

Circumscribing the Attributes of Cultural Heritage Mapping in the Colonial Hill Towns of India

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Received February 8, 2023; Revised April 14, 2023; Accepted May 9, 2023

Cite This Paper in the Following Citation Styles

(a): [1] Kanika Bansal, Pankaj Chhabra, "Circumscribing the Attributes of Cultural Heritage Mapping in the Colonial Hill Towns of India," *Civil Engineering and Architecture*, Vol. 11, No. 4, pp. 1940 - 1956, 2023. DOI: 10.13189/cea.2023.110420.

(b): Kanika Bansal, Pankaj Chhabra (2023). *Circumscribing the Attributes of Cultural Heritage Mapping in the Colonial Hill Towns of India*. *Civil Engineering and Architecture*, 11(4), 1940 - 1956. DOI: 10.13189/cea.2023.110420.

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Abstract This study brings out the significance of cultural heritage mapping as a tool to identify, document, and conserve cultural heritage resources. Such identification holds significance because of a piecemeal approach adopted by the urban local bodies in India due to which there exists a gap in integrating heritage conservation within the urban planning and development frameworks. This research maps the cultural heritage resources in Shimla, a colonial hill town in India that is a testimony of the British power and rule in India. Based on an extant literature review, four attributes of cultural heritage mapping namely location, socio-cultural, physical, and community attributes were identified and mapped to identify the drivers for integration of the cultural heritage conservation with the local urban development processes. The present research is a narrative-driven study and includes interviews with various stakeholders and gathering data through a defined cultural inventory from oral and archival history. The findings of the study suggest that community attributes and physical attributes are significant attributes of cultural heritage mapping. This is because the community and physical attributes act as drivers for a heritage-inclusive and integrated urban development approach. Further, the sociocultural and locational attributes have high significance, yet are less considered in the urban development frameworks. The study will aid in creating awareness for promoting, conserving, and managing the cultural heritage of colonial hill towns in India so that their unique cultural identity is not endangered in the wake of contemporary development. Furthermore, the present research shall facilitate the urban

local bodies to consider the identified and mapped cultural heritage resources while planning for sustainable urban development.

Keywords Cultural Heritage Mapping, Colonial Hill Towns, Heritage Conservation, Sustainable Urban Development

1. Introduction

Globally, culture is recognized as a significant role player in defining the identity attributed to timeless cultural traditions and symbolizes an existing social setup as well as a lifestyle [1]. Recently culture has been identified as the fourth pillar within the Sustainable Development Goals (SDGs) framework by UNESCO [2]. Appreciating the increasing global significance of culture, cultural mapping acts as a methodical way of identifying, assessing, categorizing, and analyzing the cultural resources that are integral to a community [3], [4]. Within the cultural mapping framework, cultural heritage mapping (CHM) acts as a crucial tool recognized by UNESCO to preserve the world's intangible and tangible cultural heritage assets and helps to identify and support a community's cultural diversity for its social, economic, and regional development [5]. Additionally, it becomes a knowledge tool for the urban local bodies to integrate the protection and promotion of cultural heritage with the urban development processes to contribute to sustainability [6].

Historic urban areas are manifestations of exceptional townscape qualities that have evolved and transformed over a while. Within the Indian Context, though the Ministry of Urban Development has developed toolkits for formulating City Development Plans with a focus on heritage. However, CHM in historic urban areas has often been conceived through a fragmented approach within the local urban development processes [7]. The need, therefore, arises to identify, employ and integrate heritage resources within urban development projects. The colonial hill towns (CHT) in India are a distinctive typology of historic urban areas and are urban entities representing British power and rule in India [8]. Historically, these towns are considered one of the most environmentally and scenically distinctive types of settlements established by the British from the 19th century onwards. Originally existing as small hamlets were identified in different parts of the country in high-altitude locations to search for seasonal relief from the intense heat of the plains [9]. Among the 80 CHT established by the British, six of them grew to function as summer capitals for the British empire in India, of which Shimla grew to be dominant and is a prototypical testament of European urban and architectural character [8], [10]. Shimla is a popular hill town in the north of India and functioned as the administrative head and the imperial summer capital of the British most time of the year. The magnificence of the buildings built during colonial rule in Shimla stands as narratives of the past and defines the town's distinctive cultural legacy [9]. Its built heritage is a link that connects our colonial past with the present and gives a unique identity and sense of place to not only Shimla but all the other CHT in a globalizing world [11]. The distinctive cultural character-defining attributes embody the unique processes manifesting cultural interactions, their cross-connections, and the synthesis between the European and the indigenous [12].

However, all capital CHT including Shimla are victims of integrations and transformations such that they stand at the perilous crossroads of ecological and environmental degradation over and above their carrying capacities [13], [14]. The forces of rapid and chaotic urbanization along with a lackadaisical integration of heritage conservation with the urban development plans pose a threat to their rich cultural heritage which is being compromised at an alarming rate [15], [16]. The need, therefore, arises to

identify, document, and devise strategies to protect the rich cultural heritage resources within the colonial hill towns for future generations and contribute to sustainable living through CHM. This study identifies the various attributes of cultural heritage mapping that act as their value qualifiers and what elements and features should be prioritized in conservation over others to serve as the basis for future urban planning studies. This process will pave way for sensitive and appropriate decisions in the management and development of historic sites and communities within the urban development frameworks. In a broader context of the colonial hill towns in India, the study will help to define the attributes of cultural heritage to map the cultural heritage resources for heritage-inclusive and integrated sustainable urban development.

2. Literature Review

Cultural mapping is defined as a “systematic tool to involve communities in the identification and recording of local cultural assets, with the implication that this knowledge will then be used to inform collective strategies, planning processes, or other initiatives” [17]. Cultural heritage falls in the cultural resource framework (figure 1) and is a living manifestation of significant events in the history of mankind representing multiple layers of cultural and historical attributes [18]. Published research suggests that CHM acts as a tool to identify, evaluate and document the valuable cultural heritage resources that contribute to a place's unique identity and sense of place [19], [20]. Research also brings out that CHM acts as the foundation for urban planning studies, policies, and guidelines in the future to affirm sensitively appropriate decision-making in developing and managing historic sites and communities [3], [21]. Duxbury et al. (2015) suggest that CHM may be useful for historical assessment, exploring cultural identity, community mapping, cultural planning as well as planning for sustainable development [17]. Therefore, over the past, CHM has been widely used by heritage professionals around the world for collecting historic shreds of evidence, narratives, and significance and its interpretation into cultural maps in various districts [22], [23].



