

Climate change and health in Nepal: an urgent need for action

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INTRODUCTION

Climate change stands as one of the foremost global challenges of our time. The World Health Organization projects an estimated 250,000 additional deaths per year due to climate-related factors between 2030 and 2050. Climate change threatens the progress made in development, global health, and poverty reduction over the past decades.¹ It is further expected to worsen health disparities, especially in low- and middle-income countries where health systems are less equipped to handle the evolving health challenges due to climate change. Moreover, it disproportionately affects the most vulnerable groups within each country setting.² This alarming statistic emphasizes the urgent need for action to mitigate the impacts of climate change and safeguard human well-being.

Nepal ranks as the fourth most vulnerable country because of its fragile mountainous topography, lack of resilient infrastructure, unplanned settlements, subsistence livelihoods of the people, and a low level of adaptive capacity.³ Nepal is a geographically diverse country and faces a range of extreme weather-related events such as high and low temperature,

consistent and continuous warming, and extreme variability in rainfall, floods, droughts, landslides, avalanches, and glacier lake outburst floods.⁴

CLIMATE CHANGE AND ITS EFFECTS ON HEALTH IN NEPAL

In Nepal, the impact of climate change is already evident across various sectors. The Ministry of Forest and Environment (MoFE) has identified public health as one of the highly susceptible sectors to climate change.⁵ In the health sector, climate change poses substantial threats. Extreme weather events such as floods and landslides not only damage infrastructure but also affect lives by disrupting the water supply and sanitation systems. Some key direct effects include heat-related morbidity and mortality, while indirect effects encompass spread of vector and waterborne diseases, nutrition risks, and non-communicable diseases.⁶ A study has also showed that an average rise of 1° temperature is linked to a fivefold increase in morbidity and mortality associated with water and vector-borne diseases.⁷ Climate sensitive diseases such as dengue are rapidly rising recently with major outbreaks reported in 2019 and 2022 (Figure 1).⁸

Furthermore, the indirect impacts of climate change on health include poor quality of air, inadequate food systems, and conflicts and social unrest.⁹ A significant proportion of Nepal's population is exposed to unsafe levels of air pollution, posing significant threat on health and productivity. In addition, damage to health infrastructure is another risk posed by climate change in Nepal, as many health facilities are

largely situated in risk-prone areas such as close to rivers and steep slopes.⁹

KEY INITIATIVES/CURRENT EFFORTS IN HEALTH SECTOR IN NEPAL

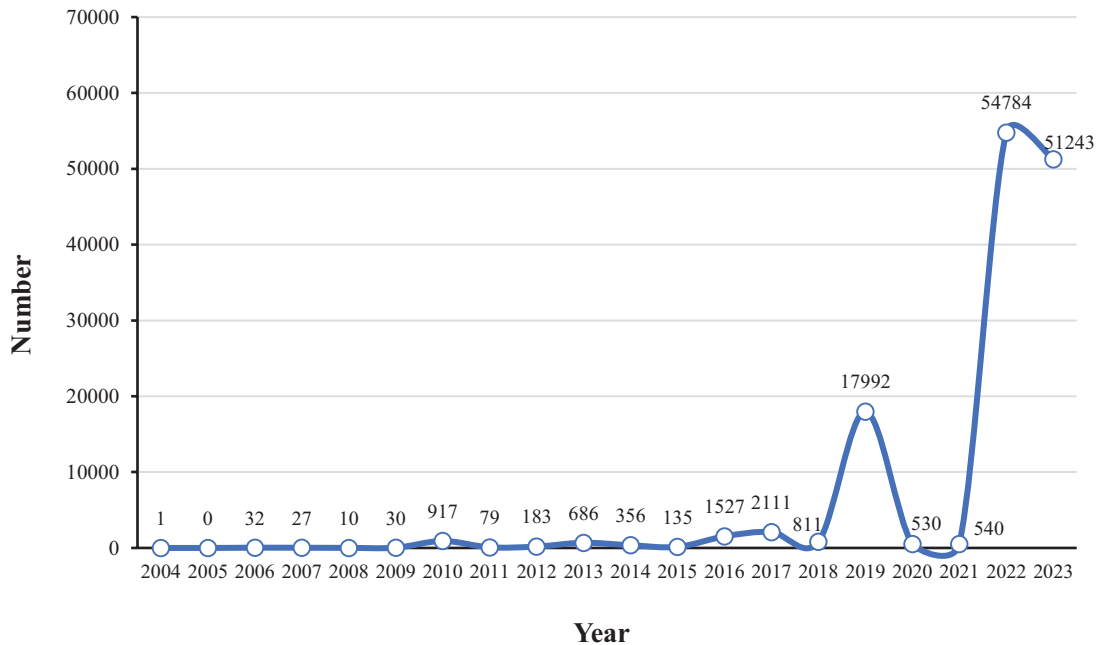
The 2019 climate change policy of Nepal aims to enhance the climate change adaptation capacity of individuals, build a climate resilient society, promote green economy through low carbon emissions and mainstream climate change aspects in the policies, strategies, and programs at all levels and across various sectors.¹⁰ Nepal has made commitments to global initiatives such as the Paris Agreement. In line with this, Nepal has also submitted its second Nationally Determined Contribution to the United Nations Framework Convention on Climate Change (UNFCCC) for the period of 2021–2030. Furthermore, Nepal's long-term aim is to achieve net-zero greenhouse gas emissions by 2050.¹¹ The National Adaptation Program of Action (NAPA) has also stressed on adaptation needs for health, mainly strengthening the health systems, integrating the impacts of climate change into the development plans, and generating evidence on climate change and health for evidence-based planning.⁵

