

DRAFT MASTER PLAN FOR CHAMPAWAT



DRAFT MASTER PLAN REPORT



For

Town & Country Planning Department

Dehradun, Uttarakhand



Submitted by

School of Planning and Architecture, New Delhi

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PROJECT TEAM

S. No.	Names of members	Designation
1.	Prof. Dr Ashok Kumar	Team Leader
2.	Prof. Dr Rabidyuti Biswas	Member
3.	Prof. Dr P.S.N. Rao	Member
4.	Prof. Poonam Prakash	Member
5.	Prof. Dr Sanjay Gupta	Member
6.	Mr. Ashish Jangid	Senior Project Associate

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SUMMARY

Known for its rich cultural heritage and natural beauty, Champawat, historically the ancient capital of the Chand dynasty, provides a unique foundation for future growth. Located in south-eastern Uttarakhand, Champawat is one of the state's 13 districts. The planning area spans 30.29 square kilometres and had a population of 19,937 as of the 2011 census, comprising one town and 30 villages, with elevations ranging from 1,160 to 2,030 meters above sea level.

Champawat benefits from good connectivity via National Highway 9 (NH 9), linking it to Tanakpur, 75 kilometres to the south, and Lohaghat, 12 kilometres to the north. The nearest railway station is in Tanakpur, and Pantnagar Airport, 170 kilometres away, is the closest air link. Currently, the urban core is densely developed with mixed-use buildings, while surrounding villages lack essential amenities. A 2023 survey by the School of Planning and Architecture, Delhi, identified a 13% housing shortage, highlighting significant gaps. The local workforce has shifted from agriculture to the tertiary sectors, with many households in Economically Weaker Sections (EWS) and Low-Income Groups (LIG). Existing infrastructure is inadequate, with deficiencies in water supply, sanitation, primary education, health facilities, fire safety, recreational areas, and parking. Road encroachments and poor pedestrian facilities further complicate these issues. Champawat, situated in seismic zone IV, faces frequent minor earthquakes and monsoon-induced landslides on NH 9, disrupting daily life.

The master plan envisions developing Champawat and Lohaghat as twin cities to promote sustainable tourism and economic growth while preserving ecological and cultural balance. By 2041, the population is projected to reach 51,037. The plan proposes medium-density development, including plotted housing, an NH bypass, and infrastructure improvements tailored to the topography for efficiency and equity. It emphasizes enhancing tourism through carrying capacity calculations and a tourist circuit to facilitate access to attractions. Water management strategies include a comprehensive drainage layout, water body conservation, buffer zones along streams, and wastewater recycling. Green spaces will be preserved, with areas on 30-degree or steeper slopes and forests remaining undeveloped. Overall, the plan aims to provide a structured, sustainable, and economically resilient framework that improves residents' quality of life, promotes tourism, and safeguards the region's heritage.

CHAPTER 1: INTRODUCTION

1.1 Introduction

The Master Plan is a vehicle for urban settlement planning, which seeks to promote orderly and sustainable development. Since the master plan for Champawat has never been prepared, the Town is experiencing gradual but significant changes in population, infrastructure demand, and environmental pressures. This makes it essential to guide its sustainable and structured growth through a master plan.

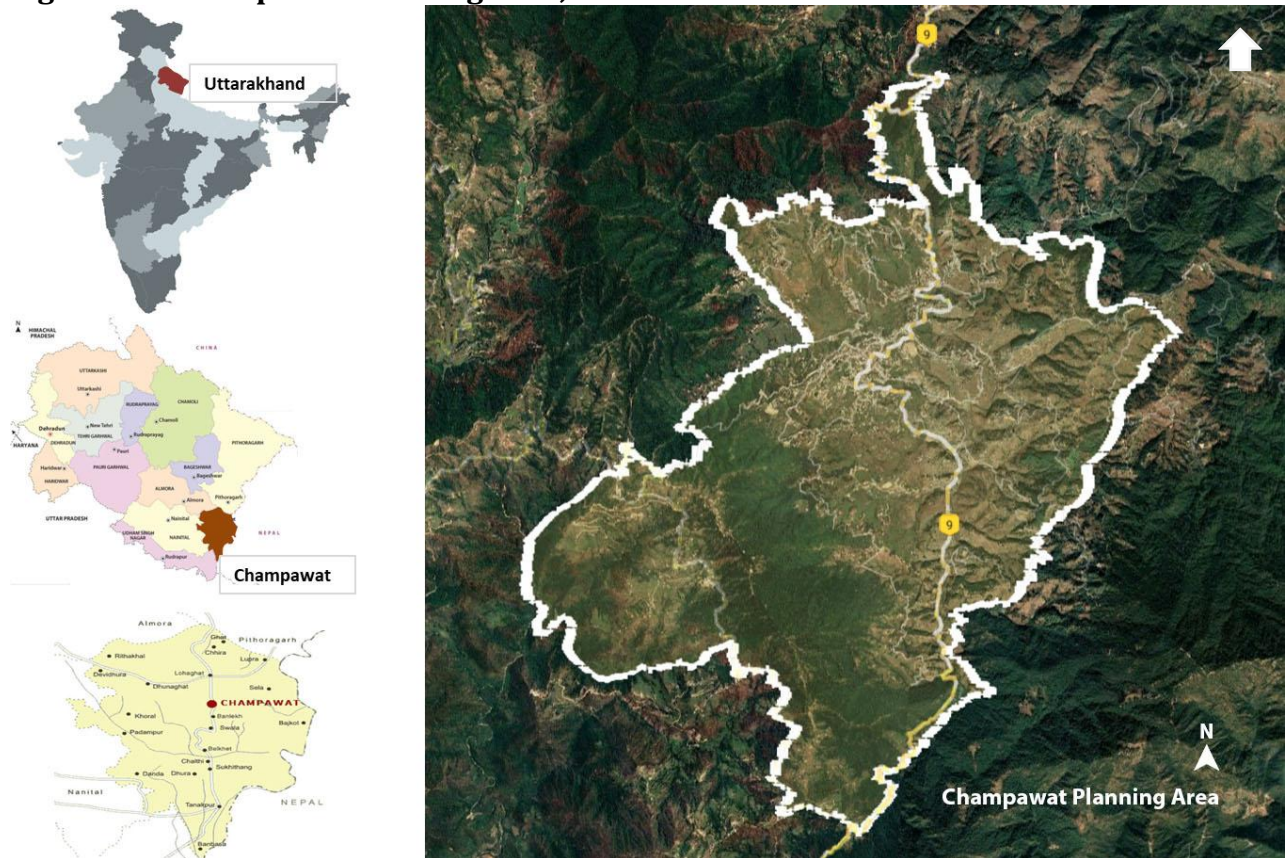
For this a bipartite agreement (dated Wednesday, 14 December 2022) for (Lump Sum Type) consultancy services pertaining to formulation of two separate GIS based Master Plan(s) for ULB Area(s) of Lohaghat and Champawat under District Level Development Authority (DLDA) Champawat in Uttarakhand was accepted and signed on behalf of First Party Town and Country Planning Department, Government of Uttarakhand and second party School of Planning and Architecture, New Delhi.

The scope of the master plan at the time of the agreement covered an area of 4.5 sq km. Further, in accordance with the letter 232/Honourable Chief Minister's Announcement/Champawat Mayor/2022-23 and letter UHUDA1-FINC/21/2023-DLDACHP-DEPT-UHUDA (computer no. 45566), an additional eighteen villages have been incorporated into the planning area. This expansion brings the total area to 30.29 square kilometres, now encompassing thirty villages and one urban area as per the 2011 census. The horizon year for the draft Master Plan will be for 2041. The contents of the draft Master Plan document will be in accordance with the Urban and Regional Development Plans Formulation and Implementation (URDPFI) Guidelines, 2015, the statutory provisions of the Uttarakhand Urban & Country Planning and Development Act, 1973, and other Relevant Acts and Legislation of the state of Uttarakhand.

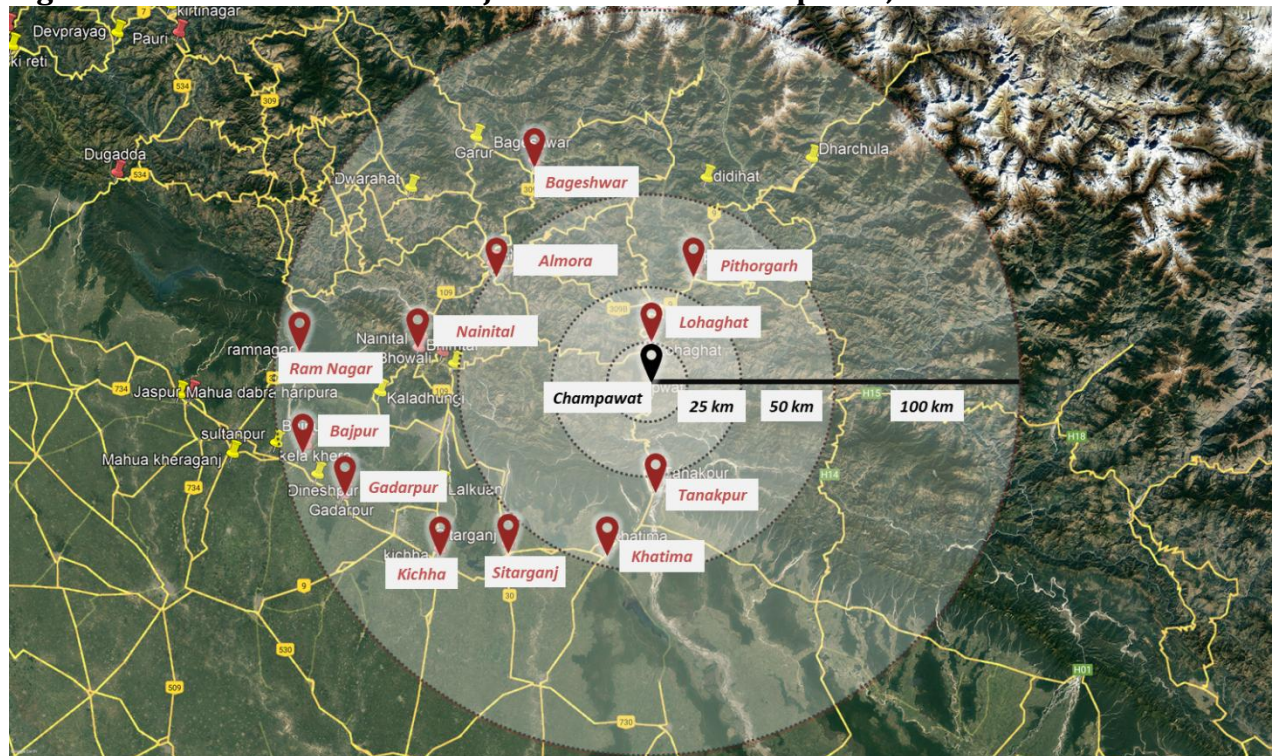
1.2 Planning Area Profile

Champawat holds a significant place in history as the ancient capital of the Chand dynasty, known for its monuments, including the exquisite Baleshwar Temple and numerous forts that showcase the architectural grandeur of the past. This rich cultural heritage is deeply woven into the region's temples, folklore, and traditional practices, creating a unique cultural foundation for future development. Champawat is one of the 13 districts of Uttarakhand, divided into five tehsils: Barakot, Champawat, Lohaghat, Shri Poornagiri, and Pati and four development blocks: Champawat, Barakot, Pati, and Lohaghat. The planning area falls within the Champawat Development Block, encompassing the Champawat Municipal area and surrounding villages.

The Champawat Planning Area covers 30.29 sq. km and has a population of 19,937, according to the 2011 Census. The planning area includes Champawat town and 30 villages as recorded in the 2011 Census. In 2019, the Champawat municipal area was expanded to include the town, four entire villages, and portions of eight other villages. As the population in this report relies on available census data, the list of towns and villages within the planning area is based on Census 2011 figures.

Figure 1.1: Champawat Planning Area, 2023.

Source: School of Planning and Architecture, New Delhi (2023)

Figure 1.2: Aerial Distance of Major Towns from Champawat, 2023

Source: School of Planning and Architecture, New Delhi (2023)

Champawat's connectivity is well-established. The area is linked by road to major cities in Uttarakhand and neighbouring states via National Highway 9 (NH 9), which runs in a north-south direction. NH 9 connects Champawat to Tanakpur, located approximately 75 kilometres to the south, and Lohaghat, situated around 12 kilometres to the north. The nearest railway

station is in Tanakpur, while Pantnagar Airport, approximately 170 kilometres away, serves as the nearest air link.

The physical setting of Champawat is characterized by its hilly terrain with an average slope of 5 to 10 degrees and lush green landscapes. The district is divided into three major geomorphic units: high-denudation mountains, river valleys, and plains. The southern part of the district features the Siwalik Group of rocks, which has a comparatively wide and mature topography with gentle slopes. Additionally, the area includes moraine plains, river terraces, structural valleys, lineaments, faults, and thrusts. With elevations ranging from 1,160 to 2,030 meters above sea level, the planning area boasts diverse topography.

Champawat Town has a notably high population (4801), followed by Majgaon (2,147), Khark Karki (1,150), and Mudiyani (1,083). Smaller villages such as Lista (47 people) and Chowkni Pandey (60 people) have very low populations, highlighting a potential disparity in settlement sizes. This shows that the population is more concentrated on the northern and eastern sides of the planning area.

Table 1.1: Town and Villages in the Champawat Planning Area, 2011

S. No.	Town and Villages		Area (in Ha) as per Census 2011	Population (Census 2011)
1	Champawat Town	Nagar Panchayat	500.00	4,801
2	Chaura Sethi	Village	16.70	547
3	Danda Bisht	Village	8.50	419
4	Dhakna Badola	Village	7.00	363
5	Dungra Saithi	Village	21.20	511
6	Jup Patua	Village	52.10	746
7	Kanalgaon	Village	9.20	222
8	Khark Karki	Village	253.00	1,150
9	Kulathi	Village	106.00	650
10	Maadli Malli	Village	168.20	517
11	Madli Talli	Village	23.80	383
12	Majgaon	Village	158.50	2,147
13	Nadhan	Village	45.40	289
14	Palsau	Village	25.20	202
15	Punaithi	Village	223.00	618
16	Shaktipur	Village	396.90	630
17	Tyarkuda	Village	235.70	551
18	Selakhola	Village	Census 2011 data not available	
19	Chowki	Village	130.70	707
20	Fungar	Village	166.60	551
21	Silang Tak	Village	87.00	342
22	Nagar Gaon	Village	21.60	143
23	Latoli	Village	42.40	568
24	Lista	Village	13.20	47
25	Kaflang	Village	63.80	250
26	Chowkni Bora	Village	268.70	493
27	Rakri Phulara	Village	41.00	208
28	Chowkni Pandey	Village	20.00	60
29	Bajrikot	Village	330.90	671
30	Chamiai	Village	57.8	68

S. No.	Town and Villages		Area (in Ha) as per Census 2011	Population (Census 2011)
31	Mudiyani	Village	712.00	1,083
Total			4206.10	19,937.0

Source: Census of India (2011).

The hydrogeology of Champawat is characterised by its gneissic aquifer. The highly weathered gneissic rocks have low cohesion, making the area prone to landslides and limiting its potential for water storage. Groundwater occurrence in the Champawat area is restricted to small, localized aquifers with limited potential.

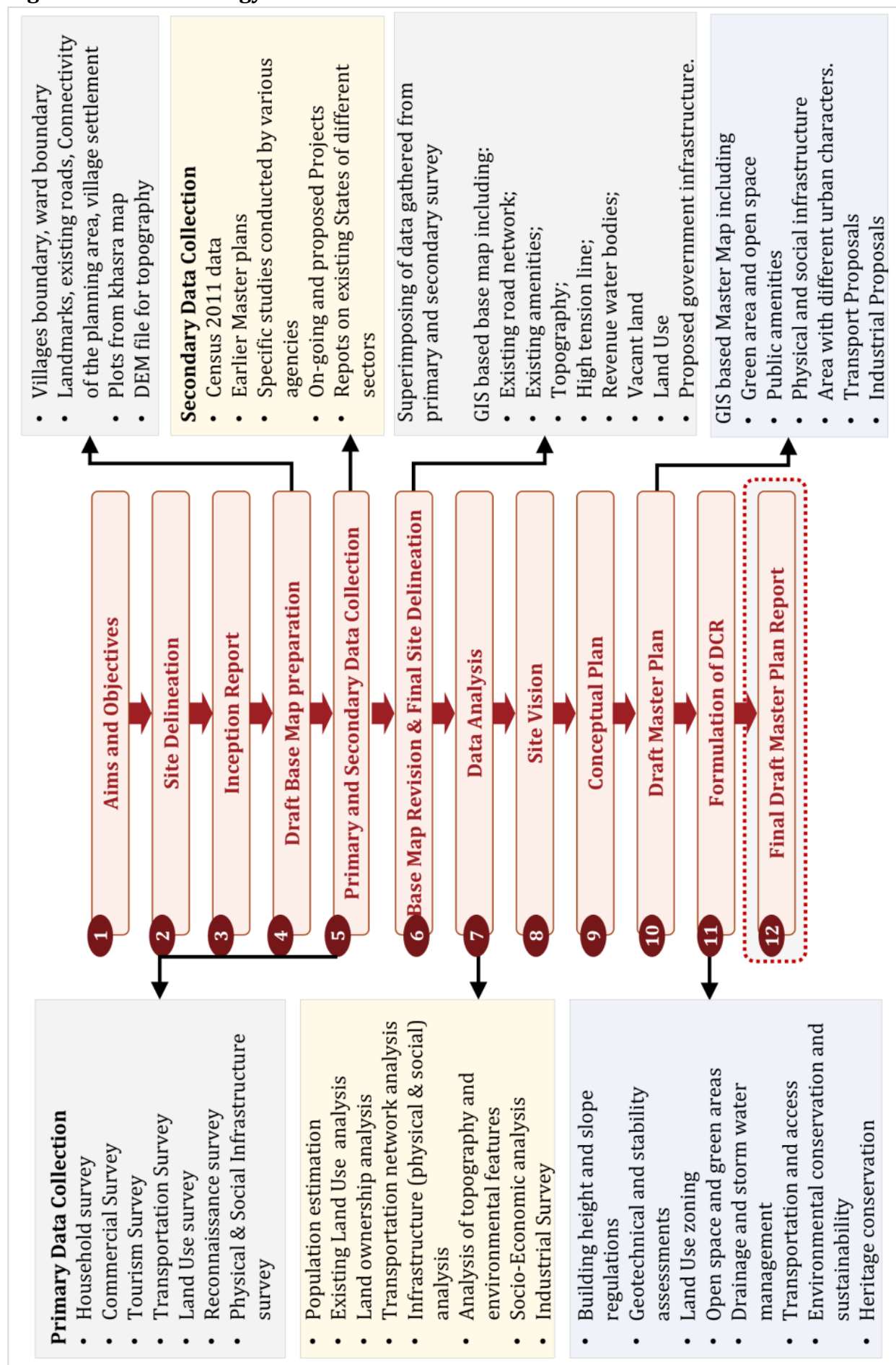
The district is home to several important rivers, including the Ladhia, Sharda, Lohawati, Panaar, Jagbura, and Ramganga. Although the planning area does not have major rivers, a tributary flows throughout it and eventually merges with the Kali River in Pancheswar. These rivers are essential for drinking water and irrigation. The climate of Champawat is temperate, with cool summers and cold winters. The region receives moderate to heavy rainfall during the monsoon season, which supports its lush greenery and forest cover.

Land degradation is a significant issue in Champawat, driven by deforestation, overgrazing, and unsustainable agricultural practices. Soil erosion and landslides are common problems, exacerbated by the region's steep slopes and heavy rainfall. Addressing these challenges through reforestation, sustainable land management, and community awareness programs is crucial for preserving the region's natural resources and ensuring sustainable development.

1.3 Methodology for the Development of the Master Plan

To develop the Draft Master Plan for the Champawat Planning Area, 2041, an inclusive and collaborative approach was adopted, adhering to democratic processes and statutory requirements. The methodology involved extensive reconnaissance, site visits, and consultations with residents and key stakeholders. Initially, a comprehensive delineation of the planning area was conducted by rasterising the municipal khasra map, thereby defining the planning boundary. The planning boundary was further revised to 29 sq. km. A base map for this area was then prepared to guide field visits, and a 10-day field survey, conducted starting on June 7, 2023, gathered primary and secondary data to provide an in-depth understanding of the area's characteristics and needs.

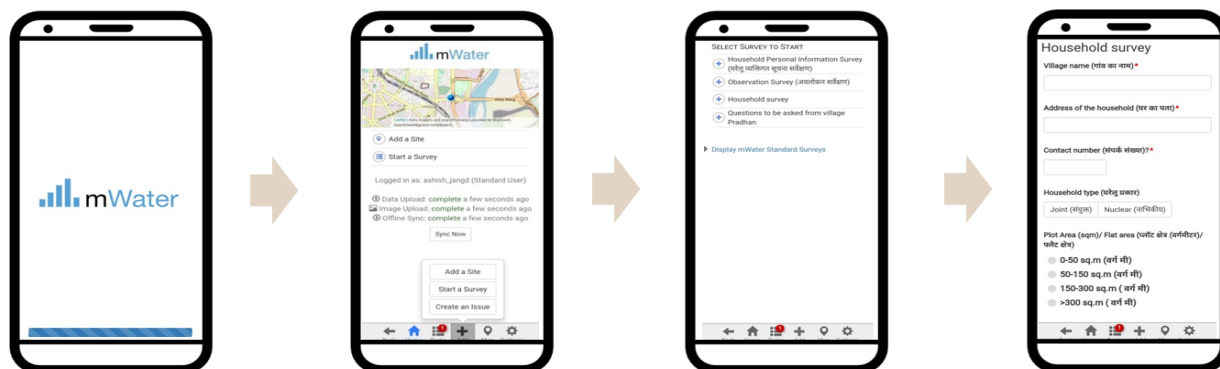
Figure 1.3: Methodology



Source: School of Planning and Architecture. New Delhi, 2023.

Various surveys were undertaken, including land use, household, commercial, tourist, and traffic and transportation surveys. Ground-truthing for land use used a pre-digitised base map with a 500 m by 500 m grid. The household survey sampled 10% of the municipal area's households, resulting in a sample of 224 households, complemented by 54 commercial and 32 tourist surveys. The surveys were conducted using the "MWATER" mobile app for streamlined data collection.

Figure 1.4: mWater application used for survey, 2023



Source: School of Planning and Architecture, New Delhi (2023).

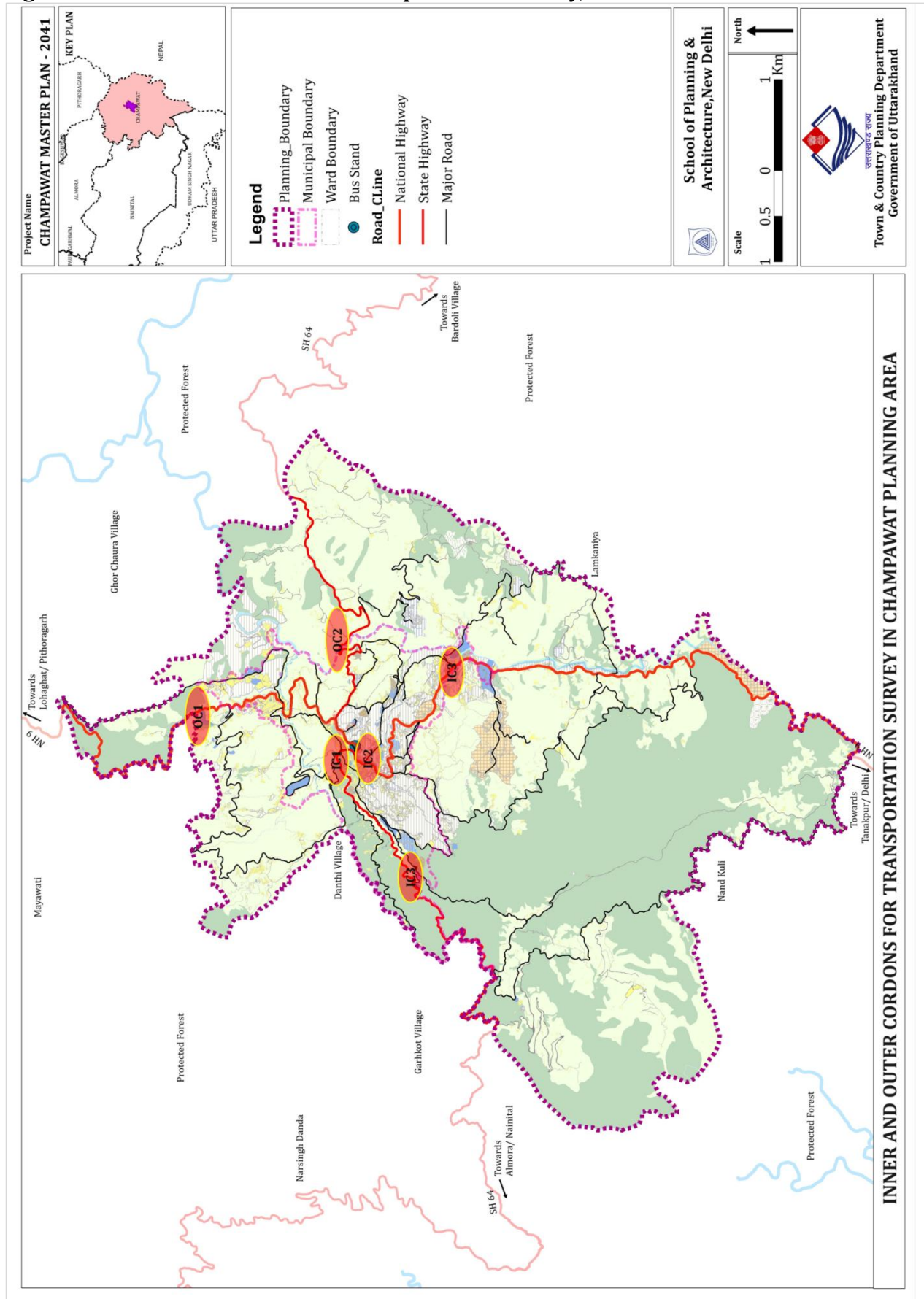
Figure 1.5: Primary Survey by School of Planning and Architecture. Delhi team, 2023



Source: School of Planning and Architecture. New Delhi (2023).

For the traffic and transportation analysis, road inventory, speed-delay surveys, traffic volume counts, origin-destination studies, and parking assessments were performed. Road inventory and speed-delay surveys were carried out on arterial and sub-arterial roads between 9:00 am and 11:00 am, while traffic volume counts and origin-destination surveys were conducted on selected cordons, both outer and inner, between 10:00 am and 5:30 pm.

Figure 1.6: Cordons selected for transportation survey, 2023



Source: School of Planning and Architecture. New Delhi (2023).

Figure 1.7: Stakeholder meeting by the School of Planning and Architecture. Delhi team, 2023



Source: School of Planning and Architecture. New Delhi (2023).

Stakeholder meetings were also essential to the process, including a significant consultation with the District Magistrate, who suggested incorporating surrounding villages to achieve a more comprehensive approach. Subsequently, the planning boundary was further expanded to include the School of Planning and Architecture. Delhi also incorporated Mudiyani Village, a densely populated area, into the suggested area, bringing the planning area to 30.29 sq. km.

Following field surveys, the base and land-use maps were updated and refined, with all buildings and roads digitised and coded by land-use type at a 1:1000 scale for accuracy.

The final analysis of each sector was performed to align with the existing issues and emerging development opportunities, setting a vision for the planning area that addresses current needs while anticipating future growth. This analysis and vision are detailed in the subsequent report on analysis and vision development.

Based on the analysis and upcoming projects, proposals are formulated to address immediate needs and support sustainable growth. Key proposals include adjustments to optimise land use, infrastructure upgrades to support anticipated population growth, improved connectivity and a preference for pedestrians, enhancements to social amenities, promotion of the tourism sector, and preservation measures for cultural and natural resources. These proposals aim to enhance the quality of life for current residents while establishing a foundation for managed, resilient growth through 2041.

1.4 Vision of the Master Plan for Champawat, 2041

The Vision 2041 for Champawat has been structured around 4 core goals to address issues identified through the existing situation analysis, stakeholder aspirations, and anticipated future challenges. These are as follows:

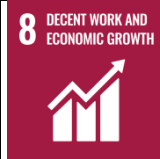
Goal A. Developing Champawat and Lohaghat as Twin Cities in Uttarakhand

Goal B. Proposing Champawat as a Model of Sustainable Development in Uttarakhand

Goal C. Proposing Economic Buoyancy in Champawat

Goal D. Maintaining Ecological and Cultural Balance in Champawat: A Holistic Approach

Table 1.2: Alignment of Vision 2041 Goals for Champawat with the UN SDGs

S. No.	Master Plan Vision Goals	Sub-heads	Links with UN SDGs	
			Direct Link	Indirect Link
1.	Goal A. Developing Champawat and Lohaghat as Twin Cities in Uttarakhand	- To Boost Human Resources - To Encourage Tourism - To Improve Way of Living	  	 
2.	Goal B. Proposing Champawat as a Model of Sustainable Development in Uttarakhand	- Ecological Conservation and Conscious Urban Planning - Promoting Eco-Friendly Practices - Responsible Waste Management - Integrating Green Spaces into Cityscape	   	  
3.	Goal C. Proposing Economic Buoyancy in Champawat	- Value Addition of Available Natural Resources - Develop MICE Venues with Better Connectivity - Promote Cottage Industries	 	 
4.	Goal D. Maintaining Ecological and Cultural Balance in Champawat: A Holistic Approach	- Green Building Practices - Rainwater Harvesting - Afforestation Programs - Maintaining Cultural Balance	 	 

Source: UN SDGs and School of Planning and Architecture. New Delhi, 2023.

1.5 Conclusion

Master Plan for Champawat, 2041, is intended to develop Champawat and Lohaghat as twin settlements for sustainable tourism and economic buoyancy while nurturing ecological and cultural balance by 2041. This plan aims to promote sustainable tourism and economic growth while preserving ecological and cultural balance. Champawat is known for its stunning natural beauty, with lush forests, rivers, and mountainous terrain, making it an ecological

treasure. The region's rich historical and cultural heritage, exemplified by the ancient Baleshwar Temple and traditional Kumaoni culture, adds to its charm. By focusing on these strengths, the plan seeks to develop infrastructure and tourism in ways that benefit the local economy without compromising the environment or cultural integrity.

CHAPTER 2: DEMOGRAPHY

2.1 Introduction

The Champawat planning area is situated in the Champawat District, comprising Champawat town and 30 villages in the area, like Madli Talli, Madli Malli, Majgaon, Juppatwa, Kanalgaon, Tyarkuda, Punethi, Shaktipur, Dungra Sethi, Danda Bisht, Kharkharki, Dhakna Badola, Nadhan, Palsau, Chaura Sethi, Kulethi, etc. The planning area covers 30.29 sq. km, of which Champawat town accounts for 4.5 sq. km, and the remaining 30 villages cover 25.79 sq. km. The total population of the planning area, as per the 2011 Census, is 19,937, with 4,935 households. Population projections for the Champawat Planning Area are based on all relevant and practical factors. However, the results may differ as the scenario changes over time.

2.2 Existing Demographic Profile

2.2.1 Population

From 2001 to 2011, Uttarakhand experienced a state-wide population growth rate of 18.81%. However, when comparing the growth rates of individual districts, Dehradun, Nainital, Udham Singh Nagar, and Haridwar stand out with growth rates exceeding 25%. These districts have undergone significant urbanisation, leading to high population densities. **(Refer Table 2.1 and Figure 2.1)**. Following these high-growth districts, Champawat and Uttarkashi have shown moderate growth rates up to 2011, while the remaining districts recorded relatively low growth rates, under 10%.

This trend suggests that Champawat is likely to experience faster growth in the coming years. Additionally, within the Champawat district, population growth is concentrated primarily in the municipal areas of Tanakpur, Champawat, and Lohaghat. **(Refer Table 2.2)**. In Champawat town, the growth rate has been moderately high over the past three decades, suggesting that people might be migrating there. **(Refer Table 2.4)**

The settlement pattern in the planning area is very sparse, with a population density of 6.58 people per hectare (pph) for the total area and 18 pph for the developed area. There are 4,935 households, with an average household size of 4.1 members. The sex ratio is 865 females per 1,000 males, indicating a slightly lower female population than males. This low population density is due to reasons such as topographical constraints, infrastructure limitations, and accessibility challenges, resulting in a sparse settlement pattern with ample open space. **(Refer Table 2.3)**

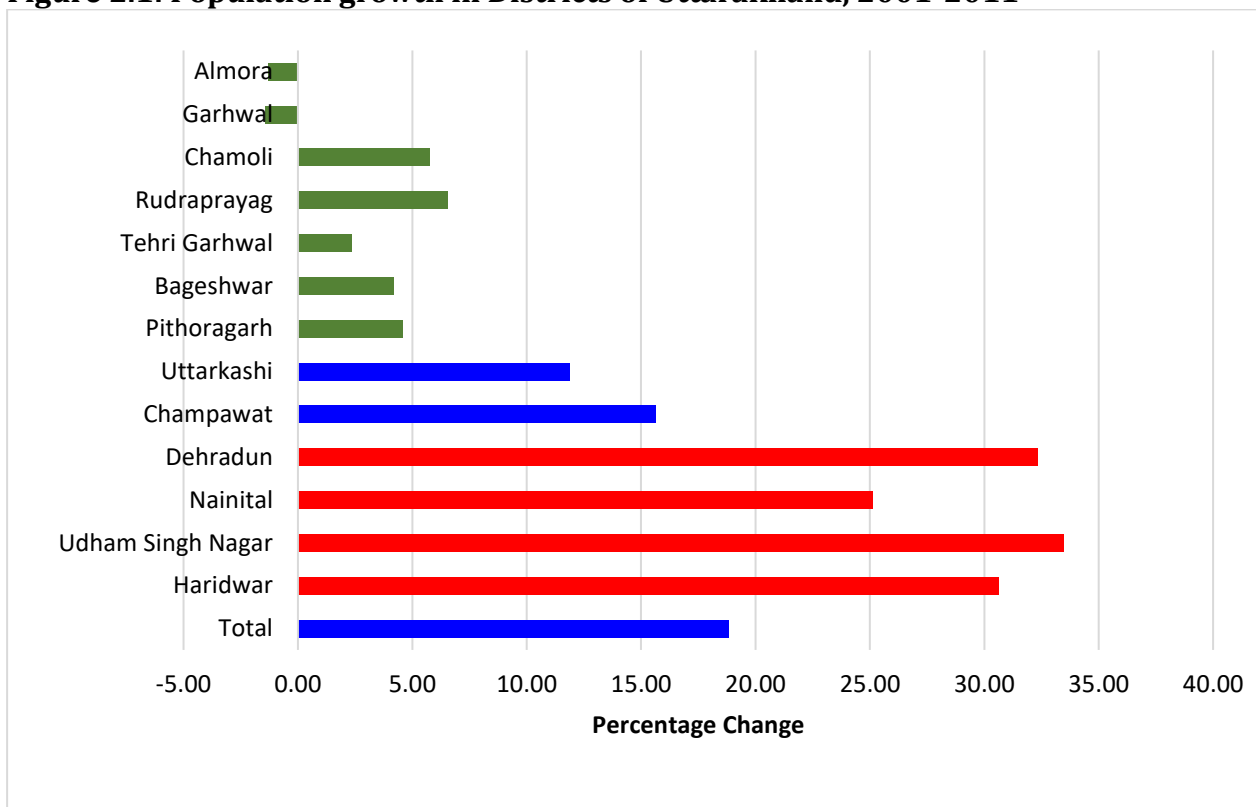
Table 2.1: Population growth in Districts of Uttarakhand, 2001-2011

	2001	2011	Percentage Change
Total in State	8489349.00	10086292.00	18.81
Haridwar	1447187.00	1890422.00	30.63
Udham Singh Nagar	1235614.00	1648902.00	33.45
Nainital	762909.00	954605.00	25.13
Dehradun	1282143.00	1696694.00	32.33
Champawat	224542.00	259648.00	15.63
Uttarkashi	295013.00	330086.00	11.89
Pithoragarh	462289.00	483439.00	4.58
Bageshwar	249462.00	259898.00	4.18
Tehri Garhwal	604747.00	618931.00	2.35

Rudraprayag	227439.00	242285.00	6.53
Chamoli	370359.00	391605.00	5.74
Garhwal	697078.00	687271.00	-1.41
Almora	630567.00	622506.00	-1.28

Source: Census of India (2001 and 2011).

Figure 2.1: Population growth in Districts of Uttarakhand, 2001-2011



Source: Census of India (2001 and 2011).

Table 2.2: Population growth in major towns of Champawat District, 2001-2011

Towns in Champawat District	Population, Census 2001	Population, Census 2011	Percentage Change
Tanakpur	15,811	17,626	11.48
Banbasa	8,179	7,990	-2.31
Champawat	3,959	4,801	21.27
Lohaghat	5,829	7,926	35.98

Source: Census of India (2001 and 2011).

Table 2.3: Demographic Data of Champawat Planning Area, 2011.

Population	Area in sq. kms	Households	Household Size	Population Density in pph	Sex Ratio
19,937	30.29	4,935	4.1	6.58	865

Source: Census of India (2011).

The population data for Champawat Town and its surrounding villages over the census years 1981, 1991, 2001, and 2011 highlight significant growth trends (**Refer. Table 2.4**). In 1981, Champawat Town had a population of 1,702, which increased to 4,801 by 2011 (**Refer. Table 2.5**). The surrounding villages saw even more substantial growth, from 5,349 in 1981 to 15,136 in 2011. The spatial distribution of growth in the planning area is shown in **Figure 2.2**.

Overall, the total population of the planning area grew from 7,051 in 1981 to 19,937 in 2011, reflecting a steady increase in both urban and rural populations over the three decades. The

population in the Champawat planning area grew substantially over the three decades, representing a remarkable increase of approximately 182.75 per cent.

Table 2.4: Decadal Population growth for the Planning Area, 1981-2011

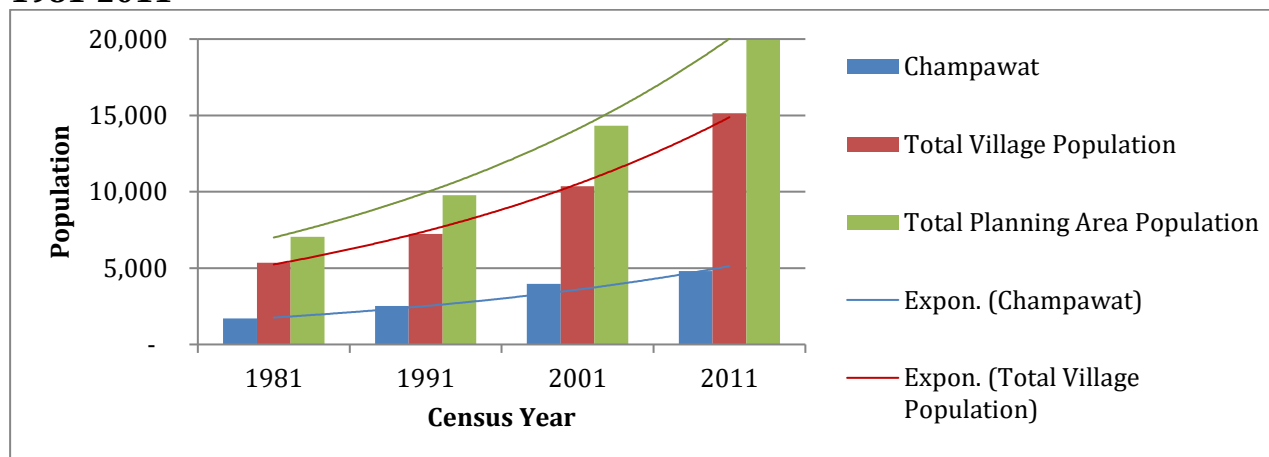
S. No.	Village/ Town	1981-1991 Growth (per cent)	1991-2001 Growth (per cent)	2001-2011 Growth (per cent)	Remarks
1	Champawat Town	48.59	56.87	21.80	Steady growth
2	Chaura Sethi	20.24	27.59	11.97	Moderate growth
3	Danda Bisht	-5.88	31.82	66.48	Fluctuating growth
4	Dhakna Badola	21.49	23.14	5.56	Slowing growth
5	Dungra Saithi	-41.61	121.59	32.53	Significant fluctuations
6	Jup Patua	21.28	301.75	122.27	Dramatic growth
7	Kanalgaon	83.04	136.59	54.13	Substantial growth
8	Khark Karki	61.63	65.35	76.24	Consistent growth
9	Kulathi	-2.78	18.10	63.71	Recovering growth
10	Maadli Malli	-0.57	46.55	65.75	Accelerating growth
11	Madli Talli	36.08	95.45	112.02	Rapid growth
12	Majgaon	63.64	188.89	404.17	Exponential growth
13	Nadhan	85.78	51.02	4.04	Varied growth
14	Palsau	20.22	19.59	20.00	Stable growth
15	Punaithi	71.10	76.69	119.92	Remarkable growth
16	Shaktipur	24.75	41.83	83.94	Accelerating growth
17	Tyarkuda	130.77	225.00	14.36	High volatility
18	Selakhola	Data Not Found			
19	Chowki	53.36	-17.44	38.25	Mixed growth
20	Fungar	18.84	43.29	17.00	Moderate growth
21	Silang Tak	250.91	28.50	37.10	Significant growth
22	Nagar Gaon	136.11	13.33	48.96	Fluctuating growth
23	Latoli	61.90	64.71	407.14	Exceptional growth
24	Lista	0	-21.15	14.63	Fluctuations
25	Kaflang	31.78	53.19	15.69	Moderate growth
26	Chowkni Bora	33.84	19.44	-4.49	Mixed growth
27	Rakri Phulara	5.19	31.60	-29.13	Volatile growth
28	Chowkni Pandey	-6.12	-6.52	30.43	Varied growth
29	Bajrikot	32.68	36.36	46.51	Consistent growth
30	Chamiai	33.33	-1.79	24.32	Mixed growth
31	Mudiyani	59.30	23.64	14.21	Slowing growth

Source: Census of India (1981, 1991, 2001, 2011).

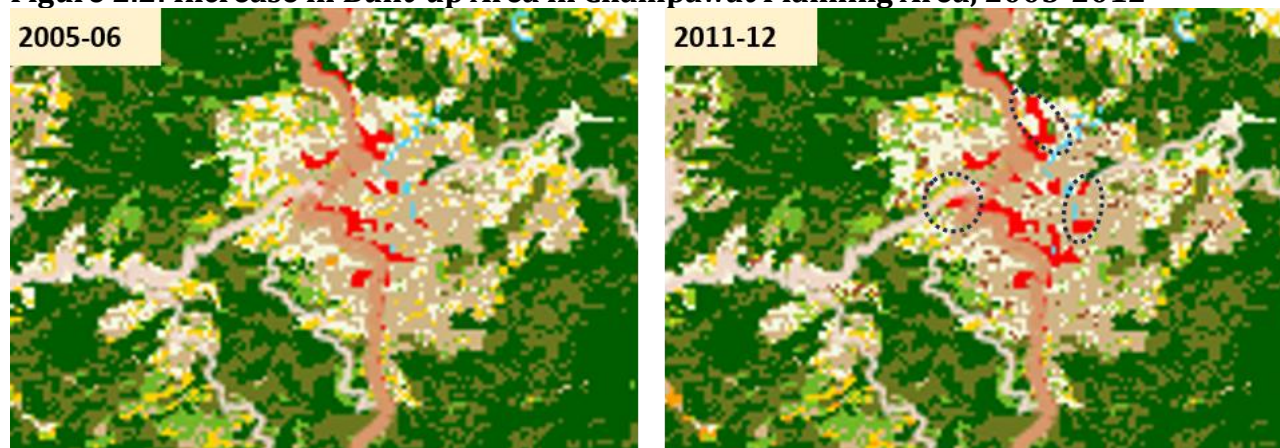
Table 2.5: Champawat Planning Area Population, 1981, 1991, 2001, 2011

S.No.		Census Years			
		1981	1991	2001	2011
1	Champawat Town	1,702	2,525	3,959	4,801
2	Villages	5,349	7,241	10,370	15,136
Total Planning Area Population		7,051	9,766	14,329	19,937

Source: Census of India (1981, 1991, 2001, 2011).

