

Building Resilience through the Integration and Mainstreaming of Climate Change Adaptation and Disaster Risk Reduction: *Lessons from the Hariyo Ban Program in Nepal*

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I. Introduction

Climate change and disasters are global issues that threaten sustainable development.² Nepal is a disaster hotspot and among the most climate vulnerable countries in the world.³ It is prone to floods, landslides, rockslides, avalanches, glacial lake outburst floods and even earthquakes, which cause loss of life, livelihoods, property and infrastructure. Nepal's vulnerability is not only due to its steep, rugged and fragile terrain, but also to anthropogenic factors, such as unsustainable land use practices and low adaptive capacity, all of which are compounded by poverty. Lack of resources, social inequities, power imbalances and limited opportunities, mean that poor and marginalized communities, women and children are among the most vulnerable to disasters and hardest hit when they happen.



Photo 1: Climate induced disaster, landslide in Kaski district of Nepal, 2015 (left) and Non climatic disaster, Nepal Earthquake 2015 in Gorkha district (right)

Climate change adaptation (CCA) and disaster risk reduction (DRR) can reduce the risks faced by communities by minimizing their exposure and vulnerability and increasing their resilience to climate change and disasters.⁴ Thus, it is important to integrate disaster and climate risk management (D/CRM) into key development sectors for sustainable development and long-term risk reduction.⁵

The Government of Nepal is working to comply with its global commitments by formulating policies and guidelines, establishing institutions, and developing frameworks for CCA and DRR, focusing on Local Adaptation Plans for Action (LAPAs⁶) and Local Disaster Risk Management Plans (LDRMPs) at the local government level.⁷ However, although various policies and frameworks have been developed by different ministries, there has been inadequate coordination among the ministries responsible for different aspects of CCA and DRR. Current development discourse is advocating for policy harmonization through the integration and mainstreaming of CCA and DRR at the local level.

The terms 'integration' and 'mainstreaming', although sometimes used interchangeably, are not the same in this context. Integration refers to incorporating CCA and DRR together in one CCA-DRR plan, and mainstreaming refers to bringing them into the regular development planning process of the government. Therefore, incorporating CCA and DRR into the strategic and periodic plans of the local government and line agencies is considered mainstreaming. This discussion paper is based on the practices and lessons learned from the Hariyo Ban Program in Nepal (2011–2016) during implementation of its climate change adaptation component and emergency responses to floods of 2014 and the earthquake of 2015. Despite the conceptual and practical challenges posed by parallel processes for CCA and DRR in policies, frameworks, institutions and leadership, the project found ample opportunities and scope to build resilience through different options for the integration and mainstreaming of CCA and DRR into local development planning processes. The experiences of the Hariyo Ban Program at the local level have generated evidence that suggests that the integration of CCA and DRR is possible, with careful follow-up to ensure its effectiveness.

This paper outlines the need to integrate CCA-DRR, the preparation undertaken by the Hariyo Ban Program, and the integration efforts operationalized so far. It also sets out the options for integration, along with lessons learned from the ongoing efforts of the Hariyo Ban Program to mainstream CCA-DRR into local planning processes.

¹ CARE Nepal, Hariyo Ban Program

² IPCC (2014) *Climate Change 2014: Synthesis Report: Summary for Policymakers*. Geneva: Intergovernmental Panel on Climate Change; UN (2015) *Sendai Framework for Disaster Risk Reduction (2015–2030)*. United Nations

³ MoHA & DPNet (2015) *Nepal Disaster Report 2015*. Kathmandu: Ministry of Home Affairs and Disasters Preparedness Network Nepal

⁴ IPCC-SREX (2012) *The IPCC Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation*. Geneva: IPCC Secretariat

⁵ MoHA & DPNet (2015); UNDP (2015) *Mainstreaming Disaster Risk Management in Nepal, Comprehensive Disaster Risk Management Programme (CDRMP)*. Kathmandu: United Nations Development Programme, Nepal

⁶ MoSTE (2010) *Local Adaptation Plan for Action*. Kathmandu: Ministry of Science, Technology and Environment, Government of Nepal

⁷ MoFALD (2011) *Local Disaster Risk Management Planning Guideline*. Kathmandu: Ministry of Federal Affairs and Local Development, Government of Nepal

