



HIGH MOUNTAINS ADAPTATION PARTNERSHIP

A Review of Nepal's Local Adaptation Plans of Action (LAPA)

by

Brian Peniston
Director, Nepal Programs
The Mountain Institute

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Executive Summary: The following report examines the Local Adaptation Plan of Action (LAPA) mechanism in Nepal and is a review of the history of the mechanism and the process and methodologies used to conduct LAPAs in Nepal. It is an illustrative guide rather than an exhaustive study, and is based on a qualitative and quantitative review of a finite number of documents that were available at the time of writing. The review also includes information gathered through interviews conducted with development professionals in Nepal, which may or may not represent the whole development sector. Based on this review, several observations and recommendations are offered as ways to possibly proceed and strengthen the LAPA process and mechanism. These recommendations are not intended to represent the views of USAID Washington D.C., USAID/Nepal, Engility Corporation, nor any of the persons or organizations interviewed.

An Overview of Climate Change Initiatives and Of the Local Adaptation Plan of Action Process in Nepal: To understand the LAPA process one must start with the context of climate change initiatives in Nepal. An ideal starting point for gaining this understanding comes from The Government of Nepal's own manual on Local Adaptation Plans of Action, which states:

“As a Party to the UN Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol, Nepal is making every effort to benefit from these instruments though institutional strengthening, policy formulation and programme development. In this endeavour, the Climate Change Policy (2011) is under implementation. More over efforts are underway to benefit from carbon

trading. In international forums, Nepal has been continuously drawing the attention of the international community to the profound impacts of climate change on the mountains and call for collaborative efforts for their mitigation. In the spirit of her international commitments and national needs, Nepal has prepared the National Adaptation Programme of Action (NAPA) to support vulnerable people in adapting to the adverse impacts of climate change.

To implement NAPA priorities, the Government of Nepal has also endorsed the National Framework on Local Adaptation Plans for Action (LAPA). This LAPA Manual, which has been approved by the Ministry of Environment, will be an effective instrument to implementing NAPA Priority Programmes. The LAPA Framework provides opportunities for immediate and effective delivery of adaptation services through the implementation of NAPA priorities. This LAPA Manual describes its guiding principles, LAPA formulation steps, a monitoring and evaluation approach, and provide stools that are practical and simple. The Framework and Manual together provide opportunities to formulate and implement LAPA in an integrated manner with the participation of the poorest and most climate vulnerable communities.”

(Source: Government of Nepal, Local Adaptation Plan of Action Manual, 2012)

Background: The Government of Nepal (GON) initiated climate adaptation planning and implementation with The National Adaptation Programme of Action (NAPA), endorsed in September 2010. The NAPA indicates the Government’s intention to disburse at least 80 percent of the available budget directly for local level implementation of identified adaptation actions. The NAPA also aims to ensure that national adaptation planning supports adaptation by local communities, particularly the climate vulnerable poor. To achieve this objective, participants in the NAPA inception workshop identified the need to develop **Local Adaptation Plan for Action (LAPA)** to mainstream local adaptation needs into development planning.

Recognizing the enormous variability within Nepal and within its various communities, the GON, with the support of civil society, felt it was necessary to design a formal process to go beyond the NAPA and develop adaptive plans that reflect more fully the needs and aspirations of Nepal’s tremendously diverse communities, and the wide range of impacts experienced from climate variability. Nepal was the first country in the world to develop a formal Local Adaptation Plan of Action process.

With funding from DFID, a consortium of agencies developed a pilot framework for preparing and implementing LAPA and piloted this tool in 9 districts across Nepal (selected for their representative qualities and as vulnerable districts) during 2010-11 by the Climate Adaptation Design and Piloting-Nepal Project (CADP-N). Nine (9) international agencies were involved in this effort, with 18 foreign and Nepali experts involved in designing the manual. Results of the pilot activities were summarized and published in a LAPA manual, drafted in 2011. (A brief summary

document of the LAPA history, design mechanism and contents of a model LAPA is attached as Annex 1 for convenience).

Main features of the LAPA Framework: At the NAPA workshop in 2010, participants identified the basic starting unit for the LAPA as the Village Development Committee (VDC) with the recommendation that activities be coordinated by the District Development Committee (DDC). This process was determined to be the most appropriate scale for integrating climate change resilience into local-to-national development planning *processes and outcomes*. Among other objectives, these administrative units were considered best at capturing location/community specific adaptation priorities and ensuring national level support for local adaptation without fragmentation or large transaction costs. The intent was to enable a match between bottom-up and top down adaptation planning, and design a mechanism that is bottom up, inclusive, flexible, and responsible. It was also intended that the LAPA process strengthen decentralized planning efforts and strengthen existing local self-governance rules and regulations. The LAPA Framework was designed to support decision-makers at local-to-national levels to:

