

Conflict-Sensitive Climate Change Adaptation in Nepal: An Analysis of Climate Resilience Policy Frameworks

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Abstract

Nepal is experiencing climate change and its impacts on the ground. The effects of climate change will exacerbate the vulnerability of people and communities to varying degrees. In some situations, it causes extreme disruption to cope with climate change impact and render livelihoods of vulnerable people. In countries like Nepal, climate change has exacerbated the social, economic, and political vulnerabilities. This study assesses the status of integration of resilience components of climate conflicts in Nepal's policy frameworks. Furthermore, the study focuses on the conflict dynamics of climate change impact to observe the fragility risk. A review of the federal government's policy framework and a semi-structured interview with the policy experts revealed that components of resilience are poorly integrated, especially peacebuilding. The policy instruments do not attribute climate change to social vulnerability and conflict dynamics. Failure to incorporate the conflict-sensitive approaches in the climate policy frameworks can lead to potential conflict or advance climate conflict instead of resilience. Many peacebuilding initiatives have been recognised in natural resource management practices however, it requires similar integration in climate change adaptation actions to enhance resilience across climate change to develop community cohesion and rebuilding trust in the government together. Finally, the study concludes that climate change policy frameworks should be taken as a peacebuilding strategy by addressing conflict risks associated with climate change through conflict-sensitive policy measures considering climate change as a risk multiplier.

Key words: Adaptation, climate change, conflict, peacebuilding, resilience.

INTRODUCTION

Climate change is becoming a major concern to humankind. It has been universally accepted that the global climate is changing, posing threats to humankind's wellbeing and the earth's natural system. It is recognised as a major threat to rural communities, which are dependent on natural resources (Maharjan *et al.* 2011). Conflicts, aggravated by climate change include impacts on food and water supply, increased competition over natural resources, loss of livelihoods, climate-related disasters, migration and displacement (Rüttinger *et al.* 2015). Failures of governance result in a lack of resilience to climate change, which disproportionately affects the vulnerable

and marginalised groups (Smith and Vivekananda 2009).

Nepal is experiencing climate change and its impacts on the ground. The latest study shows that Nepal's maximum temperature has increased by 0.45 °C per decade (0.045 °C per year) from 1976–2015 (Thakuri *et al.* 2019). The earlier report indicates variations in temperature wherein number of warmer days and nights are increasing while there is a decreasing trend in the number of cooler days and nights from 1971–2014 (DHM 2017). The 2020 Global Climate Risk Index report (Eckstein *et al.* 2020) ranks Nepal in the 9th position in terms of extreme weather events during the period

1999-2018. Furthermore, Nepal was ranked in 33rd position in 2017 (FFP 2017) and 49th position in 2020 (FFP 2020) out of 178 countries based on the Fragile State Index by the Fund for Peace.

The projected changes in Nepal's climatic variables patterns show that the future climate will be warmer with a high uncertainty level in precipitation. The change will vary by season and geography, much in rainfall, leading to a high degree of uncertainty of future rainfall with more extreme events. It is expected to affect the development sectors, such as water, disaster management, energy, biodiversity, agriculture, health, urban planning, livelihoods, and others (MoFE 2019)

A significant section of Nepal's economy and people's livelihoods depend on climate-sensitive natural resources and ecosystem services. These resources are susceptible to the effects of climate change. Nepal's vulnerability to climate change is compounded by socioeconomic and environmental factors, including increasing pressure on natural resources (water, land and forest), poverty, limited institutional capacity, population growth, poorly or improperly planned infrastructure, limited access to extension services, and very notably lack of consideration of the risk of ongoing climate change in development programmes and actions (NPC 2019).

States and societies are increasingly under pressure due to several shocks and stressors, including population growth, unequal consumption, resource constraints, and political unrest. A research by (Nagarajan *et al.* 2018) has pointed out climate change as a "threat multiplier" that is likely to increase instability. There is a little doubt that it will worsen the already fragile situations, making it harder to promote peace, adaptation, and sustainable development. Climate impacts are intensifying crises and conflicts around the world (Scherer and Tanzler 2018). Climate change worsens existing social, economic, and environmental risks that can fuel unrest and potentially result in conflict

(Rüttinger 2017). Stabilisation efforts often do not consider the impacts of climate change (UNEP 2019). Simultaneously, state fragility hinders efforts to climate change adaptation (CCA), particularly among the most vulnerable communities. In these struggling communities, climate change' effects could adversely affect political stability, food security, economic growth, and human mobility (adelphi *et al.* 2019b).