2. Understanding the Need to Integrate CCA and DRR

The Hariyo Ban Program bases its climate change adaptation activities on the Government of Nepal's National Adaptation Program of Action (NAPA), Local Adaptation Plans of Action (LAPAs), CARE's Community Based Adaptation (CBA) framework, WWF's Flowing Forward approach, and various other internationally-accepted approaches and practices. In the Hariyo Ban Program, landscape level or river basin level vulnerability assessments are conducted using WWF's Flowing Forward approach⁸ to determine human and natural system vulnerabilities within the entire landscape or river basin. CARE's CBA framework⁹ takes an integrated approach to reducing vulnerability and promoting CCA that enhances climate-resilient livelihoods, reduces disaster risk, strengthens the capacity of local civil society and government institutions, builds ecosystem resilience, and promotes advocacy and social mobilization to address the underlying causes of vulnerability. CARE is also using an assessment tool called 'Underlying Causes of Poverty and Vulnerability Assessment' (UCPVA) at the village development committee (VDC) level to identify vulnerable communities and ecosystems and as a step in assessing overall integrated vulnerability. The UCPVA clearly shows the need to integrate adaptation and disaster risk reduction planning at all levels and in all areas. Similarly, outcomes from the Hariyo Ban Program's Community Learning and Action Centers (CLACs) and the preparation process for Community Adaptation Plans for Action (CAPA) reinforce the need for the integration of CCA and DRR, as multiple stakeholders at the local-level emphasize only the DRR components for adaptation.

During all of these process, it was learned that CCA and DRR are interconnected concepts with common components and methodologies for vulnerability assessment and resilience building. Though they do differ in action at certain levels, they do complement one another and in combination they contribute to resilience development. The Hariyo Ban Program realized that CCA cannot be viewed in isolation, but must be integrated with DRR to be effective and avoid duplication.

3. Preparation for Integration

The first step towards integrating CCA and DRR was to develop a common understanding of CCA-DRR integration among the key stakeholders, including representatives of local bodies (VDCs, municipalities and district development committees - DDCs). Towards this, the Hariyo Ban Program reviewed national and international policies, government frameworks on CCA and DRR (particularly LAPAs and LDRMPs), and the government's Environment Friendly Local Governance (EFLG)¹⁰ framework. Various workshops, trainings and interactive visits were organized at the VDC and district levels. In terms of the processes, steps and factors considered in vulnerability assessment and planning for CCA and DRR, both frameworks were found to be very similar. In fact, as participants soon realized, there are more similarities than differences in the frameworks for CCA and DRR, resulting in the duplication of resources and efforts, as well as the exclusion of some priority issues due to lack of clear demarcation of responsibilities. In order to avoid duplication and rationalize time, cost and effort, participants identified opportunities for the integration of CCA and DRR, and CCA-DRR mainstreaming in local level planning processes. The highlights of the integration process, as identified by district stakeholders, are presented in Box 1.



Photo 2: Participants of CCA and DRR mainstreaming workshop in Gorkha, 2013

Box 1: Some ideas for integration and mainstreaming process, as suggested by district stakeholders

- Integrate LAPA and LDRMP into one document.
- Integrate/prioritize climate-induced disaster risk reduction in LDRMP.
- Integrate adaptation options in disaster cycle.
- Examine plans through the lens of both CCA and DRR
- Consider both CCA and DRR in all steps of the planning process.
- Conduct joint awareness and sensitization activities on CCA-DRR at the local/community level.
- Promote DDC leadership for integration of LDRMPs and LAPAs, and their mainstreaming in the planning processes of local government and sectoral line agencies. The DDC needs to lead preparation of necessary strategies/policies for CCA-DRR integration /mainstreaming, so as to enhance synergies and avoid duplication.
- Ensure CCA-DRR responsive budgeting and proper implementation of budget.

Nepal has a 14-step bottom-up planning process for local government. In order to ensure the integration and mainstreaming of CCA-DRR in the local government planning process, CCA and DRR should be considered in each step, right from the pre-planning guideline and in tole (settlement) level planning.

4. Integration Opportunities at Various Levels

The Hariyo Ban Program/CARE Nepal adopted a rigorous process for the integration and mainstreaming of CCA-DRR into LAPAs and LDRMPs. A conceptual diagram of the CCA-DRR integration process at the VDC/municipality level is presented in **Figure 1**.

8 An updated guidance manual on the flowing forward approach is currently being prepared by WWF.

9 CARE (2015) *Climate Change Information Centre*. CARE <http://careclimatechange.org/> (accessed June 2015)

10 MoFALD (2013) *Environment Friendly Local Governance Framework*. Ministry of Federal Affairs and Local Development, Government of Nepal

At present, the Ministry of Home Affairs (MoHA) and Ministry of Population and Environment (MoPE) are mandated by the Government of Nepal to lead disaster risk reduction and climate change responses, in coordination with the Ministry of Federal Affairs and Local Development (MoFALD). VDCs/municipalities lead the LDRM committee in preparing the LDRMP, targeting communities vulnerable to natural and manmade disasters, including households affected or vulnerable to climatic and non-climatic disasters. Similarly, VDCs/municipalities lead the LAPA committee in preparing adaptation plans, which target communities that are vulnerable to climate change impacts, including climate-induced disasters. As people vulnerable to climate-induced disasters are the common target, MoFALD and local government are in the right position to reach the targeted communities. The common leadership of the local government, acknowledged by LDRMP and LAPA, provides a strong foundation for CCA-DRR integration and mainstreaming into local development planning processes. Accordingly, there is an opportunity to follow a middle path (Figure 1), ensuring integration in local level institutions, planning processes, plans and targets.