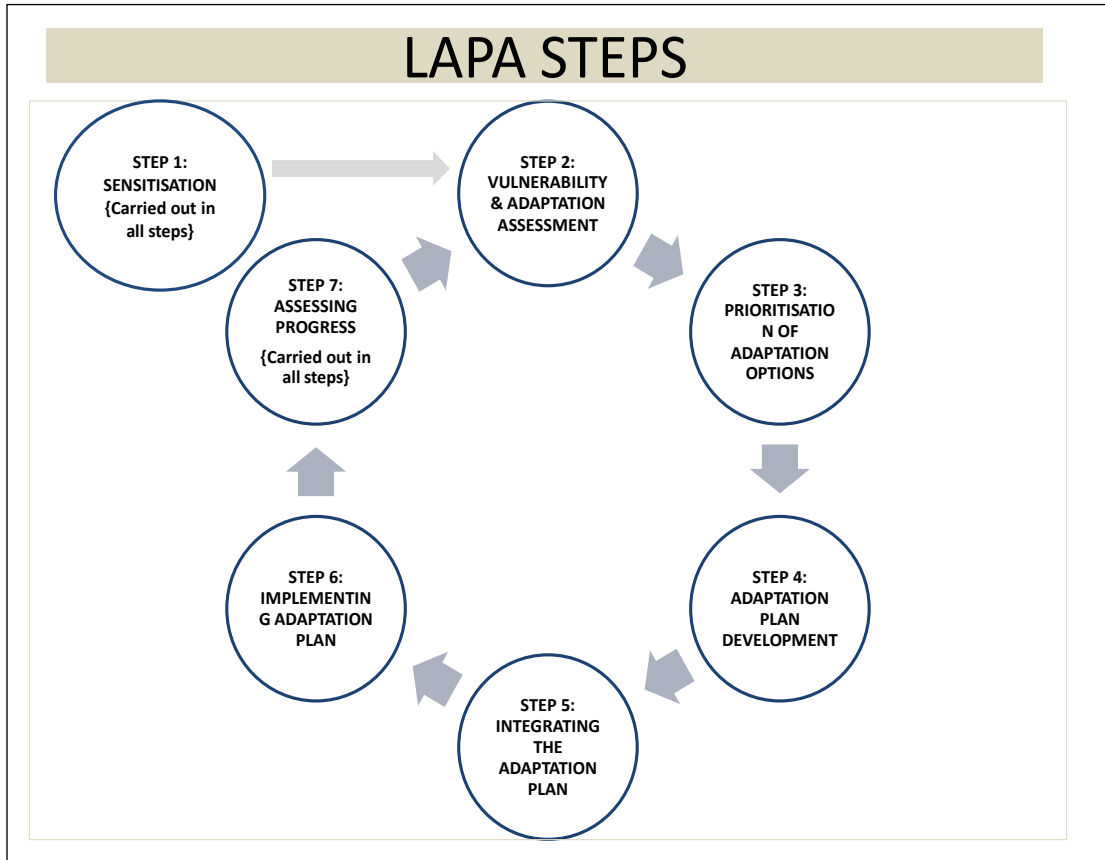
- a. Identify the most climate vulnerable VDC's, wards, and people and their adaptation needs;
- b. Prioritize adaptation options in easy ways with local people setting priorities;
- c. Prepare and integrate local adaptation plans for action into local-to-national planning in accordance with the Local Self Governance Act;
- d. Identify appropriate service delivery agents and channels for funding to implement local adaptation plans for action;
- e. Assess the progress of LAPA to ensure effective planning and delivery;
- f. Provide cost-effective options for scaling out local-to-national adaptation planning

The LAPA Framework was designed to consist of seven steps for integrating climate change resilience into local-to-national planning processes. They include (Figure 1):

1. Sensitization
2. Climate vulnerability and adaptation assessment
3. Prioritization of adaptation options
4. Developing local adaptation plan for action
5. Integrating the local adaptation plan for action into planning processes
6. Implementing the local adaptation plan for action
7. Assessing progress of local adaptation plan for action

Each step was carefully considered as to why it is important; what actions should be undertaken; and, a list of appropriate participatory tools to use was outlined. Figure 1 shows the process in diagram form.

Figure 1: LAPA STEPS



During the pilot phase the design team also proposed a number of appropriate tools to be used at each of the 7 steps in the LAPA process. These tools are listed below.

SUGGESTED TOOLS TO USE WHEN CONDUCTING A LAPA

LAPA steps	Core tools	Additional Tools
STEP 1: Sensitization	<ol style="list-style-type: none"> 1. Shared Learning Dialogues (district level) 2. Gateway Services Analysis (district level) 3. Visuals and stories 4. Climatic Hazard Trend Analysis 5. Seasonal Calendars 	<ol style="list-style-type: none"> 1. Climate adaptation capacity assessment and opportunities identification 2. Cause and effect analysis (problem tree) 3. Envisioning climate scenarios 4. Hazard and impact risk analysis 5. Hazard and response analysis 6. Mapping: hazards, vulnerability (social, economic, physical), resources (social, natural etc) 7. Timeline history regarding changes 8. School level awareness raising tools: essay competition, quiz contest, scout, eco-club, etc.
STEP2: Vulnerability and Adaptation assessment	<ol style="list-style-type: none"> 1. Gateway Services Analysis 2. Mapping hazards, risks, vulnerability, resources etc 3. Disaggregated Vulnerability Matrix 4. Hazard and Impact Risk Analysis 5. Envisioning Climate Scenarios 6. Climate adapted Well-Being Assessment 7. Visioning High Adaptive Capacity 	<ol style="list-style-type: none"> 1. Cause and effect analysis 2. GIS mapping 3. Hazard and response analysis 4. Seasonal calendars 5. Livelihoods impacts analysis 6. Climatic hazard trend analysis 7. Mapping of service provider /institutional analysis
STEP 3: Prioritisation of adaptation actions	<ol style="list-style-type: none"> 1. 12. Multi-Criteria Ranking 2. 13. Participatory Cost-Benefit Analysis 	<ol style="list-style-type: none"> 1. Impact implementation matrix 2. Pair wise ranking 3. Scenario tool for identifying energy pathways
STEP 4: Adaption plan development	<ol style="list-style-type: none"> 1. 14. Service provider analysis 2. The 4 WHs (what, where, when, who, budget etc) NO CARD 	<ol style="list-style-type: none"> 1. Logical framework 2. Inclusion sensitive budgeting (for example gender and indigenous people-sensitive budget)

STEP 5: Integrating adaption plan into the local to national planning process	<ol style="list-style-type: none"> 1. Shared learning dialogue 2. Policy and institutional analysis to identify entry points and/or adopt entry points included in this framework 	Sharing best practices and lesson learned with plan decision-makers
STEP 6: Implementing plan	NA	NA
STEP 7: Assessing progress (M&E) and informing future plan development	<ol style="list-style-type: none"> 1. Visioning high adaptive capacity 2. Service providers analysis 3. Behavior change journals analysis 4. Disaggregated vulnerability matrix 5. Mapping (risks, vulnerability, and service providers 6. Climate adapted well-being assessment 7. Self-monitoring and evaluation 8. Most significant change analysis 	<ol style="list-style-type: none"> 1. Mapping hazards, risks and vulnerability 2. Envisioning Climate Scenarios 3. Logical frameworks 4. Hazard trend analysis 5. Seasonal calendars 6. Hazard response analysis 7. Gateway systems analysis 8. Policy and institutional analysis

LAPA Innovations and Experience: When conducting the pilot LAPAs, different organizations experimented with several new techniques as ways to increase community engagement. Several of these innovations are worth mentioning here.

