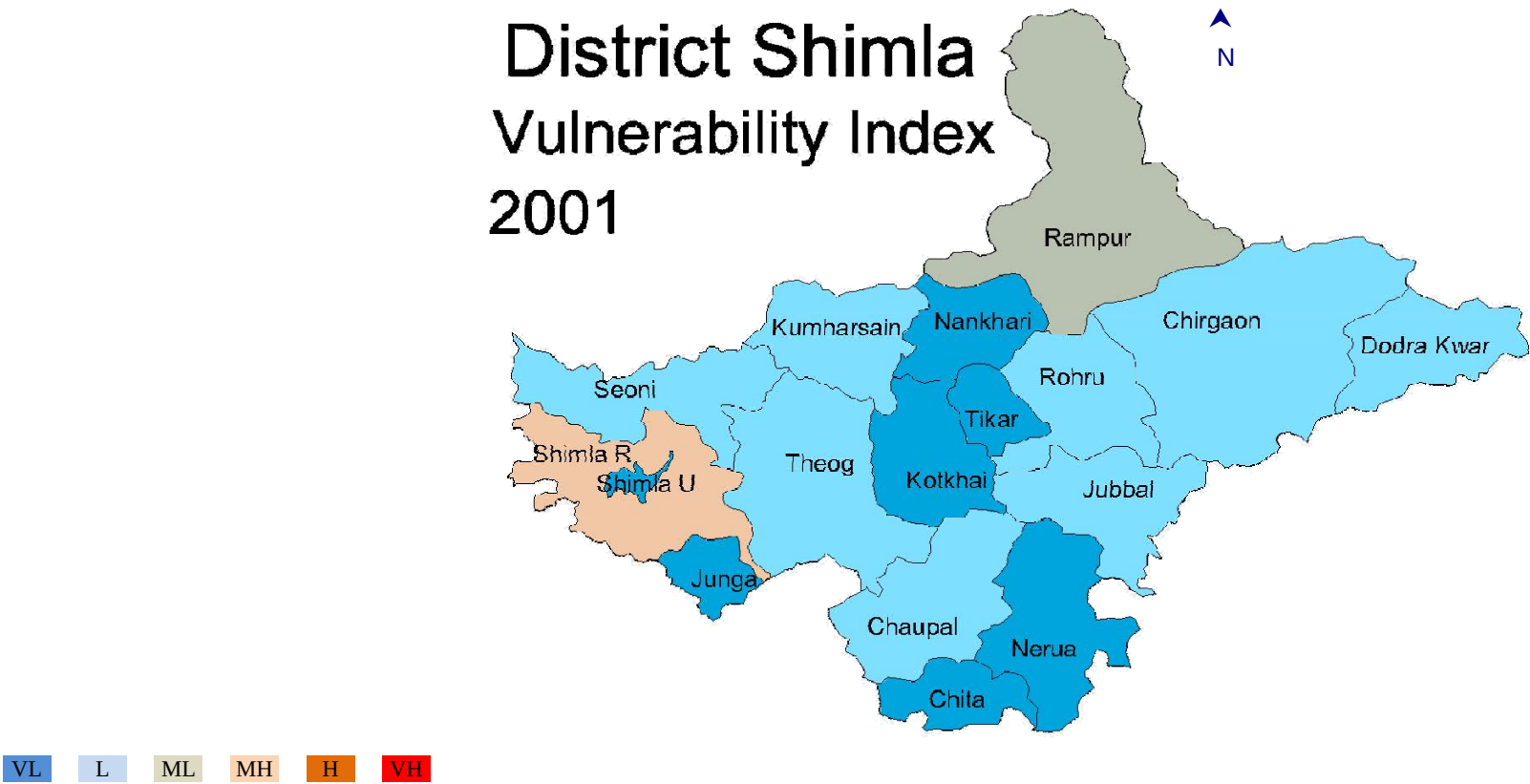
Tehsil	VI 2001	Proj.VI 2011	Proj.VI 2021	Proj.VI 2031	Proj.VI 2041
Seoni	1.69	1.82	1.96	2.12	2.29
Shimla (Rural)	4.12	4.90	5.78	7.26	8.66
Shimla (Urban)	1.5	1.90	2.37	2.92	3.55
Junga	1.22	1.38	1.57	1.77	2.00
Theog	2.11	2.44	2.83	3.27	3.76
Kumharsain	2.22	2.37	2.52	2.69	2.87
Nankhari	1.44	1.63	1.84	2.08	2.34
Rampur	2.67	3.26	3.98	4.80	5.71
Rohru	2.21	2.59	3.08	3.68	4.39
Tikar	1.15	1.25	1.28	1.51	1.67
Kothkai	0.99	1.07	1.16	1.25	1.35
Chaupal	1.67	1.91	2.18	2.50	2.85
Cheta	1.11	1.34	1.62	1.93	2.29
Nerua	1.27	1.49	1.74	2.04	2.36
Jubbal	1.52	1.67	1.84	2.02	2.22
Chirgaon	1.81	2.13	2.53	2.99	3.50
Dodra Kwar	1.53	1.82	2.13	2.48	2.86

Vulnerability Index Scenarios – District Shimla at Tehsil Level

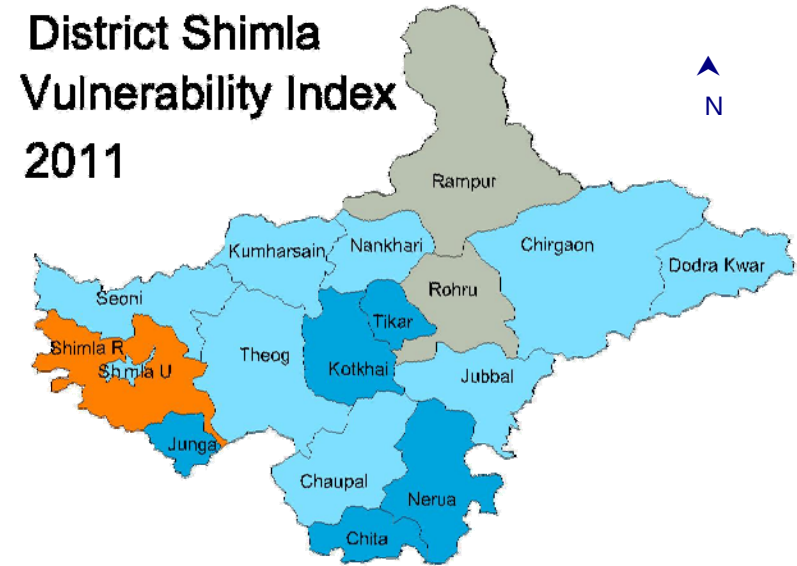


2001

District Shimla Vulnerability Index 2001



District Shimla Vulnerability Index 2011

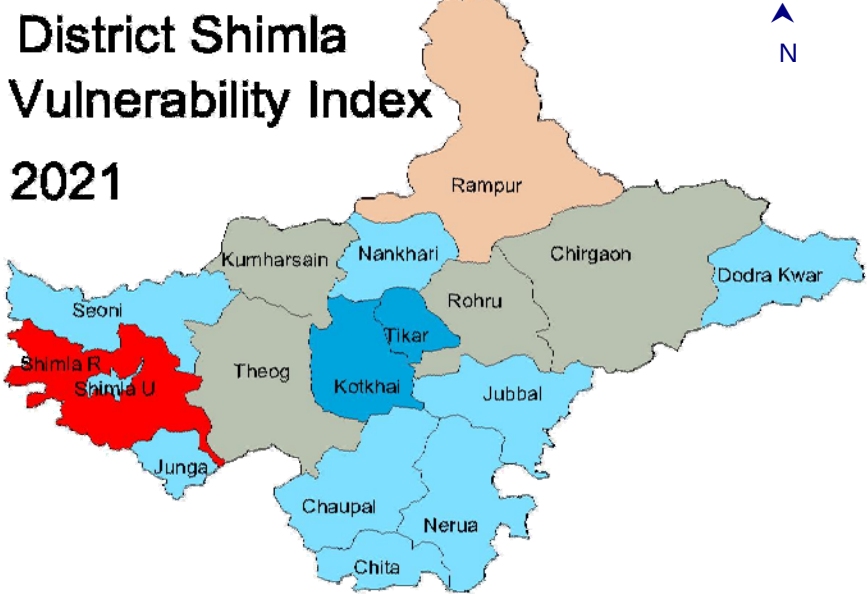


As can be seen, Shimla Rural have moved from the moderately high vulnerability segment to high vulnerability segment. Rampur retains its moderately low vulnerability segment and Rohru joins it. Shimla Urban, Nankhari and Jubbal move from very low vulnerability segment to low vulnerability segment while Seoni, Theog, Kumharsain, Dodra Kwar and Chirgaon retain their low vulnerability segment. Tikar, Kothkai, Nerua, Cheta and Junga remain in the very low vulnerability segment.



2021

District Shimla Vulnerability Index 2021

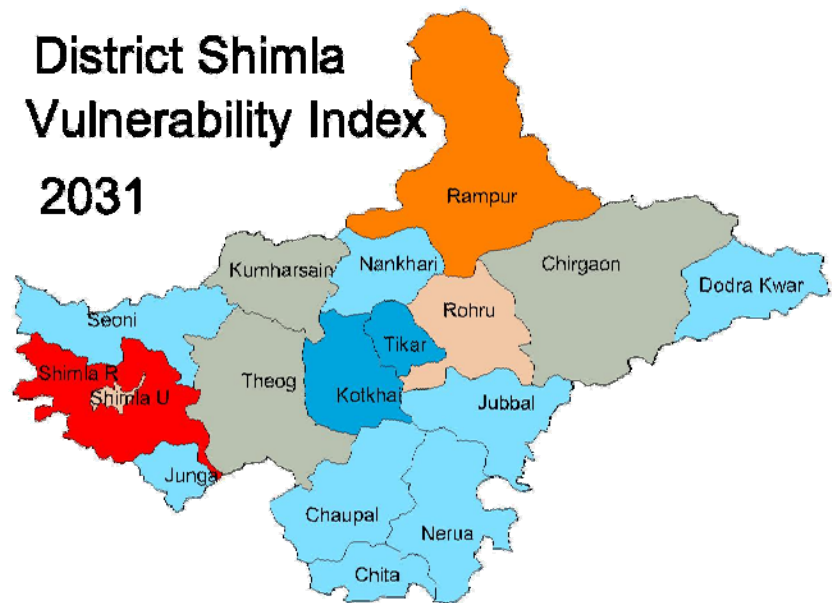


While Shimla Rural gets critical, Rampur too moves to moderately high vulnerability segment. Rohru retains its moderately low vulnerability segment and is joined by Theog, Kumharsain and Chirgaon. Tikar and Kothkai remain in the very low vulnerability segment while Seoni, Shimla Urban, Nankhari, Chaupal and Dodra Kwar are joined by Junga, Cheta, Nerua and Jubbal in the low vulnerability segment.



2031

District Shimla Vulnerability Index 2031

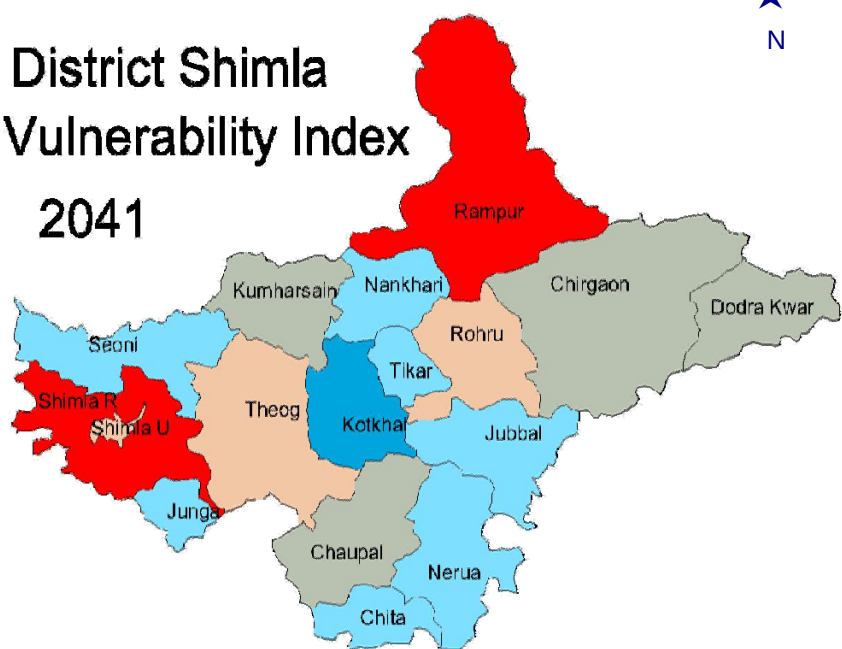


While Shimla Rural remains critical, Rampur too moves to the high vulnerability segment. Shimla Urban moves to the moderately high vulnerability segment. Rohru moves to moderately high vulnerability segment while Theog, Kumharsain and Chirgaon retain their moderately low vulnerability segment. Tikar and Kothkai remain in the very low vulnerability segment while Seoni, Nankhari, Chaupal, Dodra Kwar, Junga, Cheta, Nerua and Jubbal remain in the low vulnerability segment.

VL L ML MH H VH

2041

District Shimla Vulnerability Index 2041



While Shimla Rural remains critical, Rampur joins it in the critical segment. Shimla Urban moves to the high vulnerability segment. Rohru and Theog too move to high vulnerability segment while Kumharsain and Chirgaon retain their moderately low vulnerability segment and are joined by Chaupal and Dodra Kwar. Kothkai remain in the very low vulnerability segment while Seoni, Nankhari, Junga, Cheta, Nerua and Jubbal remain in the low vulnerability segment and are joined by Tikar in this segment

VL L ML MH H VH

Sirmaur

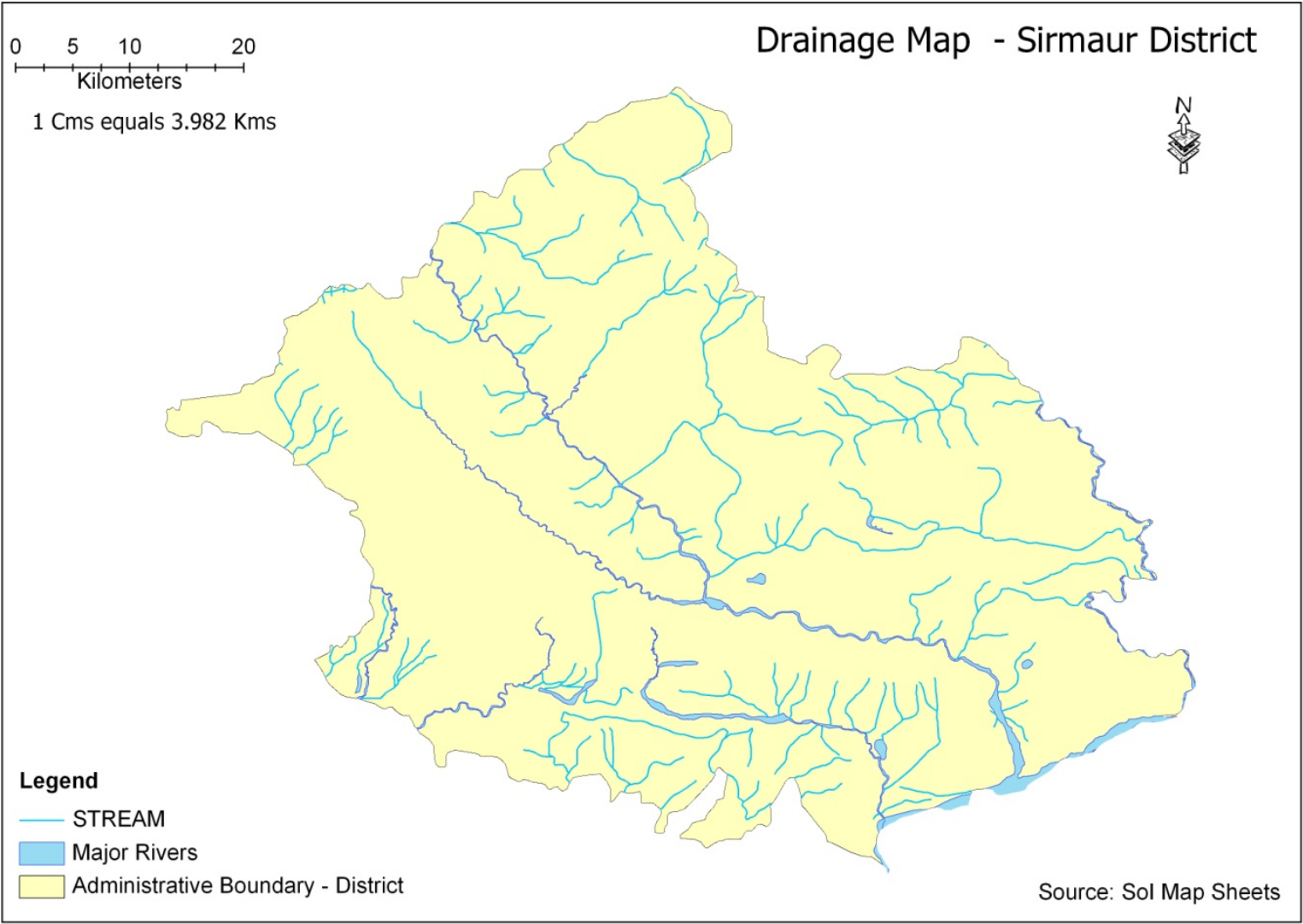
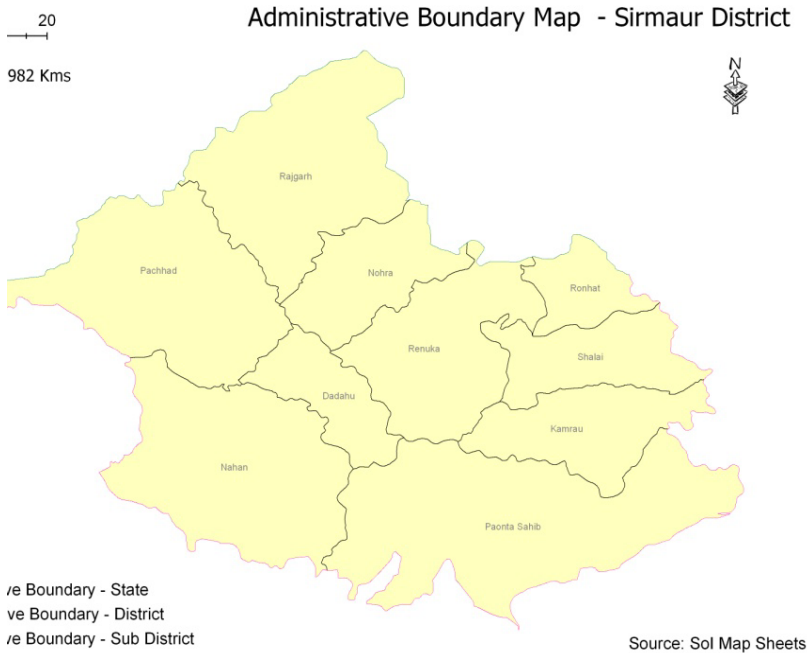
Location

