

Shimla, Himachal Pradesh (India)

ECOLOGISTICS PROJECT CITY PROFILE

ABOUT THE CITY

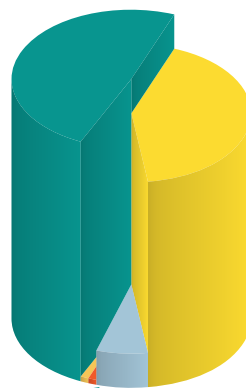
Shimla is the capital and largest city in the state of Himachal Pradesh. It is a popular hill station and one of India's most preferred tourist destinations. The city has a population of 0.16 million but manages to attract 2.8 million tourists annually. Being the state capital of Himachal Pradesh, the city houses all important governmental institutions and provide administrative offices, in addition to the education and medical hub for Himachal Pradesh. The city lies in the foothills of the Himalayan mountain range and is spread over seven hills, namely, Jakhoo Hill, Elysium Hill, Museum Hill, Prospect Hill, Observatory Hill, Summer Hill and Potters Hill. These hills are interconnected by roads. Thus, the development pattern in Shimla is governed by topographical constraints such as steep slopes, elongated hills and forest areas. During the year of 2015-16, the Shimla district contributed 13.76 percent of the GDP of Himachal Pradesh.



City transport

PASSENGER

Mobility in Shimla is unique. The hilly terrain of Shimla requires horizontal as well as vertical mobility. With restrictions imposed on traffic movement in the city (some streets allow only one-way traffic, the Mall Road - the main commercial street in the city center - does not allow any vehicular traffic), mobility and access are constrained within the limited space. While horizontal mobility is primarily on arterial roads that are open to traffic, vertical mobility options are limited to a lift between Mall Road and Cart Road, as well as pathways or staircases connecting various streets.



MODAL SHARE (2011)

Public transport	49%
Walking	42%
Private car	7%
Cycling	1%
Taxi	1%

Due to the growth of the city and increase in the number of tourists, the number of registered vehicles in the Shimla Planning Area has increased substantially in the last decade (at a decadal growth rate of 34 percent). Traffic volume studies indicate that traffic volume is exceeding road capacity on most of the roads. Studies registered a number of 113,230 daily trips, with a 49 percent share by public transport and 43 percent share for non-motorized transport. Merely 8 percent of trips were undertaken using private motorized vehicles. Currently, 308 buses (205 owned by Himachal Road Transport Corporation and 103 private buses) cater to public transport demand in and around the city. Despite the fact that private vehicles account for just 8 percent of the trips, there is a fascination with multi-level car parking (MLCP). The city has an existing MLCP with a capacity of 1,480 equivalent car spaces (ECS), while another MLCP with a capacity of 744 ECS is under construction. Roads in the city have poor walking conditions, with very little focus on safety. The total number of private vehicles has increased from 48,000 in 2011 to 71,781 in 2013.

Land area

City: 35 km²

Shimla Planning Area: 100 km²

Population

0.16 million inhabitants (2011 census)

Population density

4,800 inhabitants/km²

Connectivity

Air, rail and road

Economy

Tourism

Name of the Mayor

Smt. Kusum Sadrate

Main website (municipality)

www.shimlamc.org

FREIGHT

Compared to passenger traffic, little consideration has been given to urban freight transport in Shimla. Some of the reasons for this neglect are the lack of a single institution or department responsible for the efficient management of freight movement within the city. This makes the urban freight more complex than passenger traffic. Unlike passenger traffic, where data is of better quality and quantity, the data on urban goods movement in Shimla is almost non-existent.