Table 2.6: Decadal Population Change and Growth Rate in Champawat Planning Area, 1981-2011

Source: Census of India (1981, 1991, 2001, 2011).

Figure 2.2: Increase in Built-up Area in Champawat Planning Area, 2005-2012

Source: www.bhuvan.com

2.2.2 Sex Ratio

The sex ratio in the planning area is relatively lower than at the state and district levels (Refer **Table 2.7**). In 2011, the state and district planning area ratios stabilised at 963 and 981, respectively. But regarding the ratio in the planning area, as per the most recent data from the 2023 primary survey, the sex ratio is 896, which remains lower than at the district and state levels. This highlights a concerning trend and indicates out-migration patterns, socio-economic challenges, or other demographic shifts in the region.

Table 2.7: Comparison of Sex Ratio in State, District and Champawat Planning Area, 1991 to 2023

Census Year	State	District	Champawat Planning Area
1991	937	945	857
2001	962	1021	940
2011	963	981	865
2023	-	-	896

Source: Census of India (2011) and primary survey (2023)

2.2.3 Literacy Rate

The average literacy rate of the planning area, as per the 2011 census, is 76.9 per cent, which is lower than the district's literacy rate of 82.65 per cent.

2.2.4 Household Size

According to the 2011 Census of India, the average household size in the planning area is 4.1. The census data further reveals that nearly 24.6 per cent, the highest percentage among the household sizes, have a household size of 4 persons. Additionally, about 24.3 per cent of households have a size of 6 to 8 persons. As per the primary survey, the household size in 2023 is reduced to 3.8. This indicates a shift towards the nuclear family structure. This trend is associated with urbanisation. This signals the need for more housing units, which could strain infrastructure.

2.2.5 Migration

From the primary survey, it was found that 25.2 per cent of the population of Champawat are migrants, the main reasons being education and employment. This indicates that most facilities are concentrated in the town, so there is a need to balance them across the planning area.

Overall, the planning area is experiencing population growth, accompanied by a decline in household size, a low sex ratio, and increased migration to Champawat. Additionally, the literacy rate remains relatively low. These factors suggest on-going demographic shifts, likely driven by migration and evolving social dynamics, which will have significant implications for future development needs. The current population trends provide a valuable basis for projecting population growth through 2041, enabling planners to anticipate better future demands on infrastructure, housing, and social services.

2.3 Population Projection

A comparative analysis of decadal population growth in various cities of Uttarakhand is provided to understand the population trends over the past few decades, and to gain insights into the demographic dynamics, urbanisation patterns, and development trajectories of these cities, namely Rudraprayag, Mussoori, Pithoragarh, Almora and Nainital (see **Table 2.8**).

The population of Rudraprayag Nagar Panchayat grew steadily over the decades. The highest growth rate was observed between 2001 and 2011, with an impressive increase of 313.91 per cent. The average decadal growth rate for Rudraprayag from 1981 to 2011 stands at 118.42 per cent. Mussoori Nagar Palika Parishad experienced population growth between 1981 and 1991, with a growth rate of 63.71 per cent. However, there was a slight decline in population between 1991 and 2001 (-2.42 per cent). From 2001 to 2011, the population increased by 15.50 per cent. The overall average decadal growth rate for Mussoori from 1981 to 2011 is 25.26 per cent. Pithoragarh Nagar Palika Parishad witnessed substantial population growth over the decades, with the highest rate between 1991 and 2001 (62.28 per cent). The average decadal growth rate for Pithoragarh from 1981 to 2011 stands at 54.28 per cent. Almora's population grew consistently, though at a moderate rate. The highest growth rate was between 1981 and 1991 (25.26 per cent). The average decadal growth rate for Almora from 1981 to 2011 is 18.47 per cent. Nainital Nagar Palika Parishad experienced steady population growth, with the highest rate between 1991 and 2001 (29.47 per cent). The average decadal growth rate for Nainital from 1981 to 2011 stands at 19.24 per cent.

Champawat has experienced significant population growth over the decades, with an average decadal growth rate of 41.45 per cent. At present, the population growth trend in the planning

area follows an arithmetic pattern. To estimate the population for the year 2041, the area's moderate size and age, along with the goals of balanced growth, sustainable development, and boosting tourism and the economy, are considered. To achieve these objectives, the arithmetic, geometric, and incremental growth rates of the three projection methods are averaged.

This would help plan the area to accommodate a growing population while ensuring that urban services, amenities, and resources adequately meet residents' needs.

Table 2.8: Decadal Population Growth of Several Cities in Uttarakhand

City	District	Class	Population and Decadal Growth Rate			
			1981	1991	2001	2011
Rudraprayag	Rudraprayag	VI	1,331	1,542 (+15.85)	2,250 (+45.91)	9,313 (+313.91)
Mussoorie	Dehradun	III	16,323	26,722 (+63.71)	26,075 (-2.42)	30,118 (+15.50)
Pithoragarh	Pithoragarh	III	17,657	27,708 (+56.92)	44,964 (+62.28)	56,044 (+24.64)
Almora	Bageshwar	III	20,758	26,001 (+25.26)	30,154 (+15.97)	34,122 (+13.16)
Nainital	Nainital	III	24,835	29,837 (+20.14)	38,630 (+29.47)	41,377 (+7.11)
Champawat Planning Area	Champawat	-	7,051	9,766 (+38.50)	14,329 (+46.72)	19,937 (+39.13)

Source: Census of India (1981, 1991, 2001, 2011).

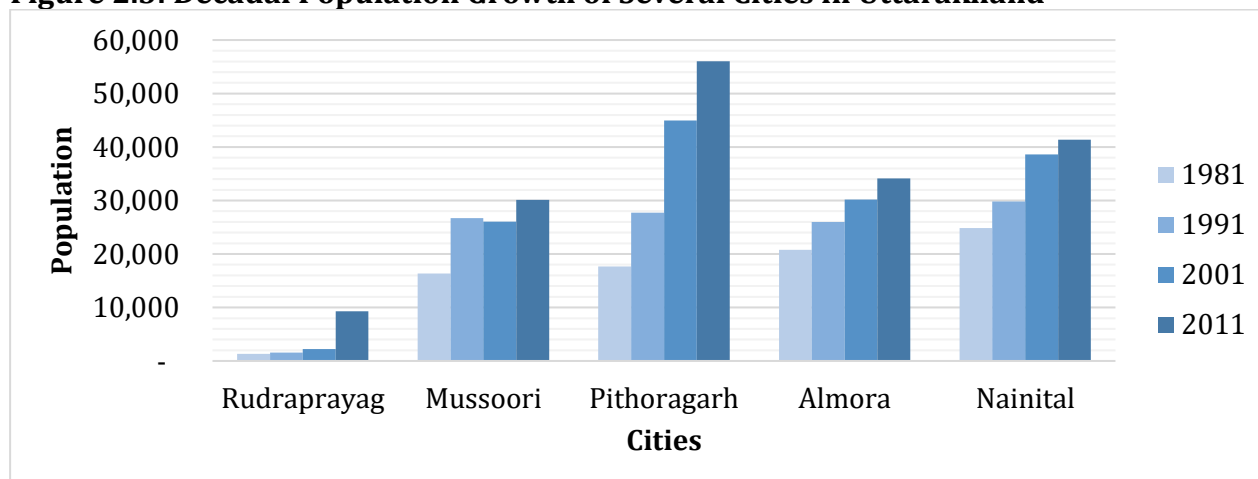
The per cent increase in population and the classification of cities based on their population growth provide insights into the demographic trends and urban development in Uttarakhand; see **(Table 2.9)**.

Table 2.9: Decadal Change in Population for the Cities in Uttarakhand

City	Class	Population Increase (1981-2011)(Per Cent)	Remarks
Rudraprayag	Class VI	599.40	Exceptional growth for a Class VI city.
Mussoorie	Class III	84.58	Moderate growth for a Class III city.
Pithoragarh	Class III	217.79	Significant growth for a Class III city.
Almora	Class III	64.00	Moderate growth for a Class III city.
Nainital	Class III	66.61	Moderate growth for a Class III city.
Champawat	-	182.75	Emerging urban hub.

Source: School of Planning and Architecture. Delhi (2023).

Figure 2.3: Decadal Population Growth of Several Cities in Uttarakhand



Source: Census of India (1981, 1991, 2001, 2011).

Champawat, as a planning area, exhibits both similarities and differences when compared to the other cities in Uttarakhand based on the parameter of population growth and classification; see **(Figure 2.3)**:

Similarities:

- a. **Population Growth:** Champawat, like several other cities in Uttarakhand, has experienced substantial population growth over the years. The population has increased significantly, particularly between 1991 and 2001 and then between 2001 and 2011. This growth trend aligns with the demographic patterns observed in cities such as Rudraprayag, Pithoragarh, Almora, and Nainital, indicating broader urbanisation and development in the region.
- b. **Urbanisation:** Champawat's population growth suggests an on-going process of urbanisation, like other cities in the state. Urbanisation in Champawat is driven by factors such as economic opportunities, improved infrastructure, and better living conditions, which appear to be attracting people to the Area, much like other urban areas.

Differences:

- a. **Classification:** One significant difference is the absence of a specific class classification for Champawat. While cities like Mussoorie, Pithoragarh, Almora, and Nainital are classified as Class III cities, Champawat's planning area lacks a specific class designation. This could imply that it is still undergoing urbanisation and development, making it distinct in status.
- b. **Population Size:** Champawat, although showing significant population growth, has a smaller overall population compared to cities like Nainital and Pithoragarh. Nainital, for instance, had a population of 41,377 in 2011, significantly larger than that of Champawat. This difference in population size reflects varying levels of urbanisation and development across cities in Uttarakhand.
- c. **Growth Rate Magnitude:** Champawat's population growth rate, particularly between 2001 and 2011, is notably higher than some other cities, even those with Class III classifications; see **(Table 2.9)**. This indicates that Champawat has experienced rapid growth in recent years, potentially due to factors that set it apart from other cities.

2.3.1 Population Projection

Population projection methods are techniques used to estimate future population size based on historical data and assumptions about future demographic trends. For the population projection of Champawat, several methods have been adopted, which are discussed below.

- a. **Arithmetic/Linear Projection:** This method considers a constant incremental growth rate over time. It projects the future population by adding a fixed number of people to the current population in each time period. This method is relatively simple but may not capture more complex population dynamics.
- b. **Geometric/Exponential Projection:** This method considers a constant growth rate in percentage terms over time. It projects the future population by multiplying the current population by a growth factor in each time period. This method is based on the assumption of compounding growth and is useful for studying population trends over long periods.

- c. Incremental Method:** The incremental method of population projection is a straightforward approach that estimates future population size by calculating the difference between the projected population for a future year and the population of a base year. This method assumes a constant growth rate, or an increment in population size, from one period to the next.

Table 2.10 represents the population projection for the Champawat Planning Area up to 2041, with 2023 as the current year. The table includes population figures for specific years, along with the corresponding arithmetic, geometric, incremental, and average growth rates. The arithmetic growth rate represents the constant increment in population from one year to the next. In this method, the projected population for the Champawat Planning Area in 2041 is 32,823. This projection is based on constant arithmetic growth of 334 persons per year. The geometric projection method indicates a population of 63,512 for the Champawat Planning Area in 2041. This projection is based on a compounded growth rate of 4.14 per cent. The geometric projection method accounts for the accelerating growth trend in the population. It indicates a higher growth rate compared to the arithmetic projection, underscoring the compounding effect of population growth. The incremental projection method estimates a population of 56,777 for the Champawat Planning Area in 2041. This projection is based on a constant incremental growth rate. The incremental projection method assumes a consistent increase in population from one period to another. It suggests a moderate growth rate relative to the geometric projection, yet still indicates a considerable population expansion by 2041. The average of the three projection methods above yields a design population of 51,037 by the year 2041.

For Champawat Planning Area, 2041, the average of the three methods (arithmetic, geometric and incremental rate of growth) is considered, as it is suitable for areas with smaller populations. Moreover, through new proposals in this master plan, the increased availability of job opportunities, economic growth in the town, and the expansion and improvement of essential services such as healthcare, education, and transportation will attract people from surrounding areas. Also, Government policies related to urbanisation, industrial development (which is not present in Champawat at present), and housing can have a profound impact on population growth.

Table 2.10: Existing and Estimated Population in Champawat Planning Area

Scenario	Year	Arithmetic		Geometric		Incremental		Average	
		Pop.	Growth Rate [per cent]	Pop.	Growth Rate [per cent]	Pop.	Growth Rate [per cent]	Pop.	Growth Rate [per cent]
Existing	1981	7,051		7,051	-	7,051		7,051	
	1991	9,950	41.11	9,950	41.11	9,950	41.11	9,950	41.11
	2001	14,432	45.05	14,432	45.05	,432	45.05	14,432	45.05
	2011	19,937	38.14	19,937	38.14	19,937	38.14	19,937	38.14
Projection	2021	24,232	21.54	28,198	41.43	25,535	28.08	25,989	30.35
	2022	24,662	1.77	29,366	4.14	27,097	6.12	27,042	4.05
	2023	25,091	1.74	30,583	4.14	28,659	5.76	28,111	3.95
	2024	25,521	1.71	31,850	4.14	30,222	5.45	29,198	3.86
	2025	25,950	1.68	33,170	4.14	31,784	5.17	30,301	3.78
	2026	26,380	1.66	34,544	4.14	33,346	4.91	31,423	3.70
	2027	26,810	1.63	35,976	4.14	34,908	4.68	32,564	3.63
	2028	27,239	1.60	37,466	4.14	36,470	4.47	33,725	3.56
	2029	27,669	1.58	39,019	4.14	38,032	4.28	34,906	3.50

Scenario	Year	Arithmetic		Geometric		Incremental		Average	
		Pop.	Growth Rate [per cent]	Pop.	Growth Rate [per cent]	Pop.	Growth Rate [per cent]	Pop.	Growth Rate [per cent]
	2030	28,098	1.55	40,635	4.14	39,594	4.11	36,109	3.45
	2031	28,528	1.53	42,319	4.14	41,156	3.95	37,334	3.39
	2032	28,957	1.51	44,073	4.14	42,718	3.80	38,583	3.34
	2033	29,387	1.48	45,899	4.14	44,280	3.66	39,855	3.30
	2034	29,816	1.46	47,801	4.14	45,842	3.53	41,153	3.26
	2035	30,246	1.44	49,781	4.14	47,404	3.41	42,477	3.22
	2036	30,675	1.42	51,844	4.14	48,967	3.30	43,829	3.18
	2037	31,105	1.40	53,992	4.14	50,529	3.19	45,208	3.15
	2038	31,534	1.38	56,229	4.14	52,091	3.09	46,618	3.12
	2039	31,964	1.36	58,559	4.14	53,653	3.00	48,059	3.09
	2040	32,393	1.34	60,985	4.14	55,215	2.91	49,531	3.06
	2041	32,823	1.33	63,512	4.14	56,777	2.83	51,037	3.04

Source: Evaluated based on the Census of India (1981, 1991, 2001, 2011).

Moreover, Champawat is a gateway to Kumaon, lies on the route to other major Kumaon districts, and is a major tourist destination, attracting a floating population from nearby districts. As per the Draft DPR Solid Waste Management – Nagar Palika Parishad, Champawat, 2022, the daily floating population is 3,000 to 5,000, primarily comprising tourists and service-sector workers. The tourism sector sees higher numbers on weekends, whereas people in the service sector travel for work on weekdays. The floating population in Champawat from 2011 to 2041, as per the above-mentioned document, is shown below. **Table 2.11**. The total population is thus calculated by incorporating the floating population, as shown in **Table 2.11** and **Figure 2.4**.

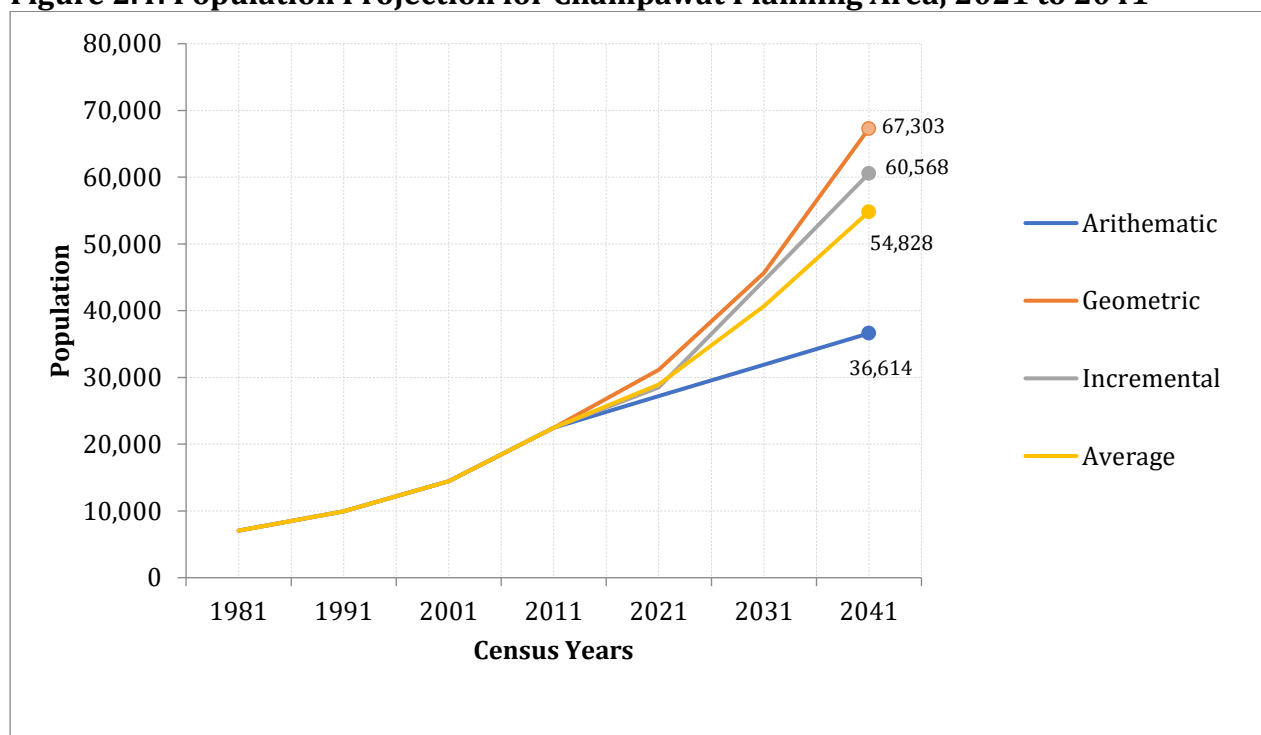
Table 2.11: Floating Population in Champawat Planning Area, 2041

Years	Projected Population	Floating Population	Design Population
2011	19,937	2,551	22,488
2021	25,989	2,964	28,953
2022	27,042	3,006	30,048
2023	28,111	3,047	31,158
2024	29,198	3,088	32,286
2025	30,301	3,130	33,431
2026	31,423	3,171	34,594
2027	32,564	3,212	35,776
2028	33,725	3,254	36,979
2029	34,906	3,295	38,201
2030	36,109	3,336	39,445
2031	37,334	3,378	40,712
2032	38,583	3,419	42,002
2033	39,855	3,460	43,315
2034	41,153	3,502	44,655
2035	42,477	3,543	46,020
2036	43,829	3,584	47,413
2037	45,208	3,626	48,834
2038	46,618	3,667	50,285
2039	48,059	3,708	51,767
2040	49,531	3,749	53,280
2041	51,037	3,791	54,828

Source: Draft DPR Solid Waste Management – Nagar Palika Parishad, Champawat (2022).

It is observed that the total population is 31,158, comprising an average population of 28,111 and a floating population of 3,047. By 2041, the total population is to be considered to be 54,828, including a floating population of 3,791, see **(Figure 2.4)**.

Figure 2.4: Population Projection for Champawat Planning Area, 2021 to 2041



Source: Evaluated based on the Census of India (1981, 1991, 2001, 2011).

Overall, the population projection for the Champawat Planning Area indicates continued growth, with higher growth rates expected in the coming years. This information is crucial for urban planning, resource allocation, and infrastructure development to accommodate the growing population and ensure sustainable development in the region.

CHAPTER 3: ECONOMY, TRADE AND COMMERCE

3.1 Introduction

A town's economy serves as its financial foundation, supporting both the community's physical development and the welfare of its residents. A town's economy not only significantly contributes to its success but also has a favourable impact on the surrounding areas.

Further, the analysis of main workers and marginal workers in Champawat underscores the importance of promoting inclusive growth and addressing gender disparities within the workforce. The Master Plan of Champawat focuses on creating an enabling environment for women's participation in economic activities in the area while also implementing measures to enhance employment prospects for marginal workers. This chapter first sets out the existing occupational structure, followed by the future one; it also outlines the hierarchy of proposed commercial centres. Lastly, the master plan focuses on uplifting the informal sector economy.

3.2 Existing Occupational Structure

The income distribution in Champawat, 2023, based on the PMAY Housing for All (Urban), 2015 income slabs, reveals a higher concentration of households in the lower income brackets. Moreover, due to urbanisation, the workforce shifted from cultivators and agricultural labourers to the tertiary sector between the 2011 and 2023 censuses. The majority of households fall within the EWS and LIG categories, which indicates a significant proportion of the population with limited financial resources.

3.2.1 Workers Participation Rate

Considering the entire planning area, as per the 2011 census, there are 7,215 workers, of whom 4,993 are males, and 2,222 are females, with a total planning workforce participation rate of 36%. The number of non-workers in the planning area is 12,722, comprising 5,695 males and 7,027 females. Significantly, out of the total workers, nearly 78 per cent are the main workers and 22 per cent are marginal workers. But in 2023, the participation rate decreased. According to the primary survey, total workforce participation is 34%. When this is compared to the state level, the workforce participation rate in Uttarakhand is 50.9%, as per the Uttarakhand State Employment Generation Strategy report, 2021, by the Uttarakhand Government, which is similar to the country level. This reflects that the workforce participation rate is very low in Champawat and needs to be increased.

3.2.2 Sectoral Distribution of Workers

From the analysis, it is evident that agriculture is not a significant economic activity in the Champawat Planning Area, as almost 68 per cent of the workers are involved in other works

3.3 Future Occupational Structure

The future occupational structure envisioned for the master plan of Champawat, Uttarakhand, reflects a harmonious blend of economic development and environmental sustainability. Embracing the town's unique hilly terrain, the plan places a strong emphasis on promoting sustainable tourism and eco-friendly practices. As the town strives to become a haven for

nature enthusiasts, adventure seekers, and cultural connoisseurs, there is a concerted effort to create jobs in the tourism and hospitality sector. This includes opportunities in ecotourism, guided trekking, and locally inspired accommodations. The plan also underscores the importance of technology in facilitating remote work, allowing residents to participate in the broader economy while maintaining the town's distinct character. Additionally, agricultural initiatives focusing on organic farming and agro-tourism aim to support local farmers and promote self-sufficiency. Education and research facilities centred on the region's ecology contribute to intellectual capital, while the encouragement of artisanal businesses preserves and celebrates Champawat's cultural heritage. The master plan envisions a well-rounded occupational structure that not only meets the community's economic needs but also preserves the natural beauty and cultural richness that make Champawat a unique destination in Uttarakhand.

Table 3.1 Outlines projected workforce participation statistics for Champawat in 2041. The total population is estimated at 51,037, with a significant workforce participation rate of 50%, matching the state-level rate. As a result, the total workforce for the area is anticipated to be 25,519 individuals.

Table 3.1: Proposal for Workforce Participation in Champawat Planning Area, 2041

Aspect	Population, Area, and Density
Total Population	51,037
Worker Participation Rate in Per Cent	50
Total Workforce	25,519

Source: School of Planning and Architecture. New Delhi (2023).

Table 3.2 delineates the envisaged land use distribution for commercial, industrial, and mixed-use zones within the Champawat Planning Area for the year 2041. The proposed allocation indicates a substantial shift in land utilisation, reflecting a strategic vision for urban development. In particular, the commercial sector is anticipated to expand significantly, with the proposed area increasing from 6.16 to 30.35 hectares, representing a notable 3.1% of the total urbanised area. Industrial zones are set to undergo a remarkable transformation, with the proposed area increasing from 0.12ha to 35.78 ha, accounting for 3.66% of the urbanised landscape. Similarly, the mixed-use category is expected to expand, with the proposed area increasing from 4.12 ha to 42.33 ha, accounting for an additional 4.33% of the total urbanised area. Collectively, the proposed commercial, industrial, and mixed-use zones amount to 108.46 ha, representing 11.09% of the anticipated total urbanised area. **(Refer Figure 3.1)**

Table 3.2: Proposed Economic Area in Champawat Planning Area, 2041

	Area in hectare		Proposed Area in Per cent of Total Urbanised Area
	Existing	Proposed	
Commercial	6.16	30.35	3.1
Industrial	0.12	35.78	3.66
Mixed Use	4.12	42.33	4.33
	10.30	108.46	11.09

Source: School of Planning and Architecture, New Delhi, 2023

The proposed Master Plan for Champawat, 2041, outlines a strategic vision for economic activities that align with sustainable development and the preservation of the town's unique characteristics. The plan aims to diversify the local economy, enhance job opportunities, and promote long-term environmental sustainability. Key economic activities identified in the master plan include:

3.3.1 Sustainable Tourism Development

Champawat's natural beauty and cultural heritage make it an ideal destination for sustainable tourism. The master plan emphasises the development of eco-friendly accommodations, adventure tourism, and cultural experiences to attract responsible tourists and minimise environmental impact. The Uttarakhand Government focuses on uplifting the tourism sector by providing state-of-the-art facilities. The following policies and plans would further facilitate the uplift of the tourism sector within the Champawat Planning Area: the Uttarakhand Water-Based Tourism and Adventure Water Sports Rules-2022; the Tourism Policy-2001; and the Uttarakhand Tourism Development Master Plan 2007 – 2022.

3.3.2 Hospitality and Service Industries

The plan promotes the growth of hospitality services, including hotels, resorts, and local eateries. Additionally, service industries such as tour guides, adventure sports instructors, and cultural interpreters are envisioned to contribute to the town's economic vitality.

3.3.3 Agriculture and Agro-Tourism

Championing organic farming and agro-tourism initiatives, the master plan seeks to boost the local agricultural sector. This includes promoting sustainable farming practices, supporting local farmers, and creating opportunities for visitors to engage in farm-related activities.

The allocation of 456 hectares of land for agricultural purposes in Champawat, Uttarakhand, signifies a strategic initiative to promote sustainable rural development and enhance agricultural productivity in the region. This allocation underscores recognition of agriculture as a pivotal sector of the local economy, providing livelihood opportunities and contributing to food security.

3.3.4 Technology and Remote Work

Recognising the global trend toward remote work, the plan encourages the establishment of co-working spaces and provides infrastructure to facilitate technology-driven occupations. This approach aims to connect Champawat residents with broader economic opportunities while minimising the need for extensive commuting.

3.3.5 Cultural and Artisanal Businesses

Fostering local culture and traditions, the plan supports the growth of artisanal businesses. Handicrafts, local artwork, and traditional industries can thrive, contributing to the preservation of Champawat's unique identity and offering culturally significant products.

3.3.6 Education and Research Centres

Establishing educational and research institutions focused on the region's ecology can attract scholars, researchers, and students. This not only contributes to intellectual capital but also promotes the sustainable management of the town's natural resources.

3.3.7 Infrastructure Development

Upgrading infrastructure, including transportation and communication networks, is crucial to support economic growth. The plan includes provisions for sustainable infrastructure development that enhances accessibility without compromising the town's ecological balance.

3.4 Hierarchy of Proposed Commercial Centres

The **Table 3.3** outlines the urban planning norm for three distinct units in Champawat. The Housing Cluster, designed to serve 5,000 people per unit, features a commercial centre hierarchy focused on Convenience Shopping. With a land area requirement of 1,500 sqm per unit, a minimum of 10 units is proposed, resulting in a cumulative land area of 15,000 sqm for this cluster. The Neighbourhood unit, serving 15,000 individuals, emphasises a Local Shopping Centre. Requiring a larger land area of 4,600 sqm per unit, a minimum of three such units is recommended, resulting in a total land area of 13,800 sqm for the Neighbourhood. A wholesale market area serving a population of 50,000 per unit is proposed, covering 5.55 hectares. The combined minimum land area requirement for all three units in the Champawat Planning Area is 78,800 sqm (7.88 ha); however, an overall area of 25.36 ha is proposed as per URDPFI, 2014.

Table 3.3: Proposed Hierarchy of Commercial Centres in Champawat Planning Area, 2041.

Planning Unit	Population Served per unit	Hierarchy of Commercial Centre	Land Area Requirement per unit (sqm)	No of units required	Total Land Area Requirement in Champawat Planning Area (sqm)
Housing Cluster	5,000	Convenience Shopping	1,500	10	15,000
Neighbourhood	15,000	Local Shopping Centre	4,600	3	13,800
Wholesale Market/ Mandi	1,00,000	Local Wholesale Market/ Mandi	100000	1	50,000
Total					78,800 (7.88 ha)

Source: Urban and Regional Development Plans Formulation and Implementation (URDPFI) Guidelines, 2014

3.5 Non-Polluting Industry

The Master Plan for Champawat, 2041, outlines a visionary strategy for sustainable urban development, prominently featuring a meticulous proposal for non-polluting industries within an allocated area of 33.11 ha. The industrial area is strategically divided into 3 sections, away from the main town. One is near the newly proposed bypass road, on a stable slope. The other two are located in Dhakna Baola village and one in Selakhola village. This strategic allocation underscores a commitment to balancing economic progress with environmental preservation. The proposed industries, envisioned to be environmentally friendly, may include sectors such as renewable energy, agro-based industries, and technology-driven enterprises. The substantial land allocation (see Table 3.2) reflects a comprehensive approach to accommodating non-polluting industries and fostering a resilient, eco-conscious industrial landscape. This proposal within the master plan seeks to position Champawat, Uttarakhand, as a model for sustainable development, where economic growth coexists harmoniously with the region's natural beauty and ecological well-being. The meticulous consideration of such non-polluting industries underscores a commitment to responsible urbanisation and a greener, more sustainable future for Champawat.

3.6 Informal Sector Economy

Provisions are being made to support street vendors and informal units, helping develop the informal sector in an organised manner. To address the challenge posed by the informal sector, the Master Plan proposes allocating spaces in consultation with relevant stakeholders. These

places would be located at high-accessibility points to enhance vendors' turnover, especially around the Champawat Main Market Area. The demarcation of vending zones and the provision of civic facilities would be carried out in accordance with the Uttar Pradesh Street Vendors (Protection of Livelihood and Regulation of Street Vending) Rules, 2017.

The table outlines the norms for allocating informal units to urban street vendors across various categories. For the retail trade, the recommendation is 3-4 informal units per 10 formal shops. Government and commercial offices are recommended to have 5-6 units per 1,000 employees. Wholesale trade and freight complexes should allocate 3-4 units per 10 formal shops, while hospitals are advised to provide 3-4 units per 100 beds. Bus terminals are recommended to have 1 unit per 2 bus bays. Educational institutions, such as primary schools, are advised to allocate 3-4 units, while secondary/senior secondary/integrated schools are suggested to have 5-6 units. Regional/district parks are recommended to have 8-10 units at each major entry point, and neighbourhood parks are advised to allocate 2-3 units. Residential areas should provide 1 unit per 1000 population; industrial areas, 5-6 units per 1000 employees; and railway terminal norms should be determined through surveys during project preparation. These guidelines offer a comprehensive framework for integrating informal street vendors into various urban settings.

Table 3.4 Urban Street Vendors' Norms in the Champawat Planning Area, 2014.

Category	No of Informal Units
Retail Trade	3 to 4 per 10 formal shops as specified in the norms
Government and Commercial Offices	5 to 6 units per 1000 employees
Wholesale Trade and Freight Complexes	3-4 units per 10 formal shops
Hospital	3-4 units per 100 beds
Bus terminal	1 unit per 2 bus bays
Primary	3-4 units
Secondary/ Senior Secondary/ Integrated	5-6 units
Regional/ District Parks	8-10 units at each major entry
Neighbourhood parks	2-3 units
Residential	1 unit / 1000 population
Industrial	5-6 units per 1000 employees

Source: Urban and Regional Development Plans Formulation and Implementation (URDPFI) Guidelines, 2014

3.7 Conclusion

Workforce participation statistics indicate a dynamic labour force, with an estimated total population of 51,037 and a notable 50 per cent workforce participation rate, yielding an anticipated total workforce of 25,519 individuals. The proposed land-use distribution signifies a strategic shift in urban planning, with substantial expansions anticipated in the commercial, industrial, and mixed-use sectors. In particular, the proposed 10.5% allocation of the total urbanised area to commercial, industrial, and mixed-use zones underscores a holistic and forward-thinking vision for sustainable urban development.

KEY PLAN

ALMORA, NAINITAL, PITHORAGARH, CHAMPAWAT, UTTAR PRADESH, NEPAL

Legend

- Revised Planning Boundary
- Municipal Boundary
- Ward Boundary
- Village Boundary
- Proposed Railway Station
- Proposed Railway Line
- Proposed Road Interventions**
 - Proposed NH Bypass (24 m)
 - Proposed SH Bypass (18 m)
 - Proposed Road (12 m)
 - Proposed Road (9 m)
 - Proposed Road Widening (12 m)
 - Proposed Road Widening (9 m)
 - Existing Road (9 m)
 - Contour (10m interval)
 - Fault Line
 - High Tension Lines
 - High Tension Tower
 - Roadway
- Commercial
- Proposed Commercial
- Proposed Wholesale and Mandi
- Mixed Use
- Proposed Mixed Use
- Industry
- Proposed Industrial

Proposed Economic Areas, 2041

School of Planning & Architecture, New Delhi

Scale: 1 0.5 0 1 Km

North

CHAMPAWAT MASTER PLAN, 2041

Town & Country Planning Department
Government of Uttarakhand

Source: School of Planning and Architecture, New Delhi (2025).

CHAPTER 4: HOUSING AND HABITAT

4.1 Introduction

Addressing the unique topographical and cultural nuances of Champawat, nestled in the hills, the housing proposals for the planning area are crafted to strike a delicate balance between modernity and the preservation of the natural landscape.

This chapter elucidates the proposals in terms of land use based on the existing situation assessment. With respect to topography, special attention is given to ensuring infrastructure resilience, with roads and pathways designed to blend seamlessly with the land's natural contours. The housing mix includes a range of options, from compact dwellings to larger residences, catering to diverse needs. Recognising Champawat's cultural heritage, the proposals aim to preserve the town's unique identity by incorporating traditional architectural elements. Inclusivity and community engagement remain paramount, with public spaces and amenities designed to foster a sense of belonging.

4.2 Existing Scenario of Housing, 2023

As per the 2011 census, 0.8% of houses are empty, 4.2% are dilapidated, and 1.1% are temporary. Whereas, as per the primary survey 2023, 4.45% of the houses were found to be dilapidated in the planning area, and 4% were of temporary material. The housing typology across the planning area is ground-floor to G+2, with the majority of houses detached. The detailed analysis can be referred to in the analysis report.

4.3 Housing Need for Champawat, 2041

In 2011, the population was recorded at 19,937, with 4,935 households. Looking ahead to 2023, the projected population is set to increase linearly to 28,111, resulting in 7,028 households with a household size of 4. Compared with 2011, an additional 2,093 households are estimated to exist in the planning area. The housing shortage that existed in 2011 amounted to 834 dwelling units. The housing shortage is calculated using numbers of houseless households, dilapidated houses, temporary houses, congested households and obsolescence factor as given in **Table 4.1**.

Table 4.1: Housing Shortage in Champawat, 2011

S. No.	Housing Shortage Factors	Shortage as per the 2011 Census
1	Houseless Household	40
2	Dilapidated Houses	207
3	Temporary Houses	54
4	Congested Households (6.5 per cent of total households)	321
5	Obscelence Factor (4.3 per cent of total households)	212
Total		834

Source: Census of India (2011).

Taking the 17% of the housing shortage from the 2011 census into account when calculating the housing shortage for 2023, the housing shortage comes out to be 356 in 2023. Now, for housing, we need the 2023 housing shortage and the 2023 increase in households from 2011, which comes to 2449. Similarly, housing needs are estimated every 5 years. **(Refer to Table 4.2).**

A notable population surge is anticipated by 2041, reaching 51,037, representing an increase of 22,926 individuals from 2023. Considering an average household size of 4.0 individuals as per the survey, the calculated number of DU's required to accommodate this increase in population is 5,732 from 2023. The estimated housing need in 2023 is 2,449 DUs. The total number of houses sanctioned under PMAY till 2023 is 236. When accounting for the estimated 2023 shortage, the calculated number of DUs needed in 2041, and the sanctioned PMAY houses, the total demand for dwelling units is projected at 9,752. These statistics (**Table 4.2**) collectively underscore the pressing need for proactive urban planning and housing development to adequately address the impending housing shortages and accommodate the projected population growth in the Champawat planning area by 2041.

Table 4.2: Housing Need and Demand for Champawat, 2041

Champawat								
S. No	Description	2011	2023	2028	2031	2036	2041	2041
A	Population (Census 2011)	19,937	-	-	-	-	-	
B	No. of households (HH) (Census 2011)	4,935	-	-	-	-	-	
C	Estimated population	-	28,111	33,725	37,334	43,829	51,037	
D	Estimated No. of households (HH)	-	7,028	8,431	9,334	10,957	12,759	
E	Increase in households (E) (HH)	-	2,093	1,404	902	1,624	1,802	
F	Estimated Housing shortage (DUs) (obsolescence, houseless, congestion, dilapidated) (17% of the HH(E))	834	356	239	153	276	306	
G	Housing need (DUs) (E+G)	834	2,449	1,642	1,056	1,900	2,108	974
H	Estimated population	-	28,111	33,725	37,334	43,829	51,037	51,037
K	Increase in Population	-	8,174	5,614	3,609	6,495	7,208	22,926
I	Estimated Household Size (As per the census 2011)	4	4	4	4	4	4	4
J	No. of DU's required (M = K/L) (DUs)	-	2,044	1,404	902	1,624	1,802	5,732
K	PMAY sanctioned houses (2023) (DUs)		236					
L	Total number of DU's needed, 2041	834	2,213	1,642	1,056	1,900	2,108	9,752

Source: School of Planning and Architecture, New Delhi (2024)

4.4 Housing Proposal for Champawat 2041

The residential population in the Champawat Planning Area for 2023 is 28,111 across 30.29 sq km. Based on the land suitability analysis, not all of the planning area is suitable for future development, so the total developable land is derived from the total area of 1504.47 hectares. Now, 261.80 hectares of land are already developed, leaving 1205.24 hectares available for future development.

Presently, the gross residential density in the municipal area is 18 persons per hectare (PPH), based on an estimated 2023 population of 28,111, while the total developable land in the Champawat planning area is 12.05 sq. km. As per the Urban and Regional Development Plans

Formulation and Implementation (URDPFI) guidelines for small towns in hilly areas, the recommended developed area density should fall between 45 and 75 pph. The gross density on the developed area is 18 pph for a population of 28,111, which is very low. Moreover, the gross density within the developable area is set at 54 pph, accommodating an estimated population of 2041. Also, within the URDPFI 2014 standard, 49.4 per cent of the development area is allocated for a residential area proposal, amounting to 4.83 sq km (483.56 hectares) at a 54 pph density (**Refer Table 4.4**). The strategy for proposing the residential area within the planning boundary is to first focus only on the developed area; secondly, the proposal is based on the current growth pattern, mainly toward the north and northeastern side. Also, the proposal is strategically located along the road network and within 200m to 500m of the road, considering the walkable distance in the hilly area.

Now, the 9,752 houses (see Table 4.2) need to be constructed on new plots. It's noted that not all these houses need to be newly constructed on fresh plots. Those in dilapidated condition or with temporary structures will undergo redevelopment or upgrading on the same plots. As per the primary survey, the most common housing typology observed in Champawat is plotted housing. But only the plotted housing typology would result in environmental degradation and increase infrastructure costs, thus emphasising sustainable development. In hilly regions like Champawat, a well-balanced housing mix shall be prioritised, with eco-friendly design, disaster resilience, and accessibility, while providing diverse housing options. Several housing mix options tailored to hilly landscapes are presented below.

- a. **Terraced Housing:** Natural Slopes could be followed in constructing the homes in a terraced formation. This will minimise land disruption and reduce the risk of landslides. This would preserve the views, promote airflow, and enhance drainage control through tiered landscaping.
- b. **Cluster Housing with courtyards:** A small group of units could be grouped around the shared open space. This would encourage social interaction, provide a gathering space, and enhance natural lighting and ventilation.
- c. **Eco-cottages:** Eco-friendly cottages on plots built with locally sourced materials and incorporating green roofs or solar panels would blend into the natural landscape, providing privacy as well as integrating eco-tourism objectives for individuals seeking a rustic experience.
- d. **Low-rise apartments: Two- to three-floor buildings on flat areas or stable slopes** can house more residents without extensive land use. This shall offer affordable, compact living options, reducing the overall built footprint.
- e. **Row houses:** Row houses on gentle slopes, using shared walls, shall reduce construction impact and enhance thermal efficiency.
- f. **Stilted Housing:** Houses on 20-to-30-degree slopes shall be constructed on stilts to minimise the site grading, reduce erosion risk, improve airflow and preserve natural contour while providing scenic views.
- g. **Mixed-use Housing:** Creating live-work units with commercial on the ground floor and residential area near the main road would encourage the local economy and reduce commuting.

- h. Homestay Housing:** Houses could be developed into homestay units where residents would be allowed to host tourists. This could be incentivised through a subsidy provided by the Uttarakhand state government under the Deen Dayal Upadhyaya Griha Awaas Homestay (amendment) Policy 2021.
- i. Community Housing Clusters:** Planned clusters of small units with shared amenities like water tanks, solar energy systems, and waste management would reduce the infrastructure cost and land impact. This would also support affordable housing in the area.

The plots can be carved out based on demand and salability. For low-income groups in the population, the minimum plot size should be at least 40 sq. m. However, the plot size may vary depending on housing needs and people's overall affordability. The proposed residential area to accommodate the projected population and overcome the current gap is shown in **Figure 4.1**. The housing area's locations are identified based on the growth pattern, existing and proposed road network, topography, etc.

Table 4.3: Existing and Projected Density in PPH for Champawat Planning Area, 2041

Total Planning Area in Ha		3,029
Existing Developed Area in Ha (Except Agriculture, water bodies, SEZ, Forest)		261.80
Existing	Residential Population 2023	28,111
	Gross Density based on developed area (PPH)	18
Projected	Projected Residential Population 2041	51,037
	Gross Density based on developable area (PPH)	52

Source: School of Planning and Architecture, New Delhi (2023).

Table 4.4: Proposed Residential Area in Developable land area, 2041

Projected Residential Population 2041 (A)	51,037
Total Planning Area in Ha (B)	3,029
Existing Developed Area in Ha (Except Agriculture, water bodies, SEZ, Forest) (C)	299.23
Developable Area in Ha (D)	1205.24
Total Land in Ha available for planning [E=C+D]	1,504.47
Gross Density assumed for development (in PPH) (F)	55
Total area for development as per the gross density assumption (in Ha) [G = A/F]	927.94
Proposed Residential Area (49.4% within the range given in the URDPFI 2014 guideline for hilly area) (in Ha)	480.2
Proposed Gross Developed Area Density for Development (in PPH)	52

Source: School of Planning and Architecture, New Delhi (2025).

KEY PLAN

The key plan shows the location of Champawat within Uttarakhand, bordered by Nepal to the south and east, and Himachal Pradesh to the north.

Legend

- Revised Planning Boundary
- Municipal Boundary
- Ward Boundary
- Village Boundary
- Proposed Railway Station
- Proposed Railway Line
- Proposed Road Interventions**
 - Proposed NH Bypass (24 m)
 - Proposed SH Bypass (18 m)
 - Proposed Road (12 m)
 - Proposed Road (9 m)
 - Proposed Road Widening (12 m)
 - Proposed Road Widening (9 m)
 - Existing Road (9 m)
 - Fault_line
 - High_Tension_Lines
 - High_Tension_Tower
 - Ropeway
- Land Use**
 - Residential
 - Proposed Residential
 - Mixed Use
 - Proposed Mixed Use

Proposed Residential Areas, 2041

School of Planning & Architecture, New Delhi

Scale: 1 0.5 0 1 Km

North ↑

Town & Country Planning Department
Government of Uttarakhand

CHAMPAWAT MASTER PLAN, 2041

Source: School of Planning and Architecture, New Delhi (2025).