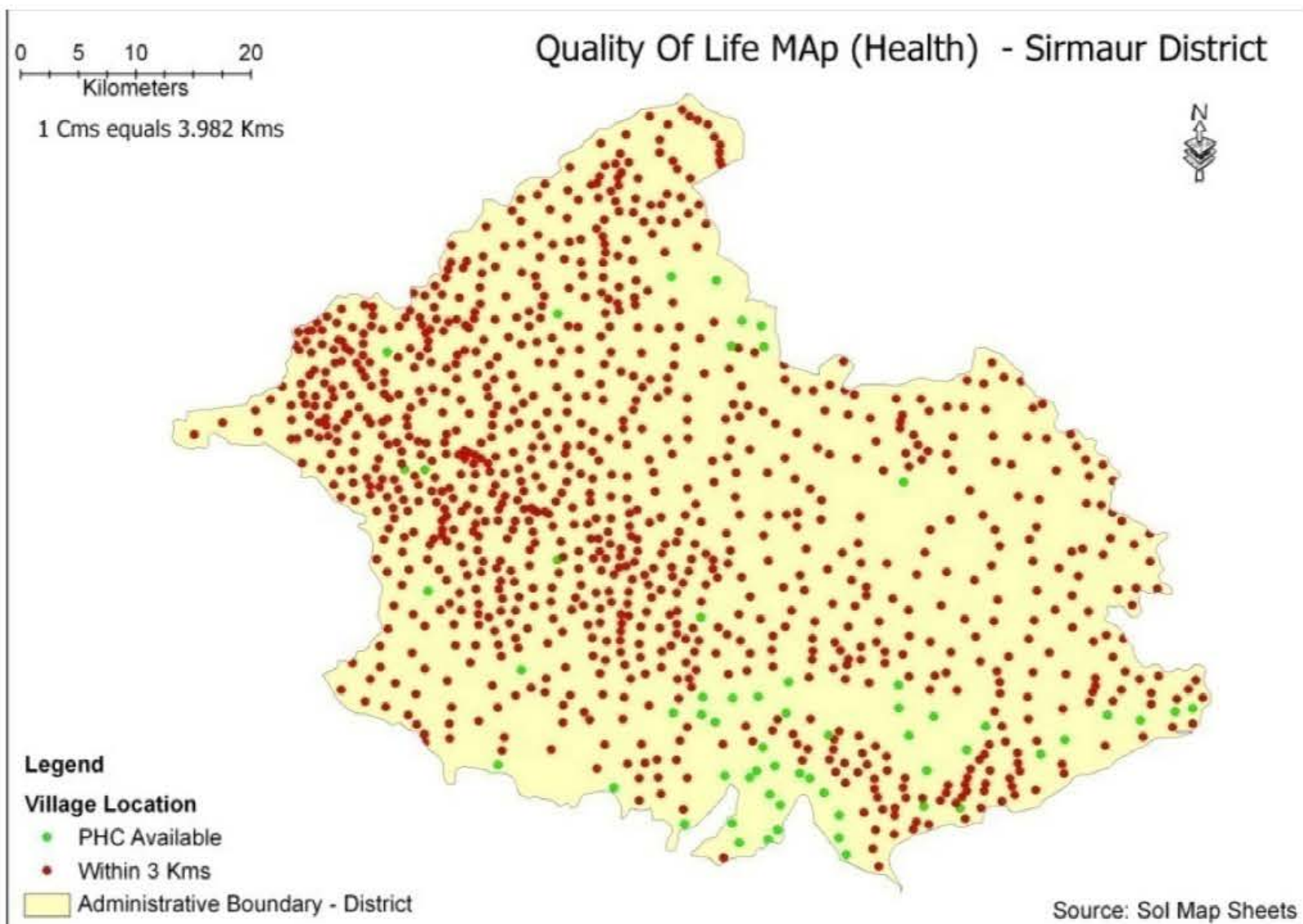
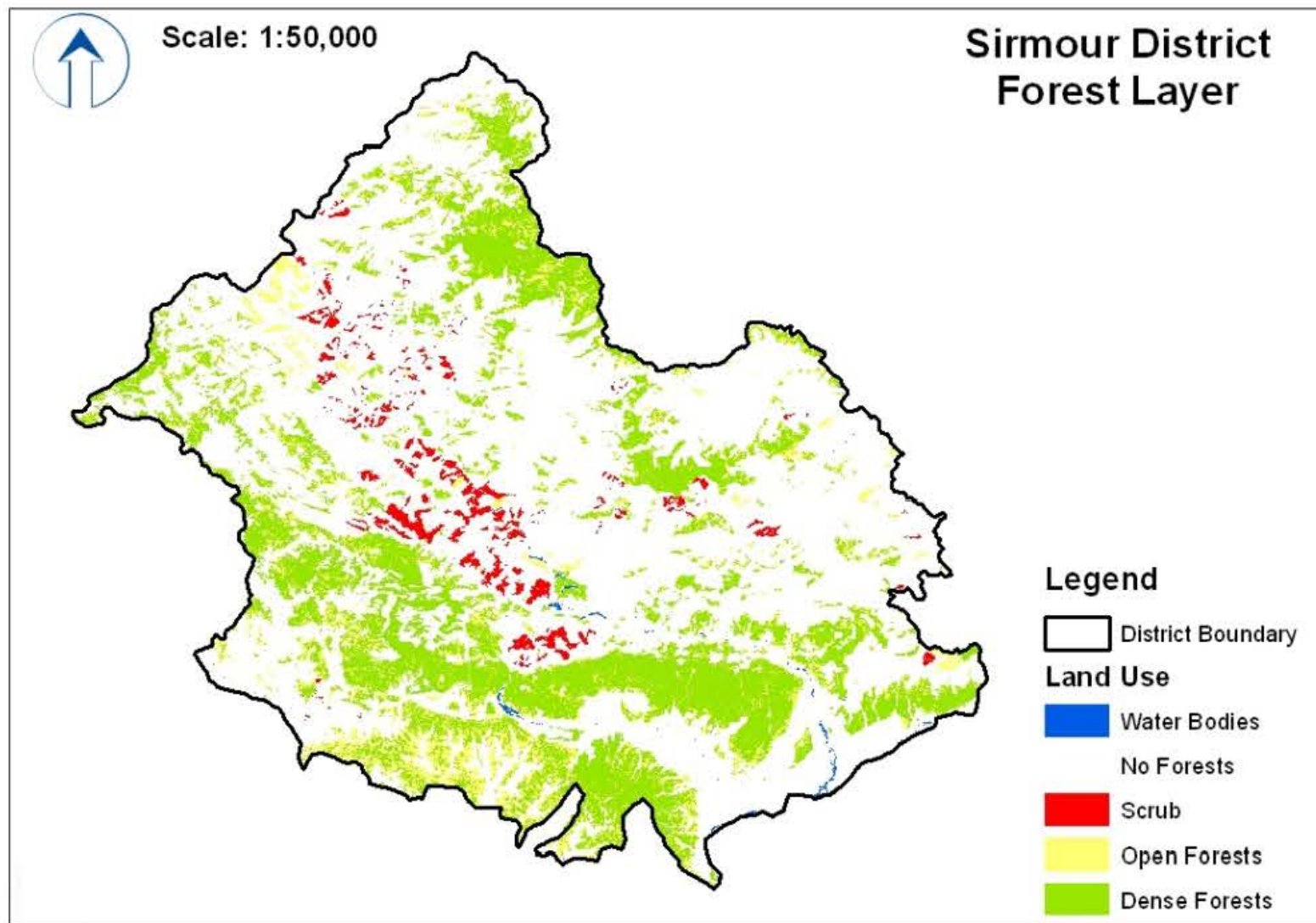
Sirmaur district falls in the south-eastern parts of Himachal Pradesh. It lies between 30⁰ 27' 30" and 31⁰ 02' 20" north latitude and 77⁰ 01' 12" and 77⁰ 49' 40" east longitude. Shimla district bounds it in the north, Solan district in the North-West, state of Haryana in the west and south while state of Uttaranchal and Uttar Pradesh make its eastern boundary. According to the Surveyor General of India, the district has a total area of 2,825 km² which is 5.07 % of the total area of the state. It ranks 8th position among districts in terms of area in the state.

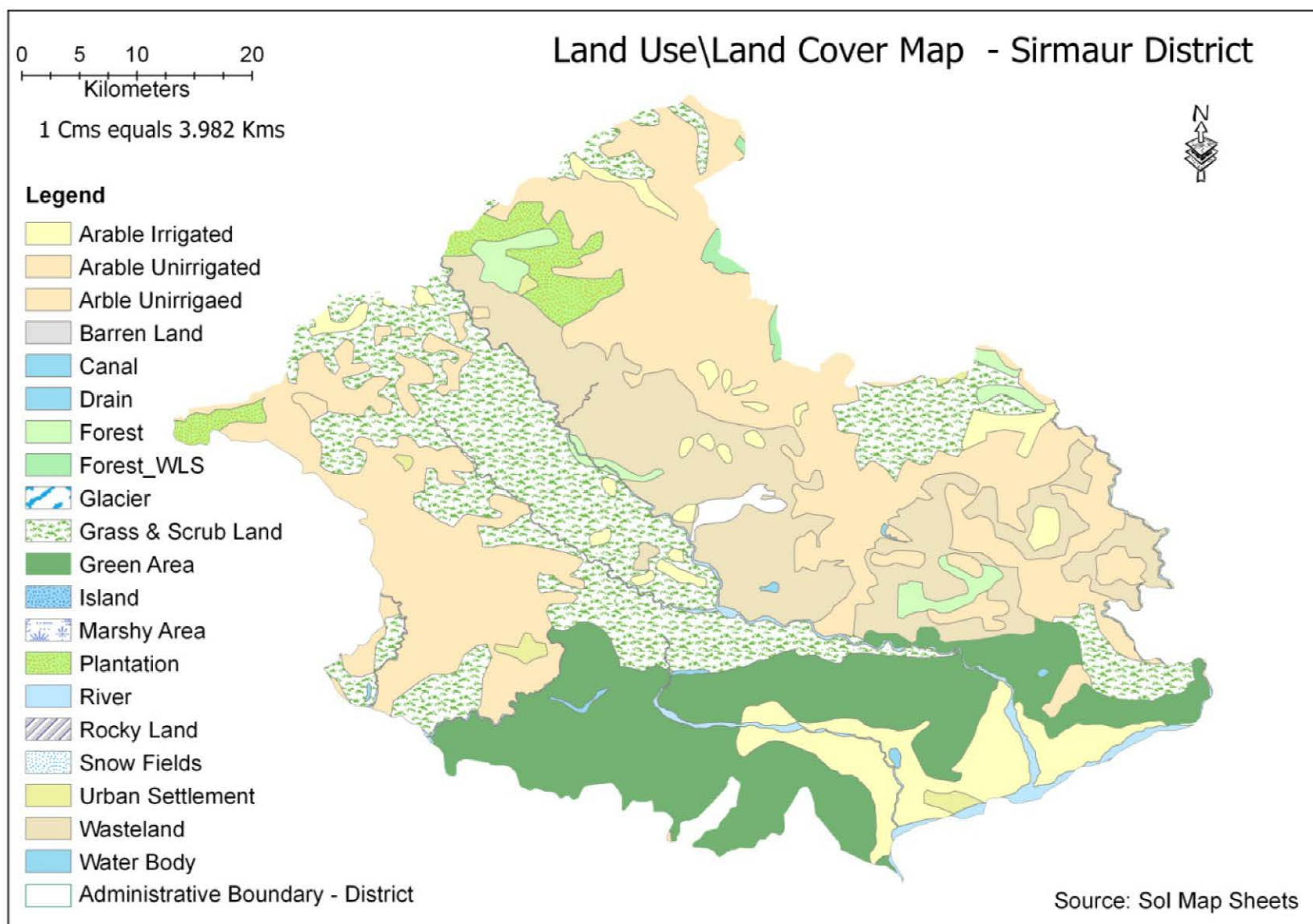
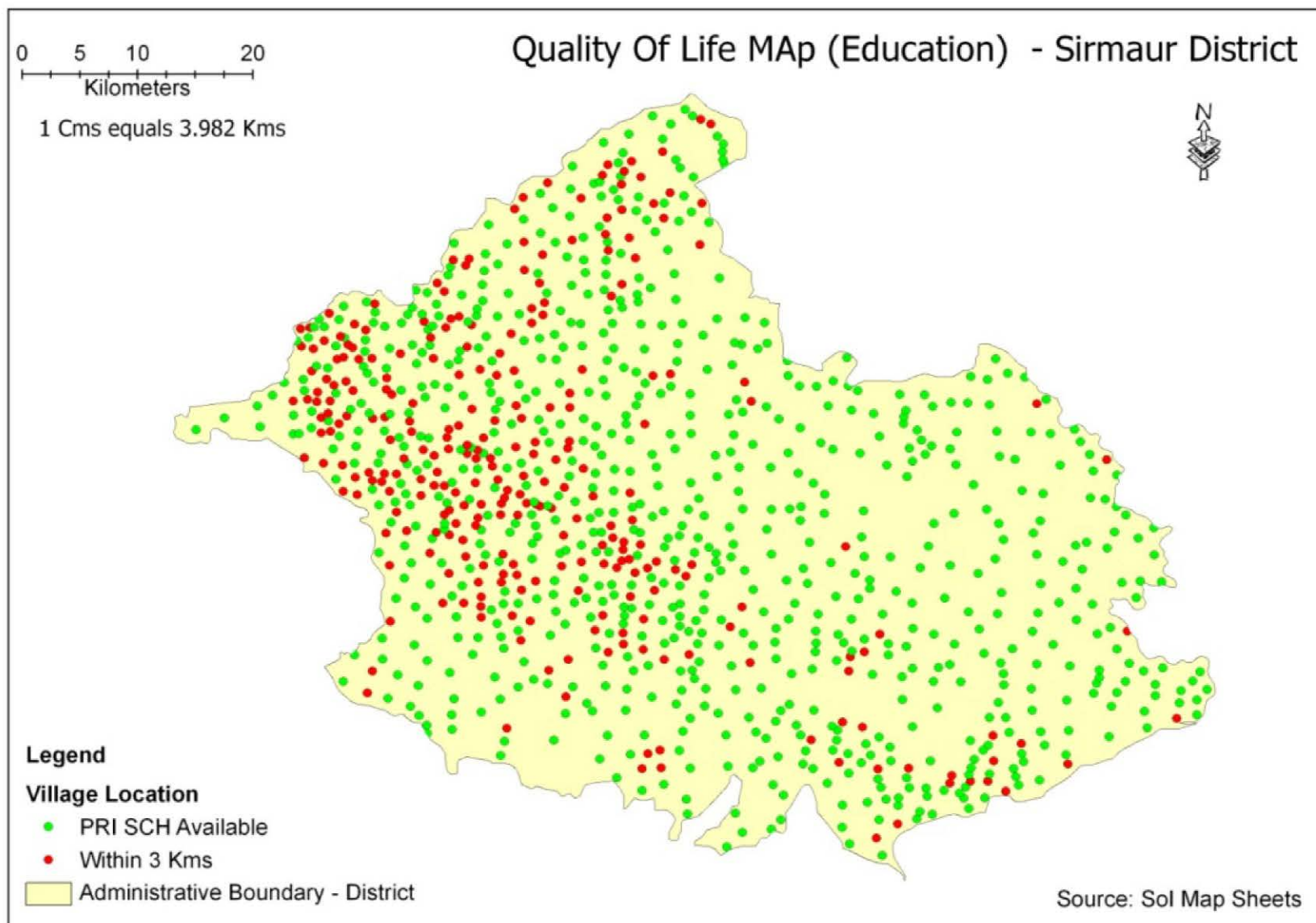


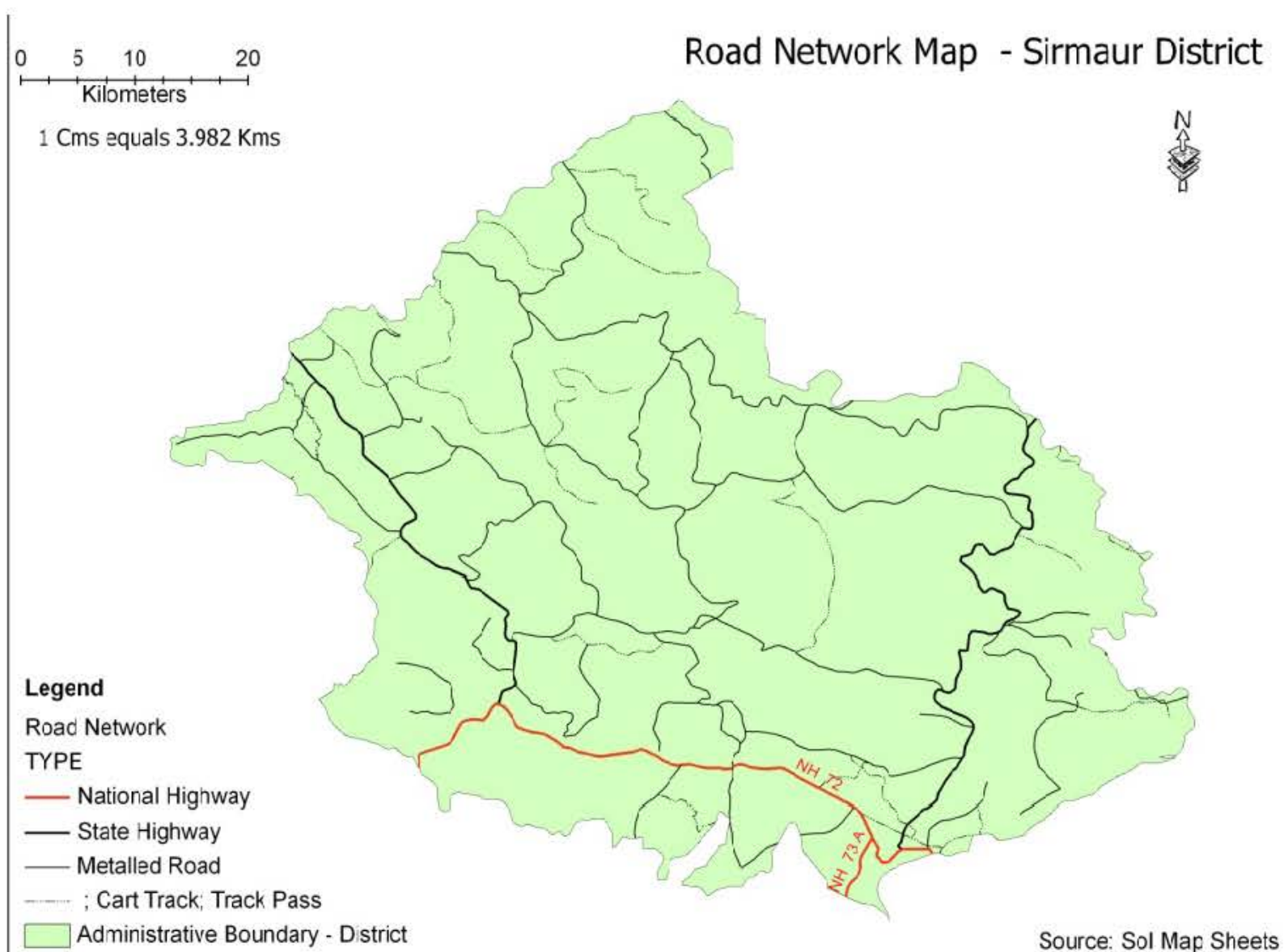
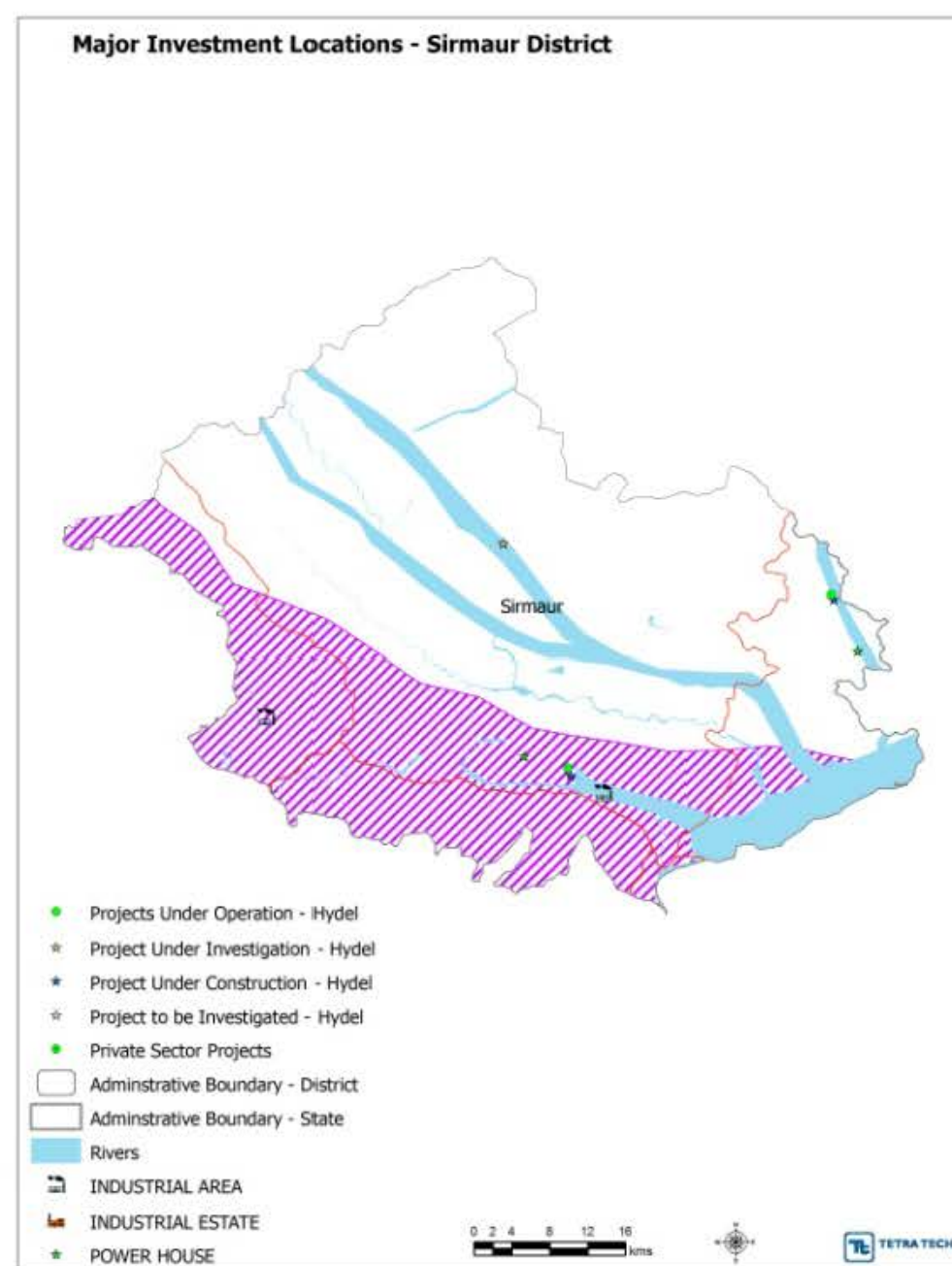
S. No	Tehsil/ Sub-Tehsil	Area in Sq.Km
1	Rajgarh	412.50
2	Pachad	406.50
3	Renuka	294.80
4	Paonta Sahib	224.30
5	Nohra	191.50
6	Nahan	172.20
7	Shalai	166.40
8	Kamrau	148.20
9	Dadahu	125.40
10	Ronhat	105.70