Fragility is defined as the combination of exposure to risk and insufficient coping capacity of the state, system and/or communities to manage, absorb or mitigate those risks. Fragility can lead to negative outcomes including poverty, inequality, displacement, and environmental and political degradation (OECD 2020). Carment *et al.* (2007) and Teskey *et al.* (2012) further define fragility as the inability (whether whole or partial) of a state to fulfil its responsibilities as a sovereign entity, including a lack of legitimacy, authority, and capacity to provide basic services and protect its citizens. Single-sector interventions are insufficient to prevent climate change effects from increasing fragility or fragility from weakening climate resilience due to the complex structure of climate-fragility concerns. The community can avoid associated risks while realising considerable co-benefits by integrating activities across the CCA, development, and peacebuilding sectors (Rüttinger *et al.* 2015).

The global discourses on climate and fragility have established climate change as a threat multiplier, where climate change has been seen as a factor that "exacerbates existing risks and worsens already fragile situations, making it harder to promote peace, adaptation, and sustainable development" (Nagarajan *et al.* 2018). Climate change has exacerbated Nepal's social, economic, and political vulnerabilities (Pandey *et al.* 2020). The political and social changes over time in Nepal are taking place at a much faster rate than the visible effects of climate change; therefore, efforts to analyse the climate-

fragility nexus have to consider social, economic, and political vulnerabilities. Climate change risks and fragility are interconnected, so their responses must also be interconnected (adelphi *et al.* 2019 a,b). The United Nations Environment Programme (UNEP)/adelphi fragility framework suggests that the following three key sectors - sustainable livelihood, climate adaptation, and peacebuilding, have to be considered to strengthen the resilience of states and societies to climate-fragility risks. States and societies experiencing fragility have less adaptive capacity to climate change and shortfall in adaptive capacity makes them more vulnerable and increases the impact of climate change. Thus, increase in additional pressures can push a state and society further into fragility (Houghton 2012; Adger *et al.* 2014). Some states and societies will prove to be resilient to the most severe climate change consequences, while others will verge on collapse with a significantly low impact. Thus, the risk assessment is independent of the influence of climate change and instead, it begins with the context of fragility (Rüttinger *et al.* 2015). This study was conducted keeping climate change at the center and fragility factors (factors that fuel conflict) as key elements of analysis associated with the climate change policy instruments.

Competition over shrinking natural resources and mass abandonment of locales, are some of the practices that are susceptible to conflict and displacement. Smith and Vivekananda (2009) has defined adaptive capacity as the ability to adapt peacefully and successfully. Linking CCA and peacebuilding can increase resilience to climate-fragility risks. Strengthening social cohesion within and between communities and local institutions and developing inclusive and effective governance would make it possible to manage climate shocks peacefully. Social cohesion and improved governance can mitigate the factors that exacerbate fragility and conflict at times of stress and mitigate the impacts of climate change (adelphi *et al.* 2019b).

STUDY APPROACH

This study has considered the three-pillar theory of change on Climate Change Fragility to Resilience (Figure 1). Resilience to climate-fragility risk requires integration of CCA, peacebuilding, and sustainable livelihood. Methodology for climate-fragility risk and resilience assessment was adopted from the UNEP/adelphi guidance note. Three pillars stand out in terms of strengthening the resilience of states and societies to climate-fragility risks (adelphi *et al.* 2019 a,b).

