International Journal of Geography, Geology and Environment

P-ISSN: 2706-7483
E-ISSN: 2706-7491
www.geojournal.net
IJGGE 2024; 6(1): 93-100
Received: 13-11-2023
Accepted: 19-12-2023

Himanshu Grover
Department of Geography, Cambridge College, Sardarshahr, Rajasthan, India

Apperdeep Kaur
Department of Geography, Punjabi University, Patiala, Punjab, India

Corresponding Author:
Himanshu Grover
Department of Geography, Cambridge College, Sardarshahr, Rajasthan, India

Dynamics of urbanization in Dharamshala city of Himachal Pradesh, India: A case study

Himanshu Grover and Apperdeep Kaur

DOI: https://doi.org/10.22271/27067483.2024.v6.i1b.206

Abstract
This research paper focuses on the dynamics of urbanization in the city of Dharamshala in the Indian state of Himachal Pradesh. The research focuses on the city of Dharamshala's urbanization patterns. The rapid expansion of Dharamshala has caused numerous environmental issues as well as disrupted the area's ecological balance. An attempt has been made to explain the dynamics patterns of urbanization and analyze the changes of demographic profile during 1971-2011. Also the focus is on the changes in the land use patterns and associated environmental problems in Dharamshala city. Results show that there are major changes in the land use patterns. The areal growth of the city has increased over many years. The residential areas have increased from the past many years and agricultural land has declined. Slums in the city has been increased rapidly from 2001-2011. The slums are having low standard of living, and slum developers are suffering from poverty, and shortage of facilities, etc. Poverty, ignorance and illiteracy are responsible to grow the problems of housing, crime, ill health and pollution in the Dharamshala city. City faces a number of ecological consequences such as air pollution, water pollution, congestion, traffic joins, etc. Transport sector, open burning, vehicular exhaust level, developmental works etc. are major contributors of deteriorated air quality in the Dharamshala city. The positive impacts of the development of the city are increasing employment opportunities, rise in the living standards of the people, development of the roads and expansion of markets. But still many problems i.e., over population, unemployment, spread of slums, water and air pollution in city are rising gradually.

Keywords: Urban expansion, population growth, land use patterns, environmental issues, ecological degradation, landslides

Introduction
Dharamshala is a city in Himachal Pradesh state which is located in the Kangra Valley's upper reaches. McLeodGanj, Bhagsunaag, Dharamkot, Naddi, Forsythganj, Kotwali Bazaar (major market area), Kaccheri Adda (which includes the government offices like the court complex, and main police station), Dari, Ramnagar, Sidhpur, and Sidhbari are amongst the suburbs of this city.

It attained the honour of being second capital (after Shimla) of Himachal Pradesh in the year 2017. It has also been identified by government of India for transformation into smart city (Firstpost, 2015) [2].

Dharamshala is a city lying in the Tehsil of Dharamshala and it is managed by Municipal Corporation of Dharamshala (MCD). It enjoys the status of district headquarters with creation of Dharamshala tehsil. Dharamshala is a prominent center of Tibetan culture in India. In the study area, rapid urbanization is a recent phenomenon. There are number of problems emerging due to this urban expansion. As a result of the growing urban population, all countries, industrialized and developing, are confronting a multitude of ecological problems. As the population of urban areas grows, so does the rate of resource consumption. Due to availability of opportunities peoples are attracted towards that city and migration of the population in Dharamshala city has increased insignificantly. This growth in population leads to resource exploitation, resulting in air, water, and noise pollution, traffic congestion, and the creation of slums, among other things. Due to these environmental issues, the city of Dharamshala is losing its beauty, for which it is highly known.

Rai *et al*. (2017) [9] stated that glaciers influence different type of natural systems in the environment and played major role for fresh water source.

Singh *et al*. (2020) [13] stated that rapid urbanization and demand regime, aggravated by tourism leading to increasing water insecurity in the Hindu Kush Himalayas. Dharamshala plannig area includes 33 revenue villages including municipal corporation limits. The total population of Dharamshala planning area is 62,279 of which the urban component contains 30,764 persons as per census 2011 (Census of India, 2011).

