

EFFECTIVENESS OF LOCAL ADAPTATION PLAN OF  
ACTION IMPLEMENTED BY MULTI-  
STAKEHOLDERS FORESTRY PROGRAMME:  
A Case Study of Parbat District

A Thesis Submitted to  
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In Partial Fulfillment of the Requirements for the  
Degree of masters of Arts  
In  
Rural Development

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# Dedication

Every challenging work needs self efforts as well as guidance of elders especially those who were very close to our heart. My humble effort I dedicate to my sweet and loving

BABA & AMA

Whose affection, love, encouragement and prays of day and night make me able to get such success and honor, Along with all hard working and respected

Teacher

Especially dedicate my thesis to my cousin

(SADISH bhuntu)

# DECLARATION

I hereby declare that the work reported in this thesis entitled *Effectiveness Of Local Adaptation Plan Of Action Implemented By Multi Stskehoders Forestry Programme: A Case Study Of Parbat District* Submitted to Office of the Dean, Faculty of Arts, Tribhuvan University, is my original work done in the form of partial fulfillment of the requirement for the Degree of Master of Arts under the supervision of **Ramesh Neupane**, University Campus.

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18 Nov. 2016

## LETTER OF RECOMMENDATION

This thesis *entitled Effectiveness Of Local Adaptation Plan Of Action Implemented By Multi Stakeholders Forestry Programme: A Case Study Of Parbat District* has been completed by Mr. **Madan Paudel** under my guidance and supervision in partial fulfillment of the requirements for the Degree of Master of Arts in Rural Development. I hereby forward this thesis for its final evaluation and approval.

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Date : 2073/08/5

22 Nov. 2017

## **APPROVAL SHEET**

This is to certify that the thesis entitled *Effectiveness Of Local Adaptation Plan Of Action Implemented By Multi Stskehoders Forestry Programme (A Case Study Of Parbat District)* and submitted by Mr. Madan paudel, in the prescribed format of the Faculty of Humanities and Social Sciences, has been examined and accepted as partial fulfillment of the requirements for the Degree of Master of Arts in Rural Development.

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I am finding it difficult to write this page because too many people have helped me during the course of my research. It does not seem possible to include all those names here. Among those unnamed ones are the people in the study area who made a warm welcome and shared with their experiences of LAPA preparation and implementation. The inputs derived from their experiences have proved to be extremely helpful in meeting the objectives of my study.

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## **ABSTRACT**

A key challenge in climate change adaptation in developing countries as a whole, and to handling global change in particular, is to link local adaptation needs on the one hand, with national adaptation initiatives on the other, so that vulnerable households and communities can directly benefit. This study was conducted on Banau, Majhphant, Tilahar and Kurga VDC of Parbat district during the period of April to November.2016 The main objective of the study was to assess effectiveness of LAPA implementation process, activities, outcomes and challenges, by MSFP in livelihoods of poor and vulnerable communities. Interview survey, key informant interview, focus group discussion were conducted in collecting primary information. One hundred and Sixty eight households were sampled out of total 840 households (I.e., 40 to 43 VDC and 20 to 23 from each CFUG) with purposive sampling for interviews survey. The data were analyzed using SPSS computer software.

The preparation and implementation of LAPA in the Parbat District for MSFP working district is based on the prescribed steps in the LAPA framework 2011. Erratic rainfall, droughts, decline of water sources and soil erosion, decline in crop productivity, incidence of crop pests, and widespread problem of invasive weed species were identified as major problems associated with climate change. Nearly 90% of respondents were found experiencing climate change signal in their localities. Assessing of climatic signal based on the perception of respondents with focusing risk, it was found that untimely rainfall was the major experience. In response to the climate change impacts, the most prioritized adaptation interventions identified have remained the conservation of water sources (springs) followed by the rehabilitation of drinking water, irrigation systems, plantation, forest management, construction of recharge pond, income generation activities and creation of awareness in the community.

The local (VDC) based adaptation plans are developed at local level in an effort to enhance the capacity of communities to adapt to climate change including its variability. While asking have you got the opportunities for participation in LAPA preparation, 81% of respondents informed that they have got the opportunities for participation in LAPA

preparation. Majority of respondents in LAPA preparation got the opportunities for participate and raise their voice. While asking about LAPA, 82.2% of respondents informed that they have heard about it. One of the reason for this was LAPA has been prepared in the VDCs where Community Learning Centre exists. During Focused Group discussion participants were confidently saying that they prepare their LAPA themselves.

From household survey among the 47.6% of respondents pointed out effective of climate change adaption activities done by IPO or NGOs. Out of them 44% mentioned that very effective of climate change adaption activities done by IPO or NGOs. Likewise 6% said that fairly effective and 2.4% pointed out do not know or any idea but they have receive support from the programme.

The implementation of LAPA has positive impact on the environmental condition as well as socio-economic. The study shows, 98 percent respondents agreed on positive impact on forest conservation. Respondents who believe on positive change of programme intervention on greenery, wildlife expansion were found to be above 85 percent. Also, more than 70 percent respondents agreed on the positive irrigation facilities and water resource conservation.

The household survey shows 95.2% of respondents pointed out yes targeted to poor, women and Marginalized and poor, women and Marginalized gained benefited from the program which is equal percentage of both of them. Likewise 92.3% of respondent point out yes MSFP of IAs carried out climate change adaption activities as per local people need. So, NGO targeted to poor, women and marginalized people and received benefited mostly poor, women and Marginalized. And also MSFP of IAs carried out climate change adaption activities as per local people need.

There are the various challenge found while preparing and implementation of LAPA which are gaining stakeholders interest in LAPA, ownership of LAPA document, linguistics problem, resource tapping from stakeholders, integrating LAPA into development planning, making community active, releasing fund, monitoring and evaluation



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## LIST OF ABBREVIATIONS/ACRONYMS

CADP-N	Climate Adaptation Design and Piloting Project – Nepal
CAP	Community Adaptation Plan
CAPA	Community Adaptation Plan of Action
CAPA	Community Adaptation plan of Action
CBA	Community Based Adaptation
CBFMA	Community Based Forest Management Assistant
CBO	Community Based Organization
CC	Climate Change
CDO	Chief District Office
CeCRED	Center for Community Resource and Environmental Development
CFOP	Community forest Operational Plan
CFUG	Community Forest User Group
CFUG	Community Forest User Group
DADO	District Agriculture Development Office
DAG	Disadvantaged Group
DCM	District Coordination Meeting
DDC	District Development Committee
DFID	Department for International Development
DFO	District Forest Office
DFSCC	District Forestry Sector Coordination Committee
DIP	Detail Implementation Plan
DSCO	District Soil Conservation Office
DSM	District Support Mechanism
ENPRED	Environmental Preservation Services for Development
ENPRID	Environment Preservation Services for Development
EU	European Union
FA	Forest Action

FECOFUN	Federation of Community Forest Users' Group, Nepal
FNCCI	Federation of Nepal Chamber of Commerce and Industry
FNSCI	Federation of Nepal Cottage and Small Industries
GEF	Global Environmental Facility
GLA	Government Line Agencies
GoN	Government of Nepal
GPSE	Gender, Poverty and Social Equity
IA	Implementation Agency
ICM	Illaka Coordination Meeting
ICIMOD	International Centre for Integrated Mountain Development
IGA	Income generating activity
IPCC	Inter-governmental Panel on Climate Change
LAPA	Local Adaptation Plan of Action
LFG	Local Forest Group
LFP	Livelihood and Forestry Programme
Li-bird	Local Initiatives for Biodiversity, Research and Development
LRP	Local Resource Person
MAP	Medicinal and Aromatic Plants
MSFP	Multi Stakeholder Forestry Programme
NAPA	National Adaptation Programme of Action
NCCSP	Nepal Climate Change Support Programme
NESDO	Nepal Educational and Social Development Organization
NGO	Non-Government Organization
NSCFP	Nepal Swiss Community Forestry Project
NTFP	Non Timber Forest Product
OP	Operational Plan
PGA	Participatory Governance Assessment
PHPA	Public Hearing and Public Auditing
PNGO	Partner Non Governmental Organization
RP	Range Post

RRN	Rural Reconstruction Nepal
SDC	Swiss Agency for Development and Cooperation
SSU	Service Support Unit
UNFCCC	United Nations Framework Convention for Climate Change
VDC	Village Development Committee
VFCC	Village Forest Coordination Committee
YPO	Yearly Plan of Operati



# **CHAPTER ONE**

## **INTRODUCTION**

This chapter includes background of study including general introduction of adaptation, statement of problem, rationale of the study, objectives of this study, scope and limitation of the study.

### **1.1 Background of the Study**

Climate change has become one of the most alarming issues globally. Therefore, the Government of Nepal is also taking some important measures to address it. For example the Government of Nepal (GoN) is a signatory to the UNFCCC, hence, it has been initiating the process of climate change adaptation planning and implementation. Nepal's NAPA was endorsed by the GoN in September 2010. Then, LAPA framework was devised and approved by GoN in 2011 for the operation of NAPA to integrate climate change resilience into the local to national development planning processes and outcomes. The Government of Nepal (GoN) has put forestry and climate change as priority programme to contribute in achieving the national objectives of poverty reduction and tackling climate change vulnerabilities.

Inter-governmental Panel on Climate Change (IPCC 2007) report states that CC is already having noticeable impacts particularly in least developed countries like Nepal which are more vulnerable from the impacts because of their inability to cope with these climatic shocks. CC is expected to have serious environmental, economic, and social impacts in South Asia in particular, where rural farmers whose livelihoods depend on the use of natural resources are likely to bear the brunt of its adverse impacts (ICIMOD, 2009). The region is also confronted with issues like poverty, environmental degradation, and natural resource depletion, shrinking water resources; desertification and CC (Schid, 2008).

The IPCC defines adaptation as the adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities (IPCC 2007). Adaptation can be any process, action or outcome in a system (ecosystem, household, community, group, sector, or

region) that helps that system to better cope with, manage, or adjust to the changing conditions, stresses, hazards, risks or opportunities associated with climate change (Smit and Wandel, 2006).

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Multi Stakeholder Forestry Programme (MSFP) is a joint initiative of the Government of Nepal (GoN) and the three Development Partners: Governments of Finland, Switzerland and the United Kingdom. The purpose of the ten-year Programme is to maximize the contribution of Nepal's forestry sector to livelihood improvement of poor, dalit, women and marginalized household, inclusive economic growth, poverty reduction and tackling climate change. The initial phase which started from January, 2012 will run until July, 2016. Briefing note (2012) MSFP aims to contribute to the vision of the Ministry of Forests and Soil Conservation (MFSC), "Forestry for Prosperity" through its four major areas of interventions or outcomes (a) development and implementation of forestry sector strategies, policies and plans through multi stakeholder processes; (b) creating jobs and income in forestry through partnership with private sector and other actors; (c) supporting rural livelihoods – especially of

the poor, women and disadvantaged and climate vulnerable people, and (d) sustainable forest management, biodiversity conservation and climate resilience (MSFP, 2012).

The preparation and implementation of LAPA and CAPA in the twenty nine Districts for MSFP working districts are based on the prescribed steps in the LAPA framework 2011. Erratic rainfall, droughts, decline of water sources, gullies and soil erosion, decline in crop productivity, incidence of crop pests, and widespread problem of invasive weed species were identified as major problems associated with climate change. In response to the climate change impacts, the most prioritized adaptation interventions identified have remained the conservation of water sources (springs) followed by the rehabilitation of drinking water, irrigation systems, plantation, forest management, construction of check dams, income generation activities, crop diversification, alternative energy, and creation of awareness in the community (MSFP 2012).

MSFP has identified climate change adaptation as a major theme targeting to rural communities especially women, poor, disadvantaged, and climate vulnerable people and households to benefit from the local forest management and other investments through the project interventions. It has clearly spelt out to reduce climate induced vulnerabilities of 550,000 households during the project period (MSFP 2012).

In Parbat district for building climate resilience, the project reached to 2950 climate vulnerable households through the implementation of 27 LAPAs and 33 CAPAs. The key interventions to build climate resilience of the communities are conservation pond for irrigation, plantation, gabion wall, community empowerment etc. LAPAs are being implemented in the leadership of AFEC ensuring VDC ownership to LAPA and resource leverage from line agencies and stakeholders. Similarly CFUGs are implementing CAPAs. MSFP team successfully tapped the seasonal activities of CE phase and as a result plantation target of both tree and NTFP species got accomplished. As an effort to increase forest area with locally preferred species, 43.17 ha (25.97 ha timber species and 17.2 ha NTFPs species) of land is under timber and NTFP plantation. This plantation activity was harmonized in line with Forest fifty operational Plans (FOPs). The choice of species of plantation in CF has been

motivated by three purposes 1) basic need fulfillment, 2) income generation of community and 3) soil stabilization.

## **1.2 Statement of the Problem**

Nepal is 25<sup>th</sup> climate-vulnerable countries in the world due to its fragile, climate sensitive ecosystems and socio-economic circumstances (IPCC-2007). Every year there are an increasing number of households impacted by climate extremes such as flooding, drought and landslides. Millions of people already face problems like acute shortage of water, food and basic services due to climate extremes.

The country's priorities lie in facilitating communities to better adapt to climate variability/ change and safeguard its development. Nepal has adopted a multi - stakeholder led NAPA process, which is regarded as highly participatory, inclusive, flexible and responsive. Government of Nepal took a strongly community-centric approach by designing and piloting Local Adaptation Plans of Action (LAPA). The LAPA framework is now endorsed by the Government of Nepal to operationalize NAPA and its climate change policy.

The concept of community based adaptation planning in order to pave the way for a process and mechanism for targeting and reaching the most vulnerable households and communities. The community adaptation plan (CAP) is a grass-roots level plan prepared by the most vulnerable households and communities identified in the LAPA. CAP provides a strong basis and means for LAPA to be implemented and addresses the adaptation needs of the most vulnerable households.

Hundreds of LAPA and CAPA have been prepared across the country, but financial resources for the implementation of LAPA and CAPA are still lacking. This suggests the allocation of adequate budget is a must for the implementation of 'adaptation activities' envisioned in the LAPA and CAPA documents. The budget required for the implementation of these adaptation activities is comparatively higher compared to the locally available resources. Therefore, a gap exists between required budget and available budget. Furthermore, the absence of the functional VDC with its elected members has been realized as a shortcoming for its consolidation and a full-fledged operation of LAPA.

The Joint Venture (JV) of LIBIRD, FECCOFUN and EMPRED has been implementing phase (2012 to 2016) Multi Stakeholder Forestry Program (MSFP), i.e. Lot-IV in Parbat District. MSFP has identified climate change adaptation as one of the activities to support climate vulnerable rural communities and households through different activities namely preparation and implementation of Local Adaptation Plan of Action (LAPAs). This initiative has been targeted to rural communities especially women, poor, disadvantaged and climate vulnerable people to support in their adaptation activities.

The JV is implementing MSFP activities through partnership with local Non-Governmental Organizations (NGOs) and Community Based Organizations (CBOs). So, the preparation and implementation of LAPA documents and activities in the MSFP Lot-IV Parbat working district was carried out through Local Implementing Partner Organizations (LIPO). The preparation and implementation of about thirty-nine LAPAs were planned for MSFP activities in the Parbat District. The numbers of planned LAPAs could not be prepared due to some reasons, however the number of LAPAs supported to prepare and implement were just twenty-seven.

This is the fact that many organizations have large investment in LAPA implementation but the outcome is not effective to adopt climate change vulnerability. There is a significant gap in the number of Adaptations Plans developed and implemented.

Hilly region is the more vulnerable region for climate change. Many changes such as increasing drought, increasing temperature, landslide and change in the pattern of rainfall have been observed by the locals in the period of a few decades. So this study has been conducted on the hilly district of Parbat, which is one of the MSFP's core districts for LAPA implementation. This study area covered four important areas of Parbat district; Majphant, Bnau, Kurga and Tilar VDCs which have rich biodiversities. The process, local people's perception, activities, outcomes and challenges of LAPA implementation by MSFP have been studied.

### **Research Questions**

- I. What are the processes of LAPA implementation by MSFP?

- II. What are the activities and outcomes from LAPA implementation By MSFP?
- III. What are the community's perceptions about LAPA implementation by MSFP?
- IV. What are the Challenges of LAPA implementations?

### **1.3 Objectives of the Study**

The major objective of this study is to examine the effectiveness of LAPA implementation by MSFP in livelihoods of poor and vulnerable communities and the specific objectives of the study are as follows:

- I. To assess the processes of LAPA preparation and implementation By MSFP.
- II. To assess the activities and outcomes from LAPA implementation By MSFP.
- III. To assess the community perception about LAPA implementation by MSFP.
- IV. To identify the challenges of LAPA implementation.

### **1.4 Rationale and Importance of the Study**

Climate change is an emerging issue of the world, which is one of the greatest threats to environment conservation and livelihood security. Increased emission of greenhouse gases into the atmosphere, human intervention to environment are further compounding this problem. Although the contribution of underdeveloped countries in climate change is minute, they are most vulnerable to climate change impact. Nepal's contribution to global greenhouse gas emission is only 0.025%; it is among the most vulnerable countries to climate change.

Nepal's atmospheric temperature is increasing at an alarming rate (0.060C per year). With the change in temperature there is increasing number of *natural hazard*. Rainfall pattern is changing; the problem of tropical diseases can be seen in Hills and Himalaya also. Glacier lake outburst, avalanches, flood, drought is being increasing. Flood related natural hazard is increasing the loss of human life and wealth.

The research on the LAPA implementation within the country is very less. There are a few national level study and reports that can be found related to LAPA implementation and also a very few on the local level. Climate change is considered to be problematic burning issue for many countries impacting various sectors like: infrastructure, forestry, agriculture etc. Widespread implications of climate change

indicate that climate change is a complex and cross-cutting issue. In this scenario local level case studies are vital for policy formulation and adaptation. Also it is important for the local adaptation plan of action and implementation in local level organization. Hilly regions of Nepal are more susceptible to climate change impact and vulnerability. In this context, study on LAPA implementation by MSFP has great significance.

## **1.5 Limitation of the Study**

The study was conducted in limited time with limited resources and concentrated only in a specific area. The study was conducted in one season. So its result may not be applicable for other areas and context.

The limitations of the study were

- i) This study was based on one hundred sixty eight sample size of the study area.
- ii) Price of all commodities had been calculated at the current price.
- iii) Some short term activities were not included in the study for instance, one day training and others etc.
- iv) This study only concerned about LAPA activities at the study area.
- v) This study was confined within limited time and resources.
- vi) The study was limited in Parbat district. The conclusion was not being generalized for the whole nation. Therefore, the inferences were useable to some extent to those areas, which have similar geographic, socio-economic characteristics.

## **1.6 Organization of the Study**

This study has been divided into six chapters these are as follow:

The first chapter deals with background, introduction of LAPA, statement of the problem, rational of the study, objective of the study, scope and limitation of the study and organization of the study.

The second chapter deals with national policy and programme on climate change, operational mechanism for climate change adaptation, implementation status and gaps

of climate change policy and program, LAPA preparation processes by MSFP in Parbat district and climate change impacts and adaptation options

The third chapter contains research methodology adopted for the study. In this chapter research design, , rationale for the selection of the study area, nature and sources of data collection, population, sampled and sampling procedure, data collection techniques and tools, household survey, focus group discussion key informants interview, field visit and observation, data tabulation and analysis.