Figure 1. Cultural Resource Framework

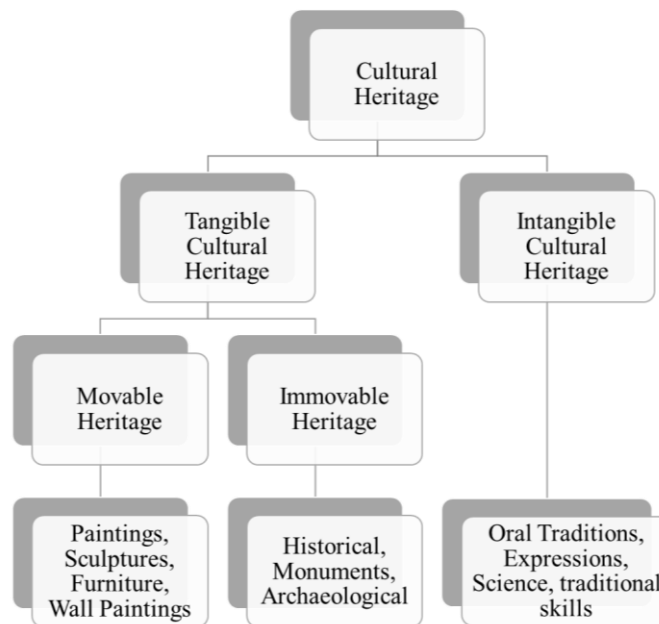


Figure 2. Broad Classification of Cultural Heritage as per the UNESCO Convention, 1972

Existing research indicates that though CHM does not have defined boundaries, it largely accounts for identifying tangible and intangible assets [5]. It further extends to a more humanistic approach that articulates culture through

the sense of place and the people-place meanings attached by identifying the associated socio-cultural aspects that give social & cultural significance. Figure 2 classifies cultural heritage as defined by the UNESCO World

Heritage Convention, 1972 tangible and intangible cultural heritage.

Cultural heritage attributes mean the significant characteristics, historic context, and social and aesthetic appearance that give the asset its cultural heritage value [24]. Broadly CHM emphasizes the documentation of these cultural heritage attributes that are a source of information and thus aligns itself with the setting and context of the place defining the locational attributes [25], [26]. For this study, the urban morphology, the social and lifestyle along with the intangible resources define the sociocultural attributes [6], [7] and the tangible assets define the physical attributes [27], [28]. The most significant is understanding and appreciating the community for its participation and involvement and thus their attributes are defined by the typology of the stakeholders [17], [18], [28]. Table 1 brings out the attributes of CHM identified from the literature review, the mapping of which will help the urban local bodies and planners to integrate cultural heritage management within the proposed urban development framework.

Further, various strands of published literature on understanding CHT in India were referred to identify the gap in the existing research on their cultural heritage. Existing sources affirm that the CHT remained uncovered before the British established them for a multitude of reasons such as health, recreation, administrative uses, and military cantonments besides serving primarily as seasonal retreats [8], [29]. Initially developed as small hamlets, they were distinct from the traditional hill settlements because of their unique locational attributes of being situated on high mountain ridges and plateaus and a European-like

natural setting [15], [30]. Furthermore, published research asserts that the initial development of CHT such as Shimla, Darjeeling, Nainital, Dehradun, etc. was triggered by the British by developing housing, road and rail networks, boarding schools, mall roads, clubs, and theatres which attracted the British officials to transform some of them into provincial summer capitals [16]. Sacareau [31], outlined the aspect of tourism in CHT to highlight them as recreational places during the colonial era continuing their scenic and touristic glory in the post-Indian independence time as well. They gradually became the favorite tourist spots for domestic as well as international tourists due to which they gained swift momentum in infrastructure development [16]. Banta [32] traced the trajectory of colonial development in CHT into firstly the pre-independence colonial existence and dominance phase; secondly the post-independence phase where power rested with the local elite rulers; thirdly the phase of socio-economic development and lastly the contemporary phase of development. Additionally, the study also highlighted that the CHT located at the mid-hills such as Shimla, Nainital, Dalhousie, and Mussorie functioned as active centers for tourism-related commercial activities to date accelerating the pace of in-migration [32]. Another research posited the comparisons and contrast between European and Indian visitors through visual explorations by tourists in CHT of India [11]. Previously published research outlined the transformation of the four (Shimla, Darjeeling, Ootacamund & Mount Abu) CHT in India from summer hill stations into imperial capitals and the challenges and impediments faced during this transition [33].

Table 1. Attributes of Cultural Heritage Mapping and its indicators

Attributes	Indicators	Source
Locational Attributes	Setting	[25], [26].
	Context	
Socio-Cultural Attributes	Urban Morphology	[6], [7].
	Lifestyle	
	Intangible Resources	
Physical Attributes	Tangible Resources	[22], [27].
Community Attributes	Stakeholders mapping	[17], [18], [28].

While the above literature review presents the published research on the evolution of CHT, few more have been instrumental in bringing out the contemporary threats and challenges faced by them. Research also posits the issues that crop up due to rapid urbanization that has led to increased local and floating populations [34], [35]. The result has led to haphazard, unplanned, and unprecedented development leading to congestion, and overcrowding putting pressure on the carrying capacity of the hills [12]. Sharma [16], in her book, documents the cultural heritage of Shimla and brings out the problems at various levels and layers in conserving the natural, cultural as well as urban heritage. The inflation in tourism-led activities has further magnified the issues of increased new construction degrading the natural topography and posing a threat to the environmental and ecological balance in the CHT [36], [37].

An extant review of the literature presented above clearly brings out that most of the previously existing studies have highlighted the evolution of the CHT, the various types of developmental challenges and threats posed on these settlements, their tourism potential, and ecological and environmental degradation because of population inflation and increased tourism within them. However, though most studies highlight the need for immediate attention towards conserving and safeguarding cultural heritage, a major gap lies in mapping the cultural heritage resources from an integrated urban development point of view. The main concern, therefore, is identifying the attributes of cultural heritage mapping that act as drivers for integrating cultural heritage conservation into the local urban development process. The study is an initial step towards comprehensively mapping attributes of cultural heritage, its significance, and the allied issues that arise while conserving heritage in colonial hill towns amidst rapid urbanization.

3. Research Methodology

The study focused on the colonial developments in India 19th century onwards, as the CHT had its genesis during this time, and presented the case example of Shimla as a prototype of the capital colonial hill towns in India. The present research is a qualitative, narrative-driven study based on a systematic process of data collection and synthesis of the cultural heritage of Shimla. The first step included mapping the cultural heritage attributes of Shimla as identified through the literature review. The existing literature was reviewed for theoretical concepts through

textbooks, reports, and research articles to understand the various aspects related to cultural mapping. Primary and secondary sources were mainly referred to for recording data on historical evidence, narratives, and events that became the basis for mapping the cultural heritage resources. The survey sample was chosen through snowballing techniques. The sample included a heterogeneous mix of the local community, government officials, professionals, and experts. Among the 147 respondents, 92 were local populace with an association of more than 25 years and were above 60 years of age. This included residents, migrated population, businessmen, NGOs, and local real estate developers. Interviews with 31 officials from the urban local bodies namely Shimla Municipal Corporation, HP Town & Country Planning Organization, and Himachal Pradesh Tourism Department were conducted. The remaining sample constituted 07 members of the heritage advisory committee, 05 members of professional bodies such as the local chapter of Shimla INTACH, 05 architects, 05 urban planners, 02 heritage professionals as subject experts, and 01 historian. Further, the researcher's experience and observation through on-site visits contributed to the findings of this paper.