For example, The Britain Nepal Medical Trust (BNMT) established “monitoring groups” during the LAPA piloting phase. During the planning phase, small scale community meetings were held, explaining the need to monitor changes during the LAPA process, related to both the progress of LAPA implementation and to understand climate trends that might affect LAPA implementation. Two “monitoring groups” were formed, a) at the ward level to monitor changes among “the most vulnerable” and locally experienced trends and b) a second village level group which monitored planned activities and fed information from the ward-level group to village level decision-makers. The groups were nested and the “village” level groups were “accountable” to the ward level group. This mechanism was thought to improve interactions between the two groups and provide more focused analysis

whether implemented activities influenced vulnerability of beneficiaries; and if not, why not; and what could be done better.

Another group working at the pilot stage instigated a series of Shared Learning Dialogues at district and VDC level. Farmers, cooperative members, Forest User Group (FUG) members, VDC secretaries, and District Development Committee members participated. Officers from District line agencies, Cooperatives, Women's groups, NGOs and Journalists also participated. The dialogues covered cross-sectoral issues along with the status of gateway systems at ward level. The information was used to assess how vulnerable the wards are and identify marginal communities. The information collected during the dialogues was shared back with local people during a final shared learning dialogue held in the district headquarters. These initial dialogues were also used to share scientific information on greenhouse gas emissions and climate change, temperature and rainfall variability, projected effects of climate change, climate change adaptation, and gateway systems generally raising awareness while enhancing communication across sectors. This forum was also used to share information on the status of local gateway systems, identifying the most and least vulnerable wards, describing national and district scenarios of temperature and rainfall, and identifying marginal communities. A second round of sharing helped identify possible programs for planning local adaptation and agencies for implementation.

Outcomes from the Shared Learning Dialogue process were as follows:

1. Information on climate change science delivered at local level
2. Status of gateway systems at local level assessed
3. Most and least vulnerable wards identified
4. Local scenario of climate change prepared
5. Possible programs for enhancing adaptation identified
6. Possible agencies for implementing adaptation plan identified

Each of these innovations tried to integrate local level planning exercises and tools more explicitly with district level planning efforts and coordinated climate change adaptation efforts. Historically, government interventions have been more top-down with limited engagement of local communities from the onset.

CASE Study: The United Kingdom Department for International Development (DfID) supported development of the CAPA framework, which is based upon the principles of inclusiveness, responsiveness, flexibility and iteration. HTSPE, the International Institute for Environment and Development, and local NGOs were involved in LAPA piloting. The information presented here is drawn from the NGO pilot reports and informal consultation with individuals involved in piloting.

The early lessons from LAPA piloting indicate that it is proving effective in overcoming barriers in adaptive governance. It has contributed to raising awareness and the capacity of communities and local institutions to take leadership in

designing adaptation responses based on available resources. Community leadership and ownership of the adaptation process is key to LAPA. The local adaptation planning process has successfully linked community-based adaptation with the national adaptation planning process, providing a framework and mechanism for facilitating a top-down and bottom-up mix of adaptation responses.

Local adaptation planning and the framework around adaptive governance in Nepal are providing good examples and lessons in support of the current discussion of the adaptation paradoxes, i.e., how to link global policy making to local responses. It is also helping Nepal to take leadership in demonstrating local preparedness and actions towards climate change governance. Although the pilot activities are in an early phase, there are already encouraging results. Existing mechanisms are so far proving effective in mainstreaming climate change adaptation at the local level.

Several field pilots have identified a wide variety of tools that can be effectively used to assess climate vulnerable households or communities. The participatory tools and methods proposed by various agencies and scholars have been refined and adopted during LAPA piloting as a basis for integrated vulnerability assessment. Social analysis system tools that emphasize collaborative enquiry and social engagement, such as problem dynamics (assessing climate change issues), option domain (identifying adaptation options) and multi-stakeholder brainstorming workshops, were liked by communities, as they provided a visual basis for communities to understand and interpret the situation. Social analysis tools, such as those available through the Social Analysis Systems approach, were received well by NGOs and government officials due to their applicability and usefulness in terms of understanding power dynamics, institutional settings and differences among risk and adaptation thresholds. These lessons suggest that integrated vulnerability assessment can be an effective entry point to the LAPA planning process.

The pilot projects identified awareness raising, local capacity building, a participatory and inclusive process of planning and delivery and collaboration among communities, NGOs and local government bodies as important elements in shaping local adaptive governance and the effectiveness of the local adaptation responses. One of the crucial lessons is that more inclusive approaches will reduce conflict, although even then it may not be possible to include or incorporate all the different perspectives and stakeholders, especially in light of local political pressures.

The LAPA experience showed that although a range of institutions are relevant for local adaptation planning, relative strengths and weaknesses for playing different roles depended on context. Local government agencies were identified as having the most potential among others for matching top-down and bottom-up climate change planning. Recognition of existing local institutions and mechanisms for sharing risks and benefits could be a good starting point for developing adaptive responses. Regarding technological innovations, existing systems and practices need to be built on. The degree of robustness in relevant systems and relative strengths and weaknesses need to be studied and understood. Facilitating the exchange of information and knowledge among communities and groups will be a powerful

means of fostering the adaptive capacity of communities.