The fourth chapter includes the background of study area, biophysical condition, geographical, demographical, political introduction of Parbat district, economic status, status of access to services, vulnerability and general information of sampled respondent.

The fifth chapter contains findings from study area, location of settlement in terms of risks, knowledge and perception on LAPA preparation process, prepares and owners of LAPA, effectiveness of LAPA, impact of LAPA, sustainability, LAPA preparation processes and methods, coordination and linkage, community participation, ownership of LAPA document, integration of LAPA document into VDC development plan, implementation of LAPA Activities, financial resources for LAPA implementation, monitoring and evaluation

The sixth chapter contains summary and conclusion of the study. After that some necessary recommendations are presented.

In the last part of the study, photographs of the study area, maps of the study area and reference have been included. Necessary annex are also included after reference.



## **CHAPTER TWO**

### **LITERATURE REVIEW**

The main objective of this chapter is to analyze the research work and clarify the need for the study on rationale basis. This chapter includes review of literature as introduction of LAPA, National Policy and Programme on Climate Change, Operational Mechanism for Climate Change Adaptation, Implementation Status and Gaps of Climate Change Policy and Program, LAPA Preparation Processes and Climate Change Impacts and Adaptation Options.

#### **2.1 National Policy and Programme on Climate Change**

It is well understood that climate change has direct impact on natural and human systems altering productivity, diversity, and functions of the ecosystem and livelihood. It poses a strong challenge especially to the poor in rural area, who tend to rely on the natural resources for their livelihood, and have limited capacity to adapt to climate change. The Initial National Communication (INC, 2004) of Nepal to the United Nations Framework Convention on Climate Change (UNFCCC) and a range of studies show that Nepal is highly vulnerable to the potential negative impacts of climate change (Regmi and Paudyal, 2009). Climate induced risks and hazards can have wide ranging, often unanticipated effects on the environment, socio-economic, and development related sectors, including agriculture and food security, biodiversity, water resources, energy, human health, urban settlement, terrestrial, and aquatic ecosystems. Poor and vulnerable communities of Nepal, therefore, are facing possible adverse effects on their livelihood and well-being (Regmi and Paudyal, 2009).

Responding to these critical impacts and vulnerabilities by supporting the adaptation of vulnerable groups is, thus, essential in Nepal. The Seventh Meeting of the UNFCCC (COP7), held in 2001, passed the resolution to prepare National Adaptation Programme of Action (NAPA) for the least developed countries. Nepal, attached to the UNFCCC and the Kyoto Protocol, is making every effort to benefit from these networks through institutional strengthening, policy formulation, and programme development (GoN, 2011). Nepal has been continuously drawing the attention of the

national and international communities to these profound impacts of climate change, and joining hands for the collaborative efforts for the adaptation.

As a signatory to the UNFCCC, the Government of Nepal (GoN) has initiated the process of climate change adaptation planning and implementation. Nepal's NAPA was endorsed by the GoN in September 2010. It was developed as a requirement under the UNFCCC to access funding for the most urgent and immediate adaptation needs from the Global Environment Facility (GEF). GoN has also endorsed the Climate Change Policy (2011) to improve livelihood by mitigating and adapting to the adverse impacts of climate change, adopting low-carbon emissions, socio-economic development path, and supporting and collaborating in the spirits of country's commitments to national and international agreements related to climate change (GoN, 2011).

NAPA is focused to respond strategically to the challenges and opportunities posed by climate change. NAPA was prepared using a multi-stakeholder, participatory, and sectoral approach at the national level. It has clearly outlined how climate change implications in all six thematic areas will impact sustainable livelihood of vulnerable communities. A key strategy of the NAPA is to ensure comprehensive stakeholder inputs in all stages of the programme development and implementation process, involving national and local level government institutions, non-governmental organizations, civil society, academia, international organizations, and donor agencies (Regmi and Paudyal, 2009).

NAPA report consists of the summary of eight independent reports prepared by six thematic working groups (forests and biodiversity, agriculture and food security, public health, water resources and energy, urban settlement, infrastructures and climate induced disaster) and two cross cutting groups (livelihood and governance, and gender and social inclusion). NAPA identifies and classifies more than 250 adaptation activities and prioritized into nine integrated activity packages focusing in six major themes (Pyakurel *et.al.*, 2013)

## **2.2 Operational Mechanism for Climate Change Adaptation**

The endorsement of NAPA document opened the door to move the process forward for the execution of adaptation activities in the country. Under the provision of national level climate change policy of GoN, LAPA framework was devised, and then approved by the Ministry of Science, Technology and Environment (MoSTE) in 2011. The LAPA framework supports the operationalization of policy objectives outlined in NAPA by facilitating the integration of climate change adaptation into local to national development planning processes and outcomes. The LAPA framework supports the development of local adaptation plans, which reflects location or region specific climate change hazards and impacts (GoN, 2011; RRN, 2014).

LAPA framework helps to identify the most climate vulnerable VDCs, wards, and people and their adaptation needs and options; prepare adoptable adaptation options so that local communities can make prioritized decisions; prepare and integrate adaptation plans into local and national level planning and according to Local Self Governance Act (LSGA). LAPA focuses on adaptation options that are available locally, and that are accessible to the most vulnerable communities and households, including women.

The Village Development Committee (VDC) and the Municipality as operational entities have been identified as the most appropriate units for integrating climate change adaptation into local level development planning processes and contribute to the national level as well. The LAPA framework ensures that the process of integrating climate change adaptation into local to national planning is bottom-up, inclusive, responsive, and flexible approach. A multi-stakeholder approach involving both the district and local actors is required in all stages of LAPA development and implementation. More appropriately, a three way partnership, such as communities from bottom-up function, government and donor from top-down function, and NGOs and civil society network from outside in, is sought important for the successful execution of LAPA (“Climate Change”, October 2014).

Nepal's LAPA framework is guided by National Climate Policy 2011 and based on the priorities set out in NAPA. LAPA is considered as an answer for institutionalized local level adaptation planning that aims to capture local needs and direct resources to where, when, and by whom these are most needed (Chaudahry *et. al.*, 2014). The LAPA framework will support decision makers from local to national level actors to:

- a) Identify the most climate vulnerable VDCs, Wards, and people; their adaptation outcomes and actions;
- b) Prioritize adaptation actions in an easy way, whereby local people make the decision for prioritization;
- c) Prepare and integrate local adaptation plans for action into local to national planning in accordance with the LSGA;
- d) Identify appropriate service delivery agents and channels for funding to implement local adaptation plans for action. The LAPA framework can, thus, ensure the best sequence of adaptation actions, and they are carried out by the most appropriate service providers in a timely and resource efficient manner;
- 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; and
- g) Provide the understanding of how gender and social exclusion exacerbates the impact on women and excluded groups, and provide information that supports decision makers to make gender sensitive and inclusive processes for all stages of adaptation interventions, and so on.

## **2.3 LAPA preparation and Implementation Status of Nepal**

Climate change has become one of the most alarming issues globally. Therefore, the Government of Nepal is also taking some important measures to address it. For example the Government of Nepal (GoN) is a signatory to the UNFCCC, hence, it has been initiating the process of climate change adaptation planning and implementation. Nepal's NAPA was endorsed by the GoN in September 2010. Then, LAPA framework was devised and approved by GoN in 2011 for the operation of NAPA to integrate

climate change resilience into the local to national development planning processes and outcomes. The VDC and the Municipality have been identified as the basic and most appropriate political units for integrating climate change adaptation into the local and national development planning processes. The number of development agencies involved in the processes has been implementing climate change adaptation activities in different parts of the country. For example, Climate Adaptation Design and Piloting Project – Nepal (CADP-N), in 10 districts across the country, was piloted to draw lessons for future directions of climate change adaptation in Nepal. Recently, the National Climate Change Support Program (NCCSP) has been in the process of implementation in 14 districts of the country. The direct LAPA at VDC level and CAPA to complement LAPA are two modalities recommended by CADP-N to develop and implement adaptation plans for the climate vulnerable rural communities in Nepal.

Hundreds of LAPA and CAPA have been prepared across the country, but financial resources for the implementation of LAPA and CAPA are still lacking. This suggests the allocation of adequate budget is a must for the implementation of ‘adaptation activities’ envisioned in the LAPA and CAPA documents. Average budget required to implement CAPA and LAPA prepared at hilly districts are NRs. 1,13,121 and NRs 4,99,472 respectively. However, some LAPAs and CAPAs are much greater than this average calculation made for smooth functioning. The budget required for the implementation of these adaptation activities is comparatively higher compared to the locally available resources. Therefore, a gap exists between required budget and available budget. Furthermore, the absence of the functional VDC with its elected members has been realized as a shortcoming for its consolidation and a full-fledged operation of LAPA.

The Joint Venture (JV) of RRN and FA has been implementing an initial phase (2012 to 2015) Multi Stakeholder Forestry Program (MSFP), i.e. Lot-1 in Koshi Hill Districts (Dhankuta, Terathum, Bhojpur and Sankhuwasabha).MSFP has identified climate change adaptation as one of the activities to support climate vulnerable rural communities and households through different activities namely preparation and implementation of Local Adaptation Plan of Actions (LAPAs) and Community Adaptation Plan of Actions (CAPAs). This initiative has targeted to rural communities

especially women, poor, disadvantaged and climate vulnerable people to support in their adaptation activities.

## **2.4 Implementation Status and Gaps of Climate Change Policy and Program**

LAPA is an adaptation plan prepared and given a shape of a guideline at VDC level aimed at reducing the vulnerabilities of local communities from climate induced impacts. The LAPA framework was designed and piloted in ten districts across Nepal under the Climate Adaptation Design and Piloting Project–Nepal (CADP-N). LAPAs are being prepared and implemented using a multi-stakeholder, participatory, and bottom-up approach at the VDC and municipality levels. Today, about 100 LAPAs have been prepared in the start-up phase in more than 14 districts by NGOs facilitated by Nepal Climate Change Support Programme (NCCSP) of the MoSTE (Chaudhary *et. al.*, 2013). The process of developing about 370 LAPAs, and then moving on to the full-fledged implementation has been targeted in 29 districts through the support of many development organizations such as UKAid, DFID, EU, and so on (Pyakurel *et. al.*, 2013).

A critical assumption in the implementation of LAPAs was that the sufficient capacity exists within local bodies to incorporate climate resilience planning and project implementation. Following the elimination of local level political election due to political conflicts, there has been no local election since 1997 to form the elected VDC and Municipality bodies to take the ownership of LAPAs.

In this scenario, designing, implementing and sustaining projects under LAPAs without a functional elected authority is not possible and VDC/Municipality secretaries have been consulting with political parties going beyond the system (Chaudhary *et. al.*, 2013). Thus, the absence of a functional elected local government has been a main cause for a weak linkage in vertical policy integration from VDC/Municipality to DDC level (Bishwokarma, 2014).

Besides LAPA to prepare adaptation plan at the community level, the concept and approach of CAPA have also been brought forward. CAPA is an adaptation plan prepared at the community level, and it is considered as the best practice to ensure the bottom-up planning process. Community forest is a successful intervention of Nepal's

forestry sector with more than 40% population involved in with enhanced forest management, ensuring equitable benefit sharing, and gender and social inclusiveness. Therefore, most of the CAPAs in the hilly regions are prepared at Community Forest User Group (CFUG) level.

The CFUG and their network provide very strong sustainable grass root level institutions that can take the lead on natural resources conservation and management activities (Regmi and Karki, 2010). Furthermore, CFUG are forceful institution and identified as the effective way to reach to the climate vulnerable communities (Pyakurel et. al., 2013).

With the technical and financial support from the Government and Non-Governmental Organizations (NGOs), local communities have developed more than 1500 CAPAs in 15 districts across the country (Pyakurel et. al. 2013). CADP-N recommended that CAPAs are more effective compared to LAPAs because adaptation activities identified by the community themselves are need based and more realistic. CAPAs prepared at community level can later be synthesized into VDC level LAPA. Thus, CAPA to LAPA and the direct LAPA are the two modalities which are being adopted by development organizations in the LAPA process.

It is mandatory to follow a multi-stakeholder approach in developing LAPA and CAPA to deal with broad spectrum of climate change impacts. It is also worth mentioning that climate change adaptation plans should be distinctive in addressing urgent needs of particular vulnerable communities for their resilience building, whereas sectoral development plans are service oriented to cover wider community (Pyakurel et. al., 2013). It was reported that there was sectoral biasness during plan preparation which was due to the influence of the organizations that facilitate to prepare adaptation plans. In many cases, activities of adaptation plans were more ambitious, and further it was difficult to differentiate between development and adaptation activities.

Allocation of adequate budget is required for the implementation of adaptation interventions. Budget required for the adaptation activities is higher compared to locally available resources, therefore, a gap exists between required budget and availability of budget. The VDC, implementing organizations, and community groups (CFUGs) are not strongly able to make commitments for financial resource to

implement LAPA and CAPA in respective VDCs. Therefore, it is mandatory for these plans to be incorporated in the VDC and district level programmes for their sustainability. Otherwise, it would be very difficult to manage fund for the implementation of adaptation plans, and this situation will only bring about frustration to the communities.

## **2.5 LAPA Preparation Processes by MSFP in Parbat District**

### **2.5.1 LAPA Preparation Processes**

Preparation of LAPA requires a process broadly an approach as prescribed in the LAPA framework by involving local stakeholders including the vulnerable communities. A certain level of scientific, social and management knowledge is required to manage the LAPA development and implementation process. In the beginning of MSFP, a manual on local and community based adaptation plan was prepared by Forest Action to facilitate the stakeholders in LAPA process. The Project Staff were capacitated through training and workshops on climate change and LAPA process, and the process of LAPA was materialized practically in the field level. Once initial actions were carried out in few piloting sites, the process of LAPA framework was refined through ‘experiential learning process. In this process, the actors engaged in it have practiced LAPA preparation as a place for learning and capacitating themselves (MSFP MTR, 2015).

While talking about LAPA preparation and implementation, the process or method adopted to select working VDCs is one of the most important aspects of discussion and analysis because it may help to understand the impacts or benefits of implemented LAPA activities to a real extent. The LAPAs have been implemented in the MSFP working VDCs which were selected on the basis of the extent of climate change vulnerability. The vulnerability mapping was carried out by the district stakeholders at the beginning of MSFP. Further, the staff of LIPOs and MSFP had further mapped out the extent of climate change vulnerability and selected the most vulnerable from among the selected MSFP working VDCs (MSFP MTR, 2015).



In addition to the active participation of the local community and beneficiary, one of the most important aspects of initiating the task for MSFP to work for LAPA process was to develop a good working relationship with government line agencies. VDC level FECOFUN took lead in preparing LAPA with backstopping support from Local Implementing Partner Organizations (LIPOs). Meetings were held with VDCs, District Development Committees (DDCs), District Forest Offices (DFOs), District Soil Conservation Offices (DSCOs), District Agriculture Development Offices (DADOs), District Livestock Service Offices (DLSOs), Federation of Community Forestry Users Nepal (FECOFUN), CFUGs, and other local level stakeholders. Inception meetings were held at VDC level in participation of VDC, Ilaka (Area) Forest Office, Service Centre of DADO and DLSO, Schools, Health Post, representative of political parties and CFUGs to share about LAPA and start the process.

Climate change sensitization meetings and workshops were held at the VDC, at the Ward, and community levels. Sensitization activities were focused to make the community members aware about climate change issues and their impacts at location specific community groups and household levels. Information was also communicated and disseminated through FM radio and leaflets on the climate change issues, impacts of climate change, adaptation options, planning, and implementation processes.

Climate change vulnerability assessment was made to identify the major threats on natural resources and livelihoods, and the groups and households most affected by the threats. Vulnerability maps were prepared at the VDC and the Ward levels. Climate hazard trend analysis, mappings, seasonal calendars, well-being ranking, and cause and effect analysis were the major tools used to facilitate the discussion sessions. These exercises were carried out with the participation of CFUG representatives, VDC personnel, school teachers, political party representatives, Sector Forest Office, Service Centre of DADO and DLSO, and local NGOs' representatives. The community, to a large extent, was inclined to generalize climate change impacts, and facilitation was required to identify the most vulnerable communities within the VDC. Based on the climate change impacts, adaptation options were identified which could address immediate needs.

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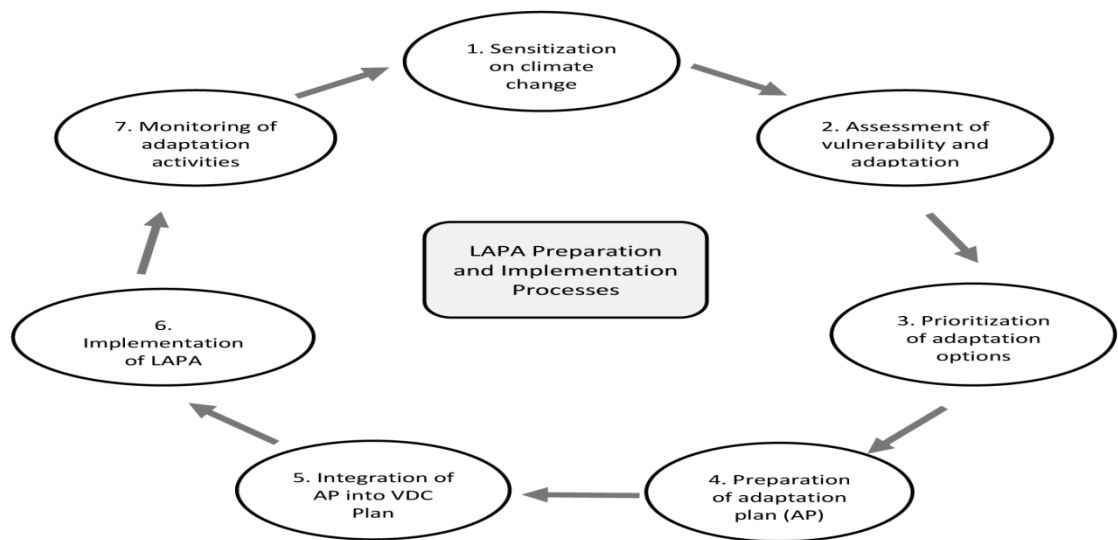
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Having identified the vulnerable communities and adaptation options, LAPA process moved on to the preparation of adaptation plan through planning sessions. There was wider participation from local communities (CFUG members), government line agencies, and representatives from political parties, civil societies, CBOs and private sectors. Adaptation activities or options were prioritized based on the severity of climate induced vulnerabilities faced by women and disadvantage groups (DAGs). For instance, conservation of water sources or springs and rehabilitation of water supply scheme were identified as the most important options which address the problem of women and DAGs. Pair-wise ranking method was used to identify the most important options. LAPA was developed to use as a roadmap for the implementation of climate change adaptation activities for the period of three to five years. Development of LAPA at the VDC level consumed ample time and efforts of all stakeholders, and 3 to 5 days were taken to accomplish the whole task.

After the preparation of LAPA, it was put forward for the integration into VDC planning process. In few VDCs, LAPAs were approved by formal process through VDC general assembly, whereas in other VDCs it was principally agreed to integrate LAPA in local development planning through the VDC general assembly. In this context, a reasonable option from the MSFP side was to implement LAPA before they

went through the VDC’s general assembly meeting. However, there was a consensus building with VDC and line agency stakeholders for implementing LAPA activities in the community level. The CFUGs, as the functional agencies in the community level, implemented priority adaptation options with the support of LIPOs. LIPOs of MSFP were the front line worker to facilitate stakeholders in the whole process of developing and implementing LAPA. A mechanism for assessing the progress of activities and outcomes was developed by forming a monitoring and evaluation committee at VDC level consisting of VDC, line agency (Sector Forest Office, DADO and DLSO service centers), and CFUG representatives. The figure 1 shows the process followed in developing LAPAs and implementation in the MSFP, Parbat districts.