The data was collected through survey interviews based on in-depth semi-structured interviews, Observation, Document Analysis, Questionnaire Survey, and Focus Group Discussion from June 2022 – September 2022. Further data was collected to map the built heritage as tangible assets of Shimla through a detailed inventory in a prescribed format by the Indian National Trust of Arts & Cultural Heritage (INTACH), India. Data on the built heritage were collected through inventories. Geographic Information System (GIS) as a tool was used to map the data collected through the inventory for mapping the cultural heritage attributes. Through the tool, the following maps were prepared as a part of cultural heritage mapping of the physical attributes as the tangible assets of Shimla – Land cover, figure-ground relationship, and the heritage buildings bringing out the diverse range of natural and cultural resources.

4. The Genesis of Colonial Hill Towns

The development of the CHT, popularly coined as “hill stations” in India is accredited to the British Empire in India from the 19th Century onwards [8]. Figure 3 shows the timeline of the development of the various colonial hill towns in India [15].

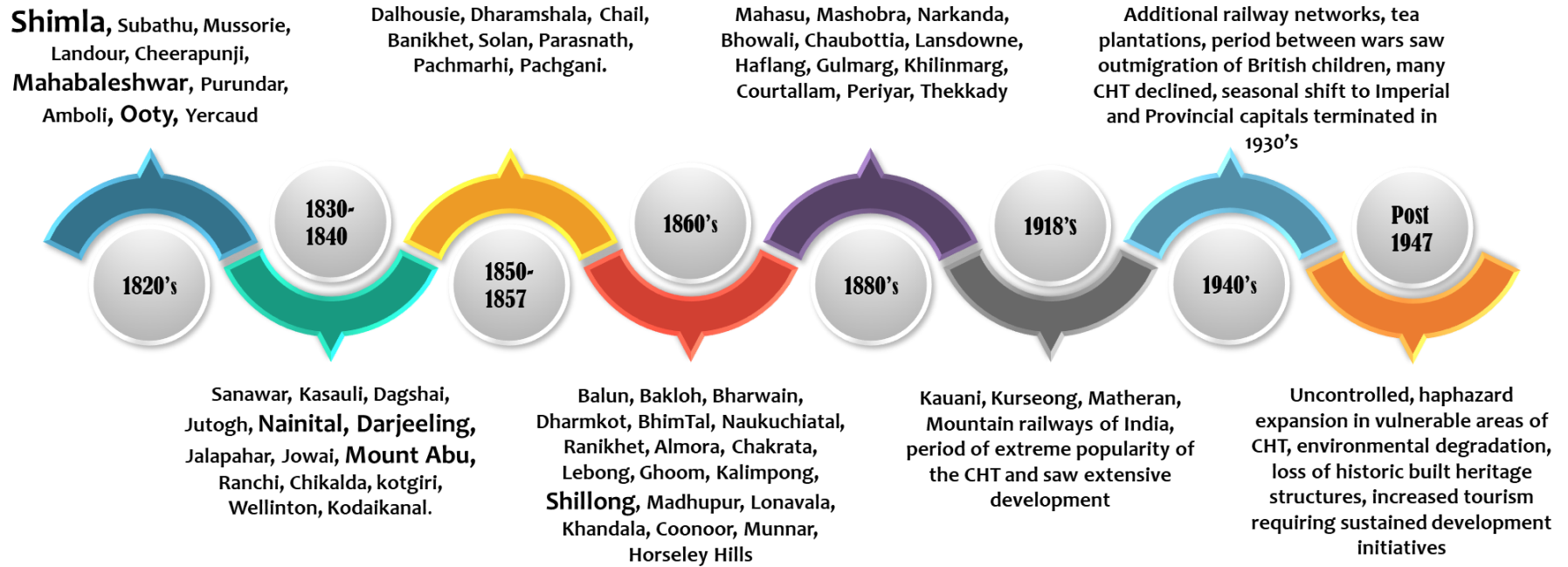


Figure 3. Timeline showing the development of various colonial hill towns across India (Source: Gupta et al., 2021, adapted by the author)

Originally developed to cater to a small share of the transient population, they were developed in 14 states of the country [16]. They were established primarily for a multitude of reasons including seasonal relief, sanatoriums, military bases, administrative functions as well as places for recreation, and continue to benefit the environment, education, and recreational needs of the populace [11]. Morphologically, the colonial hill towns were unique urban entities developed to evoke the spirit of European-style English villages through their choice and criteria of site selection, urban morphological pattern, spatial planning, and heritage resources [33]. They were a distinct category located in the northern, central, and southern mountainous regions of India [36]. Their urban morphology is defined by distinctive built forms in response to their existing natural features and is a manifestation of sociocultural characteristics and historical

features of the 19th and 20th-century colonial interactions and transitions in independent India [38], [39]. Shimla lies in the Western Himalayas, and Nainital falls in the Central Himalayas. Shimla, gained political, economic as well as social significance to become the official powerhouse of the British empire in 1864 [40], [41]. Darjeeling and Shillong are located in the Eastern Himalayan belt. Darjeeling functioned as the provincial capital for the Bengali administration because of its natural bounty, appropriate climatic conditions as well strategic location to function during the heated summer months as a retreat to the 1857 rebellion in India [11]. Mount Abu remains the only capital CHT in the west while Mahabaleshwar and Ooty fall in the Satpuras and Nilgiris towards the South. Figure 4 shows the geographical location of the CHT during the British empire on the map of India.

