

INTERFACE BETWEEN CLIMATE CHANGE AND NATIONAL SECURITY THREAT

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Abstract

Climate change has emerged as an existential threat to the planet and humanity. It is fueling natural disasters, migration, energy, health and food crises across the globe. Flood, sea-level rise, intense wildfire, heatwave, hurricanes, precipitation are threatening both civilian lives and vital infrastructure. Put together, they all have a potential to create security threats, and no country is immune from it.

In June 2022, much of Pakistan was inundated by heavier than usual monsoon rain. More than 1,700 people perished and properties worth billions were destroyed in the disaster, which also triggered food and energy crises in its wake. Likewise, on June 15, 2021, Melamchi Bazar of Sindupalchok district in Nepal was ravaged by a flash flood that claimed five lives — dozens of people are still missing. It damaged several private and public properties, and damaged the infrastructure of the Melamchi Water Supply Project (Annapurna Express 2022). The above incidents show the extent of vulnerability posed by climate change-related disasters on human lives and settlements. With this context in place, this essay tries to explore the new risks posed by the effects of climate change to Nepal's security landscape, as well as the preparations made so far to deal with possible crises. It will offer some policy recommendations.

Key words: *Climate Change, Nepal Army, National Security,*

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Introduction

The deadly or say destructive impact of climate change is prompting countries to embrace climate change as a vital national security threat. Security concerns linked to climate change include impacts on food, water and energy supplies; increased competition over natural resources; loss of livelihoods; climate-related disasters; and forced migration and displacement (UN Environment, 2019). A disaster- and crisis-ridden areas are also at risk of becoming breeding grounds for terrorist and anti-social groups. In fact, it's the non-traditional security issues which are giving birth to the traditional security issues from time immemorial; and it's only their intensity which has increased in recent years due to climate catastrophe.

This precisely is the reason, among others, as to why many countries are including non-traditional security issues into their larger security framework. Of all the factors, climate change is becoming more threatening; and countries are undertaking it as a national security threat and incorporating it in their comprehensive security policy documents. Academic deliberations of climate change from the national security perspective have gathered momentum across the globe, and it is more so in America and European countries, followed by South Asian countries.

Since 2007, the United Nations has been holding discussions on the link between climate change and insecurity. The first ever meeting of the Security Council examining the linkages between climate change and insecurity happened in April 2007. Since then, the UN body has increasingly taken steps that effectively acknowledge that the two issues are related.

In July 2011, another open debate on the matter was held, and in March 2017, resolution 2349 was adopted, highlighting the need to address climate-related risks in order to tackle the conflict in the Lake Chad basin. Similarly, in July 2018, a debate was held on "Understanding and addressing climate-related security risks (UN, 2019).

In a sign of how important the discussion is to many countries, the debate was attended by over 70 Member States and included statements in the Council chamber from a dozen ministers, including from Kuwait, Belgium, Indonesia, Germany and Poland (UN 2019).

Their collective efforts have been helpful in highlighting the agenda more strongly and thereby stopping problems that deserve significant attention

and resources. All these efforts have now regarded climate change as a climate crisis (Mathew, 2011) and this realization is certainly good to take the timely initiatives.

Since 2011, Germany has been making every effort to integrate climate security concerns into the works of the Security Council of the United Nations. During its two-year term as a non-permanent member on the UN Security Council in 2019-2020, Germany, time and again, highlighted the security implications of climate change and advocated greater Council engagement with this issue (Stefan Talmon, 2021).

Likewise, the new National Security Strategy of the United States unveiled in 2022 mentions the climate crisis as an existential threat of our time. It outlines people around the world are risking food and water supplies, public health, and at the cost of infrastructure and national security.

In South Asia, discourse on the national security dimension of climate change has received pace since a decade ago. In addition to this, there are activists and activities such as ‘save soil’ who are putting pressure on stakeholders to focus on climate change. South Asian security policy circles must recognize that nontraditional security threats like those emanating from climate change will ultimately be as intimidating as traditional security threats (Pandey Avasana South Asian voices, 2018).

She observes:

They must look both inward and outward, simultaneously rethinking conceptions of security internally while cultivating regional cooperation. We will only fully realize the gravity of the climate change-security nexus when we stop equating security with warfare and make adequate space for confronting the destabilizing effects of climate change.