Statement of the problem

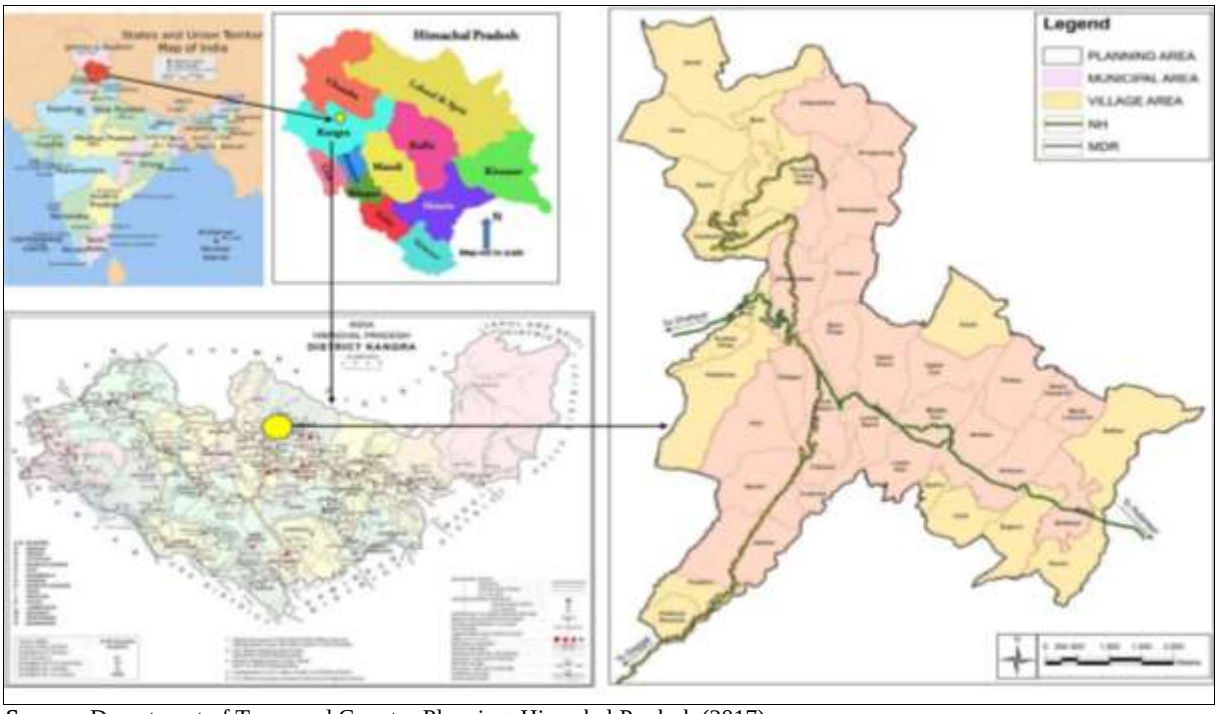
After 1971, in Dharamshala, the rapid growth of cities led to the problem of lack of housing, slum development and ecological degradation. The present study aims to evaluate as to how Dharamshala has emerged as a big urban centre of Himachal Pradesh. The study also deals with analysing patterns of urbanization in the city from 1971-2011. Increased employment possibilities, a boost in people's living standards, the building of roads, and the expansion of marketplaces are all positive effects of the city's development. The rapid growth of Dharamshala city causes numerous environmental issues and disrupts the area's ecological equilibrium.

Objectives of the study

1. To study the change in demographic profile of Dharamshala city.
2. To evaluate the spatial expansion of Dharamshala city in the last few decades.
3. To analyze the changes in the land use pattern of the study area.
4. To highlight the environmental issues being faced by the Dharamshala city.

Data and Research Methodology

The data used in this paper is secondary in nature. Data has been collected from both published as well as unpublished sources. This data is collected from various district head offices, and state government and central government institutions. Detailed information regarding population data, land use map and data, demographic data of slum, tourism data, and natural hazard data of different decades has been collected from Census of India, Chandigarh, Department of Town and Country Planning, Himachal Pradesh, and Municipal Corporation, Dharamshala. The research paper is mainly focused on description and interpretation of maps, graphs, tables which have been used as an essential tool for analyzing and illustrating each and every element in this work.