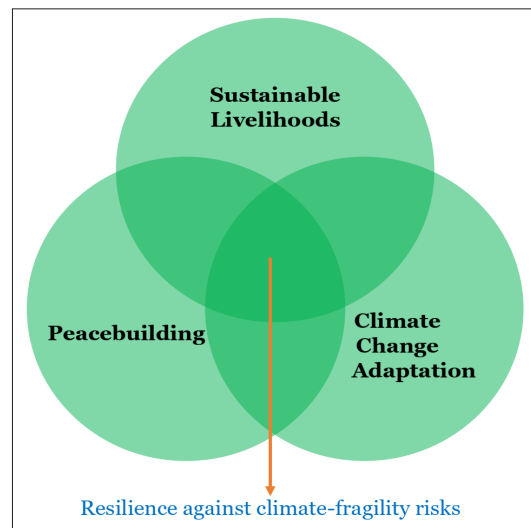


Figure 1: Conceptual framework of the study (adelphi *et al.* 2019 a,b)

A combination of various approaches was used in the study that was mainly based on evidence, research knowledge, and expert opinion. A plethora of literature was reviewed that included government policies, acts, guidelines, strategies and frameworks related to CCA and disaster risk reduction (DRR). Key informant interviews were conducted among experts working on CCA, representing key organisations to understand their knowledge, experiences, and institutional memory regarding implementing climate policy frameworks (Springate-Baginski and Soussan 2002). A total of

18 semi-structured interviews were conducted, involving participants from the central level (climate change experts from academia, ex-governmental officio, natural resources and policy analysts, national DRR & CCA project managers) and the local governments (mayors, planning officers, and disaster focal persons).

The policy analysis process involved orientation and steps suggested by Kraft and Furlong (2018). This approach (Figure 2) was applied to link with the resilience framework developed by UNEP and adelphi. Kraft and Furlong (2018) has recommended a professional-review and analysis method for examining components of public

policy and the policy process to study the causes and consequences of policy decisions.

Qualitative data obtained from the interview was analysed using content analysis (mainly discourse analysis). In general, qualitative data were recorded, organised according to the themes and analysed based on result outputs. The analysis process involves breaking down, examining, comparing, conceptualising, categorising data, and presenting them in graphical and statistical formats. As required, narrative analysis of primary qualitative data has been reformulated considering each case and the respondent's different experiences.

