

Enhancing Climate Resilience of Vulnerable Communities and Ecosystems in the Gandaki River Basin

Appendix 8c: Social Inclusion Assessment Report

Table of Contents

Table of Contents.....	i
List of Tables	i
Acronyms.....	i
Key terms and definitions	1
1. Introduction.....	2
1.1 Background.....	2
1.2 Objectives of the Study	3
1.3 Method.....	4
1.3.1 Data Collection	5
2. Review of Relevant Policies, Strategies and Projects.....	7
2.1 Review of National Social Inclusion Policies and Strategies	7
2.1.1 Strengths and Weakness of social inclusion Policies.....	9
2.1.2 Synergies, conflicts and trade-offs between different initiatives and policies	17
2.1.3 Assessment of the policy environment in relation to a Social-inclusion-based Approach to EbA	21
2.1.4 Gaps, Entry Points, and Potential Actions for Improving Existing Provisions and Mainstreaming Social Inclusion.....	22
2.2 Summary of Lessons Learned from Current and Recent Past Projects.....	31
3. Baseline.....	32
3.1 Social Inclusion in National and Local Programmes	32
3.1 An assessment of the Current State and Trends in Social Inclusion in the Project Area.....	36
3.2 A socially disaggregated assessment of Vulnerability in the project area to Climate Change and Natural Disasters	39
3.3 The Role of Social Groups in Natural Resource Use and Management	52
3.4 Recommended Key Social Inclusion -related Activities	53
References.....	55

List of Tables

Table 1: Selection of study sites based on climate change vulnerability in Gandaki River Basin	5
Table 2: Assessing the strength, weaknesses, opportunities and threats	10
Table 3: Synergies of Social Inclusion in policy, acts, plans and programs Climate change	20
Table 4: Gaps, issues and entry points	23
Table 5: Assessing the strengths and weakness of current and new programs in vulnerable areas	32
Table 6: Trends in social inclusion in the Gandaki River Basin	36
Table 7: Impacts and alternatives	41
Table 8: Beneficiary household coverage target	45
Table 9: Detail demographic and socio-economic data of the field used as baseline for this study and vulnerable communities	45
Table 10: Population status, literacy rate and poverty index of Gandaki River Basin	50
Table 11: Household head by Occupation	51
Table 12: Role of Social Group in Natural Resource Use and Management	52
Table 13: Summary of key activities	53

Acronyms

APP	Agriculture Perspective Plan
CAPA	Community Adaptation Plan of Action
CBD	Convention on Biological Diversity
CBO	Community Based Organization
CBS	Central Bureau of Statistics
CFUG	Community Forest User Group
CIPRED	Center for Indigenous Peoples' Research and Development
COP	Conference of Parties
CTEVT	Council for Technical Education and Vocational Training
DADO	District Agriculture Development Office
DDC	District Development Committee
DEO	District Education Office
DFO	District Forest Office
DLSO	District Livestock Service Office
DRR	Disaster Risk Reduction
DSCO	District Soil Conservation Office
EbA	Ecosystem based Adaptation
EFLGF	Environmental Friendly Local Governance Framework
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Safeguard
FSS	Forest Sectoral Strategy
GCF	Green Climate Fund
GEF	Global Environmental Facility
GESI	Gender Equity and Social Inclusion
GHG	Green House Gas
GoN	Government of Nepal
GSI	Gender and Social Inclusion
HDI	Human Development Index
ICIMOD	International Centre for Integrated Mountain Development
IFC	International Finance Corporation
ILO	International Labor Organization
INGO	International non-governmental organization
IPCC	Intergovernmental Panel on Climate Change
IUCN	International Union for Conservation of Nature
LAPA	Local Adaptation Plan of Action
LGCDP	Local Governance Community Development Projects
LSGA	Local Self Governance Act
MAP	Medicinal and Aromatic Plant
MDG	Millennium Development Goal
MoAD	Ministry of Agriculture Development
MoEn,	Ministry of Energy
MOFALD	Ministry of Federal Affairs and Local Development
MoFSC	Ministry of Forests and Soil Conservation
Molr	Ministry of Irrigation
MOPE	Ministry of Population and Environment
MoSTE	Ministry of Science, Technology and Environment
NAPA	National Adaption Plan of Action
NBS	National Biodiversity Strategy
NBSAP	National Biodiversity Strategic Action Plan
NCCIS	National Climate Change Impact Survey

NCS	National Conservation Strategy
NEFIN	Nepal Federation of Indigenous Nationalities
NGOs	Non-governmental organizations
NHDR	National Human Development Report
NPC	National Planning Commission
NRM	Natural Resource Management
NSFNC	National Strategy Framework for Nature Conservation
NTFP	Non- Timber Forest product
ODI	Overseas Development Index
PPCR	Pilot Program for Climate Resilience
PRSP	Poverty Reduction Strategy Paper
REDD	Reducing Emission from Deforestation and Forest Degradation
RRA	Rapid Rural Appraisal
SDG	Sustainable Development Goals
UN	United Nations
UNDP	United Nation Development Program
UNDESA	United Nations Department of Economic and Social Affairs
UNEP	United Nations Environmental Program
UNFCC	United Nations Framework Convention on Climate Change
UNDRIP	United Nations Declaration on the Rights of Indigenous Peoples
VDC	Village Development Committee
WDO	Women Development Office
WEF	World Economic Forum
WWF	World Wildlife Fund

Key terms and definitions

Whilst there is no single, agreed understanding of the key terminology - social integration, social inclusion, social cohesion and social participation - the following definitions are used to address them in this proposal.

Social Integration - a dynamic and principled process of promoting the values, relations and institutions that enable all people to participate in social, economic, cultural and political life on the basis of equality of rights, equity and dignity. It is the process in which societies engage in order to foster societies that are stable, safe and just – societies that are based on the promotion and protection of all human rights, as well as respect for and value of dignity of each individual, diversity, pluralism, tolerance, non-discrimination, non-violence, equality of opportunity, solidarity, security, and participation of all people, including disadvantaged and vulnerable groups and persons.

Social Inclusion - a process by which efforts are made to ensure equal opportunities for all, regardless of their background, so that they can achieve their full potential in life. It is a multi-dimensional process aimed at creating conditions which enable full and active participation of every member of the society in all aspects of life, including civic, social, economic, and political activities, as well as participation in decision making processes. In Part II of the publication, social inclusion is understood as the process by which societies combat poverty and social exclusion

Social Exclusion - the conditions (barriers and process) that impede social inclusion. Social exclusion is a process through which individuals or groups are wholly or partially excluded from fully participating in all aspects of life of the society, in which they live, on the grounds of their social identities, such as age, gender, race, ethnicity, culture or language, and/or physical, economic, social disadvantages. Social exclusion may mean the lack of voice, lack of recognition, or lack of capacity for active participation. It may also mean exclusion from decent work, assets, land, opportunities, access to social services and/or political representation.