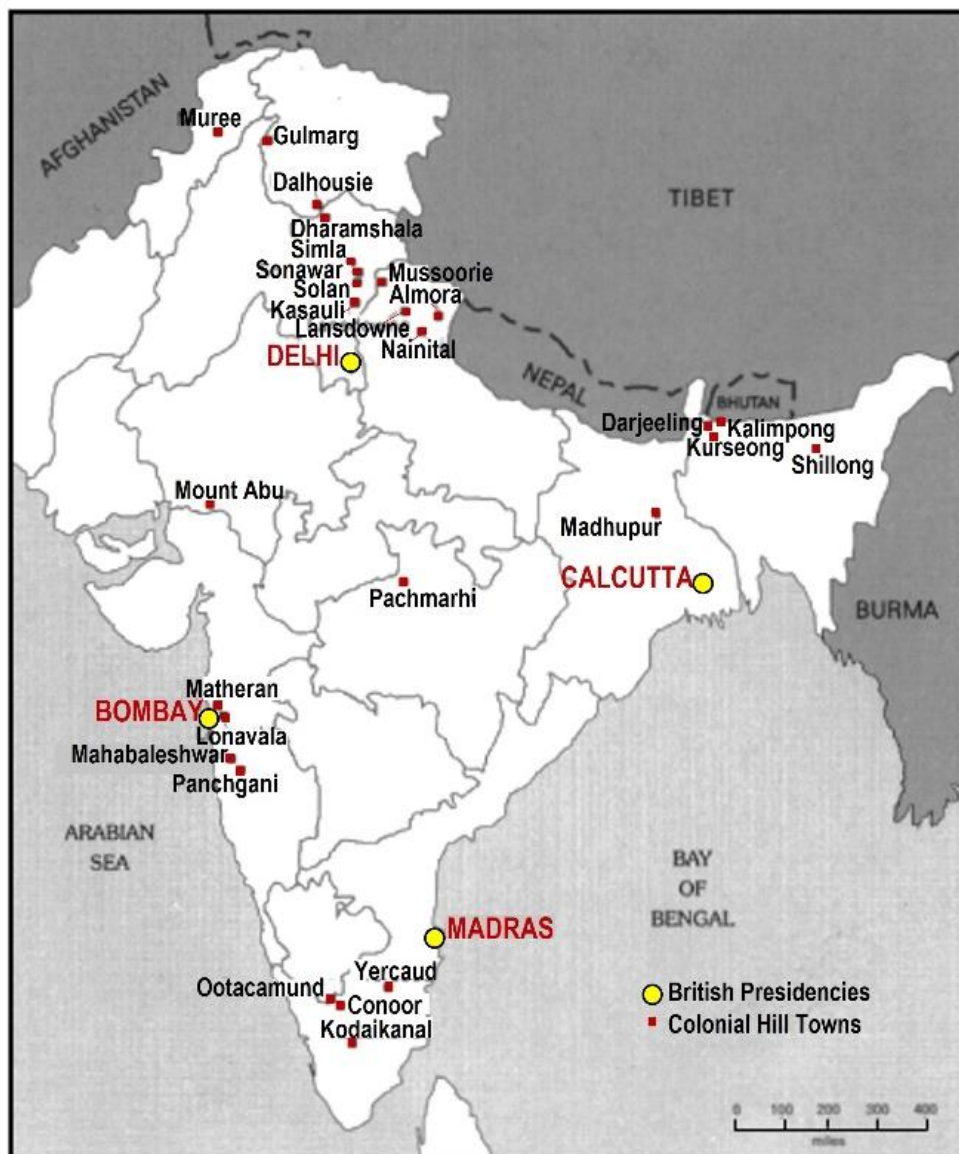


Figure 4. The principal Hill Towns of British India (Source: Kennedy, 1996)

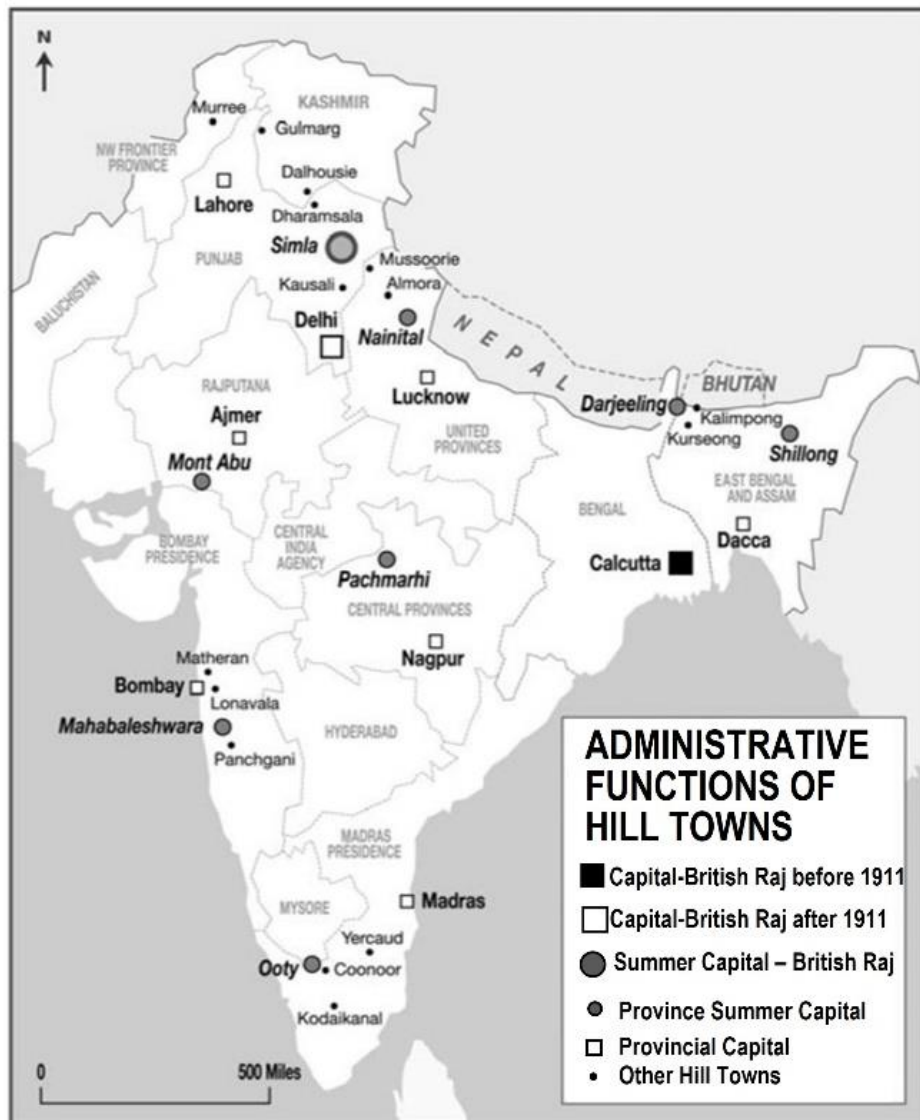


Figure 5. Administrative Functions of Hill Stations in Early 20 Century (Source: Kennedy, 1996)

With time, the CHT witnessed immense growth and development during the British rule to function as an Imperial as well as provincial summer capital as mapped in figure 5. While there were six provincial capitals namely Mahabaleshwar, Ooty, Nainital, Darjeeling, Mount Abu, and Shillong there was only one imperial capital – Shimla from where the British functioned their administrative powers most time of the year. Since Shimla functioned as the Imperial Capital classified as Tier IA, it was also known as “*Official Hill Town*” as it primarily functioned as headquarters for the British government. It was an active social, educational, and recreational center for British officials and elite Indians. Nainital, Darjeeling, and Ootacamund also fall in this category, however, Shimla being the Imperial Capital experienced large-scale development to function as a colonial power for most time of the year and was thus chosen as the area of study for this research as a representative of the capital colonial hill towns in India [39].

5. Cultural Heritage Mapping of Shimla

Cultural Significance of Shimla

Among the 80 hill towns established by the British in India, Shimla became most significant because of its picturesque locations in the Himalayan foothills and its administrative function as the summer capital of British India by the third quarter of the 19th century [8]. It has a rich historic legacy associated with British India and many significant decisions of independent India including the partition of India were taken here [42]. It emerged as the main nerve center for British India and was summer home to a host of dignitaries like the Viceroy of India, the Indian Army’s commander-in-chief, and the lieutenant Governor of Punjab. A year preceding India’s independence, significant meetings between the then British Viceroy and Indian freedom fighters like Mahatma Gandhi, Jawaharlal

Nehru, Maulana Azad, Sardar Patel, and Mhd. Ali Jinnah were convened here including the signing of the constitution between Indira Gandhi and Zulfikar Bhutto (TCPO, 2016). A news report by Chauhan (2015) “Grant Shimla heritage status, Centre urged” reinstates that the HP state government considers Shimla historically significant and thus proposes it for listing as a heritage city. The news report also brings forth the reconsideration plea by the State Tourism Department Board with support from the Himachal Pradesh state government to the central government for not including Shimla amongst the 12 listed heritage cities under “HRIDAY (Heritage City Development and Augmentation Yojana (HRIDAY) - a central sector scheme of the Government of India by Ministry of Urban Development, to bring together urban planning, economic growth, and heritage conservation in an inclusive manner to preserve the heritage character of 12

identified heritage cities)”. This reinstates the heritage significance of Shimla as a manifestation of the colonial power and rule in India.