Source: Department of Town and Country Planning, Himachal Pradesh (2017)

Fig 1: Location of Dharamshala city and its administrative area

Study Area

Dharamshala is a city in Himachal Pradesh's northern state. Dharamshala is situated on the magnificent Kangra Valley slopes. Geographically, Dharamshala is positioned 23º13' North latitude and 75º19' East longitude. The town's top section is located at an elevation of 2100 meters, while the lower part is located at an elevation of 1250 meters (Government of Himachal Pradesh, 2017) [5]. Overall Dharamshala has subtropical climate which is humid during the monsoon season. According to the 2011 census, the city's population was 30764, and the city was spread over 10.63-square-kilometer area. According to Muncipal Corporation of Dharamshala in 2015 the city's population is 53,543 and it is divided into 17 election wards covering a total area of 27.6 square kilometres. It is well connected with the important towns and cities of Himachal Pradesh and other states like Shimla, Kullu, Pathankot, Chandigarh, and Delhi through networks of roads and highways.

Population growth

Up to 1951, there was very slow population growth. After 1951, the population growth started increasing after the formation of Himachal Pradesh state on 1st Nov, 1966. The Dharamshala city gained the status of district headquarter.

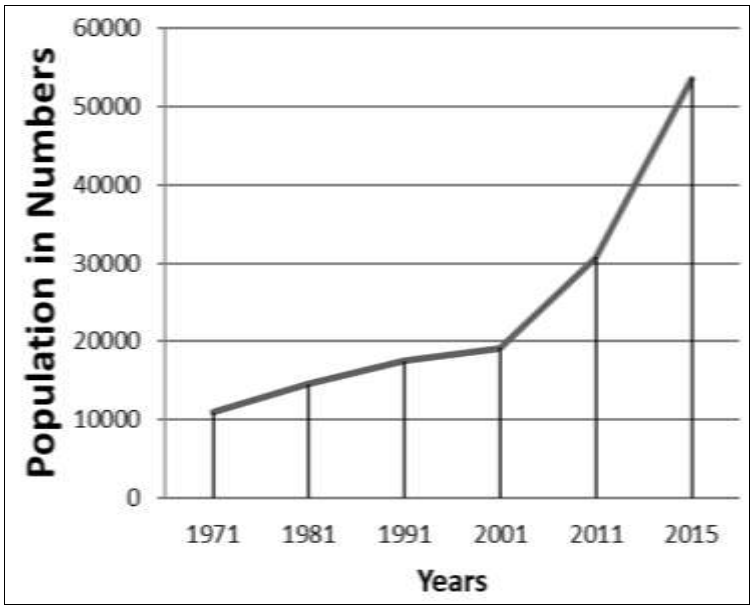
In 1961, the population of Dharamshala city was 10255, whereas in 1971 it was 10939. The city's population further increased to 17,493 persons in 1991, 19124 persons in 2001 and 30764 persons in 2011, respectively. Therefore, the city registered high growth rates of 32.75% during the time period of 1971-1981.For the time periods 1981 to 1991 and 1991 to 2001 period, growth of population continued but it was not a spectacular growth in comparison to occurred during the time period of 1971 to 1981. The detail of population growth of Dharamshala city from 1971 to 2011 is shown in Table 1.

Table 1: Percentage change in population of Dharamshala city: 1961 to 2011

Year	Population of Dharamshala City	Actual Increase in Population	% Age Increase
1961	10255	-	-
1971	10939	684	+ 6.67
1981	14522	3583	+32.75
1991	17493	2971	+ 20.46
2001	19124	2489	+14.23
2011	30764	2604	+60.87
2015	53543	30,957	+ 74.04

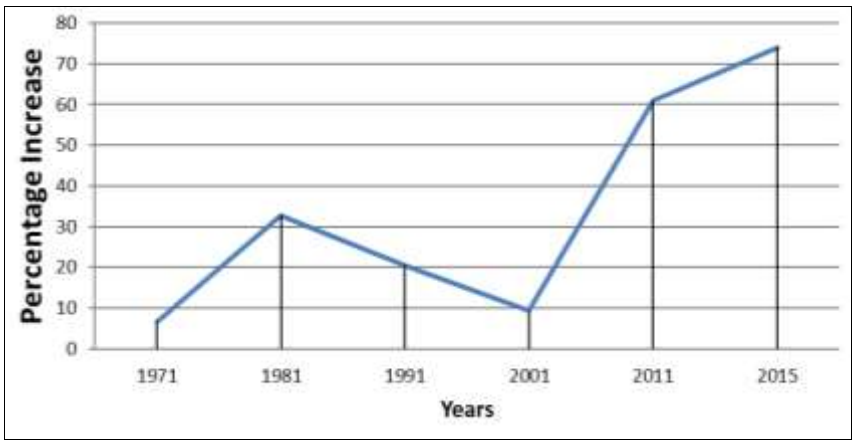
***Source*:** Census of India, 1971, 1981, 1991, 2001, 2011 and Muncipal Corporation of Dharamshala (MCD), 2019.