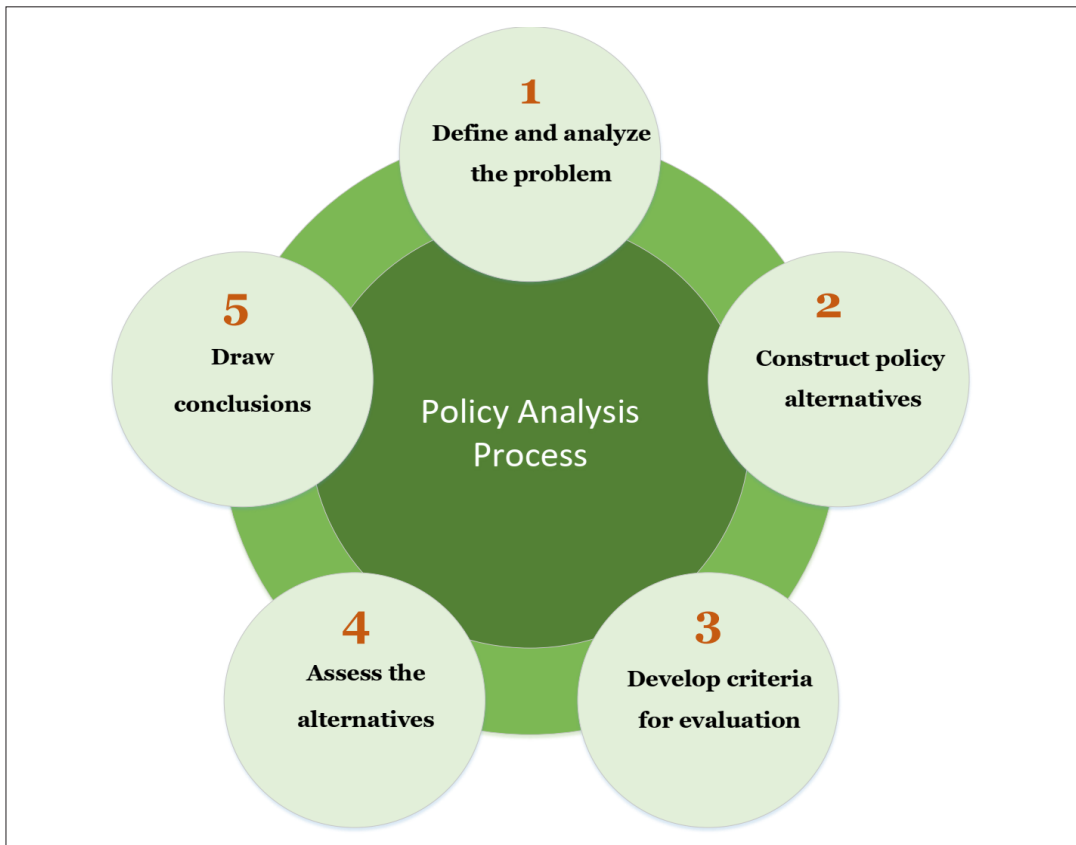


Figure 2: Policy analysis approach adapted from (Kraft and Furlong 2018)

RESULTS AND DISCUSSION

Climate Resilience Policy Frameworks of Nepal

The policy framework that directly and indirectly contributes to resilience building was analysed by considering CCA, sustainable livelihood, and peacebuilding in the policy instruments. The different policy frameworks of Nepal are discussed below.

National Adaptation Programme of Action (NAPA), 2010

The NAPA document was prepared as a strategic tool to assess climate vulnerability and systemic responses by CCA measures through a consultative process. The NAPA has defined Nepal's CCA programmes' coordination structure and implementation modalities as a first systematic government response to climate change. The document emphasises on promoting community-based adaptation, disaster management, and enhancing vulnerable groups' adaptive capacity by empowering vulnerable communities and promoting climate-smart urban settlement. The strategies and actions have targeted to increase the community's adaptive capacity through livelihood support, governance, collective responses, improved service delivery mechanisms, access to technology, and finance.

Adaptation and livelihood needs of climate change vulnerable communities are highly focused on documenting thematic adaptation and combined activities. The document has raised resource depletion and degradation issues; however, its impact on resource competition and inequitable conflict sharing is not addressed; instead linked with the adaptation need and capacity of the climate-vulnerable community.

Environment Protection Act, 2019

The Act envisages preserving every person's constitutional right to live in a safe and healthy environment, with proper use and sustainable management of natural resources. Provisions related to CCA and mitigation planning is stated in article 23-28 of the Act.

To avoid adverse impacts and risks of climate change, the federal Ministry, provincial Ministry, and local level can implement an adaptation plan at the national, provincial, and local levels, respectively. In adapting plans, special priority shall be conferred to the marginalised and the inhabitants of those geographical areas that have become more vulnerable to climate change. Also, the local community's participation shall be established in the management of protected areas and heritage sites and in sharing the benefits resulting from the management.

Sustainable livelihood and peacebuilding are not explicitly coded in the Act; however, proper planning and implementation of the adaptation plan can resolve the conflict dynamics if identified and addressed by concerned agencies. The Act has the provision of an environment protection fund to manage climate change and other environmental issues. There is also an arrangement for environmental protection and climate change management national council chaired by the Prime Minister for carrying out activities stipulated in the acts.

National Forest Act, 2019

The National Forest Act, 2019 is concentrated on consolidating the prevailing laws on forests to manage different forest types and contribute to national prosperity by protecting, promoting, and utilising the wildlife, environment, watersheds,

and biodiversity. Relating to the climate change provisions, Article 44 of the Act describes the use and distribution of dividends derived from CCA and storage and mitigation of carbon emission; the management shall be made as determined by the Government of Nepal. The Act is directed from the forest management perspective that can address specific legislation for forest management rather than other conflicts in natural resource management. There are no other specific provisions in the policy that address the adaptation need of climate-vulnerable; however, community forest users can carry out forest-based enterprise and eco-tourism activity with prior approval from the Division Forest Office. This provision of the policy offer climate vulnerable community to diversify their livelihood choices though forest-based activities.

Land Act, 1964 (Eighth Amendment, 2020)

To accelerate the country's economic development, the Land Act 1964 is framed to bring improvement in the standards of living of the actual peasants dependent on land. It is expected to forward equitable distribution of the cultivable land and make easily accessible the necessary know-how and resources on agriculture and keep up the general public's convenience and economic interests by encouraging to make a maximum increase in agricultural production.

