# Urban Growth in Himalaya: Understanding the Process and Options for Sustainable Development

Dr. Prakash C. Tiwari
Professor of Geography
Kumaun University
Nainital 263002, Uttarkhand, India

During recent years, urbanization has emerged as one of the important drivers of global environmental change transforming mountain regions, particularly in developing countries where the process of urban-growth has been fast but mostly unsystematic, unplanned and unregulated. Himalaya representing tectonically alive, densely populated, and one of the most marginalized mountain regions of the world has experienced rapid urban growth during last three decades. More recently, comparatively less accessible areas have also come under the process of rapid urbanization mainly owing to improved road connectivity, publicity and marketing of new tourist sites and the resultant growth of domestic as well as international tourism; development of horticulture; economic globalization and gradual shift from primary resource development practices to secondary and tertiary sectors; and due to absence of urban land use policy. Consequently, there has been tremendous increase in size, area, number and complexity of urban settlements in the Himalaya resulting into the expansion of urban processes (i.e., expansion of urban land use in surrounding agricultural zone, forests and rural environments) as well as increase in the intensity of urban land use (i.e., increase in the density of covered area, density of building, and increase in the density of population) within the towns.

On the one hand, the growing urban areas in high mountain are now serving as the centres of growth by creating opportunities of employment, variety of socio-economic services and expansion of infrastructure; and contributing towards the development of their vast hinterland through trickledown effect; while on the other, the sprawling urban growth in fragile mountains has disrupted the critical ecosystem services. The speedy and unplanned urbanization has perturbed the hydrological regimes of Himalayan watersheds and reduced ground water recharge, and decreased the availability of water for drinking, sanitation and crop production; depleted forests and biodiversity; increased risks of natural hazards and disasters both in urban areas as well as in their peri-urban zones; and increased vulnerability of mountain inhabitants to water, food, livelihood and health insecurity. Moreover, climate change has stressed urban ecosystems by increasing the frequency, severity and intensity of extreme weather events. As in other parts of the world, urban growth cannot be stopped or reduced in Himalaya, but it can be steered in a more sustainable manner through an integrated urban-rural land use planning. Effective land use policies need to be evolved and implemented for the protection and conservation of forests, biodiversity, water resources and agricultural land.