

Urban Environmental Planning in Shimla Smart City: Review of Related Literature

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ABSTRACT

Urban environmental concerns are on rise due to increasing population pressure on finite natural resources, deforestation, over grazing, unplanned construction, networking of roads and large-scale modification of natural landscape. It has caused irreversible damage to the ecology of this Himalayan state. Number of ultra modern projects, road networking, hydropower projects, and SEZ and real estate projects are costing Himalayan ecology. Unplanned developmental activities and urban processes in city have resulted in several ecological problems like environmental pollution, noise pollution extreme climatic conditions, shortage of drinking water, landslides, sinking land and change in seasonal cycle. Poor urban planning will cause social, economic and environmental implications in long term. Cities needs to be planned professionally keeping in mind future sustainability. Before planning a city in hilly areas, needs proper understanding of complex and dynamic phenomena involving interaction between environmental and socio- economic and political factors with multi disciplinary approach and vision. Urbanization and industrialization on one side is contributing its share in economic development of a region but on the other hand, it is degenerating water, air, soil and natural resources resulting in the degradation of environmental quality (Anjum, 1998). Urban environmental degradation leaves direct impact on the ecology and causes ecological imbalance (Singh, 1996). The most striking reason for the environmental degradation is the changing man and environment relationship. (Dasman, 1976), Shah (2001). Developmental activities in Himalayan region need different treatment and systematic planning.

KEY WORDS: Urban Planning, Urban Ecology, Literature Review

STATEMENT OF THE PROBLEM

Urban centres are the engine of growth and vehicle of modernization. The civilization perishes if cities deteriorate. However, emerging urban scenario in India is not a pleasant one. Urban centres have become dustbins of garbage. Public services are only in the namesake, roads are congested, and problems have attained such a magnitude that the conflict resolution has become remote possibility. Himachal Pradesh, which lies in the western Himalayas, is facing various types of urban environmental problems. Most of the urban environmental problems are man made. Shimla, the largest city in western Himalayas. Unplanned developmental activities and urban processes in the city have resulted in several ecological problems like environmental pollution, noise pollution extreme climatic conditions, and shortage of drinking water, landslides, sinking land and change in seasonal cycle.

STUDY AREA

The state of Himachal Pradesh lies between 30°22'40" North latitude to 33°12'40" North latitude and

75°47'55" North latitude to 79°04'20" East longitude. It covers geographical area of 55673 Sq. Km., which is nearly 10.5 per cent of the total Himalaya landmass. The state is divided into 12 districts and 106-tehsil/subTehsil and 75 development blocks. Total population of the state is 77.56 lakhs(20111 Census). The urban population constitutes 8.5 per cent of the total population and there are 58 urban centres in the state.

URBAN ENVIRONMENTAL ISSUES IN AND RELATED ISSUES

In most of the studies on urbanization, and environment factors like increasing pressure on natural resources, population growth, deforestation and unplanned developmental processes are mentioned as major factors for deterioration in environmental conditions. Studies dealing with urban environmental problems of cities located in a fragile environment are few and rare. Anderson (1875) Duthie (1883) Buck (1925) Spencer and Thomas (1948) observed that summer resorts and hill stations of the British period developed with out planning but they took of environmental quality. Mitchall (1972), Chadda (1988) opined that in coming years it would be difficult to preserve Himalayan ecology in the wake of excessive exploitation of natural resources and unplanned urbanization. Gupta (1990), Pirazizay, Reiger (1981), (1992) in his field investigations found that the ecology of western Himalayas is degenerating very rapidly due to population pressure, unscientific developmental works and lack of urban planning. Joshi (1984) Chatterjee (1990), attempted to study the urban environmental problems of Himachal Pradesh and observed that urban environmental risks shall be major challenge in coming decades. Kanwar (1990), Vaidya (1991 Singh and Anuradha (1992), writes that towns in Himachal Pradesh in nineteenth century were small and traditional. Environmental threats aggravated more with the increase in population and deforestation.