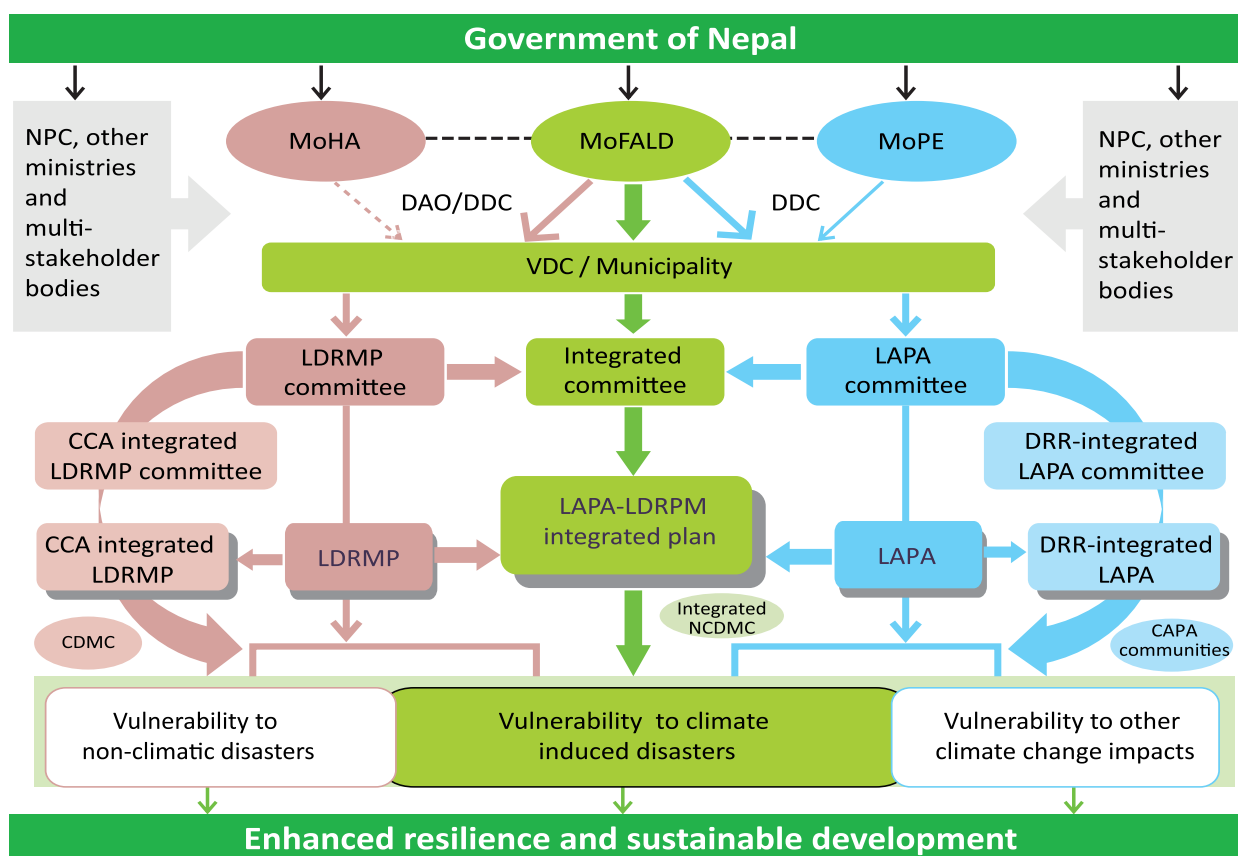


Figure 1: A conceptual model for CCA-DRR integration at VDC/Municipality level

Reflecting current practices, the various government and non-government organizations are following the local government in implementing CCA-DRR interventions in parallel. Community Adaptation Plan for Action (CAPA) committees and Community-based Disaster Management Committees/Networks (CDMC/CDMCNs) are also working in CCA and DRR at the community level. However, depending on the donor, the source of funding and the lead organization, there are opportunities as well as constraints for integration. In fact, managing the differences in the planning processes is a real challenge for integration of either CCA or DRR. In this context, the integration of either component in one or the other is a promising option. Although the harmonization of different frameworks, tools and approaches may present challenges, their integration can be a milestone for mainstreaming CCA-DRR into local planning processes.

Opportunities for integration and mainstreaming were discussed in the district and VDC/municipality-level workshops and undertaken locally, as agreed.