**Figure 1:** LAPA Preparation and Implementation Processes Adopted in Parbat District



A review, made on the process applied, reveals that LAPAs developed in the Parbat District, is comprehensive to identify location and community specific climate induced vulnerabilities. However, the process of developing LAPA is complicated, and effectiveness and efficiency of preparing LAPA differed across district and VDCs depending on the knowledge and facilitation skills of Local Resource Persons (LRP), and implementing organizations. Total of 20 LAPAs, 20 in each VDC, are targeted to be prepared in Parbat District for MSFP initial phase (2013 to 15). However, in some cases (where LAPA is prepared by other projects earlier) the resources allocated for

LAPA have been used in its implementation or preparation and implementation of CAPA.

### **2.5.2 Climate Change Impacts and Adaptation Options**

In developing LAPA, the thorough exercises were made to identify location and community specific climate change impacts and appropriate adaptation options for reducing vulnerabilities of the communities. A significant and common impact of climate change, as experienced by the community, was the change in rainfall patterns with reduced number of rainy days. For example, summer rainfall used to occur previously from June to September, but it occurs from July to September in recent years. Similarly, winter rain previously occurred from November to January, but it occurs during January in recent years. The erratic rainfall, droughts, decline of water sources, gullies and soil erosion, declining crop productivity, increased incidence of crop pests, conflagration in the forest, widespread problem of invasive weed species both in agricultural and forest land were the major climate change problems identified in the Parbat District. However, the severity of impact was location specific and based on the coping ability of the community.

Adaptation interventions identified by LAPA in response to climate induced impacts were conservation of water sources or springs, rehabilitation of drinking water and irrigation systems, plantation in degraded land, forest management, construction of check dams, income generation activities, crop diversification, alternative energy, and the creation of awareness in the community. Conservation of water sources and rehabilitation of drinking water supply system were observed to be the first and the main priority of all LAPAs.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

This chapter includes research design, Rationale of the selection of study Area, Sampling procedure, sampled sized, sources of data collection, data collection tools and techniques.

#### **3.1 Research Design**

This study was carried out on the basis of descriptive research designs because the study describes the effectiveness of LAPA implementation by MSFP in local communities. Moreover the study was focused to find out the climate change adaptation program in livelihoods of communities, effects on agriculture production and health of condition of people. In this regard, this is descriptive.

#### **3.2 Rationale of the Selection of Study Area**

Climate change has become one of the most alarming issues globally. Therefore, the Government of Nepal is also taking some important measures to address it. Nepal's NAPA was endorsed by the GoN in September 2010. Then, LAPA framework was devised and approved by GoN in 2011 for the operation of NAPA to integrate climate change resilience into the local to national development planning processes and outcomes. The Government of Nepal (GoN) has put forestry and climate change as priority programme to contribute in achieving the national objectives of poverty reduction and tackling climate change vulnerabilities.

The particular area is chosen for the study because the area which is LAPA implemented core district by MSFP. It is easily accessible, and heterogeneous in socioeconomic cultural and geographical structure. In this study area, most of the people are engaged in agriculture and livestock activities. Which is also affected area from the climate change. It also is rich in biodiversity, water resources. Thus the area is selected to assess for study of effectiveness of LAPA implemented by MSFP.

### **3.3 Nature and Sources of Data**

The data used is of both qualitative and quantitative nature. The primary data were collected from structured and semi-structure household survey, KII, FGD and Checklist. Secondary data were also studied which were acquired from books, different published and unpublished reports and documents, presentations from individuals, experts and organization and websites related to climate change adaptation.

### **3.4 Population, Sample and Sampling Procedure**

For the purpose of the study, Parbat district had been selected. In the study area, the community forest user groups are the respondents; the total beneficiaries VDCs were twenty seven in district (MSFP 2012). Four VDCs as core VDCs of MSFP which (MSFP 2012) were selected with purposive sampling and people have been benefited since initial phase to end of cost extension phase. For fulfillment of this study objectives two CFUGs in each VDC were selected with purposive sampling based on received all support of LAPA. The study, one hundred and sixty eight beneficiaries' households were sampled with simple random sampling out of eight hundred forty beneficiaries' household for household survey. The sampled respondents were twenty to twenty three numbers from each CFUG because the total numbers of households were different in each CFUG. The detail of beneficiaries VDC, sampled VDC, total CFUG, sample CFUG, total HH and sampled households mentioned below in the table:

**Table 3.1:** Sampled for household survey

<b>Total Beneficiaries VDC</b>	<b>Sampled VDC</b>	<b>Total CFUG</b>	<b>Sample CFUG</b>	<b>Total HH</b>	<b>No. of Sampled HH</b>
27(twenty seven)	Majhpharant	4	Dhulepalsing	108	21
			ThuloSalleri Bhirmani	106	21
	Banau	6	Chihandada	120	23
			Phulchadaune	89	20
	Kurga	10	Chisapani Devi	103	20
			Salghari	102	20
	Tilahar	7	Eklepakha	99	20
			Samekhoriya	113	23
<b>Total</b>	<b>4</b>	<b>27</b>	<b>8</b>	<b>840</b>	<b>168</b>

### **3.5 Data Collection Techniques and Tools**

For the study, questionnaire, interview and observation methods were used. Primary information was acquired through filling questionnaire. Interview to key informants was another method for conduction of study. Secondary data were acquired from different reports, documents and websites.

#### **3.5.1 Household Survey**

Household survey was conducted by preparing semi structured and structured questionnaires as tools. Household survey was conducted in one hundred sixty eight households to acquire the fulfillment of objective of the study. The questionnaire collected general information related to socio-cultural and climate change adaptation, LAPA preparation and implementation process and activities and outcomes of LAPA implementation by MSFP. Questionnaires generated the realistic and accurate data from household survey which were directly benefited household of the project; and questions had been asked and data were filled. The format of the questionnaire is in the annex I.

### **3.5.2 Key Informants Interview**

The primary data also were collected from key informants using the direct or indirect interview method. The interview was taken as cross checking for the data obtained from the questionnaire. The informants were interviewed on the effectiveness of LAPA implementation by MSFP and overall effectiveness of program in local community. Respondents were also chosen with related key informants and the informants were MSFP Dhaulagiri cluster chief, IA chair person of LIBIRD and FECOFUN, DFO of Parbat district, VDC secretary of sampled VDCs, Chairperson and treasure of sampled CFUGs. The format of the checklist is in the annex II.

### **3.5.3 Focus Group discussion**

The focus group discussion techniques has held in correctly all sampled VDCs with the active participation of poor, women and marginalized people, 15 participants from Majhphant, 13 from Banahu, 9 from Tilahar and 12 from Kurga participated in FGDs. That discussion was about how prepare LAPA and how and where the support had been used and utilized. The analytical techniques, Focus Group Discussion (FGD) were based on checklist. The major issue of the discussion was to find out the participation of local people on LAPA preparation and implementation, community perception about LAPA and challenges of LAPA implementation. The format of the checklist is in the annex III.

### **3.5.4 Observation**

The data were generated from observation method observing the households environment, agriculture field, construction of recharge pound, irrigation cannel, plantation and sites. The Photo's of the field visit in the annex IV.

## **3.6 Data tabulation and Analysis**

The collected questionnaires were tabulated by the help of SPSS program statistical analysis software widely used in research and data analysis through computer. All the necessary statistical tools like tables, graphs, means and medium were calculated from the program.



## CHAPTER FOUR

### INTRODUCTION OF THE STUDY AREA

This chapter includes the background of study area, biophysical condition, geographical, demographical, political introduction of Parbat district, economic status, status of access to services, vulnerability and general information of sampled respondent.

#### 4.1 Background of the Study Area

Parbat district lies at the western development region of Nepal. It is a mid hill district. This district is the fourth smallest district among 75 district of Nepal having geographic diversity. In the world map, Nepal occupies its space by 28° 00' 19" to 28° 23'59" North latitude & 83° 33' 40" to 83° 49' 30" east longitude. From the sea level this district is in the height of 520 m to 3,309m. Parbat District is rich in geographic diversity which is also one of the astonishing district. Headquarter of this district is Kushma Bazaar which is situated at the meeting point of Kali Gandaki and Modi river.

##### 4.1.1 Biophysical Condition

###### 4.1.1.1 Geographical Location

Geographically, Parbat district is formed with varied topographic conditions. The district lies between 28° 00' 19"- 28° 23' 59" Northern Latitude and 83° 33' 40"– 83° 49' 30" Eastern Longitude. Altitude wise, the district's topography ranges from a low of 520 meter at Seti Beni from the sea level to 3300 metre at the peak of Vuk water source comprising hill slopes, forest lands of different types, ravines, streams and rivers. The district lies in the mid hill region of the country and is bordered by Kaski and Syanja to the east, Baglung and Myagdi to the west, Myagdi to the north and Syangja and Gulmi to the south. Further detail is presented in the **Table 4.1**.

**Table 4.0.1:** Geographic situation of the Parbat district

Geographic situation	28° 00' 19"- 28° 23' 59" Northern Latitude 83° 33' 40"– 83° 49' 30" Eastern Longitude
Height	From sea level 520 m (Seti beni) to 3300 m max height (peak of Vuk water source)
Area	536.86 sq. Km
Border	East- Kaski & Syangja, West- Baglung & Myagdi, North- Myagdi South- Syangja & Gulmi
Located	Mid hilly district
Development region	Western region
Zone	Dhaulagiri

*Source: Yearly agriculture development program and statistics book 2071/72, DADO, Parbat*

#### **4.1.1.2 Climate and Temperature**

Located in the mid hill belt, the district has a normal range of temperature depending upon the variations on the altitude. The District's temperature ranges from a low of -7.5<sup>0</sup> while the maximum of 32<sup>0</sup>. The average rainfall of the district was recorded 2400-2600 mm.

#### **4.1.1.3 Topography**

This district has a diverse type of topography from river valleys, alluvial fans, flood plains, flat terraces, and hill ranges, which are dissected by a number of streams and gullies showing the uneven topography. The district extends from river belts to hilly regions offering the sloppy lands as well. District topography is ended with 3300 meter height. District covers various important and well-known areas with district which are listed in the **Table 4.2**.

**Table 4.0.2:** Detail of important areas in the district

SN	Name	Altitude	VDC features
1.	Jaljala Haljure Area	From the sea level Parbat District lies at the height of 750 to 3309 m. Parbat district lies in between the place of Kali Gandaki & Modi river whose maximum area are covered by natural forest.	Slate mine can be found here within the serial of hills. Banskharka, Salija, Lekhfant, <b>Majhfant</b> , Dhairign, Pang, Khurkot, Kyang, Deurali, Deupur, Vuktangle, Bajung, Chuwa & Shivalaya are the different V.D.C.s under this district.
2.	Panchase Area	From the sea level it lies at 780 – 2517 m North East Where it is in middle of Modi & Jahare river. high in	Chitre, ramja, Arthaer, <b>Tilahar</b> & Pakuwa where Pkuwa V.D.Cs and is also famous for Panchase Lake & Sidhha baraha Temple.
3.	Dhare Area	From Jahare river to Chirdi river this area is situated at the height of 640 to 2266 m from the sea level.	Under this area water resources Malyangdi, Lamaye, Chirdi & Seti khola can be found and the V.D.Cs like <b>Banau</b> , Khaula, Thulipokhari, Pipaltari, Katuwachaurpari, Mudikuwa, Khanigaun,
4.	Khadi Gorlyang Area	From the sea level 540 to 2266m height at the South of Lukhundeurali	<b>Kurga</b> , Parang, Bacnha & Bihadi are places and rivers & V.D.Cs like Lukhun deurali, Kurga, Parang, Bachha, Voksing, Balakot, Hosrangdi, Uram, Huwas & Vorle. Along with these this area is historically rich having Paitukot, Khadkari Chasaro, and famous religiows place setibeni.

*Source: Yearly agriculture development program and statistics book 2071/72, DADO, Parbat*

#### 4.1.1.4 Soil

According to approved program of District Agriculture Development Office, one day soil camp was held in Rani pani, Milan chowk, Khurkot and Pang VDCs in assistance with project and regional soil laboratory Pokhara. In this camp, 318 samples were examined from these sample VDCs where most of soil was found having low nitrogen and average phosphorous and potash. In addition, PH value of soil was found to be 5.5-7 in this study.

#### 4.1.1.5 Land Use

Parbat is one of such district which has most intensive chances of using land in a proper and managed way as it has 28,593 hector of farmable land. This district has the least share of land used for settlement and for grazing. Land is a fixed resource so that better management results the better impacts on quality of life and the ecosystems as well. Following **Table 4.3** shows the land use pattern of Parbat district.

**Table 4.0.3: Land use pattern**

S.N.	Detail of land	Unit	Area	Percentage
1	District total area	hector	53686.21	100
2	Farmable land	hector	28593	53.26
3	Farmed land	hector	24171	45.02
3.1	Land	hector	9070	16.89
3.1.1	Whole year irrigated	hector	6420	11.96
3.1.2	Seasonal irrigation	hector	2650	4.94
3.2	Uncultivable land	hector	15101	28.13
4	Forest area	hector	19997	37.25
5	Grazing and bush land with shrub areas	hector	5097.21	9.49

*Source: District Animal Service Office, yearly progress report, Parbat FY 071/072*

## 4.1.2 The Demographic Status

### 4.1.2.1 Household and Population

According to the National Report CBS 2011, there are 35,719 households in the Parbat. Total population of the district is 146,590 where, male population is 65,301 and female is 81,289. The district population density is 297. In addition, the average household size of the district is 4.10. And the sex ratio is 80.3. Based on **Table 4.4**, district has the population having citizenship of Nepal, India, China and other countries as well.

**Table 4.0.4:** Population by citizenship

Area	Total	Population having citizenship of			
		Nepal	India	China	Other countries
Total	146,590	146,289	265	0	36
Male	65,301	65,087	205	0	9
Female	81,289	81,202	60	0	27

*Source: National Report CBS 2011*

**Table 4.0.5: Ownership of houses**

Area	Total	Ownership of house/housing unit			
		Owned	Rented	Institution	Others
Parbat	35,698	31,090	3,621	186	801

*Source : National Report CBS 2011*

### 4.1.2.2 Caste, Ethnicity and Language

**Table 7** displays the highest percentage of population is in the Brahman accounting 28.5% followed by Chhetri (16%), Magar (10.7%), Kami (7.5%). The detail of all castes is presented in the **Table 4.6**.

**Table 4.0.6:** Caste and ethnicity in the Parbat

S.N.	Castes	Percentage
1	Brahman	38.48
2	Chhetri	16.01
3	Magar	10.72
4	Kami	7.49
5	Damai	6.55
6	Gurung	5.09
7	Sarki	4.98
8	Thakuri	2.56
9	Newar	2.49
10	Sanyasi	1.94
11	Sunar	0.77
12	Gharti	0.62
13	Other Dalit	0.59
14	Other castes	0.55
15	Muslim	0.25
16	Kumal	0.25
17	Rai	0.23
18	Majhi	0.23
19	Thakali	0.10
20	Tamang	0.10

*Source: Yearly agriculture development program & statistics book 2071/72, D.A.D.O, Parbat*

### 4.1.2.3 Religion

Although the people of Parbat district have diverse religions, majorities of them are Hindus accounting 90% followed by Buddhist (9%) in the second place and Christianity in the third place (1.0%). Other religions adhered by limited people are Islam, Prakirti (Animism) and others. The detail has been presented in the **Table 4.7**.

**Table 4.7:** Religion status in the Parbat district

Area	Total	Religion										
		Hindu	Buddhism	Islam	Kirat	Christianity	Prakirti	Bon	Jainism	Bahai	Shikhism	Undefined
Total	146,590	131,163	13,663	624	24	666	34	277	0	2	1	136
Male	65,301	58,304	6,138	341	12	318	15	115	0	1	1	56
Female	81,289	72,859	7,525	283	12	348	19	162	0	1	0	80

*Source: National Report CBS 2011*

### 4.1.2.4 Literacy Status

Educating people is a crucial factor to make a nation perfect. Everyone must realize the importance of education and aim to ensure that each citizen of nation is educated and independent.

**Table 4.8** displays the literacy rate of the Parbat is 76.13%, however there are 23.8% are illiterate in the district. In addition, **Table 4.8** shows higher percentage of male are literate (85.77%) than female (68.60%).

**Table 4.8:** Gender wise literacy rates of the Parbat

Gender	Literacy rate	Illiteracy rate	Not stated	Total population > 5 years
Male	85.77	14.15	0.08	43.82
Female	68.60	31.32	0.08	56.18
Total	76.13	23.80	0.08	100

Source: National Report CBS 2011

### 4.1.3 Economic Status

#### 4.1.3.1 Employment Source

Based on employment, people are engaged in different five types of professions in the Parbat. Table shows highest percentage of people are following the agriculture based profession proving that agriculture is the main profession and economic base of the district as well. In addition, service covers 20% which is followed by foreign employment (12%) in the district as indicated in the **Table 4.9**.

**Table 4.9:** Employment status

Type	Number	Percentage (%)
Agriculture based profession	15,566	51
Business	1,691	6
Service	6,246	20
Foreign employment	3,737	12
Labor	3,290	11

Source: Yearly agriculture development program and statistics book 2071/72, DADO, Parbat

#### 4.1.3.2 Land under agriculture and irrigation

As the monsoon rainfalls are uncertain, irregular, uneven and sometimes unequal this is why irrigation is essential for the agriculture. There are multiple projects running in the Parbat district so as to facilitate families to irrigate their crops. Total of 618 hector of land is irrigated by the following listed 10 different irrigation projects from the FY



055 to 058. In this district, agriculture land area is 28,593 hector. Till now there are already 385 projects accomplished where 1475.03 hector areas is irrigated this has helped local where 7049 families are benefitted from it. Nepal government has also made Rs.15726.59 contributions as indicated in the **Table 4.10** below.

**Table 4.10:** Small irrigation program and irrigated land

<b>Fiscal Year</b>	<b>Accomplished project number</b>	<b>Irrigated area in ha</b>	<b>Benefitted Families</b>	<b>Govt. Investment (in thousands)</b>
Yearly basis total (2057-068)	385	1475.03	7049	15726.59

*Source: Yearly agriculture development program & statistics book 2067/68, D.A.D.O, Parbat*

#### 4.1.4.1 Cropping Pattern and Production

Cropping pattern indicates the agriculture products which are producing on the land. Basically cropping pattern is somewhat different in between farmed land and sloped land in the Parbat shows farmed land is dominated with paddy crops while sloped land is covered by maize as given in the **Table 4.11**.