Follow on activities post Pilot LAPA Phase (post 2011): One further follow-on effort, the NRRC Flagship 4 Project was designed and is being implemented in mid- and far West Nepal. This DFID funded effort uses the LAPA process to identify the most vulnerable communities threatened by climate change, involve them in the decision-making to identify climate-related hazards and risks and prioritizing adaptation actions. The intent is to mainstream climate change adaptation approaches from local to national level planning processes and to ultimately integrate these approaches into district development planning, like most LAPAs. Specifically, this project uses the LAPA process, led by the District Authorities (i.e. the Chief District Officer's office) but implemented by CBOs and community mobilizers at the VDC/community level. This project was signed in 2012 and is now finalizing designs for 70 VDC-level LAPAs to address the needs of 400,000 people in 14 mid- and far-western districts. Approximately 40 LAPAs have been conducted so far. It is part of a US\$21 million project committed by DFID and the European Union.

Under this mechanism, sub-VDC level planning is also being conducted, using a mechanism called Community Adaptation Plans of Action (CAPA) as they determined that there was too much variability at the VDC level and that going further down to a user groups level would be more effective. Under this project funding up to 300,000 Nepal rupees (approximately \$3,100.00 USD) will be provided at the CAPA level to conduct climate adaptation projects, according to one informant.

CARE and World Wildlife Fund are also conducting user group-level adaptation planning exercises in project areas using USAID/Washington funding under a program called the SCAPES project in Eastern Nepal, and Hariyo Ban in Central Nepal. Under SCAPES, a series of CAPA and LAPA exercises were conducted in Taplejung District around the Khanchenjunga Conservation Area Project (KCAP) in partnership with district based Federation of Forest User Group staff (FECOFUN). The process used is a fairly simple, standard participatory rapid rural appraisal procedure and is largely a community resource mapping exercise on community perceived vulnerabilities due to climate change impacts. No specific innovations were noted in implementing these projects aside from the emphasis on the user group levels (for CAPA) as the starting point instead of the VDC.

Several other agencies have been conducting LAPAs in Nepal since 2010. The author and the TMI team were not able to obtain additional documents for review. While transparency is a perceived value among the NGO and INGO communities, this does not always translate into open sharing of documents and information.

Observations, Analysis, and Comments on the LAPA Process: Nearly all documents examining the LAPA and LAPA process acknowledge the value of the LAPA process and particularly commend Nepal for prioritizing a process that emphasizes a bottom up, participatory, community driven approach. The

commitment to decentralizations is also consistently commended.

Many documents refer to the value of starting at the local level, including direct interactions with community institutions. A quick review of development success in Nepal indicates that performance of program implementation remains consistently weak, and hence getting development assistance to the local level helps overcome this constraint. A number of large and small problems have contributed to this weakness, political instability, corruption, and lack of accountability being consistently identified as serious problems. Decentralization is one way to address several of these constraints simultaneously, therefore, increasing the likelihood that implementation efforts can better reach to the poor and marginalized social groups.

Stocktaking Overview: As part of the Nepal LAPA stocktaking, meetings were held with other potential donors, who may provide additional leveraged funding and help mainstream the High Mountain lessons learned into broader future programs. Meetings were held with U.S. Agency for International Development, Office of Japanese Cooperation to Nepal (JICA), US State Department Environmental Hub Office, United Nations Development Program, World Wildlife Fund, Dolpa Institute, Resources Himalaya Foundation, Himalayan Research Expeditions, Federation of Community Forest User Groups (FECOFUN), Nepal Federation of Indigenous Nationalities (NEFIN), International Center for Integrated Mountain Development (ICIMOD), World Food Program (WFP), Ministry of Forest and Soil Conservation (MOFSC), Wildlife Works Carbon, Red Panda Network, and the Multi Stakeholder Forestry Programme.

In Nepal TMI talked with several other agencies that have been conducting LAPAs and reviewed several completed LAPAs. A number of agencies have been conducting LAPAs including DFID (70 LAPAs completed with another 400 in progress), WWF (approximately 20 LAPAs completed with more in process, some in partnership with CARE), and others including Himali Conservation and Development Agency (HCDA), Federation of Community Forest User Groups (FECOFUN), Himawanti (Himalayan Women's Association) and others.

After review of the work of these organizations, the preliminary conclusion is that most LAPAs have followed the guidelines developed by Government of Nepal, but these guidelines have limitations. The January-July 2013 stocktaking and review of dozens of LAPAs in Nepal revealed that many are of inferior quality and utility. Many are no longer than 4 pages, provide only the briefest of vulnerability and adaptation analyses, and conclude with a sentence or two stating that "a committee has been selected which will be in charge of project implementation." The goal of the HIMAP is to produce a model LAPA that is based on its unparalleled fluency in the region (physical and cultural); meaningful and participatory dialogue with stakeholders; community- and Nepali-driven nature of the entire LAPA process; and incorporation of additional components described above.

Observations, Analysis and Recommendations for an Improved LAPA

Mechanism and Process: All of these efforts deserve sincere recognition and acknowledgement for the purity of their intention and of the clarity and thoroughness of the processes that are described. Unfortunately, that does not mean that they cannot be improved upon. Several comments and suggestions follow. Comments and observations fall into seven categories, including 1) unit size and ecological processes, 2) planning process, 3) decentralization verses coordination, 4) financing mechanisms, and 5) incorporation of scientific data, 6) cultural elements of climate change and 7) monitoring and evaluating impacts and results.

(1) The LAPA Unit Size: First, one must examine the issue of the correct LAPA unit size. To encourage a bottom up, community driven process and try to ensure that climate change adaptation happens at the community level, the designers of the LAPA process choose the Village Development Committee as the basic planning and implementation unit. While there are many valid reasons for this choice, including a very legitimate desire to encourage and strengthen the decentralization process in Nepal, this choice involves some trade-offs.