Social Cohesion - the elements that bring and hold people together in society. In a socially cohesive society all individuals and groups have a sense of belonging, participation, inclusion, recognition and legitimacy. Social cohesive societies are not necessarily demographically homogenous. Rather, by respecting diversity, they harness the potential residing in their societal diversity (in terms of ideas, opinions, skills, etc.). Therefore, they are less prone to slip into destructive patterns of tension and conflict when different interests collide.

Social Participation - the act of engaging in society's activities. It refers to the possibility to influence decisions and have access to decision-making processes. Social participation creates mutual trust among individuals, which forms the basis for shared responsibilities towards the community and society.

1. Introduction

Nepal's National Climate Change Impact Survey (CBS, 2016) highlights that climate change impacts have become highly visible affecting different aspects of human society and ecosystem across the globe and that Nepal has also experienced impacts in different sectors including agriculture, forests and biodiversity, water resources and energy and livelihoods.

While several policies have been devised at the central level, effective implementation of such policies and plans at local and community level in Nepal is a challenge due to limitations including lack of availability of integrated and reliable data and information on different facets of climate change impacts.

Social inclusion is a process towards human development which has emerged as a policy tool geared towards people centered development. (Labonte R, 2011) says that 'Social inclusion' 'is the political response to exclusion' and 'is about advocacy and transformation'. It is a proactive approach to value all people and groups, create conditions for them to live with dignity and fulfill their basic needs and it is also a state of society 'where all people are given opportunity to participate fully in political, cultural, civic and economic life because they feel valued, their differences are respected and their basic needs are met, so they can live in dignity'.

To measure social inclusion in Nepal, six major dimensions of inclusion were identified. Four of these – political, cultural, gender and social cohesion – are relatively new; this is the first time that they have all featured in a single index, although other studies have featured indicators for some of the dimensions.

The World Summit for Social Development, held in March 1995, established the concept of social integration to create an inclusive society, "a society for all", as one of the key goals of social development. To respond to climate change impacts, social inclusion must address accessibility to all resources, equity in benefit sharing, cultural diversity, access to information, ability to participate in planning and all levels of decision making and effective leadership as of given the geography and dignity.

UNFCCC Article 1 and 4; Sustainable Goal 5, 10 and 13 focuses on addressing issues related to gender and equality, equity, reducing inequalities and climate change issues where social inclusion perspective targets and indicators have been developed.

1.1 Background

Social Inclusion describes the complementary approach that seeks to bring about system-level institutional reform and policy change to remove inequities in the external environment. Social inclusion requires a shift from an institutional environment which gives some individuals and groups more opportunity to realize their agency than others, to one where the political system and the rule of law support equal agency for all.

Social inclusion dimensions of the social change process may be a response to pressure from below created through empowerment or it can also be instigated from positions of relative power within the existing institutional framework. With social inequalities on the rise almost everywhere, poor and vulnerable population groups are more negatively affected by the current global crises than others. Economic crises, natural disasters, environmental degradation and conflict are inhibiting development in many regions across the world, and climate change threatens to amplify these by creating additional uncertainties and risks for vulnerable populations, increasing the severity and frequency of disasters and jeopardising development gains made to date. Inclusive and meaningful participation of all community groups, particularly the most vulnerable, is needed in all the phases of climate change programming – from assessment to implementation, and throughout in monitoring and evaluation.

The process of social transformation does not follow a particular sequence. Bennett (1983) highlighted that actions are required from "within" the minds of those whom society has placed "below" – as well as action from "above", from those in a position to change the structure of access. It may not always be

the “first step”, but certainly one part of the process of change is the empowerment of marginalized groups. There is ethnographic and textual evidence that caste, ethnic and gender exclusions have never been “comfortable” for Nepalis – even for high caste males who have benefited from them. Bennett (1983) have shown that both ‘high’ and ‘low’ castes and men and women have always on some level, been aware of the internal contradictions in the hierarchical logic of caste, ethnic and gender relations making them vulnerable to the development and now climate change.

Social inclusion refers to “the process of improving the terms for individuals and groups to take part in society, and the process of improving the ability, opportunity, and dignity of those disadvantaged on the basis of their identity to take part in society”. The social inclusion debate in Nepal focuses heavily on caste and ethnicity issues. Gurung, et.al. 2014 of the Central Department of Sociology/Anthropology conducted studies on perspectives on social inclusion and exclusion in Nepal which highlight “that the present state is exclusionary, non-participatory and non-representative and discriminates against indigenous peoples, women, *Madhesi*, *Dalits* and other marginalized communities on the basis of caste, ethnicity, language, religion, sex, class and geographical territory. The other aspect of inclusion and exclusion is based on diversity of approaches of historical periods: “exclusionary inclusion,” “assimilationist inclusion” and “multicultural inclusion.”

The (CBS, 2016)survey reveals that 49.33 per cent households have heard about climate change, out of which 42.82 per cent of households got information on climate change through radio while 27.63 per cent through television. The majority of the respondents observed that deforestation, natural disaster, and human intervention as major causes for climate change. Overall, a high percentage of households (86.1 per cent) reported experiencing drought in the past 25 years. Similarly, most of the households have observed changes in temperature as well as a decrease in monsoon duration and winter rain. A high percentage of households (84.58 per cent) reported the monsoon is delayed by 1 to 4 weeks while 57.14 per cent of households observed delays in winter rain by 1 to four weeks. Almost all households (99.33 per cent) reported that they have observed an increase in drought as a climate induced disaster in the past 25 years. Similarly, 97.69 per cent households observed increases in disease/ insects and sporadic rain. Additionally, 78.12 per cent of households have observed an increase on incidence of landslides in 25 years. All households in the central mountain region reported an increase in cold waves, while all households in the central hills observed a decrease in cold waves. Likewise, 56.25 per cent of eastern Terai households have observed an increase in heat waves whereas none in the eastern hills reported so.

The survey results show that households have been adopting various climate change adaptation measures during the past 25 years. Among the 25 farm and 7 off-farm based adaptation measures identified, most of the households reported the use of chemical fertilisers, additional investment to protect livestock from disease, mixed cropping, and trying to cultivate improved crops varieties. More rural households have been using adaptation practices in comparison to urban households. Among urban households, 13.9 per cent received skill development training; only 1 per cent insured agricultural crops and 5 per cent relied only on livestock as adaptation measure. The highest proportion of illiterate (65.46 per cent) and first quintile (69.38 per cent) respondents reported using chemical fertiliser in their farmland as an adaptation measure. The majority of households have also taken different off-farm based adaptation techniques. A total of 70.64 per cent households reported that they have changed food consumption habits to adapt to climate change impacts while 49.86 per cent have been involved in road infrastructure improvement whereas 56.72 per cent engaged in community based natural resource management.

1.2 Objectives of the Study

There is a gap in climate change related knowledge in Nepal. Research does not provide a comprehensive understanding of climate change impacts on biodiversity; identification and development of adaptation strategies; understanding and predicting climate change impacts; and development of adaptation strategies at regional and national scales. There is also a weak

understanding of how biodiversity functions would respond to climate change. Inadequate institutional capacity is hindering successful climate adaptation in biodiversity management and sustaining livelihoods.