4.5 Housing Policies

4.5.1 Deen Dayal Uttarakhand Gramin Awas Yojana

The Deen Dayal Uttarakhand Gramin Awas Yojana (DDUGAY) is a housing scheme launched by the Uttarakhand government to provide affordable housing to the state's rural population. Implemented under the Pradhan Mantri Awas Yojana-Gramin (PMAY-G), this initiative aims to address the housing needs of the marginalised and economically weaker sections residing in rural areas of Uttarakhand. The key objectives of the DDUGAY include constructing pucca houses for those living in kutcha houses, providing financial assistance to eligible beneficiaries, ensuring the availability of basic amenities like water, sanitation, and electricity, and fostering inclusive development in rural regions. The Deen Dayal Uttarakhand Gramin Awas Yojana is a significant step towards fulfilling the housing aspirations of Uttarakhand's rural populace, aiming to improve their quality of life, promote socio-economic development, and contribute to the overall growth of rural communities.

4.5.2 Pradhan Mantri Awas Yojna- Urban

The Pradhan Mantri Awas Yojana - Urban (PMAY-U) is a flagship housing scheme launched by the Government of India to provide affordable housing solutions to the urban population. Introduced in June 2015, PMAY-U aims to address the housing shortage in urban areas by facilitating the construction of houses for the economically weaker sections, low-income groups, and middle-income groups. The PMAY-U targets the urban poor, including economically weaker sections and low-income groups, by providing financial aid and incentives for the construction or enhancement of housing infrastructure. The scheme also emphasises the importance of eco-friendly and sustainable housing practices. PMAY-U has made significant strides in addressing the urban housing deficit and improving living conditions for millions in urban areas across India.

4.5.3 Uttarakhand Housing Policy (Amendment) Rules, 2022

The Uttarakhand Housing Policy outlines the state government's strategies, goals, and initiatives for housing development across urban and rural areas. Its primary objective is to ensure adequate and affordable housing for all residents, addressing the diverse housing needs of various income groups and demographics.

4.6 Land Administration and Land Market

4.6.1 Key Players

- i. **Uttarakhand Housing and Urban Development Authority (UHUDA):** The Uttarakhand Housing and Urban Development Authority (UHUDA) is a state-level agency in Uttarakhand, India, responsible for planning, development, and regulation of housing and urban infrastructure in the state. UHUDA is involved in implementing housing schemes to provide affordable, quality housing for the residents of Uttarakhand. These schemes often cater to various income groups and aim to address the population's housing needs.
- ii. **Uttarakhand Real Estate Regulatory Authority:** The Uttarakhand Real Estate Regulatory Authority (RERA) stands as a pivotal player in the real estate sector within the state of Uttarakhand, India. Established under the Real Estate (Regulation and Development) Act, 2016, RERA holds significant responsibilities in regulating and overseeing real estate transactions, projects, and agents. Its primary objectives

are to promote transparency, accountability, and efficiency within the real estate industry. It acts as a bridge between developers and buyers, fostering an environment conducive to meeting housing needs while ensuring consumer protection and fair practices within the real estate landscape.

- iii. **Real Estate Developer(s):** Real estate developers play a critical role in shaping the built environment by conceptualising, financing, constructing, and often managing properties. They are instrumental in bringing housing, commercial, industrial, or mixed-use projects to life. These developers vary widely in size, scope, and specialisation, but they generally share key responsibilities and characteristics.

4.6.2 Land Development Models

- i. **Land Acquisition (Under LARR 2013):** The Land Acquisition, Rehabilitation, and Resettlement Act (LARR) of 2013 in India aimed to regulate the process of land acquisition for infrastructure, industrialisation, and social development projects while ensuring fair compensation, rehabilitation, and resettlement for affected persons. This legislation sought to strike a balance between developmental needs and safeguarding the interests of landowners and affected families.
- ii. **Optimum Utilisation of Vacant Govt. land (OUVGL) Scheme:** The Optimum Utilisation of Vacant Government Land (OUVGL) Scheme is an initiative in India aimed at maximising the use of idle or vacant government-owned land parcels. The scheme focuses on identifying and repurposing these underutilised lands for various developmental, social, or commercial purposes to generate revenue, foster economic activities, and address societal needs. Through OUVGL, government bodies could assess and categorise vacant lands, determining their potential for uses such as affordable housing, infrastructure projects, public amenities like parks or community centres, commercial ventures, or other public welfare initiatives. The goal is to leverage these resources effectively, ensuring that the land contributes positively to societal growth and development.

CHAPTER 5: TOURISM AND HERITAGE

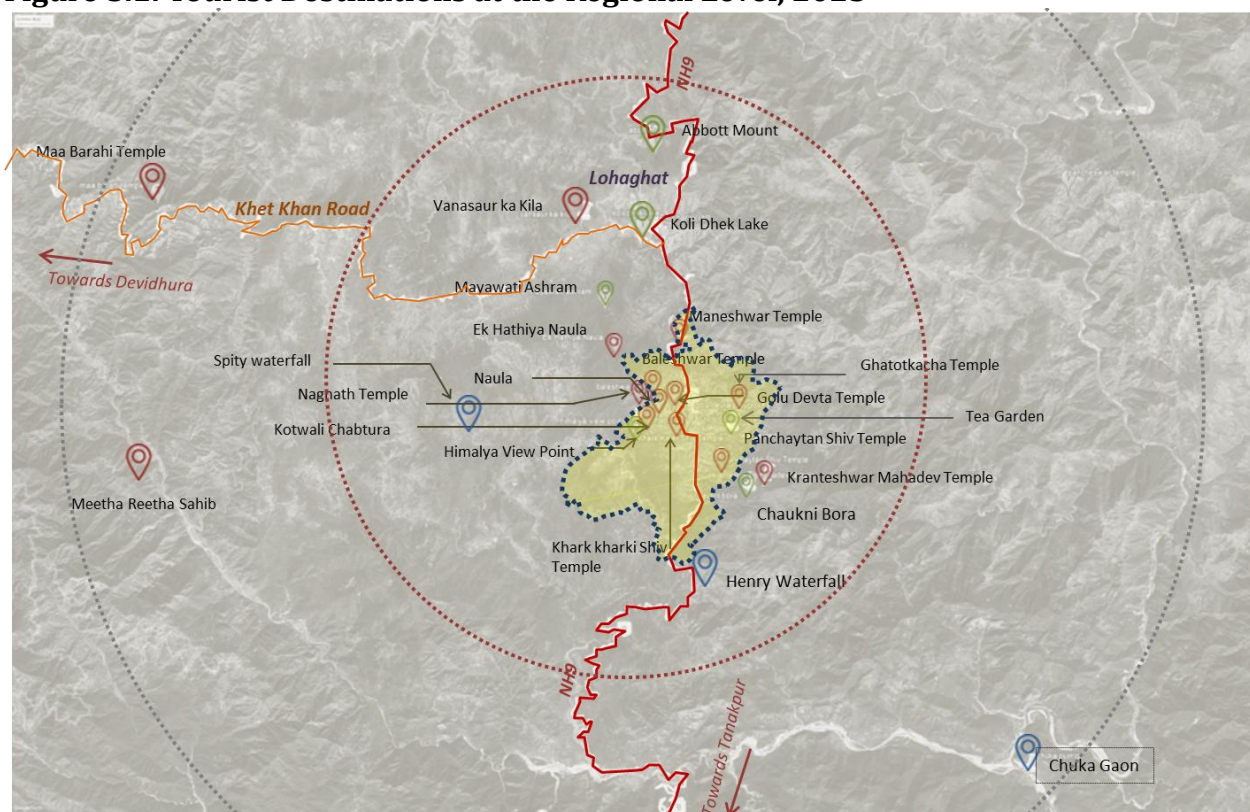
5.1 Introduction

Champawat District is home to important historical and religious sites, attracting numerous travellers and pilgrims throughout the year. It offers a perfect blend of adventure, religion, and history. It is adorned with natural scenic beauty, with approximately 65 per cent of the district covered by rich flora, including Teak, Sagoon, Jamun, Babul, and more. The potential of this diverse landscape is considered, and proposals are presented in this chapter to enhance the tourism sector in the Champawat Planning Area.

5.2 Existing Tourism Scenario

The primary survey identified various landmarks and natural attractions within and around the Champawat Planning Area. Known for its historic sites and scenic beauty, the area is complemented by nearby attractions that draw tourists. The map (Refer Figure 5.1) highlights these features, including Koli Dhek Lake, Abbott Mount, the Botanical Tea Garden, Henry Waterfall, Spity Waterfall, and Mayawati Ashram. The town also offers stunning Himalayan vistas from several points within the planning area.

Figure 5.1: Tourist Destinations at the Regional Level, 2023



Source: School of Planning and Architecture, New Delhi (2023).

According to the analysis, the tea garden (botanical garden) has gained prominence for its natural beauty and economic impact, providing jobs and exporting tea globally. There is a high demand for organic long leaf tea, with auctions held through the Kolkata Tea Board. However, the site's accessibility is poor, making it difficult for tourists and locals to visit and reducing its potential as a tourist attraction. Additionally, basic amenities are lacking in the area. Insufficient marketing and promotion also result in low visitor numbers, limiting the garden's

economic impact and growth. Without adequate policy support, the garden may struggle to gain the popularity and economic boost it needs to thrive.

The protected structures in Champawat face several issues. Poor maintenance has led to the deterioration of the Baleshwar Temple, with architectural ornaments and detailing chipped off and in need of retrofitting. The area around the temple is highly congested, and unauthorised structures have encroached on the prohibited zone, violating ASI regulations. Similarly, the Kotwali Chabutra, another ASI-protected site, is deteriorating and requires attention and preservation efforts. The Naula next to the Baleshwar Temple is also poorly maintained. These problems reflect a lack of enforcement of regulations meant to protect these historic structures. The congestion and encroachment contribute to environmental degradation, harming the area's historic and scenic value. There is a noticeable lack of systematic preservation and conservation efforts, and insufficient awareness and support from local authorities and communities further exacerbate the deterioration of these heritage sites.

Additionally, the area features other significant temples, such as the Golu Devta Temple and Nagnath Temple, which attract tourists for religious purposes and hold cultural importance. The Golu Devta Temple is particularly notable for its tradition of tying petitions for justice. Site development is necessary for these locations.

Champawat also hosts cultural events such as the Golju Mela, which showcase local talent and products and draw visitors from neighbouring regions. Although artists are invited to the mela, it is not popular enough to attract a significant number of tourists. Infrastructure upgrades and additions are necessary. With strategic planning and management, these attractions have the potential to boost tourism and the local economy.

5.3 Upcoming Projects/Developments

The state government has proposed several area development projects to boost the tourism sector in Champawat. These initiatives are designed to enhance the region's appeal by improving infrastructure, expanding tourist amenities, and promoting local attractions. By focusing on strategic developments, the area would attract more tourists and stimulate economic growth. Since the vision for the area is to develop as a twin city for sustainable tourism and economic buoyancy, proposals are considered for both the Lohaghat and Champawat planning areas. These proposals would support one another, particularly in the tourism sector, to boost the economies of both regions.

- i. Heliport in Mount Abbott
- i. Development of Golju Temple Corridor
- ii. Development of Stadium in Goral ground
- iii. Bird watching trail in Abbott Mount
- iv. Heliport in Champawat
- v. Ropeway from Tea Garden to Hingle Devi Temple
- vi. Redevelopment of Baleshwar Temple
- vii. Develop Jim Corbett Trail
- viii. Redevelopment and heritage revival of 13 Naula
- ix. Redevelop Rajbunga Fort-Chand Dynasty Museum and Interpretation Centre
- x. Develop Eco-Tourism Hotel in Tea Garden

- xi. Conduct Kiwi Festival – Kiwi plucking, farm-to-table premium hospitality (harvest season)
- xii. Set up a model orchard of 2 acres for Kiwi, set up 1 Kiwi processing centre for jam, juice and dry slice preparation (1,000 MT/season)
- xiii. Develop Cinnamon nurseries in a 20-ha area to propagate and supply 25 lakh+ quality planting materials till 2030
- xiv. Develop Adventure Park in Champawat
- xv. Connection of Railway Link in Champawat connecting Tanakpur and Bageshwar

The proposals relevant to the Champawat Planning area have been incorporated into the proposed land use.

5.4 Heritage Tourism Proposals

Heritage tourism involves travelling to experience a town's cultural, historical, and natural heritage. This form of tourism is motivated by a desire to explore and appreciate the unique aspects of a destination's past, including its historical sites, traditions, artefacts, architecture, and landscapes. Heritage tourism showcases the town's cultural and historical significance.

5.4.1 Tourist Information Centre

A Tourist Information Centre is proposed in the town near the bus stand, as there is currently none. Visitors will be given information about the area's attractions, housing options, maps, tourist circuit, transportation facilities, and basic civic amenities such as public restrooms, drinking water, trash cans, and other travel-related services. Additionally, a tourism information app is suggested to enhance the user experience. The app may also be used to search for transportation, find nearby hotels and local attractions, and book tickets online, among other things.

5.4.2 Heritage Precinct

The vision for the heritage precinct is to conserve heritage, suitably preserve/ transform the urban character, and enhance the public realm. Enforcement of regulations to protect the heritage structure, taking a 100 m distance from the Baleshwar boundary to be protected; further, a 200 m distance from the protected area to be restricted. The street would reflect the town's historical importance through its urban design. It would connect heritage buildings such as Baleshwar Temple, Nagnath Temple, Rajbunga Fort, and Kotwali Chabtura to basic amenities while seamlessly allowing visitors to experience the town's heritage.

5.5 Recreational Derive from Nature Tourism

Recreational tourism refers to travel for relaxation, enjoyment, and recreation. The proposal for stream-front development and a piazza near the stream would provide spaces for leisure and relaxation for tourists and locals.

5.5.1 Proposed Streamfront Development

Given the stunning mountain backdrop and surrounding scenic beauty, the location near Jawahar Navodaya Vidyalaya holds immense potential. The proposal suggests an 800-meter pedestrian walkway with cycle tracks alongside the stream, providing a pathway for residents and tourists to stroll and enjoy the serene ambience. Additionally, small seating areas could be developed at various locations near the streams.

5.5.2 Proposed Piazza

Additionally, approximately 1.5 hectares are earmarked for plaza development around the stream, intended to include essential tourist facilities, cafes, picnic spots, and more.

5.6 Adventure Tourism Proposals

Adventure tourism often includes activities such as hiking, trekking, mountaineering, rock climbing, bungee jumping, zip-lining, and other outdoor pursuits. Champawat, a hilly area with tourism potential, has seen proposals for a cable car, trekking routes, mountaineering, and climbing.

5.6.1 Proposed Cable Car

Cable Car Route 1 - A proposed 0.73 km cable car route from the stream front to the tea garden would improve accessibility through public transport. The cable car would also provide an enriching view of the town. The proposed lakefront and plazas will serve as good pause points for tourists and improve the public realm for residents.

Cable Car route 2- A cable car route between Champawat and Lohaghat has been proposed. The total length of the route will be 6 km, with an intermediate station at the 3 km mark, equipped with public amenities. A 1-hectare area has been designated for these facilities. Travellers will not only benefit from a convenient mode of transport but also enjoy the breathtaking scenery of the surrounding forest.

5.6.2 Proposed Trekking Route

A 2.9 km trekking route from Maneshwar Temple to Ek Hathiya ka Naula is proposed for upgrade, with facilities such as toilets, drinking water, and seating. The 1.3 km trekking route from Ek Hathiya Ka Naula to Shuttle Point is also proposed.

5.7 Proposals for Devotional Tourism

Devotional tourism, also known as religious tourism, involves travel to destinations that hold religious or spiritual significance. Pilgrimages, religious festivals, and visits to sacred sites are common activities in devotional tourism. People embark on these journeys to connect with their faith, seek spiritual fulfilment, and experience the cultural and historical aspects.

5.7.1 Redevelopment of Golu Devta Mandir Precinct

Golu Devta Mandir is a prominent temple in the district. The redevelopment plan for the Golu Devta Mandir precinct includes widening the road from a 4-meter to a 12-meter right-of-way, along with proposed parking, animal husbandry facilities, and a stadium. This stretch will have a pedestrian-dominant character, showcasing local products.

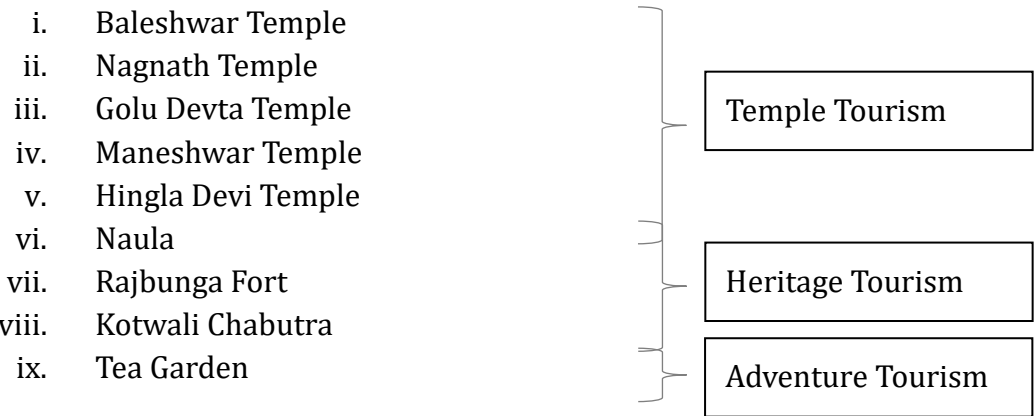
5.7.2 Mall Road near Golu Devta Temple

Amidst the verdant hills and captivating vistas of the town, a proposal is given to create vibrant Shopping Stretches on the major surrounding roads of the Goral Precinct. The shopping area will beckon tourists to explore and indulge in the essence of the local culture. This shopping area will showcase a delightful array of artisanal crafts, local specialties, and unique souvenirs, offering visitors an immersive experience in the town's rich landscape. By fostering this hub of cultural exchange, the aim is not only to enhance the tourism landscape but also to provide economic opportunities for talented artisans and entrepreneurs.

5.8 Proposed Tourist Circuit

A tourist circuit is like a treasure map guiding travellers through a series of connected destinations or attractions. It's a well-thought-out route designed to showcase diverse experiences, cultural richness, and scenic wonders within a specific region or theme. These circuits often link various places of interest, creating a seamless journey for tourists to explore and enjoy. Whether it's a historical trail, an adventure route through the mountains, or a cultural expedition across cities, a tourist circuit aims to offer a comprehensive and immersive travel experience, enticing visitors with a captivating, cohesive journey through various stops and highlights. Furthermore, well-established tourist circuits can be powerful drivers of economic development by generating income, creating jobs, improving infrastructure, and fostering cultural exchange while showcasing a region's unique offerings to visitors.

The proposed tourist circuit in the Champawat planning area includes eight existing tourist destinations. The destinations that are in the Champawat planning area are listed below:



The total length of the tourist circuit is 26.76 km. A traveller can witness the richness of the place and culture through the development of a heritage precinct, where a proposed tourist circuit would connect tourist destinations like Baleshwar Temple, Naula, Nagnath Temple, Rajbunga Fort and Kotwali Chabutra, high-end hotels and vernacular homestay clusters, heritage road, mall road, district Park, within the planning area. This circuit is also connected to its nearby tourist spots, such as Ek Hathiya ka Naula. Various activities related to hill station tourism are also proposed, considering the natural landscapes of the hills, such as a plaza, development of a stream front near Golu Devta Temple, and a Ropeway from the stream front to the Tea Garden. **(Refer Table 5.1)**. The nature of the circuit depends on the kind of destinations it has in the circuit. The circuit can be broadly classified into heritage, nature, culture and adventure as shown in **Table 5.2**.

Table 5.1: Proposed Tourist Circuits for Champawat Planning Area, 2041

Tourist Circuit	
Circuit 1	Champawat Bus Stand/tourist information centre – Baleshwar Temple/Naula - Rajbunga Fort– Nagnath Temple– Kotwali Chabutra – Hingla Devi Temple - Bus Stand or Mall Road
Circuit 2	Champawat Bus Stand/tourist information centre – Shopping Street (majority local products) – Goral Ground – Goral Devta – Mall Road – Bus Stand
Circuit 2a	Heritage Street – Mall Road - Goral Ground – Goral Devta Temple– Shopping Street (mainly local products) – Bus Stand

Circuit 3	Champawat Bus Stand/tourist information centre – Shopping Street majority of local products) – Goral Ground – Goral Devta Temple – Proposed Plaza – Street Front Development Activities – Tea garden through cable car
Circuit 3a	Heritage Street – Mall Road - Goral Ground – Goral Devta Temple – Proposed Plaza – Street Front Development Activities – Tea garden through cable car
Circuit 4	Champawat Bus Stand/tourist information centre – Maneshwar Temple – Trek route from Maneshwar Temple to Ek Hathiya Ka Naula – Trek Route from Maneshwar Temple to Shuttle Point

Source: School of Planning and Architecture, New Delhi (2023).

Table 5.2: Proposed Tourist Circuit Character, 2041

Tourist Circuit	
Circuit 1	Heritage Precinct Conservation of heritage structures and provision of basic amenities at tourist destinations. The character of the circuit would be of a heritage nature, with conserved vernacular architectural buildings. The street character would reflect the town's heritage.
Circuit 2	Exploring Local The character of the circuit would evolve through exploration, such as local products on shopping streets and mall roads, culture through events and exhibitions at Goral Ground and Golu Devta Temple, and scenic beauty through stream-front development and plazas, or a panoramic view of the town at the tear garden.
Circuit 3	Nature Experience Scenic beauty through stream-front development and plazas, or a panoramic view of the town at the tear garden through a cable car ride.
Circuit 4	Adventure The character of the circuit would evolve into an adventure, with the trek designed to include basic amenities such as drinking water, toilets, and seating.

Source: School of Planning and Architecture, New Delhi (2023).

Each tourist destination has its own nature or set of activities. **Table 5.3** Shows the activities for each destination. The tourist circuit has been shown in **Figure 5.2**

Table 5.3: Tourist Destination Proposals, 2041

S. No.	Tourist Points	Activities
1.	Tourism Information Centre near Bus Stand	At the tourist information centre, visitors will receive information on the area's attractions, housing options, maps, tourist circuits, transportation facilities, and basic civic amenities such as public restrooms and drinking water.
2.	Heritage Precinct near Baleshwar Temple	The vision for the heritage precinct is to conserve heritage, suitably preserve/ transform the urban character and enhance the public realm. A 100 m distance from the Baleshwar Temple boundary and the Kotwali Chabutra boundary would be protected. In contrast, a distance of 200 m from the protected area would constitute a regulated area.
3.	Heritage Walk/Street	The street would reflect the town's historical importance through its urban design. It would connect heritage buildings such as Nagnath temple, Rajbunga fort, Traditional Architectural Structures, and Kotwali Chabutra to basic amenities while seamlessly allowing visitors to experience the town's heritage.

4.	Development of Goral Devta Ground	Development of the Goral ground with planned spaces and enhanced accessibility through road widening.
5.	Proposed Plaza	The public plaza offers space for public interaction, a realm, sit-out spaces, and public amenities.
6.	Proposed Stream Front Development	The stream-front development will provide tourists with an immersive nature experience by allowing them to cycle and walk along the tributaries. This will also help rejuvenate the stream.
7.	Proposed Cable Car	A proposed 1.1 km cable car from the stream front to the tea garden would increase accessibility through public transport. The cable car would also provide an enriching view of the town.
8.	Proposed Trekking Route	Trekking route from Maneshwar Temple to Ek Hathiya ka Naula, with a distance of 2.9km. The route would be upgraded with facilities such as toilets, drinking water, and seating. Trekking route from Ek Hathiya Ka Naula to Shuttle Point with a distance of 1.3km
11.	Upscale Hotels	It was observed that there are no high-end hotels available in the town. Upscale hotels and resorts in the West are proposed to cater to high-end tourists.

Source: School of Planning and Architecture, New Delhi (2023).

The tourist carrying capacity is derived based on various factors such as area, standard area required for the activity, average available time for the activity and limiting factors, as shown in

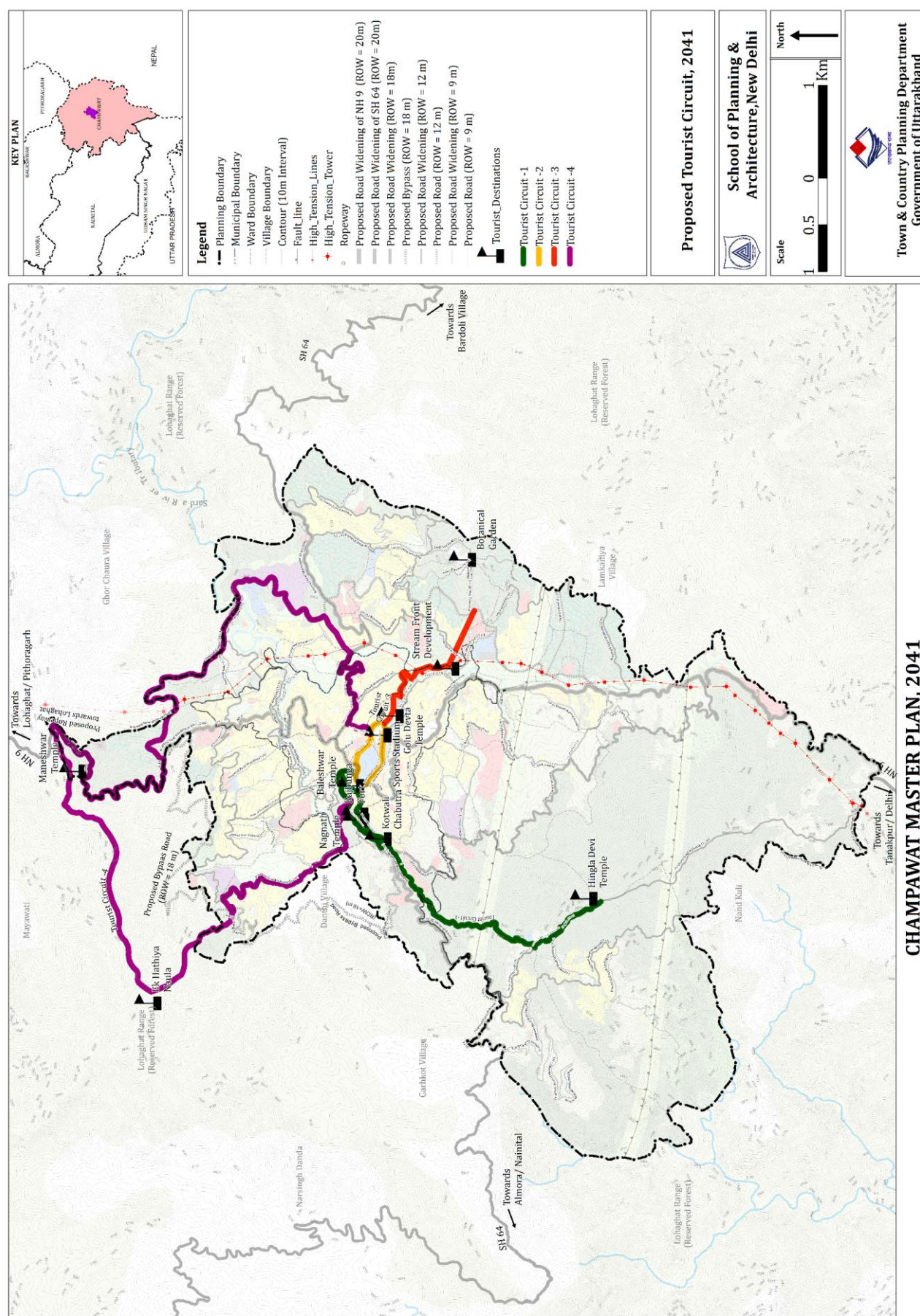
Table 5.4.

Table 5.4: Carrying Capacity for Tourist Points

No.	Destination	Type	Area (Sq. m.)	Standard Area Requirement for Activity	Average available time for activity	Average Visit Time	Rotation Coefficient (RC)=	Limiting Factor 1 (LF1)	Limiting Factor 2 (LF2)	Basic Carrying Capacity (BCC) /day	Potential Carrying Capacity (PCC) /day	Real Carrying Capacity (RCC) /day	Real Carrying Capacity (RCC) /year	Bad Weather Days
			A	B	C	D	C/D	$100 - \frac{[(\text{days} / 365) \times 100]}{100}$	$100 - \frac{[(\text{Hrs} / 24) \times 100]}{100}$	A/B	BCC X RC	PCC X LF1 X LF2	PCC X LF1 X LF2 X 365	
1	Tea Garden	Garden	Sq. m.	Sq. m.	Hrs.	Hrs.		Bad Weather Days	Closing Time					
			22,300	50	12	3.0	4.00	0.87	0.50	446.0	1,784	774.7	2,82,764	48

8	7	6	5	4	3	2
Nagnath Temple	Golju Mela	Maneshwar Temple	Golu Devta Temple	Ek Hathiya Ka Naula	Kotwali Chabtura	Baleshwar Temple
Religious Temple	Fair	Religious Temple	Religious Temple	Covered Spring	Heritage Sites	Religious Temple
150	15,200	760	500	89.8	209	702.2
9	15	9	9	4	10	9
10	14	10	10	10	8	11
0.6	3.5	1.2	0.8	1.5	1.2	1.2
16.67	4.00	8.33	12.50	6.67	6.67	9.17
0.92	0.03	0.92	0.92	0.87	0.67	0.92
0.42	0.58	0.42	0.42	0.42	0.33	0.46
16.67	1013.3	84.4	55.5	22.4	20.9	78.0
278	4,053	704	694	150	139	715
106.2	64.7	269.1	265.5	54.15	31.18	300.8
38,773	23,644	98,225	96,933	19,766	11,379	1,09,818
30	355	30	30	48	120	30

Source: School of Planning and Architecture, New Delhi (2023).Figure 5.2: Proposed Tourist Circuit in and Around Champawat Planning Areas, 2041



Source: School of Planning and Architecture, New Delhi (2025).

CHAPTER 6: SOCIAL INFRASTRUCTURE

6.1 Introduction

Public and semi-public facilities help strengthen a town's social cohesion. The proposal suggests designating specific zones for important institutional functions and for public and semi-public activities. The thorough assessment of demand for various public and semi-public facilities, along with their spatial requirements, is based on projected population growth. A designated land parcel measuring 1.126 sq km is recommended for the establishment of institutions and other public and semi-public facilities.

6.2 Educational Institutes

The analysis report shows a gap in some facilities that are mandatory in hilly areas as per the URDPFI 2014 guidelines. The URDPFI guidelines delineate the arrangement of educational institutes based on the population served per unit area. It was observed during the analysis that the primary and secondary schools are adequate based on the estimated 2023 population. The primary and secondary schools are more than sufficient in number for the projected population in 2041 (**Table 6.1**).

Table 6.1: Existing and Proposed School Facilities in Champawat Planning Area, 2041

Existing GAP Analysis						Projection			
S. No.	Category	URDPFI 2014 (Population served per unit)	Req. as per URDPFI (2023)	No. of Education Facilities existing as of 2023.	Remark	Req. as per URDPFI, for 2041	No. of Education Facilities req considering the gap & Adequacy	Area Requirement in sq. m. as per URDPFI 2014	Area required for proposal 2041 (Ha)
1	Primary School (I to V)	4000	7	18	Adequate	13	0	3,000	0
2	Middle School (VI to VII)	15000	2	30	Adequate	3	0	4,000	0
3	Secondary School (IX to X)				Adequate				
4	Senior Secondary School (XI to XII)				Adequate				

Source: URDPFI, 2014 & School of Planning and Architecture, New Delhi (2023).

Apart from the basic-level education needed to meet the present and projected social infrastructure needs of the population, the lag in higher-level education also needs to be addressed. URDPFI, 2014 states that in hilly towns, there shall be one college for every 30,000 populations, one professional college for every 30,000 populations, and one university for every 50,000 populations. The estimated population of the Champawat Planning Area for 2023 is 28,111, for which no such facilities are required. At present, there are no engineering colleges, medical colleges, technical education institutes, universities, or management colleges in the planning area. For higher technical education facilities, the nearest places are Haldwani, Lohaghat or Pantnagar. The nearest medical and management colleges are in Haldwani, which is 170 km from Champawat. The nearest engineering college is in Pantnagar,

which is 205 km from Champawat. As per the 2011 census, the population within the planning area is 19,937, and the estimated population for 2023 is 28,111, both of which fall under the neighbourhood-level Planning Unit. Thus, the inadequacy of the infrastructure within the area has been checked based on the URDPFI guidelines, 2014.

The estimated population for the master plan's horizon year, i.e., 2041, is 51,037, which would create demand for these facilities. For the development of the education sector in the Champawat Planning Area, there will be a need to provide 1 college, 2 professional colleges and 1 university. The total area required for constructing 1 college and 1 university would be 2 and 3 hectares, respectively. There would be a need to construct 2 professional colleges, which would require a total area of 3 hectares, with 1.5 hectares allocated to each college (refer). **Table 6.2).** The locations of these educational facilities are determined by factors such as connectivity, residential neighbourhoods, and accessibility.

Table 6.2: Existing and Required Higher Education Facilities, 2041

Existing GAP Analysis						Projection			
S. No.	Category	URDPFI 2014 (Pop. served per unit)	Req. as per URDPFI, for 2023	No. of Education Facilities existing as of 2023.	Remark	Req. as per URDPFI, for 2041	No. of Education Facilities required considering the gap & Adequacy	Area Requirement in sq. m. as per URDPFI 2014	Area required in Ha
1	Arts/Science / Commerce College	30000	1	1		2	1	20,000	2
2	Engineering College/ Professional college	30,000	1	0	Pantnagar (205 km)	2	2	15,000	3
3	University College	50,000	1	0	Haldwani (170 km)	1	1	20,000	3
Total									8

Source: URDPFI, 2014 & School of Planning and Architecture, New Delhi (2023).

6.3 Healthcare Facilities

The analysis of healthcare facilities shows that micro-level medical facilities are insufficient relative to the population they serve in the Champawat Planning Area. The area required for these small facilities is approximately 6.6 hectares. **Table 6.3** Shows healthcare facilities and existing and proposed area requirements.

Table 6.3: Existing & Proposed Healthcare Facilities, 2041

Existing and GAP Analysis						Projection			
S. No.	Category	URDPFI 2014 (Pop. served per unit)	Req. as per URDPFI, for 2023	No. of Healthcare Facilities existing	Remark	Req. as per URDPFI, for 2041	No. of Healthcare Facilities required considering the gap & Adequacy	Area Requirement in sq.m as per URDPFI 2014 (in Ha)	Area required in Ha
1	Dispensary	2,500	11	1	Insufficient	20	19	0.015-0.020	0.39
2	Family Welfare Centre	5,000	6	0	Insufficient	10	10	0.025-0.050	0.51
3	Maternity Homes	15,000	2	1	Insufficient	3	2	0.025-0.050	0.21
4	Nursing Home	15,000	2	1	Insufficient	3	2	0.050-0.075	0.18
5	Health sub centre	3,000	9	1	Insufficient	17	16	0.025-0.067	0.80
6	Primary Health Centre (25 to 50 beds)	20,000	1	18	Not Required	3	0	0.105-0.210	0
7	Hospital (200 - 250 beds)	80,000	0	1	The number of beds needs to be increased, as the district hospital currently has only 150.		1	0.840-2.1	2.1
8	Veterinary Centre	1,000	28	1	Insufficient	51	50	0.050-0.100	2.5
Total									6.6

Source: URDPFI, 2014 & School of Planning and Architecture, New Delhi (2023).

6.4 Organised Green Spaces

The presence of open spaces holds great significance within communities. Regions abundant in greenery play a crucial role in ecology and the environment. These verdant areas help enhance the urban climate, mitigate the urban heat island effect through their ecological balancing function, and reduce environmental harm. Beyond their environmental impact, open spaces hold social value, helping residents adopt healthier lifestyles. Additionally, their aesthetic importance shapes the overall character of settlements, enhancing the built environment of cities. Given current processes and trends, cities and their neighbourhoods can enhance their appeal to both tourists and residents by implementing open-space projects. This approach has the potential to elevate their overall value significantly. (Balogh, 2011).

According to the Urban and Regional Development Plan Formulation and Implementation (URDPFI) Guidelines 2014, the open spaces include the following two categories, namely:

- Recreational space
- Organised green

Considering the categories of open spaces mentioned, it may be desirable to allocate 10-12 square meters per person. However, in hilly regions, the inclusion of protected zones and ecological conservation areas should exceed this open space requirement. In the built-up area, excluding recreational space, vacant land, floodplain, and forest, the National Building Code, 2005 (NBC) recommends a minimum norm of three square meters per person.

Development controls as per NBC, 2005

- Open spaces/maidans shall be spatially distributed and promote multiple functions over time.
- In any layout or subdivision of land measuring 3,000 sqm or more in residential and commercial zones, the community open space shall be reserved for recreational purposes, which shall, as far as possible, be provided in one place.
 1. The minimum recreational space provided shall be 45 sqm.
 2. The minimum average dimension of the recreational space shall not be less than 7.5 m, and the length shall not exceed 2.5 times the average width.
- Each recreational area and the structure on it shall have an independent means of access.
- Any building line shall be at least 3 m away from the boundary of recreational open space.

Green areas and other associated non-economic activities are preferably proposed on government-reserved land. In case the open/green spaces which do not generate income are proposed on privately owned land, the local authority preparing the plan shall part with fair compensation as per 'The Right to Fair Compensation and Transparency in LARR Act, 2013' to the landowner.

According to the URDPFI 2014, one housing area park is required for every 5,000 people in an area of 0.5 to 1 hectare. Similarly, one neighbourhood park is required for every 10,000 people in an area of 1.2-2.0 Ha (Refer). **Table 6.4**). The guidelines also suggest one more site for a city park/playgrounds/maidan/exhibition ground/cultural gathering ground, depending on design and space availability across the entire planning area. The guidelines also include one Botanical Garden covering an area of 10-20 Ha for every town.

As discussed in the analysis report, the Champawat planning area has an adequate number of neighbourhood parks, city parks/playgrounds/maidan/exhibition ground/cultural gathering grounds, community-level multipurpose ground, and a botanical garden. These spaces need to be equipped with facilities suggested by governing guidelines. However, the Champawat planning area lacks housing area parks. As the projected population of the Champawat planning area for 2041 is 51,037, 10 park units are required, each with an area of 0.5-1 ha, depending on the availability of space within the residential zone. These parks will be integrated into the residential zones within the planning area to improve residents' access. One issue highlighted in the same chapter is that neighbourhood parks are not equitably dispersed throughout the planning area, and their sizes do not align with the recommended guidelines. This issue needs to be addressed by uniformly placing neighbourhood parks across the settlement and providing adequate space and facilities in accordance with governing guidelines. The number of existing neighbourhood parks will be sufficient for 2041. The analysis report discusses the existing botanical garden adjacent to the planned area, which is sufficient for the 2041 planning year.

Table 6.4 highlights critical gaps and future requirements for organised green areas, multipurpose grounds, and sports facilities in accordance with URDPFI standards. Currently, housing area parks, residential unit play areas, and neighbourhood play areas are absent or insufficient, with significant additional facilities required by 2041 to meet population demands. While neighbourhood parks and a city-level park exist, there is a need to ensure their strategic placement and functionality. The existing botanical garden and Goral Chaur playground require upgrades to enhance their utility and meet urban needs. The total projected area requirement is 34.5 hectares, underscoring the urgent need to integrate green spaces and recreational facilities into urban planning. These provisions are vital for enhancing community well-being, fostering social interactions, and promoting sustainable urban development.

The analysis report also discusses upgrading the Goral Chaur playground into a stadium, which will be sufficient for a population of 2041, as guidelines suggest one District Sports Centre for a population of one lakh. It is recommended that the stadium be upgraded to comply with the guidelines for a District Sports Centre. However, the Champawat planning area severely lacks Residential unit play areas and Neighbourhood play areas, which are required for populations of 5,000 and 15,000, with areas of 0.5 ha and 1.5 ha, respectively. The residential unit play area should be uniformly distributed within residential zones and is recommended to be adjacent to Housing area parks to improve accessibility between the two residential-level infrastructures. Ten units are required for the year 2041. Similarly, three neighbourhood play areas are proposed to cater to the demand for 2041. **(Refer to Figure 6.1)**

Table 6.4: Proposed Recreational Facilities & Open Spaces, Champawat 2041

S. No	Category	Existing Nos	Population Served per Unit (URDPFI Standards)	Requirement (as per standard), 2023	Requirement (as per standard), 2041	Proposal	Area (in ha)	Remark
Organised Green Areas								
1	Housing Area Park	0	5,000	6	10	10	0.5 - 1	Located near the residential unit play area within the residential zone.
2	Neighbourhood Park	0	10,000	3	5	0	-	Homogeneous placement as per settlement, and provide adequate space and facilities.
3	City Parks/playgrounds /maidan/exhibition grounds/cultural gathering grounds	1	One or more sites, depending upon design and space availability.		1	1	5	Facilities to be provided as per the guidelines and land use
4	Botanical Garden	1 (in planning area)	One for every town		-	-	-	The existing Botanical Garden shall be upgraded.
Multipurpose Ground								
5	Community Level Multipurpose Ground	0	1,00,000	1	-	-	-	Facilities to be provided as per the guidelines and land use
Sports Facility								

S.No	Category	Existing Nos	Population Served per Unit (URDPFI Standards)	Requirement (as per standard), 2023	Requirement (as per standard), 2041	Proposal	Area (in ha)	Remark
6	Residential Unit Play Area	0	5,000	6	10	10	0.5	Located near a housing area park within a residential zone.
7	Neighbourhood Play Area	0	15,000	2	3	3	1.5	Homogeneous placement as per settlement, and provide adequate space and facilities.
8	District Sports Centre	1	1,00,000	-	-	-	0	Goral Chaur playground upgraded to the level of District Sports Centre.
Total							34.5	

Source: School of Planning and Architecture. New Delhi (2023).

KEY PLAN

NEPAL

UTTAR PRADESH

ALMORA

NAINITAL

CHAMPAWAT

UDHAM SINGH NAGAR

PITHORAGARH

Legend

- Revised Planning Boundary
- Municipal Boundary
- Ward Boundary
- Village Boundary
- Proposed Railway Station
- Proposed Railway Line
- Proposed Road Interventions**
 - Proposed NH ByPass (24 m)
 - Proposed SH ByPass (18 m)
 - Proposed Road (12 m)
 - Proposed Road (9 m)
 - Proposed Road Widening (12 m)
 - Proposed Road Widening (9 m)
 - Existing Road (9 m)
 - Fault Line
 - High Tension Lines
 - High Tension Tower
 - Ropeway
- Recreational
- Proposed Recreational

Proposed Recreational Area, 2041

School of Planning & Architecture, New Delhi

Town & Country Planning Department
Government of Uttarakhand

North

Scale

1 0.5 0 1 Km

CHAMPAWAT MASTER PLAN, 2041

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6.5 Safety and Security

The table below shows the lag and projected requirements for safety services in the Champawat Planning Area. It was observed during a site visit conducted by the School of Planning and Architecture. In New Delhi in 2023, there are no fire stations or disaster management centres. Police stations, police chowkis, fire stations, and disaster management centres are all insufficient for the 2023 population, with gaps projected to widen by 2041. The area requirements highlight the urgent need for two additional police stations, nine police chowkis, one fire station, and two disaster management centres to bridge these gaps. The total land requirement for these facilities amounts to 4.4 hectares. This assessment underscores the critical need for proactive planning and investment in safety infrastructure to ensure the security and resilience of urban areas amidst growing populations and potential risks. **Table 6.5** shows the gap and the projected requirement for safety services in the Champawat Planning Area.

Table 6.5: Existing & Proposed Safety and Security Facilities, 2041

S. No.	Category	Existing				Proposal			
		URDPFI 2014 (Pop. served per unit)	Req. as per URDPFI, for 2023	No. of Safety Facilities existing	Remark	Req. as per URDPFI, for 2041	No. of Safety and security Facilities req considering the gap & adequacy	Area Requirement in sq.m as per URDPFI 2014 (in Ha	Area required in Ha
1	Police Station	15,000	2	1	Insufficient	3	2	0.50	1
2	Police Chowki	5000	6	1	Insufficient	10	9	0.1	0.9
3	Fire Station	50000	1	0	Insufficient	1	1	0.3-0.8	0.5
4	Disaster Management Centre	20000	1	1	Adequate	3	2	1	2
Total									4.4

Source: URDPFI, 2014 & School of Planning and Architecture, New Delhi (2023).