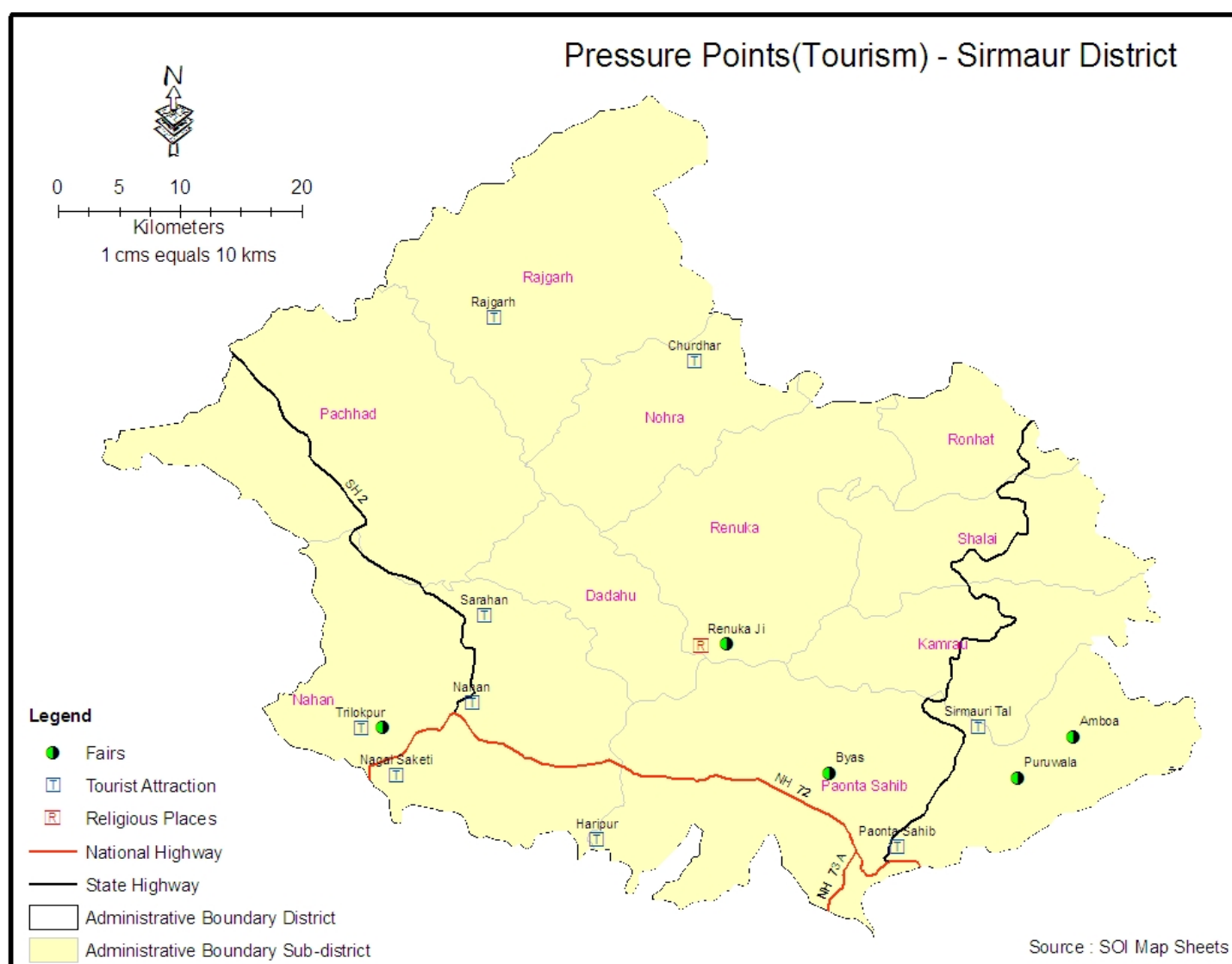
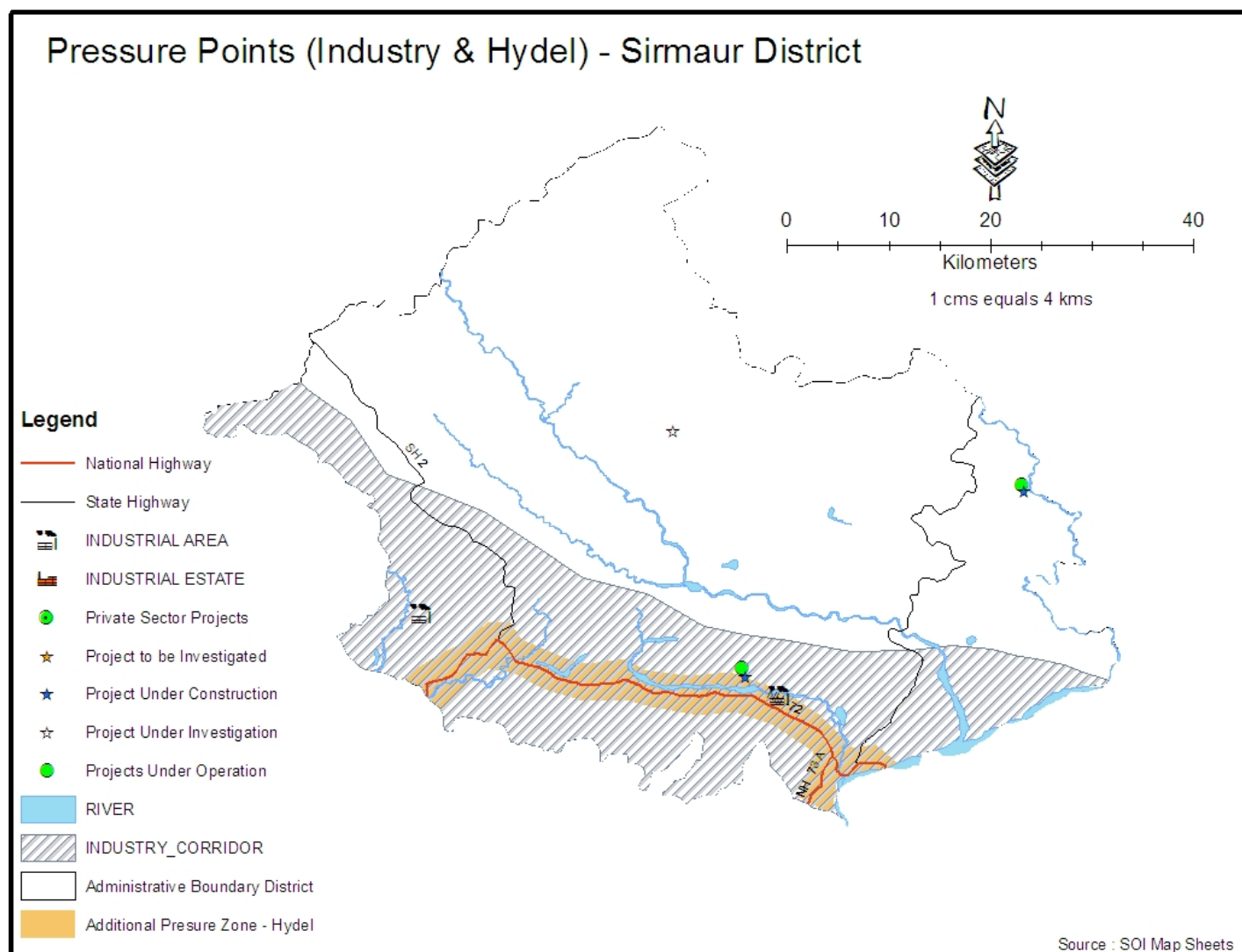
It is divided into 10 administrative units as Tehsil/Sub-Tehsil (area in descending order as







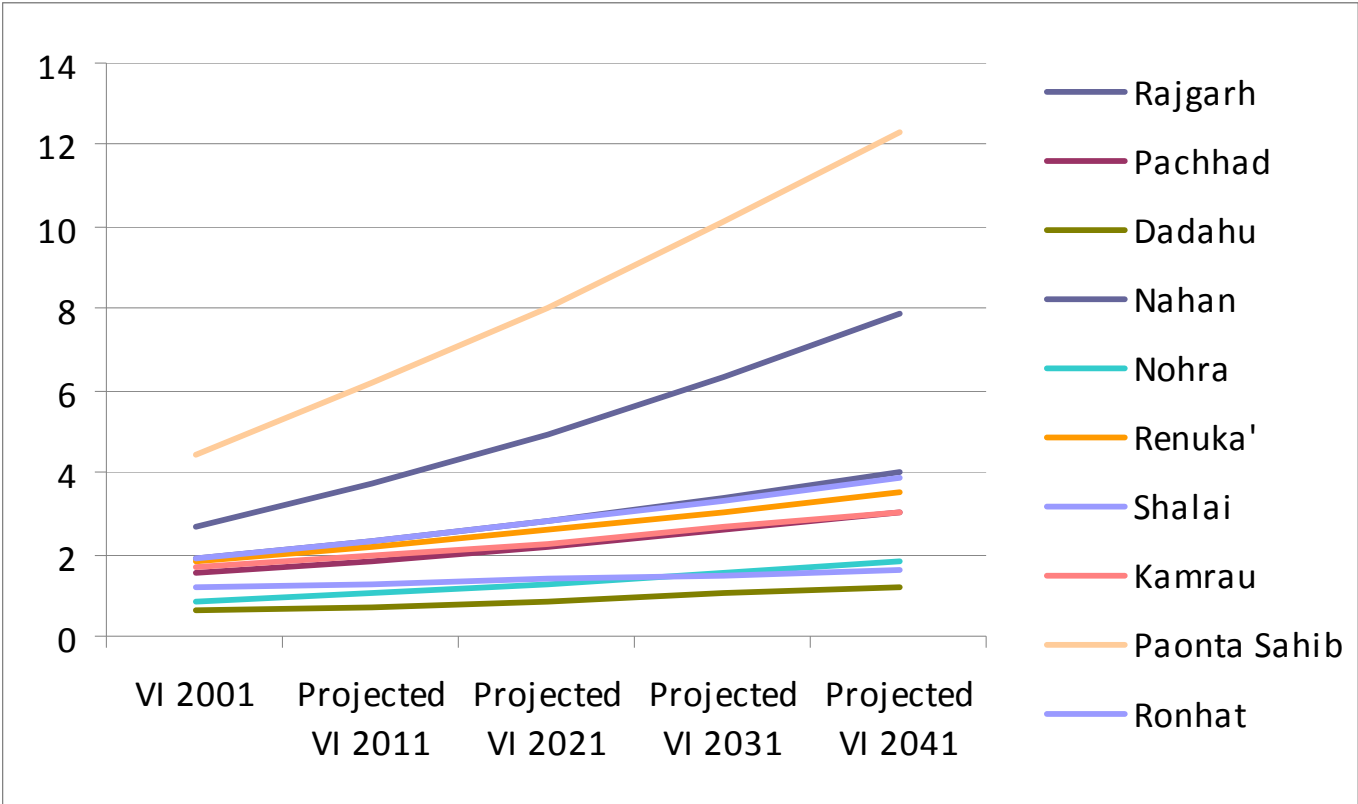




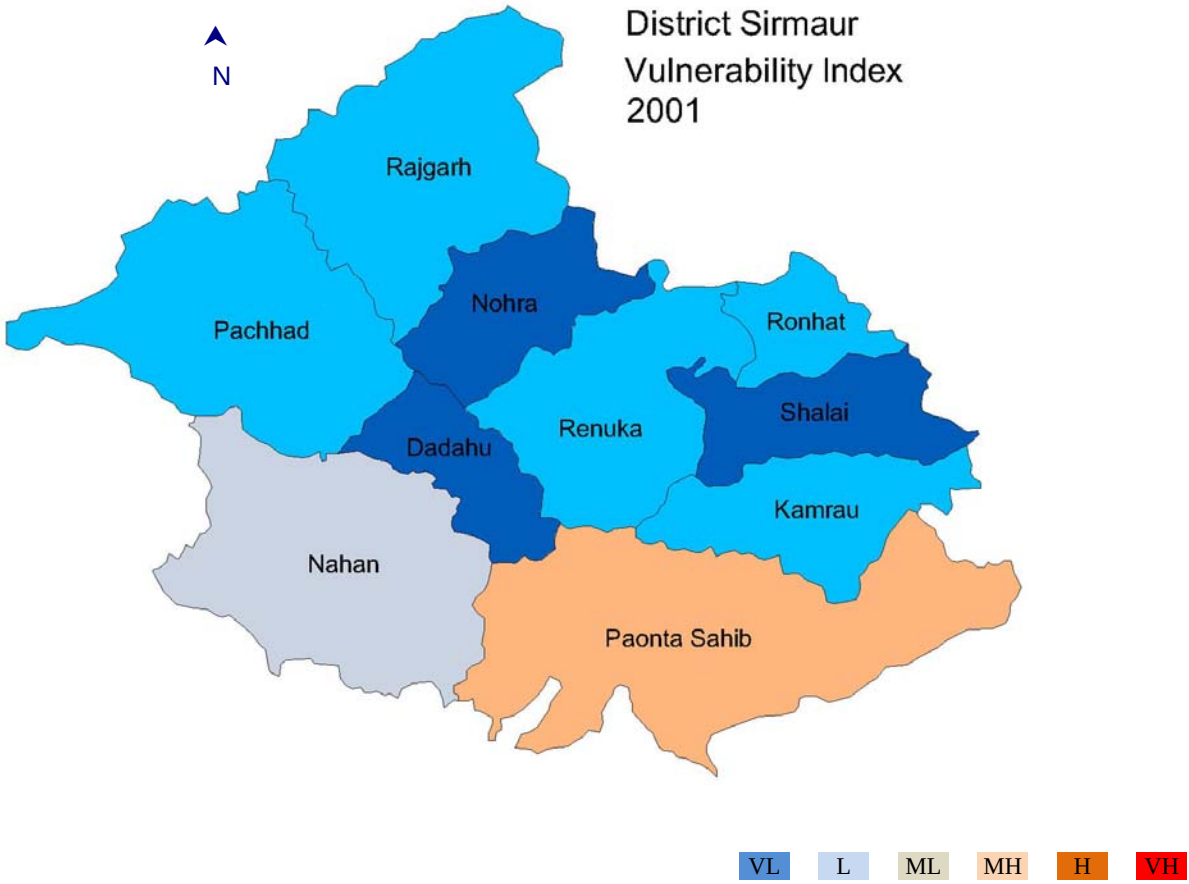
	VI 2001	Projected VI 2011	Projected VI 2021	Projected VI 2031	Projected VI 2041
Rajgarh	1.91	2.33	2.83	3.39	4.012
Pachhad	1.53	1.83	2.18	2.59	3.037
Dadahu	0.6	0.73	0.87	1.04	1.223
Nahan	2.65	3.72	4.94	6.31	7.848
Nohra	0.87	1.06	1.29	1.56	1.852
Renuka'	1.82	2.17	2.57	3.03	3.528
Shalai	1.2	1.28	1.38	1.48	1.601

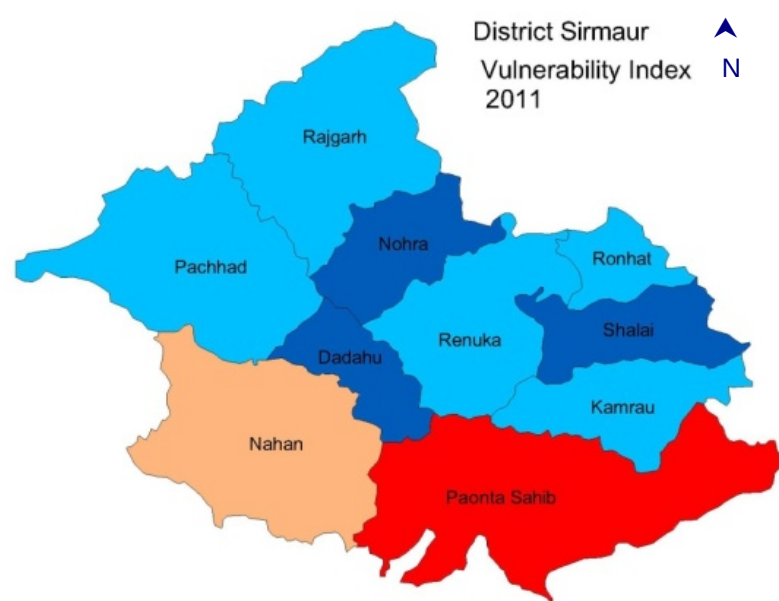
	VI 2001	Projected VI 2011	Projected VI 2021	Projected VI 2031	Projected VI 2041
Kamrau	1.71	1.97	2.28	2.64	3.036
Paonta Sahib	4.46	6.17	8.05	10.10	12.340
Ronhat	1.87	2.31	2.79	3.33	3.90

Vulnerability Index Scenarios – District Sirmaur at Tehsil Level

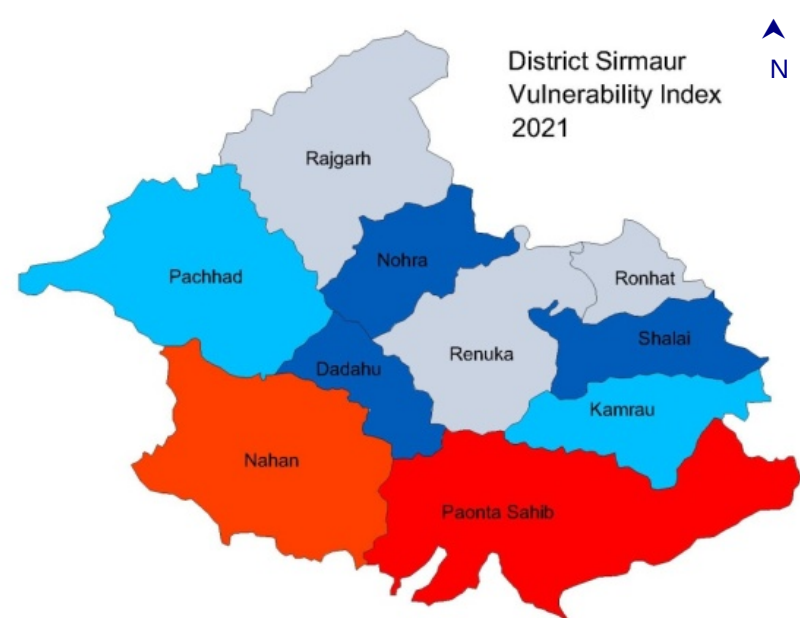


	Rajgarh	Pachhad	Dadahu	Nahan	Nohra	Renuka	Shalai	Kamrau	Paonta Sahib	Ronhat
VI	4692.66	3749.55	1461.25	6483.08	2128.18	4449.22	2930.45	4195.91	10937.76	4580.97
denominator = 57x43	2451									
Normalized VI	1.91	1.53	0.60	2.65	0.87	1.82	1.20	1.71	4.46	1.87

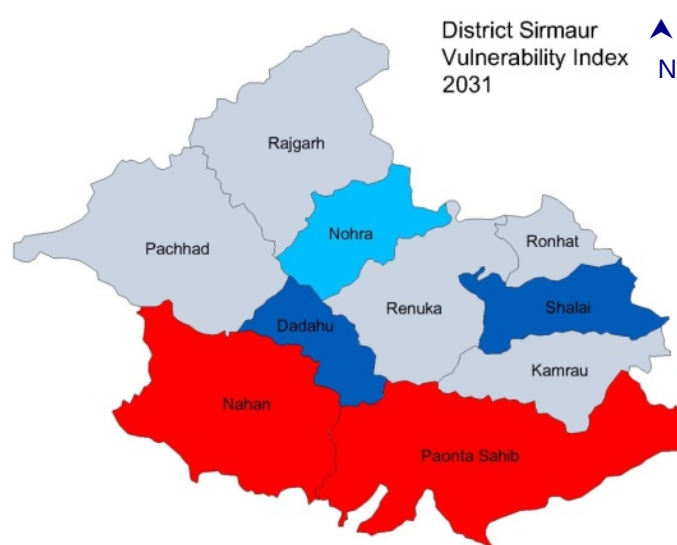




Nahan moves to the moderately high vulnerability, Paonta Sahib to high vulnerability. Rest retains their segments.