The Land Act (Eighth amendments), 2020 have stipulated a provision for providing land to landless squatters in the locations they've been residing in for over a decade. According to Section 52 of the Act, landless squatters, who have been using government or unrecorded land, shall be entitled to a certain parcel of such land or any other government land. In such case, it can resolve the ongoing tension of land issues at the local level and benefit the poor and vulnerable households living in informal settlements. Therefore, execution of the Act is expected to expand livelihood and

adaptation opportunities with access to land and minimises the prolonged issues of land ownership.

Land Use Act, 2019

The Government of Nepal has endorsed the Land Use Act 2019 to ensure that the land is used correctly and managed and that those set aside for one purpose is not used for the other. The Act has been introduced based on the condition of land, population growth, requirements of land for various purposes like food and habitation, and the need for economic development and infrastructure building, among others. The Act has introduced the novel concept of land bank for the first time. The bank will pool the land and lease it to needy people for different purposes. Provided with the extensive authority to the local government, local government can maximise the use of land for poor and needy to sustain their livelihood. Provision of land bank will further assist landless and vulnerable farmers to expand their farming activities commercially in the fertile land. Thus, local government can facilitate to promote adaptation and livelihood opportunity of their community. Realising the need based allocation of the land resources will abate disparity in land capture and use. Though it requires local government initiation to localise the policy provisions based on local settings and resources.

Local Government Operation Act, 2017

Local Government Operation Act, 2017 is framed to develop local leadership by strengthening the local governance system at the local level to institutionalise legislature, work ethic, and innovative practices to govern local government. The local level is also responsible for implementing and monitoring laws, acts, and policies related to environmental protection to ensure fewer environmental impacts at the local level.

The Act further highlights the local government's role in disaster risk mapping and fund establishment for disaster management. The Act envisions to identify, map, and replace

communities that are vulnerable to disasters. The Act has explicit disaster management provisions, environment conservation and protection, land management, and natural resource management in joint responsibility of federal and provincial government. However, special attention to climate change risk and required adaptation intervention measures are overlooked by the Act. Nevertheless, local government can work in soil conservation and watershed management activities to enhance community adaptation and livelihood. Thus, the local government has the opportunity to frame policies related to disaster management, an extension of agriculture services for livelihood diversity, and expected to resolve many issues of natural resource management disputes if capable of framing and allocating the resources for policy execution.

Disaster Risk Reduction and Management Act, 2017

The Disaster Risk Reduction and Management (DRRM) Act, 2017 aims to coordinate for effective management of disaster related activities across all level of government and agencies. The Act is centered on formation of disaster management committee at the national, provincial, district and local level for planning mitigation measures and thus mobilising human resource and fund to mitigate disaster risk and action for post disaster recovery need. Components of climate-fragility resilience are not coded in the Act; however, provision of disaster and emergency fund and committee can resolve the crisis of post disaster relief and response activities.

National Forest Policy, 2019

The National Forest Policy, 2019 aims to enhance sustainable forest management and improve all forest productivity types. The policy's vision is to manage the forest, conservation areas, watersheds, biodiversity, flora, and fauna in a sustainable and participatory approach for the generation

of forest products to improve productivity and environmental services.

The goal and objectives of policy have not prioritised the issues of climate change. The policy has proposed a plan to mitigate human-wildlife conflict in the protected area periphery through proper wildlife corridor management. However, the prevailing issues of forest resource sharing are not described in the policy. For sustainable management of protected areas, the policy has adopted participatory planning and conservation plan implementation. While managing forest resources, access to benefits of forest workers, management community, women, indigenous groups, Dalit, Madhesi, Tharu, Muslim minority, differently able, deprived, and backward communities will be enhanced by ensuring their rights. To generate employment opportunities from forest resources, the policy has prioritised promotion of forest-based enterprise and ecotourism.

National Land Policy, 2019

The Policy is a milestone in addressing long-standing problems such as recognition of informal tenure and equitable access to land for landless, small-holders and informal settlers in the Nepalese society. Drawing on the Constitution of Nepal, 2015 to strengthen development and ensure that consideration is given to key global and regional frameworks such as the Sustainable Development Goals (SDGs), the National Land Policy provides a strong foundation for good land governance.