**Table 4.11:** Crops tradition/system (crops denseness)

<b>Farmed land</b>				<b>Slope land</b>				
Paddy	-	Wheat	-	Maize	Maize	-	Millet	Empty
Paddy	-	Wheat	-	Paddy	Maize	-	Potato	Empty
Paddy	-	Potato	-	Maize	Maize	-	Buckwheat	Empty
Paddy	-	Mustard	-	Maize	Maize	-	Mustard	Empty
Paddy	-	Vegetable	-	Maize	Maize	-	Potato	Empty
Paddy	-	Wheat	-	Uncultivable	Vegetable	-	Vegetable	Empty

*Source: Yearly agriculture development program and statistics book 2071/72, DADO, Parbat*

#### 4.1.3.2 Food Sufficiency Status

District data related to the food grain situation has been varied with sources in the Parbat so as to other districts. Talking about food balance, a person needs 201 Kg of food in a year. The total processed food production was 26254 M. Tons in the fiscal year 067/68 but total food needed for the total population is 37196 M. Tons for a year. It shows there is insufficiency of food by 10941 Metric Tons. Moreover, available food is sufficient for the existing population for 258 days out of 365 days. It calculates there is food deficiency for 107 days for the total population of Parbat district.

In addition, food balance sheet given by yearly agriculture development program and statistics book 2067/68, DADO, Parbat is presented in the **Table 4.12**

**Table 4.12:** Food balance sheet (units are in Ha and M. Ton as required)

S N	Crop s	Ar ea	Prod uctiv ity	Prod uctio n	Need ed for seed	Los s	rece ived food	Loss while proce ssing	edi ble total food	ined ible used	Da na use d	Rem ainin g food
1	Paddy	959 5	2.41	2308 8	1154	230 9	196 25	5888	997 6	499	198 5	7492
2	Maize	141 50	1.95	2765 1	691	276 5	241 95	2419	211 22	253 5	420 3	1438 4
3	Whea t	291 5	2.32	6763	812	676	527 5	528	474 3	711	944	3088
4	Millet	884 5	0.91	8057	161	161	773 5	155	704 9	437 1	140 3	1276
5	Barle y	118	0.89	105	13	11	82	28	17	3	3	10
6	Uwa	80	0.80	64	8	6	50	28	7	1	1	4
	Total	357 03		6572 8	2839	592 8	569 61	9044	429 15	812 0	854 0	2625 4

*Source: Yearly agriculture development program & statistics book 2067/68, DADO, Parbat*

#### 4.1.4 Access to Services

##### 4.1.4.1 Drinking Water and Sanitation

The households of Parbat depend on various sources of drinking water supply for example; tap/piped, tube well/hand pump, covered/uncovered KUWA, spring water etc. District data shows people are facilitated with distribution of drinking water by 25% in the district. It is noted that 1 VDC is using rainfall as drinking water source in the Parbat. Moreover, households using rainfall as drinking water cover 113 households in this district. Access to tap/piped water was available to more than 29,434 households of the district followed by spring water (4,855 HHS) whereas the remaining sources supplied drinking water to fewer households. The detail sources of drinking water with benefited households are given in the **Table 4.13**.

**Table 4.0.13:** Households by source of drinking water

Area	Total	Source of Drinking Water							
		Tap/Piped	Tub e-well/ Hand pump	covered well/ Kuwa	uncovered well/kuwa	spout water	Rivers / streams	Others	Non stated
Parbat	35,698	29,434	26	244	757	4,855	230	65	87

*Source: National report CBS 2011*

Regarding the sanitation in the Parbat, Nepal government was committed and bound to contribute and develop this district by making it open defecation free area in FY 067/68. District council in FY 2069/70 has declared to do this task within 3 years. This campaign was fruitful in making 18 VDCs out of 55 VDCs as an ODF. To achieve this objective council had to declare 37 more V.D.Cs as till the end of FY 069/70. For this purpose, DDC and Western Nepal rural drinking water & sanitation project organized the conference on 16<sup>th</sup> Ashoj, 2069.

#### 4.1.5 Vulnerability Status

Parbat district is often affected by the landslides. Landslides are accelerated by rivers and road system which are affecting many village development committees in the district. The detail of the rivers and section of the roads are given in the **Table 4.14**.

**Table 4.14:** Landslide effected area

SN	Upper water resources	Direction	Affected VDCs
1	Lungdi River	west	Manjhfant, Dhairing, Lekhfant & Salija
2	Lasti River	west	Dhairing, Banau, Nanglibang
3	Pati River	EW	Deupur, Deurali, Kyang & Bajung
4	Rati River	NS	Tilahar, Chitre, Ramja
5	Malyangdi River	NS	Karkineta, Khaula, Thulipokhari, Sharpokhari, Thapathana, Pipaltari
6	Lamae River	NS	Thanamaula, Limithana, Vangara, Shankarpokhari
7	Upper Paiyun River	south	Hosrangdi, Balakot, Pakhapani, Lunkhu, Vorle, Saraunkhola
8	Mardi River	south	Hubas
9	Lower Paiyun River	south	Tribeni, Beulibas
10	Malkbang-Lunkhun road 11 km	ES	Lukhun, Pakhapani
11	Kushma-Durlung road 10 km	SW	Shivalaya, Durlung
12	Maldhunga-Beni road 13 km	west	Nanglibang, Dairing, Majfant
13	Dobilla-Falebas road area 15	NW	Katuwachaupari, Pipaltari, Mudikuwa, Debistahn, Khani gaun
14	Luukhun-Vokisng-Hosrangdi 15 km	EW	Lukhun, Voksing & Hosrangdi
15	Lunkhu-Kurga 7 km	NW	Kurga
16	Hubas-Bahaki-Barracharu 15 km	ES	Beulibas, Uram, Saligram, Bahaki, Ranipani
17	Lukhun-Pakhapani 7 km	ES	Lukhun, & Pakhapani
18	Dobilla-Silmi-Arthar road part of Jaharikhola	NS	Ramja, Pakuwa, Khaula
19	Dimuwa-Ramja road area 9 km	EW	Tilahar, Pakuwa, Ramja
20	Ramja-Chitre-Vadaure road 26 km	NS	Chitre, Ramja

Source: Yearly agriculture development program & statistics book 2071/72, D.A.D.O, Parbat

## 4.2 General information of sampled respondent

The size and structure of respondents sampled have a direct impact on a host of quality aspects of research. Sample respondent is one of the most basic influential characteristics and plays a vital role in the research findings.

### 4.2.1 Family Size and Ethnicity status

The sampled households included various caste and ethnic groups. These groups were further classified into seven major social groups viz BCTS, Dalits, Marginalized Janajati, advanced Janajati(Newar), religious minority(Muslim), Madhesi and others.

**Table 4.15:** Information of sampled Family Size and ethnicity respondents

Ethnicity of respondent	Name of VDC/Municipality				
	Majhphant	Banahu	Kurgha	Tilahar	Total
<b>B/C/Thankuri/S anyasi</b>	69.0%	18.6%	67.5%	65.1%	54.8 %
<b>Dalit</b>	31.0%	2.3%	5.0%	14.0%	13.1 %
<b>Janajati</b>	0.0%	79.1%	27.5%	16.3%	31.0 %
<b>Newar</b>	0.0%	0.0%	0.0%	4.7%	1.2%
<b>Muslim</b>	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Madhesi</b>	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Others</b>	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total</b>	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Field Survey 2016

**Table 4.15** illustrates the information about family size and ethnicity of the respondent based on the VDC. Across the social groups, The Table 16 below shows BCTS respondent was higher proportion (54%) while least one respondents in advanced Janajati (Newar) households were recorded (1.2%) in the sample. BCTS respondents were higher in Majhphant 69% out of sampled respondents, while it lowest in Banau VDC. Conversely, the Janajati respondents were higher percentage in Banau 79.1% out of sampled respondents. Dalit respondents were higher in

Majhaphant and lower in the banau VDC. In the total respondents, BCTS was higher percentage which 54.8 % than the other Dalit, Janajati and newar 13.1%, 31% and 1.2% respectively.

**Table 4.16:** Size and ethnicity respondents

Name of VDC/Municipality	Total number of family members in the family		
	Mean	Maximum	Minimum
<b>Majhphant</b>	5.21	12.00	3.00
<b>Banahu</b>	5.49	14.00	1.00
<b>Kurgha</b>	6.20	12.00	2.00
<b>Tilahr</b>	6.21	15.00	2.00
<b>Total</b>	5.77	15.00	1.00

*Source: Field Survey 2016*

Table 4.16 shows the average family size was (5.77) in sampled household respondents. The largest average family size was among the Tilahr VDC accounting for 6.21 while it was smallest among the Majhaphant figuring out 5.21. Family member size wise Tilahr fifteen (15) had the maximum number of family members across the VDC while family members were minium number among the Banahu VDC one(1).

#### 4.2.2 Sex Structure

Based on sex of respondents, **Table 4.17** show male respondents were higher (54.2%) as compared to women (45.8%). Data shows female respondents were higher in Majhphant VDC which (64.3%) than male (35.7%) out of sampled in VDC. Conversely male respondent had higher in Kurgha VDC which (75.0%). than Female (25.0%) out of sampled in VDC.

**Table 4.17:** Information of sampled sex of Respondents

Gender of the respondent	Name of VDC/Municipality				
	Majhphant	Banahu	Kurgha	Tilahar	Total
Male	35.7%	62.8%	75.0%	44.2%	54.2%
Female	64.3%	37.2%	25.0%	55.8%	45.8%
Third sex	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total</b>	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Field Survey 2016

### 4.2.3 Occupational Status

The livelihoods of the people greatly depend on the occupations of the household members in which they are involved and these occupations are also the major sources of employment and income for the people. Like elsewhere in rural Nepal, Agriculture is the prime occupation for more than 92.3% of the households surveyed in sampled VDC (Table 4.18). Irrespective of caste and ethnic groups, agriculture continues to be the major occupation for all groups. Nevertheless, the percentage of households considering agriculture as main occupation slightly varies across the different VDCs ranging from a low of 88.1% in Majhaphant to the highest 97.5% in Kurgha. In the same way, the second largest occupation of people accounting 3.0% was involved in the wage labour household while least followed by students (1.2%).

**Table 4.18:** Occupation Status of Respondents

Name of VDC/ Municipality	Occupation of respondent					Total
	Farmer	Service	Business	laborer	Student	
Majhphant	88.1%	2.4%	2.4%	7.1%	0.0%	100.0%
Banahu	88.4%	4.7%	2.3%	2.3%	2.3%	100.0%
Kurgha	97.5%	0.0%	0.0%	2.5%	0.0%	100.0%
Tilahar	95.3%	0.0%	2.3%	0.0%	2.3%	100.0%
<b>Total</b>	92.3%	1.8%	1.8%	3.0%	1.2%	100.0%

Source: Field Survey 2016

#### 4.2.4 Income Group Level of household

On the basis of income level, income groups are categorized into four groups: annual income below Rs. 50,000 in very low income group, Rs. 50,001 to 200,000 in low income group, Rs. 200,001 to 500,000 in middle income group and above Rs 500,001 in high income group. Based on these categories, 12.5 % of sampled households are under very low income group, 49.4% under low income, 33.3 % under middle-income group and remaining 4.8 % under high-income group. The **table 4.19** demonstrates lowest income group in higher percentages was Majhphant among sampled VDCs. Conversely highest income group in higher percentage was Banau among sampled VDCs.

**Table 4.19:** Income group level of household

Income group	Name of VDC/Municipality				
	Majhphant	Banahu	Kurgha	Tilahar	Total
<b>Below 50000</b>	23.8%	18.6%	5.0%	2.3%	12.5%
<b>50001-200000</b>	35.7%	18.6%	85.0%	60.5%	49.4%
<b>200001-500000</b>	35.7%	51.2%	10.0%	34.9%	33.3%
<b>above 500000</b>	4.8%	11.6%	0.0%	2.3%	4.8%
<b>Total</b>	100.0%	100.0%	100.0%	100.0%	100.0%

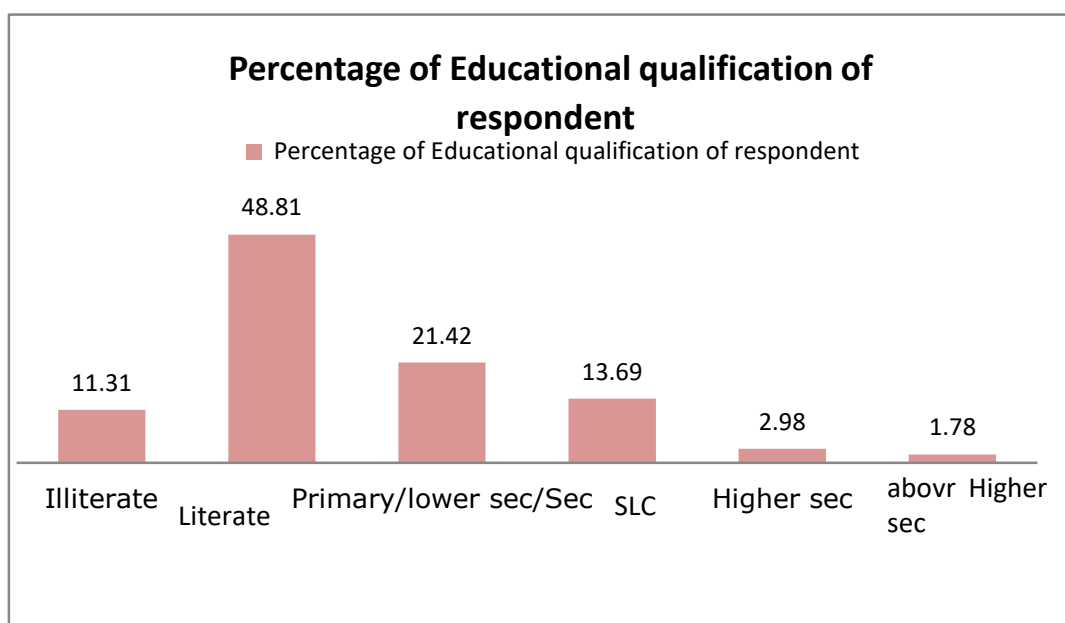
*Source: Field Survey 2016*

#### 4.2.5 Literacy and Educational Attainment

As stated in bar chart, the overall literacy and educational attainment of the sampled respondents. The bar chart shows that a higher 48.81% of the respondents are literate against a lower figure of 11.31% that are illiterate.



**Figure 2:** Overall literacy and educational attainment of the sampled respondents



(Source: Field Survey, 2016)

The literate members of the households attained varied level of education ranging from illiterate, just literate without formal education to the formal education, primary/lower secondary/secondary level, SLC, higher secondary and above higher secondary. The bar chart outlines that the highest percentage of household members accounting 21.42% was primary to secondary level education completed followed by 13.69% members who were SLC completed. By the respondent households, had the higher 48.81 percent on just literate, higher secondary level completed (2.98%) and above higher secondary level completed (1.78%) respectively.

#### 4.2.6 Food Sufficiency

**Table 4.20** shows that food sufficiency from own field varies widely by VDCs and sufficient month in sampled households. Given table portrays that of the total respondents, 4.2% households responded about their sufficient food situation for one year from the survey data. Of the total respondents, 95.8% households reported that they had food insufficiency for a year (**Table 4.20**). Comparing the VDCs, Tilahar was ahead with higher percentage (9.3%) of food sufficiency from own production. In terms of VDCs respondent households, 97.6%, 97.7%, 97.5%, 90.7% food insufficiency were Majhaphant, Banau, Kurgha and Tilahar respectively among the VDCs sampled.

**Table 4.20: Food Security and Sufficiency Status of Household**

Food sufficiency		Name of VDC/Municipality				
		Majh phant	Bana hu	Kurg ha	Tilah ar	Total
If agriculture product from own field is enough for family	Yes	2.4%	2.3%	2.5%	9.3%	4.2%
	No	97.6%	97.7%	97.5%	90.7%	95.8%
	Total	100%	100%	100%	100%	100%
If no, for how long is food enough	Less than 3 months	2.4%	0.0%	12.5%	5.1%	4.9%
	3 to 6 months	22.0%	59.5%	42.5%	7.7%	33.3%
	6 to 9 months	53.7%	28.6%	35.0%	30.8%	37.0%
	More than 9 months	22.0%	11.9%	10.0%	56.4%	24.7%
	Total	100%	100%	100%	100%	100%

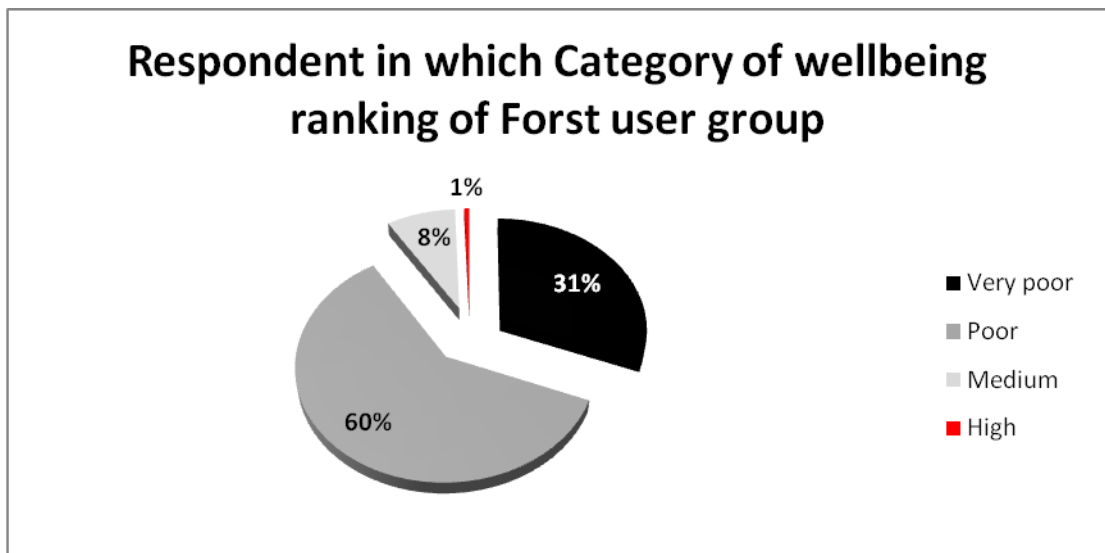
Source: Field survey 2016

According to **table 4.20** the higher percentage of food sufficiency was in the period of six to nine month which contains 37.0%. Conversely the least percentage was more than nine months food sufficiency which was 24.7%.

#### **4.2.7 Well-being Ranking of Sampled Household**

The pie-chart illustrates the respondent's well-being ranking according to the constitution of community forest.

**Figure 3:** Well being ranking of sampled household



*(Source: Field Survey, 2016)*

By economic category, the ratio of poor type of members is highest (60.1%) in the sampled VDCs. However, almost a quarter of the members are ranked as very poor (31%). The third and least percentages of members 8.3% and 0.6% are ranked as medium and rich respectively (**Figure 3**).

## **CHAPTER FIVE**

### **DATA PRESENTATION, ANALYSIS, AND INTERPRETATION**

#### **5.1 LAPA Preparation Processes and Implementation**

Preparation of LAPA requires a process broadly an approach as prescribed in the LAPA framework by involving local stakeholders including the vulnerable communities. A certain level of scientific, social and management knowledge is required to manage the LAPA development and implementation process. In the beginning of MSFP, a manual on local and community based adaptation plan was prepared by Forest Action to facilitate the stakeholders in LAPA process. The Project Staff were capacitated through training and workshops on climate change and LAPA process, and the process of LAPA was materialized practically in the field level. Once initial actions were carried out in few piloting sites, the process of LAPA framework was refined through ‘experiential learning process. In this process, the actors engaged in it have practiced LAPA preparation as a place for learning and capacitating themselves.