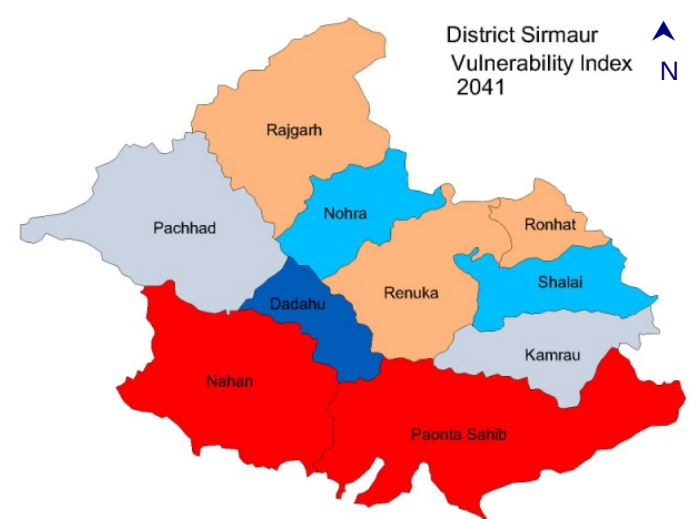


Rajgarh, Renuka and Ronhat move to the moderately high vulnerability segment, Pachhad, Dadahu, Nohra, Shalai, and Kamrau retain their segments. Nahan moves to high vulnerability segment while Paonta Sahib moves to very high (critical) segment.



Dadahu, Shalai, Rajgarh, Renuka and Ronhat retain their segments. Nohra moves to low vulnerability while Pachhad and Kamrau move to moderately low vulnerability. Nahan moves to very high (critical) vulnerability and Paonta Sahib retains its criticality.

Legend: VL, L, ML, MH, H, VH



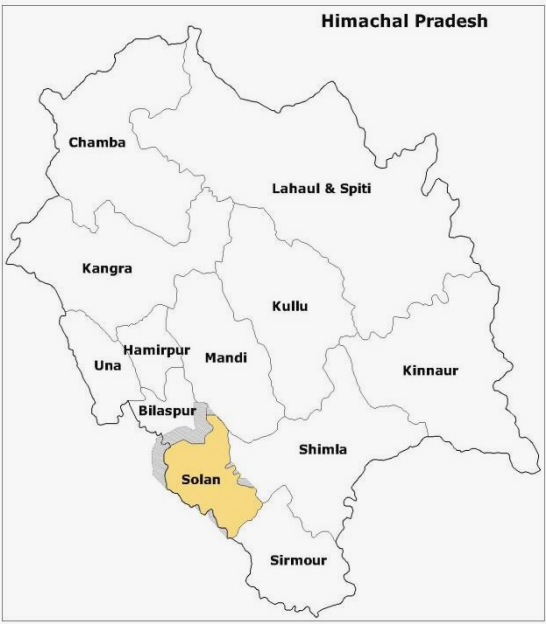
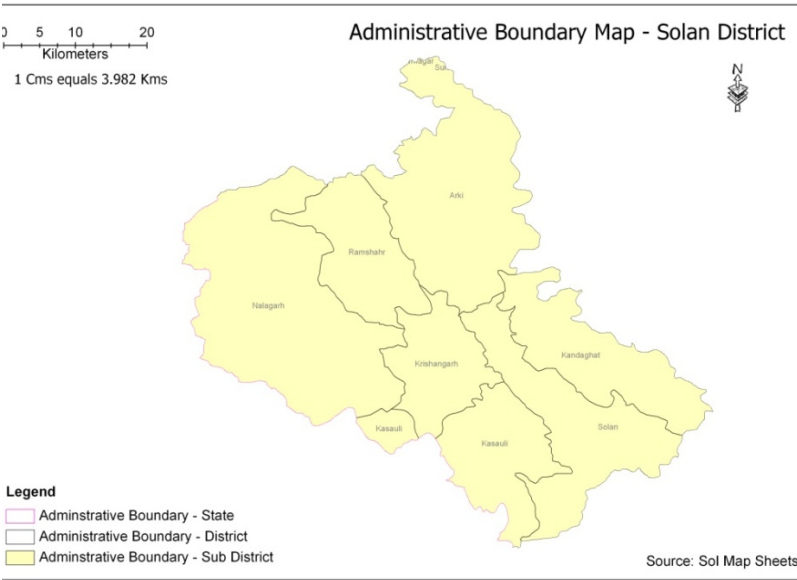
Dadahu remains very low vulnerable. Nohra is joined in low vulnerability segment by Shalai. Kamrau and Pachhad retain moderately low vulnerability. Rajgarh, Renuka and Ronhat move to moderately high vulnerability segment. Nahan & Paonta Sahib retain their criticality.

VL L ML MH H VH

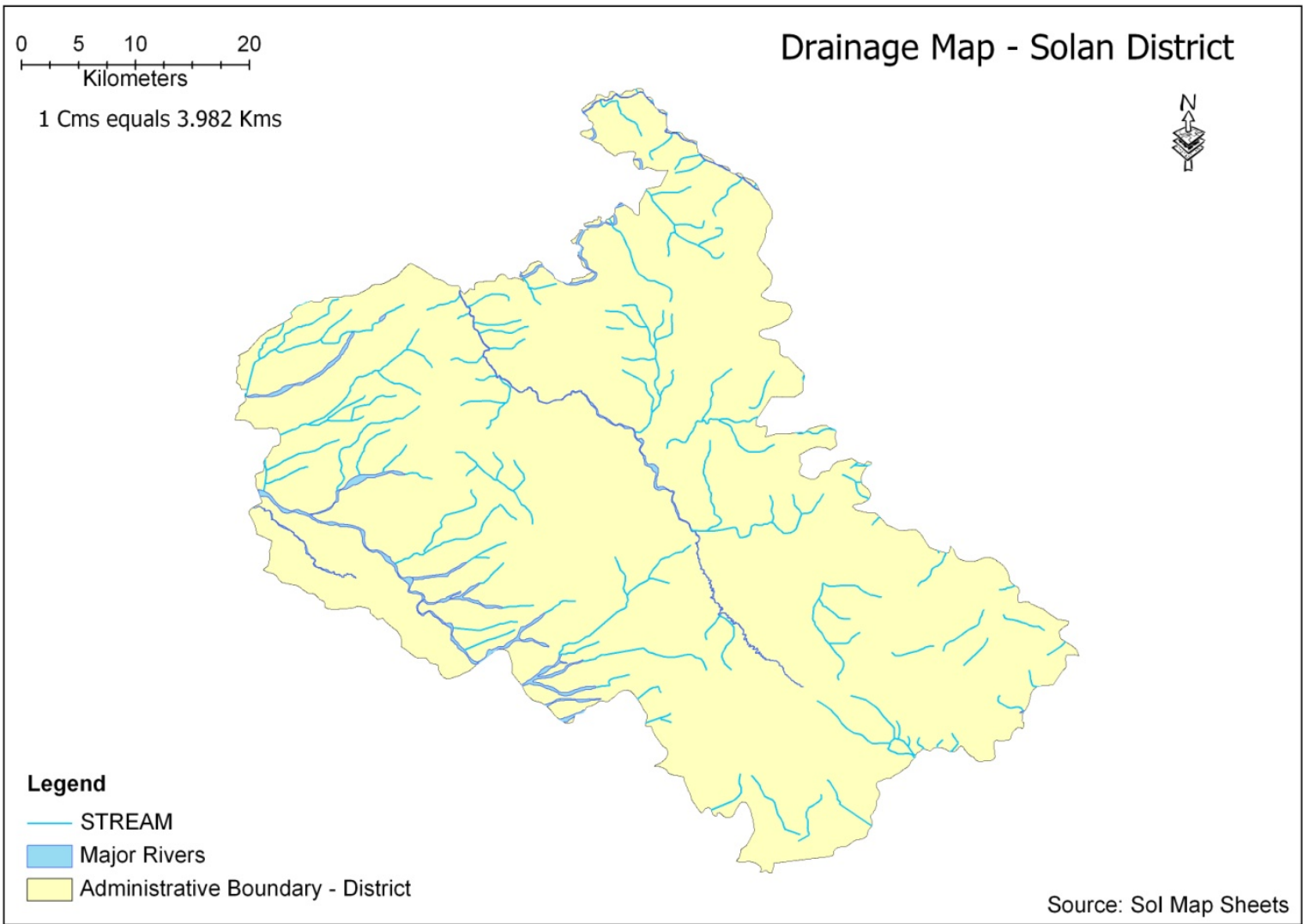
Solan

Location: Solan lies between 30⁰ 45' 11" and 31' 21' 10" north latitudes and 76⁰36'0" and 77⁰ 15' 20" east longitudes. The elevation of the district ranges from 300 to 3000m above sea level. The district is bounded by Shimla in North, by Ropar district in Punjab & Ambala district of Haryana in South, Sirmaur in East and by Bilaspur district in west. Mandi district touches boundary of Solan district in North-East. The shape of district is rectangular with slight bulge on northern side intruding towards Mandi district. The total area of the district is 1936 sq kms forming 3.5 % of the total area of the State.

The district is divided into 7 administrative units as Tehsil/Sub-Tehsil (area in descending order as follows):



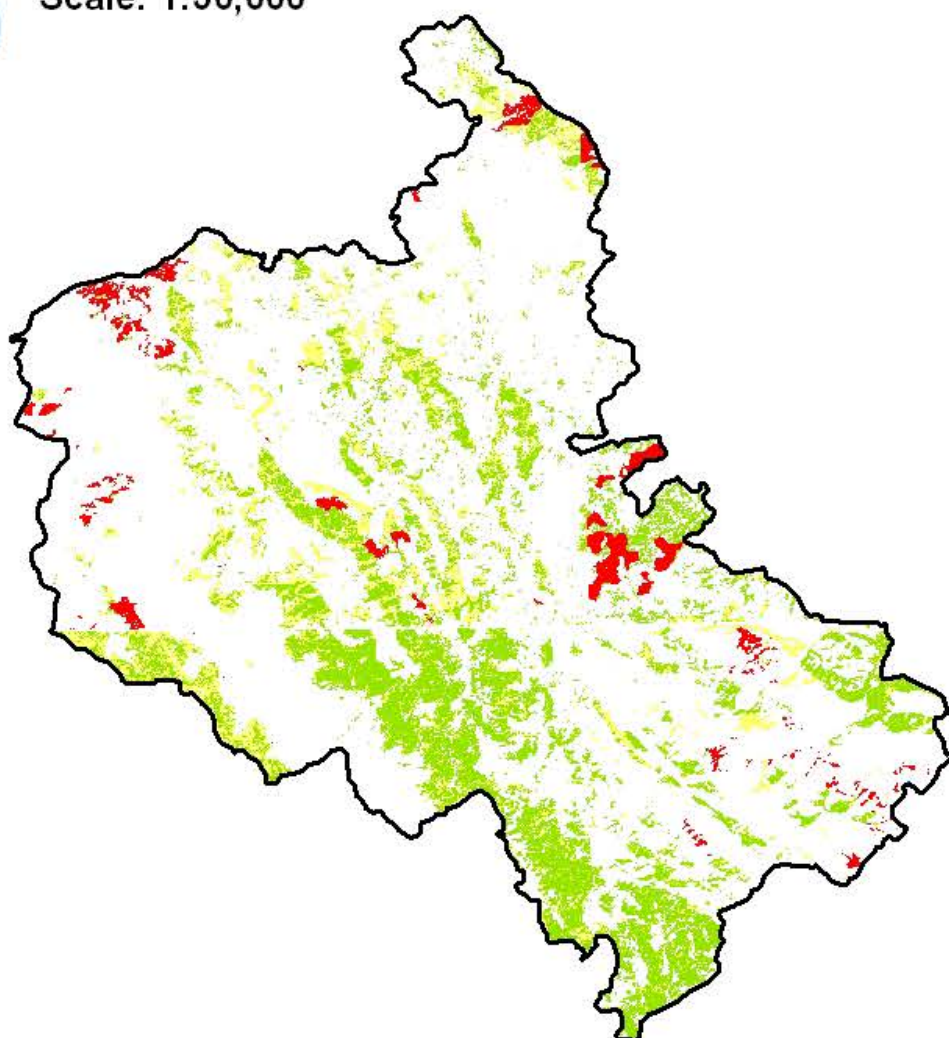
Nalagarh is the biggest sub-unit at 522.90 sq.km. followed by Arki at 394 sq.km., Solan at 210.50 sq km, Kandaghat at 207.20 sq km, Ramshahr at 183.20 sq km, Krishnagarh at 152.50 sq km with Kasauli at 138.80 sq km being the smallest sub unit





