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Department of Science & Technology  
Ministry of Science & Technology  
Government of India

**NMSHE** NATIONAL MISSION FOR  
SUSTAINING THE HIMALAYAN  
ECOSYSTEM

POLICY BRIEF



# SUSTAINABLE CITIES IN THE INDIAN HIMALAYAN REGION

| This is a knowledge product supported by IHCAP



**IHCAP** Indian Himalayas  
Climate Adaptation  
Programme



# Introduction

In the Earth Summit, Agenda 21 (UNECD<sup>1</sup>, 1992) for the very first time set its focus upon the fragility of mountain social and ecological system. One of its many crucial activities was to undertake 'integrated watershed development and find livelihood opportunities' in the mountain regions of the world. The population inhabiting the **Indian Himalayan Region (IHR)** is largely indigenous (NMHSE<sup>2</sup>, 2010) deriving most of their livelihood from the rich biodiversity at their disposal. Himalaya is counted amongst the 34 global biodiversity hotspots of the world. These chain of mountains are considered as highest in the world, there are 'complex geologic structure, snowcapped peaks, large valley glaciers, deep river gorges and rich vegetation' (NMHSE, 2010) and now even complex cities.

In 2018, for sustainable development of IHR, the planning commission of India took an important initiative; they established the **Himalayan State Regional Council**. Their primary focus has been on five action points that is: **water security; generating & strengthening data; skill & entrepreneurship; transforming shifting cultivation; and sustainable tourism** in the entire Himalayan region. A shift is noticed from environment issues to issues of livelihood, but some attention is required in the way mountain cities are urbanizing.

In recent times, urban centers have been sprouting haphazardly without much planning in the mountain regions. Such neglect in planning has debilitated the municipal corporations in the region to deliver civic services efficiently.