While talking about LAPA preparation and implementation, the process or method adopted to select working VDCs is one of the most important aspects of discussion and analysis because it may help to understand the impacts or benefits of implemented LAPA activities to a real extent. The LAPAs have been implemented in the MSFP working VDCs which were selected on the basis of the extent of climate change vulnerability. The vulnerability mapping was carried out by the district stakeholders at the beginning of MSFP. Further, the staff of LIPOs and MSFP had further mapped out the extent of climate change vulnerability and selected the most vulnerable from among the selected MSFP working VDCs.

In addition to the active participation of the local community and beneficiary, one of the most important aspects of initiating the task for MSFP to work for LAPA process was to develop a good working relationship with government line agencies. VDC level FECOFUN took lead in preparing LAPA with backstopping support from Local

Implementing Partner Organizations. Meetings were held with VDCs, District Development Committees (DDCs), District Forest Offices (DFOs), District Soil Conservation Offices (DSCOs), District Agriculture Development Offices (DADOs), District Livestock Service Offices (DLSOs), Federation of Community Forestry Users Nepal (FECOFUN), CFUGs, and other local level stakeholders. Inception meetings were held at VDC level in participation of VDC, Ilaka (Area) Forest Office, Service Centre of DADO and DLSO, Schools, Health Post, representative of political parties and CFUGs to share about LAPA and start the process.

#### **I) Sensitization on Climate Change**

Climate change sensitization meetings and workshops were held at the VDC, at the Ward, and community levels. Sensitization activities were focused to make the community members aware about climate change issues and their impacts at location specific community groups and household levels. Information was also communicated and disseminated through FM radio and leaflets on the climate change issues, impacts of climate change, adaptation options, planning, and implementation processes.

#### **II) Assessment of Vulnerability and Adaptation**

Climate change vulnerability assessment was made to identify the major threats on natural resources and livelihoods, and the groups and households most affected by the threats. Vulnerability maps were prepared at the VDC and the Ward levels. Climate hazard trend analysis, mappings, seasonal calendars, well-being ranking, and cause and effect analysis were the major tools used to facilitate the discussion sessions. These exercises were carried out with the participation of CFUG representatives, VDC personnel, school teachers, political party representatives, Sector Forest Office, Service Centre of DADO and DLSO, and local NGOs' representatives. The community, to a large extent, was inclined to generalize climate change impacts, and facilitation was required to identify the most vulnerable communities within the VDC. Based on the climate change impacts, adaptation options were identified which could address immediate needs.

#### **III) Prioritization of Adaptation Option**

Having identified the vulnerable communities and adaptation options, LAPA process moved on to the preparation of adaptation plan through planning sessions. There was wider participation from local communities (CFUG members), government line

agencies, and representatives from political parties, civil societies, CBOs and private sectors. Adaptation activities or options were prioritized based on the severity of climate induced vulnerabilities faced by women and disadvantage groups (DAGs). For instance, conservation of water sources or springs and rehabilitation of water supply scheme were identified as the most important options which address the problem of women and DAGs. Pair-wise ranking method was used to identify the most important options.

#### **IV) Preparation of Adaptation Plan(AP)**

LAPA was developed to use as a roadmap for the implementation of climate change adaptation activities for the period of three to five years. Development of LAPA at the VDC level consumed ample time and efforts of all stakeholders, and 3 to 5 days were taken to accomplish the whole task.

#### **V) Integration of Adaptation Plan into VDC Plan**

After the preparation of LAPA, it was put forward for the integration into VDC planning process. In few VDCs, LAPAs were approved by formal process through VDC general assembly, whereas in other VDCs it was principally agreed to integrate LAPA in local development planning through the VDC general assembly. In this context, a reasonable option from the MSFP side was to implement LAPA before they went through the VDC's general assembly meeting. However, there was a consensus building with VDC and line agency stakeholders for implementing LAPA activities in the community level.

#### **VI) Implementation of LAPA**

The CFUGs, as the functional agencies in the community level, implemented priority adaptation options with the support of LIPOs. LIPOs of MSFP were the front line worker to facilitate stakeholders in the whole process of developing and implementing LAPA.

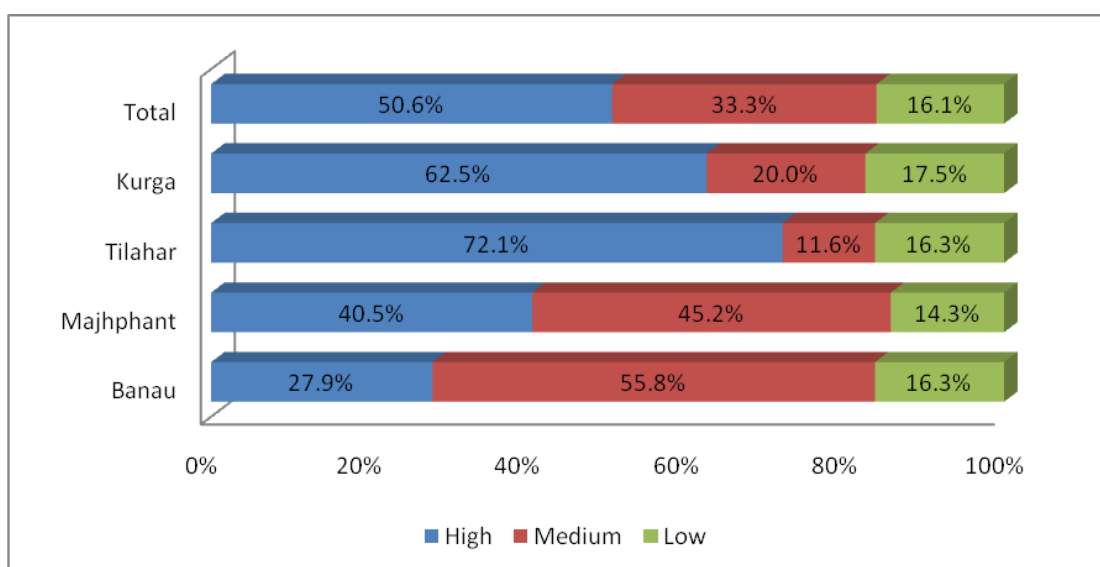
#### **VII) Monitoring of Adaptation Activities**

A mechanism for assessing the progress of activities and outcomes was developed by forming a monitoring and evaluation committee at VDC level consisting of VDC, line agency (Sector Forest Office, DADO and DLSO service centers), and CFUG representatives.

### 5.1.1 Location of settlement in terms of risks

This section gives idea on the location of settlement in terms of vulnerability of risk, perception on the importance of LAPA. Interviewer asked the respondents about settlement in terms of risk according to their constitution and past experience.

**Figure 4:** Location of settlement in terms of Risk by LAPA



(Source: Field Survey, 2016)

The communities where LAPA was prepared were found to be located at high and medium risk in terms of vulnerability (Figure 5). Most of the households in Tilahar VDC were recorded at high risk. Likewise, nearly two third of the households of Kurga VDC and up to half of the households Banahu VDC were at medium risk. This shows the rationale of preparing LAPA at those sites. This result is in line with NAPA, 2010, which has categorized Parbat district as landslide vulnerable district.

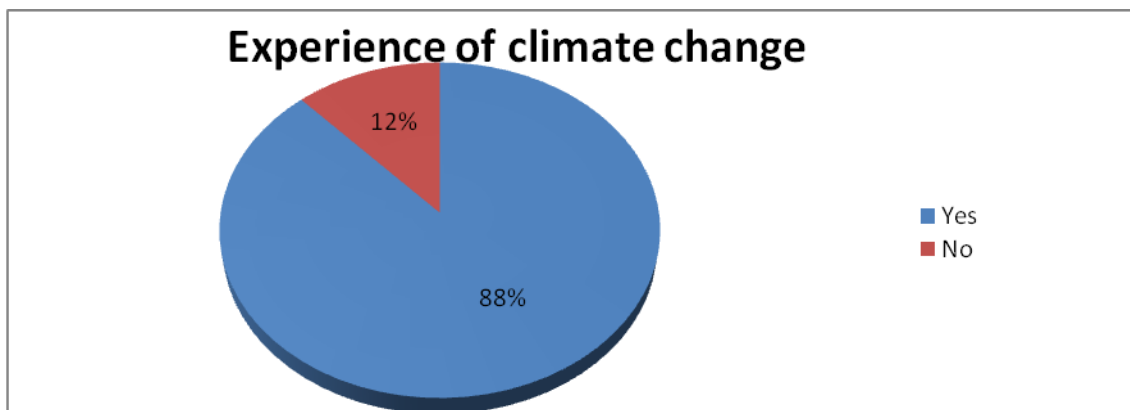
### 5.1.2 Knowledge and perception on LAPA preparation process

The local (VDC) based adaptation plans are developed at local level in an effort to enhance the capacity of communities to adapt to climate change including its variability. Project has been playing facilitation roles in developing these plans that are community driven and are geared to meet local priority needs.

### 5.1.2.1 Experience of climate change

Figures 5 and 6 show the respondent experiencing climate change signal, which helps to evaluate how much priority is given to local people voices to prepare the local adaptation plan of action and include the local issues in LAPA by LIPO's.

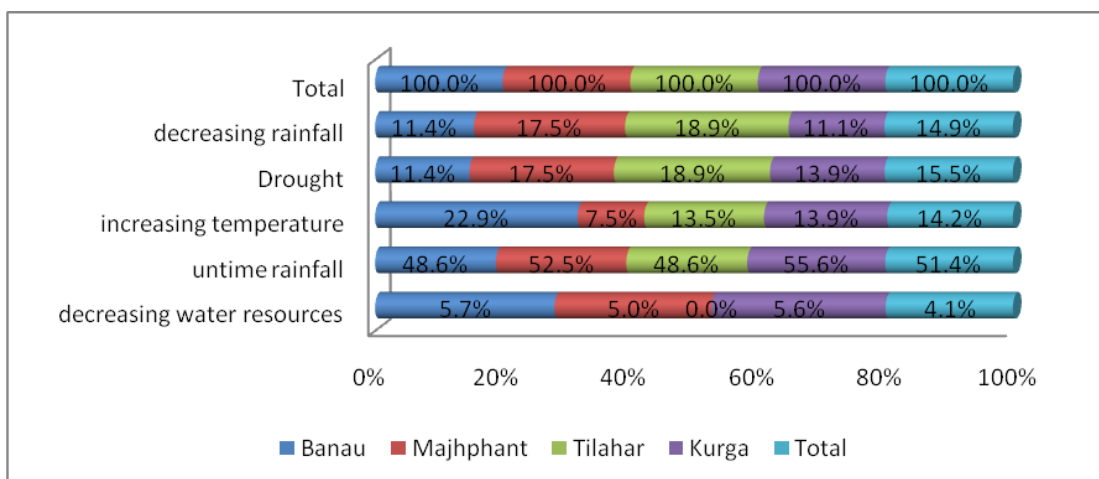
**Figure 5:** Respondents experiencing Climate Change signal



(Source: Field Survey, 2016)

Nearly 90% of respondents were found experiencing climate change signal in their localities (Figure 5)

**Figure 6:** Respondents experiencing Climate Change signal



(Source: Field Survey, 2016)

Assessing of climatic signal based on the perception of respondents with focusing risk, it was found that untimely rainfall was the major experience whereas increasing temperature resources, drought and decreasing water resources were other several climate change signals experienced by local people (Figure 6). In all VDCs untimely

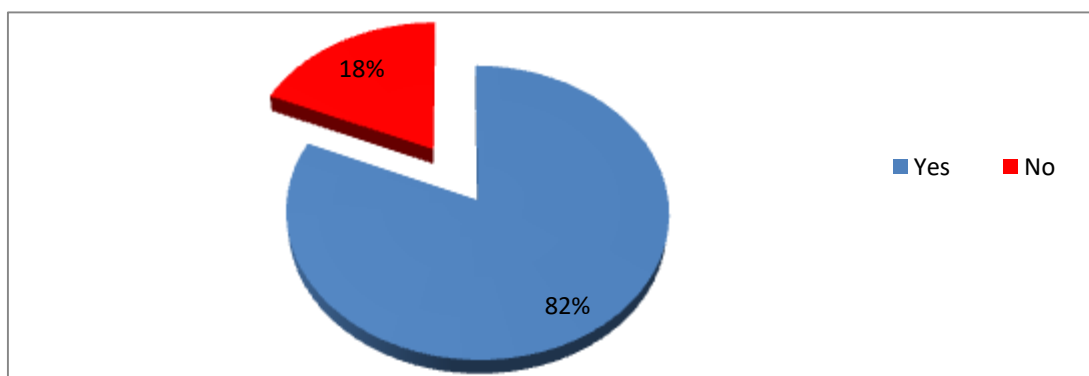


rainfall was the major signal. The result demonstrates that the individual, people and society may perceive or assess the climate risk and their potential impact differently in given circumstances. (Figure 6).

### 5.1.2.2 Knowledge and perception on LAPA

The local (VDC) based adaptation plans are developed at local level in an effort to enhance the capacity of communities to adapt to climate change including its variability. Project has been playing facilitation roles in developing these plans that are community driven and are geared to meet local priority needs.

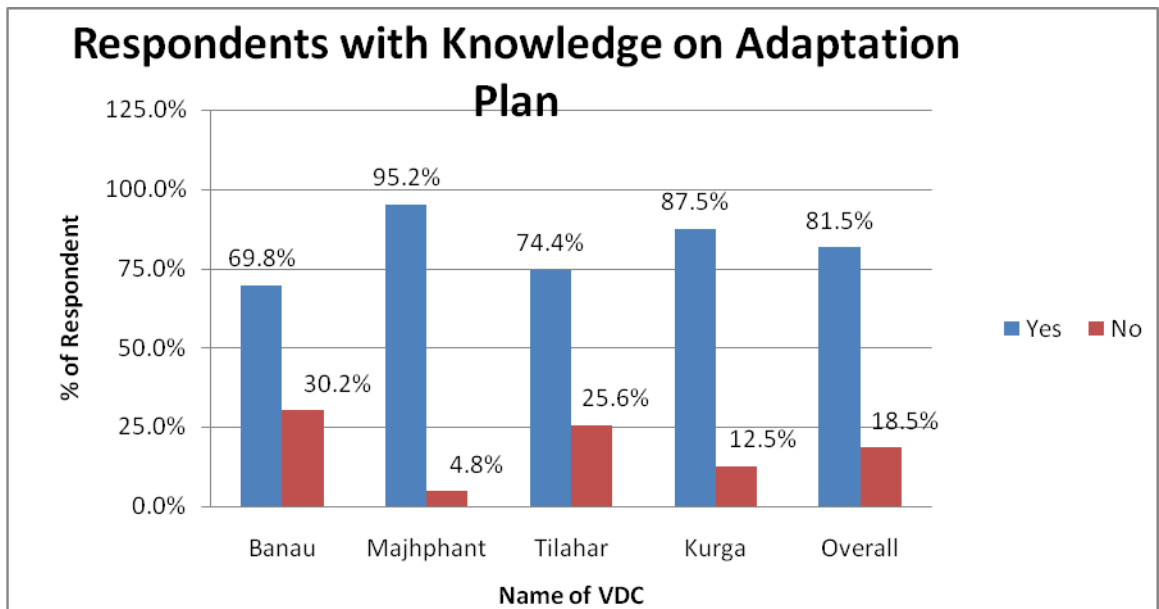
**Figure 7:** Respondents with Knowledge on Adaptation Plan



(Source: Field Survey, 2016)

While asking about LAPA, 82.2% of respondents informed that they have heard about it. Majority of respondents in all LAPAs know that they have LAPA (Figure 7). One of the reason for this was LAPA has been prepared in the VDCs where Community Learning Centre exists.

**Figure 8:** Respondents with Knowledge on Adaptation Plan



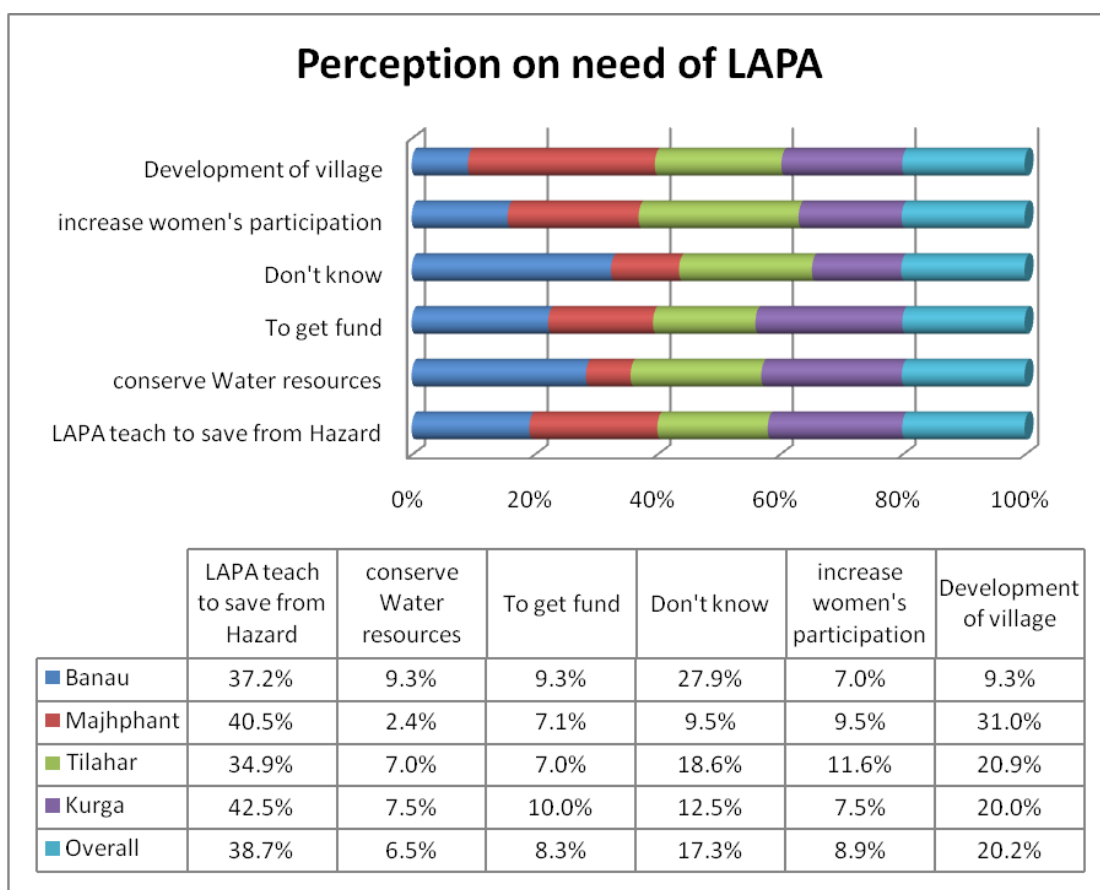
(Source: Field Survey, 2016)

The percentage of respondents with knowledge of LAPA was low in Banahu VDC as compared to other VDCSs. During focused group discussion with committee of Banahu VDC, even the committee members were not clear on LAPA. They do not have LAPA with them. In the period of FGD Social mobilization part was also found low in comparison with the remaining other VDCs.

### 5.1.2.3 Why it important to prepare LAPA?

Figure 9 illustrate the respondent perception about the importance of preparing LAPA which helps to evaluate the local people awareness about LAPA and compare to how much local people give priority to LAPA.

**Figure 9:** Respondents with Perception on need of LAPA



(Source: Field Survey, 2016)

42.5% of respondents pointed out LAPA as essential document for saving their life from hazards. Likewise, 20.2% pointed out need for village development; 8.9% for increasing women participation in both in leadership level as well as in adaptation activities; 8.3% said for getting fund from different stakeholders for solving their problems; and 6.5% stated the need for conserving water resources (Figure 9).