In the context of Nepal, too, there certainly is a greater realization about the possible threats that climate change may unfold in the days to come, creating a serious security problem. But it hasn’t been incorporated in the policy document. There is also the lack of commitment to take the discourse in a more coherent manner. Climate change has not really been seen from the security perspective. Although the National Security Strategy unveiled in 2016 briefly describes environmental security, it does not necessarily recognize climate change and its other aspects as a national security threat. Impact of climate change could affect critical infrastructure including roads, highways and electricity networks, which

could affect social stability.

Nepal at high risk of climate-induced disasters

More than one factor is responsible for climate disaster. Some come up with excessive misuse of Basudha – the mother earth. While there are others who claim that naked industrialization of various types should be held responsible.

Taken together, all these bring different types of challenges in the form of emissions. Nepal's contribution to global emissions is very low but it is facing the brunt of climate change. Due to the temperature rise, glaciers are receding and snowfall is decreasing in Nepal's mountains. Around 80% of Nepal's population is at risk from natural and climate-induced hazards, and in the last 40 years, natural disasters have caused close to \$6 billion worth of physical and economic damage in Nepal (MOFA, 2021). The effects of climate change are already seen in the sources of water, crops and other sectors.

Nepal's share in causing climate hazards is very less compared to developed countries. Yet, Nepal is one of those few countries in the world that is prone to various natural hazards such as landslides, avalanches, debris flow, flash floods, glacial lake outburst floods, earthquakes and thunderstorms. This is because of Nepal's fragile and complex geological setting, physical diversity and climatic variation (ICIMOD, 2021).

Nepal's three geographical regions — Himal, Hill and Terai — are vulnerable to separate disasters and crises. In the high mountains, there are the risks of avalanches, snowstorms and GLOFs, while the middle mountain is likely to witness hailstorms, landslides and droughts. In the hilly region, there is a growing risk of rainfall, landslides, thunderbolts and fires; Siwalik is vulnerable to forest fires, thunderbolts, floods, and landslides. Meanwhile, Terai is vulnerable to floods, heatwaves, cold waves, epidemics, and fire. So, preparations should be made accordingly.

Nepal is experiencing unprecedented disasters, prompting authorities to take the climate crisis more seriously and urgently than before. Many disasters that took place over the past years are attributed to climate change. On June 14, 2021, debris flow in the Upra valley of Jomson ravaged many villages and disrupted road access to the area.

Likewise, on November 15, 2021, an avalanche in the forest of Thasan Rural Municipality-2 of Mustang district swept away

more than 125 yaks and injured some people. Both of these incidents were attributed to climate change, and such disasters are likely to become more intense and frequent in the coming days. Though the Melamchi flood mentioned in the beginning cannot be completely attributed to climate change, it was certainly one of the prominent factors that caused the disaster. The Melamchi disaster was a result of multiple factors and processes such as weather conditions, processes in the high altitude glacial environment among others (ICIMOD 2021). According to ‘Disaster Risk Reduction and Management, 2021,’ published by the Ministry of Forest and Environment, about eight percent of Nepal is flood-prone and about 59% of its land area is landslide-prone.

On average, as the report states, about 56% of Nepal is affected by droughts, with an average drought lasting 3.4 months (102 days) a year. Based on the available data on losses and damage from different climate-induced disastrous events between 1971 and 2019, about 647 people on average die from climate-induced disasters in Nepal each year. Another report titled ‘Climate Change Scenarios in Nepal,’ prepared by the Ministry, says annual precipitation is likely to increase by 2-6% in the medium-term and by 8-12% in the long-term (Annapurna Express 2022).

Similarly, the average annual temperature is likely to rise by 0.9-1.1 degrees Celsius in the medium-term and 1.3-1.8 degrees Celsius in the long-term. The temperature rise would directly affect the Himalayan region (Annapurna Express 2022). The possible glacier outbursts are another factor, which has a high potential of causing large-scale disasters.

A 2020 joint study by ICIMOD and UNDP identified that 47 potentially dangerous glacial lakes (PDGLs) lie in Koshi, Gandaki, and Karnali river basins of Nepal and in Tibet. The study found 3,624 glacial lakes in the three basins, of which 2,070 lakes are in Nepal, 1,509 lakes in the Tibetan, China, and 45 lakes in India (ICIMOD 2020). The final report says: “As many as 1,410 lakes are larger than or equal to 0.02 km, which are considered large enough to cause a glacial lake outburst flood (GLOF). Lakes associated with a large, retreating glacier and steeply sloping landforms in their surroundings are susceptible to a GLOF.”