Scale: 1:50,000

Solan District Forest Layer



Legend

District Boundary

Land Use

Water Bodies

No Forests

Scrub

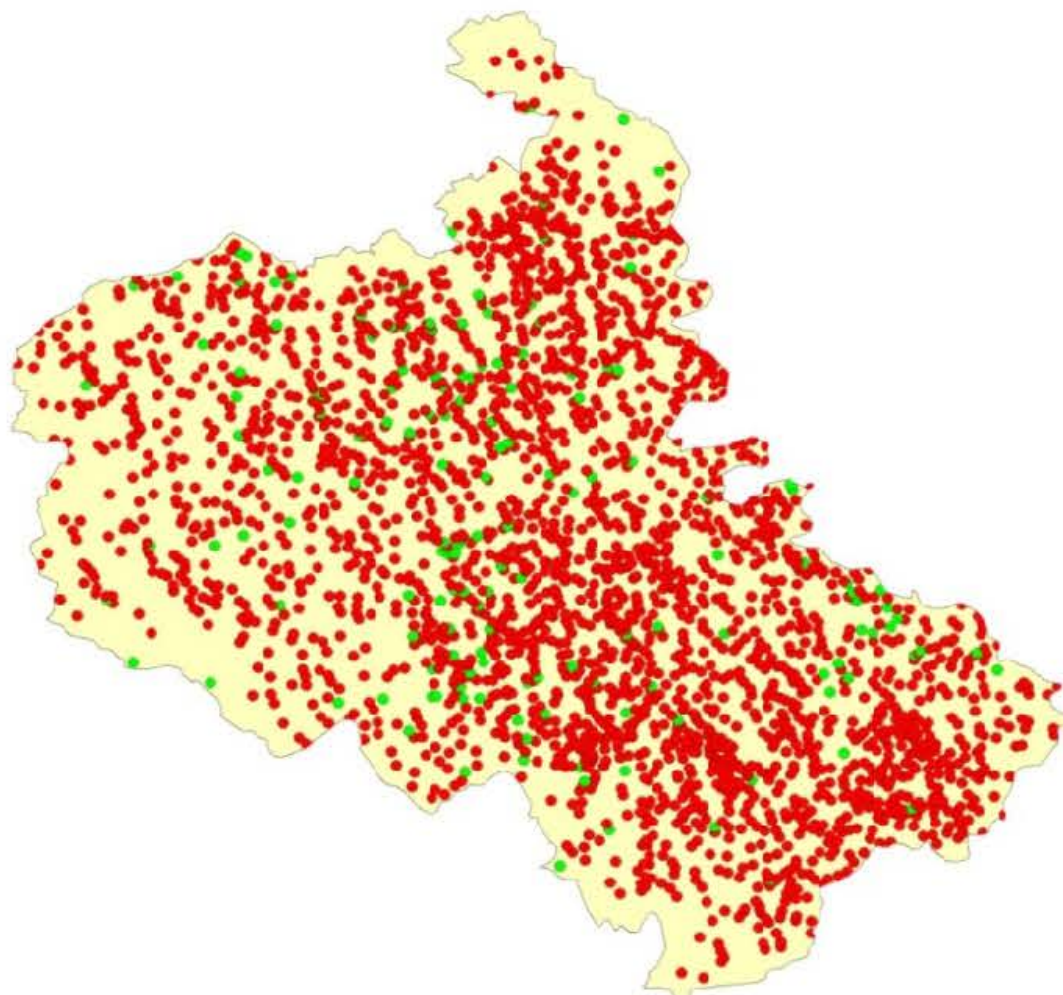
Open Forests

Dense Forests

0 5 10 20
Kilometers

1 Cms equals 3.982 Kms

Quality Of Life Map (Health) - Solan District



Legend

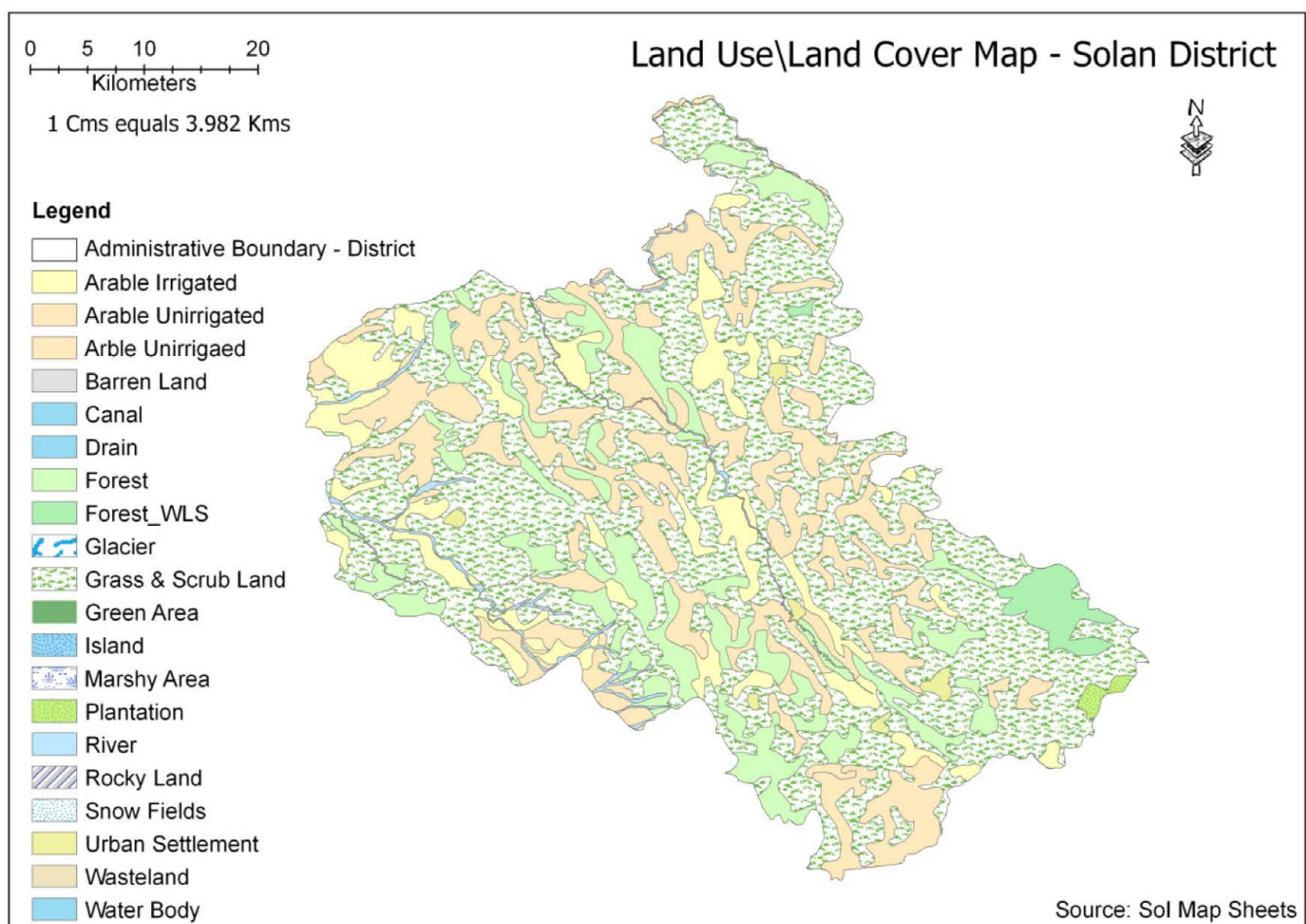
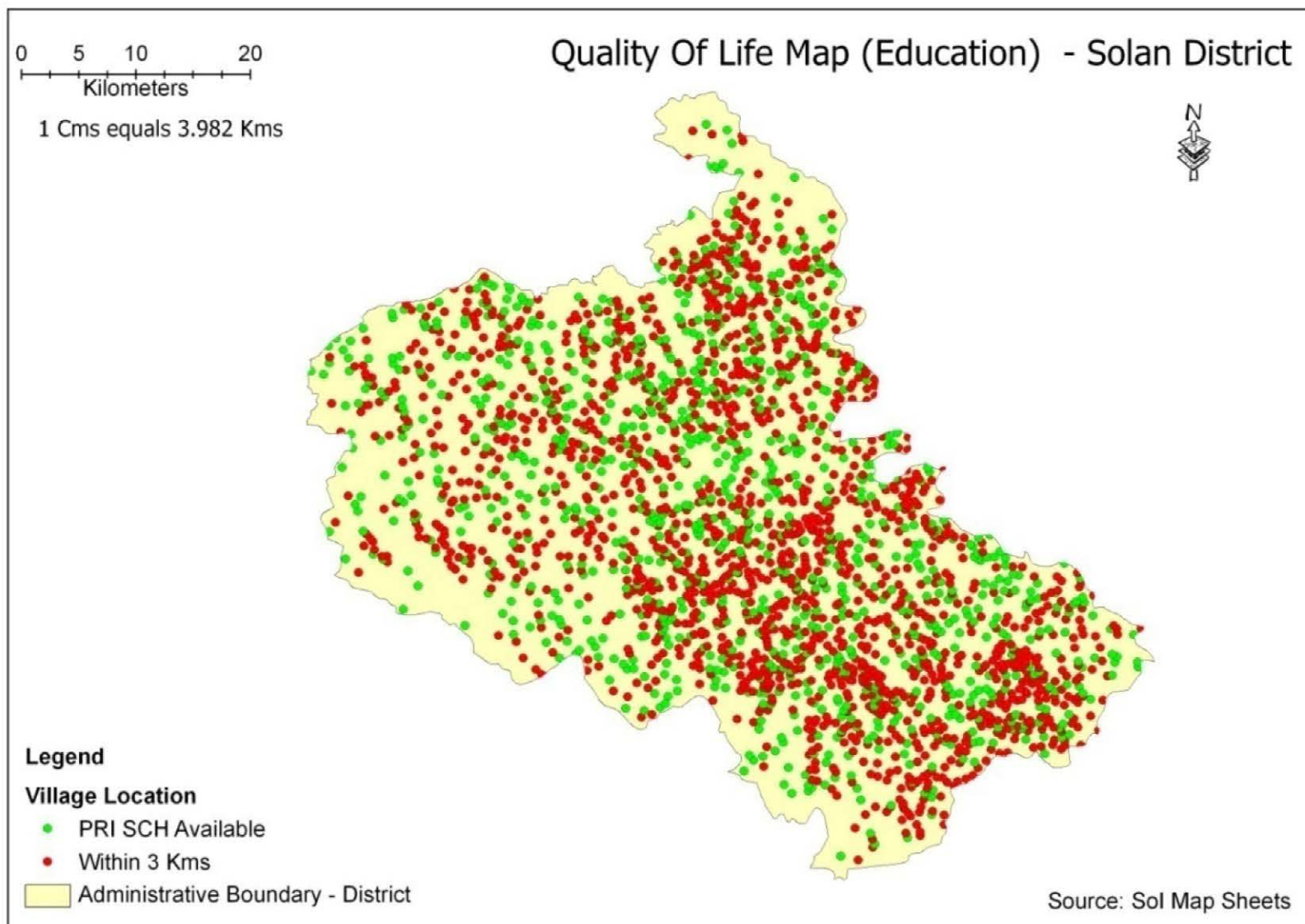
Village Location

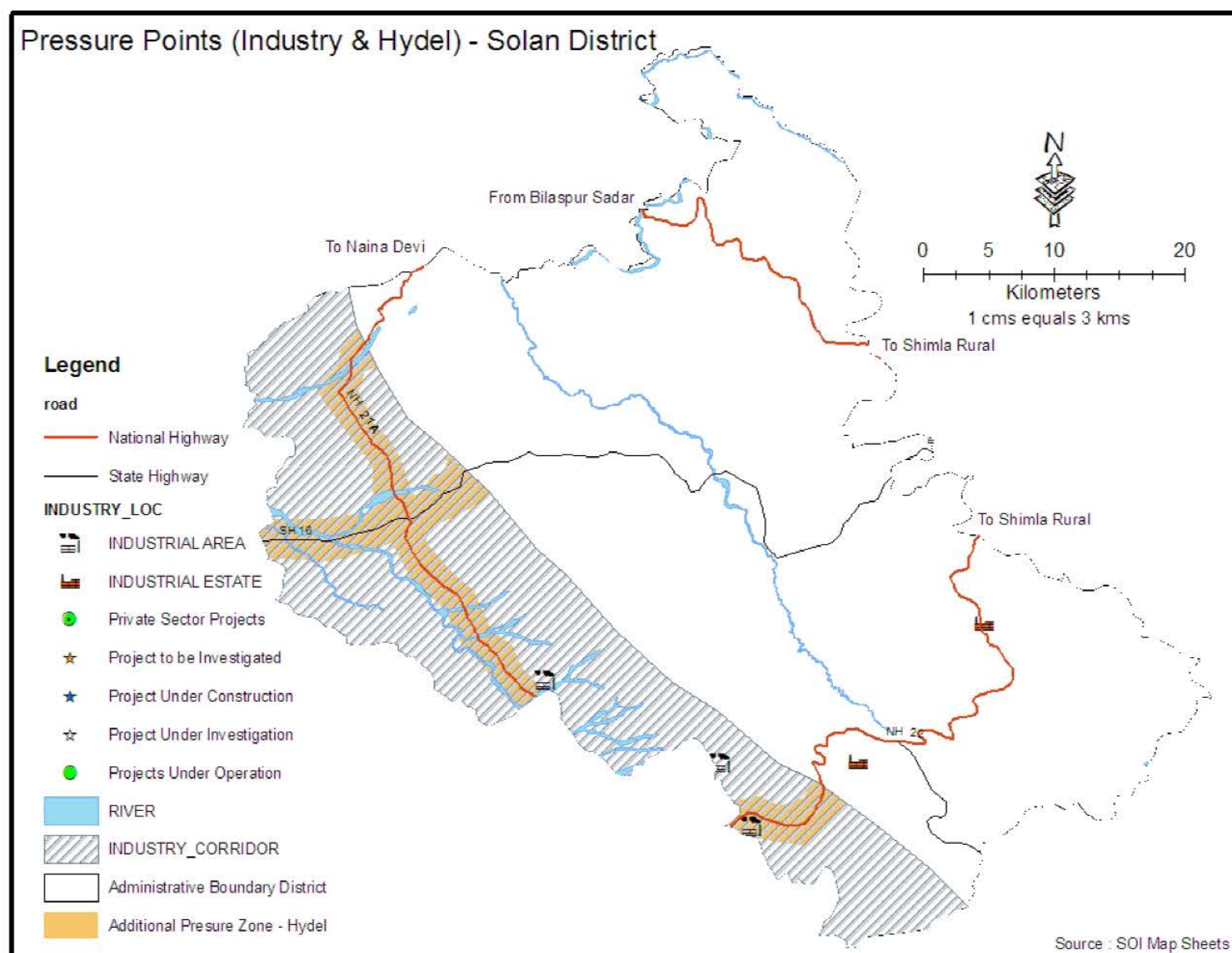
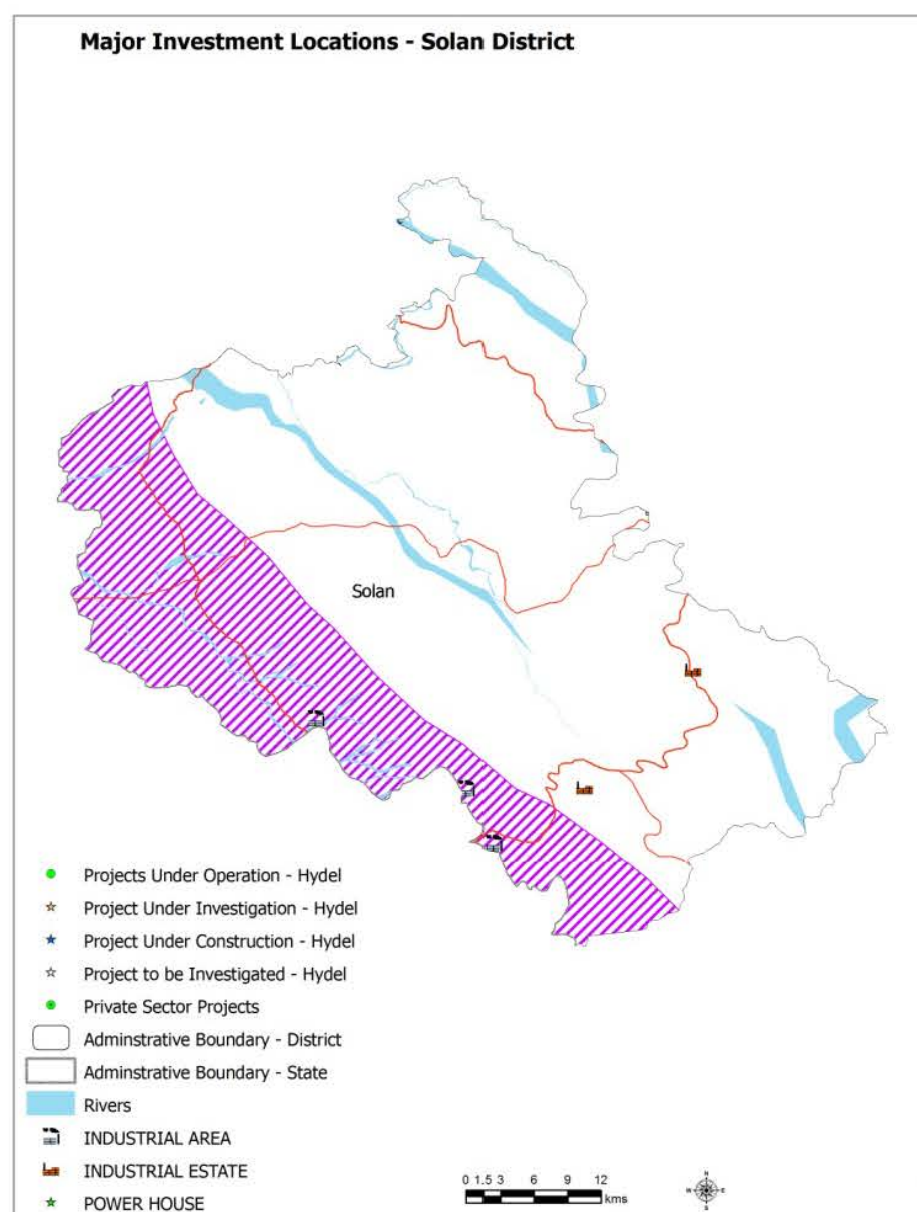
PHC Available