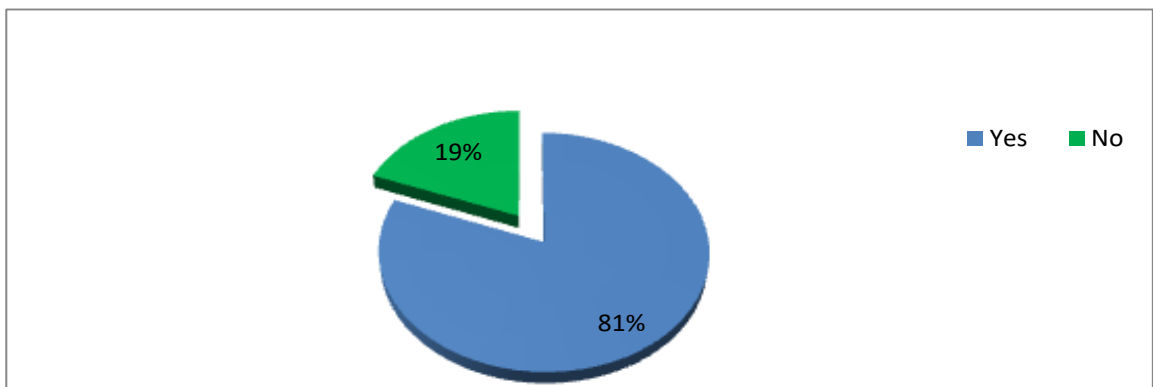
#### 5.1.2.4 Participation in LAPA Preparation

The VDC level FECOFUN, ENPRED and CFUGs, being the primary stakeholders and beneficiary of MSFP, took a lead and actively participated in the whole processes of LAPA preparation and implementation. However, the participation of all VDC stakeholders and agencies was part of prioritized work in LAPA preparation and implementation. For example, the participation of community members representing VDC level FECOFUNs, ENPREDs, CFUGs, local community members, vulnerable households, women, civil societies and representatives of the political parties were ensured and made responsive to LAPA preparation and implementation.

The ensured participation of all stakeholders and community members provided not only the opportunity for incorporating diverse local knowledge and experiences on the climate change, but also enhanced knowledge in understanding the issue, identify the possible options and prioritize most potential and viable options for adaptations. The VDC level FECOFUN and ENPREDS have the impression that the development and implementation of LAPA has been proved to be an advantage for enhancing the knowledge and strengthening the capacities of their users and beneficiaries for adaptation measures.

The local (VDC) based adaptation plans are developed at local level in an effort to enhance the capacity of communities to adapt to climate change including its variability. Project has been playing facilitation roles in developing these plans that are community driven and are geared to meet local priority needs.

**Figure 10:** Respondent participation in LAPA preparation



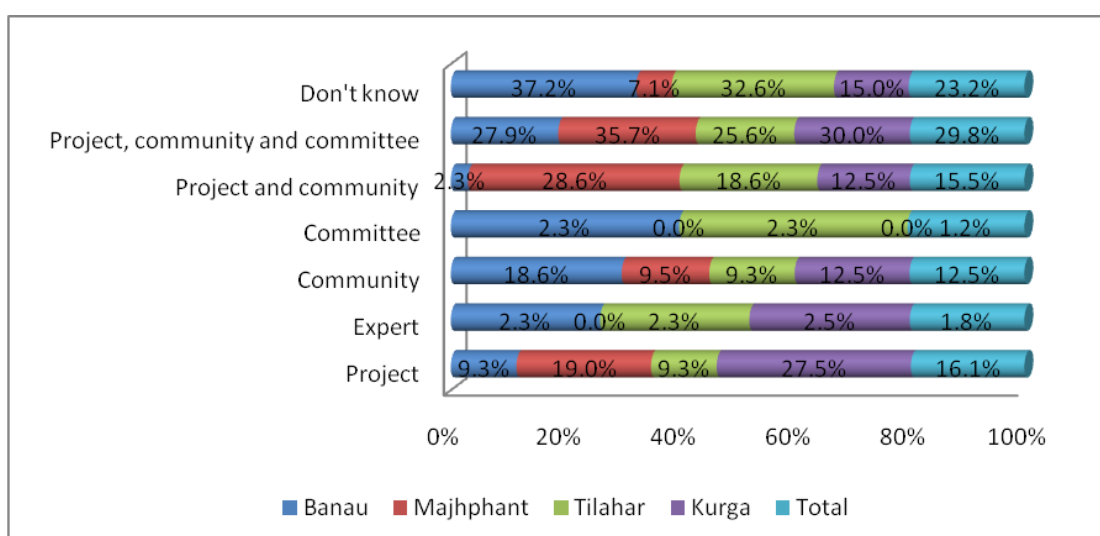
*(Source: Field Survey, 2016)*

While asking have you got the opportunities for participation in LAPA preparation, 81% of respondents informed that they have got the opportunities for participation in LAPA preparation. Majority of respondents in LAPA preparation got the opportunities to participate and raise their voice (Figure 10). One of the reason for this was LAPA has been prepared in the VDCs where Community Learning Centre exists. During Focused Group discussion participants were confidently saying that they prepare their LAPA themselves.

### 5.1.2.5 Perception on LAPA preparation

LAPA prepared in Parbat District was found comprehensive in assessing climate change impacts, and exploring adaptation options. The use of participatory tools and techniques (vulnerability mapping, trend analysis, seasonal calendars, pair-wise ranking etc.) were helpful to understand the climate change hazards and risks, analyze vulnerabilities, and then develop adaptation plans to increase resilience of the community. However, the effectiveness and efficiency of using these tools and techniques to pull out desirable outcomes differed on facilitation skills of the staff of LIPOs across districts. It reveals that adequate hands on skill need further to be improved in LIPOs community groups for using these participatory tools and techniques in refining the LAPA process.

**Figure 11:** Respondents Perception on LAPA preparation



(Source: Field Survey, 2016)

During household survey household respondents were asked about who prepares LAPA, 29.8% of respondents said that project, community and committee sit together and prepare LAPA while 23.2% do not know about it. 16.1% of respondents stated that project prepare LAPA (Figure 11). In Majhphant and Kurga VDC majority of respondent pointed out that project, community and committee prepares LAPA. Generally, respondents who participated in LAPA preparation process said that LAPA was prepared by community and project. During Focused Group discussion participants were confidently saying that they prepare their LAPA themselves in Banahu VDC. On the other hand in Tilahar majority of respondents do not know about it.

The VDCs are larger in geographical areas in the hilly context, particularly in the Parbat district, and preparing LAPA was not an easy task, which consumed much time and efforts of stakeholders and resources for its implementation. The perception of some stakeholders is that LAPA prepared at VDC level is very difficult to implement due to the lack of financial resources. In addition, it is also said that LAPA activities may not be able to address climate change specific issues of communities in a diverse social, cultural and ecological settings.

## **5.2 Activities and outcomes of LAPA**

The LAPA activities were not implemented in the form of LAPA, rather some of the activities identified and documented in the documents were implemented in the form of CAPA. The implementation of adaptation activities are undergoing through CFUGs with the backstopping support from VDC level FECOFUN, and LIPOs. Priority activities among the adaptation options were focused on addressing drinking water supply schemes, plantation, waste management and rehabilitation of irrigation systems. These activities indicate that shortage of water resources was an urgent need of climate change vulnerable communities and household.

There were arguments for seeking out the differentiation between activities under LAPA for MSFP and the regular development activities through different agencies. For instance, activities such as drinking water supply scheme, rehabilitation of irrigation system, plantation in degraded community forest land, and income generation activities were also supported by different development agencies, which have become most prioritized activities for LAPA implementation. In this case, the climate change adaptation plans and activities have become the means to complement the urgent needs of vulnerable communities for their resilience building.

### **5.2.1 Respondent Received Support from DDC or NGOs**

Table 5.1 and figure 12 shows the respondent received support from DDC and NGO which helps to assess the activities of LAPA according to form of LAPA or not. Also evaluate the activities of DDC and NGO

**Table 5.1:** Respondents received support from DDC or NGOs

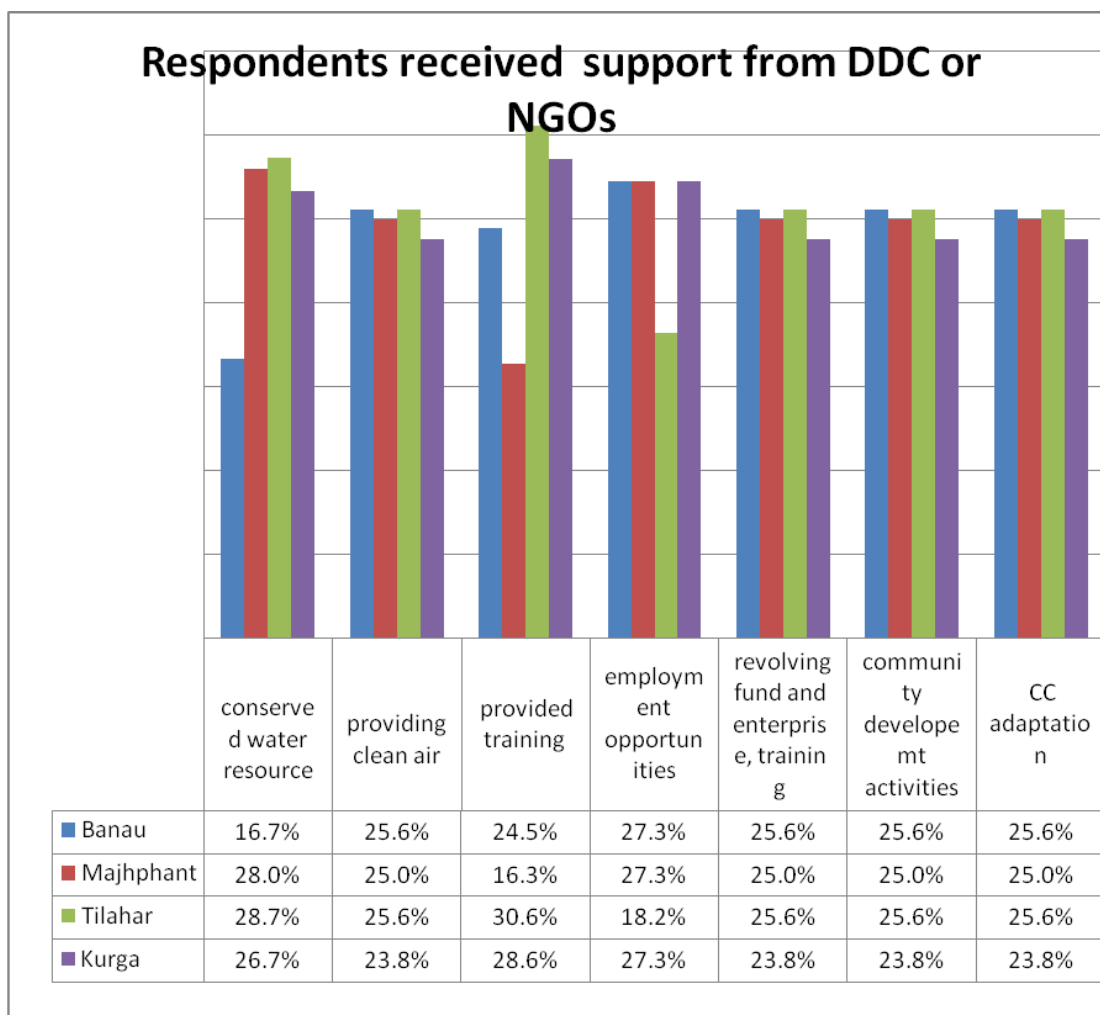
Name of VDC/Municipality	Has respondent received any support from DDC or NGOs?			
	Yes	No	Do not know	Others
<b>Banau</b>	100.0%	0.0%	0.0%	0.0%
<b>Majhphant</b>	100.0%	0.0%	0.0%	0.0%
<b>Tilahar</b>	100.0%	0.0%	0.0%	0.0%
<b>Kurga</b>	100.0%	0.0%	0.0%	0.0%
<b>Total</b>	100.0%	0.0%	0.0%	0.0%

(Source: Field Survey, 2016)

During household survey household respondents were asked if they received any support from DDC or NGOs, 100.0% of the respondents said that they did receive support (Table 5.1).

The figure illustrates the respondent received support from DDC or NGOs in four VDCs.

**Figure 12:** Respondents received support from DDC or NGOs



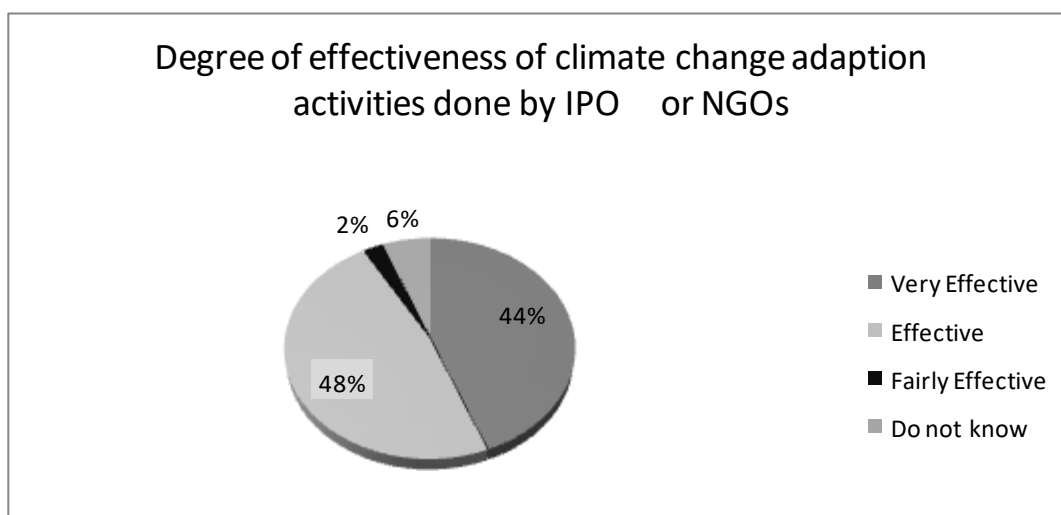
(Source: Field Survey, 2016)

Among the respondent who have received training, 30.6% shared from Tilahar VDC which is highest percentage. Second highest percentage 28.7% also shared from Tilahar VDC, who received support for conserved water resources. According to above (figure 13) respondent support for providing clean air, resolving fund, enterprise and training, community development activities and climate change adaptation support were nearly equal in all VDCS. 16.6% mentioned that received support for conserved water resources in Banahu VDC which is lowest percentage. From this figure we can say respondent received support from DDC and NGO were rational according to their need base and some support are nearly equal in all VDCs.

### 5.2.2 Degree of effectiveness of climate change adaption activities done by IPO or NGOs

The figure 13 shows the effectiveness of climate change adaption activities implemented by Implementation Partner Organization and Non-Government Organization which is taken data from household survey.

**Figure 13:** Degree of effectiveness of climate change adaption activities done by IPO or NGOs



(Source: Field Survey, 2016)

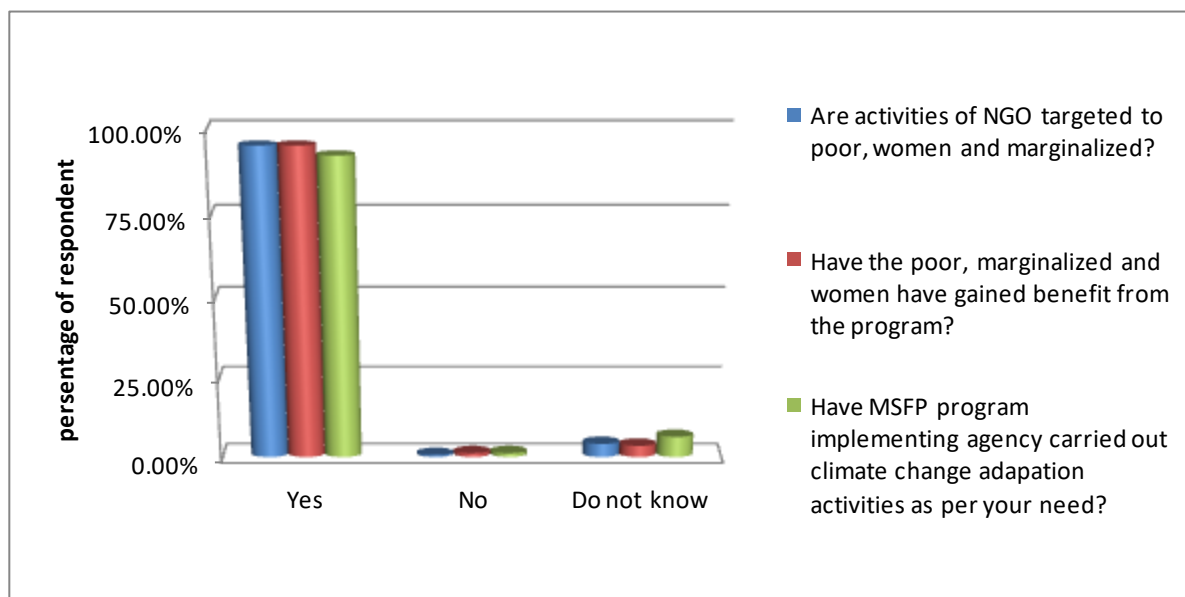
Among the respondent, 47.6% pointed out effective climate change adaption activities were done by IPO or NGOs. Out of them 44% mentioned that very effective climate change adaption activities were done by IPO or NGOs. Likewise 6% said that the adaption activities were fairly effective and 2.4% pointed out they did not know or have any idea but they did receive support from the programme.



### 5.2.3 Activities of Program Need of, Benefited by and Targeted to Poor, Women and Marginalized

Figure 14 shows whether the activities of program were need based and targeted to poor, women and marginalized group or not, which helps to evaluate if the program addressed the local issues or not.

**Figure 14:** Activities of NGO targeted to poor, women and marginalized



(Source: Field Survey, 2016)

95.2% of respondents pointed out 'yes' the programs targeted the poor, women and Marginalized and they benefited from the program. Likewise 92.3% of respondent pointed out 'yes' MSFP of IAs carried out climate change adaption activities as per local people's need. Out of them 1.2%, 1.2% and 0.6% mentioned that no respectively MSFP of IAs carried out climate change adaption activities as per local people need, poor, women and Marginalized gained benefited from the program, targeted to poor, women and Marginalized. Likewise 6.5%, 3.6% and 4.2% of respondent said that don't know respectively MSFP of IAs carried out climate change adaption activities as per local people need, poor, women and Marginalized. From the figure we can say NGO targeted to poor, women and marginalized people and received benefited mostly poor, women and Marginalized. And also MSFP of IAs carried out climate change adaption activities as per local people need.