5. Operationalizing the CCA-DRR Integration Process

The Hariyo Ban Program has enjoyed the benefits of piloting initiatives on the integration of CCA and DRR. Through inter-project coordination and collaboration within its consortium partners, CARE Nepal started the integration of CCA and DRR by facilitating integrated planning exercises in Patharaiya VDC and Lamki Chuha Municipality of Kailali, where current project sites of the Hariyo Ban Program and VISTAR project¹¹ overlap, and in Chandrapur Municipality of Rautahat, where there was significant local interest. Integrated planning is preferred, particularly by newly announced municipalities, as they have a high interest in preparing LDRMPs

11 VISTAR is an inclusive community based disaster risk reduction project led by CARE Nepal in a consortium with Handicap International and supported by DIPECHO (the European Commission's Disaster Preparedness Program) in four districts in western Nepal – Kailali, Dadeldhura, Kanchanpur and Dang.

and periodic plans. Additionally, the program tried to integrate DRR components into adaptation plans at all levels, whenever there was an opportunity to do so.

5.1 Integration into planning process

Several two-day training events were organized to make local people aware of CCA-DRR and the EFLG framework, in which overall planning processes and actions were discussed. The LAPA preparation process is guided by the LAPA framework of the Government of Nepal (following 7 key steps), with consideration of the LDRMP process (Figure 2).

The integration of CCA-DRR requires careful planning and modification to include key parts or considerations of both CCA and DRR in each and every step. The key to effective integration lies in ensuring participation, tools, and vulnerability and response measures for both CCA-DRR. Table 1 presents a summary of how DRR has been integrated into CCA/LAPA tools and processes.

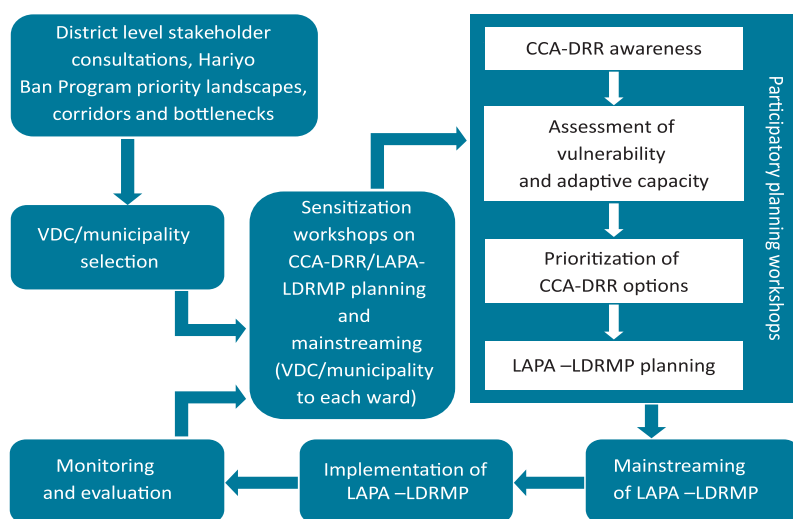


Figure 2: Process for integrating LAPAs-LDRMPs, and their mainstreaming used by Hariyo Ban Program

Table 1: Summary of how DRR has been integrated into CCA/LAPA tools and processes

Step	Activities	Additional considerations
Step 1: Start up workshop	Inclusive participation of CCA-DRR related stakeholders	
Step 2: Ward and VDC level workshop/ meetings	- Sensitization on CCA-DRR - Vulnerability assessment (types, sites and communities/ households) covering DRR and CCA, including ecosystem vulnerability - Adaptation and DRR initiatives (acknowledge local indigenous knowledge, skills and practices), possible options and prioritization - Identify potential institutions for both CCA and DRR with stakeholders analysis	- Climate sensitive wellbeing/ vulnerability assessment - Analysis of differential impacts on women, people with disabilities, the poor and others - Participation of disaster-affected communities and related groups - In the absence of elected representatives, involvement and consent of all (or key) political parties needs to be ensured

Local resource persons were capacitated for technical support and mobilized along with Hariyo Ban Program staff and expert consultants to facilitate the integration process. The Hariyo Ban Program has prepared a total of 77¹² LAPAs, of which a third have been implemented (as at December 2015).

This experience shows that there is not much variation between the two frameworks and the simple modification/addition of selected activities from both CCA and DRR perspective can achieve integration. The EFLG framework 2013 also supports planning with the integration of CCA and DRR related activities.

5.2 Integration at institution level

In order to start the preparation process for integrating CCA and DRR into the LAPA at the village level, the Hariyo Ban Program supported the formation of village climate change adaptation and disaster risk management coordination committees (VCCADRMCCs) after reviewing institutional structures adopted by other projects working in the same sector.¹³ These coordination committees are chaired by the VDC secretary (or municipality executive officer) and include members from both adaptation and disaster sectors (e.g., representatives of ward citizen forums, forest user groups, farmers' groups, water user groups, and vulnerable communities, etc.) not exceeding 25–30 members. Coordination committees should also represent major political parties, school teachers, women and marginalized communities, either in the committee or on the advisory or monitoring committee.