Locational Attributes

Shimla manifests the ‘Englishness’ of the British era beginning with its strategic location and with Europe-like structures. Shimla, originally a small hamlet was located in a transverse spur in the foothills of the western Himalayas as shown in figure 6, in 1819, when it was discovered by Lieutenant Ross, the then-British political agent. It grew because of its climatic conditions and the scenic natural beauty similar to their native place and gradually grew to become the largest hill town situated in the Himalayan belt of India.



Figure 6. Location map of Shimla

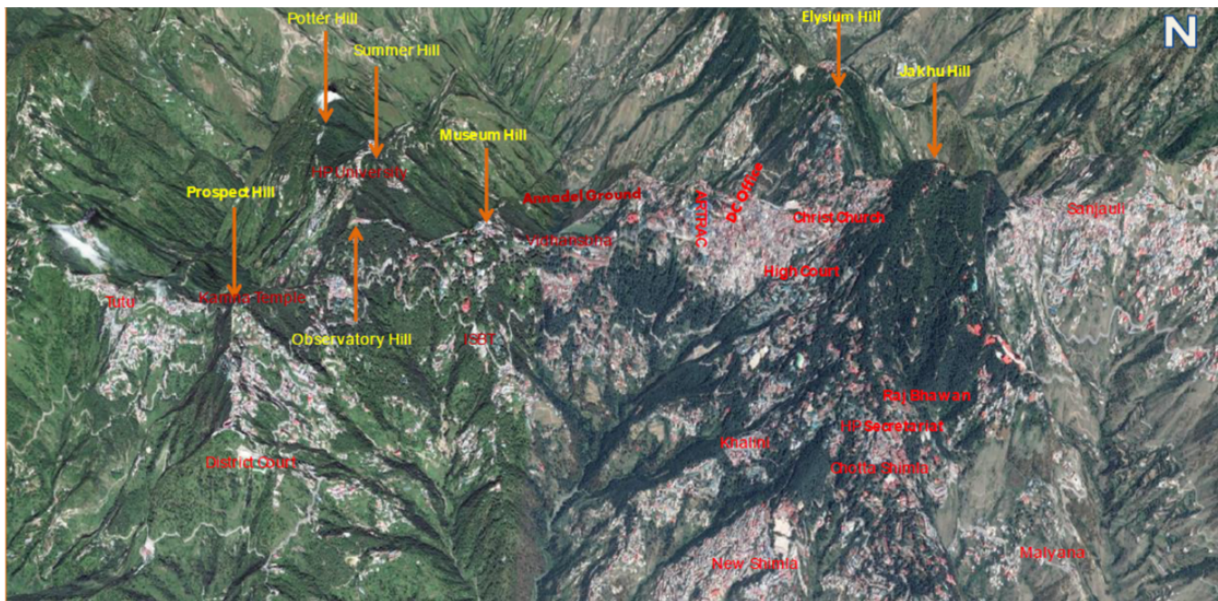


Figure 7. The seven spurs of Shimla (Source: HP State Council for Science and Technology & Environment)

Presently, it extends from $31^{\circ}4'$ - $31^{\circ}10'$ north latitude and $77^{\circ}5'$ - $77^{\circ}15'$ east longitude, covering a geographical expanse of 31.60 km^2 with a mean elevation of 2397.59 m above sea level. Shimla stretches to 9.2 km east to west on a ridge. It has seven spurs namely – Prospect Hill, Potter Hill, Summer Hill, Observatory Hill, Jakhu Hill, Museum Hill, and Elysium Hill as shown in figure 7 with Jakhu hill being the highest point at an altitude of 2454 m (Department of Environment, Science and Technology Government of Himachal Pradesh, 2012). As per the earthquake hazard zoning of India, Shimla falls in Zone IV (High-Risk Zone) and is therefore highly vulnerable to earthquakes. It is located on the largest transboundary drainage basin, the Indus Rivers & Ganges River Systems.

Socio-Cultural Attributes

Urban morphology in Shimla was governed by British-like social structure and practices, slopes, mountain ridges as well as valleys, and the existing sinuous contours that dictated the position and hierarchy of buildings, roads, and bazaars [8]. They were intended to be low-density

settlements with low carrying capacity for a specific count of people they will inhabit. Shimla was intended to cater to a maximum of 25,000 people but has experienced population inflation with immense growth and transformation into mid-rise development at the advent of the 21st century crossing the 3-lakh mark [14].

An exclusive organization of the road network (figure 8) was developed with The Mall Road as the main spine in the historic core of Shimla. The Mall Road was the most prominent distinguishing feature that was a non-vehicular, pedestrian-friendly walking promenade along the main ridge and acted as a link between the core of the town with the shops, leisure, and public facilities along it [16]. Second in the hierarchy of the roads was the cart road to ferry carts and goods dotted hedges with trees and hedges synonymous with a Europe-like picturesque setting [11]. With the unique organization of roads, buildings, and urban spaces, Shimla stands apart as an outstanding example of exceptional townscapes during the British Raj [39].