The Table 1, Figure 1 and Figure 2 shows the decadal population increase in terms of numbers, growth rate and percentage increase of population. From past decades, the population of the city is increasing but decline in the population growth rate occurred during the last decade. This table shows that in 1971-81 there was steep rise in population of Dharamshala city. Large number of people not only from within the state but also from outside migrated here in search of employment. Further, dramatic increase of 60.87% and 74.04% was witnessed in time periods of 2001-2011 and 2011 to 2015, respectively.



Source: Census of India, 1971, 1981, 1991, 2001, 2011 and MCD, 2019.

Fig 1: Population distribution of Dharamshala city: 1971 to 2011



Source: Census of India, 1971, 1981, 1991, 2001, 2011 and MCD, 2019.

Fig 2: Percentage Increase in Population of Dharamshala City: 1971 to 2011

Factors contributing to population growth

The two major factors are responsible for the growth of population at any place. That is natural growth rate (birth rate- death rate) and migration. History reveals that the city of Dharamshala carries an ancient historical importance.

The Dharamshala city has status of district headquarters with the creation of Dharamshala tehsil. So, urbanization and tourism industry in Dharamshala has boosted migration to the city and population increased rapidly. Sharma *et al*. (2018) [10] have investigated a statistical analysis of growth of Himachal Pradesh and they stated that the present day phase of globalisation, migratory population & urban growth are direct contributors in the economic expansion. The decline in growth rate seen over the last two decades is attributable to some push factors such as city congestion and a lack of basic services for the population. Rather than being a one-time event, urbanization is a continuous process that results in population and area growth over a short period of time, as seen in case of Dharamshala city from 1971 to 2011.

Changes in land use pattern of Dharamshala city

The use of land by humans for various activities is referred to as land use. It has been noticed that, in light of increasing population pressure on land and rising demand for food and other commodities, the pattern of land utilization has taken on special significance in emerging countries such as India, because as population increases, cultivated area decreases. The use of available land in a city is governed the city's geographical settings, socio-economic, and political conditions. Changing political and administrative geography played a major role for the growth of urban centres in Himachal Pradesh (Kant 1995) [6]. Residential, industrial, commercial, infrastructure (including transportation), and open spaces are the most common urban land uses.

Comparison of land use in Dharamshala city planning area

1. Residential land use

The nature of city is dominantly residential, about 56 percent of the total area was under this land use category in 2016. Also by comparison of land use patterns of 2001 to 2016, we can see that area percentage under this category has been above 50%. In future, if residential requirement is not considered it can lead to further haphazard expansion of this category. This demand for residential area is partially is due to importance of town as administrative headquarters, cultural headquarter of Tibetan population, development of hotel industry, Cricket stadium, etc. The city offers a diverse selection of housing options, including rental homes. Many residential areas in the Planning Area are inaccessible due to lack of access to motorable roads.

Table 2: Land use pattern in Dharamshala city planning area: 2001- 2016

S. No.	Land- use	Area in Hectares 2001	Area in Hectares 2016
1.	Residential	166.63 (50.47%)	537.77 (63.90%)
2.	Commercial	38.03 (11.52%)	77.15 (9.17%)
3.	Utility	-	1.75 (0.21%)
4.	Transportation	34.90 (10.57%)	100.06 (11.89%)
5.	Public and semi public	7.70 (2.33%)	88.83 (10.55%)
6.	Recreational	43.46 (13.16%)	23.63 (2.81%)
7.	Mixed use	13.60 (4.11%)	12.42 (1.48%)
8.	Open area and Arable land	25.80 (7.81%)	-
	Total	330.12(100%)	841.61 (100%)

Source: Government of Himachal Pradesh, 1991 [4], and 2017, MCD, 2011 [4-5].