6.6 Distributive Services and Other Facilities

The analysis shows that, though there are no large-scale commercial structures, stretches such as National Highway and Goral Devta Mandir Marg have a good share of footfall and fulfil daily commercial needs. The analysis of the existing infrastructure against URDPFI (2014) standards highlights both adequacies and gaps in distributive services. While facilities like banquet halls and community welfare centres are adequate for the current population, there are significant shortfalls in other critical services, including post offices, cremation grounds, and milk booths. These gaps are projected to widen by 2041, necessitating the addition of 4 post offices, 5 cremation grounds, and 4 milk booths to meet future demand, as shown in **Table 6.6**. The spatial requirements for these expansions total 1.86 hectares. Addressing these inadequacies will be crucial for ensuring equitable access to essential services and achieving sustainable urban growth.

Table 6.6: Existing & Proposed Distributive Facilities, 2041

Existing and GAP Analysis						Projection			
S. No.	Infrastructure	URDPFI 2014 (Pop. served per unit)	Req. as per URDPFI, for 2023	No. of Distributive Services Existing	Remark	Req. as per URDPFI, for 2041	No. of Distributive Services req. considering gap & adequacy	Area Requirement in sq.m as per URDPFI 2014 (in Ha	Area required in Ha
1	Banquet Hall	10,000	3	4	Adequate	5	1	0.1	0.10
2	Community Welfare Centre	16,000	2	4	Adequate	3	0	0.1-0.15	0
3	Post Office	10,000	3	1	Insufficient	5	4	0.1-0.15	0.60
4	Cremation Grounds	10,000	3	0	Insufficient	5	5	0.2	1
5	Milk Booth	10,000	3	1	Insufficient	5	4	0.04	0.16
Total									1.86

Source: URDPFI, 2014 & School of Planning and Architecture, New Delhi (2023).

The spatial location of the proposed public and semi-public infrastructure, as shown in **Figure 6.2** is determined by various factors, such as the existing locations of the schools, the distance between the existing and proposed schools, the existing and proposed residential-dominant neighbourhoods, and connectivity.

Source: School of Planning and Architecture, New Delhi (2025).

CHAPTER 7: PHYSICAL INFRASTRUCTURE

7.1 Introduction

Physical infrastructure, including the water supply system, stormwater drainage, sewerage system, and solid waste management system, provides the lifeline for the resident population of an urban settlement, as well as an input to and an outcome of industry, trade, and commerce. In this chapter, spatial planning proposals for water and drainage systems are made.

7.2 Existing Scenario of Physical Infrastructure

7.2.1 Water Supply

According to the primary survey, only 51% of households in Champawat rely on municipal water for their domestic and drinking needs, while 22% lack any reliable water source. The remaining households depend on either natural sources or private bore wells. Among the 51% with municipal water access, only 28% have direct connections to their homes, while 23% receive water through municipal hand pumps or community taps. The only surface water source, the Lohawati River, flows along the municipal boundary but lacks the capacity to meet the area's needs. Although water availability is limited, the quality is generally good, with 76% of residents rating the water's taste as good and only 2% as poor.

7.2.2 Drainage and sanitation

The drainage network in the planning area is insufficient. According to the primary survey, only 11% of households are connected to the drainage system, leaving a considerable 89% unconnected. The Ministry of Housing and Urban Affairs (MoHUA) guidelines recommend that 100% of roads with carriageways wider than 3.5 meters should have paved and covered drains along their entire length. However, the survey shows that Champawat has only 40% drainage coverage, with most well-constructed, fully covered drains located along the National Highway.

Officials from Jalsasthan also reported that, as of 2022-23, the groundwater level is 90 meters below ground level (bgl). To promote sustainable groundwater management, groundwater extraction should be discouraged. In the Champawat planning area, a piped water supply of 5 million litres per day (MLD) is sourced from a treatment plant near the Quarala River under the Mundela scheme. However, this facility provides only basic filtration rather than the full conventional water treatment process recommended by the Central Public Health Environmental Engineering Organisation (CPHEEO) in its 1999 manual on Water Supply and Treatment. According to CPHEEO standards, an urban area without a conventional piped sewerage network should receive a water supply of 110 litres per capita per day (LPCD).

7.2.3 Solid Waste Management

The waste management practices in the area show mixed results. While 65% of households benefit from door-to-door collection, a significant portion 35% still relies on less regulated disposal methods, with 12% using unsanctioned practices. This gap suggests a need for expanded collection services or increased awareness to reduce improper waste disposal. Additionally, the single open dumping yard near Selakhola poses environmental and health

risks, particularly because it is not a scientific dumping site and is located near the municipal boundary. To improve overall waste management, investing in a formalised disposal system, such as a sanitary landfill or a composting facility, could help address these issues sustainably.

7.3 Water Supply and Storm Water Drainage

Households surveyed in June 2023 reported very low surface water availability. Also, officials from Jalsasthan mentioned that, as of 2022-23, the groundwater level is 90m below ground level (bgl). For sustainable groundwater development, groundwater withdrawal shall be disincentivised. Also, the piped water supply in the Champawat planning area has a capacity of 5 million Litres per Day (MLD) from a treatment plant situated near the Quarala River under the Mundela scheme. However, the treatment process includes only filtration, not the conventional water treatment process suggested by the Central Public Health and Environmental Engineering Organisation (CPHEEO) manual on Water Supply and Treatment, 1999. As per CPHEEO, 110 Litres per capita per Day (LPCD) of water should be supplied in urban areas where a conventional piped sewerage network is not feasible. However, the existing water supply is 125 LPCD, which can be increased to 135 LPCD, as the Quarala River has a capacity of 25.92 MLD (Jal Nigam Champawat). Since the groundwater level is 90m bgl, which is very low, groundwater withdrawal shall be disincentivised to promote sustainable groundwater development.

As the projected population, including the floating population, of Champawat is 55,000, the total water demand is estimated at 7.43 MLD for the year 2041. According to the Operation and Maintenance Manual for Rural Water Supplies 2013, unaccounted-for water (UFW) in water supply systems in hilly regions ranges from 35 to 50 per cent. Since the UFW for the Champawat Municipal area is 15 per cent (Jal Nigam Champawat), increasing supply to the entire planning area will increase the UFW; hence, the consideration is 35 per cent, which includes transmission loss, theft, and leakage. The losses will amount to 2.6 MLD. As per CPHEEO 1999, fire demand is considered for populations of more than 50,000; hence, the fire demand is calculated to be 0.02 MLD. The actual water demand is 10.05 MLD, and the demand gap is 5.05 MLD. Therefore, it is proposed that the existing filtration plant should be increased to 11 MLD. The filtration plant should be upgraded to a conventional water treatment plant as per URDPFI 2014 guidelines (see Table 7.1).

The design period for WTP will be 15 years as recommended by CPHEEO 1999 guidelines. According to the URDPFI guidelines 2014, the area required for WTP for an 11 MLD water supply is 1 Ha; however, to cater to the future demand of the Champawat planning area, which may increase to 20 MLD, a 2 Ha area has been proposed. The distribution network will be designed for 30 years (see Table 7.1).

Table 7.1: Proposal for Water Supply in Champawat Planning Area, 2041

Projected Population for 2041	55,000
Per Capita Water Demand (in LPCD)	135
Total Water Demand (in MLD)	7.43
Transmission and other losses in Per cent	35
Total Losses (in MLD)	2.6
Fire Demand (in MLD)	0.025
Actual Water Demand (in MLD)	10.05
Existing Supply (in MLD)	5
Demand Gap (in MLD)	5.05
Proposed Water Supply (in MLD)	11

Scope of future expansion (in MLD)	20
Area required for Water Supply System as per URDPFI 2014 (in Ha)	1
Proposed Area provided (in Ha)	2

Source: School of Planning and Architecture, New Delhi (2023).

WTP will have four-stage water-cleansing procedures as suggested by the CPHEEO 1999 guidelines. The preliminary stage involves passing raw water through a protective bar and a screening bar to remove larger particulates. In the primary stage, raw water after the preliminary stage is then passed through aerators to increase dissolved oxygen. This process reduces the odour and colour present in raw water. In the secondary process, raw water is mixed with chemicals to undergo sedimentation and flocculation, removing suspended particulates. The treated water is then disinfected with chemicals such as chlorine, and additional chlorine is added to maintain disinfection during distribution. Treated water is then pumped to storage reservoirs. The water quality standards must strictly comply with URDPFI, 2014.

7.3.1 Overhead Tanks (OHTs)

As discussed in Chapter 8, Jal Nigam, Champawat has existing storage units which will be sufficient for the year 2041. However, these storage units must strictly comply with CPHEEO 1999 guidelines.

Table 7.2: Proposed GLSR Details in Champawat Municipal Area, 2041

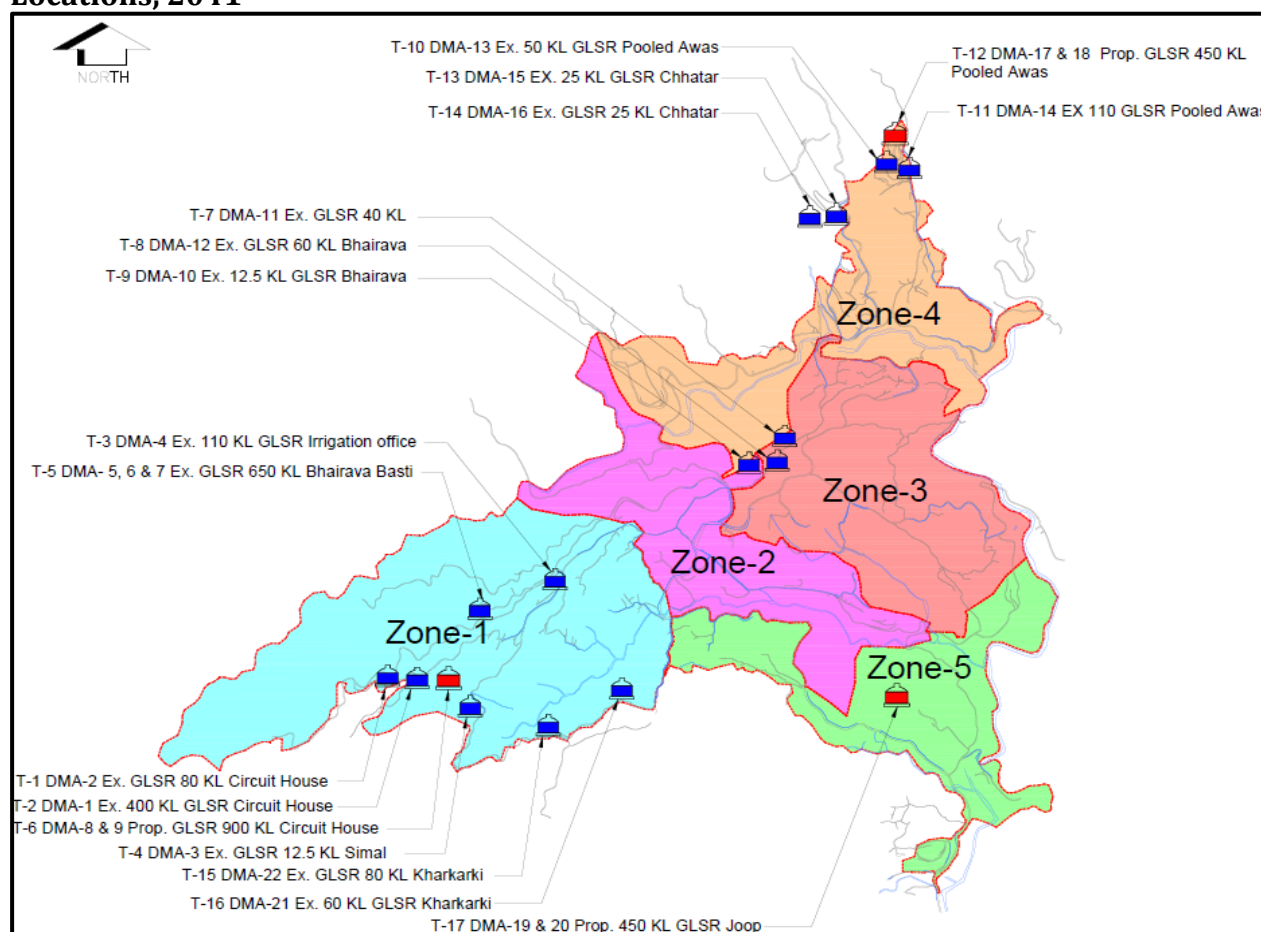
Sl. No.	Zone	GLSR Details			DMA No.	Ward
		Location	Capacity (KL)	Existing/ Proposed		
1	Zone-1	Circuit House, Block Colony	400	Existing	1	Nagnath Mandir (Part)
2		Circuit House, Block Colony	80	Existing	2	Nagnath Mandir (Part)
3		Simal	12.5	Existing	3	Nagnath Mandir (Part)
4	Zone-2	Bhairava Basti	650	Existing	4,5 & 6	Nagnath Mandir (Part), Goral Chaur and Baleswar (Part)
5	Zone-3	Near the Irrigation Office on Block Road	110	Existing	7	Baleswar (Part)
6		Circuit House	900	Proposed	8 & 9	Bhairava Part, Talli Madli (Part) and Kanalgaon (Part)
7		Bhairava, near the old Jal Nigam office	12.5	Existing	10	Bhairava (Part)
8		Bhairava, near the old Jal Nigam office	40	Existing	11	Malli Madli (Part)
9		Bhairava, near the old Jal Nigam office	60	Existing	12	Kanalgaon (Part)
10	Zone-4	Pooled Awas	50	Existing	13	Chhatar (Part)
11		Pooled Awas	110	Existing	14	Chhatar (Part)
12		Chhatar	25	Existing	15	Chhatar (Part)
13		Chhatar	25	Existing	16	Chhatar (Part)
14		Pooled Awas	450	Proposed	17, 18 & 19	Chhatar (Part), Talli Madli (Part) and Malli Madli (Part)
15	Zone-5	Joop	450	Proposed	20, 21	Kanalgaon (Part), Joop (Part)
16		Kharkarki	60	Existing	22	Joop (Part)
17		Kharkarki	80	Existing	23	Joop (Part)

Source: Uttarakhand Urban Sector Development Agency (UUSDA), 2025

7.3.2 Water Distribution Network

The water pipeline network is located within the proposed planning area throughout the town. The network will be equipped with pressure and check valves as required by engineering standards in accordance with the CPHEEO 1999 guidelines. Strong emphasis will be placed on reducing transmission losses, leakage, and the risk of theft. Every household in the planning area will be connected to a proper metering setup. The network will be developed, operated, and maintained under the Jal Nigam of Champawat (see Figure 7.2).

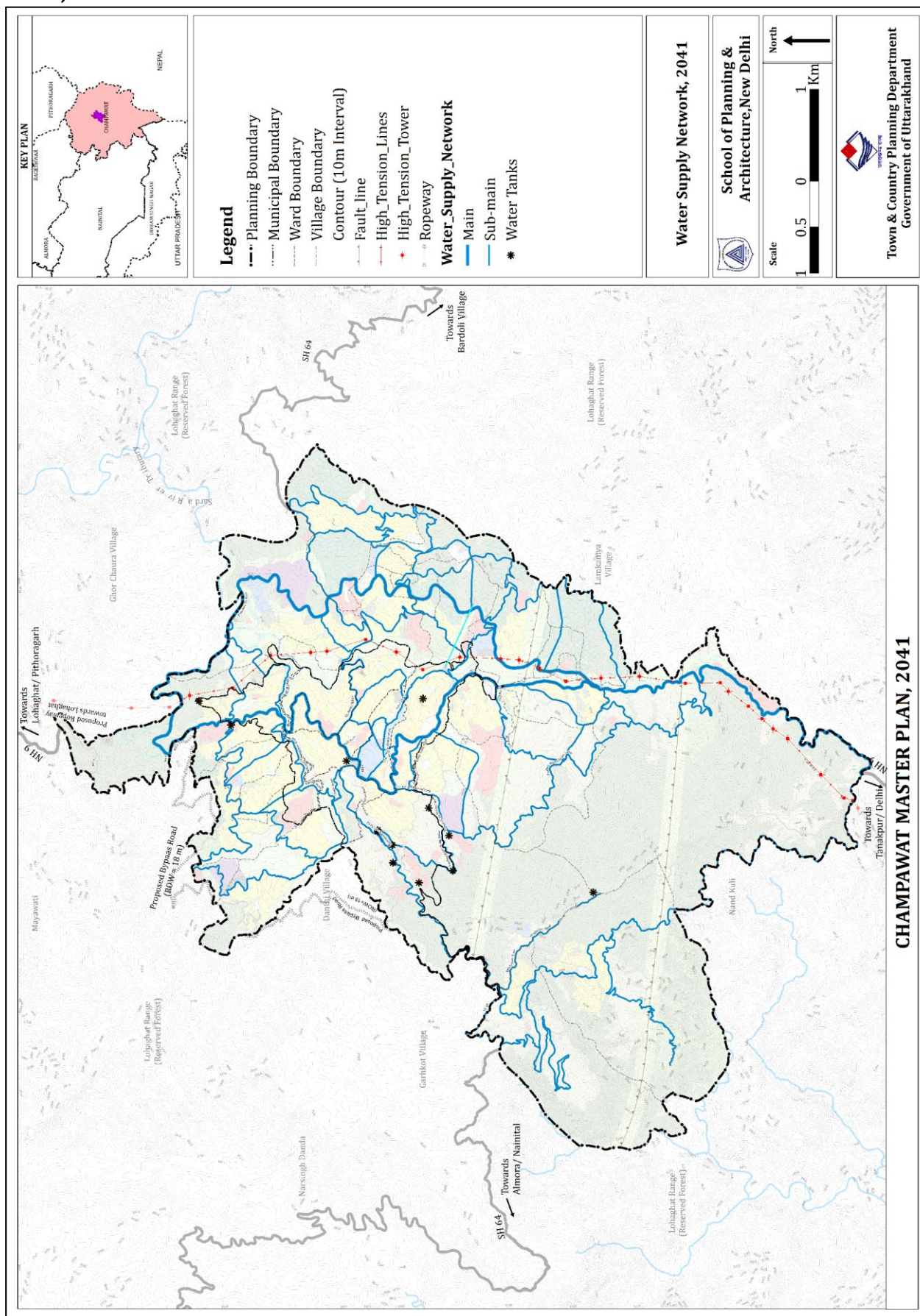
Figure 7.1: Water Supply Scheme for Champawat Municipal Area– Proposed GLSR Locations, 2041



Source: Uttarakhand Urban Sector Development Agency (UUSDA), 2025

7.4 Storm Water Drainage System

During rainfall, a substantial volume of stormwater may not permeate the ground surface. Instead, much of this water transforms into surplus overland flow or immediate surface runoff. Various factors contribute to assessing the volume and temporal changes in this runoff, including the land's geological characteristics, topography, geographical features, rainfall intensity and distribution patterns, and land use type. The calculation of runoff that reaches storm sewers relies on factors such as the intensity and duration of precipitation, the characteristics of the contributing area, and the time it takes for the flow to reach the sewer system (URDPFI, 2014). The covered drainage network accounts for only 1.5 km, which is not significant relative to the total proposed road network length of 101.5 km. According to meteorological data from the Indian Meteorological Department, the highest rainfall recorded for Champawat district is 606 mm in August 2018, at 19.55 mm (0.75 inches) per day.

Figure 7.2: Water Distribution Network with Existing and Proposed Water Storage Units, 2041

Source: School of Planning and Architecture, New Delhi (2025).

According to the CPHEEO Manual on Storm Water Drainage Systems (2019), peak stormwater discharge is calculated using the rational method. The discharge is calculated as 10 times the product of the runoff coefficient (C), the catchment area, and the rainfall intensity. As per the guidelines, the value of C for open spaces is averaged at 0.45, and that of the built-up or constructed area is 0.75. The discharge rate for the entire planning area is calculated at 37.13 cubic meters per second. As per the same guidelines, the design velocities to be ensured in gravity storm conduits can range from 0.6 meters per second to 6 meters per second in hilly regions; hence, engineering designs depend on the parameters discussed in the guidelines.

7.4.1 Integration of Water Sensitive Planning for Efficient Use of Stormwater Runoff

There are several benefits of integrating water and city planning, including water security through the sustainable use of rainwater, groundwater, and surface water, as well as the reuse of wastewater. This integration can be achieved by processing components of Water Sensitive Planning (WSP), including spatial integration, coproduction through citizen engagement, conflict management, contextual uncertainty, power and control, and the interconnectedness of humans and the environment.

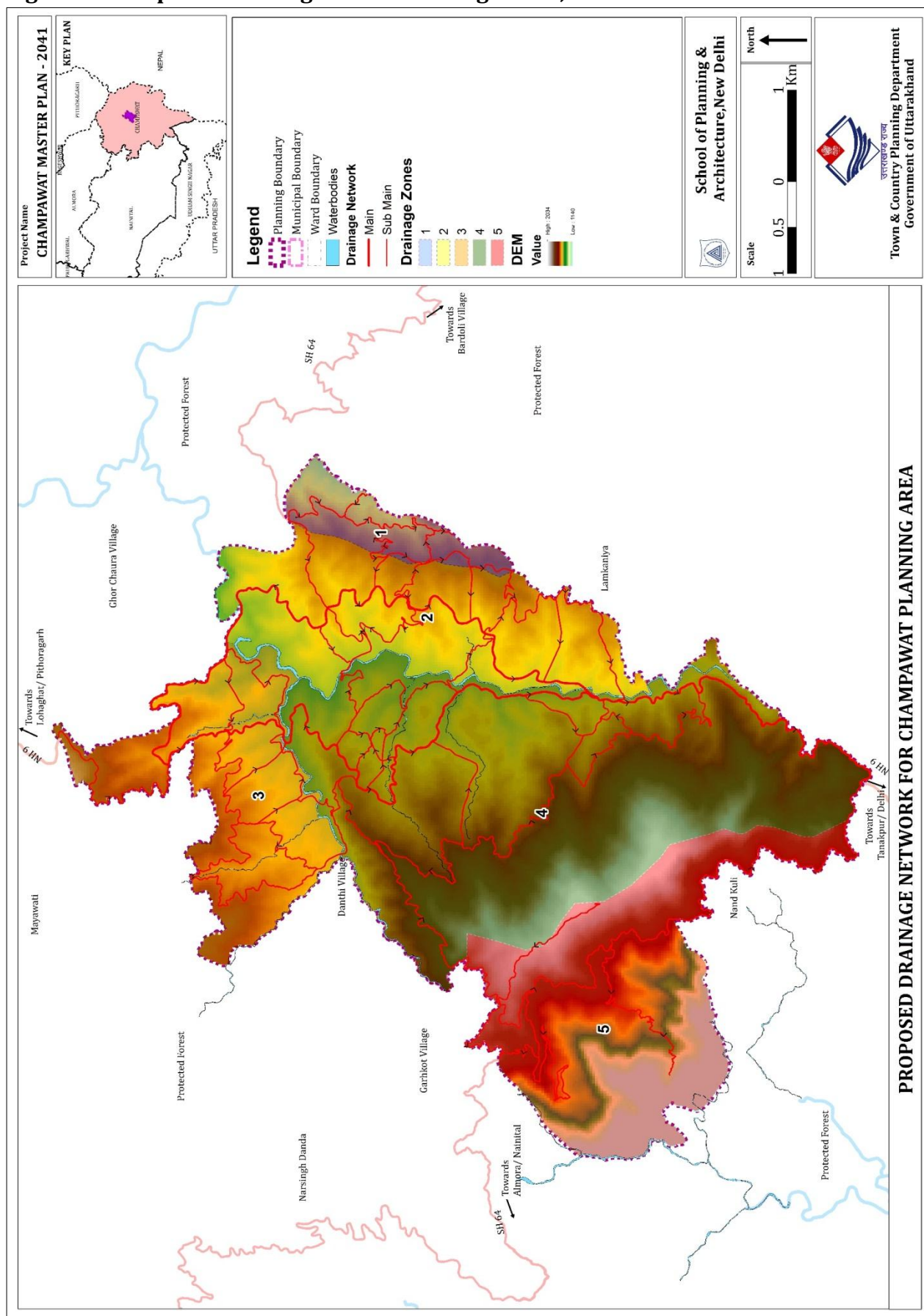
For the implementation of Water Sensitive Planning principles for the Champawat planning area, the following general principles could be used by placing water at the centre of planning processes, as outlined:

- i. Large existing water bodies, including rivers, streams, lakes, and ponds, could be identified and provided legal protection after restoration under the city planning statutes.
- ii. Greenfield layout plans clearly indicating the location of proposed water bodies and linking them with the proposed local drainage system could be connected with the city-level drainage system.
- iii. Green spaces, to act as recharge areas and in layout plans, the direction of stormwater runoff could follow these green spaces. This would require estimation of the amount of stormwater.
- iv. Decentralised drainage systems should be built along both sides of a road, taking stormwater to local pervious places such as water bodies and parks.
- v. Integration of drains, water bodies, and organised recreational places such as city-level parks and planned green spaces would be treated as city sponges.

7.4.2 Drainage Network

A comprehensive stormwater drainage network has been prepared for the Champawat Master Plan 2041 in accordance with the above-mentioned strategies. The drainage network is prepared based on the slope and the proposed road network. **(see Figure 7.3)**. The drainage network will be developed and maintained by the Municipal Council of Champawat. The construction of the drainage network and the design of the cross-section shall be carried out in accordance with the Manual on Storm Water Drainage Systems – 2019, provided by the Central Public Health & Environmental Engineering Organisation (CPHEEO). Drainage lines shall be fully covered to prevent pollutants and solid waste from entering drainage channels, which may lead to blockages. Monthly inspection of drainage lines is recommended to verify proper functioning. The final design of the drainage section may change based on the detailed analysis and requirements of the future drainage plan **(see Figure 7.3)**.

Figure 7.3 Proposed Drainage Network along Roads, 2041



Source: School of Planning and Architecture, New Delhi (2023)

7.4.3 Watershed Management

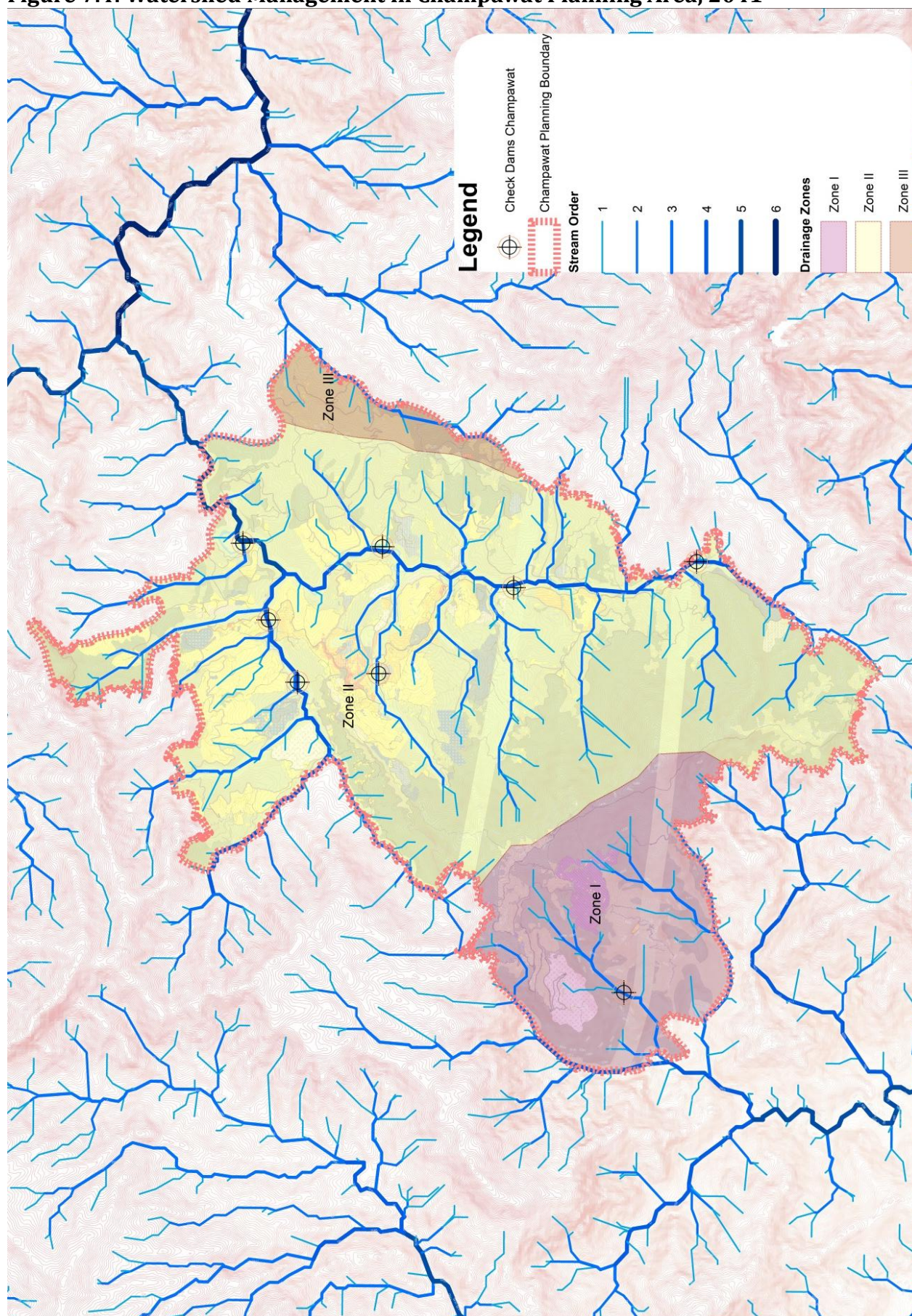
The Champawat Planning Area, encompassing 30.29 sq.km, has been divided into three distinct drainage zones based on their respective catchment areas. To manage water flow and mitigate flooding, eight check dams have been proposed across these zones. These check dams will play a critical role in controlling water runoff, reducing soil erosion, and enhancing groundwater recharge.

Table 7.3: Drainage Zones and Check Dams in Champawat Planning Area, 2041

Zones	Area	Characteristics
I	5.95 sq km	- Represents a moderate-sized catchment area. The region is likely to have natural drainage patterns that require control to prevent excessive runoff during heavy rainfall. This is a moderate-sized catchment area. The region is likely to have natural drainage patterns that require control to prevent excessive runoff during heavy rainfall - Proposed Measures: 1 check dam is proposed in this zone to manage water discharge effectively, reduce erosion, and support agricultural and residential water needs.
II	23.18 sq km	- As the largest drainage zone, Zone II covers a significant portion of the planning area. This zone will be highly influential to water management across the entire Champawat region, with a diverse landscape that includes urban and rural areas. - Proposed Measures: 7 check dams are suggested for this zone, aimed at controlling water flow from higher elevations, protecting settlements downstream, and conserving water for use during dry periods.
III	1.16 sq km	The smallest of the three zones, Zone III, contains steep topography with a valley located outside the planning area. The runoff won't affect the planning area; therefore, it is suggested that the authority consider installing a check dam in this zone in the future.

Source: School of Planning and Architecture, New Delhi (2023)

The overall Drainage Strategy is that the check dams in each zone will collectively serve as a robust system for water conservation, flood control, and sustainable land-use management across the entire planning area. Their implementation will enhance local water management practices and contribute to long-term environmental sustainability in the Champawat region. (refer Figure 7.4).

Figure 7.4: Watershed Management in Champawat Planning Area, 2041

Source: School of Planning and Architecture, New Delhi (2023)

Other watershed management strategies that would help recharge groundwater by slowing fast-moving water and promoting natural filtration and infiltration are listed below.

Soil and Water Conservation

- a. **Contour Bunding and Terracing:** Develop contour bunds and terraces to reduce runoff and enhance water infiltration on agricultural lands. Trenching is a method in which slopes are converted into stepped levels, reducing the speed of surface runoff and increasing the time for water to seep into the ground.
- b. **Gully Plugging:** Stabilise gullies using vegetative measures, gabions, or small check dams.
- c. **Mulching:** Encourage mulching techniques to retain soil moisture and prevent erosion.

Rainwater Harvesting

- a. **Rooftop Harvesting Systems:** Mandate rooftop rainwater harvesting in all public and private buildings.
- b. **Check Dams:** Construct small check dams across streams to capture rainwater and increase groundwater recharge.
- c. **Percolation Tanks:** Develop community-based percolation tanks in strategic locations.

Afforestation and Vegetative Cover

- a. **Plantation Drives:** Initiate large-scale afforestation projects with native species in degraded areas, green belts and no-development areas.
- b. **Riparian Buffer Zones:** Establish vegetative buffers along streams and rivers to prevent erosion.

Groundwater Recharge

- a. **Recharge Wells:** Install recharge wells in key areas to replenish aquifers.
- b. **Subsurface Dams:** Build subsurface dams to retain water in underground layers for sustainable use.
- c. **Infiltration Trenches:** Encourage infiltration trenches along roads and urban areas to enhance groundwater recharge.

Community Participation and Capacity Building

- a. **Watershed Committees:** Form community-based committees to oversee the implementation and maintenance of watershed projects.
- b. **Awareness Campaigns:** Conduct awareness programs on water conservation, soil health, and disaster preparedness.
- c. **Training Programs:** Provide skill development training for farmers and local workers on sustainable practices.

7.5 Sanitation and Decentralized Sludge Management

As discussed in Chapter 8 of the analysis report, 94 per cent of households in the Champawat planning area have access to sanitation facilities within home premises. This should increase to 100 per cent, as per the Ministry of Urban Development (2011). The municipal council of Champawat should ensure that the remaining six per cent of households are equipped with

sanitation facilities on their premises as soon as possible, to make the Champawat planning area an open-defecation-free town. Households with sanitation facilities mainly rely on septic tanks. As the Champawat planning area spans 30 km and has hilly terrain, a centralised sewerage system is not feasible. Hence, four Decentralised Faecal Sludge Treatment Plants (FSTPs), each one hectare in size, are proposed for the Champawat master plan for 2041.

A 22 KLD STP with Co-Treatment Facility & Package Plants has been proposed in Ward no 1 (Chhatar Ward), which would cater to and serve the Champawat Municipal Area.

Further, an 11 MLD water supply has been proposed for the Champawat Planning Area 2041. An FSTP with a capacity of 9 MLD has been proposed, based on an 80 per cent conversion factor from supplied water to sewerage, as suggested by the CPHEEO manual on Sewerage and Sewage Treatment Systems 2013. This FSTP will treat the black and grey water collected in septic tanks of households and commercial places. A zero-tolerance policy should be implemented against human scavenging, and violators should be severely penalised for their negligence. The entire septic tank cleaning procedure should be performed mechanically with minimal human involvement, as discussed in the governing guidelines. The design period of the FSTP will be 15 years, and the treatment procedure used will be as per the guidelines provided by CPHEEO. Treated effluent must comply with the parameters set by URDPFI 2014 and CPHEEO guidelines to ensure environmental safety. Treated effluent can be discharged into streams or, if necessary, returned to the water treatment plant for further treatment and recycling. The project's execution, operation, and management will be carried out through the collaborative efforts of the Champawat Jal Nigam, the Municipal Council, and the Public Works Department.

7.6 Solid Waste Management

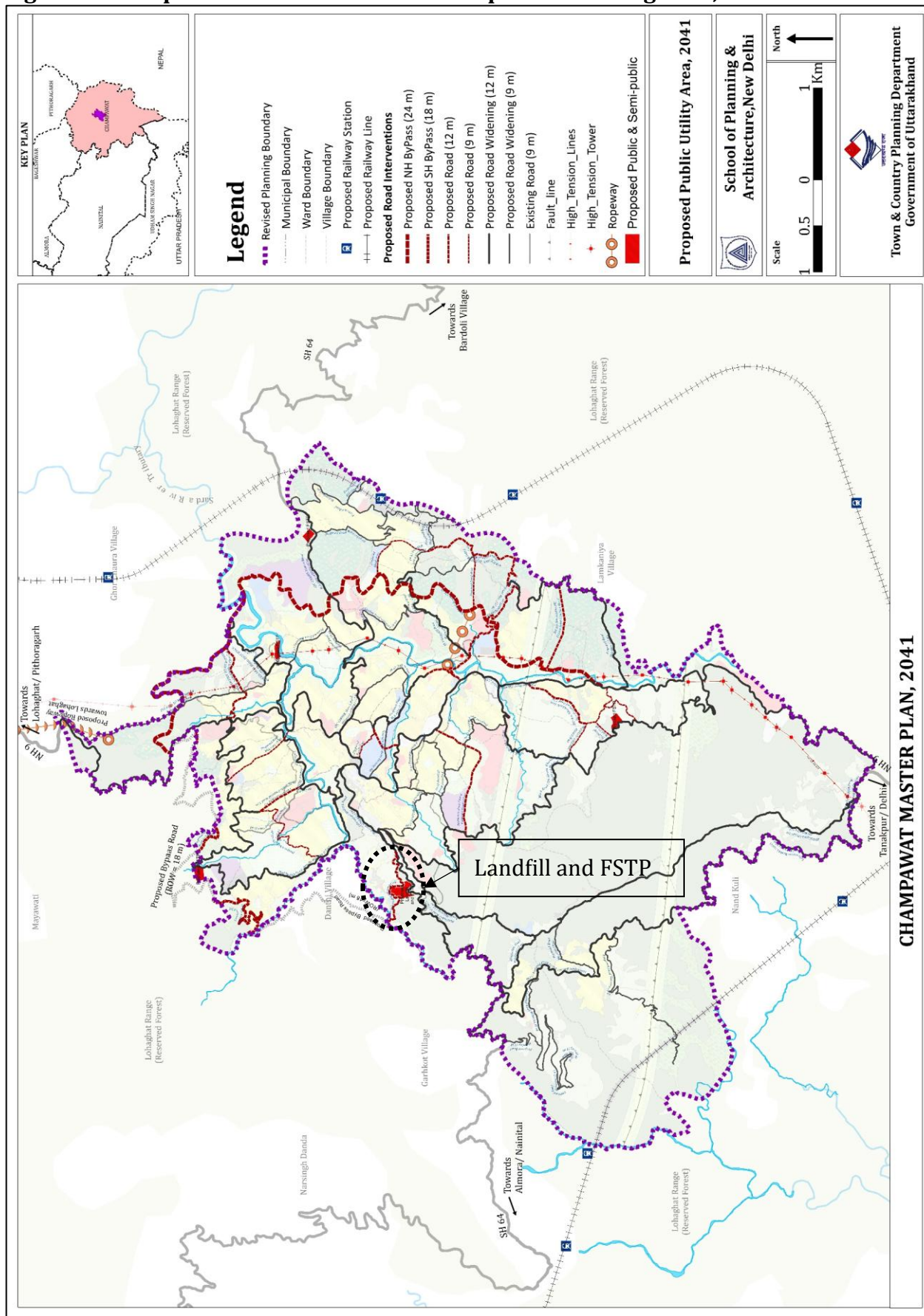
As discussed in Chapter 8 of the analysis report, solid waste management in Champawat involves household waste collection and segregation before landfilling near the Circuit House. As per the Municipal Solid Waste Management Manual (MSWMM) 2016, the CPHEEO guidelines recommend prioritising the minimisation of solid waste at the source. Citizens in the Champawat planning area should be encouraged to use reusable bags to reduce solid waste generation. However, the guidelines suggest a waste generation rate of 0.4 kg per capita per day, which translates to 22 tons per day (TPD).

To mitigate this, a Waste Management Site has been proposed covering 1.2 Ha at the present landfill site near Circuit House. The site will have a surrounding buffer area of 200 meters. The Waste Management site will be developed, operated, and maintained through the collaboration of the Nagar Palika Parishad of Champawat, the Uttarakhand Urban Sector Development Agency, and the Public Works Department. On-site waste segregation should be ensured by providing different-coloured bins for each waste type. Public dustbins will also be equipped with two separate chambers. The selection and adoption of Municipal Solid Waste processing technologies should be based on defined selection criteria and be subject to a detailed due diligence study that ascertains the appropriateness of the technology for the prevailing conditions of the respective Urban Local Bodies (MSWMM, 2016).

The waste management site will be equipped with a plastic reuse mechanism, a wastepaper recycling unit, and a system to decompose organic waste and produce compost for nearby cultivators to use in crop production. Waste collection vehicles will be covered, with separate

chambers for dry and wet waste to facilitate source segregation. These vehicles will collect waste daily and deliver it to the Waste Management site. For the safety of waste collectors, it is advised that they wear protective gloves, masks, glasses, and helmets during their working hours. Provisions for regular health check-ups of waste collectors should be made free of cost to ensure their optimal health.

The final disposal of waste that needs to be landfilled should comply with the SWM Rules, 2016, which provide comprehensive regulations on the siting, design, and operation of sanitary landfills.

Figure 7.5: Proposed Public Utilities in Champawat Planning Area, 2041

Source: School of Planning and Architecture, New Delhi (2025)

CHAPTER 8: TRANSPORTATION

8.1 Introduction

A town's traffic and transportation system plays a crucial role in enabling the movement of people and goods, ensuring accessibility, safety, connectivity, efficiency, and sustainability. Incorporating transportation needs into the town's master plan creates a well-integrated, livable environment while accommodating future developments. Champawat Planning Area demonstrates connectivity through its existing road network, shared taxis, and buses. Alternative transportation options can address challenges in hilly regions. Tanakpur railway station, being the closest, serves interstate trips across the Champawat Planning Area. Patnagar airport and Naini-Saini airport are the two closest airports, one to the south and the other to the north of the Champawat Planning Area, which serve air travel. Moreover, Champawat had a helipad to facilitate travel, especially during emergencies.

Insights into the results of traffic surveys, including classified traffic volume counts, roadside origin-destination surveys, speed and delay characteristics, average daily traffic, traffic composition, hourly variation, and traffic flow patterns, reveal the need to improve existing road transportation connectivity, intermediate public transport services, and pedestrian movement facilities. The Master Plan envisions a future integrated urban transportation system that is sustainable, highly efficient, and appropriate for the hill town. Further sections of this chapter provide an overview of short- and long-term proposals to improve the transportation network within and across the Champawat Planning Area.

8.2 Existing Scenario

Champawat Planning Area demonstrates connectivity through its existing road network, private taxis, shared taxis, and buses. Alternative transportation options can address challenges in hilly regions. Tanakpur railway station, being the closest, serves interstate trips across the Champawat Planning Area. Patnagar Airport and Naini-Saini Airport are the two closest airports, one to the south and the other to the north of the Champawat Planning Area, which serve air travel. Moreover, Champawat had a helipad to facilitate travel, especially during emergencies.

To assess the existing road network, traffic patterns, and transportation connectivity, surveys and studies were conducted, including classified traffic volume counts, origin-destination studies, and additional data from sources such as Google Maps. The chapter provides insights into the results of traffic surveys, including classified traffic volume counts, roadside origin-destination surveys, speed and delay characteristics, average daily traffic, traffic composition, hourly variation, and traffic flow patterns. The collected data informs road network characteristics, traffic flow, and various modes of transportation.

The outcomes of the Classified Traffic Volume Count reveal a clear need to improve the existing road network, as the 2023 level of service, if projected to the year 2041, would indicate that existing roads would be unable to sustain future traffic demand. Moreover, the Champawat planning area lacks Intermediate Public Transport services. Overall, the chapter provides a comprehensive understanding of the current traffic and transportation landscape in Champawat, laying the foundation for informed planning and strategic development in the region.

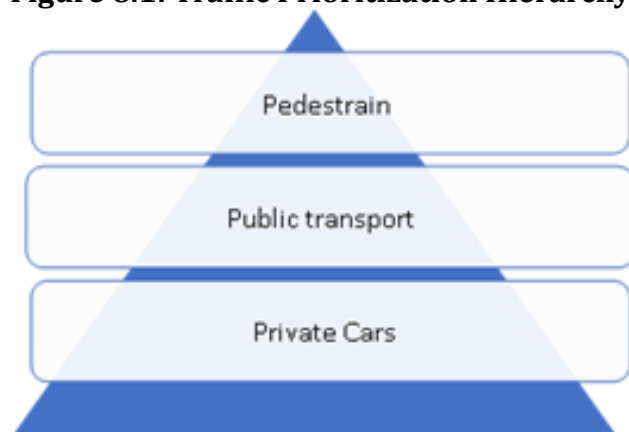
8.3 Key Principles and Planning Strategies

The transportation system is developed with the following principles and strategies:

8.3.1 Traffic Segregation

A hierarchy diagram is proposed where pedestrians have the highest priority and private cars have the least priority (see Figure 8.1).