### 5.2.4 Receive Benefits from Climate Change Adaption Program by FUG

Table 5.2 shows the respondent received benefits from climate change adaption program by FUG which helps to assess the activities of LAPA according to form of LAPA or not. Also evaluate the activities of FUG

**Table 5.2:** Receive benefits from climate change adaption program by FUG

		Name of VDC/Municipality				
		Bana u	Majh phant	Tilah ar	Kurg a	Total
Has respondent received any benefit from climate change adaption FUG in past 3 to 4 years?	Yes	100.0 %	100.0 %	100.0%	100.0%	100.0%
	No	0.0%	0.0%	0.0%	0.0%	0.0%
	Don't know	0.0%	0.0%	0.0%	0.0%	0.0%
forest management	Yes	100.0%	100.0%	100.0%	100.0%	100.0%
water conservation	Yes	100.0%	100.0%	100.0%	100.0%	100.0%
landslide control	Yes	0.0%	100.0%	0.0%	100.0%	0.0%
flood prevention	Yes	0.0%	0.0%	100.0%	0.0%	0.0%
skill development	Yes	100.0%	100.0%	100.0%	100.0%	100.0%
agriculture and livestock management	Yes	100.0%	100.0%	100.0%	100.0%	100.0%
infrastructure development	Yes	100.0%	100.0%	100.0%	100.0%	100.0%
activities of irrigation	Yes	0.0%	100.0%	100.0%	0.0%	100.0%
other activities	Yes	100.0%	0.0%	0.0%	0.0%	100.0%

(Source: Field Survey, 2016)

The table illustrates the respondent benefited from climate change adaptation program by FUG in four VDCs. All of the respondent reported to have benefited from climate change adaptation program by FUG in four VDC. According to above (**table 5.2**) respondent benefiting from forest management, water conservation, skill development, agriculture and livestock management and infrastructure development were equal in all four VDCS. Landslide control activities were done in Majhphant and Kurga VDCs. Likewise flood preservation activities were done in Tilahar VDC and irrigation activities were done in Majhphant and Tilahar VDCs. From this table we can say respondent benefiting from climate change adaptation program by FUG in four VDCs, were rational according to their need base and some support are nearly equal in all VDCs.

#### **5.2.5 Positive Changes after Project**

As we can get from the table, positive changes have been seen in the different sectors after the project implementation in a period of four years. Overall, the project has seen better achievement in forest conservation, greenery, water conservation, and irrigation facilities. On the other hand, income generating activities and awareness building programme directly and indirectly affected positively on the socio economic condition.

**Table 5.3:** Positive Changes after project

		Name of VDC/Municipality				
		Banau	Majhphant	Tilahar	Kurga	Total
Change_better forest conservation	Yes	100.0%	97.6%	97.7%	100.0%	98.8%
	No	0.0%	2.4%	2.3%	0.0%	1.2%
Change_greenary has increased	Yes	92.9%	100.0%	97.7%	100.0%	97.6%
	No	7.1%	0.0%	2.3%	0.0%	2.4%
Change_water sources has been conserved	Yes	79.1%	97.6%	100.0%	100.0%	94%
	No	20.9%	2.4%	0.0%	0.0%	6%
Change_water sources has increased	Yes	72.1%	54.8%	62.8%	87.5%	69.0%
	No	27.9%	45.2%	37.2%	12.5%	31.0%
Positive change has irrigation facilities	Yes	0.0%	100.0%	100.0%	0.0%	50.6%
	No	100.0%	0.0%	0.0%	100.0%	49.4%
Change_forest fire has decreased	Yes	65.1%	61.9%	79.1%	95.0%	75.0%
	No	34.9%	38.1%	20.9%	5.0%	25.0%
Change_forest ownership has increased	Yes	93.0%	66.7%	100.0%	97.5%	89.3%
	No	7.0%	33.3%	0.0%	2.5%	10.7%
Change_forest management has become better	Yes	88.4%	71.4%	83.7%	92.3%	83.8%
	No	11.6%	28.6%	16.3%	7.7%	16.2%
Positive change_Others	Yes	0.0%	0.0%	0.0%	0.0%	0.0%
	No	0.0%	0.0%	0.0%	0.0%	0.0%

(Source: Field Survey, 2016)

According to data, among the 'better forest conservation' 98.8% respondent pointed out 'yes'. Besides, out of them 1.2% respondent mention that 'no'. Likewise, among the 'greenary has increased' 97.6% responder answered that 'yes', while 2.4 % respondent were said 'no'. The project mainly positive impact on forest conservation and greenary has increased in period of four years. It directly provide more timber and non timber forest products and indirectly helps to water conservation. LAPA focuses mostly on the adaption through better conservation of forest and water resources conservation. These aspects directly link with income generating activities and improve health and sanitation. On the other hand, LAPA also focus on the capacity development and forest management and awareness raising.

According to FGD and KII, the CFUGs are known as the functional entities with proven past performance in forest management and development activities effectively. CFUGs not only facilitated to the implementation of LAPA activities, but also played facilitating roles for encouraging and increasing investment/contribution of the CFUGs, and the beneficiaries of the LAPA activities. Participation of the community in the implementation of adaptation activities is encouraging with their full labour contribution and sharing the financial resources. After the successful completion of initial activities, CFUGs are putting efforts to tap financial resource from different resource organizations for complete implementation of LAPA.

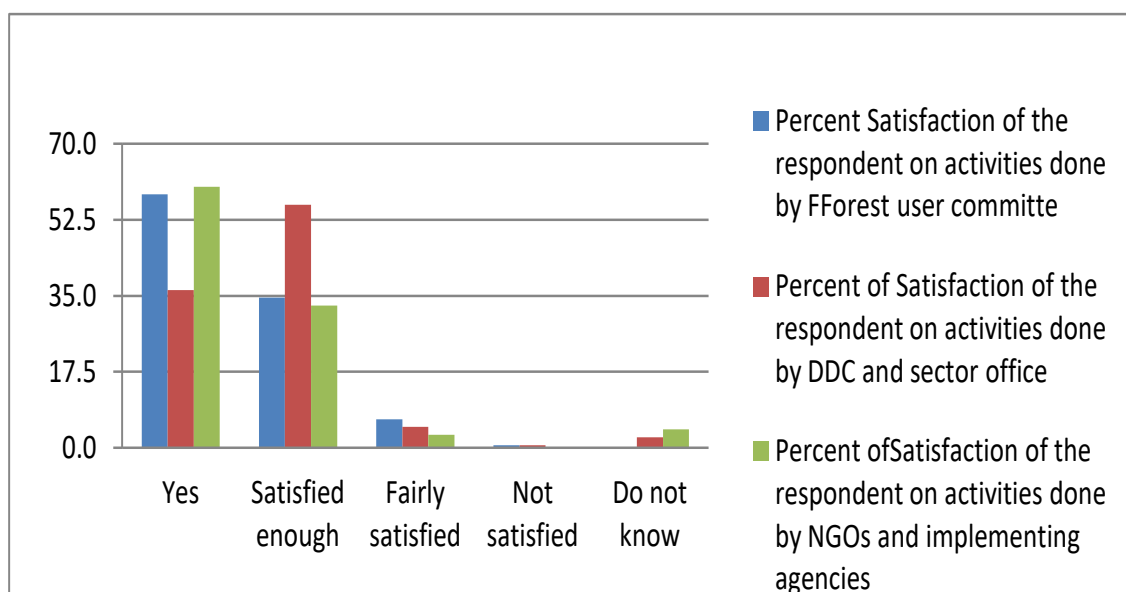
The activities implemented till now are managed mainly from the project support and contribution from the community side. A desperate situation for the community is foreseen if activities planned in LAPA remain unimplemented to reach the vulnerable households. Despite the rare success, the efforts and facilitating roles of LIPOs and CFUGs for the development of linkages with support/resource organizations both at VDC and district levels for the implementation of LAPA activities were example of felt ownership and leadership in of LAPA documents.

## **5.3 Community Perception about LAPA Implementation**

### **5.3.1 Satisfaction level of respondent on activities done by FUC, DDC and sector office and NGO and IA**

Figure 15 illustrate the satisfaction level of respondent on activities done by FUG, DDC and sector office and NGO and IA.

**Figure 15:** Satisfaction level of respondent on activities done by FUC, DDC and sector office and NGO and IA



(Source: Field Survey, 2016)

60.1% of respondents pointed out yes satisfied on activities done by NGO and IAs which is the highest percentage compare to other satisfactory level. Likewise 58.3% and 36.3% of respondent point out yes satisfied on activities done by FUC and DDC and sector office. Out of them 56% mentioned that satisfied enough on activities done by DDC and sector office which is highest percentage compare to other organization. Likewise 34.5% and 32.7% of respondent pointed out satisfied enough on activities done by FUC and NGO and IAs. None of them respondent said that not satisfied on activities done by NGO and IAs. Likewise 0.6% and 0.6% said that not satisfied on activities done by DDC and FUC. And 6.5%, 4.8% and 3% of respondent pointed fairly satisfied on activities done by respectively FUC, DDC and NGOs. Likewise 4.2% and 2.4% respondent said that don't know on activities done by respectively NGO and DDCs and none of them were pointed out don't know on activities done by FUCs.

According to 'KII' and 'FGD', some gaps have been observed from the preparation and implementation of LAPA. First, the tendency of CFUGs and local communities to exaggerate the climate change impacts with an intention of including their local issues and problems in the LAPA documents was found while developing the adaptation plan. Second, the local communities, beneficiaries, and participants of the LAPA preparation meeting also had high expectations from the preparation and

implementation of LAPAs which require big amount of resources to transform them into the practice. Third, there is still gap in the understanding of who will finance for the implementation of LAPA activities and therefore further reorientation is required to utilize local resources rather than depending on the external resources. Fourth, the participation of LAPA preparation is still questionable from the point of view of inclusiveness because the voice of the poor and socially marginalized sections/communities is still weak.

### 5.3.2 Sustainability

#### 5.3.2.1 Strength and continuation of FUG and household

**Table 5.4:** Strength and continuation of FUG and household

		Name of VDC/Municipality				
		Banau	Majhp hant	Tilaha r	Kurga	Total
<b>Is the FUC stronger and more active than before 3/4 years</b>	<b>Yes</b>	97.7%	81.0%	81.4%	97.5%	89.3%
	<b>No</b>	2.3%	2.4%	4.7%	2.5%	3.0%
	<b>Same like before</b>	0.0%	16.7%	14.0%	0.0%	7.7%
	<b>Do not know</b>	0.0%	0.0%	0.0%	0.0%	0.0%
	<b>Others</b>	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Can FUC continue their activities without external support</b>	<b>It can</b>	23.3%	0.0%	16.3%	82.50%	29.8%
	<b>Need support for some time</b>	39.5%	21.4%	62.8%	17.5%	35.7%
	<b>It can't</b>	25.6%	64.3%	20.9%	0.0%	28.0%
	<b>Do not know</b>	11.6%	14.3%	0.0%	0.0%	6.5%
	<b>Others</b>	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Will household continue their activities without external support?</b>	<b>Yes</b>	97.7%	88.1%	93.0%	100.0%	94.6%
	<b>No</b>	2.3%	9.5%	4.7%	0.0%	4.2%
	<b>Others</b>	0.0%	2.4%	2.3%	0.0%	1.2%

(Source: Field Survey, 2016)

Among the 'can FUC continue their activities without external support' respondent, 89.3% of respondents pointed out 'yes'. Out of them 7.7% mentioned that 'Some like before'. Likewise 3% said that 'No' and none of them pointed out do not know. So from this data the FUC need support for some time by the external support. Furthermore, among the 'is the FUC stronger and more active than before 3/4 years' respondent, 35.7% of respondents pointed out 'Need support for some time'. Out of them 29.8% mentioned that 'It can'. Likewise 28% said that 'It can't' and 6.5% of them pointed out 'do not know'. So from this data the FUC and.

Likewise, in the case of household among the 'will household continue their activities without external support?' respondent, 94.6% of respondents pointed out 'yes'. Out of them 4.2% mentioned that 'NO' and 1.2% of them pointed out others. So from this data the household can continue their activities without external support.

## **Challenges Of LAPA Implementation**

### **5.4.1 Gaining stakeholders' interest in LAPA:**

There is provision for involving stakeholders (local bodies, local political party representatives, line agencies, etc.) during the process of LAPA preparation. However, VDCs have not been able to bring those stakeholders together in the process. From KII it was found that VDC send invitation letter to the stakeholders and the stakeholders took it as a small program and do not give priority.

It is necessary to orient stakeholders on the issues of climate change and on importance of LAPA at least to the DFO, VDC secretary and local political leaders before LAPA preparation process so that they will keep this program in priority and participate in the process (Mr. Deepak Acharya, LRP of Parbat).

### **5.4.2 Ownership of LAPA Document:**

The main reason was the lack of institutional ownership of the LAPA document; while another reason was the lack of sufficient financial resources to support for the implementation of LAPA activities identified and compiled in the document.

The VDC FECOFUN is not liable to take ownership of this document; instead the respective VDCs are administratively responsible to take ownership of the LAPA document. However, in practice, it was observed that there is lack of real ownership of LAPA documents by the VDC administration. This was mainly because of the



nonexistence of fully functional VDC with elected members. In addition, the VDC secretary, who by position, is the only government official/employee to represent the whole VDC council and take ownership of VDC level plans and official administration. In this case, there is a dilemma of whether the VDC could be made responsible to take ownership of the LAPA document for how it could happen.

#### **5.4.3 Linguistics problem:**

Making local people understand climate change issues is challenging where people have their own language. The terminologies used during LAPA preparation as well as in the session of LAPA make people confusion and facilitator finds difficulties in making local people understand.

#### **5.4.4 Resource tapping from stakeholders:**

We have LAPA but still we the community people are not much clear on how to go ahead and translate it into action. VDC does not have big bulk of money to support for. The stakeholders as well as VDC do not listen to us. It is important to build our capacity on how to tap resources from stakeholders, (Mr. Chhetra Bahadur Magar, CFUG Chairperson, Banahu VDC)

#### **5.4.5 Integrating LAPA into development planning:**

It is imperative to mention that there is gap in delegating authorities and responsibilities to district level line agencies from the central or regional level, and to VDC or area levels from the district level to work for LAPA and develop mechanism for integration with regular development activities. Therefore, integration of LAPA with that of the regular development activities is observed as one of the most important aspects of LAPA preparation and implementation.

#### **5.4.6 Coordination and Linkage**

Climate change is a complex and multi-dimensional issue, and thus LAPA needs to be developed and implemented in a multi-stakeholder approach. The LAPA preparation and implementation processes for MSFP have become the means to develop linkages and coordination between different actors and stakeholders in the VDCs and DDCs. For example, the district FECOFUNs and local NGOs as implementing partners of MSFP in Parbat District got the opportunity and advantage for developing good

coordination and linkage with different line agencies and stakeholders both at VDC and district levels.

The MSFP aims at developing and enhancing collaboration and partnership between and among different actors and agencies. The LAPA preparation and implementation processes and methods adopted in the Parbat District provide enabling the environment for partnership and collaboration among line agencies and actors in the VDCs. In practice the LAPAs were prepared through the participation, discussion, common understanding, and consent of all VDC stakeholders such as VDC secretary, community based organizations, representatives of the political parties, community groups (such as clubs, mother's group, women's group, youth etc.), and CFUGs. The LAPA in principle has become a common document of all stakeholders and agencies in the VDCs. They not only showed their interest for collaboration and partnership, but also compelled to make commitments for their support for its implementation (Mr. Raju Paudel, Executive Director ENPRED).

In other words, LAPA has been a focal point for all stakeholders including the local community for collaborative efforts to work on the climate change issues. Due to the methods and processes adopted in the preparation and implementation of LAPAs, all the VDC stakeholders have accepted LAPA as a common, new, and important initiative. It is also accepted that LAPA activities are based on immediate needs, and they are different from other regular development interventions. So, the LAPA preparation and implementation have strengthened both the horizontal and vertical linkages among, LIBIRD, FECOFUN, ENPRED, CFUGs, community groups, and development organizations.

However, the roles and responsibilities of stakeholders are yet not well defined for a functional collaboration in LAPA preparation and implementation. It is observed and learned that an informal rapport building developed by project implementing partners with stakeholders seems to be working well for partnership and collaboration rather than institutional level responsibilities for LAPA preparation and implementation.

#### **5.4.7 Making community active:**

The community people are less active. The reason behind this might be the large coverage of households, low level of knowledge on LAPA, more project intervention in different sectors and inadequate support to group from LRP.

#### **5.4.8 Releasing fund:**

The implementation of the activities identified and compiled in the LAPA documents require big amount of the financial resources, which in most cases, are beyond the capacity and competence of VDC stakeholders and leaders. In an average, the LAPA documents prepared for MSFP, at least NRs. 15 lakhs needed annually for the implementation LAPA activities. This means an adequate budget is required for the implementation of all interventions identified in the LAPA documents. So, the budget required for adaptation activities is higher compared to locally available resources, and therefore, a gap exists between the required budget and the availability of budget. Stakeholders suggest that it is mandatory to incorporate LAPA into the VDC and district level annual programmes for its ensured implementation and sustainability.

#### **5.4.9 Monitoring and Evaluation**

It was observed that emphasis is given on the implementation of adaptation activities by stakeholders with modest consideration on monitoring and evaluation aspect. For example, drinking water supply and irrigation rehabilitation schemes have been successfully completed by the community groups in the initial stage of LAPA implementation. There is monitoring and evaluation committee at VDC level, but it does not have monitoring plan and framework to assess progress and outcomes of the LAPA, and collect learning, reflection and feedback to support responsive and interactive adaptation planning. Similarly, drinking water and irrigation schemes are found not supported with proper repair and maintenance mechanism, which are very important for the sustainability of the construction related interventions.

The district level annual multi stakeholder monitoring was conducted, however due to its broader objectives (monitoring of all activities in the district) it could focus its monitoring on the LAPA activities. The lack of monitoring plan and framework are also due to the absence of clear framework of entry points for LAPA implementation and ownership of the LAPA documents. In other words, LAPA is prepared in the participation of VDC level stakeholders, while its implementation has been carried out by the particular CFUG. This indicates that the monitoring and evaluation of LAPA activities have not been well envisioned and its framework is still not clear.

# **CHAPTER SIX**

## **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

### **6.1 Key Findings/Summary**

The observation, documentation, and analysis of LAPA, preparation and implementation processes supported by MSFP Lot-IV in Parbat districts can be summarized into the following key points:

The LAPA preparation and implementation methods have been found to be a bottom-up approach. The emphasis has been given in the preparation and implementation of the CAPAs rather than on LAPAs. However, the preparation and implementation of CAPA is considered to complement the LAPA of the same VDC.

The adaptation activities identified and planned in the LAPA documents are more realistic in terms of the approaches adopted and the possible benefits to the communities or beneficiaries. Further, the CAPA activities are comparatively more realistic than the LAPA. The LAPA and CAPA preparations have adopted same processes and approaches (based on seven steps prescribed in the LAPA framework). However, the effectiveness and efficiency of using appropriate tools and techniques to facilitate the process differed with implementing organizations and persons involved. There was active participation of government line agencies, local stakeholders and the community members in the whole process of LAPA preparation and implementation. However, the leading roles for the preparation and implementation of LAPA documents and activities were carried out by the VDC FECOFUN and particular CFUG. Though the participation of all stakeholders are methodologically ensured and prioritized, these all stakeholders have not been made equally responsible for LAPA preparation and implementation. This is due to the lack of well-defined roles and responsibilities of stakeholders.

Although the LAPA documents were prepared with the participation of all VDC stakeholders, there was the lack of its ownership by the VDC line agencies. This was

due to the ritualistic participation of VDC secretary and some other stakeholders, and lack of clear policy frameworks for its ownership. So, most of the prepared LAPA documents, instead of transforming them into the real practice, were limited as paper documents. This also resulted into the lack of perfect collaboration and partnership between and among the stakeholders and agencies.

