

THE DMN NEWS



**THE TOLL OF CLIMATE CHANGE IN
NEPAL: DEPOPULATION IN
HIMALAYAN REGION, RAPID
URBANIZATION IN HILLS AND
TERAI**

Climate change is yet not adequately acknowledged as a driving force behind migration in Nepal, despite evidence showing that it is occurring.

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The climate, which had changed gradually over thousands of years, is now shifting rapidly. The Intergovernmental Panel on Climate Change (IPCC) claims that changes in the environment and natural disasters have accelerated migration patterns and that the 21st century will see an increase in the frequency and severity of weather-related disasters such as excessive precipitation and temperature due to climate change. As a result, when people adjust to the changing environmental circumstances brought about by these environment-related changes, livelihoods are expected to be disrupted, and migration is often considered a livelihood strategy way to cope with the effects of these.

Migration is driven by a complex interplay of factors such as economic hardships, environmental challenges, social and political instability, and demographic pressure. Nepal is no exception, as these factors collectively have played a significant role in shaping migration patterns within the country. There have been studies on the movement of people caused by environmental factors. In research on climate change, migration is commonly viewed as an adaptation strategy. This perspective implies that people who have the necessary resources and social connections can either move away from regions at elevated risk or diversify their livelihoods across various areas.

Climate migration refers to the movement of people or communities, generally because of sudden or gradual environmental changes brought on by climate change or sudden weather catastrophes. These people are forced to move temporarily or permanently from their preferred place of residence, either inside a nation or across international borders. This concept, defined by the International Organization for Migration (IOM) in 2019, falls under the broader category of environmental migration, specifically focusing on cases where environmental changes are attributed to climate change.

There is an unavoidable need to restore the fragile ecosystem of the Himalayan region. Planting more trees, launching wildlife conservation campaigns, and adopting sustainable tourism help achieve an equilibrium between economic progress and environmental protection.

Climate change in Himalayan region

The landscape of the Himalayas is reshaped because of climate change, through factors such as biodiversity loss, changes in vegetation and land use, and the reduction of the cryosphere.

While locals may not understand the technical terminology, they are already feeling the effects of climate change, as shown by a recent glacial lake outburst in August 2024 in the Khumbu region. This triggered severe flooding and landslides, devastating the village of Thame and putting nearby settlements on high alert. Similarly, Manang is experiencing both lower minimum temperatures and higher maximum temperatures, leaving residents exposed to extreme cold and heat. Over the past 35 years, scientific data shows that Manang's average feverish temperature has risen by three degrees Celsius. According to a recent study by the International Centre for Integrated Mountain

Development (ICIMOD), the Himalayas may lose 80 percent of their glacier volume by 2100 if emissions continue at the current pace. Two billion people who rely on rivers fed by these glaciers face significant risks, as they could be affected by devastating floods and severe water shortages. On top of that, researchers have estimated that 1.65 billion people residing downstream and 240 million people living in the highlands would lose access to fresh water.

In response to these rising dangers and the broader environmental impacts of climate change, migration has increasingly become a prevalent livelihood strategy, helping people adapt and manage the associated risks. Based on studies, changing climate patterns—especially more summer rainfall—have created serious problems for village life. The traditional mud roofs of the homes in Upper Mustang sustain damage from the severe rainfall, which causes water leaks and forces the occupants to adjust to new living arrangements. Consequently, people from Upper Mustang are progressively moving to places like Pokhara, attracted

by its favorable environment, and better prospects of survival. However, climate change is yet not adequately acknowledged as a driving force behind migration in Nepal, despite evidence showing that it is occurring.

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Mass exodus to urban centers

Climate change compounds existing hot buttons—poverty, unemployment, and resource depletion—to cause a mass exodus from rural climate-vulnerable regions to urban centers. At the confluence of those two realities, migration stops being a coping strategy and, more importantly, unfolds as one fundamental right to live. In Mustang, for instance, almost half of the population is seasonal migrants who work and stay in urban centers like Pokhara. This exodus has led to whole villages being left empty, with both social dislocation and the collapse of local economies. This depletion of human labor pools further accelerates wider agricultural productivity and local industrial collapse, forcing those who remain even deeper into poverty with increased food security. Consequently, the slow depopulation of these regions also carries with it a significant threat to rich cultural heritage and Indigenous knowledge systems that are enmeshed within land and its management.

Meanwhile, Kathmandu and other emerging urban centers like Pokhara and Biratnagar in Nepal are under severe pressure. This influx of climate migrants has overwhelmed the infrastructure, housing, and public services. Haphazard urban expansion leads to the formation of slums and informal settlements characterized by debilitating living conditions and depriving residents of basic services such as clean water, sanitation, or electricity. Climate migration-fueled urbanization is also causing a major socioeconomic shift in rural and urban regions. Migrants on their arrival in urban centers are more likely to experience economic disconnection. Those members are often in low-paid, precarious work with little security or social protection. In turn, it is banning these migrants from the poverty cycle and straining urban welfare systems further. Urbanization can introduce new sources of tension between migrants and locals as they vie for jobs, homes, and resources when the majority previously arrived have little or nothing.

This heavy urbanization, as usual with population growth in a city, is also causing massive environmental degradation, putting stress on natural resources and public services. Nepal meets the challenge of having both depopulation and urbanization as a source of its environmental effects.

What should be done?

But to fight the throes of depopulation and urban sprawl, it needs a holistic redesign for both cities and the countryside. At the end of the day what matters is that the government and policymakers need to be on a thin rope of support for

climate migrants as well as sustainable urban growth. Rural areas will experience increased immigration. So, policies that concentrate on climate adaptation and strengthening of resiliencies are needed. Policies that invest in sustainable agriculture, disaster-resilient infrastructure, and alternative livelihoods can help to reduce the scale of migration. These will slow down the process, while longer-term approaches, for example, promoting smarter farming and saving water, can increase the productivity levels of rural communities and reduce their vulnerability.



To support the growing population without overtaxing city resources, affordable housing can be put in place as well as increasing public transportation and waste management systems. It implies setting policies that allow for inclusive, safe, and resilient urban spaces in which the basic needs of migrants (as well as the residents) are catered for.

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Planting more trees, launching wildlife conservation campaigns, and adopting sustainable tourism help achieve an equilibrium between economic progress and environmental protection.

Governments and non-governmental organizations (NGOs) should take care of water resources and protect the region from more environmental degradation. Likewise, we need effective governance for migration and urbanization at the local level.

This includes making sure local authorities have the financial and administrative tools to implement migration-friendly policies that include improving urban services, linking migrants with jobs in host communities, incorporating them into inclusion strategies for poor people, thinking of 10- or 15-year road maps, and updating social safety nets.

Similarly, we also need comprehensive public awareness and civic engagement. Enhancing awareness on collaborative climate change-related immigration issues has never been as significant to mobilizing community action. Such programs will enhance the local ability of communities to learn about sustainable practices, climate risks and adaptation strategies. This helps increase accountability and consecutively increase local ownership of tailor-made policies.

Finally, there is no escaping that managing climate change impacts requires global and regional involvement. The challenges of glacier melt, water management,

and disaster response faced by Nepal and other Himalayan countries need to be dealt with consistently. Multilateral agreements to fund climate adaptation, such as the United

Nations Framework Convention on Climate Change (UNFCCC), are essential for those countries that need financial aid to minimize their vulnerability.

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