Figure 8.1: Traffic Prioritization Hierarchy



Source: School of Planning and Architecture, New Delhi (2023)

8.3.2 Prioritise Walking and Cycling as Modes of Transportation

Emphasising walking and cycling is a priority in the development of sustainable towns. The assessment of the walking conditions, particularly for children and older people, serves as a crucial benchmark in planning.

8.3.3 Topography-based Road Network

Adding inter- and intra-level connections in place of natural topography to increase accessibility and connectivity within the planning area and the surrounding major towns.

8.4 Road Network Proposals

The burgeoning population and economic activities necessitate an expanded road network that not only enhances connectivity but also alleviates traffic congestion within the planning area. The proposed bypass is conceived as a pivotal element to divert through-traffic, mitigating congestion and facilitating smoother vehicular movement. Simultaneously, the strategic widening of existing roads aims to accommodate the increasing volume of commuters and vehicles, ensuring safe and efficient circulation (see Figure 8.2)

Emphasising an environmentally conscious approach, these proposals integrate green infrastructure and prioritise pedestrian safety, aligning with sustainable urban development principles. Furthermore, community engagement is paramount to ensuring that residents are active participants in the planning process and that the proposed interventions align with their needs and aspirations. This holistic approach seeks to future-proof Champawat's transportation infrastructure, fostering a well-connected, resilient, and liveable urban environment. **Table 8.1** provides a detailed overview of proposed roads and road widening within the Champawat Planning Area.

Table 8.1: Proposed Roads and Road Widening, 2041

S.No.	Name of the Road	Proposed ROW(in m)	Length(in KM)
1	Proposed Bypass (24 m)	24	9.34
2	Proposed SH Bypass (18 m)	18	3.5
3	Bajrikot Kharkkarki Link New Proposed Road 12 m	12	0.85
4	Bajrikot to Joop Patwa Proposed Road (12 m)	12	0.51
5	Block Road (Mudiiyani- Kharkkarki/ Bajrikot) Widening (12m)	12	8.25
6	Collectorate to Chhattar Widening (12 m)	12	1.84
7	Dhakbadola Road- Punethi Widening (12 m)	12	7.51
8	District Headquarters. TO Dungrasethi Proposed Road 12m	12	0.51
9	Gaural Chaur to Jeevan Anmol Hospital (12m)	12	0.15
10	GIC CHOWK Manch Road Widening of SH 64 (12m)	12	4.04
11	Hingladevi Road to Circuit House Widening (12 m)	12	2.49
12	Hingladevi Road TO SH Widening (12 m)	12	4.67
13	Hingladevi Road Widening (12 m)	12	0.89
14	Jeevan Anmol to Goral Chaur NEW PROPOSED (12m)	12	0.26
15	Lalawapani Banlekh SH111 Road Widening (12m)	12	8.4
16	Laluwapani-Banlekh Road Widening of SH 64 (12m)	12	5.86
17	Police Line -Dudhpokhara Proposed Road Widening (12 m)	12	3.78
18	Pooled AWAS Road to Science City Road Widening (12 m)	12	2.15
19	PRD Office to NH Bypass Link New Proposed (12 m)	12	0.57
20	PRD Office to NH Bypass Link New Proposed (12 m)	12	0.57
21	Proposed Road Widening (12 m)	12	5.47
22	Proposed Road Widening of NH 9 (12m)	12	4.44
23	SSB Road Widening (12 m)	12	0.99
24	Tea Garden Road to NH Bypass Road 12m New Road	12	0.94
25	Tea Garden Road Widening (12 m)	12	0.06
26	Chauki-Tea Garden Road widening (9 m)	9	0.28
27	Dangi Bridge to Mudiyani Road existing (9 m)	9	0.79
28	DM AWAS to Maneshwar Road Widening (9 m)	9	2.49
29	Dungrasethi Existing Road (9 m)	9	1.07
30	Dungrasethi to Darabisht new road (9 m)	9	1.38
31	Gaural Chaur Road Existing 9m	9	0.66
32	KanalGaon to Goral Chaur Ground Widening (9 m)	9	0.32
33	Kanalgaon to RFC (9 m)	9	1.01
34	Kharkkarki-Police Chauki Champawat Widening (9 m)	9	0.13
35	Mudiyani Village Road (9 M)	9	0.18
36	Proposed Road (9 m)	9	2.03
37	Proposed Road Widening (9 m)	9	16.69
	Total Length		105.07

Source: School of Planning and Architecture, New Delhi (2025).

8.4.1 Proposed Road Network

Proposed Bypass

Champawat, like many growing urban areas, faces congestion issues in its central zones. The level of service at NH9 in the main market area of Champawat is 0.59, indicating a need for an additional route due to peak-hour traffic congestion. So, in this hue, two bypass routes spanning over 12.839 kilometres are proposed to redirect this traffic away from the core, thereby reducing congestion, enhancing pedestrian safety, and improving the overall urban experience (refer). **(Table 8.1 and Figure 8.2)**. Additionally, the bypass aligns with

sustainable urban planning principles by preserving the local environment, minimising disruptions to established communities, and optimising the use of existing road infrastructure. Its implementation is envisioned not only as a solution to current traffic concerns but as an investment in the long-term liveability, resilience, and sustainable growth of Champawat. The road design would be further based on the design standards in the Hill Road Manual, IRC: SP: 48-1998, and IRC: 52-2019.

Proposed Road Network

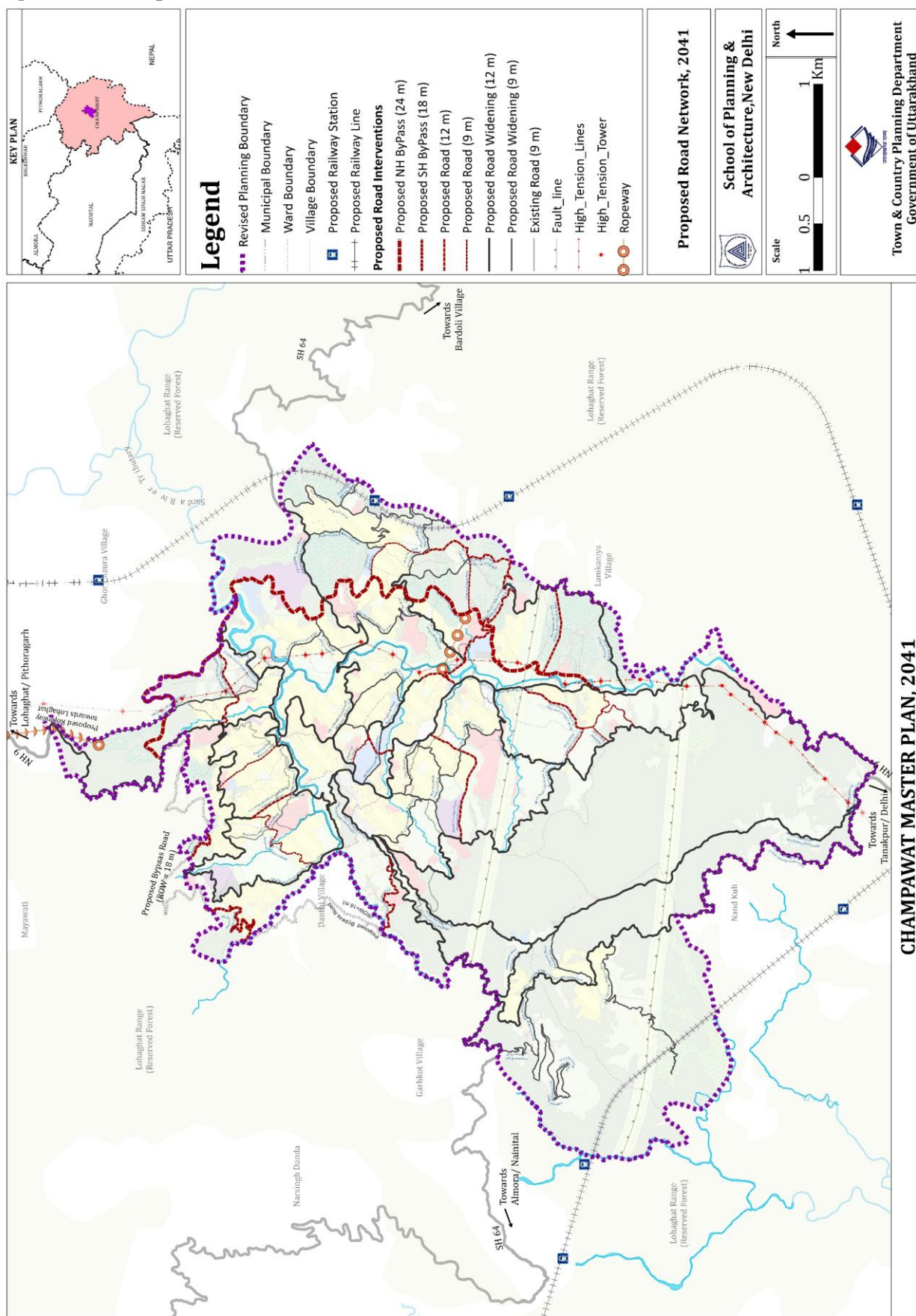
To accommodate existing and future traffic demand within Champawat, particularly around Goral Chour Ground, Golu Devta Mandir, the proposed Tourist Information Centre, the proposed Open-Air Theatre, and the proposed cable car station, roads with right-of-way (ROW) widths of 12 meters and 9 meters are proposed.

A few more connecting links are proposed to bridge gaps between existing roads and improve connectivity. These proposed links serve as strategic conduits to weave together disjointed segments of the existing road infrastructure, fostering a more coherent and accessible urban fabric. By identifying key locations where these connecting links are needed, we aim to create a seamless network that enhances mobility, reduces travel distances, and mitigates congestion in critical areas. The road design would be further based on the design standards in the Hill Road Manual, IRC: SP: 48-1998, and IRC: 52-2019. **(See Figure 8.2, Figure 8.3 and Figure 8.4).**

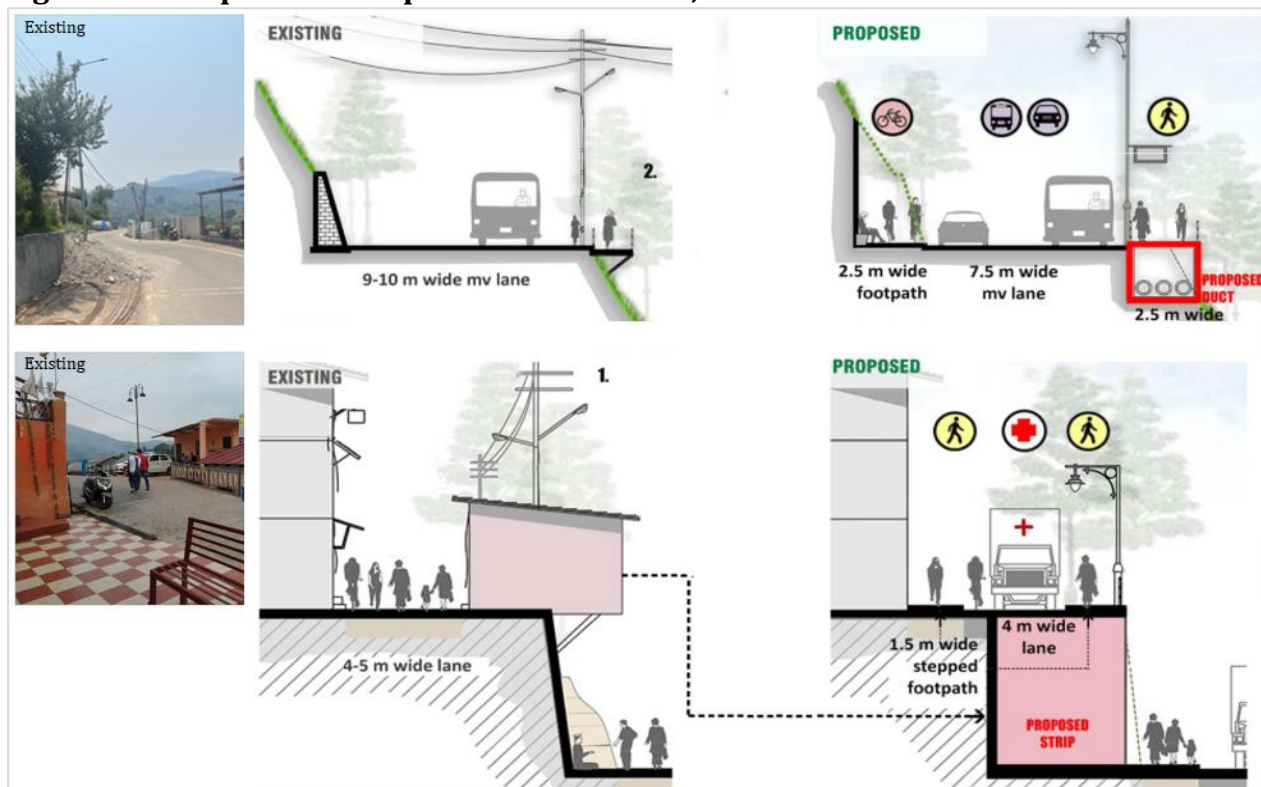
8.4.2 Suggested Road Widening

In view of the existing and future traffic demand within Champawat, especially roads abutting tourist destinations, public-semi-public areas, and residential areas, road widening is also proposed (refer **Table 8.1, Figure 8.4 and Figure 8.5**).

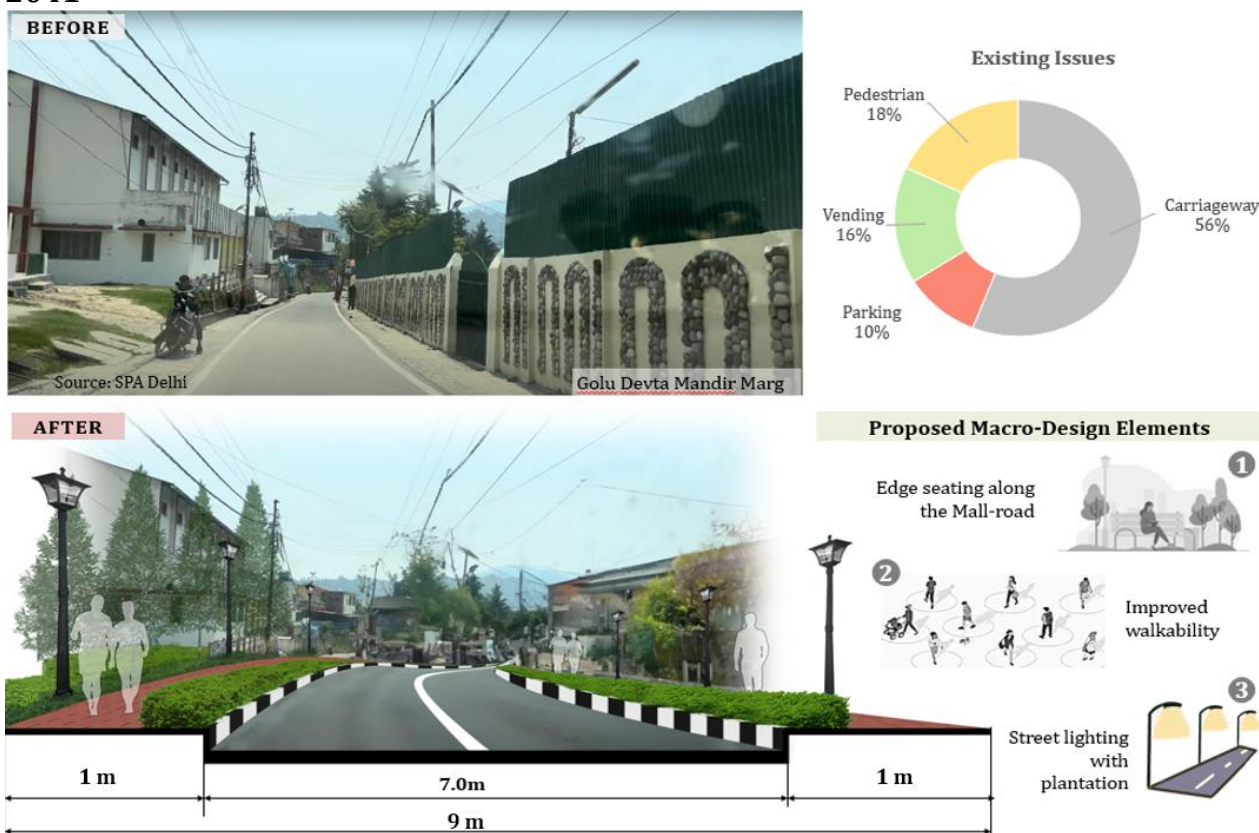
Figure 8.2: Proposed Road Network, 2041



Source: School of Planning and Architecture, New Delhi (2025).

Figure 8.3: Proposed Conceptual Road Sections, 2041

Source: School of Planning and Architecture, New Delhi (2023).

Figure 8.4: Proposed Road Widening and Upgradation of NH9 to Goral Chour Ground, 2041

Source: School of Planning and Architecture, New Delhi (2023).

Figure 8.5: Suggested Road Cross Sections in Champawat Planning Area, 2041

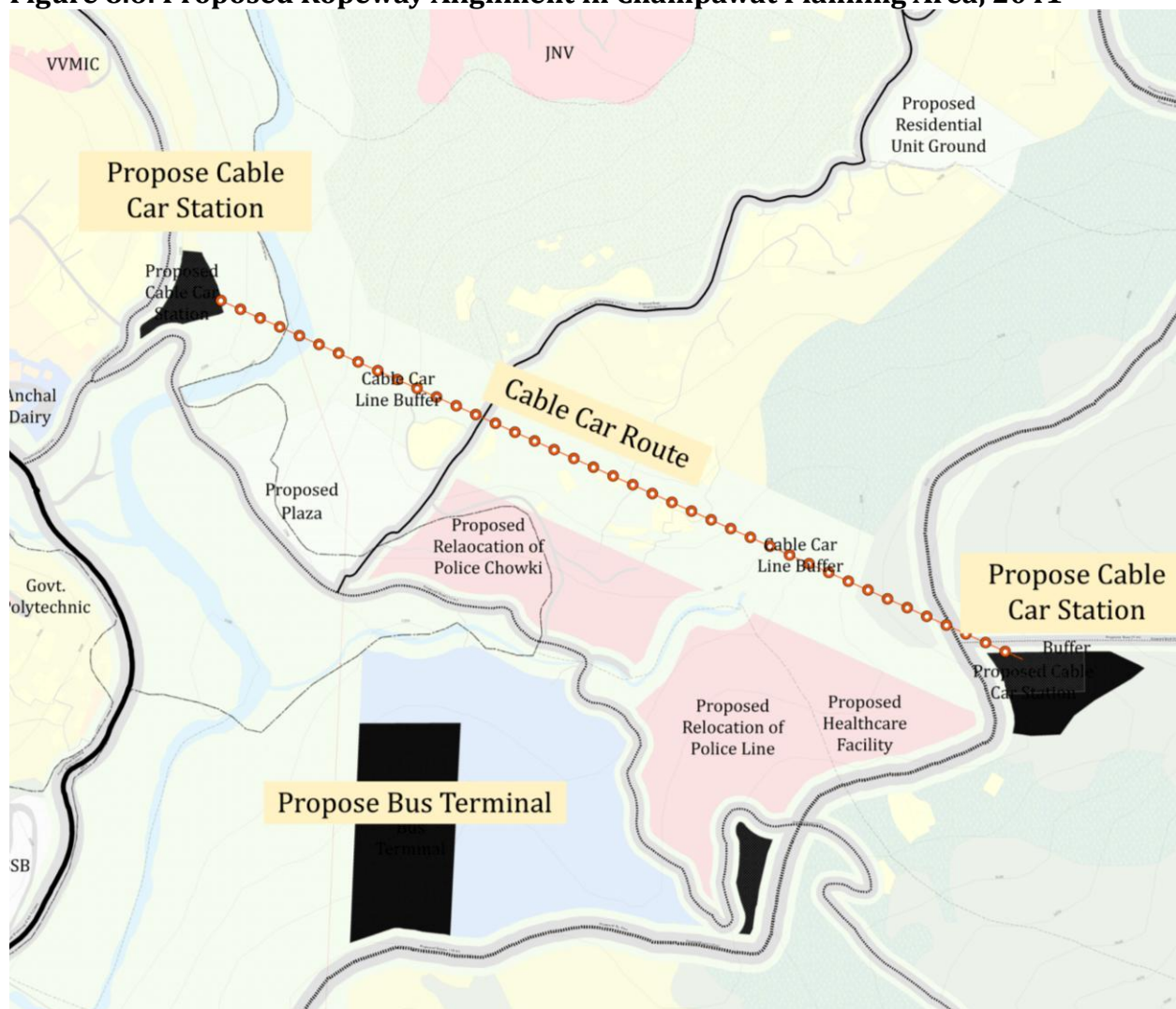
Source: School of Planning and Architecture, New Delhi (2025).

8.4.3 Cable Car Route

The introduction of a cable car spanning 0.735 Kilometres within the Champawat Planning Area, connecting Goral Chour Ground and the Tea Garden, offers a solution to enhance mass transit and contribute to the town's overall accessibility and charm. In line with the vision of the twin cities, Champawat and Lohagaht are also connected via cable car to minimise the travel distance and promote convenient travel for tourists.

This proposed cable car system is designed to provide an efficient, environmentally friendly mode of transportation, offering residents and visitors a scenic, convenient way to traverse these two significant locations. The cable car project not only addresses transportation needs within and beyond the planning area but also adds a unique, aesthetically pleasing feature to the urban landscape. By providing a bird's-eye view of the town and its surroundings, the cable car enhances the overall tourism experience and can boost local economies.

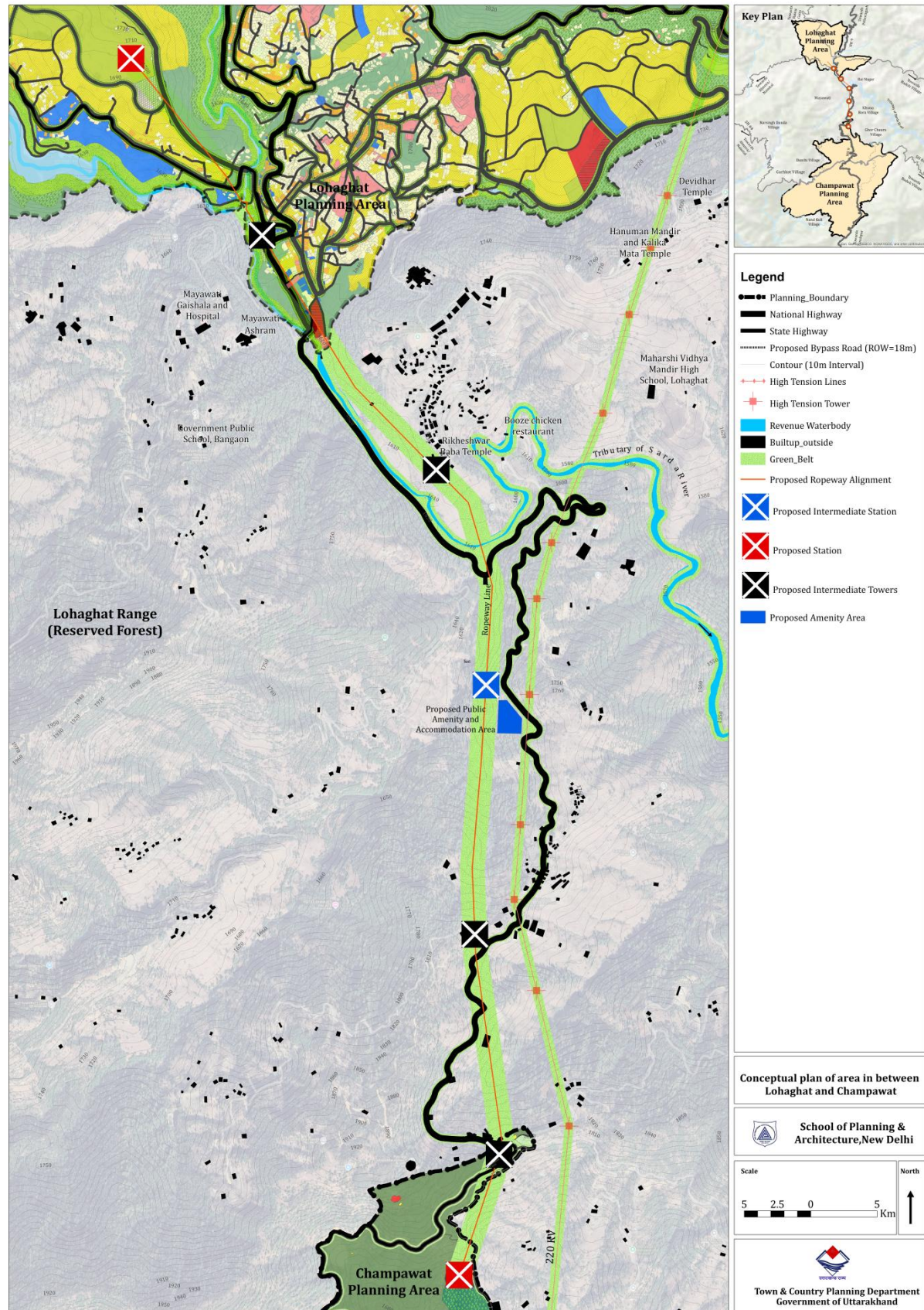
Careful consideration shall be given to integrating the cable car into the existing urban fabric, ensuring minimal disruption to the town's character while maximising its functionality. Safety features, accessibility, and environmental sustainability shall be prioritised in the planning and implementation of this transportation initiative. Furthermore, the cable car project aligns with the broader goals of sustainable urban development by promoting alternative transportation modes, reducing road congestion, and minimising the environmental impact associated with traditional transit methods.

Figure 8.6: Proposed Ropeway Alignment in Champawat Planning Area, 2041

Source: School of Planning and Architecture, New Delhi (2023).

The proposed aerial ropeway connecting the towns of Champawat and Lohghat is envisioned as a transformative infrastructure project that will enhance regional connectivity and support the integrated development of these two settlements as twin towns. Spanning a length of 5.4 kilometres, the ropeway will significantly reduce travel time between the towns to just 15 minutes, compared to the current 30–40 minutes by road (see **Figure 8.7**). This efficient and eco-friendly mode of transport will not only offer a safer alternative to the region's landslide-prone roadways but also promote tourism, local commerce, and socio-economic integration. By linking the two towns seamlessly, the project aims to foster coordinated urban growth, shared public services, and balanced development, paving the way for sustainable twin-town planning in the hilly terrain of Uttarakhand.

Figure 8.7: Proposed Ropeway Alignment between Champawat and Lohaghat Planning Area



Source: School of Planning and Architecture, New Delhi (2025).

8.5 Other Proposals

8.5.1 Off-Street Parking

In response to the burgeoning parking challenges in the Champawat Planning Area, four proposed off-street parking strategies endeavour to harmonise vehicular access with the town's unique urban fabric. The delineation of designated parking lots strategically positioned near Goral Temple, Champawat District Hospital Road, and popular destinations will be complemented by the construction of multi-level parking structures, optimising space sustainably. An existing centralised parking hub, located at the core of the Municipal Corporation, shall serve as a conduit for visitors by integrating shuttle services and pedestrian pathways. The introduction of a well-designed paid parking system not only aligns with contemporary urban management practices but also promises to catalyse revenue streams for subsequent infrastructure enhancements. Leveraging smart parking technologies, such as sensor networks and mobile applications, will streamline parking navigation and reduce unnecessary traffic. Moreover, the integration of green parking principles, coupled with community engagement initiatives and awareness campaigns, will engender a socially responsible and environmentally conscious parking paradigm. The incorporation of mixed-use parking facilities, bicycle parking zones, and routine maintenance, underscored by diligent surveillance measures, will collectively foster a progressive and sustainable parking infrastructure for the Champawat Planning Area. Moreover, details of existing and proposed parking facilities are provided in **Table 8.2** below:

Table 8.2: Parking Facilities in Champawat Planning Area, 2041

Type of Parking	Existing Parking	Proposed Parking
Surface Parking (Public)	2	9
Surface Parking for Taxi	1	
Multi-Level Parking	2	
Total	5	9

Source: School of Planning and Architecture, New Delhi, 2025

Table 8.3: Transportation Facilities in Champawat Planning Area, 2041

Type of Facilities	Existing facilities	Proposed Facilities
Bus Parking	1	1
Bus Terminal	0	1
Cable Car Station	0	3
Helipad	1	5
Railway Station	0	1
Total	1	4

Source: School of Planning and Architecture, New Delhi, 2025

KEY PLAN

The key plan shows the location of Champaawat within Uttarakhand, India, bordering Nepal. It highlights the districts of Pithoragarh, Nainital, and Almora.

Legend

- Revised Planning Boundary:** Dashed purple line
- Municipal Boundary:** Solid black line
- Ward Boundary:** Dotted blue line
- Village Boundary:** Solid grey line
- Proposed Railway Station:** Blue square with white cross
- Proposed Railway Line:** Double solid black line
- Proposed Road Interventions:**
 - Proposed SH ByPass (24 m):** Thick red dashed line
 - Proposed SH ByPass (18 m):** Red dashed line
 - Proposed Road (12 m):** Thin red dashed line
 - Proposed Road (9 m):** Thin red solid line
 - Proposed Road Widening (12 m):** Black solid line
 - Proposed Road Widening (9 m):** Thin black solid line
 - Existing Road (9 m):** Thin grey solid line
 - Fault_line:** Dashed grey line
 - High_Tension_Lines:** Red dashed line with cross-ticks
 - High_Tension_Tower:** Red dot
 - Ropeway:** Orange circle with cross
- Proposed Transportation Facilities, 2041:**
 - Proposed Roads:** Thick black solid line
 - Existing Roads:** Thin black solid line

Scale

1 0.5 0 1 Km

North

School of Planning & Architecture, New Delhi

Town & Country Planning Department Government of Uttarakhand

CHAMPAWAT MASTER PLAN, 2041

Source: School of Planning and Architecture, New Delhi (2025).

8.5.2 Proposed Railway Line and Railway Station

A new rail link is proposed from Tanakpur to Bageshwar, traversing through Champawat and adjoining areas within the district. This strategic alignment is envisioned to significantly enhance regional connectivity between the plains and the hill districts of Uttarakhand, enabling efficient passenger movement and freight transport, and improving access to tourism. The proposed rail corridor will function as a vital economic lifeline, integrating Champawat's growing trade, agro-based industries, and eco-tourism zones with the broader national railway network.

In alignment with this proposal, a new Railway Station is planned within the Champawat Planning Area, located less than 1 km from the Champawat Bypass Road. This location ensures high accessibility, seamless multimodal integration, and improved connectivity for residents, visitors, and commercial activities. The proposed station is expected to catalyse surrounding urban development, enhance last-mile connectivity, and support future transit-oriented growth within the region.

8.5.3 Up-gradation of Existing Bus Stand

The master plan incorporates the development of a new bus terminal designed to meet the transportation needs of the Champawat planning area. The upgraded bus terminal is strategically integrated into the existing land-use plan and encompasses an area of 0.003962 square kilometres (0.39 hectares). The proposed upgradation of the existing bus stand aims to transform it into a modern infrastructure that not only enhances functionality but also supports future growth. This comprehensive and forward-thinking approach ensures that the bus terminal will effectively serve the community's transportation needs while integrating seamlessly with the broader land-use plan.

8.5.4 Shuttle Service

The proposed shuttle service in the Champawat Planning Area envisions a transformative leap in the town's urban mobility landscape. With a forward-thinking approach, this initiative is tailored to address the evolving transportation needs of a growing community. The shuttle service weaves through key residential, commercial, and recreational hubs, forming an intricately connected network that promotes accessibility and convenience for residents and tourists. By prioritising high frequency, reliability, and seamless integration with existing transit systems, this shuttle service seeks to redefine mass transit in the Champawat Planning Area. It embraces eco-friendly technologies, exploring options such as electric shuttles to align with sustainability goals. Community engagement remains central, ensuring that the service resonates with the unique requirements of the local population. As an integral component of the town's vision for 2041, the proposed shuttle service is poised to enhance connectivity, reduce traffic congestion, and contribute to a more sustainable and vibrant urban environment in Champawat.

8.5.5 Helipad

Five helipads are proposed within the Champawat Planning Area to facilitate emergency services, disaster management, tourism connectivity, and other allied uses, thereby strengthening regional accessibility and promoting economic growth.

8.6 Pedestrian Movement Areas

Last Mile connectivity

A large segment of the population is pedestrianised as it is expected to use public transport. Therefore, the right-of-way shall have designated lanes for pedestrian use, often along street sides, between street crossings, and encompassing corners. The sidewalk corridors are intended to provide a pedestrian environment independent of automobile movement. Major principles of designing pedestrian walkways are:

- a. Providing an obstruction-free, safe, and comfortable walking zone.
- b. Use of pervious paving to build a natural drainage system, which would further help in reducing the heat island effect.
- c. Provide accessibility ramps and tactile paving for persons with disabilities.
- d. Direct and interconnected pedestrian movement with all modes of transportation.
- e. Segregation of pedestrians from vehicular traffic to reduce conflict and accidents.

Lastly, pedestrian walkways' design would be developed as per provisions under 'IRC: 103 – 1988 Guidelines for Pedestrian Facilities'; and 'Uttar Pradesh Road Development Policy in 1998'.

8.7 Conclusion

In Champawat, an effective traffic management plan is essential to address the distinct challenges posed by the town's topography and ensure smooth vehicular flow. First and foremost, the proposal involves road infrastructure improvements, including widening and optimising curves to accommodate the hilly terrain. Public transportation initiatives, such as introducing shuttle services and improving bus networks by connecting roads and widening roads, aim to reduce dependence on private vehicles. Strategic parking management strategies, including centralised parking areas and paid parking systems, are proposed to alleviate congestion in key areas. Pedestrian-friendly infrastructure, like well-designed sidewalks and crossings, will be implemented to encourage walking and enhance safety. Additionally, the installation of traffic signals and clear signage, coupled with the integration of real-time information systems, will contribute to organised traffic movement. Community engagement programs will seek residents' support and cooperation to ensure that the traffic management plan aligns with the needs and preferences of the local population. This comprehensive approach, tailored to Champawat's unique context, aims to create a sustainable and efficient traffic management system for the town.

CHAPTER 9: ENVIRONMENT AND DISASTER RISK

9.1 Introduction

The state of Uttarakhand lies in hilly terrain within a high-seismic zone along the Himalayan belt and has experienced significant losses due to frequent seismic events. Champawat also falls under seismic zone IV, which is highly prone to earthquakes; therefore, the proposal related to environmentally sensitive zones has been discussed in this chapter.

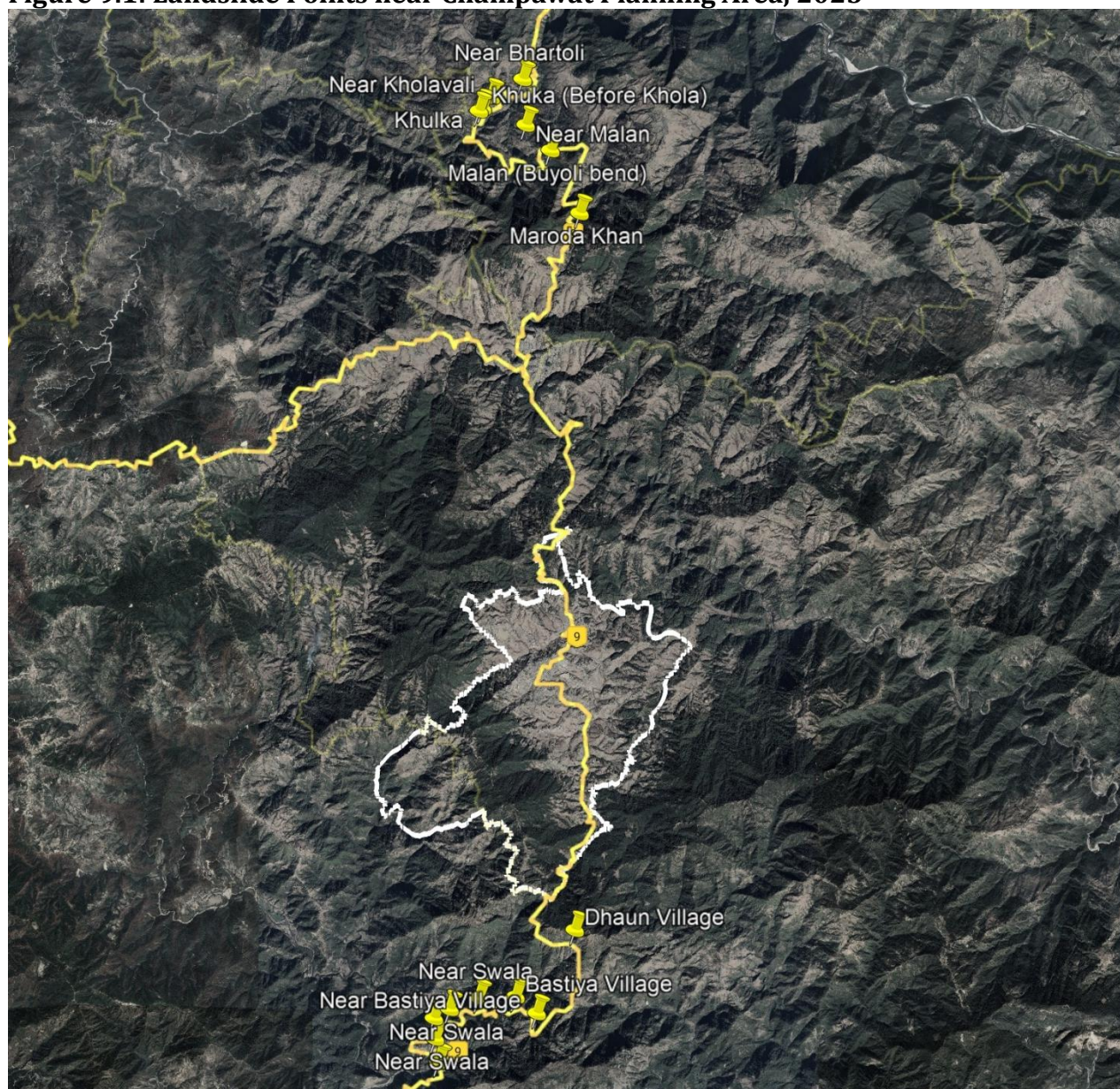
9.2 Existing Natural Hazard Profile

Champawat lies within the Champawat Forest Range and, due to its location, faces various environmental challenges and disaster risks. The region's hilly terrain makes it particularly vulnerable to natural disasters. Here's an overview of the key environmental issues and disaster risks in Champawat:

9.2.1 Disaster Risks and Environmental Challenges

Located in a seismically active zone, Champawat experiences tremors from 1 to 10 earthquakes annually, with epicentres primarily in the Chamoli district or in Dipayal and Jumla in Nepal. These seismic events generally have magnitudes less than 5. Over the past century, however, the area has endured two significant earthquakes with magnitudes exceeding 6.5. These major earthquakes originated from Uttarkashi and Pipalkoti, Chamoli district. The repercussions of these seismic events have resulted in substantial property damage in the planning area. No landslide occurred within the planning area, but one occurred about 6km north of the planning area on NH9; as a result, this disrupts the planning area's daily activities (Refer). **Figure 9.1**). Two fault lines pass through the Champawat Planning Area. The presence of fault lines in the area increases the risk of seismic activity. Based on data from the Disaster Mitigation & Management Centre and Bhuvan, the northern region of the Champawat planning area is susceptible to both landslides and severe sheet erosion. However, major landslides that disrupt daily activities in the planning area generally occur on NH9 near Sawala, with the most recent in 2021 and 2023. Champawat Planning Area is also at a high risk of floods and forest fires. Forest fires mostly occur in the southern part of the planning area, mainly in Nadhan, Palsau, and Mudiyani Villages.

Due to the presence of discontinuous aquifers in the area, people depend on streams in the planning area for water. During the field visit, it was observed that the water in the streams was contaminated with dumped solid waste. As a result, the water resources are under stress, leading to water scarcity in the area. The area also lacks a proper waste management system, contributing to air and water pollution.

Figure 9.1: Landslide Points near Champawat Planning Area, 2023

Source: School of Planning and Architecture, New Delhi (2025).

9.3 Proposals

Fault Line Monitoring: Two fault lines pass through the Champawat Planning Area. The presence of fault lines in the area increases the risk of seismic activity. This can pose hazards to communities, buildings, and infrastructure. Establish a continuous monitoring system for the two fault lines passing through the Champawat Planning Area to provide early warnings and mitigate risks.

Construction Restrictions: Enforce strict building regulations, restricting construction on slopes of 30 degrees or steeper. For slopes ranging from 15 to 30 degrees, construction should be allowed only with proper permissions and adherence to safety standards. The majority of the area, which falls between 5 and 15 degrees, shall be considered safe for development. To mitigate the risk associated with the fault line, there shall be a 100 m green belt buffer; within 50 m of the centre of the fault line, there shall be no development area.

Building Codes: Implement earthquake-resistant building codes for new constructions and retrofitting of existing structures to withstand seismic activity.

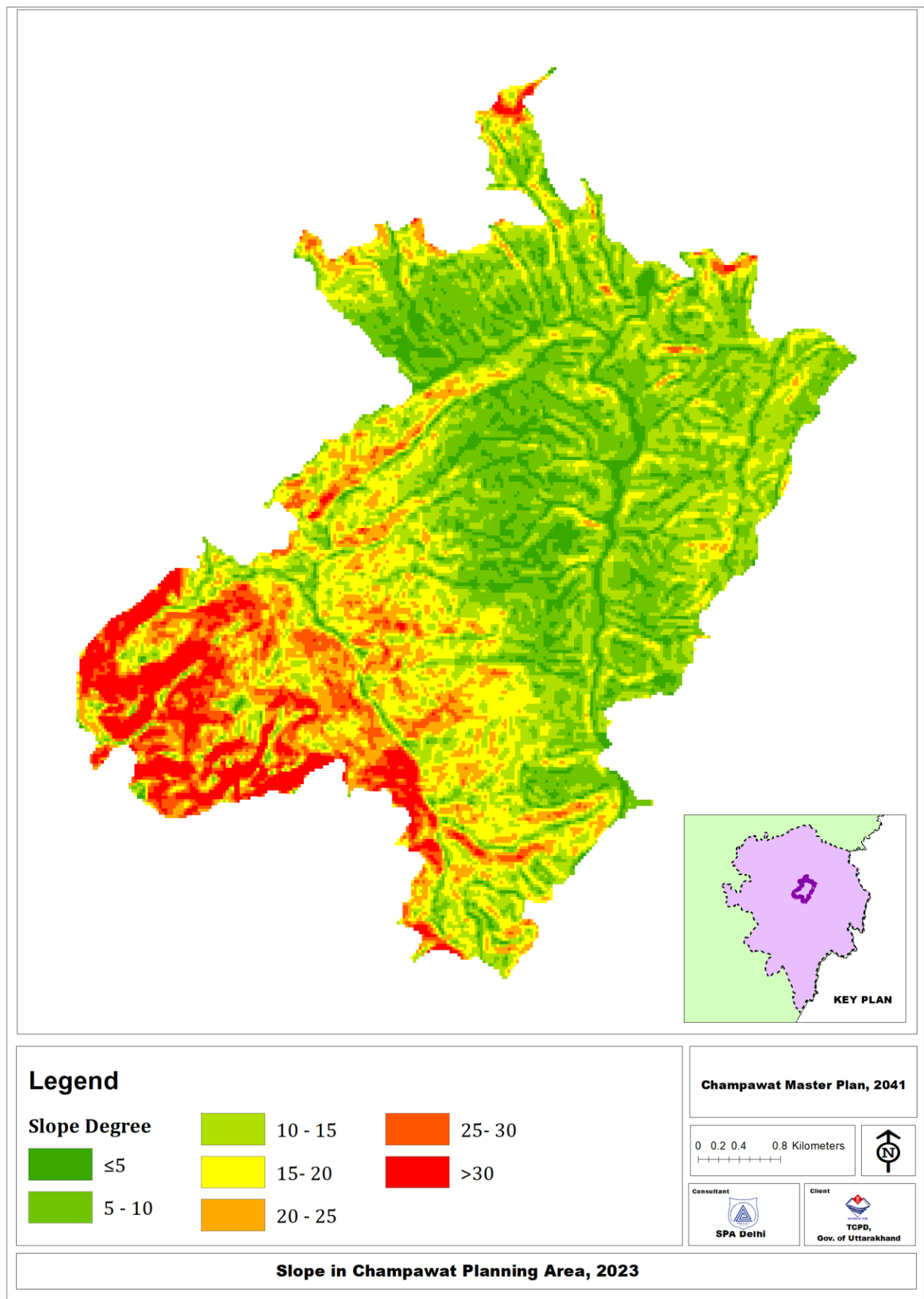
Early Warning Systems: Develop and deploy early warning systems for landslides to provide timely alerts to residents and authorities.