The National Land Policy is underpinned by an inclusive agenda that covers the land rights of women and vulnerable groups, including rehabilitation of the landless, squatters and informal tenure-holders for improved housing; access to land and security of tenure; tenure security for landless peasants for farming; women's access to land ownership; and the optimum use of land for sustainable housing. It is forward looking and considers key environmental challenges related

to food security, infrastructure development and the application of fit-for-purpose techniques in land administration.

The Policy has addressed the concern of landless people. In doing so, it has stressed on providing access to land resources, facilitating rebates in land registration charges to targeted beneficiaries' groups, and administering land to landless squatters for one time. The policy has recognised environmental preservation and climate change risk mitigation as an approach for enacting the policy, but it does not clarify on how the implementation will help to minimise the risk of climate change. The document does however, go into further detail about disasters as a risk component. Like there are agenda on spotting natural disaster hotspots in the land use map and adopting relocation of settlement and conservation of such area. Thus, the Policy has supported enhancing livelihood and adaptation of landless dwellers and minimising the risk of disaster-prone residents.

National Environment Policy, 2019

The National Environment Policy is adopted to achieve Sustainable Development Goals (SDGs), instructing relevant laws and policies by maintaining a balance between environment and development, fulfilling the international agreement, cooperating and coordinating environmental management between non-governmental organisations (NGOs), government, and private and public institutions. The National Environment Policy aims to mainstream pollution control and other environmental issues. It prioritises environmental justice by applying penalties for environmental polluters and compensating the victims. The Policy is entirely grounded to address the issues of environment and environmental management. However, provisions on climate change and interrelated issues of vulnerability is lacking in the policy.

Environment Protection Regulation, 2020

Relating to climate change, Rule 24 of the Regulation delineates the authority to the Government of Nepal, provincial government, and local level to articulate and prioritise plans on climate change management based on the evidences generated. Similarly, the local level is accountable for reporting climate adaptation activities to respective provincial ministries and provincial governments to the respective federal ministry. The federal ministry is entitled to frame and implement a national adaptation plan every ten years. The Regulation does not prescribe a specific modality of CCA planning and implementation. Therefore, incorporating the other climate-fragility resilience components is directed by the ground reality of climate change issues and vulnerability context, socio-political interest, resource availability, and planning process by the local government.

Local Adaptation Plan of Action (LAPA) Framework, 2019

In Nepal's changed governance structure, the LAPA framework falls under federal, state, and local governments' purview related to the entire climate change-related policy measures. The LAPA framework's goal is to execute development work at the local level to build a resilient climate society and mainstream CCA and DRR and management in the overall process of resource management. In this context, the LAPA framework is based on the theoretical concept that CCA and DRR and management should be mainstreamed in the local level's overall development process as part of the national policy on climate change. According to the framework, the federal, provincial, and local governments are entitled to mainstream CCA and DRR and management at the local level and to address specific problems of vulnerable households, groups, and communities.

The framework has identified local institutions as the primary stakeholders for implementing the local adaptation plan, though coordination with the federal and provincial governments to leverage other resources, is required. In relevance to the components of climate-fragility resilience, sustainable livelihood, CCA, and peacebuilding, the LAPA framework is entirely grounded on the concept of CCA and DRR and management at the local level. Instead of addressing specific needs of the community, the framework guides the local government to integrate and mainstream CCA and DRR and management in the thematic sector of the local government development process. However, some clauses suggest building a climate-resilience livelihood system of climate-vulnerable households and communities. Natural resources and ecosystems at risk of climate change, especially watersheds, river systems, and landscapes, can be identified, and CCA and DRR and management can be implemented to make them climate-resilient. Proper resource management to attain a resilient community will eliminate the risk of resource competition posed by climate change. When the vulnerable community's adaptation needs are not addressed on time, they will be deprived of services and facilities they are entitled to; thus, adverse effects will continue to increase.