The national health policy 2019 highlights that preparedness and response measures will be adopted to tackle climate change, and encourages environment and health-friendly technologies. The Ministry of Health and Population, Nepal, has also committed to the UNFCCC COP26 Health Initiatives on climate resilient health systems.¹² It has developed the Health-National Adaptation Plan (H-NAP) which aims to protect human health through necessary adaptation measures and

Climate change and health in Nepal: an urgent need for action

Figure 1

Annual trend of Dengue cases in Nepal (2004–2023).



developing a climate-resilient health systems. It also aims to strengthen the national research capacity on climate and health, and integrate climate change in health-related policies.¹³

KEY GAPS AND FUTURE DIRECTIONS/WAY FORWARD

Despite having policies in place, there are gaps in implementation and a lack of a well-defined roadmap for building a resilient health system at all levels of government in Nepal. We have identified the following key gaps and way forward for climate health actions.

Integration of climate and health data

The absence of a robust climate information system and the lack of integration between climate and health data presents a challenge.⁴ Integrating data on climate parameters, such as temperature, with health data will support evidence-informed decision-making. Furthermore, it is essential to strengthen the current disease surveillance and early warning system to better capture and disseminate data on

climate sensitive-diseases on a regular basis. This will help in timely control and response for climate-sensitive diseases.

Adaptation of climate change in local health plans

Recently, decentralization in Nepal has given larger responsibility to the local governments, which has also caused strain to local health systems. This is due to gaps in capacity and experience which has also resulted in climate change response receiving inadequate priority in local plans. Local governments often prioritise basic health services over climate-related concerns due to limited resources. The capacity gaps assessment by MoFE in 2020 highlighted that health, drinking water, and sanitation, despite being important sectors often ignore the integration of climate change into their adaptation plans. Also, programs targeted to health, water and climate change adaptation are very limited.¹⁴ Thus, it is important that the local levels have a strong commitment towards combatting climate issues and ensure they incorporate adaptation into their annual plans, and the national and

subnational governments take climate crisis as a shared responsibility.

Mapping of vulnerable clusters

Comprehensive and rigorous mapping of vulnerable clusters at the municipality or lower level and the development of an action plan to mitigate the impact in such clusters remain vital. This involves stakeholder engagement; data collection and analysis considering factors such as exposure, sensitivity, and adaptive capacity, and conducting vulnerability assessments to identify areas and populations most at risk due to climate change. During this, granting priority to vulnerable groups and individuals is imperative in the effective implementation of adaptation programs. Focusing on the needs of these marginalised communities ensures that climate resilience efforts are equitable, inclusive, and address the unique challenges faced by those most susceptible to the impacts of climate change.

Engaging the private sector

Efforts to engage the private sector in adaptation to climate change have

Climate change and health in Nepal: an urgent need for action

been highlighted in the NAPA, but these must be accelerated. Engaging the private sector is essential to leverage their resources and expertise in our climate-related initiatives. They can bring in investments and expertise, collaborate with government initiatives, involve local communities and non-profit organizations, and produce creative solutions such as new climate-friendly services and technologies to help us adapt better.

Adopting a comprehensive, systems-wide approach

To effectively address the climate crisis, a collaborative effort across various sectors is essential. It is crucial for health and other stakeholders to establish a well-coordinated strategy that spans different government levels.

Furthermore, there should be an agreed plan for aligning budgeting, financial management, procurement, monitoring, and evaluation processes to efficiently combat the crisis. Embracing a comprehensive, cross-sectoral approach is key to tackling this crisis.

CONCLUSION

Since Nepal is already facing several climate-related challenges and consequences, immediate actions are now required to safeguard from the impacts of climate change on health and health systems. It is essential to address the existing challenges across technical capacity, coordination, and financial resources. Furthermore, the urgency of the situation cannot be overstated, as the well-being and survival of millions of

lives depend on our actions. Thus, now is the time for us to step up and prioritise climate action, with an emphasis on climate-health initiatives, on a local and national scale.



CONFLICT OF INTEREST

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