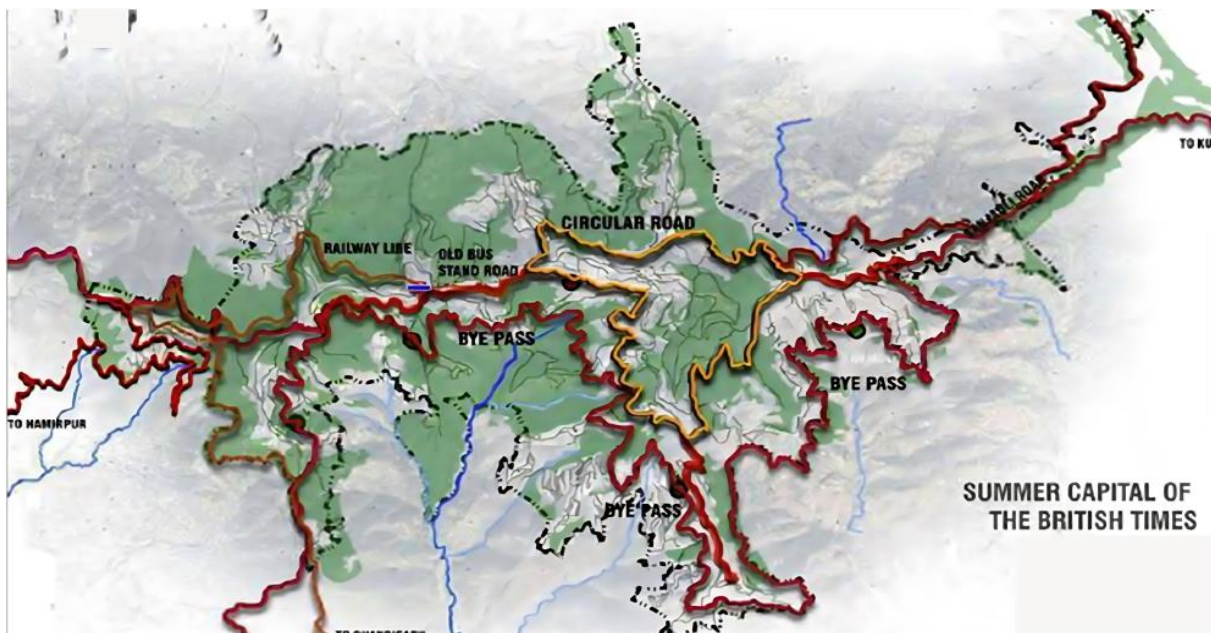


Figure 8. Road Network of Shimla

The socio-cultural setup and practices further dictated the tangible and intangible cultural heritage assets in Shimla. The typical 'Pahari' (Hindi word meaning mountainous) music and folk dance of the hills, the literary works, and collections in several indigenous languages, visual and performing art forms, several festivals, fairs, and events native to the hills, and colorful native traditional costumes typical of varied 'Pahari' ethnic groups, bountiful artifacts and traditional crafts, the museums along with the vivid scales and types of socio-religious structures and practice prevalent till date act as living manifestations of Shimla's hill culture [43]. Besides, the bountiful natural heritage which includes natural features and landscapes like mountain ranges, unique vegetation, and forestation makes Shimla scenically beautiful and a magnet for domestic and international tourists [44].

Different categories of buildings were purposefully located as per the existing topography, their function, and usability as per the social structure such that the British could segregate their living from the Indians. The most typical built form was the Anglican Church, representing the social and religious values associated with the British culture and was thus located in the heart of Shimla [31]. Bungalows and cottages for the government officials and elite were strategically located around the ridge crests as evident in Shimla with English style and layout including backyards that served as fruit and vegetable gardens [45]. While the residences and bazaars for the local Indian

populace were located along the slopes at a distance from the residing elites as followed by the social practice. Military cantonments occupied the peripheral boundaries of the settlements for enhanced security [33]. Another significant cultural heritage resource in Shimla is the Kalka-Shimla Mountain railways of India, inscribed as World Heritage Sites by UNESCO which is a remarkable manifestation of the technological as well as transport development in India [44]. The introduction of the concepts such as dog shows, horse shows, carnivals, flower shows, dances, and theatrical shows along with European-style outdoor games such as golf, cricket, polo, hockey, and tennis ordained the Europeans with the home-like social setting and culture in a remote hill settlement [46].

Physical Attributes

The physical attributes of Shimla were mapped using GIS as a tool based on the data collected through the inventories and focus group discussion. The land cover mapping of Shimla indicated the physical land typology including the agricultural, open land, buildings, and forest covers as indicated in figure 9. Mapping outlines that the major part of Shimla is covered by forests ranging from very dense to open forests and the historic core is densely packed with buildings.

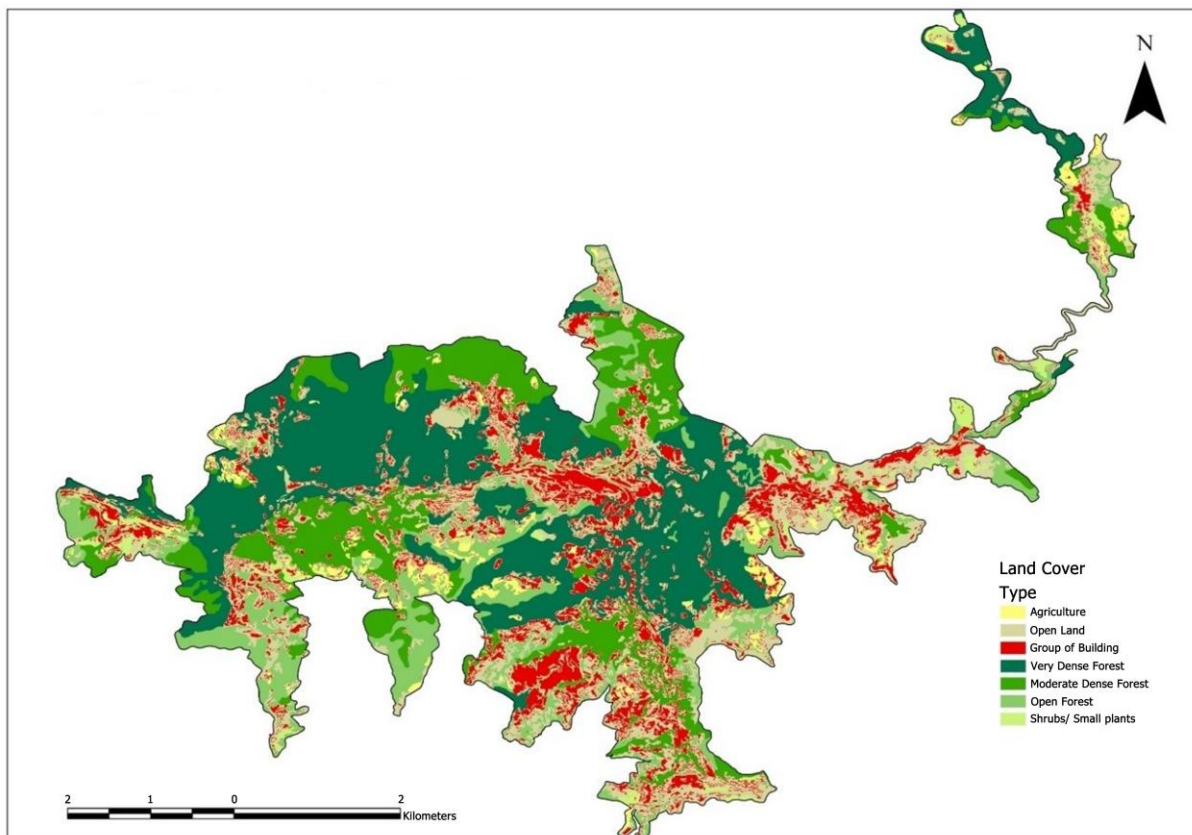


Figure 9. The Land cover of Shimla

The figure-ground mapping was done to define the relationship between the built and unbuilt spaces in Shimla as shown in figure 10. Solid mass in black represents the buildings and land coverage, while the voids are representative of the streets, plazas, and other open spaces in Shimla. This mapping helps the urban planners to appreciate the existing built forms and the open space continuity in the present-day times in Shimla.

Buildings as tangible assets manifest the built environments and are the physical attributes of the cultural heritage [9]. Shimla emerged as the nerve center for British imperialism and therefore has many important landmark buildings that hold national significance. These historic buildings define the built environment and connect the

present to the glorious past of Shimla. Figure 11 shows the mapping of the heritage buildings on the map of Shimla.

Data analysis further suggests that as many as 230 buildings in Shimla fall in the category of heritage buildings. Of these 175 functions as residential buildings, 22 are categorized as civic buildings, 20 are institutional, 08 are classified as religious buildings and the remaining 05 are commercial covering the urban scape of Shimla, as illustrated in figure 12(a). Additionally, the timeline of their development as shown in figure 12(b) indicates that the major development took place towards the end of the 19th century after Shimla and it became the summer capital of India.