National Climate Change Policy, 2019

The National Climate Change Policy, 2019 aims to mainstream climate change issues in policies, strategies, development plans, and programmes at all levels and thematic areas. The Policy's main motto is to 'enhance adaptive capacity and build ecosystems' resilience at risk of adverse effects due to climate change'. The policy ensures sustainable environmental services by developing a climate-resilient ecosystem and building a climate-friendly community. It emphasises addressing marginalised, incapacitated, and disadvantaged groups and creating a healthy environment by reducing the adverse effects of climate-induced disasters on human health and reducing loss or damage caused by climate-induced disasters.

The community's high dependence on natural resources for livelihood has made them more susceptible to climate change. Therefore, the Policy adopts a climate-friendly agriculture system to improve the livelihoods of a vulnerable community. The policy takes on a strategy to minimise the loss and damage caused by climate-induced disasters to lives and property, health, livelihoods, physical infrastructures, and cultural and environmental resources. The Policy highlights facilitating livelihoods by establishing good governance and gender equality and social inclusion (GESI) to formulate policies and implement climate change programmes. Policy features the execution of climate-resilient livelihood programmes to households and communities at risk of adverse impacts of climate change. Climate change policies have highly prioritised the issues of CCA and climate-resilient livelihood. Though there is no specific concern of conflict resolution in the policy, preference for climate adaptation, climate-resilience livelihood, and resilience-building can contribute to peacebuilding.

POLICY FRAMEWORKS AND CONFLICT DYNAMICS

Most of the policy instruments do not consider social vulnerability and conflict dynamics. It fails to examine the integration of conflict resolution that can contribute to the fragility resilience. It is imperative to include vulnerable groups in adaptation policy to build their social resilience and adaptive behaviors. More importantly, to empower them to develop their livelihood choices, reduce the climate risk, minimise the conflict threats, and strengthen peace and harmony.

Climate change policy frameworks need special attention to the vulnerable community living in specific regions like buffer zone or proximity to the protected areas, deprived of mega-development projects, and limited livelihoods, as such regions are governed by strict environmental norms, like Buffer Zone Management Rules. Climate Change Policy provisions have established thematic or

sector recognition. Considering the geography of the country, specific needs of vulnerable people are missing; however, if the Climate Change Policy

is taken as an overarching policy to guide provincial and local governments, it remains questionable to localise or contextualise the Policy.



Photo 1: Agriculture field in Nepal. Climate change may lead to greater seasonal variability of the water resource. Water resource scarcity or disproportionate distribution for irrigation can lead to conflict between the communities (Photo by S. Thakuri 2015).

Sector-specific policies like land, forest, environment, and disaster risk management have indirectly addressed the need to minimise potential conflict risk; however, climate change is not identified as a threat multiplier. For instance, the Land Act can resolve the ongoing tension of land issues at the local level and benefit the poor and vulnerable households living in informal settlements. The policy documents (Acts/Regulation) framed by the provincial and local

government do not reflect the provisions of national policies like land policy, environment policy, forest policy, and climate change policy due to the non-binding provisions; however, the explicit role of each government is defined in the policy. Local government policy instruments are also highly influenced by the federal ministry's draft policy sample; therefore, policies are not framed to reflect the local scenario.

Implementation of the Climate Change Policy is observed at the federal level only, which is influenced by donor funding and international treaties and convention. Therefore, downscaling of the Policy and strengthening institutional development of climate governance cannot be the prioritised need of provincial and local governments. Also, policy experts suggest that at the present context, it would be wise to mainstream climate change as a cross-sectoral issue at local level development policy instead of demanding for a separate climate policy or institution. Since the federal government entirely depends on foreign aid to operate and frame climate actions, it would merely be an addition to the existing local government policies. The Environment Protection Act, 2019 has provided a Council on Environment Protection and Climate Change Management chaired by the Hon'ble Prime Minister. The council's role was inactive despite the provision in the Environment Protection Act, 1996. Although the council's main task is to coordinate the policy activities related to environment and climate change at the national level, environmental management seems to have been overshadowed by the inability to hold regular meetings.