In cases where complete integration was not agreed, LAPA and LDRMP committees were made inclusive with the addition of DRR and CCA-related target communities and stakeholders. In all cases, a working procedure was drafted and endorsed through the local government or its council, in line with the Local Self Governance Act 1998.

The Hariyo Ban Program/CARE Nepal also supported sensitization and cross-sharing between CCA and DRR communities. The program realized the need for networking to improve the effectiveness of both CCA and DRR initiatives and to raise their voice in policy discourses. Hence, the adaptation communities were linked with the already existing Network of Community Based Disaster Management Committees (NCDMC) at the district and national levels as a first step towards joint efforts. There is a plan to expand this network and make it more inclusive, following the necessary legal process. The network is expected to be pivotal in providing services to vulnerable communities and linking them with government institutions.

¹² Including 47 LAPAs by CARE Nepal, 25 LAPAs by the National Trust for Nature Conservation and 5 LAPAs by the Federation of Community Forestry Users Nepal.

¹³ The National Climate Change Support Program formed and promoted the Village Environment Energy and Climate Change Coordination Committee, the Initiative for Climate Change Adaptation followed the Village Climate Change Coordination Committee, and the Multi-Stakeholder Forestry Programme promoted the Agriculture, Forest and Environment Coordination Committee.

5.3 Mainstreaming of integrated plans

Rigorous exercises were also carried out to mainstream integrated plans into the regular development planning processes of local government and sectoral line agencies. In addition to raising these issues in general discourse, series of mainstreaming workshops were carried out (at the ward/settlement, VDC/municipality and district levels) just before or during the regular planning processes of the government agencies. The program worked together with local government institutions and stakeholders to internalize, build common understanding, and enhance integration and mainstreaming. Community-level integrated adaptation plans on the whole, or their activities, were presented and discussed at ward-level meetings in order to align with the 14 steps in the local development planning processes. Integrated VDC/municipality adaptation plans were also presented and discussed at the council meetings. Once approved by the VDC/municipality council, the activities are considered mainstreamed into the local development plans. In addition, district-level mainstreaming workshops were organized to encourage the mainstreaming of these plans/activities by the DDC and sectoral line agencies. Furthermore, the contribution and learning from the Hariyo Ban Program, particularly on CCA-DRR integration, has also been mainstreamed through recognition and replication of CCA-DRR activities in the district-level periodic plans for Banke and Kailali districts.

5.4 Implementing integrated plans

Efforts have been made to effectively implement these integrated plans. A third of the LAPAs prepared with the assistance of the Hariyo Ban Program have already been implemented and the rest are in the course of implementation. Although not yet fully materialized, there are opportunities to leverage resources from the following sources:

- The Government of Nepal's directive to allocate 5% of local budgets to DRR activities¹⁴ and its emphasis on allocating 80% of the total climate funds to the local level, as per Nepal's Climate Policy and National Adaptation Program of Action.
- Support from District Disaster Relief Committees (DDRCs), Nepal Red Cross Society, sectoral line agencies and stakeholders in different thematic clusters, particularly for disaster-related activities.
- Support from the EFLG framework – substantial resources were received from the EFLG for the implementation of integrated plans in Chandrapur Municipality of Rautahat district and Simjung VDC of Gorkha district.
- If the integrated and mainstreamed plans of the VDC/municipality are well implemented, the DDC allocates additional points in the Minimum Conditions Performance Measure (MCPM), which qualifies them for additional resources.
- Resources can be generated at the local level through the community (in-kind contributions), the private sector (donations), and campaigns for emergency funds.
- Support from other projects/programs – additional resources are available for the implementation of integrated plans by various national projects/programs focusing on CCA and DRR.
- Regular programs of local government and sectoral line agencies to plan identified activities or to target specific groups.

5.5 Replication and policy discourse

There are some success stories of communities obtaining resources, receiving appreciation for good work, and achieving mainstreaming by the local government, sectoral line agencies and stakeholders at various levels. Similarly, the Hariyo Ban Program has documented its learning and best practices and emphasized their replication and inclusion in policy discourse wherever possible.

The Nepal Community Resilience Program (SABAL) is a new USAID-funded project in which CARE Nepal has been replicating the integration of CCA and DRR. Similarly, the Hariyo Ban Program, VISTAR and ANUKULAN (A climate change adaptation project funded by DFID/UKAid) have recently been collaborating for integrated planning and implementation in Krishnapur and Bedkot municipalities in Kanchanpur district.