Marginalized groups and communities have been facing insecurity over land access and tenure, lower political representation and decision-making power in rural governance, lack of access to financial capital, level of empowerment, barriers to participation in training and extension services and many other challenges exist in the path of promoting inclusiveness on equitable adaptation and development phases. Therefore, it has been a challenge to have inclusiveness that addresses social perspectives and barriers in building resilience and mitigation within the context of climate change and be able to understand how social norms and relations, along with other critical factors such as caste, class, age, disability and sexual orientation, affect differences in access, power and decision making in regards to adaptive capacity. Thus, the objective of this study are:

1. To support the development of the Environmental and Social Impact Assessment (ESIA) and specifically the Environmental and Social Management Plan (ESMP), including how the project will avoid or mitigate negative impacts in accordance with the GCF's (ESS) standard.
2. To describe how social inclusion is considered in accordance with the GCF's relevant Policies and IUCN's ESMS policies
3. To provide inputs to the project design to inform and understand the specific social inclusiveness based on caste, class, gender, ethnicity and power relations among the vulnerable communities to address their interests, needs, and priorities.
4. To provide recommendations on how social inclusive participate equally and actively in decision making, having access to resources, ability to manage and gain maximum benefit from programme interventions and how the programme can contribute to the Government's social inclusion agenda

1.3 Method

Climate disaster risk is the probability or likelihood of a hazard or long-term change causing injury, damage or loss to human lives, livelihoods and physical assets, especially poor and vulnerable groups. Risk relates to the magnitude of the hazard, and the capacity and vulnerability of the community involved to reduce climate change impacts by adapting and mitigating by both increasing capacity and reducing vulnerability. In every country, certain groups, whether illegal immigrants, indigenous people, marginalized groups or other minorities, confront barriers that prevent them from fully participating in reducing risks or building capacity to respond to climate change impacts.

The response to climate change of inclusiveness can happen when major three domains of interaction - market, services and their spaces are assessed as per the ESIA and SIA guidelines and through consultation among excluded groups. Therefore, for the purpose of this study the following methodology has been used for data collection.

The most agreed definition of Environmental and Social Impact Assessment (ESIA) is "a comprehensive document of a Project's potential environmental and social risks and impacts. An ESIA is usually prepared for greenfield developments or large expansions with specifically identified physical elements, aspects, and facilities that are likely to generate significant environmental or social impacts" (IFC, 2012). The key process elements of an ESIA generally consist of (i) initial screening of the project and scoping of the assessment process; (ii) examination of alternatives; (iii) stakeholder identification (focusing on those directly affected) and gathering of environmental and social baseline data; (iv) impact identification, prediction, and analysis; (v) generation of mitigation or management measures and actions; (vi) significance of impacts and evaluation of residual impacts; and (vii) documentation of the assessment process (i.e., ESIA report) (IFC, 2012)

The concepts any response or adaptive activities so far needs to addressed by increasing engagement by diverse stakeholders and for who could be considered here in Gandaki River Basin also matters.

For the purpose of this study, many of the definitions we have used come from the Inter governmental Panel on Climate Change (see below) as they represent the widest consensus on climate change terms available, but it should be noted that there are varying interpretations across the literature, causing some confusion in the climate change debate.

1.3.1 Data Collection

For the purpose of the study, qualitative and quantitative data through primary and secondary data were collected. Primary data was collected from the study sites, while secondary data was collected from published and unpublished documents regarding socio-inclusion in climate change, its impacts, adaptive measures and vulnerability. For data collection from 19 districts of Gandaki Basin, sites were identified as 9 clusters and only 14 districts were visited.

Primary data collection

Primary data was collected from the selected Municipalities and Rural Municipalities of all the districts using a questionnaire survey and Rapid Rural Appraisal (RRA) tools and techniques. For the collection of data following tools were used:

Scoping is the process of determining which issues are likely to be important, including the identification of key environmental and social issues and defining the ESIA terms of reference (ToR). Scoping has identified some or all of the matters to be addressed in the ESIA, including, but not limited to:

- Identifying the impacts to be assessed, especially focusing on those that are critical to decision-making by the Project proponents, stakeholders and regulatory authorities
- Assessing the types of alternatives to be examined including routing, design solutions and mitigation Baseline aspects that require particular attention.

As per the scoping tool, local level to district level stakeholder meetings and consultations were carried out within the 14 districts of Gandaki river basin.

Table 1: Selection of study sites based on climate change vulnerability in Gandaki River Basin

Cluster	District	District Level Consultation	Local	Local level Consultation place	Total Number	Community level	No.
1	Mustang	Jomsom	Gharapjong	Jomsom	1	Jomsom area	2
			Thasang	Lete/Kobang		kobang /lete	2
	Myadgi	Beni	Annapurna	Lumle	1	Ghar khola/ Dana	3
			Raghuganga	Raghuganga	1	Beghkhola	1
	Parbat		Jaljala	Jaljala	1	Galeshwor	2
2	Kaski		Madi	Thumakodanda	1	Near yagjakot/ sikles	3
			Pokhara Lekhnath	Pokhara	1	Begnas area	1
			Rupa	Rupakot	1	Rupa area	1
	Lamjung		Kwholasothar	Maling	1	Ghale gaun/ bhujung	3
			Madhya Nepal	Karaputar	1	Swati pasal/Jitakot	2
3	Lamjung		Besishahar	Besishahar	1		1
			Dordi	Nauthar	1		4
			Dudhpokhari	Gaunda VDC	1		2
			Marsyangdi	Bhulbhule	1		2
			Sundarbazar	Sundarbazar	1		1

4	Dhading	Dhadingbesi	Gangajamuna	Phulkharka	1		2
			Tripurasundari	Salyantar	1		2
	Gorkha	Gorkha	Aarughat	Aaruchanaute VDC office	1		2
			Dharche	Gumda	1		2
			Gorkha	Gorkha	1		2
5	Nuwakot	Trishuli	Kispang	Kaule	1		2
			Meghang	Deurali	1		2
	Rusuwa	Dhunchu	Gosaikunda	Syaphru/ Syaphrubesi	1		2
			Kalika	Dhaibung	1		2
			Parbati Kunda	Goljung	1		2
7	Palpa	Tansen	Mathagadhi	Jhadewa	1		2
			Nisdi	Mityal	1		2
			Purbakhola	Ringneraha	1		2
	Nawalparasi		Binayee Tribeni	Dumkibas	1		2
			Hupsekot	Deurali	1		2
8	Gulmi	Tamghas	Resunga	Tamghas	1		
			Gulmidarbar	Gaundakot	1		
			Satyawati	Johang	1		
	Baglung		Galkot	Harichaur	1		
			Bareng	Hukdisheer	1		
6	Chitwan		Ichchhyakamana	Chandibhanjyang	1		
			Madi	Madi	1		
			Rapti	Rapti	1		
			Kalika	Kalika	1		
	Nawalparasi		Kawaswoti	Kawaswoti	1		
Total	14	8			40		80

Discussion with key stakeholders in Rural Municipality and Municipalities

Key local stakeholders such as District Agriculture Development Office (DADO), District Forest Office (DFO), District Soil Conservation Office (DSCO), District Livestock Service Office (DLSO), Women Development Office (WDO), District Education Office (DEO), climate change specialist from different NGOs and INGOs, CBOs, and local teachers were consulted about climate change, rainfall pattern, trend of livestock holding, and problem faced on agriculture and forest sector and climate change mitigation measures used by local peoples and possible measures to be applicable in future. Whereas, for the Rural municipalities particularly in the Village Development Committee (VDC) level, ward chair, rural municipality representatives, VDC level offices and experts were consulted based on the checklist of questionnaires.