On the positive side, quoting from the GON LAPA Manual of 2011:

“The VDC and the municipality have been identified as the most appropriate unit for integrating climate change resilience into local-to-national development planning processes and outcomes. The VDC or the municipality as administrative and geographic units are able to capture location/community specific adaptation priorities and ensure that national level support for local adaptation does not get fragmented or incur large transaction costs. Integration at these units enables a match between bottom-up and top down adaptation planning. The VDC or the Municipality as operational unit refer to the Village and or Municipality Development Councils, and the Village or Municipality Development Committees. Whilst the Council is responsible for executive decision making, Village or Municipality Development Committees are responsible for planning, integration of the LAPA into Sectoral and development planning processes, coordination, monitoring and evaluation, and service delivery. These Village and Municipality Development Committees are competent to consolidate and channel both development and climate adaptation budgets. To ensure delivery of adaptation services in a timely and effective manner capacity building of these local bodies would be necessary.”

However, this trend to devolve into smaller rather than larger administrative units can result in promoting decentralization at the expense of reducing the potential for impacts at scale. Among LAPA practitioners there are two main camps evolving, one that wants to work more at the ecological and less at the administrative boundary level, and the other that wants to devolve to even more decentralized levels. A number of organizations in Nepal have argued that the climate adaptation planning process needs to go beyond VDCs and reach down to the user group or community

level, and they have developed a process called Community Adaptation Plan of Action (CAPA). While many natural resource management decisions are made at the user group level, and these institutions (such as community forest user groups and irrigation user groups most notably) are effective units of local, decentralized resource governance, they may be too small to promote climate change activities that build resilience at a more substantial level. As an example, building a local check dam may control erosion and build "resilience" in one smaller gully and impact the fields of a small number of households in that micro watershed, but will do little to enhance resilience to the extreme rainfall events that have occurred in Nepal these past few weeks and destroyed homes and infrastructure downstream, causing damage and loss of life to thousands of people. Balancing the needs at the local, micro level and the larger scale geographic needs will continue to present a challenge and promote debate.

Applying this concept to the High Mountains project, one can see a new possibility for expanding the High Mountain Khumbu LAPA work, using it as a foundation to create a model for a more hybrid LAPA process. This process would go beyond the individual VDC level (the current standard limited to the VDC level, with restricted potential funding levels), expanding the concept to interconnected VDCs that function more as ecological units, which may help raise larger leveraged funding such as a Khumbu-wide Adaptation Plan. This might better position the current High Mountain work for complimentary funding through other mechanisms such as National Park Buffer Zone Funding, which occurs at these larger ecological unit levels.

(2) LAPA Planning Processes: As with many things designed by committee, the LAPA planning process perhaps errs on the side of comprehensiveness rather than efficiency. The list of suggested participatory tools to use when conducting a LAPA is very comprehensive, perhaps even too comprehensive. The emphasis on using a wide variety of known and field tested participatory tools is a strong indicator of Nepal's commitment to try to ensure that climate change adaptation efforts reach into the lowest and generally marginalized groups. The recommended tools to use to accompany the seven step LAPA process are all well-known and field-tested tools that can help development projects reach into the lowest levels of society. Nepal remains ahead of many developing countries in the use and adaptation of participatory tools, and these recommendations demonstrate a clear leadership role in climate change adaptation globally. Many of these participatory tools are powerful ways to ensure greater inclusion and better gender balance if used correctly and thoroughly. The tools table listed is a thorough and comprehensive list of the appropriate tool to use at each step in the seven steps LAPA process, and is indeed impressive for its comprehensiveness.

However, conducting each of these techniques in a thorough and comprehensive manner will require considerable investment of both time and money to complete them properly. As a result, a number of LAPAs are stripped down due to either funding or time constraints and are conducted as simple PRA (participatory rural

appraisal) exercises that assess community perceptions on climate change vulnerability. These are useful documents but provide largely qualitative information. It may well be that they are conducted primarily as pro forma documents completed in order to qualify communities to apply for Government of Nepal (GON) Adaptation Funds, which are provided under UN and bi-lateral assistance mechanisms. These Adaptation Funds are provided at the Village Development Committee (VDC) level. According to one informant, communities that meet the meet these criteria can apply for grants up to Nepali Rupies 300,000 (approximately \$US 3,210 per VDC). Many produce simple hand drawn, village sketch maps with superficial write up of the generalized findings. This is adequate to apply for and compete for small GON project funding under the Adaptation Fund mechanism but provides an inadequate basis to design larger more comprehensive projects that are more likely to result in lasting and sustainable climate change resilience, even at the community level. Hopefully the process being used in the TMI High Mountain LAPA work has the potential to fill this gap.

(3) Decentralization versus Coordination: The LAPA experience in Nepal is still in its infancy and there remains much to learn. The Government of Nepal is interested in using the agreed framework for LAPA to drive the adaptation mainstreaming agenda. This will require working with other sectors and stakeholders to look for potentials and opportunities to upscale LAPA learning across different watersheds and geographical areas in Nepal will be useful.

There remain some challenges however. Authors of some studies in Nepal conclude that the

“responses of Nepal’s political constituencies towards climate change crisis are diverse, inconsistent and non-coherent. Responses usually emerge from individual understanding, often based on limited knowledge of the whole issue. There is little internal discussion among the political bodies, many of them are exposed to international and NGO led activities and therefore get different perspectives. These are further complicated by the conflicting ideological and political orientation of political parties and leaders. However, it is surprising that there is huge variation even within the leaders of particular political party partly due to little serious homework and discussion on the issue within the parties. there is shared view that climate change is primarily due to industrialized countries and that Nepal as a LDC should get aid to better adapt to the changing global climate. However, many have not gone beyond this general situation and there is little understanding and explanation of our adaptation priorities let alone the programmes. “ (Naya Sharma Paudel, CAPD-Forest Action 2010; Responding to climate change in a transitional politics: review of political context in relation to designing LAPA in Nepal).