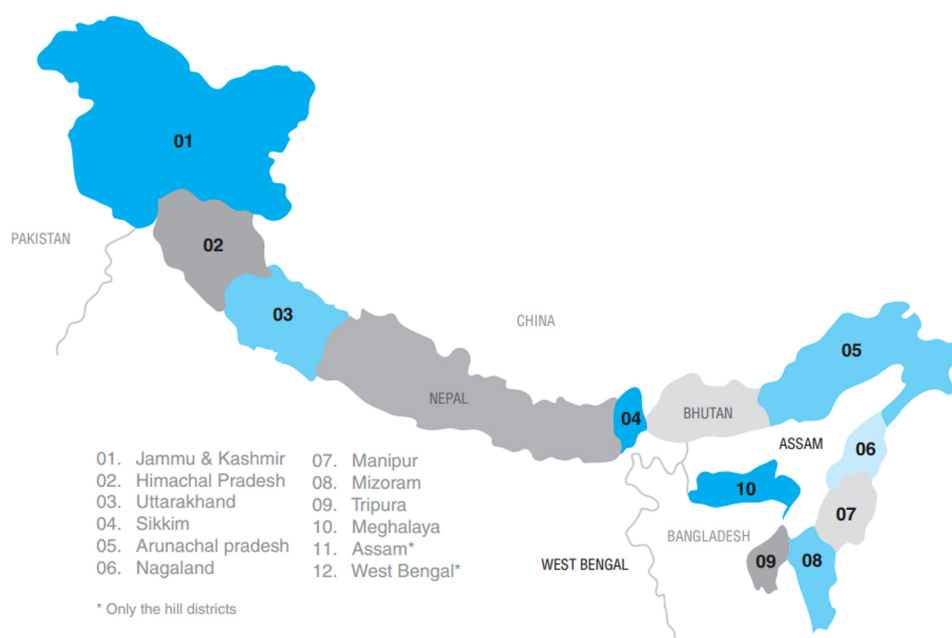


Figure 1: India Himalaya Region

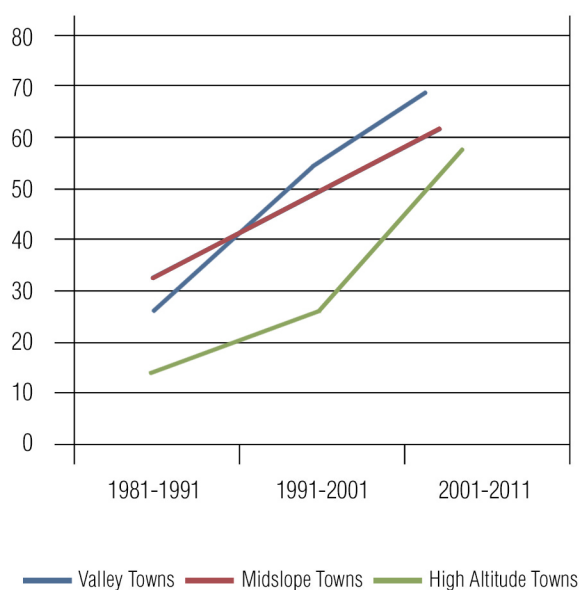
Source: NMHS in Climate Vulnerable Assessment for IHR report by IHCAP and SDC, 2018

<sup>1</sup> UNECD-United Nations Conference on Environment and development.

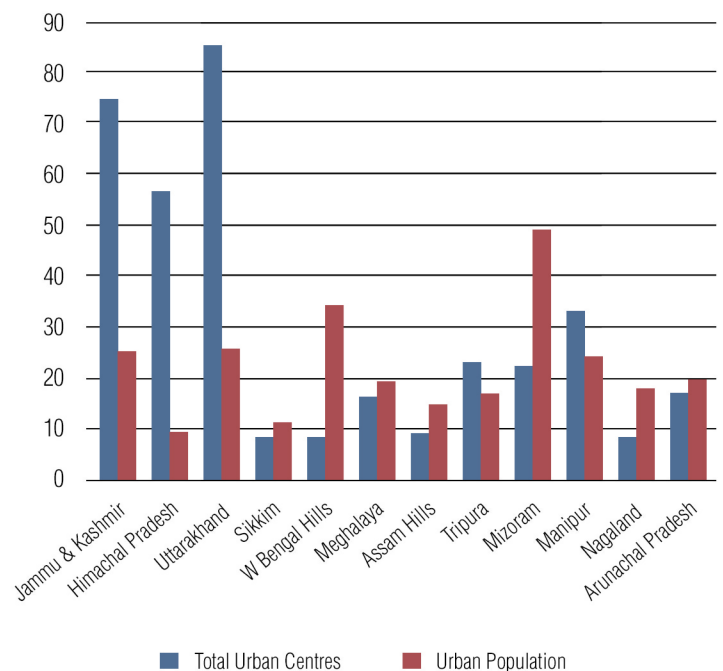
<sup>2</sup> NMSHE- National Mission for Sustaining the Himalayan Ecosystem.

# Issues

Improved road connectivity, industrialization and increased tourism has contributed to urban development in the region. While the urban centers are getting more and more congested, more and more conversion of rural areas into urban center can be seen. But there is heavy neglect of land-use plan, inadequate infrastructure supply and haphazard construction by flouting building rules. This policy brief is directed more towards saving the social and ecological condition of newly forming urban centers in IHR so that they don't meet the same fate as the older urban centers.



DECADAL URBAN POPULATION GROWTH (%)



NUMBER OF TOWNS AND URBAN POPULATION IN 2011

Figure 2: Urban Growth in the Himalayan States  
Source: Prepared by Tiwari, C.P., (2018); Based on Census of India, Population Data on 2011

Rapid urbanisation has been witnessed in the Indian Himalayan Region in the past one decade, which has caused undue pressure on it's natural resources as well as degrading it's ecosystem. The forest cover has been under rapid decline in the Eastern Himalayan region (ORF<sup>3</sup>, 2019) as more and more land is being opened up for urban activities. The state of Uttarakhand witnessed the largest number of notified town, while the state of Mizoram saw highest proportion of urban population in the whole of IHR, in 2011<sup>4</sup>. This rapid urbanization has had the following consequences as laid out in the chart:

<sup>3</sup> Observer Research Foundation, 2019

<sup>4</sup> Tiwari, CP. et. al, 2018. <sup>1</sup>



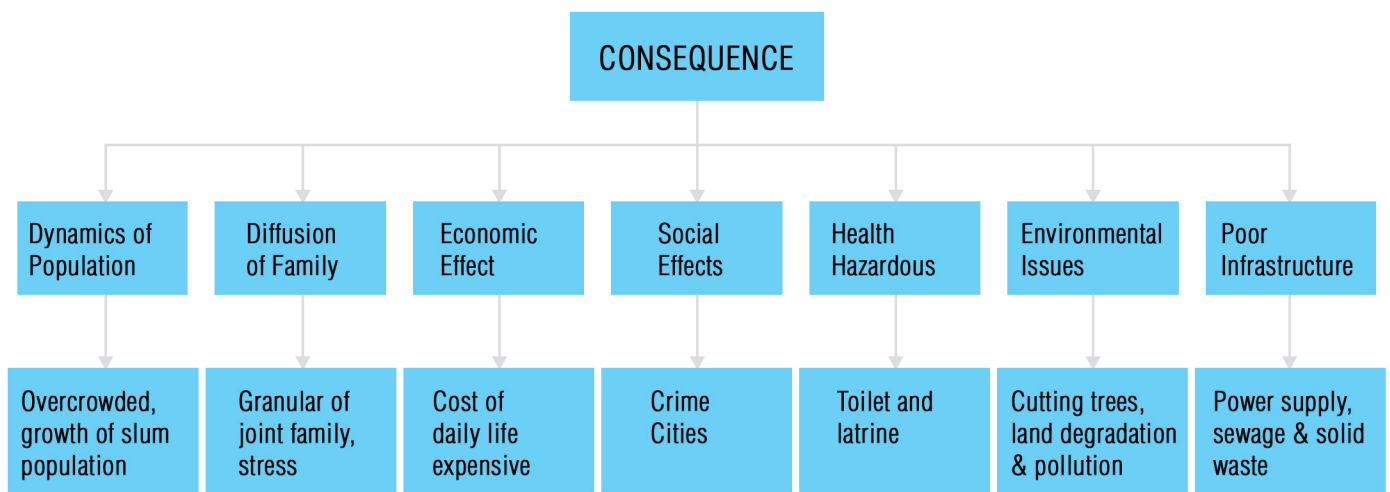


Figure 3: Consequences of Urbanization both positive and negative  
 Source for figure 2 &3: Paul.K, 2016. 'Post Facto, trends and pattern of urbanity in Sikkim'

# Challenges

## LOCAL GOVERNANCE AND URBAN MANAGEMENT :

- Lesser expertise in delivering civic supplies and use of outdated technology for handling large population, over large areas.
- Increasing tourism and population; expanding urban centers; lack of adherence to land-use planning
- Rapid homogenization, lack of urban art and culture in the city; lack of heritage preservation in the urban centres;

## ROAD AND CONSTRUCTIONS :

- Traffic congestion, excessive hawking on pedestrian paths, lack of foot over bridges, lack of footpaths
- Unplanned and unchecked construction activities; disregard for building norms; lack of open green spaces;
- Huge rural-urban migration, cultural erosion due to inadequate infrastructure.
- Lack of supply of affordable housing, presence of urban slums
- High number of motorized vehicles in city;
- Lack of intra city public transport; no- allocation of parking spaces and parking on either sides of roads
- Multi-storied buildings constructed at slopes



## CIVIC SUPPLIES :

- Disposal of untreated solid and liquid waste into rivers (inefficient sewerage system), mismanaged landfills, illegal landfill locations; excessive plastic waste generated and, lack of public and community toilets
- Insufficient water supply connections
- Lack of capacity building and lack of will for institutional reforms; increasing number of homeless persons



# Action Points

## HOUSING AND CONSTRUCTIONS :

- a) **Building solar passive house**, which is already put to practice for most institutional buildings, but residences built by urban housing agencies must inculcate this practice. The **National Building Code that is being revised after consultation with state governments must factor this in for the Himalayan region.** The state-level urban art council proposed for setting up must oversee the implementation of the National Building Code<sup>5</sup> .
- b) **Municipal by-laws and national building code must also include compulsory usage of solar water heating, rainwater harvesting system and bio-toilets<sup>6</sup> .** The technology needed should be distributed at subsidized rates for encouraging all to shift towards green renewable methods for conservation of natural resources.
- c) **Buildings obstructing drainage network inside the city area must be fined and immediate removal of obstructions by any such building should be issued.** Also any construction or building activity in the catchment area, water bodies like lakes, streams should be strictly prohibited. The National Building Code, along with the municipal by-laws and land in the urban-periphery belonging to village panchayat coming under pressure of urbanization has to take care of this to avoid flooding in the area.
- d) **Affordable housing for urban poor along with community toilets should be given priority, given their poor living conditions and their vulnerability during environmental disasters.** The monitoring on the status of delivering affordable housing should be directly linked to the Chief Secretary's office