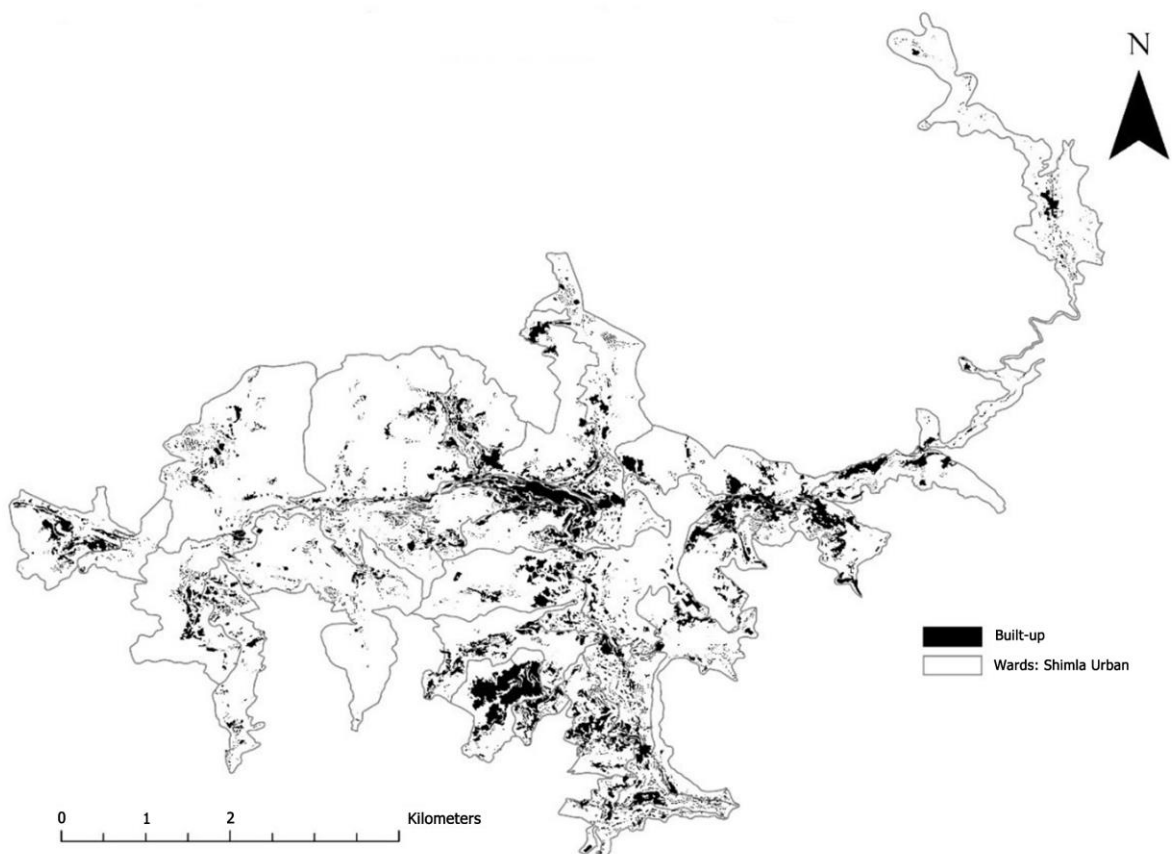


Figure 10. Figure-ground relationship of Shimla (Source: author)

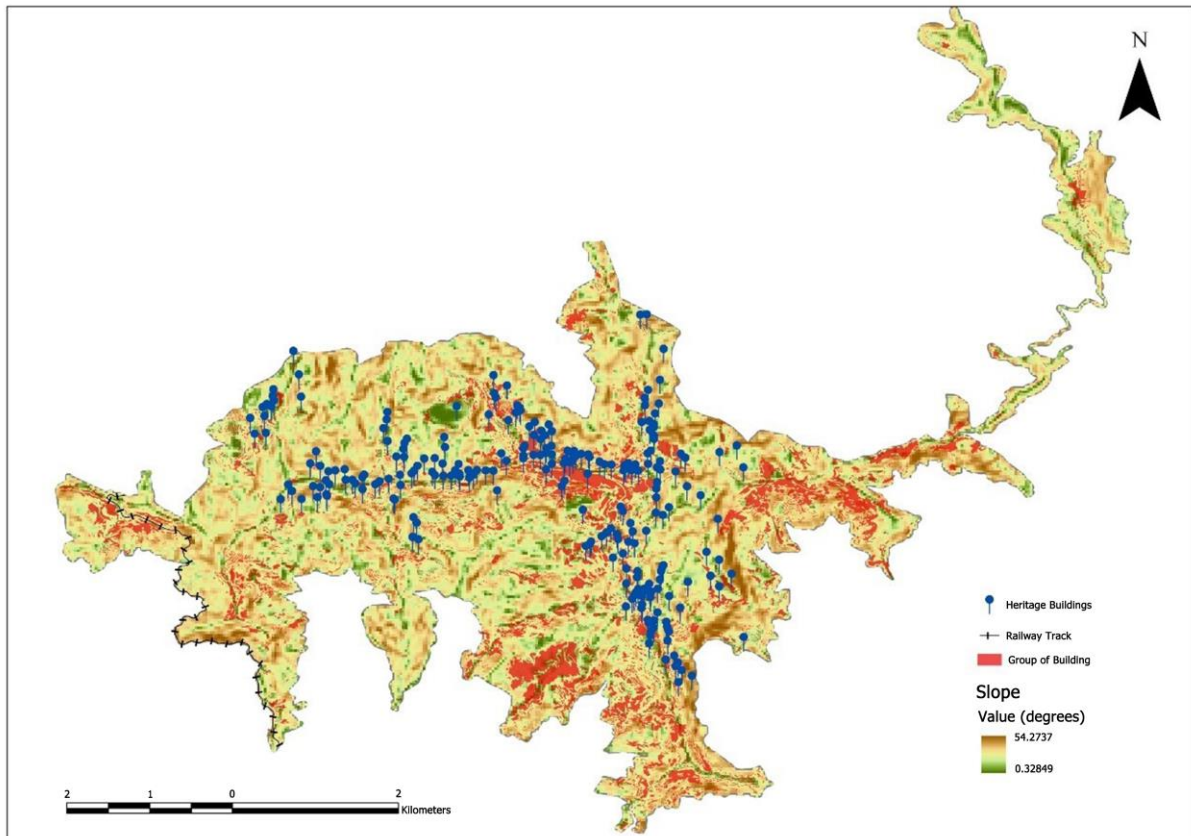


Figure 11. Heritage Buildings in Shimla (Source: author)