If one agrees with Paudel’s conclusions, then the decision to focus on a decentralized approach may contribute to this lack of understanding as it complicates coordination and working across sectors as they generally do not have operational

arms functioning at the VDC level. Coordination is further complicated as climate change is typically categorized under the banner of “environment” programming rather than mainstreaming it into environmental as well as larger development efforts. “This presents a challenge to establishing climate change as a cross-cutting issue rather than an environmental one,” concludes a 2011 report by the Capacity Development for Development Effectiveness Facility for Asia and Pacific, a “community of practice” organization working in the Asia-Pacific region. DFID Climate Change professionals agree, stating that ideally “we shouldn’t have separate climate change projects,” and“Local development should look at the needs in the area with climate change in mind.” However, the mechanisms to integrate climate change into regular or existing development work remain weak and ineffective. The situation is further complicated by the fact that the apex body in Nepal for all Climate Change issues is the Ministry of Environment, Science and Technology (MOEST), a Ministry that does not have regional or district level staff in place, nor large budget authority.

There is widespread agreement that decentralized decision making and planning for climate change adaptation are appropriate for Nepal as it reaches into the grassroots and aids with inclusion, but these decisions come with drawbacks, and create coordination challenges. As the mainstreaming mechanisms remain weak and the coordination between Ministries lacking, particularly when this requires some sharing of resources (especially funding), creative problem solving will be required to address this issue.

(4) LAPA Financing Mechanisms: Ensuring that climate change money flows to the most vulnerable communities will require the right structure to be effective. While the topic of climate financing is slightly outside the discussion of the LAPA, it is worth raising a few points for consideration. As the flow of funds is planned to go via the District to the vulnerable VDCs, this will require the building the capacity within existing district level structures. Lessons learned from other development sectors have relevance and important lessons can be learned on creating effective decentralized funding structures. (For a detailed analysis, please see Neil Bird, Climate Change Finance, Overseas Development Initiative 2012, listed in the references). An institutional mapping of VDC, Municipalities and DDC functions, powers, capacities and relationships would be useful to identify which agencies have the skills and manpower to assume these additional duties.

As mentioned in an earlier section, effective adaptation responses will require a coordinated approach and a multi-disciplinary response across multiple different agencies in order to be effective. The current structure of providing each VDC with Rs. 4.6 million, depending on population and proposed project priority, of funding for prioritized projects achieves the decentralization goal and aids in bottom up approaches, but does not guarantee that funds will be utilized in a way that addresses larger climate related challenges. The proposed development of LAPAs to implement adaptation actions for communities in a number of districts of Mid and Far West Nepal will be a strategic learning opportunity, particularly with the

national climate change policy stating ‘at least 80 percent of the total funds available for climate change activities flow to the grassroots level’. Both the fund flow mechanism and mechanics of local fund management will need to be examined carefully. Even when these issues are carefully resolved, the issue remains that small chunks of approximately \$3000 investments may not address larger watershed or landscape level climate challenges like drought, floods or catastrophic hazards like glacial lake outbursts. At present there is no mechanism within the LAPA process for adjacent communities to work together and pool their adaptation funds to address a larger climate problem. In fact the current incentives encourage communities to act independently of one another, while climate change impact may demonstrate that communities are dependent upon each other such as in downstream communities depending on the predictable flow of water from upstream communities and water sources.

The experience of development finance flows suggest several different models to secure local level service delivery: one where funding passes through central ministries to Local Bodies; another where central funds pass directly to community groups, or models like emergency relief funding which flow through district authorities to vulnerable communities. Each approach has advantages and disadvantages, characterized by the difference between an emphasis on short-term, high impact as opposed to an approach that gives greater weight to long-term, institutional development. If carefully designed and transparently implemented, the LAPA experience may offer insights and help strengthen the function of local government bodies. Nepal does have some experience in creating effective decentralized funds management that passes through village development committees like the health facilitation management committee & the village forest coordination committee. This learning could be valuable as more climate change funds are disbursed through adaptation funds. These institutions are better suited to providing good governance & are more credible at the local level. As Bird states,

”Such committees also have the capacity to manage financial resources, which includes the capacity to account for resources, ensure quick disbursement targeted at climate adaptation, and M&E. New guidelines, for instance, ensure that District Development Funds and Village Development Funds practice results based management/disbursement of funds. Responding to climate change has been included as a result area” (Neil Bird, Climate Change Finance, 2012)

(5) Incorporation of Scientific Data into the LAPA Design and Process: The current LAPA design process is exceptionally strong in using participatory processes to assist vulnerable communities to identify perceived climate change threats and then prioritize community-based responses. One significant area of weakness is that there is no mechanism described that explicitly seeks out and incorporates available scientific knowledge into the planning and decision making process. While much of Nepal lacks quality scientific data, there is no justification for not capturing the data that is available and incorporating it into the LAPA and the community priorities. This could considerably improve the technical quality and usefulness of LAPAs,

moving them from simple statements of perceived climate risk to much more evidence based planning tools. Improved quality and more comprehensive LAPAs will enhance the competitiveness of proposals submitted for consideration under the Government of Nepal (GON) Adaptation Funds and would strengthen the competitiveness of any proposals that communities submit to other donors to seek funding from other agencies that address larger climate change issues and problems. This combination of a community based but science driven approach is a niche and gap that the High Mountain LAPA process is helping to fill. While the Khumbu area is exceptional in Nepal in that it has been studied more than most remote regions, one is consistently surprised how much data is available for many parts on Nepal when the search includes a thorough review of development reports and other “grey literature”.

(6) Cultural Dimensions of Climate Change Adaptation: As strong as the LAPA design is on collecting community inputs into climate change impacts, the process is surprisingly lean on collecting data on any cultural dimensions of climate change. Although it may appear counter intuitive, culture is thoroughly impacted by climate change, ranging from timing of holiday schedules such as timing of festivals, planting dates, and architectural styles (e.g., flat roofed architecture in arid zones that now leak during the un-seasonally heavy rains events). Many local people also have strong cultural associations with the land and landscape features and collecting and understanding these perceptions adds value to climate change findings and helps local people as they prioritize climate adaptation actions. An example from the TMI experience in the Khumbu region is that a number of local people mentioned that they started to notice climate change impacts only after they ceased conducting local rituals acknowledging local natural deities, and focused more on making more money from tourism. While these are qualitative findings, understanding them can help climate professionals create increased climate change awareness and prioritize responses to climatic events. Developing a few new tools to incorporate this type of information will strengthen future LAPAs and make climate change concepts more accessible to local people.