Forest Fire Management: Implement firebreaks, conduct controlled burns, and enhance surveillance and response capabilities in the southern part of the planning area, particularly in the villages of Nadhan, Palsau, and Mudiyani.

For the rejuvenation of water bodies, it is proposed that a minimum 12m buffer along the boundaries of the stream passing through the Champawat Planning Area, where no development shall be permitted, be maintained as a green belt. **Figure 9.3** Shows buffer along the stream in the Champawat planning area.

Sustainable Water Use: Promote rainwater harvesting; develop alternative water sources such as recharge ponds, snow and glacier meltwater utilisation, stream augmentation, fog and dew harvesting, and recycling and reuse of wastewater; and encourage the efficient use of water resources to address water scarcity.

Implementing these measures will significantly enhance the resilience of the Champawat planning area to natural disasters and environmental challenges. Through a combination of regulatory enforcement, infrastructure improvements, community involvement, and continuous monitoring, Champawat can achieve a safer and more sustainable future.

Figure 9.2: Slope within Champawat Planning Area, 2023

Source: DEM, Bhuvan & School of Planning and Architecture, New Delhi (2023)

Source: School of Planning and Architecture, New Delhi, 2025, and (www.gsi.gov.in, 2023)



CHAPTER 10: LAND USE

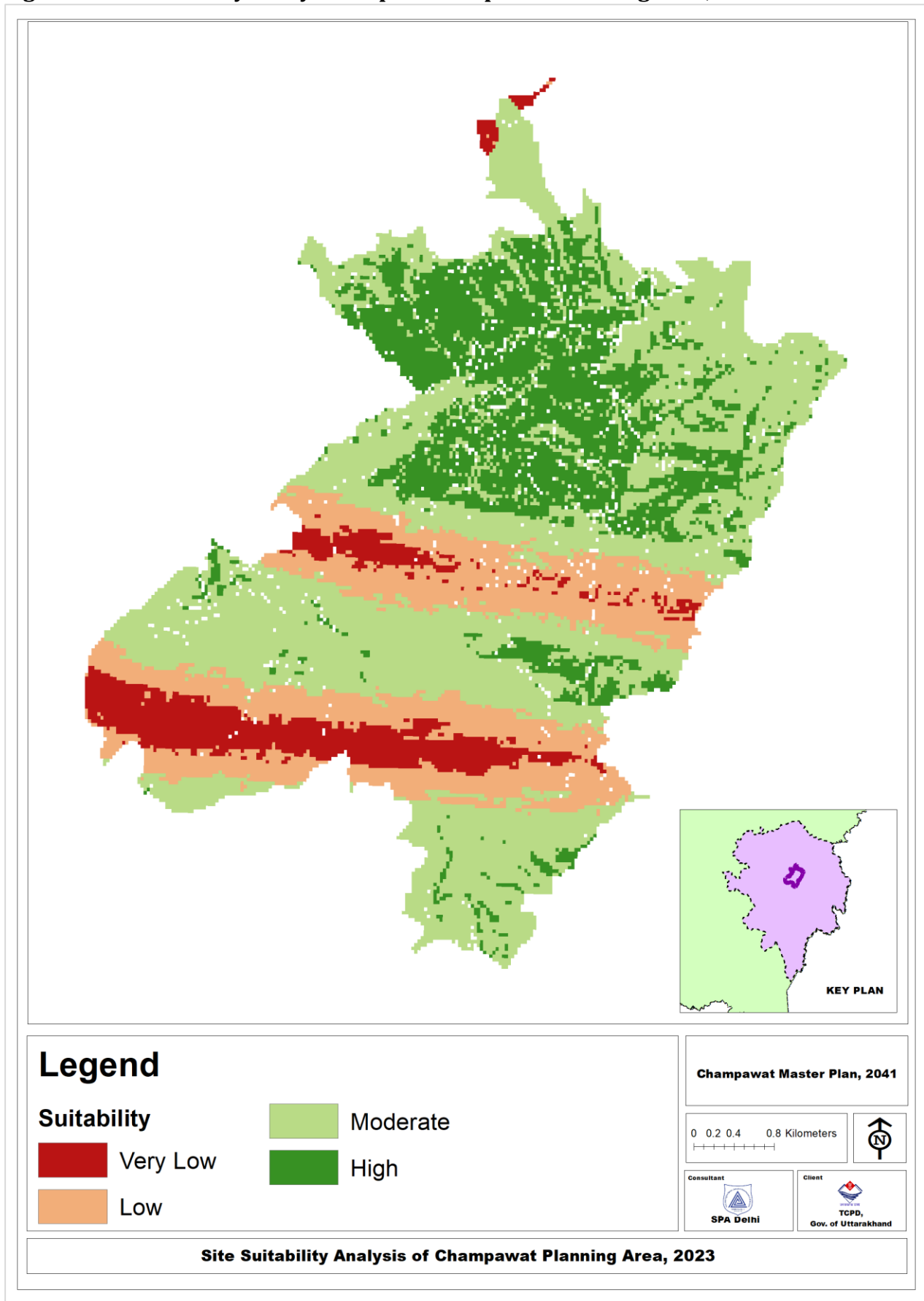
10.1 Introduction

Based on the land-use analysis, this chapter presents the proposed land use for the Draft Master Plan for the Champawat Planning Area for the year 2041. The draft master plan is developed following a comprehensive land suitability analysis that outlines the strategic placement of essential elements, such as economic nodes, residential areas, and social and physical infrastructure, including a hierarchical road network and a public transport system.

10.2 Existing Land Use

Champawat's existing land use reveals a dynamic landscape where agriculture and green areas dominate, underscoring the town's commitment to environmental sustainability. While residential and road areas account for a relatively modest share, they play crucial roles in accommodating the population and facilitating connectivity.

The Land Suitability Analysis (**Refer Figure 10.1**) is carried out to identify areas that could be developed and those that are sensitive and should be restricted from any future development. According to the suitability analysis, the majority of the developable land is situated within the Champawat municipal area and the northern section of the planning area. Also, compared with the existing land use in the planning area, the development trend is very similar to that shown on the suitability analysis map. Thus, further incorporating this analysis into our decision-making process would mitigate potential risks associated with the development of the planning area. The total area available for planning is 15.26 sq km, of which 2.61 sq km is already developed, and 12.65 sq km is available for future development proposals.

Figure 10.1: Suitability Analysis Map of Champawat Planning Area, 2023

Source: School of Planning and Architecture, Delhi (2023).

KEY PLAN

CHAMPAWAT

UTTARAKHAND

NEPAL

Legend

- Planning Boundary
- Municipal Boundary
- Ward Boundary
- Village Boundary
- Contour (10m Interval)
- Fault line
- High Tension Lines
- High Tension Tower
- Ropeway
- Proposed Road Widening of NH 9 (ROW = 20m)
- Proposed Road Widening of SH 64 (ROW = 20m)
- Proposed Road Widening (ROW = 18m)
- Proposed Bypass (ROW = 18 m)
- Proposed Road Widening (ROW = 12 m)
- Proposed Road (ROW = 12 m)
- Proposed Road Widening (ROW = 9 m)
- Proposed Road (ROW = 9 m)
- Public Lands

Public Land, 2023

School of Planning & Architecture, New Delhi

Town & Country Planning Department Government of Uttarakhand

CHAMPAWAT MASTER PLAN, 2041

Scale

1 0.5 0 1 Km

North

95

Table 10.1: Developable Land Area for Planning, 2041

Total Planning Area in Ha (A)	3,029
Existing Developed Area in Ha (Except Agriculture, water bodies, SEZ, Forest) (B)	261.80
Developable Area in Ha (C)	1265.04
Total Land in hectares available for planning [D=B+C]	1,526.8

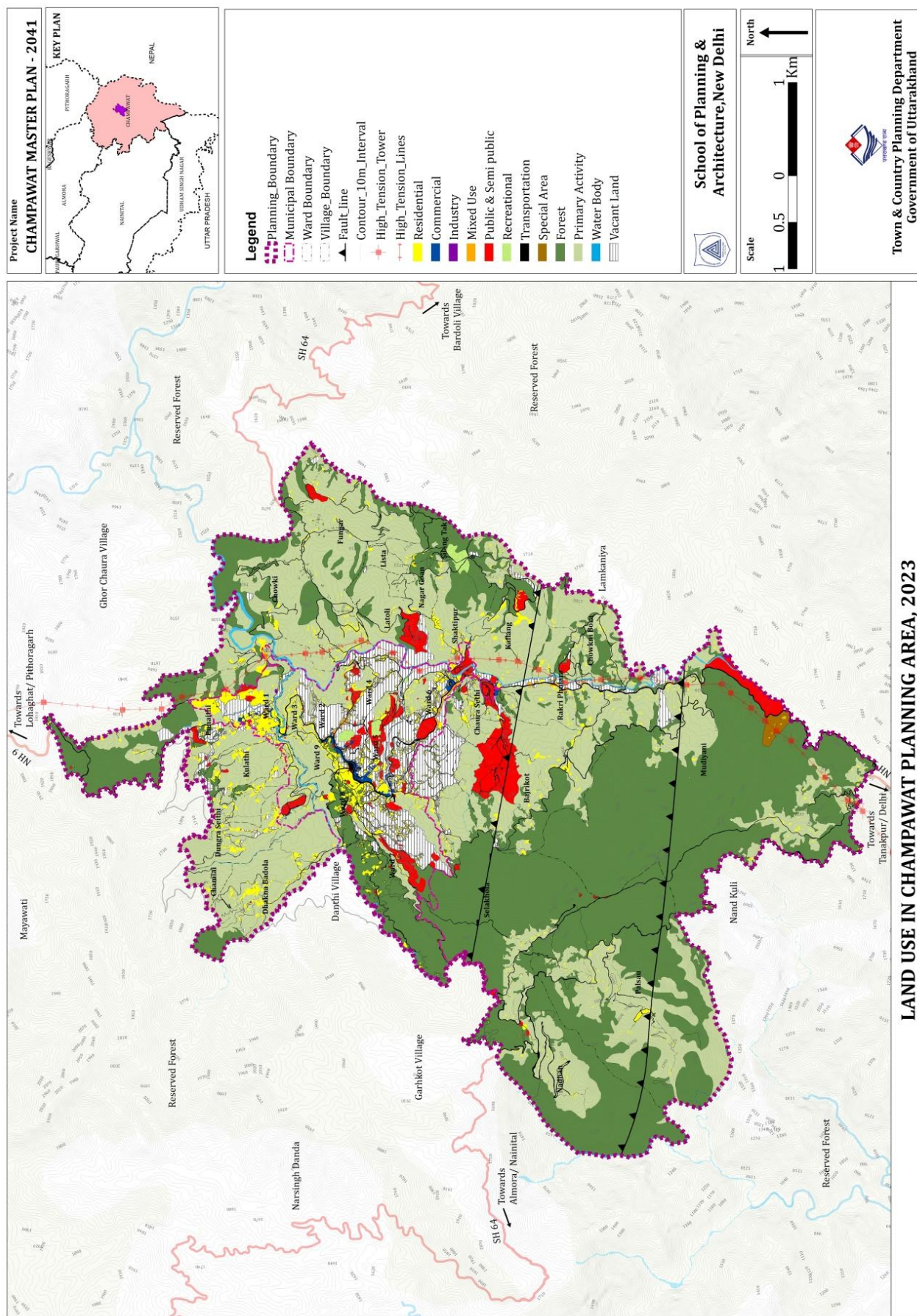
Source: School of Planning and Architecture, Delhi (2023).

Table 10.2: Area Distribution of Existing Land Use in Champawat Planning Area, 2023

S.No.	Land Use Category	Area in Ha	% of Total Area	% of Developed Area	URDPFI, 2014 guideline for total area
A	Environmentally Sensitive Areas				
	Forest	1295.35	42.76%		
	Water bodies	25.26	0.83%		
	Total A	1320.58	43.59%		
B	Developed Area				
	Residential	103.15	3.41%	34.47%	50 to 55
	Commercial	6.16	0.20%	2.06%	2 to 3
	Industrial	0.12	0.00%	0.04%	3 to 4
	Mixed Use	4.12	0.14%	1.38%	
	Public & Semi Public	89.43	2.95%	29.89%	8 to 10
	Recreational	8.07	0.27%	2.70%	15 to 18
	Transportation & Communication	81.99	2.71%	27.40%	5 to 6
	Others	6.17	0.20%	2.06%	
	Total B	299.23	10%	100.00%	
C	Area Available for Development				
	Agriculture	1205.24	39.79%		
	Vacant	204.22	6.74%		
	Total C	1409.46	46.53%		
		3029.28	100%		

Source: School of Planning and Architecture, Delhi (2023).

Figure 10.3: Land Use of Champawat Planning Area, 2023



Source: School of Planning and Architecture, Delhi (2023).

10.3 Character of the Planning Area

Champawat holds significant regional importance as both a historic town and a scenic destination in Uttarakhand's Kumaon region. Known for its 10th-century temples, ancient forts, and traditional wood-carved buildings, the town embodies a rich cultural heritage. Its natural beauty, combined with its historical assets, makes it a focal point for tourism development.

According to the Uttarakhand Tourism Development Master Plan, Champawat falls under Zone 5 of the state's seven designated tourism zones. This plan identifies important circuits within Zone 5, including the Pithoragarh-Champawat circuit, which connects key destinations such as Pithoragarh, Ghat, Lohaghat, Champawat, Almora, Binsar, Jageshwar, Rameshwar, and back to Ghat and Pithoragarh. The development of these circuits positions Champawat as a critical node in the regional tourism network. With its potential to offer diverse experiences, including eco-tourism, adventure tourism, religious tourism, and cultural tourism, the town is set to play an increasingly vital role in the state's tourism economy.

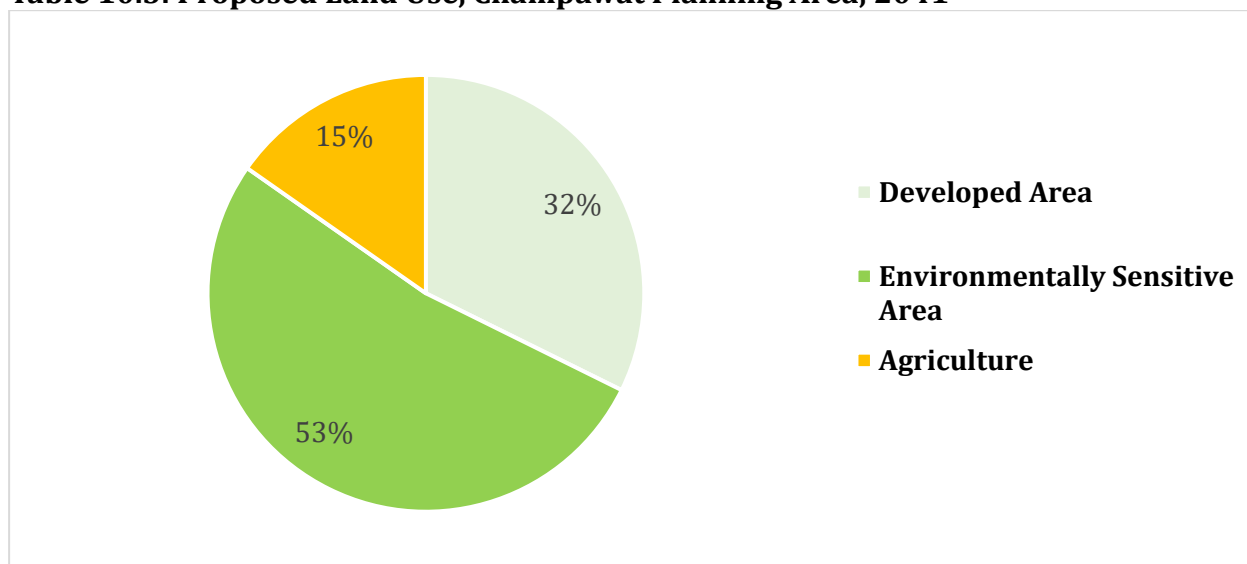
By 2041, Champawat is envisioned to evolve into a tourism-centric hub while retaining its role as an administrative headquarters. This dual role will strengthen its position as a key destination for both governance and experiential tourism, enhancing its regional significance and fostering sustainable economic growth.

The Draft Master Plan for Champawat was developed following a comprehensive land suitability analysis and is designed to sustainably manage and guide this growth. The plan proposes a balanced framework that integrates economic development, residential needs, and social infrastructure while preserving the town's natural and cultural heritage. The plan ensures that Champawat remains a blend of historical charm and modern infrastructure, serving both its residents and visitors. The Master Plan includes provisions for green spaces, eco-friendly tourism infrastructure, and sustainable industrial practices that align with the region's environmental priorities. By prioritising sustainable growth and enhancing key infrastructure, this chapter will explore the proposed land-use strategies in detail.

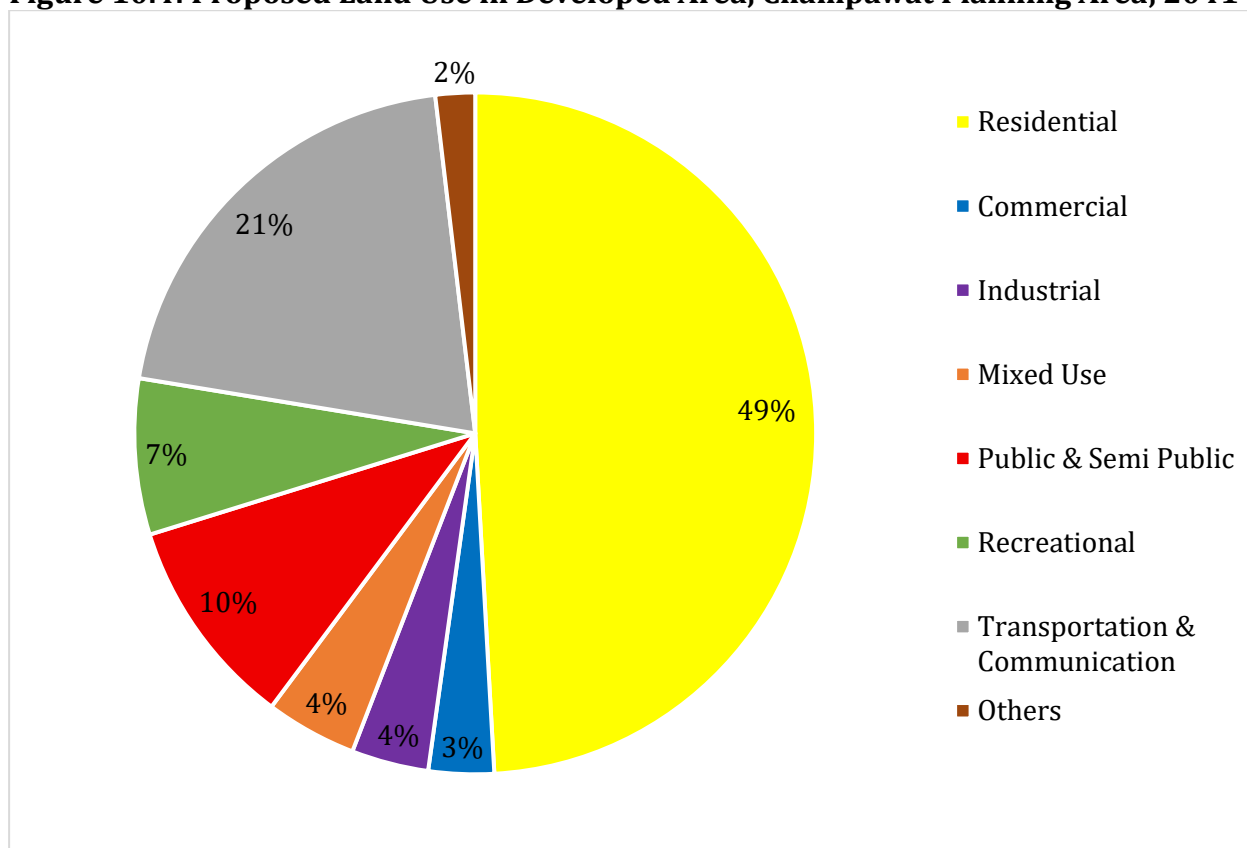
10.4 Proposed Land Use

A comprehensive overview of the proposed land-use distribution in Champawat is presented in **Table 10.4**. Land is categorised into various classes as per the Urban and Regional Development Plans Formulation and Implementation (URDPFI), 2014 guidelines, each representing a distinct purpose or function. Among these classes, Residential Land use accounts for the largest share, covering approximately 49.11 per cent of the total urbanised area. It is given to accommodate the future population of Champawat. The other predominant allocation goes to transportation, recreation, and public and semi-public areas, accounting for 22.41 per cent, 7.39 per cent, and 10.01 per cent of the total land, respectively.

The land is also allocated for various other purposes, including industrial (3.66 per cent) and mixed-use (4.33 per cent) areas. It's worth noting that these negligible percentages indicate limited presence or focus on these aspects within the town. Moreover, relatively low percentages for education, health services, and religious categories were observed in the city, indicating that the required number of facilities for the future population is provided for essential public services and facilities (**see Figure 10.4, Figure 10.5 and Figure 10.5**).

Table 10.3: Proposed Land Use, Champawat Planning Area, 2041

Source: School of Planning and Architecture, Delhi (2025).

Figure 10.4: Proposed Land Use in Developed Area, Champawat Planning Area, 2041

Source: School of Planning and Architecture, Delhi (2025).

In conclusion, the land-use distribution in Champawat presents an intriguing pattern, with an abundance of residential land in urban areas. The town prioritises preserving its natural beauty and catering to residential needs. While traditional agriculture might not be a focal point, the town's dedication to conserving green spaces and focusing on infrastructure is evident. Future planning involves exploring ways to revitalise agricultural practices and bolster public service provisions.

Table 10.4: Area Distribution of Proposed Land Use, 2041

Medium Town (50,000 to 1,00,000 population as per URDPFI 2014)					
S.No.	PLU Category	Area in Ha.	Share within Urbanised Area (in per cent)	URDPFI, 2014 guideline	Overall Share
A	Developed Area				
	Residential	480.20	49.11	48 to 52	16%
	Commercial	30.35	3.10	2 to 3	1%
	Industrial	35.78	3.66	4 to 5	1%
	Mixed Use	42.33	4.33	-	1%
	Public & Semi Public	97.84	10.01	8 to 10	3%
	Recreational	72.27	7.39	15 to 18	2%
	Transportation & Communication	200.74	20.53	5 to 6	7%
	Others	18.37	1.88	Remaining	1%
	Urbanised Area	977.87	100.00		32%
B	Environmentally Sensitive Area				
	Forest	1196.52			40%
	Waterbodies	24.74			1%
	No Construction Zone	87.18			3%
	Green Belt	277.71			9%
	Environmentally Sensitive Area	1586.14			52%
C	Primary Activity				
	Agriculture	465.27			15%
	Total	3,029.28			100%

Source: School of Planning and Architecture, Delhi (2025).

10.5 Conclusion

Champawat's proposed land use reveals a dynamic landscape where residential and green areas dominate, underscoring the town's commitment to environmental sustainability. While commercial and road areas account for a relatively modest share, they play crucial roles in accommodating the population and facilitating development within the city. Notably, it has expanded opportunities to bolster public services and explore potential developments in industry and recreation. The insights from analysis guided the planning efforts, ensuring that Champawat continues its path toward balanced and sustainable growth, meeting the needs of its residents while preserving its natural beauty. In conclusion, the proposed land use creates a balanced development in the Champawat Planning Area. The proposed land use is prepared based on the preferred spatial strategy for the Champawat Planning Area, which is further discussed in detail.

CHAPTER 11: DEVELOPMENT CONTROL REGULATIONS

11.1 Introduction

The main objective of development control regulations for Master Plan of Champawat Planning Area, 2041 is to regulate the development in the Champawat Planning Area to make it safe, secure, and sustainable by assigning use zones and use premises, the division of use zones into premises, the use premises that are allowed in the use zone, and the use activities that are allowed in the use premises are all included.

In the Master Plan of the Champawat Planning Area, 2041, development proposals will be governed by these development control regulations. The regulations will serve as a framework for implementing both the general land-use plan and the Master Plan policies. To achieve the anticipated growth, these restrictions will serve as both promotional tools and development control tools.

The implementation of master plan proposals for the Champawat planning area cannot be regulated solely by the land-use plan set out in the master plan. Zonal development plans must further supplement it. The regulations specified in these plans shall guide and facilitate development within the Champawat planning area.

11.2 Definitions

Master Plan: The master plan defines the various zones into which the development area may be divided for development, and indicates the manner in which the land in each zone is proposed to be used. It also serves as a basic framework within which any such development shall be carried out.

Zonal Development Plan: Zonal Development Plan for each zone into which the development area may be divided.

The activities, with short descriptions and minimum area requirements, are obtained from the URDPFI Guidelines, 2014. This can be adapted for the Champawat planning area.

11.3 Designated Use Zones

The major designated use zones of the Champawat Planning Area are as follows:

- i. Residential
- ii. Commercial (Retail and Wholesale, including Warehousing)
- iii. Mixed Use
- iv. Industrial (Proposed Industrial area)
- v. Public and Semi-public (Institutional, Facilities and Utilities)
- vi. Recreational (Recreational Greens, Parks and Playgrounds and Green Buffers)
- vii. Traffic and Transportation (Bus Stops, Parking, Roads)
- viii. Special Area (Heritage Structures)
- ix. Forest (including afforestation area)
- x. Water Bodies (Tributaries and Canals)
- xi. Green Belt (Buffer from water bodies, fault line, roads, HT lines)
- xii. No Construction Zone (Buffer from Fault Line)
- xiii. Primary Activity (Agricultural and Agroforestry)

11.4 Zoning Regulations

In general, the Master Plan of the Champawat Planning Area identifies land uses such as residential, commercial, industrial, mixed-use, public and semi-public facilities, transportation, recreational, and other specific land uses. Zoning regulations also apply to ancillary or incidental activities not shown separately on the land use map of Champawat. To ensure public health, welfare, and security of the people in the master plan areas, the provisions for ancillary or incidental activities or utilities must be made by the competent authority in accordance with the zoning regulations and the specific requirements of a particular scheme.

11.5 Permissible and Permitted Uses in Various Land Use Zones

One of the goals of the master plan is to create a balanced and liveable city with a coherent social life. People should be able to live a healthy lifestyle, access work through easy commutes, and their children should be able to play freely in safe places. It is critical to establish regulations to accomplish this. The development plan specifies various land uses and development regulations, including coverage, density, setbacks, conformity of use, premises, and other critical development issues. The different activities or utilities to be provided or planned in the proposed main land use categories are as follows:

Permitted Uses: These activities or utilities, which are ancillary to the main land use and are planned and permitted.

Permissible Uses: These activities will be planned or able to be allowed under specific permission of the Development Authority Board, keeping in view the infrastructure and its environmental impact on the surrounding area, which the authority shall do, and if found satisfactory, shall be presented to the board for approval.

11.6 Subdivision Regulations

Subdivision of land to prepare a layout plan is carried out for a sector or area designated primarily for a specific land use in accordance with the master plan. The regulations described here are intended to assist in the creation of use area layout plans. These rules specify requirements for the provision of a circulation system, public areas, and facilities. The service plans that accompany these layout plans for the provision of physical infrastructure, such as water supply, sewage, drainage, power, telecom, gas, and solid waste management, must adhere to the standards set forth from time to time by the Authority.

11.6.1 Residential Use Areas

As per the Master Plan of Champawat Planning Area, 2041, nearly 50 per cent of the developed area is designated for residential use. This residential use comprises both newly planned and existing residential areas. The use areas within the proposed residential areas will have mixed housing typologies. The subdivision of use premises at the sector level will include:

Recreational Greens and Open spaces: The minimum area required for playgrounds, parks, and tot lots under the green and open space category must comply with the provisions of the Uttarakhand Building Byelaws, 2016.

Circulation: A vehicular road must have a minimum right-of-way of 6 meters. However, if the road is adjacent to a park or other open area with a building on only one side, it may have a minimum width

of 4.5 meters. Apart from these norms, road widths are given in the Uttarakhand Building Byelaws, 2016.

Considering the growth pattern, market trends, and the development that the proposed infrastructure will induce, the 2m ROW is not viable and shall be increased to a minimum of 4.5m ROW.

The Uttarakhand building bye-laws specified setbacks for the Champawat district according to plot size. The master plan follows the same principle and setback for the residential areas.

11.6.2 Commercial Use Areas

With the current development pattern, where almost all major roads are mixed-use, and there is anticipated demand for residential and institutional spaces, various commercial stretches are being developed and positioned in strategic locations. Commercial and financial activity will be concentrated primarily along the major roads with access to IPT and PT services. Both automobiles and public transportation can reach such major commercial spines. The commercial activities are concentrated along the main road, i.e., NH-9, and have developed as mixed land-use, small-scale retail and service-use-based shops around the residential area and in the city centre. The majority of the shops are single-unit, and the commercial area lacks complexes. Other newly developed commercial areas are along the existing and proposed major stretches. However, provisions for more commercial areas have been made through mixed land use, giving residents greater flexibility to build. Further, details and development control regulations are as per the Uttarakhand Building Byelaws, 2016.

11.6.3 Mixed Use

As of 2023, in Champawat town, the major character of mixed-use development was along the NH9 and SH64. Considering the existing pattern and demand for commercial and institutional spaces, the mixed-use development along major roads is proposed. The mixed-use character not only helps in achieving the desired form but also provides an extra edge in creating a liveable neighbourhood. Commercial (shopping centre, small businesses), hospitality (hotels, restaurants), and administrative (banks, etc.) uses are permitted in the mixed-use development. The remaining will be used for residential (apartments), public (civic centre, theatres, and museums), and medical purposes (hospital, health centre, clinics).

11.6.4 Industrial Use Areas

Champawat, located in hilly areas, is environmentally sensitive and lacks a major industrial base, according to the 2023 survey. Given the potential of available natural resources and local products, there is a need to promote non-polluting industries to strengthen the economic base and create job opportunities. The development regulations are in accordance with the Uttarakhand Building Byelaws, 2016.

11.6.5 Public and Semi-public Use Areas

The public and semi-public areas contribute to the vibrancy of the Champawat Planning Area. Zoning for major institutional uses and public/semi-public areas has been proposed in various parts of the planning area. The various heads under which these facilities are provided are education, healthcare, socio-cultural, distribution services, safety management, and police and administrative facilities. The development control regulations for these facilities are in accordance with the Uttarakhand Building Byelaws, 2016.

Within the public semi-public premises, there are distinct activities that are either permitted or permissible under certain conditions.

11.6.6 Greens, Parks, Open Spaces, Recreational Greens and Water Bodies

Champawat, which falls in hilly areas, has an eco-sensitive nature. The hierarchy for organised greens such as parks, playfields, and other open spaces, such as specified parks, amusement parks, maidans, multipurpose open spaces, botanical gardens, etc., is as per **Table 11.1**.

Table 11.1: Hierarchy of Organised Green in Hilly Areas

Sr.	Category	URDPFI 2014 (Population served unit)	Area Requirement (H)
1	Housing Area Park	5000	0.50 – 1.0
2	Neighborhood Park	10000	1.20 – 2.0
3	City Park/Playground/maidan/exhibit grounds/cultural gathering grounds	1 or more, depending on the site	-
4	Botanical Garden	1 for every town	10.0 -20.0

Source: URDPFI Guidelines (2014).

11.7 Mandatory Provisions

11.7.1 Rooftop Solar Power Panels

Solar power plants on building rooftops covering 50 per cent of the clear rooftop area are required for all structures (commercial, institutional, and industrial) with more than 10,000 sq m of built-up area. Guidelines on Off-Grid and Decentralised Solar Applications and Rooftop and Other Small Solar Power Plants set by the Ministry of Renewable Energy, Government of India, must be adhered to while installing solar power plants on building rooftops.

Plans submitted to the competent authority for approval by the applicant must explicitly disclose information about rooftop solar power plants, based on which the competent authority will determine incentives. When granting the building completion certificate, the competent authority shall require the rooftop solar power plant to be completed and operational.

11.7.2 Rainwater Harvesting

Rooftop rainwater harvesting systems must be developed and installed in every building, regardless of use type or size. In general, the amount of rooftop water available for collection should be considered when designing a rainwater harvesting system. The Central Ground Water Board has provided the following calculation to calculate how much water should be collected from rooftops:

Total quantity of water to be collected (cu m) = Roof Top Area (sq m) x Average Monsoon Rainfall (m) x 0.8.

11.8 Parking Provision

Parking may be provided in open, under-stilt, or underground areas in basements or on separate block plots, using mechanised methods or conventional ramps. Surface parking shall be allowed within the setback, provided a clear space is left for tree planting and Fire Tender movement. The details of the required parking facility, based on the built use, comply with the Uttarakhand Building Byelaws, 2016.

11.9 Permissibility of Various Activities in Major Land Use Areas

The permissibility of various activities or uses has been classified into land use zones such as Residential, Commercial, Mixed Use, Industrial, Recreational, Public- Semi Public, and Transportation, where the permissible support activities in use premises or on the plot are shown **Table 11.2**. The supporting facilities shall be allowed up to 25% of the aggregate proposed land use on each plot.

Table 11.2. Permissible Support Activities in Use Premise or on a Plot

1	Residential
1.1	Single House/Plot/Flat Permissible uses- Residence Support Facilities- Professional practice by the residents, only in a 20 sq. mt. area; for more than 20 sq. mt. area, the plot shall be located on the ROW more than 6 m, and 1 ECS @100 SQFT shall be provided for office space
1.2	Group Housing Permissible uses- As per Building Regulations Support Facilities- As per Building Regulations
1.3	Staff Housing Permissible uses- As per Building Regulations Support Facilities- As per Building Regulations
1.4	Guard/Chaukidar residence Permissible uses- Residence for Guard/ Chowkidar
2	Commercial
2.1	Retail Shop/Platform Permissible uses- Retail Shop, Hawkers' Platform
2.2	Repair shop Permissible uses- Repair shop, spare parts shop
2.3	Personal service Shop Permissible uses- Personal service shop
2.4	Vending booth Permissible uses- Vending booth/kiosk
2.5	Showroom Permissible uses- Showroom
2.6	Weekly Market Permissible uses- Weekly market, informal retail trade, kiosks (all structures will be temporary and mobile, only for one day in a week; public conveniences, temporary or permanent as per decision of the Authority)
2.7	Convenience shopping centre Permissible uses- Retail, Repair and Personal Service shop, Showroom, Restaurant, Canteen, Food Court, Clinic and Polyclinic, Clinical Laboratory, Kiosk/ Vending booth, Bakery, Confectionery, <i>Atta Chakki</i> , Office, Bank, Coaching Centres/ Training Institutes, Informal Commercial units/platform, Multilevel Parking. Support Facilities- Guest House, Service Apartment, Health centre/ Dispensary, Nursing home, Health club/Gym, Yoga/ Meditation centre, Dance/Music/Art centre, religious centre, Barat Ghar, Exhibition Hall
2.8	Local/Sector level Shopping Centre Permissible uses- Retail, Repair and Personal Service shops, Showroom, Restaurant, Canteen, Food Court, Clinic and Polyclinic, Clinical Laboratory, Kiosks, Vending booth, Bakery, Confectionery, <i>Atta Chakki</i> , Office, Bank, Coaching Centres/ Training Institutes, Informal commercial units/platform, Cinema/Multiplex, Multilevel Parking, Support Facilities- Guest House, Service Apartment, Banquet Hall, Exhibition Hall, Health Centre/Dispensary, Nursing home, Health club/Gym, Yoga Meditation centre, Dance/Music/Art centre, religious centre, Convention/ Conference centre, Auditorium, Barat Ghar
2.9	Shopping Centre/Commercial Centre/shopping mall Permissible uses- Retail shop, Showroom, Personal Service shop, Bakery, Confectionary, Food Court/ Canteen/ Restaurant, Office, Cinema/Multiplex, Drive in Cinema, Bank, Hotel, Guest House, Service Apartment, Banquet Hall Barat Ghar, Convention/ Conference centre, Auditorium, Art Gallery, Health Club/ Gym/ Spa, Guest House/ Lodging/ Boarding House, Vending Booth/ kiosk, Milk Booth, Clinic and Polyclinic, Clinical Lab, Internet/ Information

	Centre, Petrol / Diesel/ Gas filling Station, Coaching Centres/ Training Institutes, Fruit and Vegetable market, Informal Commercial unit/Platform, Multilevel Parking, Taxi/ Autorickshaw/Rickshaw Stand, Bus Shelter, Transport /Cargo Booking Centre, Residential (as per Building Regulations) Support Facilities-Repair Shop, Motor garage and Workshop, Automobile showroom/ Showroom cum service centre, Warehousing, Exhibition Hall /Exhibition Centre, Recreational Club/Swimming pool, Socio Cultural centre, Dance/ Music/ Art Centre, Yoga/ Meditation Centre, Museum, Indoor Stadium/ Games Hall, Amusement/ Specialized /Theme Park, Open Air Theatre, Library, R&D Centre, Religious Centre, Community Centre, Social Welfare Centre, Health Centre/Family Welfare Centre/ Dispensary, Nursing Home.
2.10	Informal commercial unit / Platform Permissible uses- Informal commercial unit / Platform
2.11	Wholesale Market/Mandi Permissible uses: Wholesale shop, Repair Shop, Bank, Automobile showroom/ Showroom cum service centre, Restaurant/Canteen/Food court, Coal/Wood/Building Material Market, Vegetable/ Fruit Market, Cold Storage, Warehouse/ Godown for Non-Hazardous items, Loading/unloading facility, Vending Booth/kiosk, Multilevel Parking, Taxi/Auto Rickshaw/Rickshaw stand, Office. Weighbridge/ Dharamkanta, Petrol / Diesel/ Gas filling Station, Cinema/Multiplex, Informal Commercial unit/Platform Supporting Facilities-Guest House/Lodging/Boarding House, Hotel, Showroom, Retail Shop, Personal Service Shop, Truck Parking and other logistics, Health Centre/Family Welfare Centre/ Dispensary, Nursing Home, Service apartment
2.12	Bakery/Confectionery/Atta Chakki Permissible uses- Bakery/Confectionery/Atta Chakki
2.13	Coal/Wood/Building Material Market Permissible uses- Wholesale shop, Repair Shop, Showroom, Bank, Automobile showroom/ Showroom cum service center, Restaurant/Canteen/Food court, Warehouse/ Godown for Non-Hazardous items, Loading/unloading facility, Truck Parking and other logistics, Vending Booth/ Kiosk, Multilevel Parking, Taxi/Auto Rickshaw/Rickshaw stand, Office, Weighbridge/Dharamkanta, Petrol / Diesel/ Gas filling Station, Informal Commercial unit/Platform Supporting Facilities: Guest House/Lodging/Boarding House, Retail Shop, Personal Service Shop, Health Centre/Family Welfare Centre/ Dispensary, Nursing Home, Service apartment
2.14	Vegetable/Fruit Market Permissible uses- Wholesale shop, Retail Shop, Repair Shop, Personal Service Shop, Bank, Restaurant/Canteen/Food court, Warehouse/ Godown for Non-Hazardous items, Cold Storage, Gas Godown, Loading/unloading facility, Truck Parking and other logistics, Vending Booth/ Kiosk, Multilevel Parking, Taxi/ Auto Rickshaw/ Rickshaw stand, Weighbridge/ Dharamkanta, Petrol / Diesel/ Gas filling Station, Informal Commercial unit/Platform Support Facilities- Guest House/Lodging/Boarding House, Showroom, Office, Health centre/Family Welfare Centre/ Dispensary, Nursing Home
2.15	Cold Storage Permissible uses- Cold storage, Loading/unloading facility, Truck Parking, and other logistics. Supporting Facilities- Office, Canteen, Vending Booth/Kiosk
2.16	Hotels Permissible uses- Lodging facility, Restaurant /Canteen/ Food court, Dining hall, Cafeteria, Tourist Information centre, Convention centre/Conference centre/ Auditorium, Seminar Hall, Exhibition Hall, Banquet Hall, Laundry. Recreational Club/Swimming pool, Internet/Information Centre, Health Club/Gym/Spa, Discotheque, Yoga/ Meditation Centre. Multilevel Parking, Office. Supporting Facilities- Bank, Creche, Automobile showroom/ Showroom cum service centre, Retail Shop, Personal service shops, Showroom, Service Apartment, Health centre/Dispensary
2.17	Service Apartments Permissible uses- Guest Suite, Conference Facilities, Office, Supporting Facilities- Bank, Creche, Health Centre/Dispensary, Retail Shop, Personal Service Shop, Restaurant/Canteen/Food Court
2.18	Restaurant/Canteen/Food Court

	Permissible uses- Restaurant, Canteen, Food court, Banquet Hall, Vending Booth. Supporting Facilities- Office, Bank extension counter
2.19	Drive-in cinema Permissible uses- Open air theatre, Drive-in cinema, Open Air Restaurant, Supporting Facilities- Office related to cinema activity.
2.20	Exhibition Hall/Exhibition centre Permissible uses- Exhibition Hall, Exhibition centre and art gallery, Library, Store/Godown facility, Auditorium, Multilevel Parking Supporting Facilities- Office, Showroom, Dance/ Music/ Art centre, Yoga/ Meditation centre, Museum, Restaurant/Canteen/Food court, Vending Booth/Kiosk
2.21	Banquet hall/Barat Ghar Permissible uses- Banquet Hall, Barat Ghar, Guest suite/room, Restaurant, Food court, Vending Booth/kiosk, Multilevel Parking Supporting Facilities- Retail shop, Personal service shop, Bank, Auto-rickshaw stand, Office
2.22	Petrol/ Diesel/ Gas Filling Station Permissible uses- Petrol/Diesel Pump/Fuel Station, Gas filling station, Automobile Repair Shop, Automobile Service station, Supporting Facilities- Office, Retail shop/Departmental Store, Showroom
2.23	Gas Godown Permissible uses- Gas Godown, Truck Parking, Supporting Facilities- Booking Office
2.24	Warehouse/Godown for Non-Hazardous Items Permissible uses- Store/Godown. Loading unloading facility, Truck Parking, Support Facilities- Booking Office
2.25	Automobile Showroom/ Showroom cum service centre Permissible uses- Automobile showroom, Licensed service centre, Parking: retail shop (Spare Parts), Truck Parking. Supporting Facilities- Office, Retail shop, Kiosk/ending Booth
2.26	Freight Complex/Logistic Park Permissible uses- Booking Office, Warehouse, Store/ Godown, Cold Storage, Space for Container Stocking, Truck Parking, Loading /Unloading facilities, Repair shop, Weighbridge, Vending Booth/Kiosk, Truck Parking. Supporting Facilities- Office, Petrol/Diesel/Gas filling station, Bank, Service Station, Restaurant/Canteen/ Food court
2.27	Steel/Cement/Building Material Yard Permissible uses- Storage Yard, Loading Unloading Facility, Truck Parking, Weigh Bridge. Supporting Facilities- Office, Storage God owns
2.28	Weigh Bridge/Dharamkanta Permissible uses- Weighbridge/ Dharamkanta, Vending booth/Kiosk Supporting Facilities- Office
2.29	Cinema/Multiplex Permissible uses- Cinema/ Multiplex, Retail Shop, Personal Service Shop, Showroom, Office, Restaurant, Food Court, Vending booth/ kiosk, Multilevel Parking Supporting Facilities- Bank, Gym/ Health club/ Spa, Taxi/Auto/Auto rickshaw stand
2.30	Govt./Semi Govt. /Public Undertaking/Local Body Office Permissible uses- Govt./Semi Govt./Public Undertaking/Local Body Office, Multilevel parking, Conference facilities, Seminar Hall, Supporting Facilities- Auditorium, International conference centre, Cultural and information centre, Stationary shop, Book store, Chemist store, Vending booth/Kiosk, Health Club / Gym, Bank extension counter, General store, Crèche, Indoor games halls, Dispensary, Internet centre, Library, Museum, Planetarium, R&D centres, Radio and television station, Canteen, Staff Housing, Guest house, Hostel, Transit Hostel
2.31	Office/Corporate office Permissible uses- Office/Corporate office, Conference room, Seminar Hall, Multilevel Parking Supporting Facilities- Auditorium, International conference centre, Cultural and information centre, Stationery shop, Book store, Chemist store, Vending booth/Kiosk, Health Club / Gym, Bank extension counter, General store. Crèche, Indoor games halls, Dispensary, Internet

	centre, Library, Museum, Planetarium, R&D centres, Radio and television station, Canteen, Staff Housing, Guest house, Hostel, Transit Hostel
2.32	Professional/Personal/Agent Office Permissible uses- Professional/Personal/Agent Office, Conference room. Supporting Facilities- Canteen, Bank extension counter
2.33	Bank Permissible uses- Bank, Canteen
2.34	Project Development/Management/Maintenance office Permissible uses- Project Development/Management/Maintenance office, Supporting Facilities- Bank extension counter, Canteen
2.35	Satellite/Wireless/Telecommunication centre Permissible uses- Satellite/Wireless/Telecommunication Centre, residential flat (for maintenance staff), Supporting Facilities- Research laboratory, Canteen
3	Industrial
3.1	Service/Cottage Industry Permissible uses- Service/Cottage Industry (Non-Hazardous, Non-polluting) as per stipulation of Industries department, residential unit, Supporting Facilities- Creche/ Daycare centre, Retail shop for the product manufactured, Storage
3.2	Flatted Factories Permissible uses- Industrial units (Non-Hazardous, Non-polluting) as per stipulation of Industries department, Canteen, Loading Unloading Facility, Truck parking, Multilevel Parking Supporting Facilities- Office, Bank, Gym, Storage, Taxi/Auto/Auto rickshaw stand, vending booth/kiosk, internet centre, Creche and Day care centre
3.3	a. Commercial Shops, Areas for storage, display and sale of merchandise, Cinema halls, Restaurants, open eating kiosks b. Residential uses, Hostel, Guest house, Staff quarters
3.4	Small/Light Industry Permissible uses- Industrial units (Non-Hazardous, Non-polluting) as per stipulation of industry department, Canteen, Loading Unloading Facility, Truck parking, Vending booth/kiosk, Storage, Multilevel Parking Supporting Facilities- Office, Bank, Showroom for display/sale of industrial products manufactured in the unit. Gym/ Health club, Crèche and day care centre, Internet centre, Dispensary, Taxi/Auto/Auto rickshaw stand
3.5	Industrial plot (specific industry type) Industrial units (Non-Hazardous, non-polluting) as per stipulation of industry department, Canteen, Loading Unloading Facility, Truck parking, Vending booth, kiosk, Storage, Internet centre, Multilevel Parking. Supporting Facilities- Office, Bank, Showroom for display/sale of industrial products manufactured in the unit, Gym/ Health club, Crèche and day care centre, Internet centre, Dispensary, Taxi/Auto/Auto rickshaw stand
3.6	Medium scale Industry Industrial units (Non-Hazardous, Non-polluting) as per stipulation of industry department, Showroom for display/sale of industrial products Canteen, Creche and daycare centre, Loading Unloading Facility, Truck parking, Vending booth/kiosk, Storage, Internet centre, Multilevel Parking Supporting Facilities- Office, Bank, Showroom for display/sale of industrial products manufactured in the unit, Gym/ Health club, Crèche and day care centre, Internet centre, Dispensary, Taxi/Auto/Auto rickshaw stand
3.7	Film Centre/TV, Radio Programme Production Centre Permissible uses- Film Centre/TV centre, Radio Programme Production Centre, Auditorium, Media centre, Canteen, Library, Vending booth/ Kiosk Supporting Facilities- Office, Bank, counter Gym/ Health club, Creche and daycare centre Taxi/Auto/Auto rickshaw stand
4	Public / Semi-public / Institutional Facilities
4.1	Reformatory and Orphanage Permissible uses- Reformatory and orphanage, Hostel, Supporting Facilities- Health centre/ Dispensary, Residence of Caretaker and maintenance staff. Personal service shop
4.2	School for mentally/Physical challenged Persons Permissible uses- School for mentally, physically challenged, Hostel.