Mishra and Shandil (1992) Kant (1995), Zaimche (1994), Zaimche (1994) Zaimche (1994) pointed out that populatin pressure has aggravated many land use problems like accommodation, water supply, sewage disposal and congestion in Himalayas. Kanwar (1990), Dewan (1980), (Baffia),Singh(1996) and Smith(1981) observed that urbanization and population pressure has resulted into many environmental problems in the capital town of Himachal Pradesh and long term urban planning and strict municipal rules. Chakraborti (1997), Narain and Agarwal(1997) observed that unplanned urbanization in third world countries They advocated for the implementation of the resolution passed in the summit. Siddhartha (1999) developmental activities and urban processes if not planned can cause damage to fragile ecology of Himalayas. Chatterjee (2001) presented similar views. Kayasta and Kumra (1990) opined the explosive increase in population growth and rapid industrialization has together caused havoc in the human adjustments to urban as well as rural environment. Marsh (1964) opined that depletion of renewable and non-renewable resources has caused excessive damage to the environment and quality of life. Gupta (1976) stated that blasting of hills, expanding urban colonies and clearance of forests for hydroelectric projects causes' damage to limited resources in Himalayas. Desai (1982) pointed out that degeneration of western Sikkim Himalayas are due to population pressure and encroachment of forestland. Smith (1982), Lal and Moddie (1981) stressed on environmental awareness among masses to reduce impact of environmental degradation, and environmental laws should be implemented strictly. Negi (1982) pointed out that road networking and population pressure has made many Himalayan rivers in disaster prone. Malkana and Tandon (1981) pointed out that awareness programmes need to be launched to conserve natural environment. Chadda (1988) examined population growth in the Garhwal Himalaya and felt that main cause of concern in 21st century would be population pressure, he stressed

on sensitization of masses and policy makers on urban environmental issues. Sahani (1988) pointed out that increasing tourist inflow in Himalayan region has disturbed its fragile ecology and sustainability. He suggested environmental awareness programmes at grass root level. Grover (1989) states that natural hazards in Himalayan towns are the result of mismanaged land use in urban areas and lack of coordination between government authorities he opined. Bahuguna (1989) pointed out that spreading awareness about conservation of environment is only way out to save Himalayas. He felt concern about growing unplanned urban expansion in Himalayan region. Farrell (1982) felt that changing climatic conditions in the hill stations are the result of deforestation and population pressure. Gupta (1990) pointed that land use changes, deforestation, mismanagement of resources, increasing population pressure and unplanned construction would cause environmental problems in Himachal Pradesh. Morgan (1991) stated that people lack knowledge about the future implications of over exploitation of natural resources and many natural hazards are the result of lack of awareness. Marsh (1991) also held similar opinion. Calter (1995) pointed out that in ecologically sensitive areas like Himalayas, developmental activities need to be monitored strictly. He also observed that encroachment on forestland, over grazing, growth of extensive monoculture, shifting cultivation, lack of long-term environmental policies and ignorance about environmental implications are major causes of environmental degradation. He found that there was considerable decrease in the rainfall in the region and most of the time rainfall is torrential in nature, which causes flash floods. He observed that major cause of extreme climatic conditions in Eastern Ghats is due to laid-back attitude of policy makers and population pressure people. Singh and Anuradha (1998) observed that construction of roads and buildings, increasing movement of vehicles has mounted pressure on already weakened mountains. They opined that tendency of drawing a profit out of every source is steadily reducing the Himalayan region into a land of dead mass. All above mentioned studies highlights increasing environmental risks due to laid back attitude of authorities and lack of awareness among masses about environmental risks. Malini and Rao (2001) observed that reduction in rainfall in Western Ghats is due to depletion of forest cover in recent past. Reduction in the forest cover is mainly due to illegal felling, encroachments and urbanisation. Luthra and Verma (2001) while studying the level of environmental awareness among masses of Shimla, concluded that environmental awareness alone is not likely to achieve the desired objectives unless and until one is sensitive to environment. Chandran (2002) opined that the Gangotri glacier is receding due to excessive anthropogenic activities. There is no check on human interference in such sensitive areas. Chaturvedi (2002) also studied receding high altitude glaciers in Gangotri region and found that human interference has damaged whole valley and authorities have showed no concern about it. Kayastha (1998) opined that ruthless exploitation of natural resources; increasing urban centres and excessive human interference are leading to decaying of Himalayan ecology. Yadav (1998) opined that developmental projects, road networking and excessive human interference in Himalayas have threatened its survival. He studied the Vishnupryag hydro project on Alaknanda River near Joshimath. The project would damage the ecologically sensitive Bhyunder valley. Dutta and Singh (1998) state that mismanaged tourism industry has degraded the Himalayan ecology, as garbage and human waste have become common on Himalayan slopes. They write that people and policy makers need to be sensitized about the implications of environmental degradation. Shah (2001) Problem of environmental degradation is more serious in developing countries where environmental accountability is neglected. Grandner and Singh (2002) observes that unplanned tourism has caused damage to the ecology of Kullu and Manali towns (H.P.). Accelerated growth of tourism over the past decade had substantial impact on