Photo 3. Hariyo Ban Program shared its learning in a national workshop

Recognizing the need for an integrated approach to CCA and DRR, Kaski DDC has been promoting Disaster and Climate Change Committees at the community and VDC/municipality levels (Kaski DDC, 2014¹⁵) to take forward LAPA and LDRMP agendas. In addition, a national workshop (Photo 3) on Mainstreaming Adaptation Initiatives and Learning was organized to present achievements and learning from adaptation planning in the Hariyo Ban Program. Led by the Ministry of Science, Technology and Environment (MoSTE), the workshop became a good platform for sharing the experiences of the Nepal Climate Change Support Program under the MoSTE, the CCA-DRR and EFLG initiatives of MoFALD, and various adaptation projects (Hariyo Ban Program, Multi Stakeholder Forestry Programme - MSFP, Ecosystem Based Adaptation) that are working with the MoFSC and various other stakeholders. The workshop agreed on two main resolutions, namely: 1) to activate the Multi-stakeholder Climate Change Initiative Coordination Committee (MCCICC) and form a working task group as soon as possible to standardize the methodology, harmonize, and coordinate, and 2) to develop a common participatory approach to integrate DRR into adaptation planning and implementation.

14 MoHA (2015) *National Progress Report on the Implementation of the Hyogo Framework for Action (2013-2015)*. Available at: http://www.preventionweb.net/files/41755_NPL_NationalHFAprogress_2013-15.pdf

15 Kaski DDC (2014) *Proposed Policies and Programs for FY 2071/072, 22nd District Council, 27 Falgun 2070*. Kaski DDC, Government of Nepal

6. Issues and Discussion

Integration and coordination is sometimes easier said than done. Conceptual mismatches and inadequate understanding; complexity in policy, leadership and institutions; and insufficient capacity and resources are some of the key issues and challenges in CCA-DRR integration and mainstreaming.¹⁶

Due to **conceptual mismatches and inadequate understanding** of the nature of threats with respect to frequency, intensity, severity and scale, climate change adaptation and medium to long-term disaster preparedness have received little attention to date. Similarly, there is also uncertainty about which should come first, climate change adaptation or disaster risk reduction, and practitioners of each discipline fear that their own discipline may be overshadowed by integration.

The **inclusion (or exclusion)** of non-climatic disasters in adaptation and of non-disastrous climatic impacts (which can be like slow poison) in disaster risk reduction are two key issues in the integration process. Furthermore, as time and resources are often constraints, any endeavor towards integration can suffer from the risk of making **generic, rather than specific, plans** that deal with specific vulnerabilities. The addition of the **ecosystem dimension** is another area of concern in integration.

Globally, disasters are generally seen as a national issues and climate change as an environmental issue.¹⁷ Although the role of the MoFALD is given due emphasis, **different leaders and parallel policies**, frameworks and guidelines from different government ministries, particularly the MoHA (for disasters) and MoSTE (for climate change), have hindered the integration process. Considering the cross-disciplinary nature of impacts and the central role of local governments in owning both the LAPA and LDRMP, the MoFALD has good potential to lead the integration process, working closely with multi-stakeholder bodies like the National Planning Commission (NPC) and the Multi-stakeholder Climate Change Initiative Coordination Committee to ensure inter-ministry coordination. The EFLG framework prepared by the MoFALD also provides scope for such integration and harmonization. Local governments should be capacitated and strengthened to effectively coordinate with multiple stakeholders (like coordination committees) and lead the integration and mainstreaming process at the local level. However, the **current local government**, in the absence of elected people's representatives, and considering their many responsibilities, are able to give little attention to CCA and DRR issues, unless it is an emergency. In the absence of clear mandates and guidelines, the existing project-based, parallel and inconsistent institutions hinder the potential to integrate CCA and DRR.

Likewise, the **efficiency and effectiveness** of CCA and DRR interventions and their governance can be improved by promoting integrated coordinating **institutions and networks of CCA-DRR** communities (e.g., the NCDMC) and civil society at various levels. The risk of a large committee can be minimized by the rational selection of members representing multiple sectors and use of criteria like gender, geographic and thematic representation. Such integration is possible through the respective local government council, in line with the Local Self Governance Act 1998 and its Regulation. In addition to effectively bridging the gap between local government and vulnerable communities, integrated networks can be effective in advocating for implementation and providing feedback for people-friendly policy formulation.

Reports show that it is the poor, women, people with disabilities and people from marginalized communities who suffer the most from climate change and disasters. Accordingly, **the differential impact** of climate change and disasters should be seriously considered and responded to in both CCA and DRR initiatives.