Focus group discussion

For the collection of information and ideas regarding climate change, and its effects, and adaptation and mitigation measures, focus group discussion was organized with people such as vulnerable groups, women, the poor, Dalit and households affected by climate change. First the vulnerable sites were identified by talking to the chairs of each rural municipality or municipality and based on this, 2 sites were visited in each targeted rural municipality or municipality. At least 10 people were included in each discussion.

Direct Observation

Direct observation of the sites (drying out water sources, landslides, flooded areas etc.) affected by climate change was made during the field visit with community members. The field observation was done to observe and gather information on local social and physical features to gain insight into the consequences of disasters and the measures adopted by people to cope with landslides and drought.

Secondary data collection

Secondary data on climate change, its effects on community and household levels, and adaptation and mitigation measures applied by community members and farmers for this study was collected to supplement primary data. Relevant literature from different publications, reports of different Municipality, Rural Municipality, Government offices, NGOs and INGOs, libraries (ICIMOD library) and journals, articles, UNFCCC reports, SDG report, GCF reports, climate change and indigenous people report by Nepal Federation of Indigenous Nationalities (NEFIN), Central Bureau of Statistics (CBS), National Climate Change Impact Survey (NCCIS) report 2016, Human Development Index (HDI), Global Environmental Facility (GEF), World Economic Forum (WEF), United Nation Development Programme (UNDP) human development report 2014, National Adaptation Programme of Action (NAPA), Local Adaptation Plan of Action (LAPA), Community Adaptation Plan of Action (CAPA), District Development Committee (DDC) and Department of Forest, Kathmandu were consulted from different sources. Statistical data were accumulated from Central Bureau of Statistics, Department of Survey and Department of Forest Research and Survey. Most of the baseline survey is based on the review of project and government documents.

As outlined in the SIA tool- The baseline for the current study was based on the (CBS, 2011) and (GoN, 2014) and the (CBS, 2016) report. IUCN had also conducted the pre-feasibility of this river basin and based on this further study was conducted which helped first to screen the project interventions to minimize the impacts of climate change in the area among the vulnerable communities. For this, (MOE, 2010) vulnerability mapping was used and potential impacts were addressed in forestry ecosystems and services, water resource management, climate change, DRR, agriculture, livestock and other relevant issues.

2. Review of Relevant Policies, Strategies and Projects

2.1 Review of National Social Inclusion Policies and Strategies

The United Nations Framework Convention on Climate Change (UNFCCC), 1992 states that “Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities”. In particular UNFCCC Articles 1 and 4 are cornerstones on which to build social dimensions within the climate change framework. Article 1 establishes definitions for the whole of the Convention. It defines “adverse effects of climate change” as including those that have deleterious effects on “the operations of socioeconomic systems or on human health or welfare.” Thus, it follows that any climate change policy addressing the “adverse impacts of climate change” should integrate consideration of potential impacts on people, including their health and welfare (1). Article 4 comprises the commitments of Parties to the Convention. It recognizes the cross-cutting nature and symbiotic relationship between climate change policy and other policies, including social dimensions.

One of the biggest challenges to make socio-economic sectors climate resilient is the lack of knowledge, scientific data and information related to climate change and its impact on different geographical scales and socio-economic development sectors and the lack of climate modelling to assess likely impacts. It is a challenge to assess the effects and likely impacts of climate change, to identify the vulnerable sectors and enhance their adaptive capacity, and to develop a mechanism for reducing GHG emissions.

It is necessary to create an enabling environment for technical and financial opportunities at the national and international level in the process of addressing climate change impacts. It is equally necessary to make the country's socio-economic development climate-friendly, and to integrate climate change aspects into policies, laws, plans and development programmes, and implement them. There is a need to effectively enhance the capacity of public institutions, planners and technicians, private sector, NGOs and civil society involved in development work.

UNFCCC recognizes that inclusion of the social dimensions of climate change can be justified on at least four equally significant grounds that is social dimensions are already recognized in existing climate agreements, albeit in the most elemental sense, often under-recognized and under-implemented in practice, secondly the inclusion of social dimensions in climate policy is a prerequisite to ensuring that human rights are respected; climate change and related response measures impact the fundamental security, lives, health and livelihoods of people, especially the most vulnerable. Thirdly, the effectiveness of climate change policies will very likely be enhanced if social dimensions are fully integrated. Finally, there are essential synergies between the climate change agenda and complementary sustainable development and human rights agendas, both in terms of their objectives and their means of achievement. By integrating social dimensions in climate policy, these synergies have significant potential to amplify concrete results.

The Overseas Development Institute (ODI, 2016) reviewed grey literature on gender equality and social inclusion on resilience to climate change and suggested

- the need to include gender-sensitive approaches within the project design stage of resilience building activities in order to be truly effective and meaningful
- the need to take a context specific, people-centred and participatory approach to gender equality and social inclusion within resilience-building projects
- the need to challenge the root causes of vulnerability, power relations and structural challenges, within different social-economic-political contexts, so as to remove the barriers to gender-sensitive approaches
- the need to reflect on the different needs, skills and capacities of women, in order to consider the role women can play in building resilience to climate change
- gender equality and social inclusion are necessary as cross-cutting themes for organisational approaches to resilience, as well as for food security and resilient livelihood initiatives.
- social inclusion is a must to cater for the resilient capacity of vulnerable groups.

(UNDESA, 2007) describes the definition of an inclusive society taken up by the World Summit for Social Development (Copenhagen, 1995) as a “society for all in which every individual, each with rights and responsibilities, has an active role to play”. Such an inclusive society must be based on respect for all human rights and fundamental freedoms, cultural and religious diversity, social justice and the special needs of vulnerable and disadvantaged groups, democratic participation and the rule of law. It is promoted by social policies that seek to reduce inequality and create flexible and tolerant societies that embrace all people. The issue of social inclusion/exclusion is not only imperative in the attainment of MDG Goal 1 “Eradicating extreme poverty”, but also other Goals, such as achieving universal education, promoting gender equality, reducing child mortality, and improving maternal health. Unless we pay closer attention to the issue of social inclusion/exclusion, some segments of the population will continue to be excluded from the progress made so far.

Therefore, the question now arising is how to make the concept of social inclusion operational, even in the face of resistance to change. The challenge for policy makers and social scientists is, therefore, to find ways to dissociate the concept of social inclusion from the utopian realm of a “perfectly inclusive” world vision to redefining it as a practical tool used to promote an inspirational yet realistic set of policy measures geared towards a “society for all.” This requires a paradigm shift so as to recognize the dignity, value and importance of each person, not only as an ethical norm and moral imperative, but also as a legal principle, a societal goal, and ultimately, practice (UNDESA, 2007). “No human being should be condemned to endure a brief or miserable life as a result of his or her class, country, religious affiliation, ethnic background or gender”.