ICIMOD Report (2019) says: “As the Nepal earthquake in 2015 laid bare, mountain cities and settlements are vulnerable to disasters — from landslides and erosion to debris flows and floods. As the number and

intensity of these disasters increase, more than one billion people are at risk.”

In Nepal, climate-induced disasters cause around 65% of all disaster-related annual deaths. Nepal has experienced at least 24 GLOF events in the past, according to the report. Of these, 14 are believed to have occurred in Nepal itself, and 10 were the result of flood surge overflows across the China-Nepal border (Tibet Autonomous Region). The eastern Himalayas are the hotspots of GLOF hazards. Mostly GLOF is concentrated in Province 1, Bagmati Province, Gandaki Province, Karnali Province, and Sudurpaschim Province (MoFE, 2021).

The Terai region has its own set of climate change-related vulnerabilities. A strong “tornado” hit Bara and Parsa districts on March 21, 2019, killing 30 people and injuring 1150 others. As many as 2890 families were rendered homeless.

Why Climate-induced disaster is a threat to security

As stated above, many countries have prioritized climate change as a core element of their development, economic, security and foreign policy documents. In our context, there has not been much realization among the politicians and policymakers that the climate crisis is reshaping all aspects of the society.

Nepal government came up with National Security Policy in back 2016, as mentioned above, which for the first time touched some issues relating to environmental security. The national document mentions the possible security threats that emancipates from the climate-induced disasters. The problems such as massive and unmanaged exploitation of natural resources, uncontrolled growth of population, spread of endemic diseases, food insecurity, and lack of drinking water are on the rise and problems have emerged in supply side due to international, regional and local conflicts and instability (NSP, 2016).

The document further states that disasters emerged by human-induced problems such as unmanaged settlement, forests degradation, pollution; natural disasters such as earthquake, soil erosion, flood, landslide, and water submergence. Similarly, the document talks about the unmanaged and irregular exploitation of natural resources, climate change and environmental loss, and chemical, radiation and technology-induced disaster.

The document, however, falls short of making a clear vision of how climate change has security dimensions. A big-scale disaster at any point could create big security threats. For instance, damages of critical projects like the Melamchi project could create a water crisis which thereby creates security challenges.

Big floods and landslides could sweep the big hydropower projects, prompting an energy crisis. In many countries, floods and energy crises have led to massive migration thereby creating political and social instability which cannot be ruled out here. Due to Nepal's geography, vital security installations could be destroyed by the extreme weather events making it difficult to mobilize the army. And failure to mobilize the army could create big security problems. Nepal's snow-capped mountains are turning bare, adversely affecting the country and the entire South Asian region, thereby amplifying food insecurity, violence and migration in the Himalayan basin area (Rawal 2021).

Due to a monsoon pattern shift, the area suffers from droughts, inundation and landslides, the increasing natural disasters demand extensive humanitarian assistance and disaster relief missions, compromising military preparedness for core military operations (Rawal 2022). Climate change and global warming are caused by deforestation, loss of biodiversity, and melting of glacial ice etc. which are global environmental problems today (Bhandari, 2022).

Such environmental issues keep threatening the security of countries around the world and there are a number of national and transnational issues affecting nations, regions, and the entire globe as a whole: that is why this kind of security threat is included in the Global Commons, Bhandari argues (Bhandari, 2022).

Environmental Security issues need to fit into our national planning because it is the most important issue to Nepal and regionally within South Asia. There is a need for institutional reform. For instance, there is a National Security Council which consists of members from Home, Foreign Affairs and Finance but not representatives from the Ministry of Environment and there is a need to include representatives from the Ministry of Environment as well to mainstream (Rimal, 2022).

Though the issue of climate change has been mentioned in the national security documents, as mentioned earlier, there is no mention of climate change in other government documents. Nor is there any coordination

between the Environment Ministry and security agencies. Not only in national security and strategies, the issue of environmental security should be placed in all government policies, strategies and procedures (Upreti 2021).

Failure to manage the natural resources properly could lead towards conflict posing challenges to national security (Upreti 2022). Dozens of policy documents prepared by the Ministry over the past few years have not mentioned anything about the security implications of climate change and there is a need for further academic study to explore the linkages between environmental security and security (Upreti 2022).