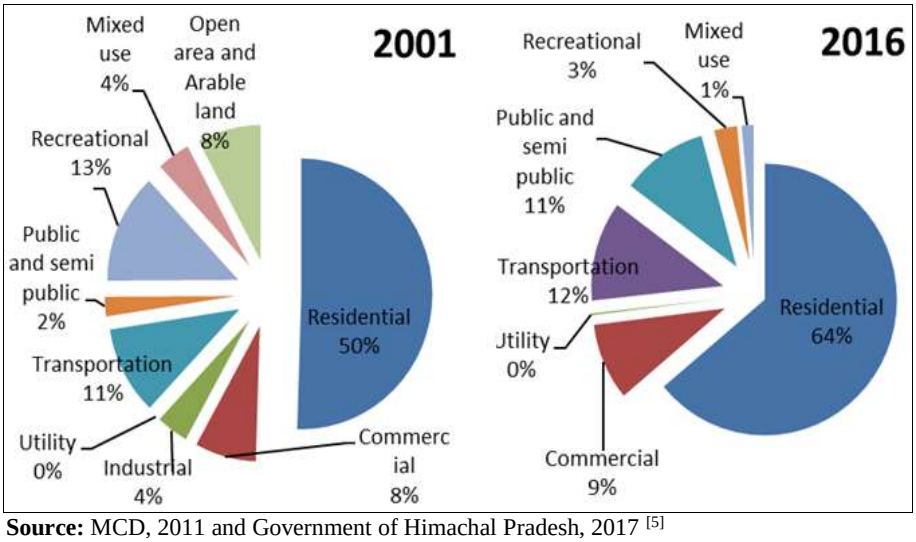
2. Commercial land use

Commercial growth has primarily occurred along major access routes leading from outside the Planning Area, as well as around tourist attractions. In the Planning Area, commercial stretches include Kotwali Bazar, Depot Bazar, Civil Bazar, Kachehari Bazar, McLeodGanj, Forsythganj, Dari Bazar, and Maximus Mall. The majority of commercial operations in this tourist attraction town are devoted to retail shops and hotels.

Total area under the commercial use was 24.9 hectares in 2001 which has increased to 77.15 hectares.

3. Transportation land use

Transportation use in Dharamshala comprises of roads, bus terminus, bridges, parking lots, etc. For a hill town, the street network is quite extensive in Dharamshala but it is also a city preferred for its beauty by tourists, so MCD has to invest in developing roads, and as a result area under transportation has increased from10.57% in 2001 to 11.89% in 2016.



Source: MCD, 2011 and Government of Himachal Pradesh, 2017 [5]

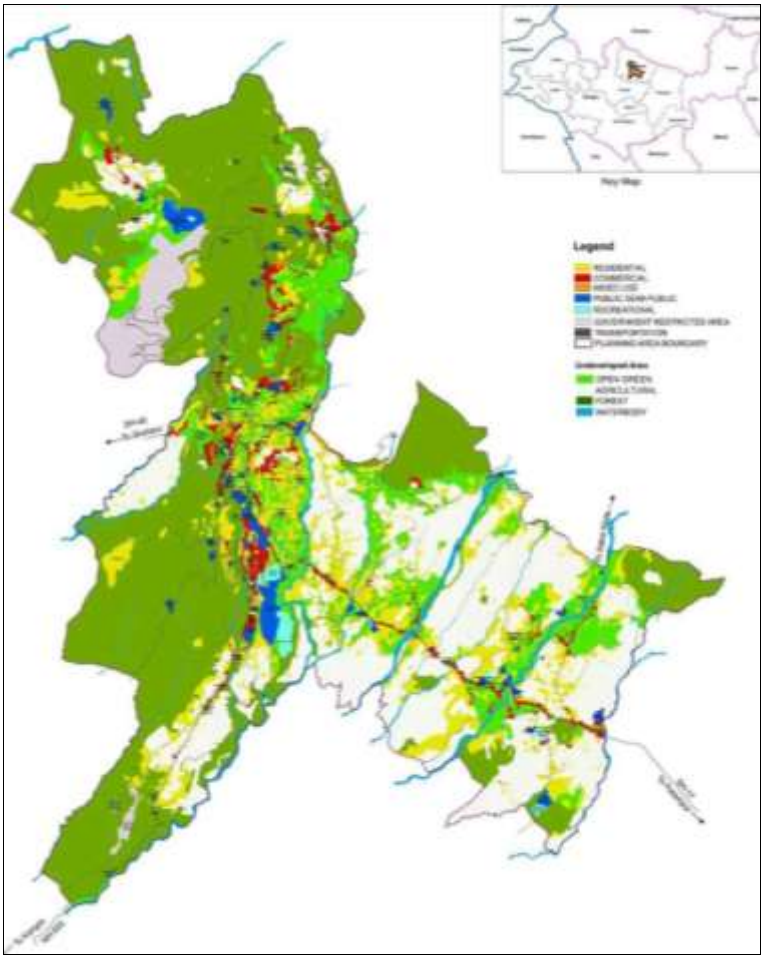
Fig 3: Land use pattern of Dharamshala planning area, 2001 & 2016