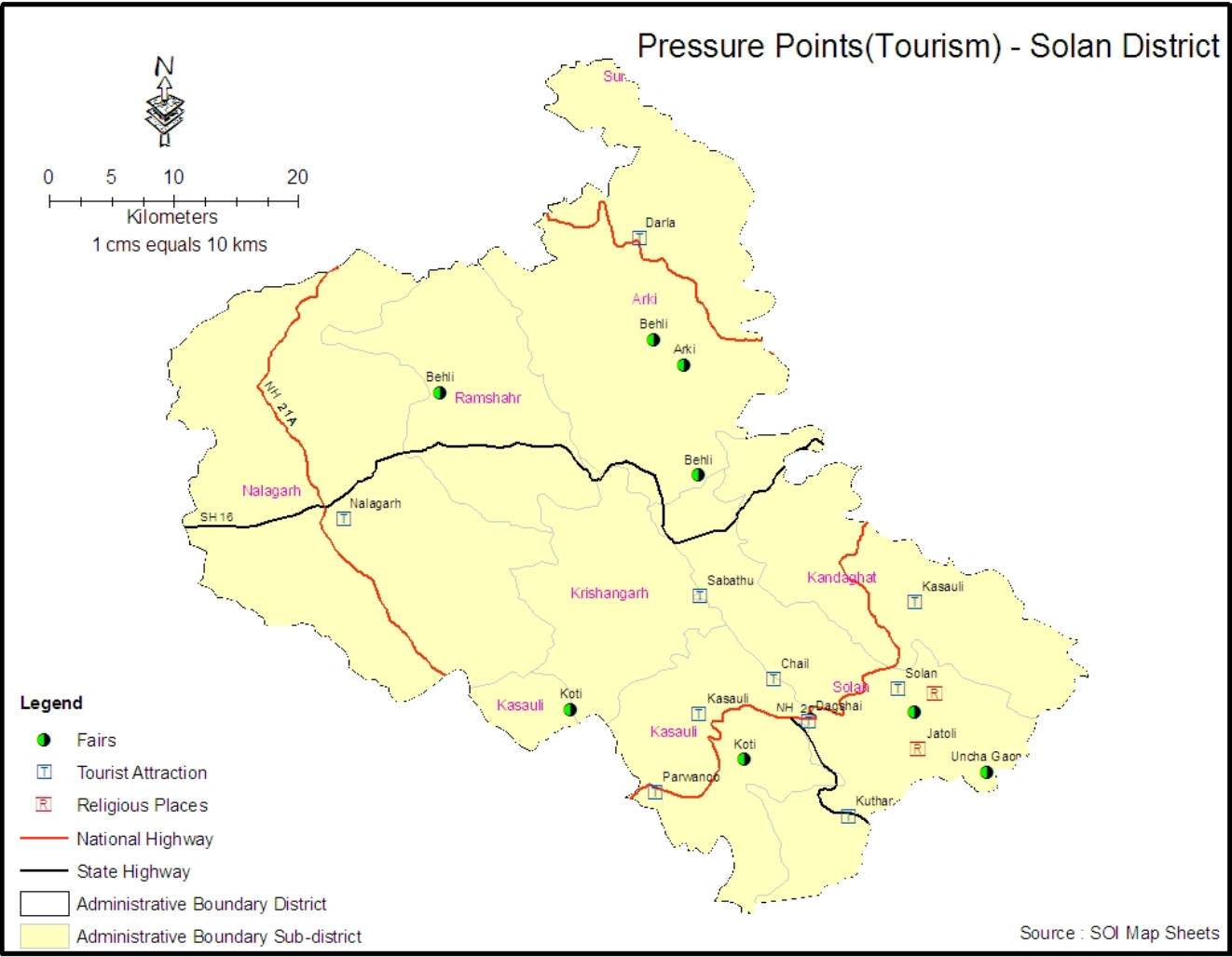
Within 3 Kms

Administrative Boundary - District

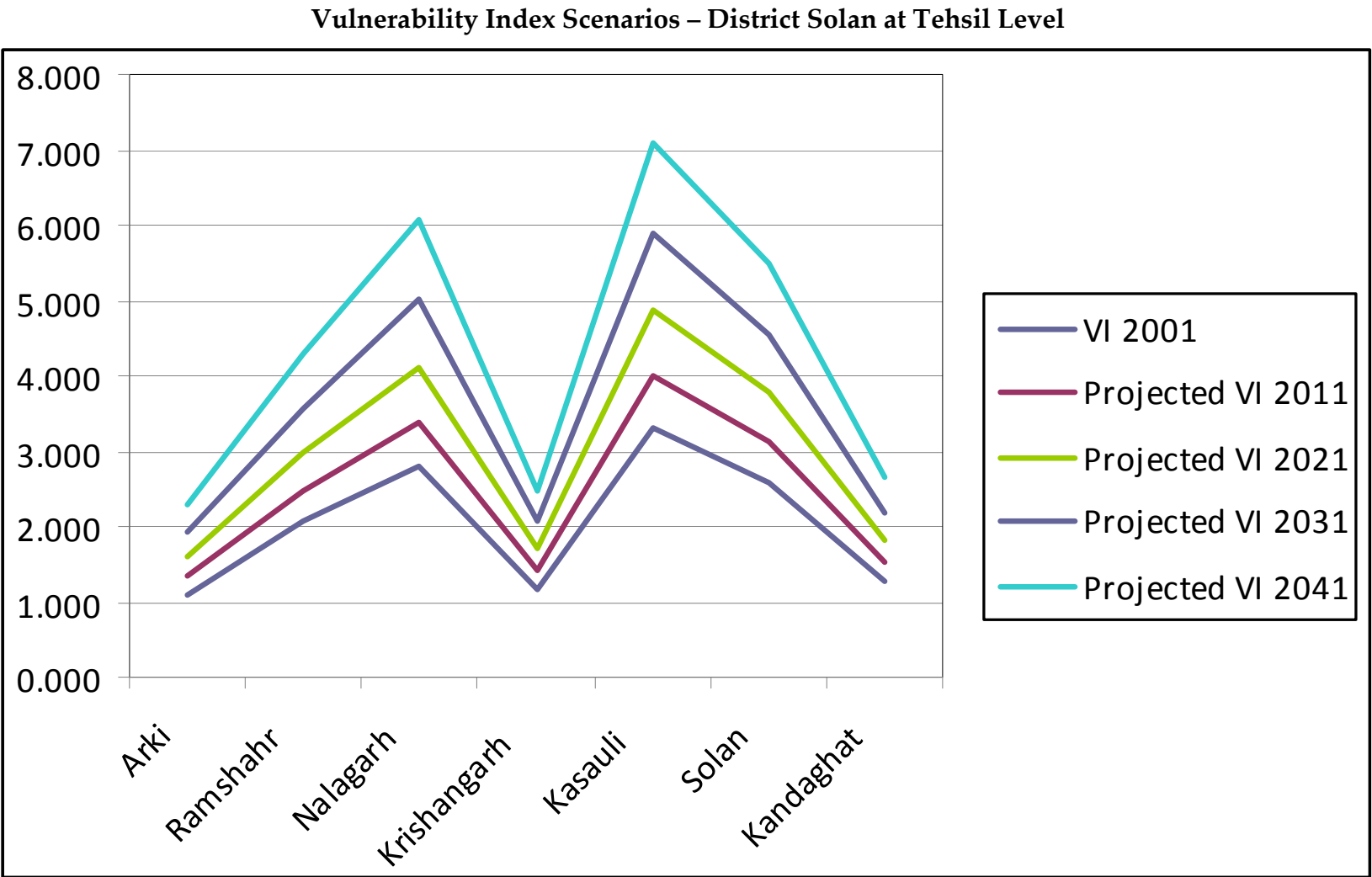
Source: Sol Map Sheets



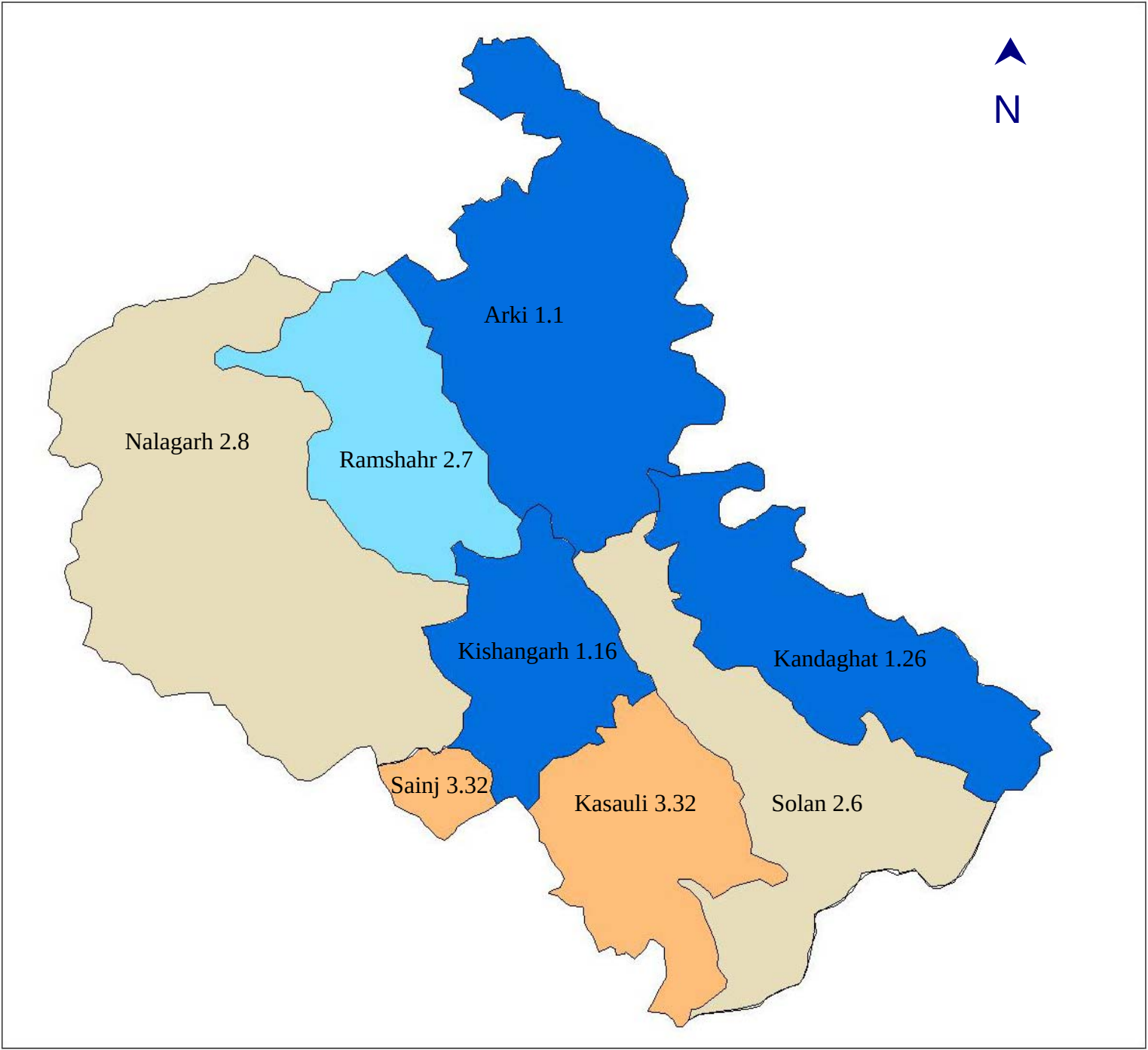




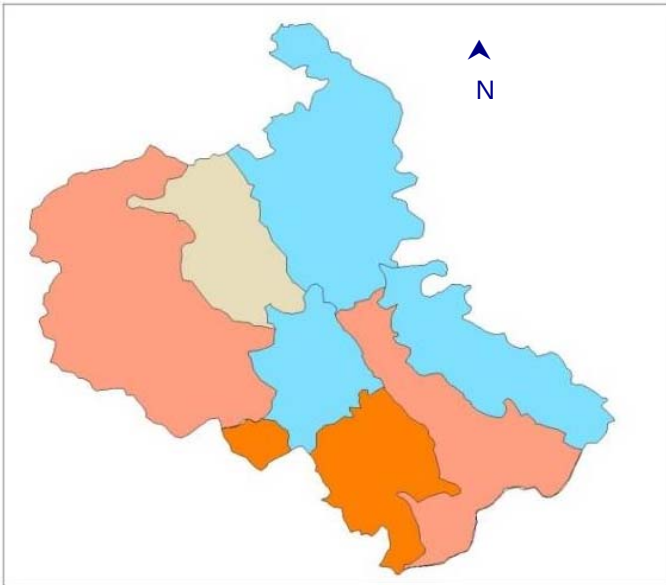
	VI 2001	Projected VI 2011	Projected VI 2021	Projected VI 2031	Projected VI 2041
Arki	1.105	1.328	1.596	1.919	2.306
Ramshahr	2.070	2.485	2.983	3.581	4.299
Nalagarh	2.800	3.398	4.123	5.003	6.070
Krishangarh	1.180	1.420	1.709	2.057	2.476
Kasauli	3.320	4.016	4.857	5.875	7.106
Solan	2.600	3.133	3.775	4.550	5.482
Kandaghat	1.260	1.516	1.824	2.195	2.641



	Arki	Ramshahar	Nalagarh	Krishangarh	Kasauli	Solan	Kandaghat
VI	2707.67	5076.13	6852.80	2831.44	8133.61	6379.66	3091.55
denominator = 57x43	2451						
Normalized VI	1.105	2.07	2.80	1.16	3.32	2.60	1.26

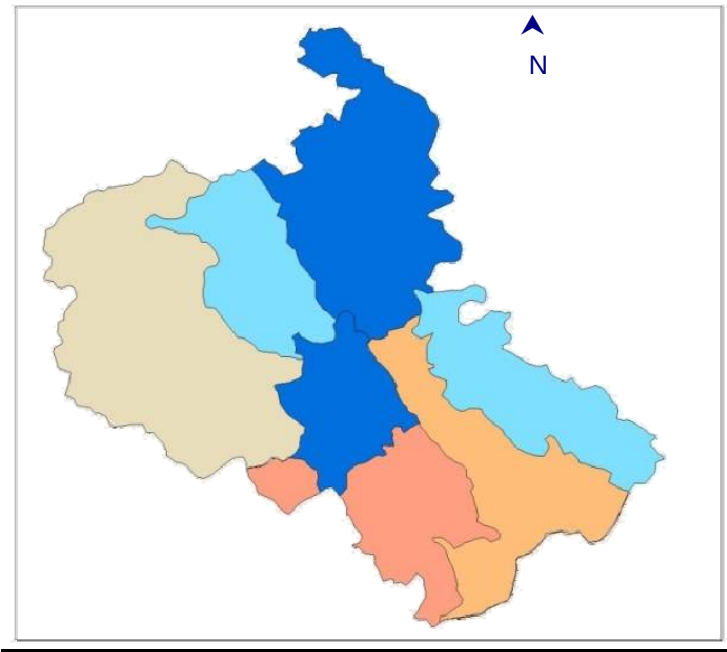


VL L ML MH H VH



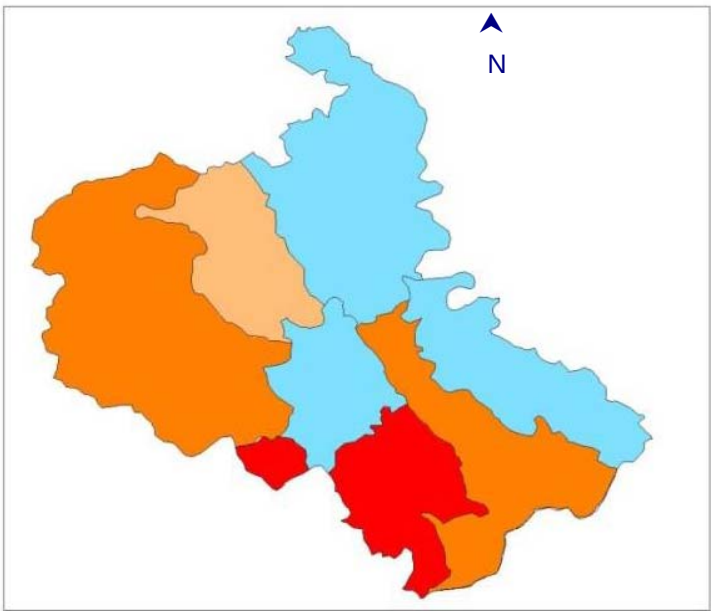
Kasauli, Solan, Kandaghat and Ramshehr move to the next higher segment of vulnerability.

VL L ML MH H VH



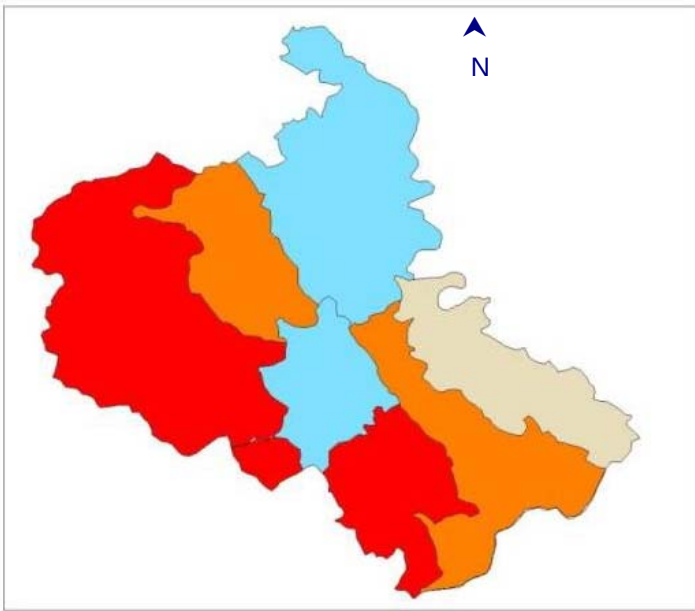
Kasauli, Solan, Nalagarh, Krishangarh, Arki and Ramshehr move to the next higher segment of vulnerability. Kandaghat remains in the segment.

VL L ML MH H VH



Kasauli, Solan, Nalagarh and Ramshehr move to the next higher segment of vulnerability. Kandaghat, Arki, Krishangarh remain in the segment.

VL L ML MH H VH



Kasauli, Solan, Nalagarh, Kandaghat and Ramshehr move to the next higher segment of vulnerability. Arki, Krishangarh remain in the segment.

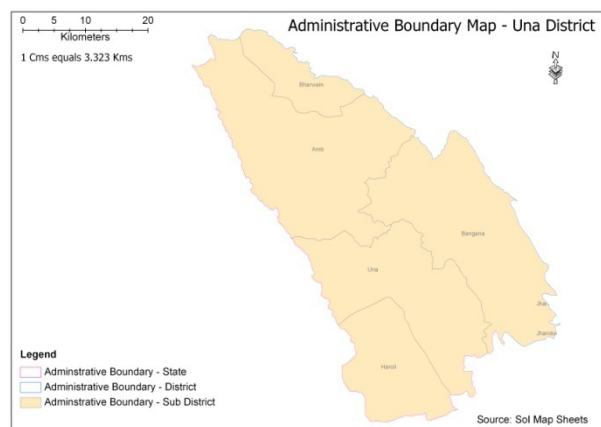
VL L ML MH H VH

Una

Location

Una district lies in the western south-western part of Himachal Pradesh. It is bounded by Kangra district in the north and north-east, Hamirpur district in the east, Bilaspur in the south-east and Punjab State in west and south. The district is located between $31^{\circ}17'52''$ - $31^{\circ}5'20''$ North latitudes and $75^{\circ}58'21''$ - $76^{\circ}28'25''$ East longitudes. The district has a total area of 1,550 Sq.kms. and ranks 10th in the State in order of area.

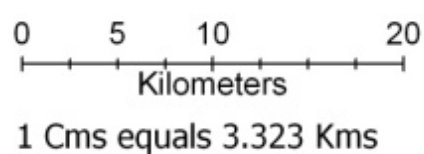
During the British regime, present Una district excluding Bangana was part of Hoshiarpur district of Punjab. In the re-organisation of Punjab state, present Una district was merged within Himachal Pradesh with district headquarters at Dharmsala and the remaining area of present Anandpur Sahib tahsil remained in Punjab. Thus, Una was bifurcated in two states i.e. Himachal and Punjab on the re-organisation of states. On 1.9.1972. Himachal Pradesh government divided the Kangra district into three districts namely Una, Hamirpur and Kangra. New Una district was formed by transferring entire Una tahsil, Amb sub-tahsil and villages of Barsar sub-tahsil from the Kangra district.



The district is divided in five administrative sub divisions namely

Una (which houses the District Headquarters), Amb, Bangana, Bharwain and Haroli. Area wise, Amb is the largest entity covering an area of 496.3 sq.kms, followed by Bangana spread over an area of 412.5 sq.kms., Una 333.9 sq.kms, Haroli 198.8 sq.kms and Bharwain spread over an area of 100.6 sq.kms.

Bharwain shares its boundaries with Kotla Khas (Jaswan) and Dera Gopipur Tehsils of Kangra District, Amb shares boundaries with Kotla Khas, Dera Gopipur and Rakkar Tehsils of Kangra District and Bangana shares its boundaries with Rakkar Tehsil of Kangra District, Nadaun and Barasar Tehsils of Hamirpur District and Jhanduta and Naina devi Tehsils of Bilaspur District. Bangana, Una, Haroli and Amb Tehsils share boundaries with Punjab



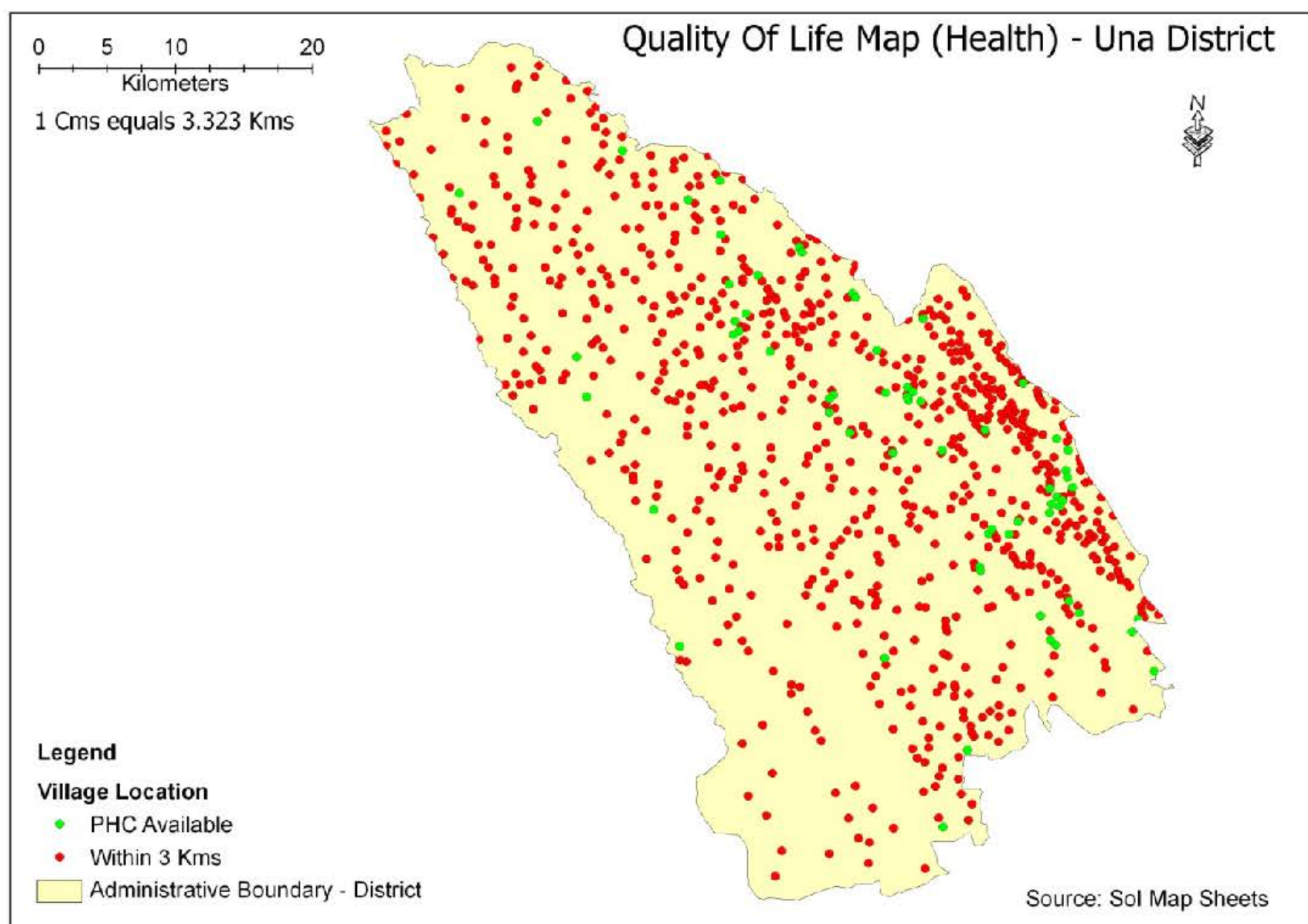
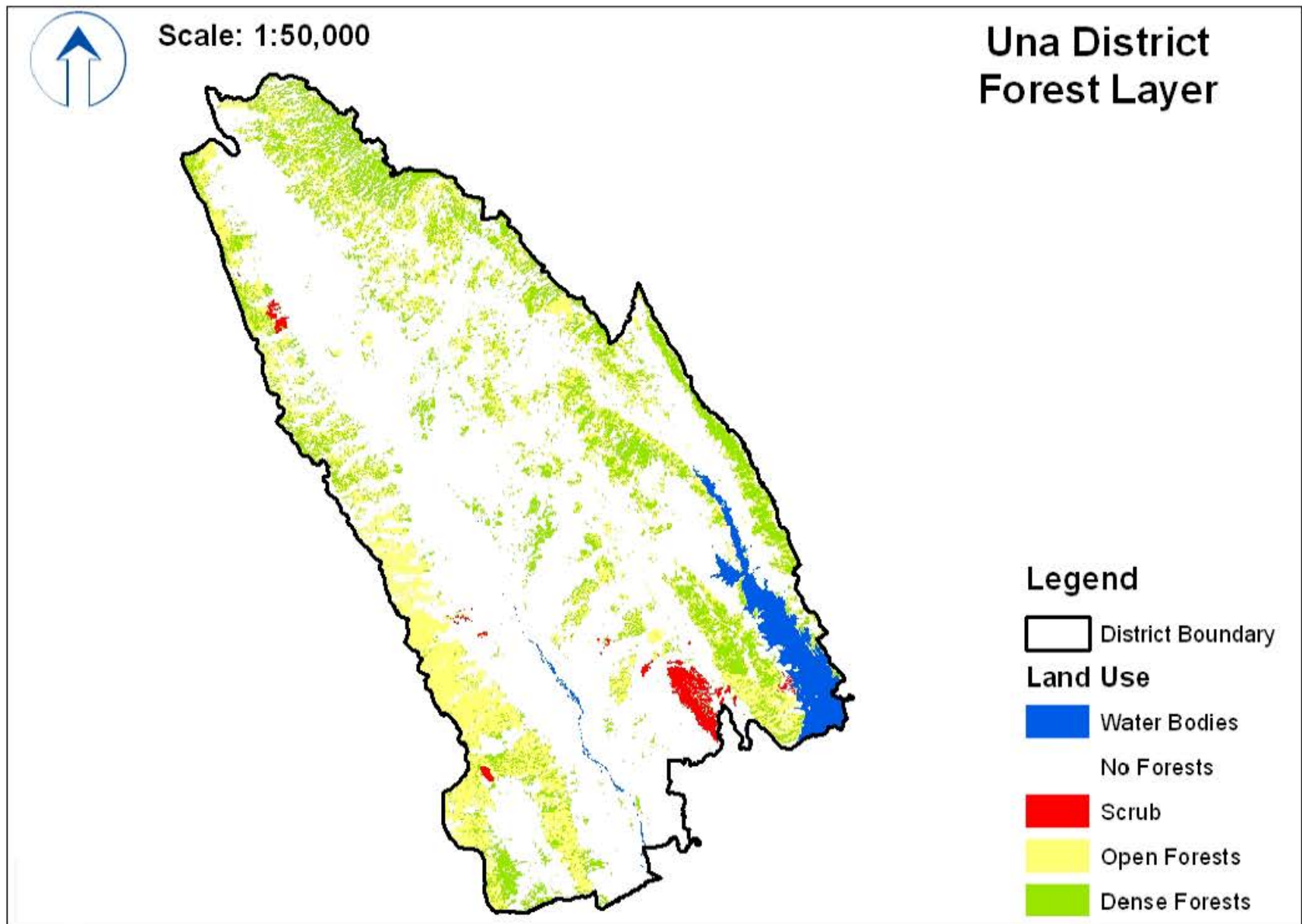
Drainage Map - Una District