2.1.1 Strengths and Weakness of social inclusion Policies

A study carried out by a UN task team that looked at the social dimensions of climate change states that “The current climate change discourse – including the way mitigation and adaptation measures are designed and appraised – tends to emphasize environmental, economic or technological inputs and costs. The social dimensions of climate change are not well understood or addressed. As a result, current policy responses may not fully address the negative impacts, nor do they take full advantage of potential opportunities to reach a number of sustainable development goals”.

The findings of the UN study emphasize that “A social dimension's lens allows for a broader understanding of climate vulnerability and directs attention to the socioeconomic conditions that make people vulnerable in the first place: the human and social resources, institutions, policies and power relations that are traditionally addressed by development and poverty reduction interventions. For adaptation to be pro-poor and result in enhanced resilience among the most vulnerable people and communities, addressing the socio economic determinants of vulnerability must be part of adaptation strategies. It also says that, at the same time, a social dimension's lens allows accounting for climate change impacts on human health and well-being, social institutions, ranging from building resilience of health systems to social protection systems, and demographic factors that are critical elements of people's resilience”.

The report by the International Panel on Climate Change (IPCC, 2014) highlights that vulnerability to climate change is due to gender and other factors, including class, ethnicity and age: that is differences in vulnerability and exposure arise from non-climatic factors and from multidimensional inequalities often produced by uneven development processes. These differences shape differential risks from climate change. People who are socially, economically, culturally, politically, institutionally, or otherwise marginalised are especially vulnerable to climate change and also to some adaptation and mitigation responses. This heightened vulnerability is rarely due to a single cause. Rather, it is the product of intersecting social processes that result in inequalities in socio-economic status and income, as well as in exposure. Such social processes include, for example, discrimination on the basis of gender, class, ethnicity, age, and (dis)ability.

Socio-culturally, Nepal is a multi-lingual, multi-religious, multi-ethnic and multi-cultural country inhabited by 125 castes and ethnic groups (CBS, 2011). As per the national census of 2001, out of 105 castes and ethnic groups, Bahuns and Chhetris constitute 30.9 percent, indigenous peoples constitute 37.2 percent, Madhesis constitute 14.8 percent, Dalits constitute 11.8 per cent and religious minorities and other unidentified group constitute 5.3 per cent of the total population of 2.27 million. In the Gandaki Basin (19 districts), the 2001 census shows that, *Bahuns* and *Chhetris* constitute 33.58 percent, Magar 15.38 percent, Tamang 10.17 per cent and rest of the communities that is around 40.87 per cent consists of *Madhesis*, Dalits and religious minorities and other unidentified groups of a total population of 5.13 million.

For this proposal the client has conducted a review on climate change and social inclusion dimensions to assess and manage the positive and negative social consequences of climate change, and to ensure transparent and participatory decision-making processes. People centered and multisectoral climate policies will yield multiple co-benefits, while the absence of social dimension-oriented policies often risks exacerbating inequities, potentially waste resources and undermine their own objectives in stemming climate impacts. In identifying the strengths and weaknesses of existing policies, legislation, regulations and strategies, the team has reviewed the following based on the institutional, policies and legislations, guiding documents, resources available based on human resources, natural resources and social cultural aspects.

Guiding International Conventions:

- UNFCCC 1992
- ILO Convention 169 (social inclusion)
- Millennium Development Goals (MDGs)

- Sustainable Development Goals (SDGs)
- Convention on Biological Diversity: Guidelines for mainstreaming gender into national biodiversity strategies and action plans (CBD)
- ILO 169- Indigenous and Tribal Peoples Convention, 1989

National level policies

- Civil Rights Act (Muluki Ain) 1955 - prohibit discrimination on the grounds of “religion, race, sex, caste, tribe, ideological conviction or any of these
- Constitution 1990- guarantees all citizens basic human rights and fundamental freedom, but statutory laws that still discriminate against women can be found in the area of property rights and family law
- Constitution of Nepal 2072
- The tenth plan (2002-2007)- Inclusion of gender in major program sectors
- NPC Social Inclusion Policy
- LSGA Act 1999,
- Local Self-Governance Regulations (LSGR) and Gender Equality and Social Inclusion Operational Strategy 2009
- Sectoral guidelines among all Ministry Levels (Ministry of Forests and Soil Conservation, Ministry of Agriculture, Ministry of Federal Affairs and Local Development, Ministry of Environment and Population,
- Climate change policy 2011
- Governance (Management and Operation) Act, 2008
- The Civil Service Act 2049, Article 7, Sub-Article 7
- REDD+ policy and SES policies- draft
- NAPA 2010
- LAPA guideline 2011

Table 2: Assessing the strength, weaknesses, opportunities and threats

Institutions involved in CC activities	List of Institutions	Strength	Weaknesses
Forest Conservation and ecosystem services Agriculture management Gender/ Women empowerment DRR (climate induced) Water resource management	<ul style="list-style-type: none"> • Nepal Foresters Association • National Parks • Buffer zones • CFUGs • WWF • IUCN • ICIMOD • Agriculture sectors • Livestock sectors • District government line agencies • Local NGOS (Karuna Foundation) • Suhara • Womens empowerment forum 	<ul style="list-style-type: none"> • In the central level within the Ministries, climate change issues are being looked after by separate divisions • INGOs and NGOs are involved in promoting herbal farming, forest conservation, illegal activities control, plantation, shed improvement, introducing alternative energies • Community level structures formed and functioning • Focal persons in districts to address climate change and DRR issues • GESI focal persons in the 	<ul style="list-style-type: none"> • Two separate ministries, that is Ministry of Forests and Soil Conservation and Ministry of Environment, have different cells to look after climate change issues and responses • Weak governance, poor coordination and accountability of institutions to implement programs in the field level • Rural municipality and municipalities not having developed institutional mechanism • No clear cut working modality in local and provincial level by these institutions • No direct person allocated to address climate change and DRR issues in local level for social