4. Public and semi-public and utility land use

Offices, education facilities, and health facilities are among prominent usages considered under the public and semi-public land use category for Dharamshala city. Kachehri, Civil Lines, Cheelgari, Shamnagar, Ramnagar, Dari, Barol, and Sakoh, for example, are the areas where primarily the public and semi-public land usage is found. In 2016, under this land use category fell 88.83 hectares or 10.55% of total land use. Under utilities a meagre area of 1.75 hectares was devoted.

5. Recreational land use

The Dharamshala city is known for its serene beauty, but with increasing population pressure and increase in tourists foot fall more and mor land is being devoted to construction of housing and hotels. This often happens by infringing upon open spaces. So the city lacks a range of organized open and public places such as parks, playgrounds, recreation centers, and so on. Only a negligible share of land is used for recreational activities indicating a dearth of locations for community meetings and social events.



***Source*:** Department of Town and Country Planning, Himachal Pradesh (2017)

Fig 4: Land use of Dharamshala planning area, 2016

6. Mixed land use

Mixed-use construction has been seen along key roadways and near tourist attractions due to the city's status as a tourist destination. This use accounts for 12.42 ha of the total developed area, or around 1.48 percent of the total developed land in 2016 and it was little bit less as compared to 13.60 hectares in 2001.

Environmental and other issues faced by Dharamshala city

Dharamshala city faces issues regarding civic services like garbage disposal, traffic congestion, leaking water pipes and unchecked illegal constructions (Sharma, 2020) [12]. Another issue is of dealing with slums, water scarcity and degradation of natural environment caused by tourism related activities. The city is also facing geomorphic hazard of land sliding.

Slums

Many labourers from destitute sections of Rajasthan and Maharashtra states have relocated to Dharamshala, and living in slums of Charan Khad, which is located near the Dharamshala cricket stadium in the city's southern suburbs. Migrated people are mostly construction workers, daily wagers, street vendors and rag pickers they live in a haphazard manner in the city in their temporary settlements.

Table 3: Slum population and number of slum households in 2001 and 2011

Sr. No.	Name of Slums	2001	2011	2001	2011
		Population	Population	Number of households	Number of households
1.	Charan Khad	310	390	69	80
2.	Sham Basti	200	250	45	69
	Total	510	640	114	149

***Source*:** Census of India, 2001, and 2011.

The dwellings found in slums are ‘kutcha’ houses or 'Jhuggis'. From the comparison we noted that the population of both the slums is changed. Charan Khad has seen addition of 80persons in 2011 as compared to 2001. In Charan Khad, according to Municipal Corporation of Dharmshala (MCD) own survey about 1500 persons or about 290 families were living here in 2016. Similarly, Sham basti has seen an increase of 50 persons.

In case of Charan Khad, the media sources mention that about 290 families who were living here since past 30 years, on June 17, 2016 were forcefully evicted by MCD and their flimsy dwellings were demolished and no efforts were made to rehabilitate them (Goswami, 2016; Nigar and Mahar, 2016; The Analysis, 2017; Vishwapremi, 2019) [3, 8, 15, 16]. They were evicted because they were defecation in open, but by evicting them and not providing them housing, the issue of open defecation will still remain.

Impact of tourism

Most common consequence of tourism on the environment are:

- Changing the structure of local flora and fauna.
- Pollution of water, air and soil resources.
- Soil erosion and triggering of Landslides.
- Depletion of natural resources.
- Traffic congestion and public transport.
- Visual impact.