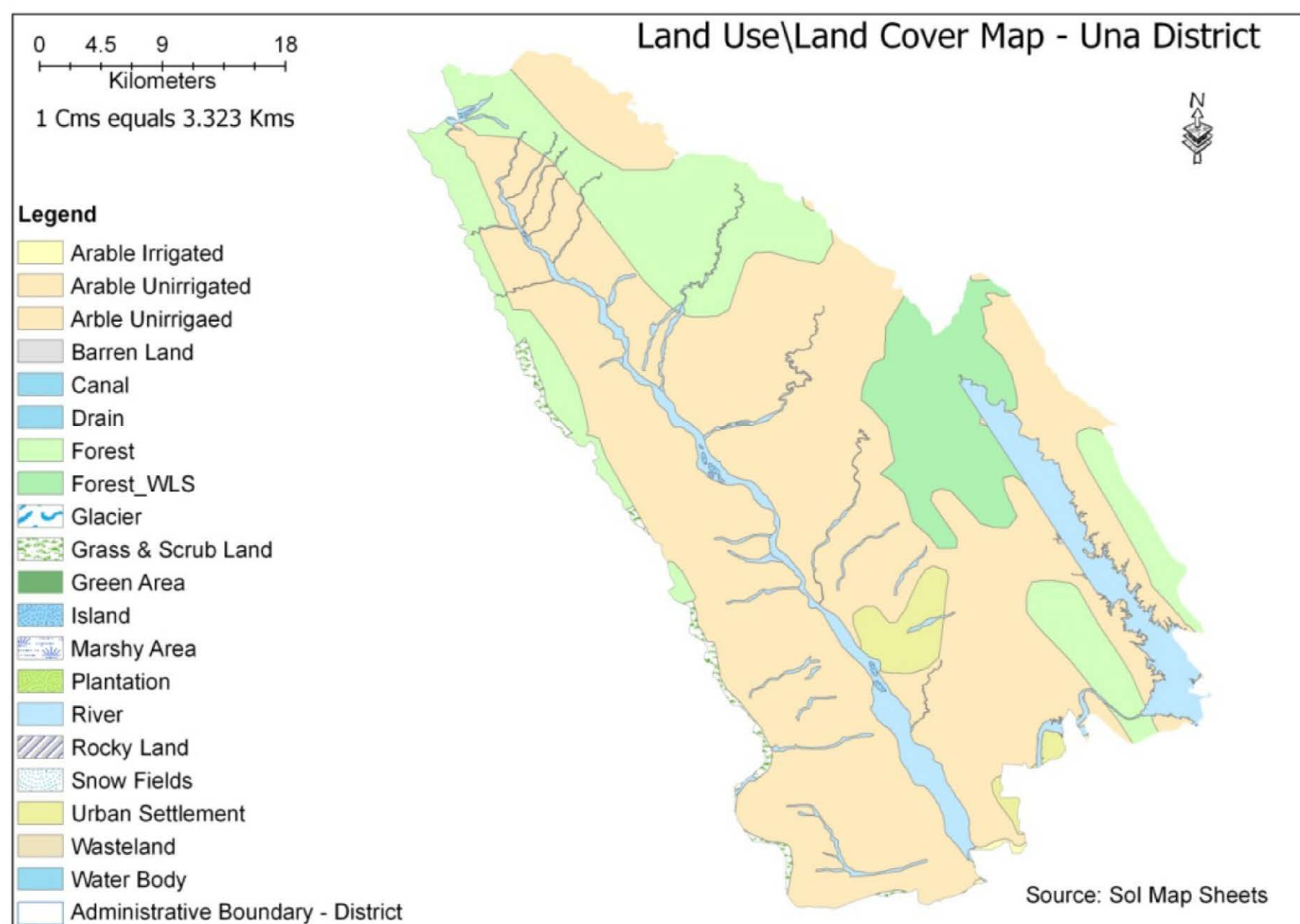
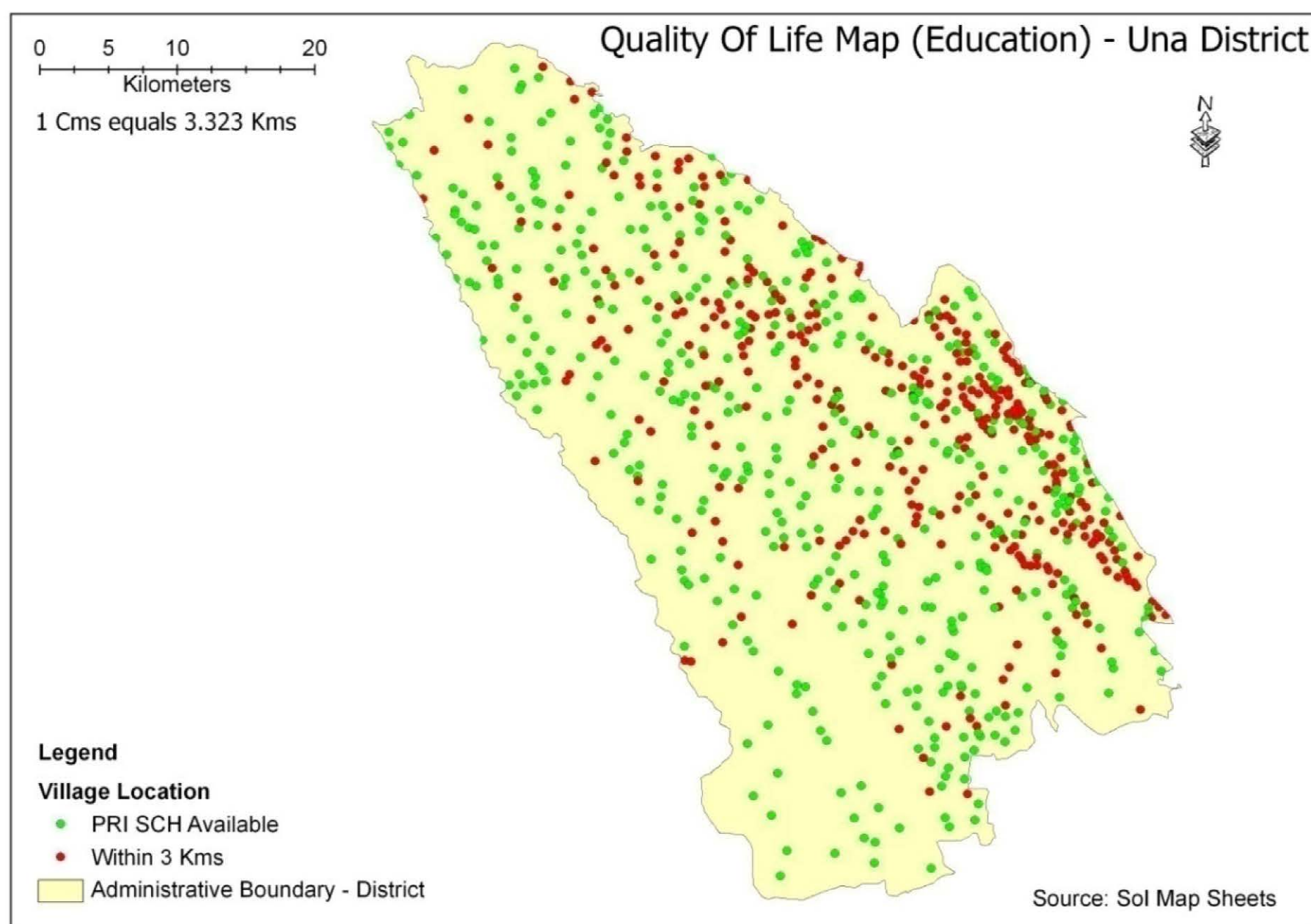


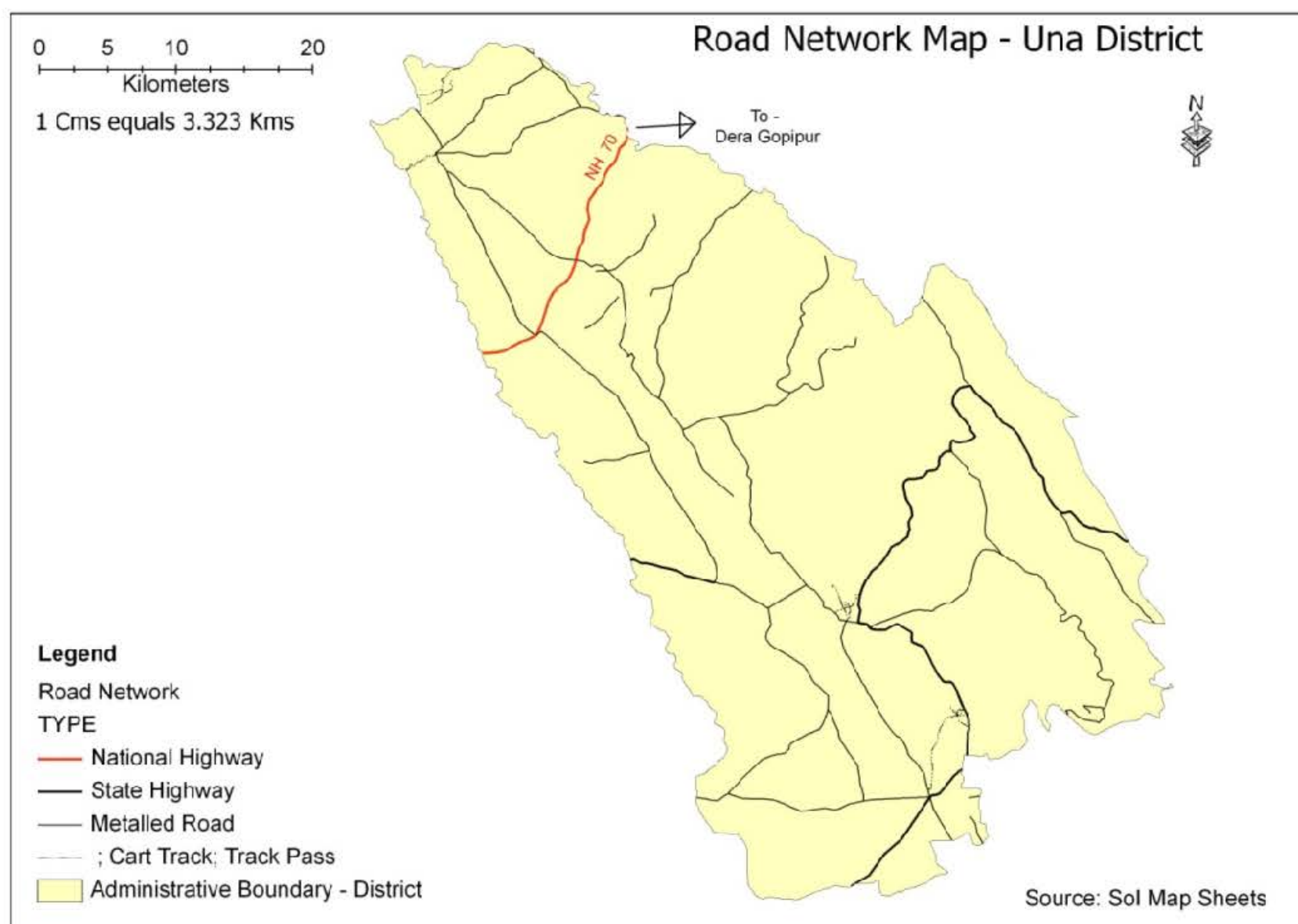
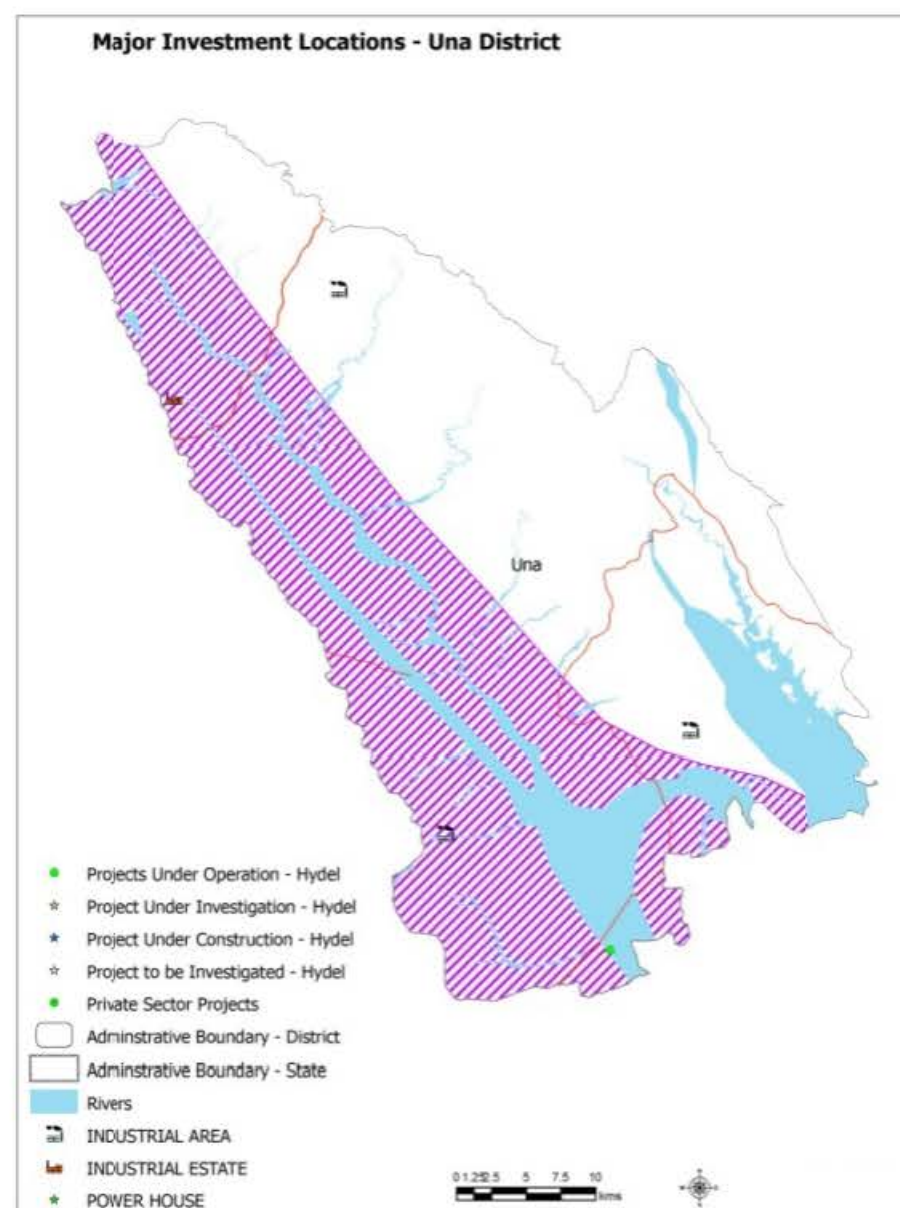
Legend

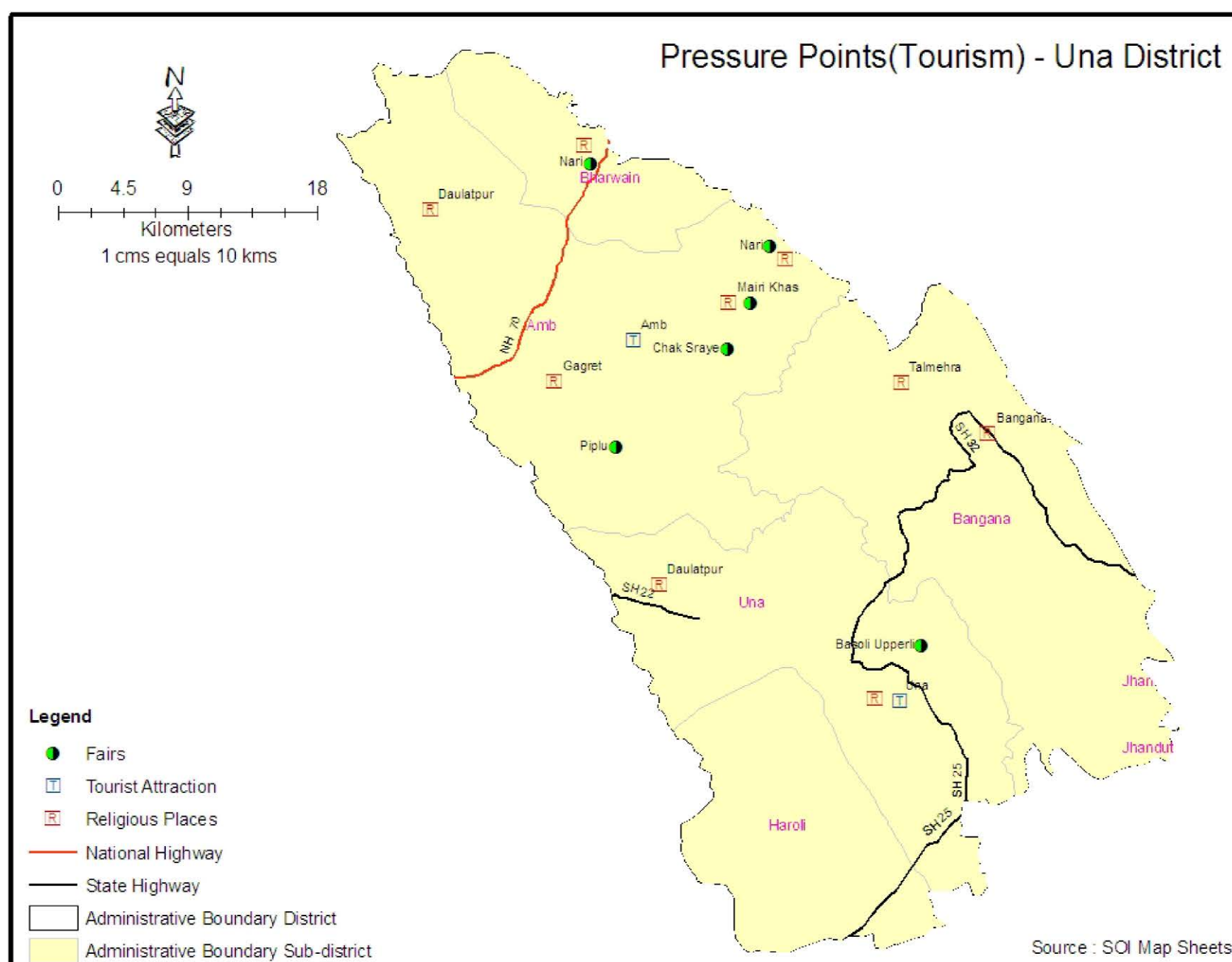
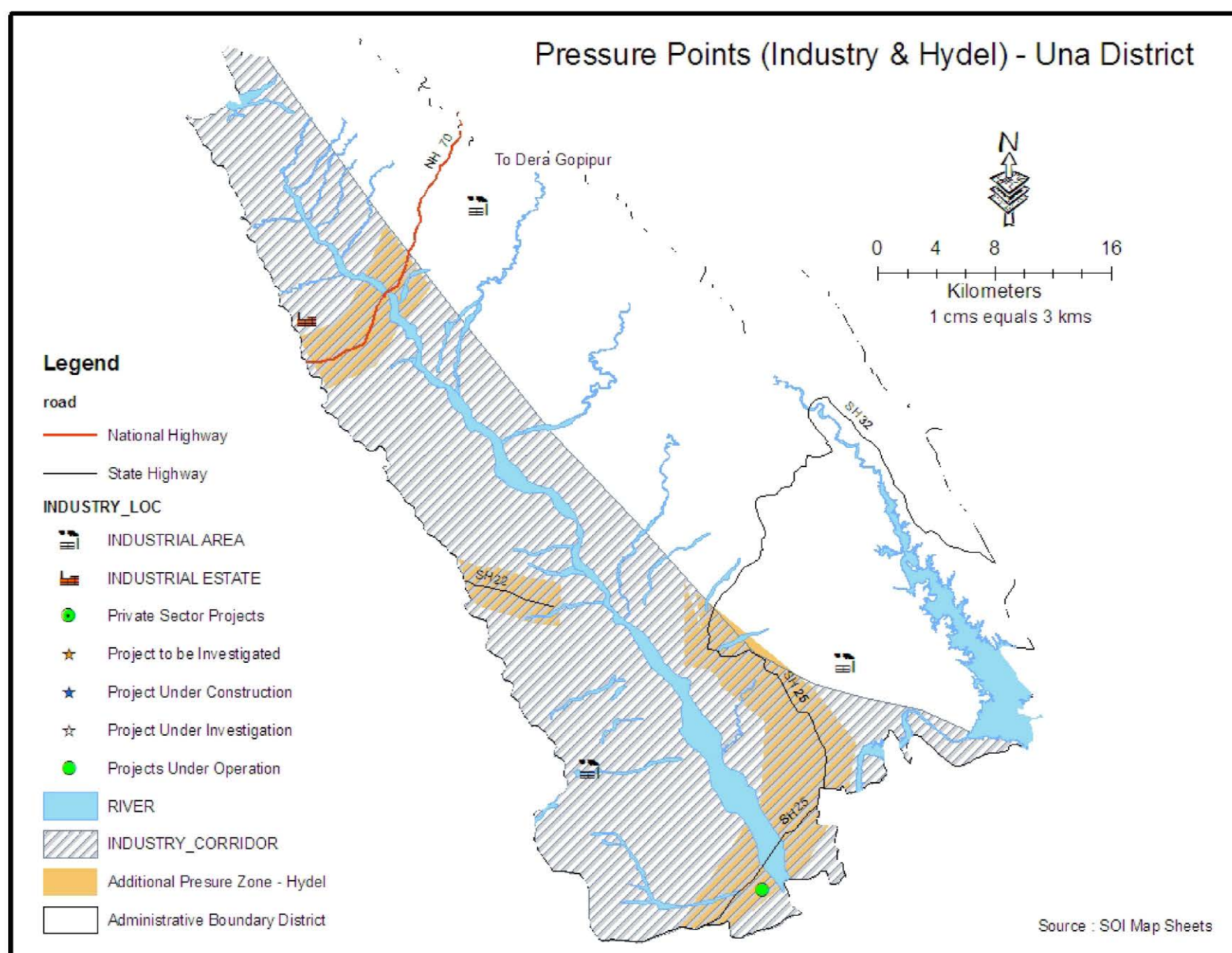
- STREAM
- Major Rivers
- Administrative Boundary - District