In 2019, the Ministry of Forest and Environment came up with a new climate change policy which mentions disaster risk reduction and management but it falls short of highlighting the security aspects of climate change. Loss or damage to be caused by climate-induced disasters to lives and property, health, livelihoods, physical infrastructures and cultural and environmental resources will be reduced (MoEF, 2019). Apart from the impact on society, an increase in the frequency and intensity of extreme weather events directly impacts military assets and undermines military readiness (Niraula, 2011). The climate change Policy 2019 talks about the food, energy, water and other wide-range of security but remains silent on how all these crises could pose a threat to national security.

Preparing NA to tackle the effects of climate change

Due to the above mentioned factors, our security deployment in the mountainous, hilly and Terai region are always vulnerable to large-scale disasters. The increasing cases of avalanches, landslides and flood has increased the risks of impacting the both defense and civilian infrastructures. The possible outbursts of glacier lakes as mentioned above provides another vivid example of national security and climate change. In 2016, NA drained water from the Imja glacial lake to a safe level.

Under the guidance of the Nepal Army, about 40 personnel working in high altitude regions were selected for the pilot project located at an altitude of over 5,000 meters. The involvement of some 100 high altitude workers from the local areas made the task a bit easier (My Republica, 2016). The glacier lake outburst can sweep the downstream human settlement if the actions are not taken on time. NA still falls short of

resources and trained manpower to deal with such a situation.

Among others, disaster management is a key responsibility that the Nepal Army has been taking charge of for the long time. The primary role of NA is to conduct search and rescue missions, medical assistance and evacuation, air rescue and mass evacuation and flood control (NA, 2022). NA has historically provided vital relief during floods, earthquakes, avalanches, fires, landslides, air and other transportation disasters (NA 2022). As Nepal government places NA at the forefront of any disasters and a leading and inseparable agency it is imperative to deliberate on how equipped and prepared NA is to undertake the tasks.

Considering the worst effects of climate change, NA has made some preparations but it falls short of resources. The total number of concrete infrastructure of NA is 4060 out of which mud infrastructure is 1449 and there are still 111 bunkers where army personnel live. As a preventive measure, NA is planting trees in the flood and landslide-prone areas. The construction sites are being selected considering the possible natural disasters. NA has intensified the tree plantation and has adopted a policy of planting 25 plants in the compensation of one tree. Similarly, environment friendly procedures have been implemented. Similarly, an anti-lightning system has been implemented. But NA lacks sufficient resources to deal with possible climate-induced disasters.

NA is the only organization which can handle the large-scale disasters in the coming days as it is engaged both on preventive measures and in the areas of preparedness (Silwal, in person communication, 2022). Due to the effects of climate change, the intensity and frequency of natural disasters are sure to increase so NA will have to face an even greater crisis in the days to come. First, policy makers should pay attention to how to make our military installations safe and secure from disasters.

For example, large-scale climate disasters can sweep the army barracks and other infrastructures making it difficult to mobilize the army personnel. Some of the resource allocation agreements and migration policies in India, and other parts of South Asia, are not comprehensive enough to deal with the added impacts of climate change (David Antos, 2017). With these points of tension already threatening the region, the added stressors of climate change could result in several intrastate and interstate security risks (David Antos, 2017). The more climate-induced disasters demand higher cost of military infrastructure maintenance, training and availability of more equipment and technologies. In our

case, there have not been assessments to determine the required response to growing threats.

Conclusions and recommendations

The severe effects of climate change are already visible everywhere. As mentioned above, we have already started facing unprecedented natural disasters which are causing the loss of life and property. NA, being at the forefront of rescue and rehabilitation efforts, is playing a pivotal role in the preventive stage and response. But government agencies are not well prepared to deal with the situation nor has there been any coordination. There is a need for effective institutional arrangements to ensure coordination among state institutions. The world is failing to limit the temperature rise to 1.5 degrees. The planet will grow dangerously hot so policymakers need to implement radical ways to respond to possible crises. First and foremost, this issue should incorporate all vital policy documents of the country and law. There is no presence of NA and other security agencies in the national and international climate framework and negotiations.

For instance, we can hardly see the presence of those agencies in the ongoing discussions on the effects of climate change in Nepal. Another immediate task is to build strong and resilient military barracks in order to save them from landslides and floods. Many NA barracks in the hilly and mountainous region remain vulnerable to climate change. Still, thousands of our military personnel live in the bunker and weak infrastructures. The current investment on disaster management is not sufficient so that NA should be equipped with high-technology to cope with the security threats that emancipates from the effects of climate change.

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