Unfortunately the local population is one that has to "pay" the costs of the resulting environmental degradation from tourist exploitation.

Municipal waste and associated water degradation

In Dharamshala, municipal waste disposal site is an open dump which lies at 32º14’51.4” N latitudes and 76º18’38.2”E longitudes at an altitude of 1821 m above mean sea level.

Table 4: Municipal Waste Generation in Dharamshala Town

Description	Quantity	Remarks
Total waste collected by Municipal Committee, Dharmshala	8000 kg	
Wet garbage i.e. Bio-degradable waste	60 kg per day (Ecompost manure produced per day is 40 kg)	Biodegradable waste is managed by the residents hence it is very less as compared to the total municipal waste.
Plastic re-cycled	250 Kg per day	
Dry garbage such as cloth, paper, glass, card board etc.	7690 Kg per day	Major component

***Source*:** Municipal Corporation of Dharamshala, 2011

It can be explained that biodegradable waste is managed at the dumping site through the composting process, whereas the major component of the waste, i.e. dry garbage, is left untreated. This not only results in a visually unpleasant surroundings, but it also create further issues such as frequent choking of sewerage system, pollution of water bodies, vector proliferation, and living conditions that are unsanitary, to name a few.

For collection of waste, municipal committee, has placed containers at various identified sites but due to negligence of authorities and people it is not used accordingly. Also the areas lying outside MCD, especially hotels usually are burning garbage or throwing into water bodies due to lack of garbage disposal facilities.

Sterkele and Zurbrugg (2013) [14] investigated on water supply, sanitation and solid waste in upper Dharamshala. Water Scarcity is the major problem in the Dharamshala city. Increasing urban population, infrastructure development, climate change and the decrease in ground water recharge is also intensifying major water problems in the city (Sharma *et al*. 2019) [11].

Mining

Mining in these locations is done in an illegal manner (Lal, 2018) [7], with following mining processes that are completely unscientific. Slate mining has degraded the beauty of the woodlands, destroying flora and soil cover, depleting water resources, and destroying agricultural and forest land, resulting in erosion, stream silting, and triggering landslides.

Landslides

The slope of Dharamshala varies from gentle to steep. Landslides are one of Dharamshala's most common natural disasters as it falls in a seismic activity prone zone. Severe landslides usually occur during the rainy season and post high-intensity earthquakes. Anthropogenic activities like putting load by constructional activity especially on steep slopes is also a triggering factor.

Increased urbanisation, deforestation, and encroachment of areas on steep hill slopes, as well as inappropriate road cutting and water-intensive farming activities, all contributed to a rise in landslide intensity and frequency. The state government and the district administration have done nothing to regulate and check unplanned and massive construction in active sliding zones (Behal, 2020) [1].

Conclusion

Dharamshala city has faced a sharp change in its demography and there are many ecological consequences which have emerged out of these developments. This shift in the city's population-resources dynamic has resulted in a slew of issues. Rapid urbanisation, migration, population growth, and tourism have resulted in uncontrolled development.

- City being an administrative, cultural and educational centre attracts huge numbers of population. The areal growth of the city has increased manifold over past few decades.
- The population of city has increased at an alarming rate from 2001 to 2015, which has put pressure on land and water resources of the city.
- The residential area has also expanded a lot to meet with population pressure and in many cases this expansion has occurred in areas vulnerable to land sliding. The land under recreational use has faced decreased share while residential, transportation and governmental land use have increased share amongst the various land use categories.
- Poverty, ignorance and illiteracy are partial responsible for the problems of housing, crime, ill health and pollution in the Dharamshala city, especially in slum areas and lack of funding and negligence by concerned authority are also contributing factors.

Suggestions

There are many problems (over population, unemployment, slums, water and air pollution) in the city, which are rising gradually. Some suggestions regarding the study are as follows:

1. To control the ecological degradation in Dharamshala city, tourism industry should be more eco-friendly and the population pressure on the city should be reduced by planned horizontal expansion of city as vertical expansion is not safe due to the land sliding and increasing seismic activity risk.
2. The state government should focus on decentralizing of education facilities, employment opportunities in the rural areas which are lying near to the Dharamshala city. In this way, we can control the in-migration in the city from the adjoining rural areas.
3. There is need to control traffic congestion in the city and it's suburbs and people must be encouraged to use public transport during rush hour.
4. The process of making the city 'Slum-free' should be linked to overall economic development process.
5. Dharamshala city can become a smart city only when basic issues like proper disposal of garbage are immediately tackled.