	Supporting Facilities- Health centre/ Dispensary, Medicine shop, Residence of Caretaker, and maintenance staff. Personal service shop
4.3	Creche & Day Care Centre/Play & Nursery School Permissible uses- Creche and Day Care Centre/ Play and Nursery School, Supporting Facilities- Residence of caretaker and maintenance staff
4.4	Nursing home Permissible uses- Rooms/suites, Dining facilities, Canteen, Supporting Facilities- Guest Room, Bank, Retail shop, Personal service shop, Chemist, Health centre/Dispensary, Nursing home, Health club/Gym, Yoga/ Meditation centre, Dance/Music/Art centre, religious centre, Bank extension counter, Vending booth/Kiosk
4.5	Primary School Permissible uses - Primary school, Canteen, Swimming pool, Auditorium, Library, Indoor games Hall, Hostel. Supporting Facilities- Retail shop for books and stationery, uniform, Bank extension counter, Staff housing, Vending booth/Kiosk
4.6	Secondary School/Integrated Residential School Permissible uses- Senior secondary school, Canteen, Swimming pool, Auditorium, Library, Indoor games Hall, Hostel Supporting Facilities- Retail shop for Books and Stationery. Uniform, Chemist: Bank extension counter, Vending booth/Kiosk, Staff housing,
4.7	Vocational Institute Permissible uses- Vocational training centre, Canteen, Swimming pool, Auditorium, Library, Indoor games Hall, Hostel Supporting Facilities- Guest house, Transit hostel, Retail shops for Books and stationery, chemist, Fruits and vegetables, general store; Personal service shop, Repair shop, Vending booth/Kiosk, Bank extension counter, Staff housing
4.8	Degree/PG/professional (MBA/Engineering, etc.) college Permissible uses- Degree/P G/professional (MBA /Engineering, etc.) college, Canteen, Swimming pool, Library, Auditorium, Indoor games Hall, Hostel Supporting Facilities- Guest house, Transit hostel, Retail shop for Books and Stationery, Chemist, Fruits and vegetables, general store; Personal service shop, Repair shop, vending booth/Kiosk; Bank extension counter, Staff housing
4.8(a)	Medical College with Hospital Permissible uses- Hospital, Medical college, Swimming pool, Library Supporting Facilities- Auditorium, Indoor games Hall, Hostel, Guest house, Canteen, Retail shop for Books and Stationery, Chemist, Flowers, Fruits and vegetables, general store; Personal service shop, Repair shop, Vending booth/Kiosk, Bank extension counter, Staff housing, Cultural and information centre, international conference centre, internet café, Library, Museum, Planetarium, R&D Centre, Radio and Television station, Gym/ Health club, Guest House, Transit Hostel,
4.9	University Permissible uses- University, Educational Colleges, Canteen, Swimming pool, Indoor games Hall, Convention centre, Exhibition Hall Supporting Facilities- Auditorium, Indoor games Hall, Hostel, Guest house, Canteen, Retail shop for Books and Stationery, Chemist, Flowers, Fruits and vegetables, general store; Personal service shop, Repair shop, Vending booth/Kiosk, Bank extension counter, Staff housing, Cultural and information centre, international conference centre, internet café, Library, Museum, Planetarium, R&D Centre, Radio and Television station, Gym/ Health club, Guest House, Transit Hostel
4.10	Post Office Permissible uses- Post and Telegraph Office, Canteen
4.11	Telephone Exchange Permissible uses- Telephone exchange/RLU/RSU, Supporting Facilities- Canteen, Bank Extension Counter, Staff Housing
4.12	Police Station Permissible uses- Police Station, Support Facilities- Canteen, Bank Extension Counter, Staff Housing, Fire Station, Service workshop, Hostel/dormitory. Support Supporting Facilities- Canteen, Bank extension counter, Staff Housing
4.13	Police Post Permissible uses- Police post Supporting Facilities- Canteen, Bank extension counter, Staff Housing,
4.14	Library Permissible uses- Library, Internet/information centre, Exhibition Hall and art gallery, Supporting Facilities- Auditorium, Canteen, Staff housing, Bank extension counter

4.15	R & D Centre Permissible uses- Research and Development centre, internet/Information centre, Hostel, Library Supporting Facilities- Auditorium, Canteen, Staff housing, Guest House, Transit hostel, Bank Extension counter, Health/Gym
4.16	Health Centre/Family Welfare Centre/Dispensary Permissible uses- Health centre, Dispensary, Family welfare centre, Supporting Facilities- Canteen, Chemist shop, Vending Booth/kiosk, Office,
4.17	Trauma Centre Permissible uses- Trauma centre, hostel, Supporting Facilities- Canteen, Vending Booth/ Kiosk, Bank extension counter, Chemist shop, Books/Stationery Shop, General Departmental store, Personal service Shop, Office, Staff Housing, Patient attendant accommodation, Gym,
4.18	Hospital Permissible uses- Hospital Supporting Facilities- Auditorium, Bank extension counter, Cultural and Information centre, Chemist shop, Canteen, Books/Stationery /Flower Shop, Indoor Games Hall, International conference centre, Internet centre, Library, Museum, Planetarium, R&D centre, Radio and Television centre, General Departmental store, Personal service Shop, Office, Staff Housing, Patient attendant accommodation, Health club/Gym, Guest House, Hostel, Transit Hostel, Vending booth/kiosk
4.19	Clinic Permissible uses- Clinic Supporting Facilities- Chemist shop
4.20	Nursing home Permissible uses- Nursing Home, Clinical lab. Supporting Facilities- Chemist shop, Vending booth/kiosk
4.21	Clinical Lab Permissible uses- Clinic laboratory Supporting Facilities- Clinic, Chemist shop, Vending Booth/kiosk
4.22	Veterinary Hospital/Dispensary Permissible uses- Veterinary Hospital/Dispensary, Diagnostic centre, Supporting Facilities- Canteen, Chemist shop, Staff Housing
4.23	Health club/Gym/Spa Permissible uses- Health club/Gym, Vending booth/Kiosk
4.24	Dance/Music/Art centre Permissible uses- Dance/Music/Art centre, Supporting Facilities- Auditorium, Guest House, Canteen, Vending booth/kiosk, hostel
4.25	Yoga/Meditation centre Permissible uses- Yoga/Meditation centre, Library, Conference Facilities, Hostel Supporting Facilities- Guest House, Auditorium, Canteen, Vending booth/Kiosk
4.26	Milk Booth Permissible uses- Milk Booth
4.27	Religious Building/Centre Permissible uses- Religious Building/Centre, Yoga and Meditation Hall, Library, Ashram, Bathing Ghat, Gaushala, Dargah, Supporting Facilities- Residence for essential staff/ priest, Retail shop for flowers/ offerings, Charitable Dispensary, Dining Hall with kitchen,
4.28	Convention centre/ Conference Centre/Auditorium Permissible uses- Convention centre/Conference Centre/Auditorium, Exhibition Hall, Art Gallery, Internet/ information centre, Multilevel parking Supporting Facilities- Restaurant, Hostel, Canteen, Library, Guest room, Bank extension counter, Caretaker and Maintenance Staff Housing
4.29	Planetarium Permissible uses - Planetarium, Office, Canteen
4.30	Socio-cultural Centre Permissible uses- Socio-cultural Centre, Exhibition Centre, Art Gallery, Dance/ Drama/Music Training centre, Swimming Pool, Multilevel parking, Supporting Facilities- Auditorium, Library, Museum, Canteen, Vending Booth/kiosk, Bank extension counter
4.31	PCO Permissible uses- PCO
4.32	Internet/Information Centre Permissible uses- Internet/Information Centre,

	Supporting Facilities- Bank Extension counter, Canteen, Library
4.33	Social Welfare Centre Permissible uses- Social Welfare Centre. Supporting Facilities- Canteen, Library, Vending Booth/kiosk, Bank extension counter
4.34	Cremation/Burial ground/Crematorium Permissible uses- Cremation/Burial ground/Crematorium. Supporting Facilities: Retail shop for wood, flowers, and related materials; Maintenance staff residence.
5	Public Utilities
5.1	Faecal Sludge treatment plant
5.2	Sanitary landfill site/Solid waste treatment plant Permissible uses- Sanitary landfill site/Solid waste treatment plant. Supporting Facilities- Office, Maintenance staff residence
5.3	Tube well/Overhead tanks/Underground tanks/Rainy well Permissible uses- Tube well/Overhead tanks/Underground tanks/Rainy well Supporting Facilities- Office, Maintenance staff residence
5.4	Electric sub-station Permissible uses- Electric sub-station. Supporting Facilities- Office, Maintenance staff residence
5.5	Public Toilet Permissible uses- Public toilet
5.6	Transmission tower/Mobile tower as per existing Policy. Permissible uses- Transmission tower/Mobile tower as per existing Policy
6	Transportation
6.1	Open parking Permissible uses- Open Parking, Vending booth/Kiosk
6.2	Multi-level parking Permissible uses- Multi-level parking. Supporting Facilities- Office, Maintenance staff residence
6.3	Taxi/Auto/Rickshaw Stand Permissible uses- Taxi/Auto/Rickshaw Stand. Supporting Facilities- Vending Booth/kiosk.
6.4	Truck Terminal/Transport Nagar Permissible uses- Truck parking, Service Garage, Spare parts shops, Repair shop, Transport Agencies offices and other related offices, Showroom, Weighbridge/Dharamkanta, Storage Godowns, Multi-level parking. Supporting Facilities- Retail shop, showroom, Office, Restaurant, Hotel, Bank, Vending booth/kiosk.
6.5	Bus Stand/Shelter Permissible uses- Bus stand/ Shelter
6.6	Bus Depot Support Facilities- Office, Canteen
6.7	Motor Garage/Service Garage/Workshop Permissible uses- Motor Garage/Service Garage/Workshop, Service Station. Supporting Facilities- Automobile showroom, Spare parts shop, office, Vending Booth/kiosk
6.8	Traffic Park/Children Traffic Park/Training Centre Permissible uses- Traffic Park/Children's Traffic Park/Training Centre. Supporting Facilities- Restaurant, Vending Booth/kiosk
6.9	Loading/Unloading Facilities/Space Permissible uses- Loading/Unloading Facilities/Space, Weighbridge Supporting Facilities- Vending booth/kiosk
6.10	Transport/Cargo booking centre Permissible uses- Transport/Cargo booking office, Warehousing/Godowns, Truck Parking. Supporting Facilities- Office, Vending booth/kiosk, Canteen
6.11	Toll Plaza Permissible uses- Toll Plaza, Maintenance office Supporting Facilities- Office
6.12	Helipad Permissible uses- Helipad, Office, Waiting Area
6.13	Roads
7	Recreational – Parks and Open Spaces
7.1	Park/Playground Permissible uses: Park, playground.

	Supporting Facilities- Vending Booth/ Kiosk
7.2	Multipurpose open space Permissible uses- Multipurpose open space Supporting Facilities- Vending Booth/ Kiosk
7.3	Golf course/ Race course Permissible uses- Golf Course, Race course, Swimming Pool, Indoor/ Outdoor games facilities, Multilevel Parking Supporting Facilities- Pro shop/ Sports goods shop, Bar/ Restaurants, Vending booth/ Kiosk, Conference facilities, Bank extension counter, Caretaker Residence, Guest house, Golfers' temporary accommodation
7.4	Stadium/ Sports Training Centre/ Sports Complex Permissible uses- Stadium/ Sports Training Centre/ Sports Complex, Indoor/ Outdoor games facilities, Hostel, Swimming pool, Multilevel parking Supporting Facilities- Staff housing, Grocery shop, Sports goods shop, Personal service shop, Canteen, Vending booth/ Kiosk, Conference facilities, Bank extension counter, Caretaker Residence, Guest house, Players' temporary accommodation
7.5	Picnic Spot Permissible uses- Picnic huts, camping site, Park, playground, landscaped garden Supporting Facilities- Restaurant/Food court/ Canteen, Vending booth/ Kiosk, Caretaker Residence
7.6	Indoor Stadium/ Games Hall Permissible uses- Multipurpose Indoor Stadium, Indoor Games Hall, Indoor Games facilities, Swimming pool, Outdoor sports facilities, Park, Playground Supporting Facilities- Hostel, Canteen. Office related to sports facilities, Vending booth/ Kiosk, Conference facilities, Bank extension counter, Caretaker Residence, Guest house, Players' temporary accommodation.
7.7	Amusement / Specialised/ Theme Park Permissible uses- Amusement/Specialised/ Theme Park, Playground Supporting Facilities- Restaurant/ Food court/Canteen, Vending booth/ Kiosk, Bank extension counter, Indoor games, Retail shop, Caretaker Residence
7.8	Recreational Club/Swimming pool Permissible uses- Recreational Club, Swimming Pool, Indoor/Outdoor games facilities, Park, Playground Supporting Facilities- Restaurant/ Food court/ Canteen, Vending booth/ Kiosk, Caretaker residence, Library, Bank extension counter
7.9	Museum cum Auditorium/Conference Hall/ Art Exhibition Gallery Permissible uses- Museum cum Auditorium/Conference Hall/ Art Exhibition Gallery, Open-air theatre, Multilevel Parking Supporting Facilities: Canteen, office, Vending booth/Kiosk, Caretaker residence, Library. Bank extension counter
7.10	Open Air Theatre Permissible uses- Open Air Theatre, Supporting Facilities- Canteen, Office, Vending booth/ Kiosk, Caretaker residence
7.11	National Memorial Permissible uses - National Memorial, Supporting Facilities - Canteen, Office, Card/gift shop, Vending booth/ Kiosk, Caretaker residence
7.12	Botanical Tea Garden Permissible uses – Tea garden Supporting Facilities – Eco-huts, Canteen, Office, Card/gift shop, Vending booth/ Kiosk, Caretaker residence

Table 11.3: Land Use Permissibility Matrix

Abbreviations											Symbol				
Res: Residential	Ind: Industrial	Trans: Transportation			W.B: Water Bodies, Canals and Ponds			Permissible Use							
Comm: Commercial/ Retail	PSP: Public Semi-Public Facilities	Spl. Area: Historical Structures			Grn Belt. : Water body buffer			Conditional Permissible Use			1-5				
Mix. Use: Mixed Use	Rec: Park Playgrounds and Open Spaces	Forest: Reserved Forest			NCZ: No Construction Zone			With special permission of the Board							
Agri: Agriculture (Primary Activity)								Not permissible							
Land Use															
S.No.	Activities / Use Premises	Resd.	Comm.	Mix. Use	Ind.	PSP	Rec.	Trans	Spl. Area	Forest	W.B.	Grn Belt.	NCZ	Agri	
		1	2	3	4	5	6	7	8	9	10	11	12	13	
1	Residential														
1.1	Single House/Plot/Flat														
1.2	Group Housing														
1.3	Staff Housing				4										
1.4	Guard/chaukidar residence														
2	Commercial														
2.1	Retail Shop/Platform	1			1	1		1							
2.2	Repair shop	1			1										
2.3	Personal service Shop	1													
2.4	Vending booth	1			1	3									
2.5	Showroom	1			2			1							
2.6	Weekly Market	3	3		3			3							
2.7	Convenience shopping centre	1			1	1		1							
2.8	Local/ Sector level Shopping Centre	1			1	1									
2.9	Shopping Centre/ Commercial Centre/ shopping mall	1			1										
2.10	Informal commercial unit/ Platform	1			1										

2.11	Wholesale Market/ Mandi													
2.12	Bakery/Confectionery/ Atta Chakki	1												
2.13	Coal/ Wood/ Building Material Market													
2.14	Vegetable/ Fruit Market	1												
2.15	Cold Storage													
2.16	Hotel	1			1	1								
2.17	Service Apartment					1								
2.18	Restaurant/ Canteen/ Food Court	1												
2.19	Drive-in cinema													
2.20	Exhibition Hall/Exhibition centre	1												
2.21	Banquet hall/Barat ghar	1			1	1								
2.22	Petrol/Diesel/Gas Filling Station	1				1								
2.23	Gas Godown													
2.24	Warehouse/Godown for Non-Hazardous Items													
2.25	Automobile Showrooms/Showroom cum service centre													
2.26	Freight Complex/Logistic Park						4							
2.27	Steel/Cement/Building Material Yard													
2.28	Weigh Bridge/DharmKanta													
2.29	Cinema/Multiplex	1			1	1						1		
2.30	Govt./Semi Government Undertaking/Local Body Office /Public	5			5									
2.31	Office/Corporate office	5			5									
2.32	Professional/Personal/Agent Office													
2.33	Banks	5												
2.34	Project Development/Management/Maintenance Office	5			5									

2.35	Satellite/Wireless/Telecommunication centre	5												
3	Industrial													
3.1	Service/Cottage Industry													
3.2	Flatted Factories													
3.3	Information/Software Technology Industry													
3.4	Small/Light Industry													
3.5	Industrial plot (specific industry type)													
3.6	Medium-scale Industry													
3.7	Film Centre/TV, Radio Programme Production Centre													
4	Public / Semi-public / Institutional Facilities													
4.1	Reformatory and Orphanage	4												
4.2	School for mentally/Physical challenged Persons	4												
4.3	Crèche & Day Care Centre/Play & Nursery School													
4.4	Nursing home													
4.5	Primary school	4			4	4								
4.6	Secondary School/Integrated Residential School	4			4									
4.7	Vocational Institute	4												
4.8	Degree/P G/professional (medical/Engg, etc.) college	4												
4.9	University													
4.10	Post Office													
4.11	Telephone Exchange	4			4									
4.12	Police Station/Fire Station	4			4									

4.13	Police Post													
4.14	Library													
4.15	R & D Centre	4												
4.16	Health Centre/Family Welfare Centre/Dispensary	4			4									
4.17	Trauma Centre	4												
4.18	Hospital/Medical college	4												
4.19	Clinic													
4.20	Nursing home	4			4									
4.21	Clinical Lab	1			1									
4.22	Veterinary Hospital/Dispensary													
4.23	Health club/Gym	4												
4.24	Dance/Music/Art centre	4			1									
4.25	Yoga/Meditation centre													
4.26	Milk Booth													
4.27	Religious Building/Centre	4			4									
4.28	Convention Centre/Auditorium centre/Conference	4			4									
4.29	Planetarium				4									
4.30	Socio-cultural Centre	4												
4.31	PCO													
4.32	Internet/Information Centre	1			1									
4.33	Social Welfare Centre	1												
4.34	Cremation/Burial ground/Crematorium													
5	Public Utilities													
5.1	Faecal Sludge treatment plant/Pumping station	4										4		
5.2	Sanitary landfill site/Solid waste treatment plant													

5.3	Tube well/Overhead tanks/Underground tanks/Rainy well													
5.4	Electric sub-station	4		4										
5.5	Public toilet													
5.6	Transmission tower/Mobile tower as per the existing Policy													
6	Transportation													
6.1	Open parking													
6.2	Covered/multi-level parking													
6.3	Taxi/Auto/Rickshaw Stand	1		1										
6.4	Truck Terminal/Transport Nagar				4									
6.5	Bus Stand/Shelter													
6.6	Bus Depot/Terminal				4									
6.7	Motor Garage/Service Garage/Workshop				4									
6.8	Traffic Park/Children Traffic Park/Training Centre	4		4	4									
6.9	Loading/Unloading Facilities/Space													
6.10	Transport/Cargo booking centre	1		1										
6.11	Toll Plaza													
6.12	Helipad													
6.13	Roads													
7	Recreational													
7.1	Park/Playground													
7.2	Multipurpose open spaces													
7.3	Golf course/Racecourse													
7.4	Stadium/Sports training centre/Sports complex	4		4	4									
7.5	Picnic Spot													
7.6	Indoor stadium/Games Hall	4		4										

7.7	Amusement/Specialised/Theme Park	4		4										
7.8	Recreational Club/Swimming pool	4		4	4									
7.9	Museum-cum-Auditorium/Conference Hall/ Art/Exhibition gallery	4		4	4									
7.10	Open-air theatre	4		4	4									
7.12	National Memorial													
8	Agriculture													
8.1	Orchard/ Plant nursery/ Social Forestry													
8.2	Farmhouse													
8.3	Dairy farm/ poultry farm													
8.4	Agricultural equipment workshop/ service centre													
Note:														
1. This Zoning regulation shall be applicable for planning of Land uses at the Master Plan/ Sector Plan Level.														
2. The Authority may decide the activities to be permitted in Special Projects.														
3. Activities already permitted in the various schemes shall continue as per the terms & conditions specified in the scheme.														
4. Commercial Activities in other land uses shall be permitted based on the impact fee or additional reserve price as decided from time to time by the Authority.														
Conditions:														
1. In Planned Designated Commercial Plot/ Area														
2. Only for the products of the industry/factory.														
3. Only on 8m or more wide roads/Plots earmarked by the Authority.														
4. Planned / Designated Plots.														
5. Planned commercial, facility, or institutional Plots.														

CHAPTER 12: IMPLEMENTATION STRATEGIES

12.1 Urban Land Management Implementation Techniques

Land management refers to the systematic and practical use of land resources, employing appropriate technologies tailored to specific land use systems. Urban land, a critical yet finite resource, is essential for every aspect of development. However, its localised nature and limited availability pose significant challenges. Effective land management is, therefore, vital for fostering the sustainable growth of towns and cities. One of the foremost challenges faced by planners, engineers, and policymakers is ensuring Sustainable Land Management (SLM) across both urban and rural landscapes. This encompasses the judicious exploration and utilisation of a nation's natural and environmental resources while addressing essential needs such as food security, social services, education, healthcare, infrastructure development, transportation networks, industrial growth, communication, and environmental conservation. The goal is to balance economic growth and orderly development without compromising the environmental integrity needed for future generations.

In Uttarakhand, land management plays a pivotal role in securing legal land rights while safeguarding its social, economic, and environmental functions. Recognising land as a finite and irreplaceable resource underscores the need for its optimal use, particularly in rapidly growing urban centres. The complexities of land-related issues demand innovative and effective land-use planning strategies to meet both current and future needs.

The primary challenge for planners lies in devising comprehensive land-use plans that integrate physical and social infrastructure to accommodate the existing population and the anticipated growth of urban and peri-urban areas. This involves adhering to frameworks such as the Urban Development Plans Formulation and Implementation (UDPFI) guidelines, among other national and regional directives, to ensure a balanced and sustainable allocation of land for residential, commercial, industrial, and recreational purposes.

12.2 Master Plan Approach

Effective implementation of a Master Plan requires structured mechanisms to assemble and develop land. These methods ensure the efficient allocation of land for infrastructure, housing, and public amenities while addressing socio-economic and environmental priorities. Below are the key mechanisms commonly employed:

1. Land Acquisition using RFCTLARR Act 2013
2. Land Pooling and Redistribution
3. Land Reservation
4. Transfer of Development Rights (TDR)
5. Guided Land Development

12.2.1 Land Acquisition

The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation, and Resettlement (RFCTLARR) Act, 2013, establishes a transparent and equitable framework for land acquisition for public purposes. It ensures fair compensation to landowners and provides robust rehabilitation and resettlement (R&R) measures for those affected by such acquisitions. The Act incorporates four schedules that outline:

- i. Minimum norms for compensation, determined by market value, applicable multipliers, and solatium.
- ii. Entitlements for resettlement and rehabilitation, benefitting both landowners and those whose livelihoods are impacted.
- iii. Essential facilities and services to be provided at resettlement sites for displaced persons.
- iv. Furthermore, the Act grants flexibility to states and implementing agencies to adopt higher standards for compensation and R&R measures, fostering regional adaptability. It is specifically applicable in cases where land acquisition is involuntary, i.e., when direct purchase agreements with landowners cannot be reached.

Some of the models of land acquisition are as follows:

A. The Uttarakhand Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement (Social Impact Assessment and Consent) Rules, 2015 (UK RFCTLARR, 2015)

The UKRFCTLARR provides a structured framework for implementing the provisions of the RFCTLARR Act, 2013, in Uttarakhand. These rules ensure fair, transparent, and equitable land acquisition processes for public purposes while safeguarding the rights and livelihoods of affected communities. Key Features of the UKRFCTLARR

- i. Social Impact Assessment (SIA):
 - a. Establishes a systematic process for conducting an SIA to assess the socio-economic implications of land acquisition on affected individuals and communities.
 - b. Evaluates the project's impact on livelihoods, community resources, infrastructure, and cultural heritage.
- ii. Resettlement Action Plan (RAP)/R&R Scheme:
 - a. Mandates the preparation of a Resettlement Action Plan (RAP) or an R&R Scheme to provide appropriate rehabilitation measures for displaced individuals and families.
 - b. Ensures that affected persons are adequately compensated and supported in rebuilding their lives.
- iii. Applicability:
 - a. Specifically applicable to projects requiring involuntary land acquisition, i.e., where direct purchase agreements with landowners cannot be reached.
- iv. Transparency and Fairness:
 - a. Emphasises transparency in acquisition procedures and ensures public participation in decision-making.
 - b. Provides a legal framework to minimise disputes and grievances related to land acquisition.

B. Ghaziabad Joint Venture Model

The Ghaziabad Joint Venture (JV) Model, implemented by the Ghaziabad Development Authority (GDA), represents an innovative approach to urban development that combines public- and private-sector participation. The model is designed to promote efficient land use, affordable housing, and timely project execution while ensuring compliance with regulatory standards. The key features are as follows:

- i. **Efficient Land Use:** The JV model optimises land resources by integrating public welfare objectives with private sector efficiency.
- ii. **Affordable Housing:** Ensures provision of housing for EWS/LIG segments in compliance with social equity goals.
- iii. **Reduced Public Sector Burden:** The private sector undertakes development costs, reducing financial pressure on the development authority.
- iv. **Timely Execution:** Time-bound agreements with penalties for delays enhance project efficiency.
- v. **Profitability for Developers:** Allows developers to earn profits from a portion of the developed land, making the model attractive to private participants.

C. Haryana Guided Land Development Model

The Haryana Guided Land Development Model represents a progressive approach to urban development by encouraging private sector participation while empowering landowners. It is designed to streamline land acquisition and accelerate development, reducing the financial and administrative burden on the government. Key Features are as follows:

- i. **Efficiency:** Avoids delays and disputes commonly associated with compulsory land acquisition.
- ii. **Empowerment:** Provides landowners with an active role in development, offering opportunities for greater economic benefits.
- iii. **Private Sector Engagement:** Enhances participation from private developers, leveraging their resources and expertise.
- iv. **Timely Development:** The fixed timeframe ensures optimal land utilisation and faster urbanisation.
- v. **Reduced Public Liability:** Shifts the financial responsibility of land acquisition from the government to private entities.

12.2.2 Land Pooling and Redistribution

The Land Pooling Scheme (LPS) in Uttarakhand is an innovative urban planning approach aimed at addressing the growing demand for land in urban areas while ensuring equitable development. This scheme enables the consolidation of land from multiple owners to facilitate organised urban expansion, infrastructure development, and improved land utilisation, without resorting to traditional land acquisition methods. Key Features of the Uttarakhand Land Pooling Scheme are:

- i. **Voluntary Land Contribution:** Landowners voluntarily contribute a portion of their land to a designated land pool, which is later consolidated and developed for urban growth. Unlike traditional land acquisition, land pooling involves no transfer of ownership, and landowners retain a stake in the final development.
- ii. **Master Plan Development:** A comprehensive master plan is created that details land use, infrastructure layout, road networks, and the locations of public amenities. This ensures that the area is developed in a planned and efficient manner, promoting sustainable growth.
- iii. **Redistribution of Developed Land:** After the land is pooled and developed with infrastructure, it is redistributed to the original landowners in proportion to their initial

contributions. This ensures that landowners receive back a part of their land, which is now more valuable due to the infrastructure and urban integration.

- iv. **Landowner Benefits:** The land pooling scheme ensures that landowners benefit from the increase in land value that results from infrastructure development. Unlike traditional land acquisition, they are not displaced but remain in possession of a portion of their land, which has now become more valuable due to urban development.

Benefits of the Land Pooling Scheme in Uttarakhand

- i. **Efficient Land Use:** The scheme enables better land use, particularly in growing urban areas where land availability is a major challenge. It helps prevent urban sprawl and encourages organised growth.
- ii. **No Displacement of Landowners:** Unlike compulsory land acquisition, landowners are not displaced. They retain ownership and benefit from the development, ensuring minimal social disruption.
- iii. **Increased Land Value:** The infrastructure improvements and urban integration significantly increase land value, offering substantial financial benefits to landowners.
- iv. **Cost-Effective for Authorities:** The scheme reduces the government's need to compensate landowners through traditional acquisition methods. Instead, the private sector can play a more active role in development, with costs largely covered by betterment charges and land sales.
- v. **Sustainable Urban Growth:** By planning infrastructure and services from the outset, the scheme encourages sustainable development, ensuring that essential amenities such as roads, drainage, and public spaces are integrated into urban planning.

Challenges of TPS Implementation in Uttarakhand

- i. **Administrative Complexity:** Coordinating with multiple landowners, preparing detailed plans, and ensuring equitable redistribution can be challenging and time-consuming.
- ii. **Betterment Charges and Cost Recovery:** Delays in project execution may lead to mismatched betterment charges and infrastructure costs, requiring robust financial management.
- iii. **Legal Disputes:** Ensuring transparent and fair redistribution of plots is critical to avoid conflicts and disputes among landowners.

For land areas between 250 and 5000 square meters (sq.m), the owner receives 20% of the surrendered area as developed residential plots and 4% as commercial plots. For areas between 5001 and 10,000 sq.m, the allocation increases to 22% for residential and 6% for commercial plots. For areas exceeding 10,000 sq.m, the entitlement increases to 27% for residential plots and 7% for commercial plots.

12.2.3 Land Reservations

Land reservation is a strategic mechanism for managing urban development and addressing the need for public amenities and infrastructure without imposing significant financial burdens on local authorities. The concept involves allowing landowners to retain development rights while contributing portions of their land for public purposes. This approach enables planned urban growth and efficient utilisation of land resources.

The Accommodation Reservation model allows landowners to develop sites reserved for public amenities in the development plan by utilising the full permissible Floor Space Index (FSI)/Floor Area Ratio (FAR). The model works as follows:

- i. **Development and Handover:** Landowners develop the reserved site and hand over the built-up area designated for public amenities (such as schools, dispensaries, or markets) to the local authority free of encumbrances. In return, they receive the full FAR/FSI compensation.
- ii. **FAR/FSI Exclusion:** The area designated for public amenities is excluded from the FAR/FSI calculations, thereby incentivising landowners to participate.
- iii. **Cost Savings for Authorities:** Local authorities avoid the financial burden of land acquisition and compensation.

This model has been particularly effective in Mumbai, where it is integrated into the Development Control Regulations.

- iv. **Application to Roads and Infrastructure:** For road widening or new construction, landowners can surrender required land to the authority in exchange for additional FAR/FSI, ensuring seamless infrastructure development.

In Uttarakhand, the potential of the accommodation reservation model is:

- i. **Public Amenities and Open Spaces:** The model can be used to secure land for non-economic activities such as open spaces, public utilities, and essential infrastructure.
- ii. **Affordable Housing:** It offers a way to develop spaces for economically weaker sections (EWS) by reserving a portion of the developed land for affordable housing.
- iii. **Cost-Effective Development:** Relieves local authorities from incurring significant expenses in acquiring land for public purposes.
- iv. **Incentives for Landowners:** Encourages voluntary participation by providing additional development rights as compensation.
- v. **Mitigating Displacement:** In cases where existing structures are affected by infrastructure projects, the model can allocate portions of land for rehabilitating displaced persons.

Challenges and Considerations

- i. **Implementation in Hilly Terrain:** Uttarakhand's topography presents unique challenges, requiring careful planning and design for infrastructure placement and development.
- ii. **Regulatory Framework:** Clear guidelines need to be established under Uttarakhand's urban development policies to implement and monitor land reservation schemes.
- iii. **Monitoring and Enforcement:** Robust mechanisms are needed to prevent misuse of additional FAR/FSI and ensure compliance with development plans.

12.2.4 Transfer of Development Rights (TDR)

The Transfer of Development Rights (TDR) is a progressive urban planning tool being explored in Uttarakhand to facilitate sustainable urban development. Drawing inspiration from the successful implementation of TDR in cities like Mumbai, it allows the government to acquire land for public purposes without immediate financial compensation, thereby overcoming the financial constraints associated with land acquisition. Key Features of TDR in Uttarakhand

Efficient Land Acquisition:

- a. Reduces the financial burden on local authorities for acquiring land for public projects.
- b. Provides a systematic approach to acquire land without displacing landowners or leading to prolonged legal disputes.

Flexibility in Land Use:

- a. Landowners can use TDR certificates in other designated zones, encouraging balanced urban development.
- b. Encourages vertical growth in urban areas, optimising land use in high-demand regions.

Market-Driven Mechanism:

- a. The DRC creates a tradable asset that landowners can monetise, providing them with a fair market-based return.
- b. Developers can purchase TDR to expand their projects within permissible zones, creating a dynamic urban land market.

Benefits of TDR in Uttarakhand

- i. **Facilitates Public Projects:** Ensures the timely acquisition of land for critical infrastructure, such as roads, parks, and utilities, without the financial strain of cash compensation.
- ii. **Encourages Vertical Growth:** Promotes higher-density development in urban areas, thereby reducing urban sprawl and conserving peri-urban and rural land.
- iii. **Equitable Compensation:** Offers landowners an alternative form of compensation, ensuring they are not financially disadvantaged when their land is reserved for public use.
- iv. **Market-Driven Urban Development:** Creates opportunities for developers to acquire additional FSI/FAR, balancing urban development with economic growth.

Challenges in Implementation

- i. **Zoning Restrictions:** Proper zoning regulations must be established to prevent excessive concentration of FSI/FAR in specific areas, which could strain infrastructure.
- ii. **Valuation Disparities:** Determining the fair market value of TDR and ensuring transparency in transactions is crucial for equitable compensation.
- iii. **Regulatory Framework:** Clear and efficient policies need to be developed to avoid delays and disputes during implementation.

12.2.5 Guided Land Development

Guided Land Development (GLD) is an urban planning approach that leverages existing infrastructure to catalyse organised, sustainable urban development. It involves collaborating with landowners to ensure their participation in the urbanisation process and to provide equitable benefits. The strategy aims to balance urban growth with the provision of essential infrastructure and services, making it a viable option for addressing the challenges of unplanned urban sprawl in Uttarakhand. Key Features of Guided Land Development

Partnership with Landowners:

- a. Landowners contribute a portion of their land for public infrastructure development.
- b. They pay a betterment levy for the added value resulting from the provision of infrastructure.

Urban Growth Management:

- a. Infrastructure provision, such as roads, water supply, and sewage systems, is used to guide and control the direction and pace of urban development.
- b. Ensures the integration of newly urbanised areas into the overall city plan.

Equitable Land Assembly:

- a. GLD minimises the need for compulsory land acquisition by encouraging direct negotiation between developers and landowners.
- b. Landowners are compensated through market-driven mechanisms, ensuring fairness and higher satisfaction.

Focus on Economic Inclusivity:

- a. GLD secures urban land for economically weaker sections (EWS) by reserving portions of developed land for affordable housing and other public purposes.

Benefits of Guided Land Development in Uttarakhand

- i. **Infrastructure-Driven Growth:** Focuses on urban expansion in areas with planned infrastructure, reducing the environmental impact and preserving ecologically sensitive regions.
- ii. **Minimised Conflict:** By engaging landowners and developers in direct negotiations, GLD reduces disputes and delays associated with traditional land acquisition methods.
- iii. **Economic Inclusivity:** Ensures the availability of serviced urban land for affordable housing, addressing the needs of EWS and low-income groups.
- iv. **Efficient Land Utilisation:** Encourages planned urban layouts that integrate residential, commercial, and public spaces to enhance overall liveability.
- v. **Cost Efficiency:** Reduces the financial burden on government agencies by shifting some development costs to private developers and beneficiaries.

Challenges and Considerations

- i. **Regulatory Framework:** Clear policies and guidelines are needed to prevent misuse by private developers and ensure adherence to urban planning principles.
- ii. **Topographical Constraints:** Uttarakhand's hilly terrain presents unique challenges for infrastructure development, requiring innovative design solutions.
- iii. **Monitoring and Transparency:** A robust framework is necessary to monitor projects and ensure transparency in negotiations and land transactions.

Key Mechanism	Key Enablers	Key Features	Benefits	Challenges and Considerations
Land Acquisition	Government	Transparent framework under the RFCTLARR Act, 2013, ensuring fair compensation,	-Fair compensation and R&R for affected individuals. -State-specific rules	-Lengthy and complex procedures. - Risk of disputes

Key Mechanism	Key Enablers	Key Features	Benefits	Challenges and Considerations
		rehabilitation, and resettlement through Social Impact Assessment (SIA) and Resettlement Action Plan (RAP).	like UKRFCTLARRR enhance transparency and fairness.	in compensation or R&R implementation.
Land Pooling and Redistribution	PPP Model	Voluntary contribution of land for urban development; redistributed post-development with enhanced value; infrastructure integrated into master plans.	-Prevents displacement and ensures equitable benefits. -Increased land value for contributors. -Cost-effective and promotes sustainable growth.	-Requires coordination among landowners. -Potential legal disputes over equitable redistribution.
Land Reservation	Private	Landowners retain development rights while contributing land for public amenities in exchange for additional FSI/FAR.	-Secures land for public infrastructure without financial burdens. -Encourages private participation and affordable housing.	-Difficult to implement in hilly terrain like Uttarakhand. -Requires robust regulatory oversight to avoid misuse of incentives.
Transfer of Development Rights (TDR)	PPP Model	Landowners are compensated with tradable TDR certificates for surrendering land for public purposes, which encourages vertical urban growth.	-Cost-effective land acquisition for public projects. -Promotes higher-density urban development. -Market-driven mechanism ensures equitable returns.	-Zoning and valuation disparities may create inequities. -Requires a strong regulatory framework for transparency.
Guided Land Development (GLD)	Government and PPP Model	Landowners contribute land for infrastructure development; the planned provision of essential services directs growth.	-Minimises disputes and delays. -Promotes economic inclusivity with affordable housing provisions. -Encourages efficient and sustainable urban layouts.	-Regulatory clarity is needed to prevent misuse. -Topographical challenges in infrastructure implementation.

Source: UK RFCTLARRR, 2015; Land pooling scheme, 2015; Uttarakhand TDR Policy, 2022; Guided land Development, 2016.

12.3 Urban Regeneration and Urban Renewal

Urban regeneration and urban renewal are pivotal for fostering sustainable urban development and enhancing the quality of life in Uttarakhand. These processes aim to revitalise underutilised assets, redistribute economic opportunities, and improve urban prosperity while addressing critical challenges such as inadequate infrastructure, deteriorating buildings, and environmental degradation. However, these initiatives require a balanced approach to ensure inclusivity, sustainability, and alignment with local policies and environmental norms.

Scope and Approaches in the urban regeneration process involve:

i. Redevelopment of Brownfields

Transforming abandoned or underutilised industrial or commercial sites into productive urban spaces.

ii. Densification and Intensification

Encouraging more efficient use of land and infrastructure, especially in high-demand areas.

iii. Economic Diversification

Promoting varied economic activities to reduce dependency on limited sectors, ensuring economic resilience.

iv. Heritage Preservation and Adaptive Reuse

Maintaining Uttarakhand's cultural and architectural heritage by repurposing historical structures.

v. Public Space Reactivation

Enhancing parks, plazas, and communal areas to promote social interaction and improve urban aesthetics.

vi. Strengthening Service Delivery

Improving access to water, sanitation, waste management, and public transportation.

Challenges and Considerations

i. Risk of Gentrification and Privatisation

Urban regeneration can inadvertently displace low-income communities or privatise public spaces, restricting access. To avoid such outcomes, policies must ensure equitable development and prioritise affordable housing and community participation.

ii. Adherence to Building Byelaws

All regeneration efforts should align with local building byelaws, heritage conservation guidelines, and environmental protection regulations to maintain ecological balance and urban aesthetics.

iii. Slum Redevelopment

The Pradhan Mantri Awas Yojana (PMAY-Urban) provides a framework for slum redevelopment. This includes replacing informal settlements with affordable, well-serviced housing. Authorities should identify priority areas for implementing these schemes to achieve inclusive urban renewal.