Despite adoption of participatory approaches and well-documented adaptation plan, there was the lack of clear ownership of the LAPA documents. There was neither clear policy framework nor development of the clear practices for VDC or VDC line agency as responsible for taking its ownership.

Although the activities compiled and planned in the CAPA and LAPA documents were realistic and need based, there was still lack of integration between CAPA and LAPA themselves. Moreover, there was neither a clear policy framework nor developed practices for the integration of CAPA and LAPA activities in the VDC level, and other regular development planning processes and their implementations.

There is the absence of the elected VDC body for a long time to take lead in planning and implementation of development activities. If this situation goes long, integrating LAPA into VDC planning process and support of the VDC for implementation of Adaptation Plan with full ownership is questionable.

LAPA have been helpful to strengthen horizontal and vertical linkages and networks of CFUGs with other stakeholders with an advantage of cross-learning. Adaptation options identified both by LAPA and CAPA were found similar across VDCs and districts. Major interventions identified were conservation of water sources, rehabilitation of drinking water, irrigation systems, and plantation in degraded land, forest management, and construction of check dams, income generation activities, alternative energy, and the creation of awareness in the community. Activities implemented from LAPA till now have focused on water resources signifying the urgent need for drinking and irrigation water to climate vulnerable communities. The financial resources allocated by MSFP for the preparation and implementation of LAPA were not adequate. For example, the budget required for adaptation activities is higher compared to provided resources and locally available resources. Therefore, the gap exists between required budget and availability of budget for full fledging implementation of LAPAs and CAPAs.

The role of CFUGs in preparing and implementing LAPA is encouraging. Similarly, the involvement of district FECOFUN and local NGOs and LIPOs with the roles to facilitate CFUGs and the community has been proved to be practical and successful. Initiation has been taken to synthesize LAPA from CAPAs to authenticate and consolidate the concept of the bottom-up approach. There is now important role of VDC and other line agencies to accomplish this task.

## **6.2 Conclusion**

The preparation and implementation of LAPA in the Parbat District for MSFP working district is based on the prescribed steps in the LAPA framework 2011. Erratic rainfall, droughts, decline of water sources and soil erosion, decline in crop productivity, incidence of crop pests, and widespread problem of invasive weed species were identified as major problems associated with climate change. Nearly 90% of respondents were found experiencing climate change signal in their localities. Assessing of climatic signal based on the perception of respondents with focusing risk, it was found that untimely rainfall was the major experience. In response to the climate change impacts, the most prioritized adaptation interventions identified have remained the conservation of water sources (springs) followed by the rehabilitation of drinking water, irrigation systems, plantation, forest management, construction of recharge pond, income generation activities and creation of awareness in the community.

LAPA has been a focal point to stakeholders for collaborative efforts to work on climate change issues. LAPA has strengthened horizontal and vertical relationships and close tie among CFUGs, local community groups, civil societies and development organizations. New experiences have been gained and lessons have been learnt by the community and supporting stakeholders through cross-learning from LAPA. Though minor gaps in coordination with well-defined roles and responsibilities have been taken into account among government line agencies for a collaborative work for LAPA for each agency has its own programme with specific mandate and with the given priorities.

Interaction meetings and workshops among LIPOs and other local stakeholders are taken to be most essential for sharing the lessons learned in the process and outcomes

for further improvements in the preparation and implementation of the adaptation plans. Though steps/processes undertaken are based on the national level policies and guidelines, it seems that LIPOs and CFUGs are required to improve facilitation skills in using different participatory tools and techniques in developing effective adaptation plans. Roles and responsibilities of major stakeholders should be clearly defined with commitment and ownership for LAPA implementation.

The full-fledged implementation of LAPAs already structured is important rather than development of new adaptation plans. The policies and institutional mechanisms for ensuring funds for the implementation of LAPA through VDCs and DDCs should be integrated in the annual plans of VDCs and DDCs. Strong and effective monitoring and evaluation mechanism is required for LAPA because they include diversified activities with specific objectives. A repair and maintenance committee with the provision of fund for repair and maintenance work should be in place with all CFUGs managing the drinking water supply and irrigation systems. CAPAs are required to be synthesized into LAPA for authentication and integration of climate change adaptation plan into VDC and DDC development plans.

It is now obvious that LAPA is developed at VDC level. The process of preparing LAPA documents and synthesizing them into the NAPA seems to be good example of 'bottom-up approach' of planning processes. These processes also contributed to the empowerment and capacity enhancement of community leaders, transformation in their livelihood and contributed for the benefits of local communities. Similarly, it has contributed to strengthen democratic practices at the local level.

### **6.3 Recommendation**

The approaches and methods adopted for the preparation and implementation of LAPA was more democratic. These processes have also contributed in the capacity building and linkages development of local communities and CFUGs. In addition, the implementation of LAPAs has benefitted to the climate change vulnerable communities in MSFP Lot-IV Parbat district. However, there are some rooms to improve preparation and implementation of LAPA activities. Based on the observation and analysis of LAPA cases from MSFP Lot-IV Parbat district, following recommendations are given for the improvement of existing gaps and problems.

Preparation and implementation of LAPA activities seem elective tools to develop capacities of local communities to adapt against the climate change impacts. However, the experiences and practices on the ground clearly show that the existing policy framework is not adequate for developing the synergic effects throughout the whole processes.

- ❖ All LAPA activities need to be tie-up ( integration) with the regular local development planning processes and their implementations;
- ❖ Clear policy frameworks and guidelines are needed for the implementation of LAPA activities whether this should go through the CFUGs or VDCs or local NGOs.
- ❖ Clear policy framework and guidelines should be provisioned on funding mechanism for the implementation of LAPA activities.
- ❖ Ownership and integration of LAPA into VDC and DDC level development plan: The ownership to the programme by of stakeholders is important for directing mobilising resources towards achieving outcomes. Diversification of LAPA and CAPA activities: The field visits and observation clearly show that most of the LAPA in Parbat District supported and implemented for MSFP are focused on the renovation and reconstruction of drinking water supply and irrigation systems. So, diversification in the implementation of CAPA and LAPA activities will have additional synergic effects in the adaptation of local communities. For example, they support and promote diverse forms of income generating activities



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## Annexs

### Annex - 1: Questionnaires for Data Collection

**HOUSEHOLD SURVEY QUESTIONNAIRE**  
**EFFECTIVENESS OF LAPA IMPLEMENTATION BY MSFP IN PARBAT**  
**DISTRICT**  
**2073**

Code No. :

Name of Respondent:

#### 1. General Information

S.N	Question	Answer (Choose the right answer)
1.1	Address of respondent	
1.1.1	VDC/Municipality	
1.1.2	Ward No.	
1.2	Sex of respondent	1. Male 2. Female 3. Third sex
1.3	Name of CFUG	
1.4	Caste of respondent	1. Brahamin, kshetri , Thakuri, Sanyasi 2. Dalit 3. Adhibasi janajati 4. Newar 5. Muslim 6. Others
1.5	Occupation of Respondent	1. farmer 2. Service/job 3. Business 4. Wage/labour 5. Foreign Employment 6. Student 7. Others
1.6	Education of Respondent	1. Illiterate 2. Literate 3. Primary/Lower secondry/secondry 4. SLC Passed 5. Higher secondry 6. Higher Education
1.7	Age Of Respondent	
1.8	Number of Family Member	1. Total.....(Female..... Male.....)

1.9	In your own land, production is sufficient to family for a year?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol> If No, How month sufficient <ol style="list-style-type: none"> <li>1. Above 9 month</li> <li>2. 6-9 month</li> <li>3. 3-6 month</li> <li>4. Less than 3 months</li> </ol>
1.10	How to manage inadequate foodstuff for insufficiency?	<ol style="list-style-type: none"> <li>1. Wage labour</li> <li>2. Take loan</li> <li>3. Job/service</li> <li>4. Borrow/buy</li> <li>5. Sale of livestock and other assets</li> <li>6. Others</li> </ol>
1.11	How much earn annual income of your family?	This question answer may be multiple, please select multiple options based on need <ol style="list-style-type: none"> <li>1. Job/ pension.....</li> <li>2. Labor wage.....</li> <li>3. Business.....</li> <li>4. Livestock and its production.....</li> <li>5. Agriculture production.....</li> <li>6. Foreign employment .....</li> <li>7. Rent.....</li> <li>8. Forest resources.....</li> <li>9. Others.....</li> </ol> Total income.....
1.12	Name of Member CFUG	
1.13	Which Category is assigned to your forest user group in the wellbeing ranking?	<ol style="list-style-type: none"> <li>1. High</li> <li>2. Medium</li> <li>3. Poor</li> <li>4. Very poor</li> </ol>
1.14	Are you member of Forest users group's executive board?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol> If yes, Which post <ol style="list-style-type: none"> <li>1. President</li> <li>2. Vice president</li> <li>3. Secretary</li> <li>4. Treasury</li> <li>5. Member</li> </ol>

## 2. Knowledge and perception on LAPA preparation process

S.N	Question	Answer (Choose the right answer)
2.1	Do you heard/experienced about climate change?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol>

	If yes, could you kindly tell?	<ol style="list-style-type: none"> <li>1. Untimely rainfall</li> <li>2. Increasing temperature</li> <li>3. Decreasing water resources</li> <li>4. Decreasing water resources and untimely rainfall</li> <li>5. Decreasing rainfall</li> <li>6. Others.....</li> </ol>
2.2	Do you know about climate change adaptation plan?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol>
	If yes, could you kindly elaborate?	<ol style="list-style-type: none"> <li>1. Plantation</li> <li>2. Construction of recharge pond</li> <li>3. Construction of recharge pond &amp; irrigation channel</li> <li>4. Water sources conservation</li> <li>5. Construction of Gavi to prevent from flooding</li> <li>6. Others.....</li> <li>...</li> </ol>
2.3	Is it important to prepare LAPA?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol>
	Why it important to prepare LAPA?	<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> </ol>
2.4	How LAPA is prepared?	<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> </ol>
	Who prepares it?	<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> </ol>
2.5	Who participates in LAPA preparation?	<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> </ol>
	Have you got the opportunities for participation?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol>
2.6	Does women, men, poor, dalit, marginalized janajatis, youth participate in LAPA preparation?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol>
	Is their voice reflected in LAPA?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol>
2.7	Who makes decision in LAPA preparation?	<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> </ol>

2.8	What are the decisions made in favor of women, men, poor, dalit, marginalized janajatis, youth in LAPA preparation?	1. 2. 3
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### 3. Knowledge and perception on LAPA implementation process

S. N	Question	Answer (Choose the right answer)
3.1	How LAPA is implemented?	1. 2. 3
3.2	Who participates in LAPA implementation?	1. 2. 3
	Have you participated?	1. Yes 2 No
3.3	Does women, poor, dalit, marginalized janajatis, youth participate in LAPA implementation?	1. Yes 2 No
3.4	Who benefits from LAPA implementation	1. 2. 3.
	Have you benefited?	1. Yes 2 No
3.5	Does women, poor, socially discriminated and vulnerable group benefits from LAPA implementation?	1. Yes 2 No
	If yes, what and how?	What 1. 2. 3.  How 1. 2.

		3.			
3.4	What are the Learning, challenges and opportunities in LAPA implementation?				
		<b>LAPA Implementation</b>			Remarks
		Learning	Challenges	Opportunities	
	District level				
	VDC level				
	Community level				

#### 4. Effectiveness

<b>4.1</b>	Have you received climate change adaption programme support from DDC and NGOs?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> <li>3. Don't know</li> <li>4. Others.....</li> </ol>
<b>4.2</b>	Have you obtained any support from climate change adaption programme of DDC, NGO and CFUGs, how do you supported?	<p>The answer would be multiple, please select more than two options.</p> <ol style="list-style-type: none"> <li>1. Irrigation (cannel and recharge pond)</li> <li>2. Entrepreneurs and income generation from mobile fund</li> <li>3. Employment</li> <li>4. Community development activities</li> <li>5. Climate change adaptation programme</li> <li>6. Training</li> <li>7. Water sources</li> <li>8. Others</li> </ol>
<b>4.3</b>	Degree of effectiveness of climate change adaption activities done by implementation partner organization (IPOs), NGO and CFUGs.	<ol style="list-style-type: none"> <li>1. Very Effective</li> <li>2. Effective</li> <li>3. Fairly Effective</li> <li>4. Not effective</li> <li>5. Do not know</li> <li>6. Others.....</li> </ol>
<b>4.5</b>	Are activities of NGO targeted to poor, women and marginalized?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> <li>3. Don't know</li> </ol>

	Have the poor, marginalized and women have gained benefit from the program?	1. Yes 2. No 3. Don't know
<b>4.6</b>	Have MSFP program implementing agency carried out climate change adaption activities as per your need?	1. Yes 2. No 3. Don't know 4. Others.....

### 5. Impact of the LAPA

<b>5.1</b>	Did you receive any benefit from climate change adaption FUG in past 3 to 4 years?	1. Yes 2. No 3. Don't know 4. Others.....																								
<b>5.2</b>	If yes, receive benefit from climate change adaption FUG in past 3 to 4 years																									
	<table border="1"> <thead> <tr> <th>Activities</th> <th>Support (Cash, skill, training, material )</th> <th>Benefit/Impact of the program</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	Activities	Support (Cash, skill, training, material )	Benefit/Impact of the program																						
Activities	Support (Cash, skill, training, material )	Benefit/Impact of the program																								
<b>5.3</b>	Changing condition of rural household and community in the study area after the implementation of LAPA.																									
	<table border="1"> <thead> <tr> <th>Changes</th> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr> <td>Forest conservation</td> <td></td> <td></td> </tr> <tr> <td>Greenery</td> <td></td> <td></td> </tr> <tr> <td>Increasing wildlife animal</td> <td></td> <td></td> </tr> <tr> <td>Water resource conservation</td> <td></td> <td></td> </tr> <tr> <td>Health and sanitation</td> <td></td> <td></td> </tr> <tr> <td>Increase of irrigation facilities</td> <td></td> <td></td> </tr> <tr> <td>Environment conservation and protection</td> <td></td> <td></td> </tr> </tbody> </table>	Changes	Yes	No	Forest conservation			Greenery			Increasing wildlife animal			Water resource conservation			Health and sanitation			Increase of irrigation facilities			Environment conservation and protection			
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Water resource conservation																										
Health and sanitation																										
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Environment conservation and protection																										



	<p>Increase herbs plants and management</p> <p>Increase forest based enterprises</p> <p>We feeling or ownership of forest</p> <p>CFUGs capacity for effective planning and implementation</p> <p>Understanding the importance of forest resources</p> <p>Others.....</p>			
5.4	Do you satisfy on activities done by Forest user committee?	<p>1 Yes</p> <p>2 Satisfied enough</p> <p>3 Fairly satisfied</p> <p>4 Not satisfied</p> <p>5 Do not know</p>		
5.5	Do you satisfy on activities done by DDC and sector office?	<p>1 Yes</p> <p>2 Satisfied enough</p> <p>3 Fairly satisfied</p> <p>4 Not satisfied</p> <p>5 Do not know</p>		
5.6	Do you satisfy on activities done by NGOs and implementing agencies?	<p>1 Yes</p> <p>2 Satisfied enough</p> <p>3 Fairly satisfied</p> <p>4 Not satisfied</p> <p>5 Do not know</p>		

## 6. Sustainability

6.1	Is the FUC stronger and more active than before 3/4 years	<p>1. Yes</p> <p>2. No</p> <p>3. Same like before</p> <p>4. Don't know</p> <p>5.</p> <p>Others.....</p>
6.2	Can FUC continue their activities without external support	<p>1. It can</p> <p>2. Need support for some time</p> <p>3. It can't</p> <p>4. Don't know</p> <p>5.</p> <p>Others.....</p>
6.3	Will respondent continue their activities	<p>1. Yes</p>

	climate change adaption without external support?	2. No 3. Don't know 4. Others.....
<b>6.4</b>	What kind of support is expected by respondent from DDC and NGOs?	
<b>6.5</b>	was your climate change adaption activities affected from the earthquake	1. Yes 2. No
	What was the effect on earthquake on respondents climate change adaption activities?	

## **Annex 2 - : Chick list for Focus Group Discussion**

### **CHICKLIST FOR FGD EFFECTIVENESS OF LAPA IMPLEMENTATION BY MSFP IN PARBAT DISTRICT 2073**

Code No. :

Date.....

Name of FUG:

Name of VDC:

#### **1. Knowledge and perception on LAPA preparation process**

- 1.1 Do you heard/experienced about climate change? If yes, could you kindly tell?
- 1.2 Do you heard/experienced about climate change? If yes, could you kindly tell?
- 1.3 Do you know about climate change adaptation plan? If yes, could you kindly elaborate?
- 1.4 Is it important to prepare LAPA? Why it important to prepare LAPA?
- 1.5 How LAPA is prepared? Who prepares it?
- 1.6 Who participates in LAPA preparation?
- 1.7 Have you got the opportunities for participation?
- 1.8 Does women, men, poor, dalit, marginalized janajatis, youth participate in LAPA preparation? Is their voice reflected in LAPA?
- 1.9 Who makes decision in LAPA preparation?
- 1.10 What are the decisions made in favor of women, men, poor, dalit, marginalized janajatis, youth in LAPA preparation?

#### **2. Knowledge and perception on LAPA implementation process**

- 2.1 How LAPA is implemented?
- 2.2 Who participates in LAPA implementation? Have you participated?
- 2.3 Does women, poor, dalit, marginalized janajatis, youth participate in LAPA implementation?
- 2.4 Who benefits from LAPA implementation and have you benefited?
- 2.5 Does women, poor, socially discriminated and vulnerable group benefits from LAPA implementation? If yes, what and how?
- 2.6 What are the Learning, challenges and opportunities in LAPA implementation?

**3. Effectiveness**

- 3.1 Have you received climate change adaption programme support from DDC and NGOs?
- 3.2 Have you obtained any support from climate change adaption programme of DDC, NGO and CFUGs, how do you supported?
- 3.3 Degree of effectiveness of climate change adaption activities done by implementation partner organization (IPOs), NGO and CFUGs.
- 3.4 Are activities of NGO targeted to poor, women and marginalized?
- 3.5 Have the poor, marginalized and women have gained benefit from the program?
- 3.6 Have MSFP program implementing agency carried out climate change adaption activities as per your need?

**4. Impact of the LAPA**

- 4.1 Did you receive any benefit from climate change adaption FUG in past 3 to 4 years?
- 4.2 If yes, receive benefit from climate change adaption FUG in past 3 to 4 years

<b>Activities</b>	<b>Support (Cash, skill, training, material )</b>	<b>Benefit/Impact of the program</b>

- 4.3 Changing condition of rural household and community after the implementation of LAPA.
- 4.4 Do you satisfy on activities done by Forest user committee?
- 4.5 Do you satisfy on activities done by NGOs and implementing agencies?

**5. Sustainability**

- 5.1 Is the FUC stronger and more active than before 3/4 years?
- 5.2 Can FUC continue their activities without external support?
- 5.3 Will respondent continue their activities climate change adaption without external support?
- 5.4 Will respondent continue their activities climate change adaption without external support?
- 5.5 Will respondent continue their activities climate change adaption without external support?
- 5.6 Was your climate change adaption activities affected from the earthquake?
- 5.7 What was the effect on earthquake on respondents climate change adaption activities?

# Annex 3 - : Map of Study Area

## PARBAT DISTRICT