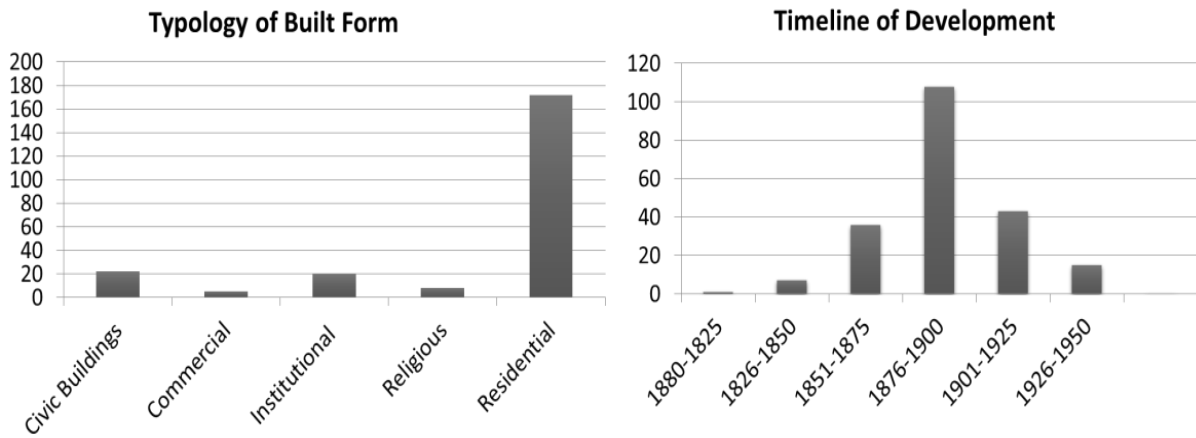


Figure 12. (a) typology of built form; (b) Timeline of the development of heritage buildings

Table 2. Stakeholder Mapping in capital CHT

Categories of Stakeholders	Sub-types
Government Stakeholders	Legislators from Central and State Governments – Urban Development Minister, Cultural Minister, Department of Language Art & Culture, Administrators and officials from Urban Local Bodies – Deputy Commissioner, TCP Officer, Assistant Town Planners, Chief Architect,
Social Stakeholders	Local NGO – INTACH, IIA Local Community – residents, floating population, tourists Artisans, craftsmen, artists, etc.
Economic Stakeholders	Real Estate Developers Investors Businessmen Owners
Expert Stakeholders	Historians Academics Heritage Specialist Conservation Architects

Community Attributes

Various stakeholders act as custodians of the available cultural resources, more specifically the cultural heritage. Stakeholder mapping was done to identify different categories of people or groups of people who are engaged in the urban development process directly or indirectly and play a significant role in overlaying local development with heritage management [47].

6. Results & Discussion

Data from primary and secondary sources were compiled to suggest the findings of the study. Results indicate that 40% of respondents agree that mapping the locational attributes of cultural heritage is important while integrating heritage management with the local urban development process. This is because, hills are unique in their topography and physical setting, their urban development process is greatly determined by the existing contour, landforms, and vegetation that build their natural heritage. The growing needs have resulted in over-development threatening the natural landforms and making the hill towns more vulnerable to hazards. The lack of an integrated approach has resulted in environmental degradation by denuding the hills of their trees making space for more and more buildings and roads. In the contemporary context, a significant factor that continues to be crucial in conserving the physical attributes in Shimla and sustainable development is its location in high-risk seismic zones; specifically, the ones that lie in the Himalayan region and Aravalli are exposed to the highest risk [38]. Besides, not only in Shimla but all capital CHT are under a constant threat of landslides, soil erosion, flash floods, and other natural hazards. For example, the extensive damage in Mussoorie and Dharamshala (1907)

and Shillong (1877) occurred due to earthquakes. Nainital and Darjeeling experienced extensive soil erosion and landslides in the 19th century causing a lot of damage.

Results further suggest that sociocultural attributes of CHM are significant while planning for future urban development. This is evident from the fact that 60% of respondents believe that the socio-cultural character of Shimla is unique and dictates the urban setting of a European hill town. The hierarchy of the roads, the architectural expression, and vocabulary, the urban form, and the juxtaposition of the various buildings that were driven by social beliefs all manifest the colonial spirit. Also replacing traditional materials with new materials because of the non-availability of the traditional materials also impacts the overall character. Moreover, cultural traditions, religions, festivals, and events are symbolic of the intangible cultural heritage but are considered important in an urban development process for their historic, spiritual, and economic values [22]. Unprecedented growth and haphazard planning over the years have greatly impacted the socio-cultural values, altering the character of the towns and making the complete ecosystem fragile [48]. The increase in the number of tourists and the excessive tourism-related activities have negatively impacted and threatened the existing fragile heritage buildings and historic sites. Many of the finest and historically significant buildings in Shimla are being transformed to cater to the needs of the tourists and monetary benefits impacting their historic values and the overall townscape. Such changes distort the original use and impact the architectural character of the towns [49].

Findings are also suggestive that the physical attributes hold a great deal of importance as 80% of respondents believe that they are living manifestations of the past. However, in the context of built heritage, while looking at the national statistics, about 45% of heritage buildings are

either facing the danger of disappearance or display acute signs of deterioration, or lie in a physical state of damage and are under the threat of getting transformed and are ultimately lost. Similarly, in the wake of development in Shimla, many heritage buildings have experienced insensitive alterations, replacements, demolition, or contemporary additions in a distinct style, and materials impacting the historic and architectural values associated with the built heritage [44]. Many of the existing heritage buildings function as government offices and thus time to time changes are done as per the need without due consideration to maintaining their historic character. While most respondents were in favor of safeguarding the built heritage, a fair percentage of respondents also believed that heritage buildings were built at a time when there were no urban issues. In the present time, built heritage is considered to be obsolete, obscuring the way for new urban development [50]. Furthermore, the stakeholders' role has been given the most significance by the respondents as they are the key decision players in heritage management as well as urban development [29]. 90% of respondents are of an opinion that conflicting and vested interests of the various stakeholders are the main reasons for the gap that exists between heritage management and urban development. Also, the paucity of funds for repair and maintenance with the urban local bodies has been an ever-pressing problem when it comes to implementing any conservation action leading to the deterioration [35]. Owners of built heritage either have low paying capacity or are non-willing to invest in the built heritage. This lackadaisical approach has severely impacted the historic and cultural characteristics of Shimla and also other colonial hill towns.

7. Conclusions

This study was conducted to investigate the gap between heritage management and the sustainable urban development process in the capital colonial hill towns of India. Cultural heritage mapping acts as a tool to bridge the gap as well as identify the facilitators and challenges to formulate a heritage-integrated development and management approach by the urban local bodies. Contemporary market-driven changes and improved economic forces have increased the influx of floating population, tourists, and the local populace in the capital colonial hill towns. These transitions have added new dimensions of growth and development pressurizing their historic cores in hill towns beyond their carrying capacities. Considering this change, cultural heritage has either become stagnant over the years or has been victim to natural and man-made agents losing its original identity or getting destroyed. Various attributes of cultural heritage mapping are instrumental in bringing the ground realities and challenges in heritage-inclusive urban development specifically in the historic cores. The research concurs that

the physical attributes and community attributes act as drivers for integrating cultural heritage conservation into the local urban development processes. The study adequately brings out that the cultural heritage resources of Shima in India are valuable assets for sustainable development in the future, however, their identification, evaluation of their significant history, and conservation require initiatives at many levels and sustained programs for awareness and community participation for inclusive development. Cultural heritage mapping should thus be an integral tool in the process of urban planning in urban areas with rich historic pasts to recognize the vastness of cultural heritage resources and how they can be enriched for social, and economic development.

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