Policy Framework Supporting Urban Renewal

i. Pradhan Mantri Awas Yojana - Urban (PMAY-U)

This scheme focuses on slum redevelopment, providing affordable housing and access to essential services for economically weaker sections.

ii. Atal Mission for Rejuvenation and Urban Transformation (AMRUT)

Focuses on improving urban infrastructure, including water supply and sewerage systems, to enhance the quality of life in targeted cities.

iii. State-Level Building Byelaws and Policies

Guide urban development to ensure safety, environmental conservation, and aesthetic integration.

Implementation and Future Directions

- i. Community-Centric Development**
Engaging local communities in the planning and implementation process to ensure inclusivity and address their specific needs.
- ii. Disaster-Resilient Urban Design**
In a disaster-prone state like Uttarakhand, urban renewal must incorporate resilience to earthquakes, landslides, and floods.
- iii. Public-Private Partnerships (PPPs)**
Leveraging partnerships to fund and execute large-scale urban regeneration projects effectively.

12.4 Land Bank Creation

A Land Bank is a repository of land parcels managed by the government to facilitate planned development, infrastructure projects, and economic growth. In Uttarakhand, the creation of a Land Bank is crucial for addressing challenges related to urbanisation, infrastructure development, and equitable land distribution, especially in a state with unique geographical constraints.

Special Provisions in the Uttarakhand Urban and Country Planning and Development Act, 1973

To facilitate Land Bank creation, amendments or special provisions under the Uttarakhand Urban and Country Planning and Development Act, 1973 could include:

- i. Simplified Land Transfer Processes**
Streamlining the transfer of land parcels from private to government ownership with adequate compensation.
- ii. Integration with Master Plans**
Aligning Land Bank objectives with urban development master plans to ensure strategic land use.
- iii. Zoning Regulations for Reserved Lands**
Reserving certain land parcels for affordable housing, industrial development, or environmental conservation within Land Banks.
- iv. Public-Private Partnerships (PPPs)**
Encouraging private entities to contribute underutilised land for development in exchange for incentives.
- v. Digital Land Record Management**
Establishing a digital system for tracking land ownership, transactions, and availability, ensuring transparency.

Implementation Strategy

- i. Land Survey and Inventory**
Conduct a comprehensive survey to identify and catalogue available land parcels, including unused government lands.

ii. Policy Framework

Develop a clear policy for the creation of a Land Bank, including guidelines for land acquisition, compensation, and utilisation.

iii. Stakeholder Involvement

Collaborate with local governments, private entities, and communities to ensure equitable and inclusive land management.

iv. Capacity Building

Train urban planning officials in modern land management tools and techniques.

v. Monitoring and Review

Establish mechanisms for periodic review of Land Bank utilisation and its impact on urban development.

12.5 Vacant Government Land Creation

The Optimum Utilisation of Vacant Government Land (OUVGL) is a strategic initiative to identify and repurpose unused or underutilised government lands for various public and commercial uses. In Uttarakhand, where ecological and topographical factors constrain urban expansion, the effective use of vacant government lands can play a significant role in driving sustainable urban development while addressing infrastructural deficits and financial resource needs.

Strategies for Vacant Government Land Creation

- i. **Identification and Cataloguing** Conduct a comprehensive survey of government-owned lands, including municipal properties, in urban and peri-urban areas.
Develop a centralised digital land inventory system to track land parcels and their current usage status.
- ii. **Reallocation of Underutilised Lands** Reassess lands allocated to obsolete or irrelevant uses and repurpose them for current needs, such as affordable housing or green infrastructure.
- iii. **Zoning and Land Use Planning** Integrate identified vacant lands into local master plans, zoning regulations, and sectoral development strategies to ensure their effective utilisation.
- iv. **Land Sharing Mechanisms** Develop frameworks in which part of a land parcel can be used for revenue-generating purposes (e.g., commercial complexes), while the rest is allocated to public infrastructure or services.
- v. **Public-Private Partnerships (PPPs)** Partner with private entities to fund and execute large-scale infrastructure projects on government land, such as:
Intercity bus terminals with retail and hospitality facilities.
Multi-purpose civic centres combining government offices and community spaces.

Implementation Framework

- i. **Legislative Support**
Incorporate provisions for OUVGL into the Uttarakhand Urban and Country Planning and Development Act, 1973, to facilitate the identification, reallocation, and optimal utilisation of government lands.
- ii. **Stakeholder Engagement**

- Involve municipal authorities, local governments, and private-sector participants in decision-making to ensure that projects align with community needs.
- iii. **Transparency and Accountability**
Use digital platforms to ensure transparent land allocation processes and prevent misuse.
- iv. **Incentivising Innovative Uses**
Provide incentives for private sector involvement in developing sustainable and inclusive projects on government lands.
- v. **Monitoring and Evaluation**
Establish a task force or agency to oversee the implementation of OUVGL, track project outcomes, and make periodic policy adjustments.

12.6 Tourism Implementation Strategy

Uttarakhand, with its unique blend of natural beauty, spiritual heritage, and adventure opportunities, holds significant potential for sustainable tourism development. An effective implementation strategy, supported by clear roles and responsibilities among the Ministry of Tourism, the Department of Tourism, the Government of Uttarakhand, and Destination Management Committees, is essential to unlock this potential.

Roles and Responsibilities of the Ministry of Tourism (MoT)

- i. **Institutional and Governance Support**
 - a. Provide technical and financial assistance to develop identified destinations as model sustainable tourist hubs.
 - b. Collaborate with state and local authorities to ensure alignment with national tourism goals.
- ii. **Swadesh Darshan 2.0 Implementation**
 - a. Guide the state government in implementing the Swadesh Darshan 2.0 scheme, focusing on sustainable and theme-based tourism development.
 - b. Ensure timely approvals and fund disbursement for projects under the scheme.
- iii. **End-to-End Project Support**
 - a. Deploy a Project Design and Management Consultant (PDMC) to assist the state in planning, designing, implementing, and managing tourism projects.
 - b. Monitor project progress and provide technical solutions to challenges.
- iv. **Data-Driven Destination Management**
 - a. Develop and implement systems for data collection and analysis to monitor tourist inflow, economic impact, and environmental sustainability.
 - b. Use insights to optimise resource allocation and identify emerging tourism trends.
- v. **Strategies and Best Practices**
 - a. Share strategies and global best practices for niche tourism areas such as adventure tourism (e.g., trekking, river rafting), wellness tourism (e.g., yoga retreats), and eco-tourism (e.g., wildlife and forest trails).
 - b. Promote responsible tourism practices to minimise the environmental footprint of tourism activities.

Roles and Responsibilities of the Department of Tourism, Government of Uttarakhand

- i. **Synergy with Central and State Schemes**

- a. Pradhan Mantri Kaushal Vikas Yojana (PMKVY) for skill development.
- b. Make in India and state-specific entrepreneurship programs for promoting tourism-related MSMEs.
- c. Swadesh Darshan 2.0 and PRASAD Scheme for infrastructure and spiritual tourism development.
- ii. Leverage Central and State resources
 - a. Human capital development and job creation.
 - b. Marketing and investment promotion.
 - c. Infrastructure improvement and digital transformation.
- iii. Set up and operationalise Destination Management Committees (DMCs)
 - a. Coordinating destination planning, development, and management.
 - b. Implementing sustainable tourism practices.
 - c. Engaging local stakeholders, including communities, businesses, and authorities.
- iv. Ensure the alignment of tourism initiatives with key national priorities
 - a. Sustainability: Promote eco-friendly practices and reduce the environmental footprint.
 - b. Digitalisation: Onboard stakeholders to the NIDHI Plus platform for streamlined operations.
 - c. Skill Development: Train tourism and hospitality personnel in emerging industry requirements.
 - d. Tourism MSMEs: Provide support to local businesses and entrepreneurs to participate actively in tourism growth.
 - e. Destination Management: Develop comprehensive frameworks for managing tourism assets and services effectively.
- v. Monitoring and Reporting
 - a. Regularly update the central portal with progress on tourism schemes and initiatives.
 - b. Submit timely progress reports to the Ministry of Tourism, ensuring transparency and accountability.
- vi. Encourage private investment in destination development
 - a. Public-Private Partnerships (PPPs) for infrastructure and service projects.
 - b. Incentives for private operators to develop tourism facilities such as hotels, adventure parks, and cultural centres.
- vii. Focus on effective Operation and Maintenance (O&M) of tourism
 - a. Sustainability and longevity of infrastructure.
 - b. High-quality service delivery for tourists.
- viii. Accelerate implementation of strategies formulated by the Ministry in niche tourism
 - a. MICE (Meetings, Incentives, Conferences, and Exhibitions): Develop facilities for conferences and business tourism.
 - b. Medical & Wellness Tourism: Promote Uttarakhand as a hub for wellness retreats and ayurvedic treatments.
 - c. Ecotourism: Highlight destinations like the Valley of Flowers and Jim Corbett National Park.
 - d. Adventure Tourism: Capitalise on trekking, rafting, paragliding, and skiing opportunities.
- ix. Encourage stakeholders in the tourism and hospitality sector to embrace digital tools
 - a. Registering and maintaining profiles on the NIDHI Plus platform to enhance visibility and connectivity.

- b. Implementing digital booking systems, virtual tours, and e-ticketing for tourist attractions.

Roles and Responsibilities of the Destination Management Committee (DMC)

Destination Management Support

- a. Act as the operational body for the Destination Management Organisation (DMO) for the designated destination.
- b. Ensure cohesive execution of tourism strategies and policies formulated at the state and central levels.

Monitoring and Implementation

- a. Regularly review the on-ground implementation of tourism schemes and projects, identifying and addressing bottlenecks.
- b. Foster synergy among various departments and organisations involved in the destination's development to streamline efforts and resources.

Enhance essential framework Improvement

- a. Health and Hygiene: Implement measures for clean and sanitary conditions, including waste management and clean water access.
- b. Safety: Establish robust safety measures for tourists, such as emergency services, security personnel, and safety guidelines.
- c. Civic Infrastructure: Improve roads, transport, lighting, and public amenities to enhance the tourist experience.
- d. Quality Maintenance: Ensure the upkeep of tourist facilities and attractions to maintain high standards of service and satisfaction.

Oversee operation and management

- a. Hygiene and cleanliness of public spaces and tourist facilities.
- b. Safety protocols for tourists, including hazard management and emergency response.
- c. Continuous monitoring and maintenance of infrastructure quality.

Grievance Redressal

- a. Establish mechanisms to resolve grievances and complaints from tourists efficiently and effectively, ensuring a seamless visitor experience.

Lead destination branding, marketing, and promotional activities through:

- a. Digital campaigns targeting domestic and international tourists.
- b. Collaboration with travel agencies, tour operators, and online platforms.
- c. Organising cultural events, festivals, and exhibitions to showcase the destination's uniqueness.

Skill Development and Entrepreneurship

- a. Promote skill development programs for locals in hospitality, tour guiding, and other tourism services.

- b. Support local entrepreneurship by encouraging initiatives like homestays, handicrafts, and local food outlets to generate employment and income.

Facilitate Public-Private Partnerships (PPPs)

- a. Infrastructure development (e.g., hotels, transport hubs).
- b. Adventure and eco-tourism activities.
- c. Smart technologies for visitor management and destination operations.

Promote data collection and analysis for informed decision-making

- a. Tourist demographics, behaviour, and preferences.
- b. Impact assessments of tourism activities on local communities and the environment.

Impact Assessment

- a. Conduct periodic assessments of the economic, social, and environmental impact of tourism activities at the destination.
- b. Use insights to refine strategies, ensuring sustainability and balanced growth.

Institution/ Agency Involved	Roles and Responsibilities
Ministry of Tourism (MoT)	- Provide institutional and governance support for sustainable tourism development. - Guide Swadesh Darshan 2.0 implementation with focus on sustainability. - Offer end-to-end project support through PDMC for planning and management. - Develop data-driven systems for monitoring tourism impact. - Share strategies and best practices for niche tourism areas.
Department of Tourism, Uttarakhand	- Align with central and state schemes for tourism growth. - Set up and manage Destination Management Committees (DMCs). - Monitor and report progress on tourism initiatives. - Promote private investment through PPPs. - Ensure operation and maintenance of tourism infrastructure. - Foster digitalisation and skill development in the tourism sector.
Destination Management Committees (DMC)	- Act as operational bodies for Destination Management Organisations (DMOs). - Monitor on-ground implementation of tourism projects. - Improve civic infrastructure and maintain hygiene and safety standards. - Address tourist grievances and maintain infrastructure quality. - Facilitate destination branding, marketing, and promotional activities. - Support local skill development and entrepreneurship.

ANNEXURE A

1. Introduction

Uttarakhand, located in the Himalayas, has distinct land and economic development policies that are tailored to its specific needs. The state government places a high priority on long-term growth, investment attraction, and job creation. Industrial development, investment promotion, infrastructure expansion, skill enhancement, tourism and hospitality, micro, small, and medium enterprises (MSMEs) advancement, and the agriculture and horticulture sectors are among the key areas of focus.

These policies aim to create an enabling business environment, attract investment, and cultivate sustainable industries, all of which contribute to Uttarakhand's overall economic growth and development. The government works hard to maintain a harmonious balance between economic development and environmental conservation, ensuring long-term progress in this environmentally sensitive region.

Land acquisition and economic development policies at the national and state levels work together to shape the socioeconomic landscape, attract investments, and foster long-term growth. The effective implementation of these policies is critical for achieving inclusive development and improving the overall welfare of the nation and the state of Uttarakhand. This chapter provides a brief overview of pertinent state and national policies applicable in Uttarakhand.

2. National Rehabilitation & Resettlement Policy, 2007

The National Rehabilitation & Resettlement Policy, 2007, was formulated to ensure a holistic approach to the rehabilitation and resettlement of persons affected by land acquisition. The policy aims to address the needs of displaced individuals and communities by providing them with adequate compensation, rehabilitation assistance, and opportunities for livelihood restoration. It stresses the importance of community participation, social infrastructure development, and improving the quality of life for the affected population.

The policy can serve as a reference to develop comprehensive rehabilitation and resettlement strategies for Champawat town. It can guide the town authorities in providing adequate support and assistance to affected individuals and communities during land acquisition and resettlement processes. The master plan can include provisions to implement the policy's guidelines and address the socio-economic needs of the displaced population.

3. Optimum Utilisation of Vacant Govt. Land (OUVGL) Scheme, 1997

The program focuses on identifying vacant government and municipal land and using it for public benefit. In the proposed Champawat master plan, such land is designated for public and semi-public uses to balance land demand and supply, guiding development on vacant government land to meet community needs efficiently.

4. The Uttarakhand Nazul Land Management, Settlement and Disposal Bill, 2021

The Uttarakhand Nazul Land Management, Settlement, and Disposal Bill, 2021, focuses on the efficient use of government-owned land by addressing its management, settlement, and disposal. It aims to provide affordable housing for economically weaker sections (EWS), generate revenue, promote self-employment opportunities, safeguard leaseholders' rights, and manage illegal occupations. In Champawat, this bill can be instrumental in developing affordable housing, supporting small businesses through land allocation, and ensuring planned urban growth, aligning with the town's development goals and boosting local infrastructure and economic activities.

5. Uttarakhand AYUSH Policy, 2018

The Uttarakhand AYUSH Policy, 2018, provides specific incentives and assistance to develop the AYUSH (Ayurveda, Yoga, Unani, Siddha, and Homoeopathy) sector in the state. The policy includes the following provisions:

Financial Assistance: One-time financial assistance of either 10 per cent of the project cost or INR 1.50 Crore for hill districts and INR 1 Crore for plain districts is provided to support the establishment and growth of AYUSH-related ventures. This assistance aims to facilitate investment and encourage the development of AYUSH infrastructure.

Investment Facilitation Desk (IFD): The Department of AYUSH sets up an Investment Facilitation Desk (IFD) to provide necessary information and support regarding available infrastructure, such as land and physical infrastructure, as well as various incentives and schemes. The IFD serves as a resource for potential investors, guiding them through the process of setting up AYUSH-related units in Uttarakhand.

It is important to note that specific incentives for AYUSH-related units may also be available under other policies, such as the MSME (Micro, Small, and Medium Enterprises) policy, the Mega Industrial and Investment policy, and the Government of India's Industrial Development Scheme 2017. The respective policies would determine eligibility for these incentives.

The Uttarakhand AYUSH Policy, 2018, aims to promote the growth and development of the AYUSH sector in the state. By providing financial assistance and facilitating investment, the policy aims to attract investment, enhance infrastructure, and create a conducive environment for establishing AYUSH-related ventures in Uttarakhand.

6. Uttarakhand Agriculture Policy, 2018

The Agriculture Policy 2018 aims to increase farmers' income by promoting sustainable farming and better crop management. It focuses on growing and processing nutritious grains, managing land efficiently, and connecting agriculture with food industries. The policy encourages integrating horticulture, tea gardens, and aromatic plants with eco-tourism, as well as supporting herbal farming, mushroom cultivation, and advanced irrigation methods. It also emphasises better marketing, such as linking local markets to e-NAM and setting fair prices for local crops.

In the Champawat planning area, this policy can support farmers by promoting eco-friendly farming practices, developing local food processing units, and improving irrigation. Linking markets and boosting tourism through tea gardens and aromatic plants can enhance income opportunities, transforming agriculture into a sustainable and profitable sector.

7. Uttarakhand MSME Policy, 2015 (Amendments & Guidelines)

The MSME Policy 2015 in Uttarakhand, as amended in 2019, provides incentives and support to Micro, Small, and Medium Enterprises (MSMEs) in the state. The policy categorises regions and industries by location and provides specific incentives accordingly. Here are the key provisions of the policy:

- a. **Categorisation of Industries:** The policy categorises industries into Category A, B, B+, C, and D based on their location in different districts and development blocks in Uttarakhand.
- b. **Interest Subsidy:** MSMEs in Category A are eligible for an interest subsidy of 10 per cent per year or a maximum of INR 8 lakhs. Category B and B+ MSMEs can avail an 8 per cent interest subsidy, with a maximum limit of INR 6 lakhs. Category C MSMEs can receive a 6 per cent interest subsidy, with a maximum limit of INR 4 lakhs. Category D MSMEs are eligible for a 5 per cent interest subsidy, with a maximum limit of INR 3 lakhs.
- c. **Capital Subsidy:** MSMEs in Category A can receive a capital subsidy of 40 per cent of their annual turnover, with a maximum limit of INR 40 lakhs. Category B and B+ MSMEs are eligible for a 35 per cent capital subsidy, with a maximum limit of INR 35 lakhs. Category C MSMEs can avail a 30 per cent capital subsidy, with a maximum limit of INR 30 lakhs. Category D MSMEs can receive a 15 per cent capital subsidy, with a maximum limit of INR 15 lakhs.
- d. **Transport Subsidy:** The policy provides a transport subsidy based on the annual turnover or inbound/outbound logistics cost, whichever is less. Category A MSMEs can receive a 7 per cent subsidy, Category B MSMEs can avail a 5 per cent subsidy, and Category B+ MSMEs can receive a 5 per cent subsidy with a maximum limit of INR 5 lakhs.
- e. **Stamp Duty:** MSMEs in Categories A, B, B+, and C are eligible for a 100 per cent stamp duty exemption, while Category D MSMEs can receive a 50 per cent exemption.
- f. **Power Bill Rebate:** The policy offers a power bill rebate based on the sanctioned load of the MSMEs. Category A MSMEs can avail a rebate of 100 per cent for the first 5 years and 90 per cent thereafter for loads up to 100 KVA, and 60 per cent for loads above 100 KVA. Category B and B+ MSMEs can receive a rebate of 100 per cent for the first 5 years and 75 per cent thereafter for loads up to 100 KVA, and 50 per cent for loads above 100 KVA.
- g. **Other Incentives:** The policy also includes incentives such as reimbursement of internet usage charges, exemption from Mandi charges, reimbursement of state excise duty, and cost reimbursement for standardisation and quality certification.

The policy was amended in 2018 and 2019, extending its validity until March 2023. It also expanded coverage to include Software Development units within the IT & ITeS sector and Energy sector units engaged in energy production using non-traditional methods. Additionally, service sector industries in Category C and D districts are now eligible for incentives.

Overall, the MSME Policy 2015 in Uttarakhand aims to promote the growth and development of MSMEs in the state by providing financial incentives and support to different industry categories based on their location. These provisions are designed to encourage entrepreneurship, boost investment, and foster economic development in Uttarakhand.

In Champawat, this policy can promote local industries such as agro-processing, handicrafts, eco-tourism, and renewable energy by reducing costs and encouraging investment. These incentives can boost employment, support entrepreneurship, and drive sustainable economic growth in the region.

8. Industrial Development Scheme for Himachal Pradesh & Uttarakhand, 2017

The Central Capital Investment Incentive for access to credit (CCIIAC) is a scheme that provides incentives to industries for investment in plant and machinery. Under this scheme, eligible industries can receive a subsidy equal to 30 per cent of their investment in plant and machinery, up to a maximum of INR 5.00 crore.

In addition to the CCIIAC, there is the Central Comprehensive Insurance Incentive. This incentive provides reimbursement of 100 per cent of the insurance premium for the building and plant & machinery for a maximum period of 5 years from the date of commencement of commercial production/operation. This helps businesses by reducing the financial burden of insurance costs during the initial years of operation.

It's important to note that the eligibility criteria for these incentives include the following conditions:

- a. Units must have commenced production on or after April 1, 2017, and registered with the Department for Promotion of Industry and Internal Trade (DPIIT) on or before September 30, 2018.
- b. All eligible units must be registered under the scheme with DPIIT through the designated portal to be eligible for any benefits provided by this scheme.

The Industrial Development Scheme 2017 encompasses these incentives and aims to promote industrial development by providing financial support to eligible industries. These measures encourage investment, improve access to credit, and mitigate insurance costs, thereby facilitating the growth and expansion of industries in the country.

9. Uttarakhand Start - Up Policy, 2018

The Uttarakhand Start-up Policy 2018 provides various incentives and support measures for start-ups in the state. Some of the key provisions of the policy include:

- a. Monthly Allowance: Start-ups can receive a monthly allowance of INR 10,000 for one year, with an increased amount of INR 15,000 for start-ups operated by SC/ST/women/physically challenged individuals or those belonging to Category-A regions of the MSME Policy 2015.
- b. Marketing Assistance: Start-ups are eligible for financial assistance of up to INR 5 lakhs for marketing and publicity of their innovative products. Additionally, if the start-up operates in a focus sector, is run by SC/ST/women/physically challenged individuals, or

falls under Category-A regions of the MSME Policy 2015, the assistance can be increased to INR 7.5 lakhs.

- c. Patent (Intellectual Property): Start-ups can receive up to 100 per cent reimbursement of the actual cost of start-up patent fees, including filing fees, attorney fees, research fees, and maintenance fees. The reimbursement amount is capped at INR 1 lakh for Indian patents and up to INR 5 lakhs for international patents.
- d. Stamp Duty: start-ups are exempted from paying stamp duty on lease deeds, places, or purchases of space, based on the category defined in the MSME Policy 2015. This exemption is 100 per cent for Categories A, B, and B+, and 50 per cent for Category D.
- e. State Goods & Services Tax (SGST): start-ups can receive reimbursement of SGST deposited by them.
- f. Incubation Space: start-ups operated by SC/ST/women/physically challenged individuals and recognised by the Start-up Council can avail of space at recognised incubators at a 25 per cent discount.
- g. Need-Based Assistance: start-ups can receive financial assistance of up to INR 5 lakhs for the cost of raw materials, components, and other related equipment required for innovative product development or existing product improvement.
- h. Capital Grant: start-ups setting up or scaling up incubation facilities can receive a one-time capital grant of 50 per cent of the capital cost (excluding the cost of building and land) up to INR 1 crore. Additionally, start-ups can receive INR 2 lakhs per year for three years as part of operating and management expenses.
- i. Matching Grant: Incubators recognised by the state government that manage the seed fund scheme of the Government of India can receive a sum equal to that obtained from the Government of India or up to INR 2 crore, whichever is lesser, as alternate finance.

These provisions aim to support and nurture start-ups in Uttarakhand by providing financial assistance, access to infrastructure, and other incentives to foster their growth and development.

10. Uttarakhand Film Policy, 2015 (as amended in 2019)

Under the Uttarakhand Film Policy 2015 (as amended in 2019), the following incentives and provisions are provided:

- a. Discount on Rest Houses: Film units are eligible for a 50 per cent discount on stay in the rest houses of Garhwal Mandal Vikas Nigam Ltd., except for May, June, and October.
- b. Industry Status: Cinema houses situated at an altitude greater than 1000 meters are granted "Industry Status" by the state government.
- c. Production Cost Financing: The state government may consider financing up to 75 per cent of the production costs (below INR 2 Crores) for eligible films.
- d. Tax Benefits: Films that have more than 50 per cent outdoor shooting in Uttarakhand are eligible for tax-free status, based on merit.
- e. Grant for Film Processing Expenditure: Expenditure incurred in processing films produced in the Uttarakhand regional language may be reimbursed up to 30 per cent or a maximum of INR 25 lakhs if processed in a lab situated in Uttarakhand. If processed in a lab outside Uttarakhand, the reimbursement is up to 25 per cent or a maximum of INR 20 lakhs.

- f. Exemption from Shooting Charges: Films shot in Uttarakhand are exempted from shooting charges to promote the region as a tourist destination.
- g. SGST Reimbursement: Cinema houses located in hilly regions (above 600 meters altitude) are eligible for SGST reimbursement of up to 30 per cent for revival purposes.
- h. Scholarship: Students from Uttarakhand pursuing their career at the Film & Television Institute, Pune, or Satyajit Ray Film & Television Institute, Kolkata, can receive a yearly scholarship of up to INR 25,000.

These policies and incentives aim to promote and support the film industry in Uttarakhand.

11. Development of Micro and Mini Hydro up to 2MW, 2015

Under the Policy for Development of Micro & Mini Hydro Power (Up to 2 MW) 2015 and the Policy for Development of Small Hydro Power (2-25 MW), the following incentives and provisions are provided:

- a. Capital Fund Support: Developers can avail the Social Venture Capital Fund available with the Rural Development Department through UPASaC (Uttarakhand Parvatiya Aajeevika Sanvardhan Company) and other eligible programs.
- b. Royalty Exemption: There is a 100 per cent exemption on royalty for both micro and mini hydro power projects (up to 2 MW) as well as small hydro power projects above 5 MW for the first 15 years.
- c. Water Usage Charge Exemption: Projects awarded under these policies are exempted from water usage charges.
- d. Land Allotment: Government land, including land belonging to eligible Panchayati Raj Institutions (PRI), except forest land, can be allotted on a lease for 40 years at a premium of Rs. 1 per square meter.
- e. Court Fee Exemption: Developers are granted an exemption from court fees for the registration of documents relating to the lease of land.
- f. Industry Benefits: Micro and mini hydro power projects in Uttarakhand are treated as an industry, making them eligible for all benefits declared by the state government for the industry from time to time.

These policies aim to promote the development of micro, mini, and small hydro power projects in Uttarakhand by providing financial support, exemptions, and other incentives.

12. Uttarakhand Policy on Small Hydro Power 2 to 25 MW, 2015

The Policy for Development of Small Hydro Power (2-25 MW) provides guidelines and benefits for developing micro, mini, and small hydro projects in Uttarakhand. Here are the key aspects of the policy:

- a. Industry Status: Micro and mini hydro projects in Uttarakhand will be treated as an industry. This means that all benefits declared by the State Government for the industry will also apply to these power projects.
- b. Small Hydro Power Projects (SHP): The policy focuses on SHP projects ranging from 2 MW to 25 MW in capacity.
- c. Royalty Exemption: For SHP projects between 2 MW and 5 MW in capacity, there is a 100 per cent exemption from royalty payments. For projects above 5 MW, the 100 per cent exemption applies for the first 15 years of operation.

These measures aim to encourage the development of small hydropower projects in Uttarakhand by granting industry status and offering royalty exemptions. The policy aims to facilitate the growth of clean and renewable energy sources in the state.

13. Uttarakhand Policy on Hydropower Development (25 MW to 100 MW), 2015

Under the Policy for Development of Hydro Power (25-100 MW) in Uttarakhand, the following incentives and provisions are provided:

- a. **Water Charges Exemption:** The developer of hydropower projects is exempted from water royalty charges for the units generated before the scheduled date of commissioning.
- b. **Industry Benefits:** Hydro power projects in Uttarakhand are treated as an industry. Therefore, all benefits declared by the state government for the industry from time to time apply to these power projects.
- c. **Right of Way:** Private developers are not required to obtain government permission for the right of way for the construction of transmission lines and associated works linking the small hydro power plant with the state grid substation.

These provisions aim to support the development of hydro power projects in the 25-100 MW range in Uttarakhand. By providing exemptions and treating them as an industry, the policy encourages investment and facilitates the smooth implementation of such projects.

14. Policy for Energy Generation from Pirul (Pine Leaves) and Other Biomass-2018

Under the Policy for Energy Generation from Pine Litter and Other Biomass-2018 in Uttarakhand, the following incentives and provisions are provided:

- a. **Electricity Duty Exemption:** Developers of biomass-based power plants are exempted from paying electricity duty on the electricity generated by the power plant for a period of 10 years after commissioning.
- b. **Training Support:** The Uttarakhand Renewable Energy Development Agency (UREDA) and the Forest Department provide support for training and capacity-building activities for Community-Based Organisations (CBOs) on various aspects related to the establishment of biomass-based projects.
- c. **Stamp Duty Exemption:** If the power generation unit is set up on private land, the developer is exempted from paying stamp duty for the registration of documents. However, if the developer later uses the land for another purpose, the amount of stamp duty shall be recovered from the developer.

These provisions aim to encourage and support the generation of energy from pine litter and other biomass sources in Uttarakhand. The exemptions and support provided by the policy help facilitate the development of biomass-based power projects in the state.

15. Uttarakhand Town and Country Planning Act, 1973

This act is legislation specific to the state of Uttarakhand, located in northern India. It was enacted to regulate and control the development and planning of urban and rural areas in Uttarakhand.

The key objectives of the Uttarakhand Town and Country Planning Act, 1973 include:

- a. Promoting planned and balanced development of urban and rural areas in Uttarakhand.
- b. Regulating land use and development activities to ensure efficient and sustainable use of land resources.
- c. Ensuring the provision of essential infrastructure and amenities in urban and rural areas.
- d. Preventing haphazard and unplanned development, and promoting orderly growth of towns and cities.
- e. Protecting the natural environment and preserving ecological balance.
- f. Facilitating the preparation and implementation of development plans and zoning regulations.
- g. Controlling and regulating construction activities, land subdivisions, and building regulations.
- h. Establishing procedures for granting development permissions, building approvals, and land use changes.
- i. Creating mechanisms for public participation and consultation in the planning process.
- j. Enabling the acquisition and development of land for planned urbanisation and public purposes.

Under this act, the state government has the authority to establish town and country planning departments and appoint planning authorities responsible for the preparation, implementation, and enforcement of development plans. The act also outlines the powers and functions of these planning authorities and specifies the procedures for plan preparation, public notice, objections, and appeals.

16. Uttarakhand Export Policy, 2021

The export policy for Uttarakhand seeks to position the state as a prominent player in the export sector by leveraging its natural resources and fostering a conducive environment for trade. The vision of the policy is to establish Uttarakhand as a leading exporter at the domestic and global levels. To achieve this, the policy outlines several key objectives. These include developing a simplified, responsive institutional mechanism to facilitate rapid export growth, improving export infrastructure, such as warehouses and cold storage, and enhancing the export potential of traditional and focus sectors through value addition and quality competitiveness. The policy also aims to provide fiscal and non-fiscal incentives to exporters, offer handholding support to existing and new exporters, and establish coordination with national and global agencies involved in export promotion. By implementing these measures, the government aims to streamline export processes, strengthen logistical capabilities, and promote trade across emerging sectors. The ultimate goal is to create a favourable ecosystem for exporters, boost export volumes and revenues, and contribute to Uttarakhand's overall economic development.

The policy sets two primary targets:

- a. Increase the share of exports from INR 15,900 crore in FY 2021 to INR 30,000 crore within a span of 5 years.
- b. Generate additional employment opportunities for 30,000 individuals.

The policy's implementation is as follows:

- a. The policy will be enforced upon its official notification and will remain in effect for a period of 5 years.
- b. The policy may be modified, amended, or superseded as necessary. Any such changes will be duly notified.
- c. In the event of policy amendments, if the State government has already committed incentives to a specific unit, said incentives will not be retracted. The unit will continue to be entitled to the benefits initially promised.

This approach ensures clear objectives for export growth and employment creation while allowing flexibility for policy adjustments. Existing units will retain their entitled benefits regardless of any policy modifications.

ANNEXURE B - Tourism Priority Projects

Magnet Points	Category	Development	Key Players	Investment (in Cr)	Timeline	Department	Execution	Proposal
Champawat	Product	Greenfield	Develop Sapteshwar waterfall trek and ecotourism facilities	2	Short Term (2 years)	Forest	PPP	Proposed
Champawat	Product	Greenfield	Develop Jim Corbett trail in Champawat – Trail, interpretation centre, forest library, souvenir store	3	Short Term (2 years)	Forest	PPP	Awaiting Department Approval
Champawat	Hospitality	Brownfield	Redevelop Champawat KMVN - Premium segment - 35 keys	23	Short Term (2 years)	UTDB	PPP	Proposed
Champawat	Product	Brownfield	Redevelop & heritage revival of 13 Naula (100 Naula Project)	0.21	Short Term (2 years)	UTDB	EPC	DPR Underway
Champawat	Product	Brownfield	Redevelop Rajbunga Fort - Chand Dynasty Museum and Interpretation Centre	2	Mid Term (4 years)	UTDB	PPP	Awaiting Tehsil Construction
Champawat	Hospitality	Greenfield	Develop Eco-Tourism Hotel in Tea Gardens, Champawat - 15 Keys	13	Long Term (6 years)	UTDB	PPP	DPR at MOT

ANNEXURE C - Tourism Hospitality, Creation, Enablers and Infrastructure

Magnet Points	Category	Development	Key Players	Investment (in Cr)	Timeline	Department	Execution	Proposal
Champawat	Product	Brownfield	Redevelop Baleshwar Temple	-	Mid Term (4 years)	ASI	EPC	On-going
Champawat	Infrastructure	Greenfield	Development of 29 4G towers in shadow areas		Long Term (6 years)	BSNL, DoT	EPC	DPR Underway
Champawat	Enablers	Greenfield	Develop a multi-speciality disaster relief centre and a disaster training centre in Champawat.	-	Mid Term (4 years)	DDMA	EPC	Proposed
Champawat	Enablers	-	Conduct Kiwi Festival – Kiwi plucking, farm-to-table premium hospitality (harvest season)	2.5	Mid Term (4 years)	Horticulture	EPC	Proposed
Champawat	Infrastructure	Greenfield	Develop a ropeway from the Tea Garden to Hingla Devi	-	-	NHIDCL - Parvatmala	EPC	Proposed
Champawat	Product	Greenfield	Develop an Open-Air Theatre in the proposed District Jail near Goralchod Maidan	0.97	Long Term (6 years)	Pey jal	EPC	DPR Underway
Champawat	Infrastructure	Brownfield	Enhance Champawat - Ek Hathiya Naula Road - 3Km	9	Mid Term (4 years)	PWD	EPC	Proposed
Champawat	Infrastructure	Greenfield	Develop a 100-car MLCP in Champawat city	6	Mid Term (4 years)	PWD	EPC	Proposed
Champawat	Infrastructure	Brownfield	Redevelopment of Churani-Jamaredi road	0.62	Mid Term (4 years)	PWD	EPC	On-going
Champawat	Infrastructure	Greenfield	Develop Kanda-Ramak road – 2 km	2	Mid Term (4 years)	PWD	EPC	DPR Underway
Champawat	Infrastructure	Brownfield	Improvement of the internal link roads of Champawat	9.92	Long Term (6 years)	PWD	EPC	DPR Underway
Champawat	Infrastructure	Brownfield	Resurface Champawat Gaudi-Kimtoli motor road – 12.15 km	10.58	Long Term (6 years)	PWD	EPC	On-going
Champawat	Infrastructure	Greenfield	Develop roads from Manch to Bakoda, Deuri to Chalti, Tamli to Tanakpur, Binwal Village,		Long Term (6 years)	PWD	EPC	DPR to be Prepared

			Goldanda to Kaliadhura and Seal to Sootera					
Champawat	Infrastructure	Brownfield	Resurface Barakot Simalkhet-Kaflikhan Bhanauli road (SH57) from 13 km to 38.12 km	8.06	Long Term (6 years)	PWD	EPC	DPR Underway
Champawat	Product	Brownfield	Develop the Aipan experience centre at Ek Hathiya Naula - Local arts & handicraft experiences	2	Short Term (2 years)	State Archaeology	EPC	DPR to be Prepared
Champawat	Enablers	-	Purchase of 15 new buses for operating on 8 new routes in Champawat	5.25	Mid Term (4 years)	Transport	EPC	Proposed
Champawat	Infrastructure	Brownfield	Underground development of 11 KV and LT lines in Champawat market	-	Short Term (2 years)	UPCL	EPC	Tender Documents Underway
Champawat	Infrastructure	Greenfield	Develop off-grid Solar power plants in 115 Aganwadi centers	1.95	Mid Term (4 years)	UPCL	EPC	Funds Awaited from the Finance Ministry
Champawat	Product	Brownfield	Redevelop Khari Bazaar as the Mall Road of Champawat (CM Heritage Street)	2	Long Term (6 years)	UTDB	EPC	DPR Awaiting Approval
Champawat	Product	Brownfield	Golu Devta corridor - Nainital, Almora & Champawat (Manaskhand Corridor)	1.11	Long Term (6 years)	UTDB	EPC	On-going
Champawat	Product	Brownfield	Redevelop Siddha Narsimha Kalukhan Temple	2.67	Long Term (6 years)	UTDB	EPC	DPR Awaiting Approval
Champawat	Product	Brownfield	Develop Adventure Park in Champawat	2.84	Long Term (6 years)	UTDB	PPP	DPR Awaiting Approval
Champawat	Enablers	-	Conduct The Champawat Challenge - Downhill cycling from Lohaghat stadium to Tanakpur Stadium	2.5	Short Term (2 years)	UTDB	PPP	Proposed
Champawat	Product	Greenfield	Develop Sapteshwar waterfall trek and ecotourism facilities	2	Short Term (2 years)	Forest	PPP	Proposed

Champawat	Product	Greenfield	Develop Jim Corbett trail in Champawat – Trail, interpretation centre, forest library, souvenir store	3	Short Term (2 years)	Forest	PPP	Awaiting Department Approval
Champawat	Hospitality	Brownfield	Redevelop Champawat KMVN - Premium segment - 35 keys	23	Short Term (2 years)	UTDB	PPP	Proposed
Champawat	Product	Brownfield	Redevelop & heritage revival of 13 Naula (100 Naula Project)	0.21	Short Term (2 years)	UTDB	EPC	DPR Underway
Champawat	Product	Brownfield	Redevelop Rajbunga Fort - Chand Dynasty Museum and Interpretation Centre	2	Mid Term (4 years)	UTDB	PPP	Awaiting Tehsil Construction
Champawat	Hospitality	Greenfield	Develop Eco-Tourism Hotel in Tea Gardens, Champawat - 15 Keys	13	Long Term (6 years)	UTDB	PPP	DPR at MOT

ANNEXURE D - Projects under Champawat Dairy Acceleration Mission

Magnet Points	Project for Consideration	Brief Description	Investment (INR Cr)
Champawat and Lohaghat	Champawat Pashu Ashray Vikas Yojana	2,000 small shelters through 50% govt. subsidy in Lohaghat and Champawat	30
Champawat and Lohaghat	Mini Collection Centres with Chillers	200 mini collection centres through 50% govt. subsidy equipped with 500 LPD bulk milk chillers and electronic milk adulteration testing equipment in Lohaghat, Champawat, Tanakpur and Pati	20
Champawat	Champawat Mahila Gau Seva Sangathan	20 large govt. farms to be developed in Tanakpur and Champawat. Farms to be operated by female-SHG and private players in PPP mode	60
	Gau Swasthya Sanrakshan Abhiyan	8 specialised dairy health centres providing 1 annual check-up (BCS, vaccinations, AI dates), lab tested reports	8

ANNEXURE E - Proposed Project for Kiwi, Lilium, Cinnamon, Silk and Tea

Brief Description	Investment (INR Cr)	Timeline	Department
Set up a model orchard of 2 acres for Kiwi: • Plants at each development stage • Training of 1,500 farmers in a package of practices	0.25	Short term (2 years)	Horticulture
Set up CoE for Lilium: • Knowledge sharing MOU with institutes ¹ for bulb propagation • Training of 2,000 farmers in a package of practices • Propagation of Lilium bulbs on PPP mode • Development of a focused research program on crop improvement, sustainable practices and propagation techniques	2		Horticulture
Develop Cinnamon nurseries in a 20-ha area to propagate and supply 25 lakh+ quality planting materials till 2030	1.25		CAP
Policy for Lilium bulb propagation by private players: • Polyhouse (1 ha) • Cold storage (5,000 MT)	6		Horticulture
Policy for Lilium bulb propagation by private players: • Polyhouse (1 ha) • Cold storage (5,000 MT)	82 (Under Proposed Kiwi Policy)		
Policy to promote the set-up of Cinnamon plantations in 1,500 Ha in Champawat, Lohaghat and Pati blocks • 80% subsidy on set-up cost, including drip irrigation and water harvesting systems	124 (Under Proposed Aroma Park Policy)		CAP
Policy to increase the Lilium area under cultivation from 1 ha to 20 ha @ 80% subsidy on set-up (planting material, etc.)	33		Horticulture
Poly sheet replacement for the renewal of existing polyhouses of Lilium	0.13		
Establish Ropeways for the first mile transportation in hilly regions for Kiwi and Lilium	2.5		
Set up primary processing centres, including a solar dryer and a grinder for Cinnamon	6 (Under Proposed Aroma Park policy)	Mid-term (4 years)	CAP
Revamp existing FPOs to undertake activities in farmer clusters across the value chain.	-	Short term (2 years)	Cooperatives
Organise annual festivals and create product-linked tourism for Kiwi and Lilium	0.5	Mid-term (4 years)	Horticulture
Set up 1 Kiwi processing centre for jam, juice and dry slice preparation (1,000 MT/season)	0.25	Long term (6 years)	
Horticulture development under NABARD funds	1.2	Short term (2 years)	Agriculture
Horticulture development under NABARD funds	0.81	Short term (2 years)	Horticulture

ANNEXURE F - Health and Education

HEALTHCARE				
Brief Description	Investment (INR Cr)	Timeline	Department	Status
50-bedded critical care blocks in the district hospital, Champawat	20			Under Construction
Develop Integrated Nursing Institute, Champawat	28	-	Health	Operational
Expansion and upgradation of PHC Chalti – 5 beds	2.5	-	Health	DPR - Underway
Develop 150 beds across the district - District Authority to identify locations & PHC as per population density	30	-	Health	Proposed
EDUCATION				
Brief Description	Investment (INR Cr)	Timeline	Department	Status
Develop a state-of-the-art district library in Champawat	1	Mid-term (4 years)	Education	Revision Underway
Develop a Model Laboratory for all subdivisions	0.4	Mid-term (4 years)	Education	Proposed
Develop an Army school in Champawat.	-	Long term (6 years)	Education	Proposal Cancelled
Develop Student Hostel in Champawat	5.34	Long term (6 years)	Education	Underway
TEI: Develop Science City in the district to provide experiment-based immersive learning	57	Short term (2 years)	Education	Under-Process
TEI: Develop Polytechnic College Champawat	1.88	Long term (6 years)	Education	On-going
Develop a women's sports college in Lohaghat, Champawat	-	Long term (6 years)	Sports	DPR Awaiting approval
Location	Area (Acre)	Current Ownership		Remark
Champawat	2.5	UTDB		Land identified for an adventure park
Champawat	2.5	Revenue Department		Land identified for an adventure park
Champawat Heliport	25	Revenue Department		Land available for Tourism Property
KMVN Champawat	8	KMVN		Land available for Tourism Property

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