	<ul style="list-style-type: none"> • Shakti Samuha • Red Cross • Unwritten customary laws and practices 	<p>line and district offices</p> <ul style="list-style-type: none"> • Customary laws and practices existed in many communities • Communal status and groups functioning to control and manage resources 	<p>inclusion</p> <ul style="list-style-type: none"> • Poor knowledge documentation of traditional practices of resource management and conservation • Customary laws and practices not addressed by policies • Communal functioning bodies and structures, norms and values reducing
Policy & Strategies	<ul style="list-style-type: none"> • UNFCCC 1992 • Climate change policy 2011 • SDG • PRSP • National plans • Forestry sector strategy 2014 • NBSAP 2015 and NCSFNC 2016 • APP • NAPA 2010 • LAPA document • Water resource use plans • Energy sector development plans • EIA plans • NCNSFS • Ecosystem Based Adaptation policies • ILO 	<ul style="list-style-type: none"> • Most of the required laws (act, regulations, directives and guidelines) are already in place and they include: • the importance of technology transfer and research work • social inclusion perspectives as goal and targets set • Community forestry already engaging climate change adaptation and mitigation plans • Local and community level action plans developed with the support of government and non government agencies 	<ul style="list-style-type: none"> • Lack of harmonization and coordination in mainstreaming social inclusion in policies • Weak legislation framework for implementation of policies • Local and provincial level planning and implementation modality to address climate change and DRR is not prepared • Local to provincial level the policy and strategy awareness is lacking • Lack of monitoring and evaluation of achieved targets based on social inclusion •
Natural resources	<ul style="list-style-type: none"> • Forests, water, land, minerals, solar energy, managed by government, INGOs, NGOs and community-based organizations 	<ul style="list-style-type: none"> • Natural resources are well managed by the involvement of men and women and even in the land tax exemption women have special provisions • Access and use of the resources are socially inclusive as per the plans and policies and specifies there will be no discrimination in benefiting from the use of resources • Ecosystem based 	<ul style="list-style-type: none"> • High dependence on natural resources especially by the marginalized communities • Land degradation (erosion, soil fertility, desertification) impacting vulnerable communities not having roles in decision making and planning of the management • Programs and policies weakly implemented • Socially excluded groups not benefitting from alternate livelihood approaches and technology transfer in conservation or agriculture

		adaptation practices ensuring securing sustainable livelihoods and address climate change impacts	
Human resources	CTEVT Academic institutions Non academic training centers	<ul style="list-style-type: none"> • A pool of qualified human resources available in public and private & I/NGO sectors in all the sector for implementation produced within and outside the country • Central to local level initiatives are implemented to address empowerment, equity, equality and capacity are built for women, dalit, Janajati and marginalized as well as professional groups • Academic and non academic institutions creating platforms skill development and capacity building • • • 	<ul style="list-style-type: none"> • A large number of women, dalit, Janajati and poor groups are either illiterate or have a low level of education • A limited number of trained human resources available in climate change adaptation and mitigation practices • Institutions not having skilled manpower and labs to do soil and water quality tests • WDO not having knowledge in natural resource management, climate change and adaptation practices • Capacities of local to provincial level not built to address climate change issues and develop inclusive plans and policies • Capacities of monitoring and evaluation weak in all the sectors and keeping disaggregated data weak • Unclear TOR for gender and social inclusion focal persons and roles and responsibilities not clear
Socio Cultural Aspects	<ul style="list-style-type: none"> • The local norms and values • Social barriers • Customary rights and practices • Traditional knowledge management • Social justice and social cohesion • Land right issues • 	<ul style="list-style-type: none"> • Institutions started to address social inclusion in combining with gender issues • • Caste, ethnic and religious discrimination being addressed and plans and policies prepared • • Social Impact assessment given priority in project developments 	<ul style="list-style-type: none"> • The patriarchal society and cultural norms restricts women, dalit, janajatis, poor and deprived community to have access to land and other resources. • Climate vulnerable groups identification is not based on gender, class, caste, ethnicity • Activities not planned to address social barriers GESI not fully addressed by all the institutions • Social inclusiveness not addressing the ability, access and dignity issues and social dimensions for climate impact mitigation and adaptation

Opportunities		Threats	
Political transformation	<ul style="list-style-type: none"> • Change in political transformation is advantage for policy reforms and ensure the voices, access and benefit sharing • Influence the decisive roles to develop programs to empower and enable women, dalit, Janajati and poor 	Institutions	<ul style="list-style-type: none"> • Limited commitment and leadership of GoN in mainstreaming gender and social inclusion • Weak institutional structures • Inadequate monitoring and evaluation having disaggregated data
Meaningful participation	<ul style="list-style-type: none"> • Increase in meaningful participation ensures the efficiency of the programs implemented • Support in eliminating discrimination • Respect the values, norms and cultural practices to ensure social inclusive decision making capacity, leadership role and respect the dignity and create access to resources and benefit sharing 	Policy & Strategies	<ul style="list-style-type: none"> • Increasing tendency of violations of policy, acts and regulations with fluid political situations • Lack of good governance and coordination among all the stakeholders • Customary laws and practices not being addressed and knowledge vanishing • Local governing bodies and traditional practices of managing resources through Mukhia, Badghar, etc not used integrated in policy and plans
Human Resource	<ul style="list-style-type: none"> • Capacity building, empowerment, awareness raised among the policy implementers to service receivers • Encourage meaningful participation in planning, decision making, leadership, access to services and facilities, benefit sharing • Community capacity in social impact assessments and generate human resources to monitor climate change impacts and build resilience capacity • Generate awareness among poor and marginalized all class, caste, gender and disadvantage groups in 	Human resources	<ul style="list-style-type: none"> • Chronic shortage of labor resulting in from outmigration and increase burden of women • Scarcity of trained human resources in the field • Younger generation farming and adapting to climate change practices eroding •

	adaptation and mitigation activities		
Emerging Issues	<ul style="list-style-type: none"> • Not being able to integrate or mainstream gender and social inclusion • Inadequate harmonization and implementation of the policies • Not having access to budget to conduct or participate fully in development programs • Address the institutional reformation based on customary laws, norms and values • Restore traditional knowledge management issues of resources and build capacity of vulnerable communities • 		<ul style="list-style-type: none"> •

Strengths

Institutional: Institutional reformation mainstreaming and integrating gender was first initiated in the earlier 5 year plan (6th year plan), and the constitution of Nepal strongly mentions on having no discrimination against all caste, ethnicity, class or religion and from then onwards PRSP initiated social inclusion as a means to address the discrimination.

Though gender equity and social inclusion has been coined together by donors, even the National planning commission, various Ministries like Forest, Agriculture, Environment, Physical infrastructure, Energy and Water resource mainstreamed this as an agenda of development approach in a cross cutting way. When analyzing the strength of social inclusion, it is clear that at least all the ministries and their line agencies have assigned a gender focal person either a man or a woman as a coordinator, but this has not been not socially inclusive. The institutional level of social inclusion, based on caste, class, gender, and religion, is still not carefully addressed even when implementing effective programs like poverty alleviation.

Based on an overall review of the documents in the central and district level, gender focal persons have been assigned and women development officers are deployed, but this approach is still not inclusive. These focal persons and implementers are responsible to review the policies, carry out studies or research and implement programs in the field level. In order to strengthen the services to support climate change activities not all the government and local level institutions are strengthened. Climate change focal persons besides GESI focal person is needed.

Policies and strategies: Implementation of gender mainstreaming, livelihoods and social inclusion aspects has been strongly emphasized by international policy and national Acts, policies and regulations. As per the UNFCCC, CBD, NAPA, climate change policy 2011, and the NPC social inclusion policy Nepal has committed to have a gender and social inclusion strategy in the National Biodiversity Strategic Action Plan (NBSAP) and various other plans and policies. Though the policies, plans and

regulations are developed by each Ministry, implementation of the policies in an effective way is important and indicators to be developed to verify how these have been implemented. So far climate change issues to build resilient capacity has yet to stress social inclusion and this needs reformation to address the vulnerable communities in local and provincial levels. The LAPAs that have been prepared for more than 60 districts contain inclusive plans to address climate change and community action plans developed by WWF, CARE and other institutions that are supporting adaptation and mitigation initiatives.