As at December 2015, the coverage for preparation of LAPAs and LDRMPs in Nepal reached only around a quarter of local government units (around 500 LAPAs and around 700 LDRMPs¹⁸, as of 12 May 2014), and their implementation has also been lacking. Despite this mandatory requirement of the Government of Nepal (as a criterion for evaluation of the performance of local government-MCPM), preparation of LDRMPs has not gained adequate momentum due to **lack of sufficient resources and capacities**. Similarly, LAPAs, in general, have become project-driven, mainly by the Nepal Climate Change Support Program, Hariyo Ban Program, MSFP and Initiative for Climate Change Adaptation. Climate extremes and disasters are uncertain and local people have many demands to meet with the limited resources available to them. So, challenges exist in prioritizing the use of resources, as the opportunity cost associated with the allocation of resources to uncertain events can be high. The process of integrated planning will, of course, be more cost-effective than separate plans, with the savings of implementing a harmonized approach estimated at around USD 3000 per VDC in the first year.¹⁹

Studies have found that every USD 1 spent on disaster preparedness saves USD 7 in disaster response.²⁰ While local governments may find it **difficult to prioritize resource allocation to prepare for uncertainties** (CCA and DRR), it is a moral and humanitarian imperative to arrange resources to respond to emergencies and support the affected people. Thus communities are often vocal against the government practice of providing compensation, rather than timely support for preparedness. There is also a need for proactive disaster management policies, laws and programs.²¹

Insufficient budget allocation and lack of adequate leverage are other pertinent issues in **meeting the high expectations and needs of communities** for support in the effective implementation of integrated plans. As resilience building and development cannot be sustained without due consideration of climate change adaptation and disaster risk management, additional efforts and resources need to be made available to mainstream and implement CCA-DRR interventions. There are various options that can be applied according to the local context and time involved, which will be discussed in the next section.

16 Rivera Claudia (2014) *Integrating Climate Change Adaptation into Disaster Risk Reduction in Urban Contexts: Perceptions and Practice*. PLOS, Current Disasters. Available at: <http://currents.plos.org/disasters/article/integrating-climate-change-adaptation-into-disaster-risk-reduction-in-urban-contexts-perceptions-and-practice/> (accessed 5 July 2015)

17 According to UNISDR 2000, environment authorities usually have responsibility for climate change adaptation, whereas authorities for disaster management, civil defense and home affairs typically have responsibility for disaster risk reduction. This is a misinterpretation of the principles behind CCA and DRR, and in the future there needs to be greater collaboration between the respective practices.

18 The exact number of LDRMPs and LAPAs is unclear because of the newly declared municipalities.

19 iDE (2014) *The Harmonization Approach; A New Approach to Harmonizing Local Climate Change and Disaster Risk Reduction Planning*. BRACED Project Development Phase, 2014, Annex O

20 World Bank (2004), cited in USAID (2012) *Natural Disasters: Counting the Cost*. USAID

21 MoHA & DPNP (2015) *Nepal Disaster Report 2015*. Kathmandu: Ministry of Home Affairs and Disasters Preparedness Network Nepal

7. Options for Integration of CCA and DRR

There are four basic options for the integration of CCA-DRR. Table 2 briefly describes each of these options along with the opportunities, challenges and suitability.

Table 2: Analysis of options for integration of CCA and DRR

Option	Description/principle	Opportunities	Challenges	Institutional arrangement	Remarks/suitability
Option 1: Integrated plan for CCA and DRR	Both parts can be covered in an integrated CCA and DRR plan with harmonized tools and methodologies. In plans there could be specific sections, e.g., for CCA, climatic disasters, non-climatic disasters.	- Effective and efficient in terms of resources, cost, time and effort - Easier in terms of prioritization as per the local context and time - Meets the mandatory provision of Government of Nepal for LDRMP - EFLG friendly - Complements VDC/municipality profile development - Supports preparation of periodic plans at DDC/VDC level - Easy to give continuity	- Confusion about ministerial role/lead - Policy review of the Government of Nepal or prior consent of local government is necessary - Difficulties managing mega-disasters	Integrated committee with rational mix of both CCA and DRR communities	Win-win situation: Can be considered in policy provision.
Option 2: Existence of both plans, with inclusion of relevant sections in both CCA and DRR plans (inclusive)	Activities of common interest to CCA and DRR are included in both plans (inclusive).	- Aligned with the current policy provisions of Government of Nepal - No plan is disturbed, but necessary issues/concerns are addressed in both, making the chance for implementation high through either channel that can secure budgetary resources	- Implementation is complicated due to overlaps - Risk of duplication if not well coordinated - Costly	Separate committees with representation of both CCA and DRR communities	Win-win situation: Close coordination is a must. Roles and responsibilities of committees responsible for both need to be clearly defined. Ways out in case of dispute need to be clear.
Option 3: Integration of relevant DRR parts in CCA plans (exclusive)	Sensitization, post-disaster recovery and emergency preparedness, particularly for recurring disasters, are better covered by LAPA led integration.	- Effective and efficient in terms of resources, cost, time and effort - Easier to implement medium or long-term measures of DRR, which otherwise remain passive due to conventional emergency management practices	- DRR activities are relatively more costly than CCA ones - Resource constraints – if CCA priorities are not receiving adequate funding it will be difficult to prioritize funds for DRR - Difficulties with non-climatic disasters and emergency response	Inclusive committee representing DRR people in LAPA/CAPA communities	Opportunistic: Opportunities exist for DRR when CCA part is being supported by projects. Activities during emergencies including rescue and relief, particularly in widespread/large scale disasters, should be handled by LDRMP or conventional emergency management.
Option 4: Integration of relevant CCA parts in DRR plans (exclusive)	Adaptations measures relevant to climate change (e.g., adaptation to climate-induced disasters) are included in DRR plans.	- Priority adaptation measures are implemented - Any measures to prepare or respond to disasters consider climate proofing as well	What to do with the climate change impacts being faced by the communities in their daily life, but that are not disastrous in scale?	Inclusive committee representing DRR community	Opportunistic: Opportunities exist for CCA when DRR part is being supported by projects. Separate CCA plan also required.