As an example, interviews with Lama Tenge and other monks were conducted by HIMAP staff during a half day visit to the Thame monastery on 20 April, 2013. Changes that Lama Tenge has observed in recent times include the following:

- a. Changing and irregular weather and precipitation patterns (e.g., previously, snow never fell in April whereas now it is abundant),
- b. Wind storms, never recorded in Khumbu history, with velocities so powerful that roofs are blown off of houses and hundreds of trees were knocked down,
- c. Hail storms during the monsoon that damage or destroy potato crops,
- d. Decreased river levels, and

e. Lack of obtaining sufficient freshwater.

Lama Tenge also provided the following interpretation of why climate change is occurring:

"Thirty years ago, people were poor but happy. They farmed, ate tsampa, used the forests, and respected nature. Every three months every household would request the services of a monk from the monastery to do a three day puja (worship) for the gods. Now, tourism has come, nobody helps their neighbors anymore, and all people think about is money. Many families no longer do the pujas, trash is everywhere, and instead of burning a bit of juniper each morning as a sign of respect for the gods they burn garbage. Sacred sites have become polluted, and more people are using tobacco. People now have no respect for nature, they're abusing nature, and the gods are angry and are changing the climate to show their displeasure."

(From: Byers, A.C. 2013. Trip Report: Community Consultations Phase II: Imja, Thame, and Gokyo Valleys, 15-30 April 2013. HIMAP.)

The parallels between the east and west in "not respecting nature," and the resultant consequences of climate change and a warming planet, are of note.

(7) LAPA Monitoring and Evaluation: One challenge of any local planning tool like a LAPA lies around monitoring and evaluation. The initial LAPA pilot worked with 9 partner organizations to develop monitoring and evaluation guidance, piloting some of LAPA approaches and identifying a framework. Early lessons suggest that outcome-based monitoring is relevant for improving adaptive capacity and improving climate change governance. The pilots also suggested that cost benefit analysis can be a strong decision support tool for the identification and prioritization of climate adaptation measures and development plans, hence their inclusion as a tool in the priority setting step. This is also a way to draw-down resources to reach out to the most vulnerable communities or households. Such a highly decentralized planning tool presents many monitoring and evaluation challenges. While the LAPA process is very thorough in its design and specifically mentions a number of tools to use at each step, the actual use of the tools varies considerably in each setting. This makes comparability challenging and limits the ability of managers to compare one project's results to another. One reason for the high degree of variability is that different projects choose to invest different levels of resources in the LAPA process, ranging from simple PRA style community perception surveys to much more comprehensive multiple nested consultations with community members such as the TMI Khumbu consultations. A further trade-off is that in areas where limited projects funds are likely to be available to implement prioritized projects, investing large sums of money in data collection and community consultation can raise expectations without providing many

opportunities for follow up projects. Another monitoring challenge is that two levels of monitoring are required, one to monitor the LAPA process and another to monitor the impacts of any prioritized climate change adaptation projects that are implemented. The wide range of impacts from climate change presents a wide array of potential solutions and action projects, which in turn requires a wide range of monitoring tools. Demonstrating clear cause and effect also is challenging, for example one cannot state without qualification that construction of a check dam has resulted in reducing impacts of flood or controlling soil erosion. Such uncertainty results in the use of more qualitative tools that remain unconvincing to some policy makers.

One example of a successful multi-activity monitoring framework is the Strategic Program for Climate Resilience in Nepal (SPCR). That project developed a results framework that can help guide future climate change actions, being the first such framework explicitly designed for a national climate programme. This is a large scale multi-national donor funded project in Nepal with 7 components and the strongest component from a monitoring perspective is the component that seeks to build climate resilient mountain watersheds. This component has the most similarity also to the High Mountain project and it seeks to improve participatory watershed management, taking into account impacts of climate change, enhanced efficiency of water use in farming systems, and improving access and reliability of water resources. The general indicators being used in that project include participatory plans developed and implemented, erosion control measure implemented and improved surface water storage capacities, community adaptation of water use plans and lessons learned being feed back into the national development practice. While imperfect, the indicators developed and used under this project have some value for measuring the effectiveness of the LAPA projects as well.

TMI Progress to date on Khumbu LAPA: The focal work area of TMI in Nepal continues to be the Khumbu Valley. This work was comprised of two subtasks covering (i) designing, partnering, and initiating a Local Adaptation Plan for Action (LAPA) for the Khumbu Valley; and (ii) continued GLOF reconnaissance, risk modeling, and community-based risk mitigation in partnership with UNDP/Nepal. Task two will not be discussed in this report as it is covered elsewhere. During Year Two, the HIMAP expanded linkages with local communities and civil society organizations, as well as with local and national government agencies and entities (e.g., Department of National Park and Wildlife Conservation (DNPWC), Buffer Zone Management Committee, Sagarmatha Pollution Control Committee (SPCC), etc.) as a means of enabling, supporting, and facilitating the LAPA production for the Khumbu. Guidelines and a plan for execution of the LAPA were produced in early 2013, building on the information obtained during the September 2012 community consultations; follow on meetings with stakeholders in Kathmandu; and LAPA introductory and climate change impact assessments in communities in the Thame, Gokyo, and Imja valleys in April-May 2013. A Nepali, Ph.D.-level LAPA team leader was hired in April, 2013; two local, M.A.-level resource persons (one female, one

male) were recruited from the Khumbu region; and the final community consultations, adaptation prioritization, funding source identification, and intervention mainstreaming workshops will be conducted in August-September 2013.