the local society, economy and environment and long-term sustainability of tourism is threatened by degenerating physical and cultural environment. They used environmental and land use history of the area from early 19th century. Cole and Sinclair (2002) also presented similar views and informs that Gangotri glacier has retreated by 5 K. M in past 50 years one of the biggest indicator of climatic change. He held responsible mismanages yourism industry for receeding of Gangotri glacier. Yadav (2002) writes that planning and development of tourism infrastructure and its marketing should focus on environmental, social, cultural and economic sustainability criteria. Pickering, Harrington, Worboys (2003) while studying the environmental conditions in Alpine mountains points out that growing tourism industry has greatly affected the mountain environmental conditions. Climate changes reflect variations within our atmosphere, oceans and ice caps, and human activity. Changes in the climatic conditions will affect infrastructure in cities, the vulnerability of the society increases also as urbanisation continues, and population grows (Berggren, 2007). Pressures on the resources and dependency on harmful technologies and immigrant population is creating urban problems today. Ashley (2005) suggested that potential effects of climate change on urban property damages are likely to be significant in the future. Increased risk comes from the likely increase in the number and intensity of extreme weather events such as heavy rainstorms, cyclones or hurricanes. Of course, there are large differentials in the scale of such risks between urban centres in each nation. Freshwater availability is expected to decrease due to climate change, which, along with population growth and increasing demands arising from higher standards of living, could adversely affect more than a billion people by the 2050s in Asia (Adger and Aggarwal, 2007). In India, malaria is expected to expand its range horizontally and vertically, from its currently endemic range in eastern and north eastern India to western and southern India (Bhattacharya, 2006). Indian cities have become major reservoirs of vector-borne diseases such as malaria and dengue fever. The morbidity risks will increase. Extreme weather events can generate new health hazards and cause disruption to public health services that lead to increased disease incidence.

CONCLUSION

During pre-independence era and urban environmental problems were not focus of the research studies. After independence, there is steady development in the research studies on Himalayan environmental degradation and urban problems. All the studies highlight the impact of developmental activities and unplanned urbanisation on environment. These studies should be a wake up call for all policy makers and stockholders that damage has already been done now it is time to act for risk reduction exercises. Unplanned and undisciplined urban life will not only lead to urban environmental problems but also socio-economic problems. It was also observed during the review of literature that more research is required especially towns located in Himalayas. Shimla city is is not only expanding horizontally, but it has recorded high density of population in various pockets, which is not causing undue stress on nearby vegetation but is detrimental in view of the high risk earthquake ZONE-IV and sinking zone. As against the recommended density of 450 persons per hectare in hill settlements, the town's localities have densities ranging from 2,500 to 3,500 persons per hectare for the same area. Although Shimla Municipal Corporation has quite belatedly prohibited any construction on slopes steeper than 45 degrees, the damage has already been done. Kaur in down to earth (2022) opined that instead of increasing infrastructure in Shimla to promote tourism, the government should fix tourist inflow and improve existing amenities. Kumar Ashwani, Pusshlata (2017) stressed on need for interventions by local governing authorities to rearrange irregular individually owned plots which generally follow natural

topography to make them serviceable and conducive for development in all localities of Shimla city. Sharma(2023)The challenges faced by Shimla demand a holistic approach to city planning and climate resilience. There is need for sustainable urban growth through efficient land use, strict zoning regulations, and the preservation of the city's architectural heritage. Furthermore, addressing climatic issues change requires both local and global efforts. Shimla's residents, administration, and environmentalists must collaborate to create awareness, advocate for sustainable practices, and implement measures that enhance the city's resilience to climatic shocks. The city has complex issues of city planning, rain-induced devastation, and climate change, The delicate balance between preserving its history and embracing its future requires innovative urban planning, community engagement, and a collective commitment to a sustainable future.

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