Natural Resources: It is evident that all class, caste, gender, and religion have been the care takers and participants for developing, managing and using the resources based on forest, energy, agriculture, water and other natural resources. But it seems that not all groups of society have equal access and distribution patterns are different. Having this as strength, for the natural resource management and conservation gender equality and social inclusion is necessary to ensure the equitable access to resources and benefit sharing. In the case of land use rights and increase the access government has tax exemption policy for example 25 per cent per cent in municipality, 30 per cent per cent in VDCs and 40 per cent per cent in remote areas. To build climate resilient communities and address the vulnerable groups' management of resources, access and use should be socially inclusive. For this one of the strength is to conduct social impact assessment to identify the vulnerable groups in the Gandaki basin to ensure their participation for effective ecosystem based management.

Human Resources: The country has skilled and technical human resources produced by various institutions to mainstream gender, livelihoods and social inclusion. For example 10 per cent per cent of the women quotas are separated for their enrollment in the field of engineering, forestry, agriculture and social sectors. CTEVT education has been an encouragement for deprived students to get this technical education to enhance their technical capacity and skills.

Weakness

Institutions: The major weakness within forest, agriculture, water resources, environment, energy, irrigation sectors and with institutions focused on women, children and social welfare, is not having similar implementation modalities from central level to local levels. For example, gender focal persons are appointed to the central and district levels, but the line agencies in the district do not have gender focal persons. The government has a central set up for providing services, but this is not sufficient or efficient at the local level. LAPA is generated only in districts having PPCR implementation modality or forestry sector implementing REDD+ initiatives. Climate focal persons and experts not capacitated to address all the adaptation and mitigation practices. Local level traditional institutions and structures are not functioning to address social inclusion aspects to climate change.

Policies and strategies: Although the Aichi target 14 aims to ensure that by 2020 biodiversity and ecosystem services will provide water, clean air, good health for betterment of livelihoods, targeting women, poor and deprived groups, not all the sectoral ministries have addressed these issues. Gender mainstreaming within the Ministries are there, but the understanding of these issues at the local level or by people is limited.

The policies, plans and strategies developed for mainstreaming gender and social inclusion are not harmonized or coordinated for effective implementation. For example, the Interim Constitution has stressed and given a mandate to ensure 33 per cent of women's involvement in all levels of decision making processes and development activities, but this target is still not implemented fully. In case of community forestry 50 per cent of women and deprived communities should be involved in all the programs, but this seems to be more on paper than in the field. Women, especially in the villages, are not aware of the land tax exemption policy that is less or 100 Rs. registration fee if the women's name is

included in the land registration fee or if they have the land in their name that tax deductions are being made.

Natural Resources: All the relevant national policies, plans and strategies have tried to effectively implement gender mainstreaming, social inclusion and address livelihood issues, but in the field they are still weakly implemented in the management and conservation of natural resources.

Human Resources: Women development officers who are implementing most of the gender issues lack technical skills to implement all the relevant development programs. At the local level skills and technologies are still weak for managing and conserving natural resources. When district forest offices or other relevant agencies have to address gender issues, they set aside this job saying it's not our field and let the WDO take care of this, because they do not have sufficient knowledge. The training programs in the field level are not targeting the women and deprived groups and sometimes they are not communicated for skill development opportunities.

Social and cultural aspects: The patriarchal society and cultural norms restricts women to have access to land and other resources. Due to this obstacle the voices of women, deprived groups or indigenous community are not addressed and the ministries not having advocacy network limits the access to services and equitable benefit sharing from the resources.

Opportunities

Political Transformation: Nepal is going through political transformation and this could be an advantage to mainstream and integrate gender inclusion and poverty reduction issues for better livelihoods through managing and conserving natural resource programs. It is time now to have clear policies outlined in the new constitution to ensure the voices, and access and benefit sharing of women, deprived communities and indigenous people for their livelihoods. It is also an important opportunity for the political leaders to show their commitment to uplift women, deprived groups and indigenous people to empower them in social, economic and cultural aspects. They can play a decisive role to develop programs to empower and enable women and deprived groups securing their livelihoods.

Meaningful participation: An increase in meaningful participation in the sector of conservation and development will definitely ensure the efficiency of the programs being implemented. Gender mainstreaming and inclusive legal policies of participation will support women and deprived groups to remove the negative socio-cultural norms and enable them to fight for their rights in resource management and decision making of all sectors. One major input will be to eliminate discrimination from resource management and development programs.

Human resource: Capacity building, empowerment, awareness raising, sustainable development and accountability programs will not only raise the human resource capacity of the central or district level program implementers, policy makers or service receivers. For gender mainstreaming and inclusion programs these programs will support the deprived communities to have their share in participation and encourage them fully participate in all the development and conservation activities.

Threats

Institutional: In the sector of natural resource management, development programs that are unable to mainstream gender and have weak institutional structures are the main challenges. If there has been gender mainstreaming within the institutions, inadequate monitoring and evaluation and keeping disaggregated data is taken as a challenge.

Policies and strategies: Having gender mainstreaming, inclusive or poverty reduction policies and strategies may not resolve the solutions and accomplish the targets, for implementation has to be

efficient and effective as well. Inadequacy in implementation also affects the governance system of the country. As per the conventions and their targets it is well written that no discrimination will be done based on caste, gender, religion, class, culture or geographical regions to get the services. Ensuring access to services and equitable benefit sharing without any discrimination is a major challenge while initiating natural resource management and development projects.

2.1.2 Synergies, conflicts and trade-offs between different initiatives and policies

The UN-REDD Program 'The Business Case for Mainstreaming Gender in REDD+' (2011), among other studies, confirms that women and men have differentiated knowledge, uses and access to forests, and that women are often the primary users of forests. Women's and men's specific roles, rights and responsibilities, as well as their particular use patterns and knowledge of forests, shape their experiences differently. Their rights to forests and land resources therefore need to be recognized as well as the roles they play as leaders, participants and beneficiaries.

The CBD Aichi Target of Strategic Goal D points to enhancing the benefits to all from biodiversity and ecosystem services. According to this, Target 14 specifies: By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.

Reports by (IPCC, 2007), (IPCC, 2010), (IPCC, 2010a), (IPCC, 2014), (UNFCCC, 2013) highlights the issues on how "indigenous knowledge and local practices (ILKP) are increasingly recognized and used as a valuable resource for planning climate change adaptation. Vulnerable communities use indigenous practices to plan adaptation and disaster risk reduction activities at the local level". Based on this study, Ministry of Science, Technology and Environment, 2015 prepared a document on Indigenous knowledge and *practices for Climate Resilience in Nepal*, Mainstreaming Climate Change Risk Management in Development which highlights the overall cross cutting themes based on gender and social inclusion.

Millennium Development Goal (MDGs).