Acknowledgement

Authors are thankful to Cambridge College, Sardarshahrand Punjabi University, Patiala where this research work was undertaken. We have not received any funding support from anywhere.

Compliance with ethical standards

Conflict of Interest

We do not have any conflict of interests.

References

1. Behal D. Risky slope: What makes Dharamshala vulnerable to landslides? Down to Earth; c2020. Available from: https://www.downtoearth.org.in/blog/natural-disasters/risky-slope-what-makes-dharamshala-vulnerable-to-landslides-71811.
2. Firstpost. List of 98 cities shortlisted under Smart Cities Mission; c2015. Available from: https://www.firstpost.com/india/full-text-of-98-smart-cities-announced-by-government-2383826.html.
3. Goswami S. 1,500 people evicted from slum in Dharamshala; rehabilitation uncertain. Down to Earth; c2016. Available from: https://www.downtoearth.org.in/news/urbanisation/1-500-people-evicted-from-slum-in-dharamshala-rehabilitation-uncertain-54575.
4. Government of Himachal Pradesh. Dharamshala Planning Area Development Plan. Department of Town and Country Planning, Government of Himachal Pradesh; c1991. Available from: https://web.archive.org/web/20120424075155/http://himachal.nic.in/tcp/DevPlanDharamshala.pdf.
5. Government of Himachal Pradesh. Dharamshala Planning Area Development Plan-2035. Department of Town and Country Planning, Government of Himachal Pradesh; c2017. Available from: http://tcp.hp.gov.in/Application/uploadDocuments/devlopmentPlan/PlanDoc020171226_122950.pdf.
6. Kant S. Urbanisation in Himachal Pradesh during the present century. Population Geography. A Journal of the Association of Population Geographers of India. 1995;17(1-2):49-64.
7. Lal M. Shocking video/photos expose Govt Officer's lies about illegal slate mining in Dharamshala; c2018. Available from: https://himachalwatcher.com/2018/07/07/shocking-video-photos-expose-govt-officers-lies-about-illegal-slate-mining-in-dharamshala/.
8. Nigar S, Mahar S. Photo Story: Inhabitants of Charan

Khad Slums Bear Brunt of Dharamshala Smart City Dream; c2016. Available from: https://thewire.in/rights/dharamashala-slum-smart-city.
9. Rai PK, Mishra VN, Singh S. Remote Sensing-Based Study for Evaluating the Changes in Glacial Area: A Case Study from Himachal Pradesh, India. Earth Syst Environ; c2017 p. 1-3. https://doi.org/10.1007/s41748-017-0001-2.
10. Sharma AR, Tanwar S, Rizvi S. Growth of urbanization in Himachal Pradesh: A Statistical Analysis. International Journal of Engineering & Technology. 2018;7(1-4):39-46.
11. Sharma S, Mukherjee M, Khare D. Urban growth and water supply system in the Hill town, Dharamshala, India. The Agricultural Science Association; c2019. Available from: https://anzasca.net/paper/urban-growth-and-water-supply-system-in-the-hill-town-dharamshala-india/.
12. Sharma A. Smart city Dharamshala aspires to be more than a picturesque spiritual retreat; c2020. Available from: https://citizenmatters.in/dharamshala-smart-city-projects-ambition-and-progress-15059.
13. Singh. Urbanisation and water insecurity in the Hindu Kush Himalaya: Insights from Bangladesh, India, Nepal and Pakistan. Water Policy. 2020;22(S1):09-32.
14. Sterkele B, Zurbrugg C. Baseline Study on Water Supply Sanitation and Solid waste in upper Dharamshala, India; c2013.
15. The Analysis. Charan Khad Slum Demolition: A story of lost human rights; c2017. Available from: https://theanalysisweb.wordpress.com/2017/07/01/charan-khad-slum-demolition-a-story-of-lost-human-rights/.
16. Vishwapremi B. Eviction of slum dwellers in Dharamshala; c2019. Available from: https://www.landconflictwatch.org/conflicts/eviction-of-slum-dwellers-in-dharamshala.