Provisions of the Forest Act contradict with the provisions of the Local Government Operation Act, which has allowed 10 per cent of royalty earned by selling forest products to local governments (reserve fund at the local level). In addition to the forest law, provisions of laws related to the registration of enterprises also contradict the Local Government Operation Act. However, the government has decided to waive off 15 per cent tax imposed on community forest users' groups on the sale of Sal (*Shorea robusta*) and Khayar (*Acacia catechu*) timbers. Similarly, the modality of sharing income and resources between the forest user groups and local governments needs to be sorted out. Furthermore, whether or not the Community Forestry User Groups (CFUGs) should be imposed

tax burden has become debatable. While the CFUGs are demanding rights to make decisions regarding the utilisation of income generated from forest management, the federal policy aims to collect the tax. Further, tussle between local government (rural) municipalities and CFUGs over the stake of the community's revenue will pose a significant threat to institutionalising federalism.

Forest land is degraded by floods or encroachment every year, placing the forest-dependent community's livelihood at risk. The jurisdiction of forest management falls under the provincial government in such case; the local government might not be willing to invest in the forest like - providing public land for expanding forest area, providing support in the afforestation activities or restoration of forest ecology damaged by climate change and other disaster event. The Local Government Operational Act, 2017 has described forest management as a shared responsibility between the governments; however, the local government has not framed any policy, nor institution, to manage forest resources.

The Local Government Operation Act has explicit provisions on disaster management, environment conservation and protection, land management, and natural resource management in joint responsibility of federal and provincial government. However, special attention is given to climate change risk and required adaptation intervention measures in the Act. Local government representatives believe that they do not need separate funds and policies to address climate change adaptation or associated risks of climate change. There is a claim that they have fully internalised and exercised the Act, which has positively addressed Environment and DRR Act and institutions need to implement them. Moreover, a community development programme executed by local government has addressed the local community's livelihood that can best build the adaptation capacity. The local governments rely more on fiscal transfers from federal and provincial

governments. Unless the local government does not have sufficient funds for development activity, addressing climate risk could only be boosted by external fund support.

Rural livelihoods are exceptionally vulnerable to climate change and variability since they rely heavily on farming and natural resources base. People and societies may struggle to deal with their lives by modifying or diversifying, adjusting their ways of living, or moving away from their homes without proper institutional support like moving for a job to India even at times of COVID-19 Crisis. However, the risk persists if climate adaptation fails to entail significant social, cultural, and economic transformations. Likewise, poorly structured adaptation and mitigation programmes will intensify and promote disparities in societies.

CONCLUSIONS

The policy instruments framed at the federal level do not consider social vulnerability and conflict dynamics. It fails to examine the integration of conflict resolution that can contribute to fragility resilience. Many peacebuilding initiatives have been recognised in natural resource management practices however, it requires similar integration in CCA actions to enhance resilience across climate change to develop community cohesion and rebuilding trust in the government together (Pandey *et al.* 2020). Climate change-induced resource scarcity may weaken social cohesion and local safety nets and increase the affected community's vulnerability triggered by decline in access to resources. Thus, climate change should be considered as an additional stressor that can exacerbate conflict due to resource scarcity in climate-vulnerable regions. To address the need of climate-vulnerable community, climate adaptation intervention is commonly practiced and recommended in Nepal; however, implications of adaptation on resource allocation and power-relations are not addressed by such frameworks. Therefore, policy frameworks should assess the

social and political risk associated with CCA through conflict-sensitive policy measures to strengthen peace and harmony.

Most climate change programmes do not address conflict and often ignore future conflict impacts. They are generally not designed to offer a comprehensive assessment of political, social, economic, and environmental risks. Like most risk assessment tools, resilience frameworks tend to overlook the risk of conflict and violence and are biased towards assessing exposure to natural hazards (Bosetti *et al.* 2016). Climate change risks and fragility are interconnected and emerge when climate change interacts with other political, social, economic, and environmental pressures, such as rapid urbanisation, inequality, economic shocks, and environmental degradation. In conclusion, existing policy framework initiatives are not conflict-sensitive, certain groups can unintentionally be deprived in favor of others, and social tensions may be inflamed. Therefore, climate change and DRR policy should be taken as a peacebuilding strategy by addressing conflict risks associated with climate change through conflict-sensitive adaptation policy.

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