The best option for a particular site will depend on the local context, time and enabling policy environment. In all cases, it is better to consider both CCA and DRR so as to achieve the overarching goals of building resilience, reducing vulnerability and ensuring sound development. Some of the key considerations might be including both CCA and DRR in awareness/sensitization or capacity building programs, provisioning emergency funds/mechanisms and mainstreaming both CCA and DRR in regular development processes.

Integration alone is not effective unless it is implemented with good ownership at the local level. The mainstreaming of integrated plans in the regular planning processes of the Government of Nepal and various line agencies and stakeholders can be made effective through a series of awareness and mainstreaming activities from the local level up and by grasping the 14-step planning process of the Government of Nepal. Social mobilization to ensure participation and ownership by the community and local government, local capacity building, integration and resource leveraging from stakeholders (government organizations, NGOs, CBOs, or the private sector) at different levels, and regular monitoring and reviews are required for effective integration and the mainstreaming of these endeavors. Local government has the most prominent role in this process. An enabling policy is a *MUST* to promote integration.

Finally, although there is some promising evidence, the real effectiveness of this approach can only be seen after fully-fledged implementation of integrated plans and mainstreamed plans i.e. plans of local government or sectors; and the replication of practices in various contexts. Careful facilitation of the process and detailed documentation is required to improve the integration approach and practices in the future.

8. Lessons Learned and Way Forward

The following are some of the key lessons learned and way forward for wider discussion on the integration and mainstreaming of CCA-DRR:

- CCA and DRR stand on a shared agenda of resilience building through vulnerability reduction and sustainable development, following similar processes, tools and institutions, and led by local government. Despite few issues and challenges, there are ample opportunities to build resilience using different context-specific options for integration and mainstreaming CCA and DRR so as to enhance efficiency, cost-effectiveness and synergies.
- The practices of the Hariyo Ban Program at the local level have generated evidence to justify the possibility of successful integration and mainstreaming through consensus building and the engagement of local multiple local stakeholders, particularly local government and political parties.
- Effective mainstreaming requires the development of integrated plans beforehand following the government's 14-step planning process so that priority activities can be endorsed right from the beginning during the settlement/ward level planning process.
- The real effectiveness of this approach can only be seen after fully-fledged implementation of integrated and mainstreamed plans and the replication of practices in various contexts.
- Policy harmonization, clear guidelines, resources and capacity building are necessary to deal with issues and create an enabling environment for the effective integration and mainstreaming of CCA and DRR.



Photo 4: Bio-engineering at Krishnapur in Kanchanpur district of Nepal (left) and Public pond for water storage and fisheries at Kanneshwori Community Forest User Group (CFUG), Banke district of Nepal (right). Such types of interventions are believed to benefit climate change adaptation and disaster risk reduction through protection of the lives, livelihoods and property of vulnerable communities from floods, droughts and fire.

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Hariyo Ban Program

The Hariyo Ban Program is a USAID-funded five year (2011–2016) program being implemented in Nepal through a consortium of international and national NGOs: World Wildlife Fund-WWF Nepal (prime), Cooperative for Assistance and Relief Everywhere-CARE Nepal, Federation of Community Forestry Users in Nepal (FECOFUN) and National Trust for Nature Conservation (NTNC) covering a total of 29 districts including the east-west Terai Arc Landscape (TAL) and the north-south Chitwan-Annapurna Landscape (CHAL).

The program aims to reduce the adverse impacts of climate change and threats to biodiversity in Nepal. Climate change adaptation is one of the core components of the program, which works to reduce vulnerability and promote climate adaptation, taking an integrated approach that promotes climate-resilient livelihoods; reduces disaster risk; strengthens the capacity of local civil society and government institutions; builds ecosystem resilience; and promotes social mobilization and advocacy to address the underlying causes of vulnerability.



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