Source: Sol Map Sheets



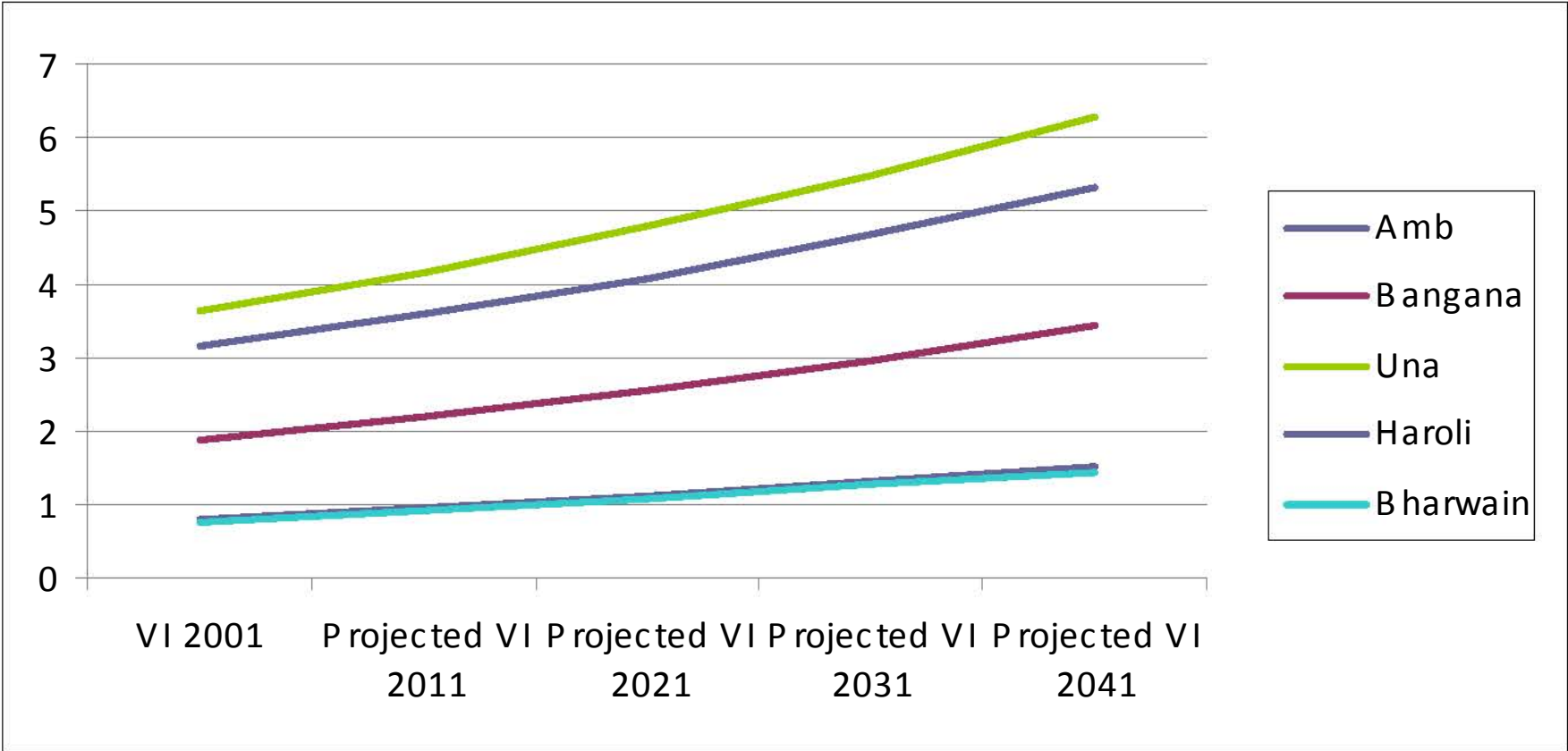




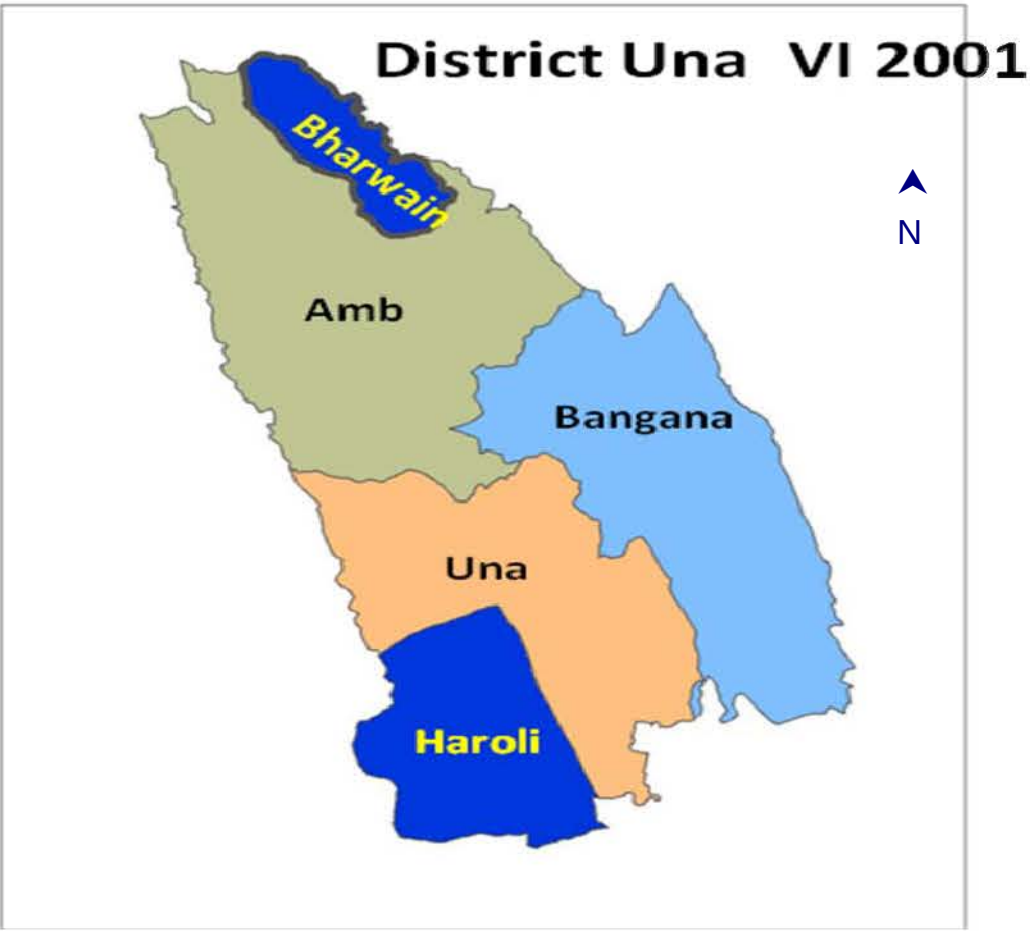


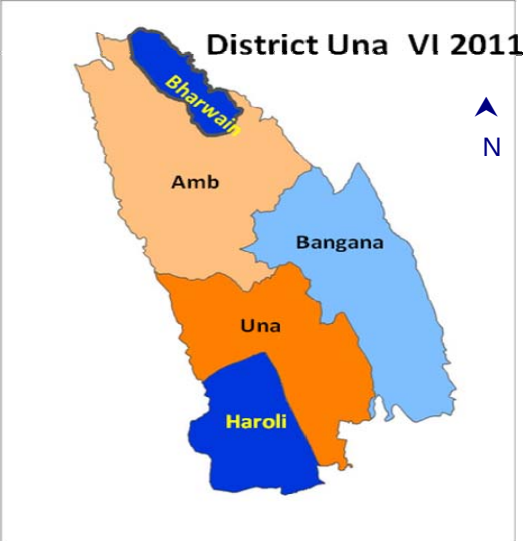
	VI 2001	Projected VI 2011	Projected VI 2021	Projected VI 2031	Projected VI 2041
Amb	3.16	3.60	4.09	4.66	5.311
Bangana	1.9	2.20	2.56	2.98	3.445
Una	3.65	4.18	4.79	5.49	6.284
Haroli	0.82	0.96	1.13	1.31	1.524
Bharwain	0.78	0.94	1.10	1.27	1.450

Vulnerability Index Scenarios – District Una at Tehsil Level



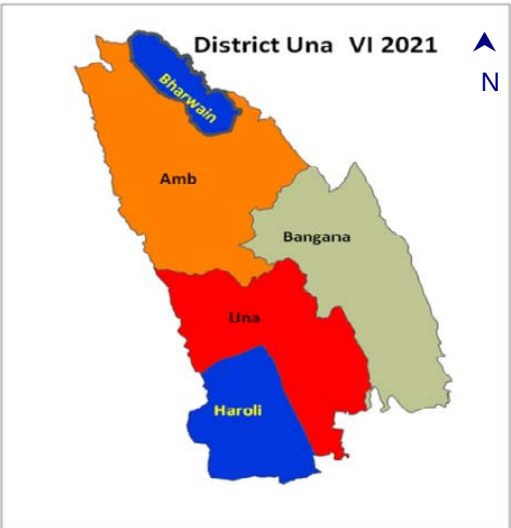
	Amb	Bangana	Una	Haroli	Bharwain
VI	7739.29	4659.38	8946.29	2010.08	1922.30
denominator = 57x43	2451				
Normalized VI	3.16	1.90	3.65	0.82	0.78





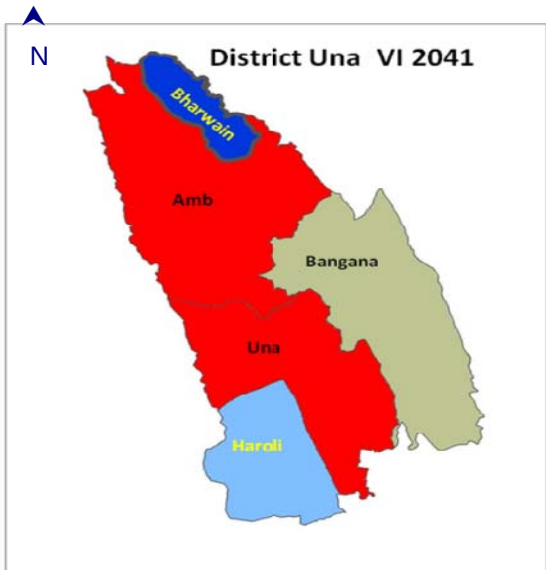
Amb and Una Tehsils move to the next higher segment of vulnerability.

VL L ML MH H VH



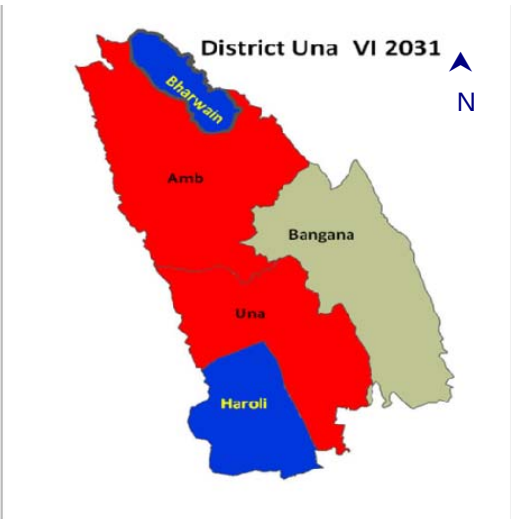
Amb, Una and Bangana move to the next higher segment of vulnerability. Bharwain & Haroli remain in the segment.

VL L ML MH H VH



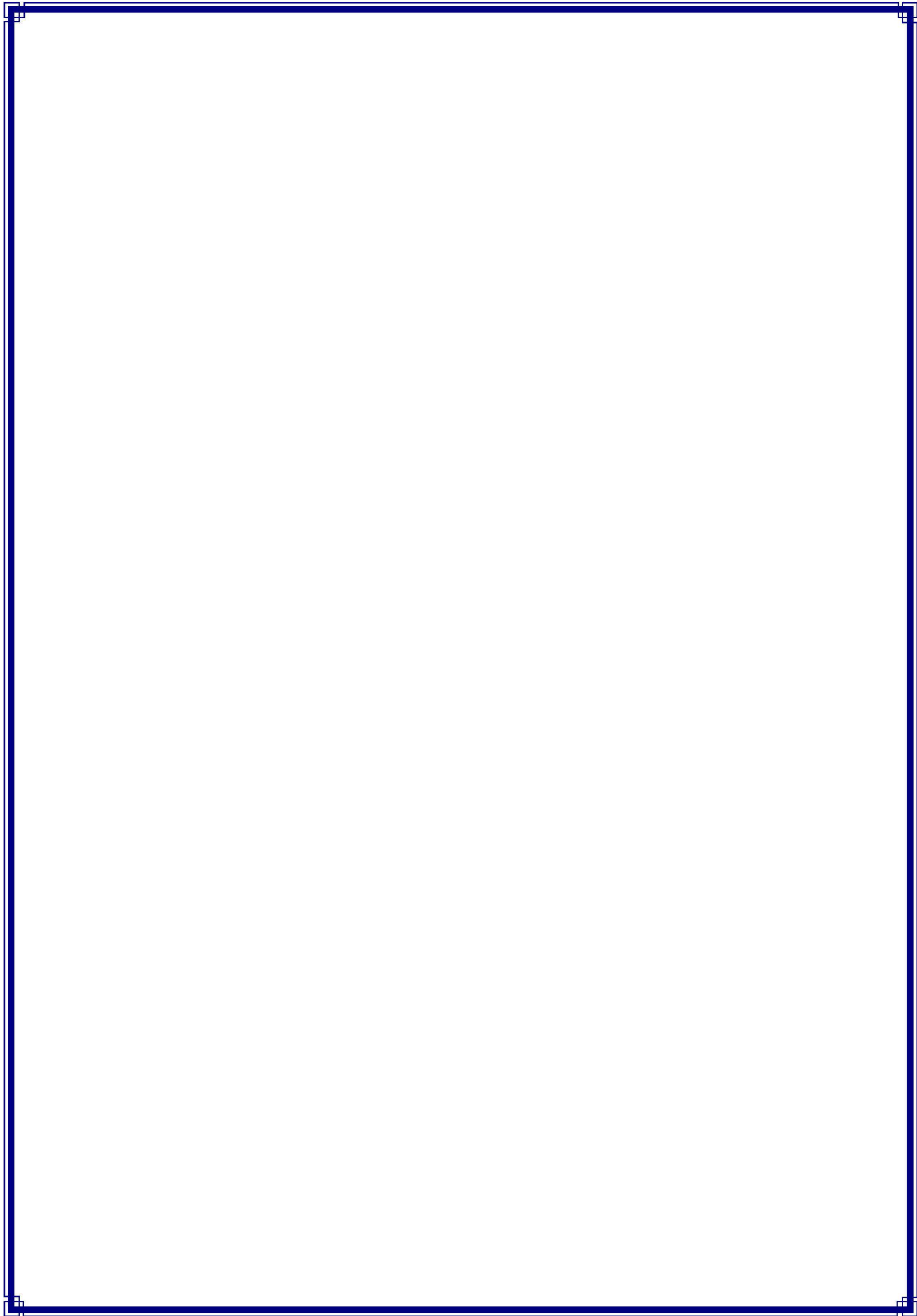
Amb moves to the critical segment. Una remains in the critical segment. Bangana, Haroli and Bharwain retain segments.

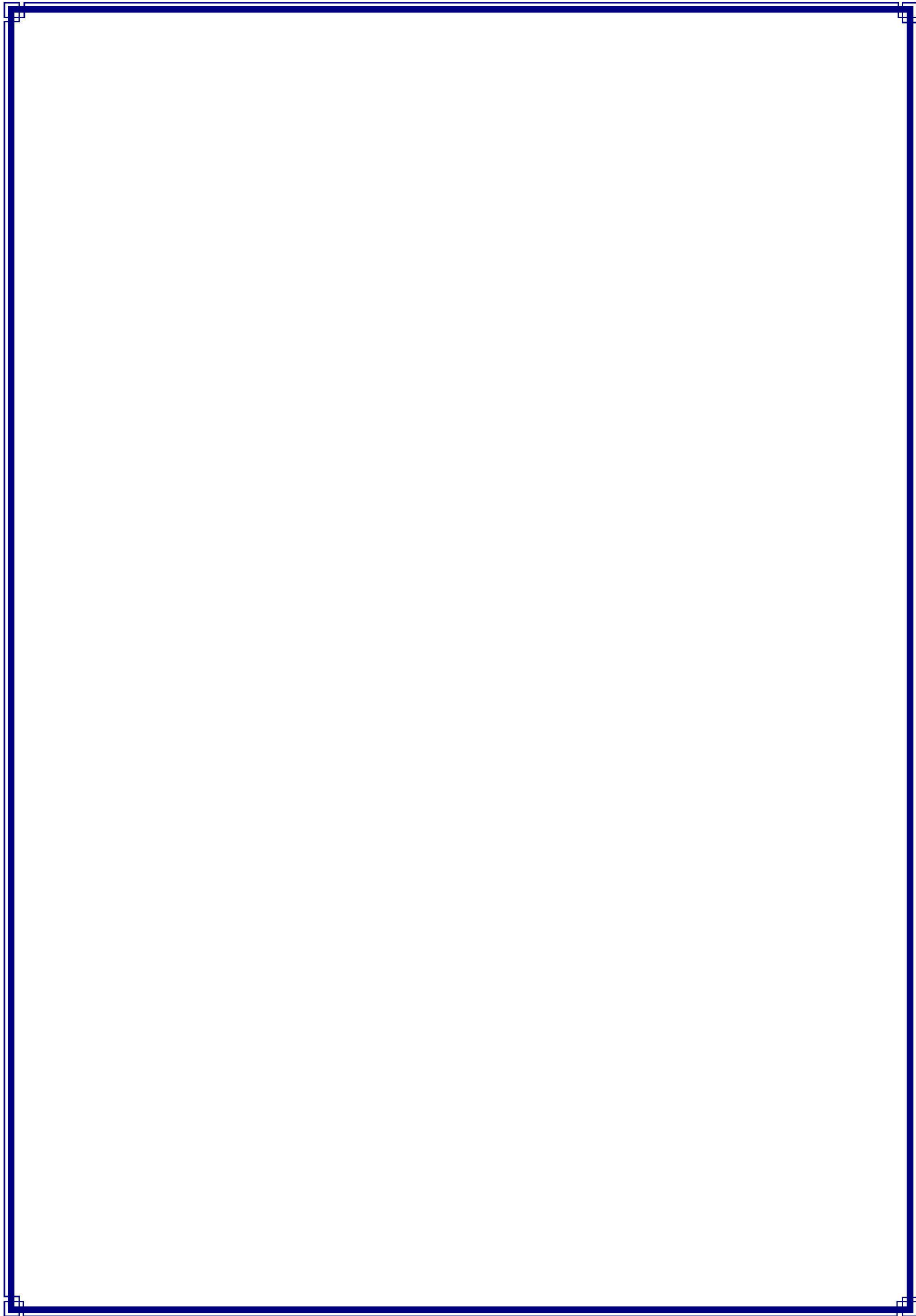
VL L ML MH H VH



Amb, Una, Bangana retain segments. Haroli moves to the next higher segment of vulnerability. Bharwain retains the segment of very low vulnerability.

VL L ML MH H VH





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