The facilitation of the LAPA production process has built on TMI's decades of work in the region, the 2012 community workshops, IRG/Engility's training of trainers' workshop in Kathmandu (which engaged local stakeholders in climate change adaptation and development activities and planning), plus various trainings of TMI staff in climate change principles and V&A methodologies. It has capitalized on progress made by the HIMAP in advancing plans for adaptation and disaster management in the Khumbu, and is attempting to leverage funding from the UNDP *Community-based Glacial Lake Outburst and Flood Risk Reduction in Nepal Project* which was approved in April 2013. The implementing agency for this project is the Nepal Department of Hydrology and Meteorology (DHM), which the HIMAP has consulted with regularly since September 2013. The UNDP has requested significant support from the HIMAP, in both the social as well as physical sciences, in undertaking a number of activities in consultation with local stakeholders, and the UNDP is anxious to incorporate the unparalleled community and technical expertise of the HIMAP and its international experts. Co-financing opportunities (e.g., bidding on selected project tasks, activity cost sharing) were discussed beginning in May, 2013, and the HIMAP has been invited to participate in the forthcoming Inception Workshop (August or September, 2013).

Local Adaptation Plan for Action for the Khumbu Valley As a complement to its NAPA planning process (National Adaptation Programme of Action), under the UNFCCC, Nepal has developed a national framework for Local Adaptation Plans for Action (LAPA) to integrate climate change adaptation into local development planning and climate-smart development. The aim is to (i) enable communities to understand the consequences of climate change and partner with them in determining adaptation priorities, (ii) implement flexible climate-resilient adaptation (land and resource use) plans, and (iii) inform and catalyze integrated approaches (e.g., for climate-smart development) between sectors and stakeholders, reinforcing the sustainability of the project. Nepal expects that the LAPAs will provide a mechanism to mainstream adaptation in the development agenda of local government bodies. The Government of Nepal's (GON) guidelines state that these processes should address such elements as:

- Promoting community-based adaptation through integrated management of agriculture, water, forests, and biodiversity.
- Building and enhancing adaptive capacity of vulnerable communities through improved systems and access to services for agricultural development.
- Community-based disaster management for facilitating climate adaptation.
- GLOF monitoring and disaster risk reduction.

- Forest and ecosystem management in supporting climate-led adaptation innovations.
- Adapting to climate challenges in public health.
- Ecosystem management for climate adaptation (e.g., Ecosystem based Adaptation).
- Empowering vulnerable communities through sustainable management of water resource and clean energy supply.
- Promoting climate-smart urban settlements.

Additionally, the HIMAP will integrate three components designed to enhance the utility and sustainability of the LAPA planning documents produced. They include (a) assisting stakeholders in the identification of prospective funding sources for each of the priority climate change adaptation interventions identified (e.g., Buffer Zone, VDC, GON, international donors), (b) purposely mainstreaming high priority climate change adaptation interventions with District- and local-level development priorities (e.g., adding water collection systems and climate smart designs to the construction of new community buildings), and (c) actively leveraging co-financing for the implementation of priority climate change and risk reduction interventions (e.g., National Geographic Society alternative energy grants, UNDP/Nepal subcontracts).

As an overall conclusion, the TMI Nepal LAPA is progressing well and is on track for completion by the end of December 2013. Several areas for additional information and strengthening are nevertheless recommended. These are the need to: 1) increase gender inclusiveness in LAPA participants, 2) increase perspectives of the season migrant workers who populate the Khumbu and 3) broaden LAPA participation to include more inputs from the economically disadvantaged Khumbu residents, e.g. include more non-lodge owners. Representation from all three categories can be strengthened and enriched in future consultations. The other task that remains is to take the valuable lessons learned during the High Mountain project and seeks ways to mainstream these findings into future development efforts including into USAID Nepal's emerging 5 Year Country strategy.

Next Steps and General Observations: Based on meetings with USAID Nepal Mission staff, opportunities to mainstream and expand the High Mountain project were explored. USAID Nepal Mission priorities for the next five years are in West Nepal, and mainstreaming the High Mountain impacts will require consistency with their priority geographies, particularly West Nepal. These are areas harboring extreme levels of human impoverishment, and environmental degradation – made worse by growing climate change impacts and vulnerabilities. USAID Nepal clearly appreciates the innovations, impacts and accomplishments of the High Mountain project. One outcome from the HIMAP work is that the HIMAP work has contributed to the foundation for USAID Nepal to mainstream climate change into all other program sectors. More detailed discussions indicated that the 5 Year USAID Nepal Country Strategy will focus on integrating climate vulnerabilities and impacts into **natural resource management** with a focus on 4 elements **including biodiversity**

conservation, forests, soils and water as topical headings. Opportunities to expand the High Mountain learning in multiple sectors abound, with particular overlap in the areas of water storage and water management activities as obvious starting points for integrating the Khumbu High Mountain lessons learned, but applied in the geographies of West Nepal.

Beyond USAID Nepal, discussions with UNDP/GEF were positive and UNDP's seems keen to integrate much of the High Mountain learning into their new GEF project designed to mitigate risks from growing natural hazards such as Glacial Lake Outburst Floods. The contracting mechanisms are being sorted out and it is important for High Mountain staff to be present at the Planned Inception workshop in order to incorporate the High Mountain learning into their project implementation, especially in the areas of glacial lake monitoring, design of community based early warning systems and mitigation of GLOF risks through engineering work.

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Responsibility for the content of this paper rests solely with the author including any material errors, omissions, or errors of interpretation or fact. In particular, no responsibility for the opinions shared here should be attributed to the High Mountains Adaptation Partnership Nepal Team, Engility Corporation, USAID Nepal, USAID Washington DC, the Government of Nepal or the people of Nepal, nor to any of the persons interviewed during the course of this study.

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(Note: 87 other climate change documents were also consulted but not referenced or quoted as they dealt with topics on specifically related to LAPAs or NAPAs in Nepal).

Annex 1: Summary of the LAPA history and Process: A Framework Document
(attached)

Annex 2: Suggested Outline for Khumbu Specific Local Adaptation Plan of Action

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