The majority of goods are transported through roads since Shimla is externally connected only through narrow gauge rail network. In Shimla, the wholesale markets for grain and timber are located in the heart of the city in areas such as Lower Bazaar and Lakkar Bazaar. The timber market at Lakkar Bazaar creates traffic congestion during peak hours. The city has fruit godowns at Pantha Ghati, Bata Kuffer and Mesobera. Therefore, the city has restricted the movement of freight

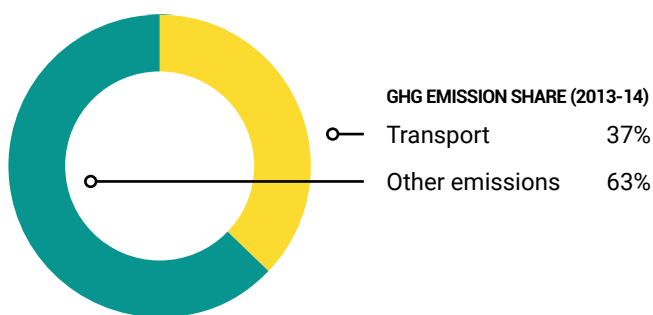
vehicles during peak hours. Loading and unloading of goods is allowed from 8:00 pm to 7:00 am. On average, 34.4 percent of freight traffic is found to be external-to-external (EE) traffic. Most of the freight traffic in the city is concentrated on two roads:

- Outer ring road: Dhalli – Dhalli Tunnel – Bata Kuffer – Malyana – Mehli – Pantha Ghati – BCS – Khalini – ISBT – Victory Tunnel – Lakkad Bazaar – Sanjoli Bypass – Dhalli.
- Inner ring road: Old Bus Stand – Chota Shimla – Sanjoli – Lakkad Bazaar – Victory Tunnel – Old Bus Stand.

In core city areas with steep slopes and surrounding markets such as Lower Bazaar, Kart Road and Mall Road, the last mile delivery of goods is dependent on human porters. The latter charge between 60 to 200 Indian rupees based on the weight of goods. The porters carry goods up to 50 kg in a single trip without the use of any mechanical instruments.

Since Shimla is visited by approximately 2.8 million tourists annually, the consumption of local goods, especially food and groceries, is considerably high compared to other cities. As per interactions with various stakeholders, it was observed that independent retailers and local convenience stores together represent more than 60 percent of daily deliveries in Shimla. Delivery of goods to these local stores varies from twice a day to three times a week. Growth in the use of the Internet has led to the rapid development of e-commerce, which is one of the fastest growing consumption sectors in Shimla. Companies such as Amazon and Flipkart have opened their own warehousing facilities in the outskirts of the city.

GHG EMISSIONS PROFILE



The emissions inventory for Shimla was developed under the EU-funded Urban LEDs project for the year 2013-14. The GHG emissions inventory for Shimla city was prepared in accordance with the approved principles and standards of the Global Protocol for Community-Scale Greenhouse Gas Emissions (GPC). During the year 2013-14, total emissions were found to be 222,637 tons of CO₂e, with the transport sector contributing to 37 percent of it.

TRANSPORT DECARBONIZATION STRATEGIES

The transport sector in Shimla, with a mode share of 43 percent for non-motorized transport and 48 percent for public transport, is less carbonized compared to other cities. However, heavy tourist inflows, along with hilly topography, create congestion on the narrow roads of the city. The average speed on Cart Road (a commercial street) during peak hours ranges from 2 km/h to 12 km/h, which increases pollution and emissions. The City has constructed 410 m of ropeway and a further 3.6 km (with a capacity of 1,000 passengers per hour per direction) is under construction. To encourage active mobility, 31 km of main roads in the city center are proposed to be developed with segregated bike lanes on one side and pedestrian footpaths on the other side. In addition to designated bike lanes, 15 docking stations with 88 bicycles have been proposed to start a citywide public bike-sharing system. The city authorities are also adopting the following strategies to decarbonize transport:

- Integrating land use and transport planning.
- Controlling the movement of personal vehicles.
- Encouraging the public transport system and other sustainable modes of transport.

The City Development Plan (CDP) has suggested the relocation of non-conforming activities like timber markets, transport hubs, wholesale grain markets, and a wholesale vegetable market in the peripheral areas to decongest the core areas. It is envisaged that these relocations will reduce 25 percent of freight-related traffic in the congested city core areas (like Lakkad Bazaar). This reduction in traffic will have a significant impact on the emissions in the city.