<sup>5</sup> Accessed at- <https://www.cprindia.org/policy-challenge/7871/regulation-and-resources>

<sup>6</sup> Accessed at- <https://www.cprindia.org/policy-challenge/7871/regulation-and-resources>



- e) **Building Morung style accommodation or youth dormitory for assisting youth migrating from rural parts of hill states towards the city.** Morungs have been an essential part of Naga Life, where elders have conveyed folk music and dance, folk tales and oral tradition. A self-governed youth dormitory centered around cottage industry such as carpentry, weaving and wood carving or any other traditional craft will go a long way to curb alienation that one faces due to fast changing city-life.

## **SANITATION AND SOLID WASTE MANAGEMENT :**

- a) There is a need to have more Himalayan plastic freedom drives like the one already organized by IMI (Integrated Mountain Initiative) and Zero Waste Himalaya, after conducting a waste audit across 12 Himalayan states. **Schools, government meetings/functions, pilgrim centers holding religious functions in any place must pledge to create and maintain a plastic free environment of their own accord.**
- b) It has been observed that the single biggest problem arising out of our Himalayan cities is garbage collection and its proper disposal due to expanse and volume of waste generated by the city, which has become difficult for the municipal corporation to handle. Increasing **capacity building programs and training of officers who shall implement plastic, solid, liquid, medical waste management in the hill-city.**
- c) A sanitation welfare policy with shift in paradigm, **safe and dignified sanitation work should be the basis on which welfare measures should be chalked out by each hill-state.** Fair payment, their housing situation, safe-garbage handling mechanism and free medical check-ups should find place in the welfare policy.
- d) Mandatory public toilet construction under PPP model, its maintenance and operation should be fixed by the municipal corporations. **After a toilet has been commissioned, its construction must have a binding date for completion.**
- e) **Given the worsening sanitation situation in the hills, a report on the availability of public and community toilets, STPs (Sewage Treatment Plants), number of effluent treatment plants under the hill city sanitation infrastructure is required to make data available on the lack and the problems surrounding it<sup>7</sup> .**
- f) Make provisions of **safe drinking water at busy centers through water dispensing mechanisms-Water ATMs, installation of aesthetically done drinking water fountains, increase tax on packaged drinking water, etc.**

<sup>7</sup> Accessed at: [http://www.sulabhenvi.nic.in/Database/STST\\_wastewater\\_2090.aspx](http://www.sulabhenvi.nic.in/Database/STST_wastewater_2090.aspx)



## REJUVENATION OF URBAN SPACES AND SUSTAINABLE TRANSPORT SOLUTIONS :



- a) River-sides and streams crossing hill cities should be re-imagined, drives to clean the rivers and rejuvenate it's water should also become priority for the residents. **Public squares/central parts of the city should be cordoned-off from motorized vehicles. It must give way to cultural activities, such as festivals and fairs. Hawkers and peddlers should not encroach upon footpath, a dedicated area for hawkers and peddlers to vend their goods.**
- b) The Municipal Corporations of cities in the IHR region uniformly needs to impose rules regarding buying of motorized vehicle, **if the person has proof of parking then they should be allowed to register for purchasing.**
- c) **Constructing roads by making use of plastic waste, plastic waste** segregated from other kinds of waste can help in eliminating the construction of bituminous-tarred road. Compulsory, environmental impact assessment of new roads to be built, including highways to see what impact they can have on the fragile ecosystem.
- d) **Increasing parking fees for vehicles in market centers and hill towns to discourage the use of motorized vehicles<sup>8</sup> .** Parking should be prohibited on road sides. Since, parking on the roads cause congestion.

<sup>8</sup> Accessed at: <https://www.cprindia.org/policy-challenge/7871/regulation-and-resources>







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