Goal 4 of the Sustainable Development objective aims to achieve Gender Equality, Social Inclusion, and Human Rights: disaggregation of data on food security, education, safety, health, access to alternate energy, land access institutional capacity/ not environment and conservation issues. MDG goal 3 aims to promote gender equality and empowering women by 2015. However, the present level of gender differences in education, economic, and political achievements indicate that this goal was not attained.

Sustainable Development Goals

The United Nations (UN) Secretary- General's High-Level Panel of Eminent Persons on the Post-2015 Development Agenda (UN, 2013) called for designing development goals that focus on reaching excluded groups. "Leave no one behind," they urged the Secretary-General, adding, "We should ensure that no person—regardless of ethnicity, gender, geography, disability, race, or status—is denied universal human rights and basic economic opportunities."

- On September 25th 2015, countries adopted a set of goals to end poverty, protect the planet and ensure prosperity for all as part of a new sustainable development agenda with specific targets to be achieved over the next 15 years and for this outlined 17 goals. Among these goals Goal 5-Gender Equity, 10-Reduce inequality and 13-climate change address gender, inclusion and climate change issues and set up as targets. Goal 10 especially highlights to reduce inequality within and among countries. Accordingly, the National Planning Commission has developed its goals, targets and indicators to comply. Some key targets outlined in Goal 10 include that by 2030 to achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average and by 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity,

origin, religion or economic or other status given indicators which here needs to be ensured by Nepal and will be provisioning for this Gandaki River Basin management.

- Ensure equal opportunity and reduce inequalities of outcomes, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard
- Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality
- Improve the regulation and monitoring of global financial markets and institutions and strengthen the implementation of such regulations
- Ensure enhanced representation and voice for developing countries in decision-making in global international economic and financial institutions in order to deliver more effective, credible, accountable and legitimate institutions
- Facilitate orderly, safe, regular and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies
- Implement the principle of special and differential treatment for developing countries, in particular least developed countries, in accordance with World Trade Organization agreements
- Encourage official development assistance and financial flows, including foreign direct investment, to States where the need is greatest, in particular least developed countries, African countries, small island developing States and landlocked developing countries, in accordance with their national plans and programmes

Constitution of Nepal 2015

The preamble of Nepal's Constitution (GoN, 2015) highlights the following sovereign power: embracing the sovereign right of the people and the right to autonomy and self-rule, by maintaining Nepal's independence, sovereignty, geographical integrity, national unity, freedom and dignity; ending all forms of discriminations and oppression created by the feudal, autocratic; embracing multi-caste, multi-lingual, multi-cultural and diverse geographical specificities, by ending discriminations relating to class, caste, region, language, religion and gender discrimination including all forms of racial untouchability, in order to protect and promote unity in diversity, social and cultural solidarity, tolerance and harmonious attitudes, we also express our determination to create an egalitarian society on the basis of the principles of proportional inclusion and centralized and unitary system and participation, to ensure equitable economy, prosperity and social justice.

While considering the gender and natural resource based issues, we should not forget to look at the goals of Local Governance Community Development Projects (LGCDPs) initiation. "Gender Equality and Social Inclusion Strategy (Draft)" by LGCDP defines exclusion from four dimensions: 1) gender-based, 2) caste, ethnicity, religion-based, 3) poverty-based, and 4) regional-based. That is LGCDP's goal will be to contribute towards poverty reduction through inclusive responsive and accountable local governance and participatory community-led development that will ensure increased involvement of women, *Dalits*, *Adibasi Janajatis*, Muslims, *Madhesis*, disadvantaged groups in the local governance process. It also guides the local governments how they should plan and spend their budgets. For example, at least 35 per cent of expenditure should be for projects that benefit women and disadvantaged groups.

Nepal is complying with national and international conventions, (HMGN/MFSC, 2002), (IUCN/HMGN, 1988), (HMGN, 1989), Land Policy 2004, (MOE, 2011), (GoN/MoFSC, 2014), MoAD's Gender Mainstreaming Strategy of 2006, Environmental Protect Act 1997, Agro-biodiversity policy 2063, Hydropower Development Policy (2001), the National Water Resources Strategy (2002), National Water

Plan (2005), and the Rural Energy Policy (2006). Wetland Policy some key strategies and targets have been set as below as mentioned in NCSFNC, 2016:

- The draft National Biodiversity Strategy Action Plan 2014 includes an overall goal is to significantly enhance the integrity of Nepal's ecological systems by 2020, thereby contributing to human well-being and sustainable development of the country. Its one of the principle is Legitimate rights of indigenous and local communities, women, *dalits*, and other disadvantaged social groups over local biological resources deserve due recognition.
- The national gender policy emphasizes having at least 33 per cent per cent of women representation in the parliament.
- According to the Forest Policies at least 35 per cent of revenue, accrued from all types of forests management approaches based on community forestry, will be invested for the enhancement of livelihoods of the ultra poor, backward community and indigenous ethnic group of the same region. Another important aspect mentioned is that a gender and social inclusive strategy of the forestry sector will be effectively implemented as a model ensuring participation of at least 50 per cent women in the committees of community forests user group.
- The Eleventh Amendment of the Civil Code (2002) and the Gender Equality Bill (2006) have accorded women equal inheritance and property rights, providing the basis for women to access loans and credit for agricultural production if the land is registered in their name.
- The Government's introduction of a 20 per cent rebate on land-registration fees for purchasing land in the name of women provides an incentive, although this is often used to circumvent landholding ceilings.
- MOAD gender policy clearly mentions that the women farmer participation will be 50 per cent in the possible areas of agricultural extension program and a separate section included addressing the needs of women farmers.
- Section 8.4.2 of the (MOE, 2011), calls for "ensuring the participation of poor people, Dalits, marginalised indigenous communities, women, children and youth in the implementation of climate adaptation and climate change related programs."
- The Land right policy indicates that the cost to the wife of affecting transfer of ownership is a tax of 100 NPR. In addition a 40 per cent discount in the land registration fee will be granted to village women living in remote areas.
- Water related Act and policies has provisions for 33 per cent representation of women on the user committees and proportionate representation of caste and disadvantaged ethnic groups.
- DDCs must allocate 15 per cent of the total annual block grant for the benefit of women, and another 15 per cent for disadvantaged groups. The block grants for VDCs also earmark a minimum of 15 per cent for the benefit of women, Dalits, Adivasi Janajatis, people with disabilities, Madhesi, Muslim, backward caste groups, elderly, children, and youth.
- The Rural Energy Policy, whose goal is to contribute to poverty reduction and environmental conservation by ensuring access to clean, reliable, and appropriate energy in rural areas, mandates the participation of local bodies and encourages social mobilization. A review of the policy found an absence of gender- and social-related objectives; unaddressed differences in energy needs, use, and beneficiaries; and measures needed to overcome the barriers that women and excluded groups face in accessing energy sources.
- The recent Strategy on Gender and Social Inclusion (2008) by the Alternative Energy Promotion Centre/Energy Sector Assistance Programme may help address these implementation gaps. The strategy identifies the need to define the target groups and to prioritize women, the poor, and socially excluded groups. The policy on Subsidy for Renewable (Rural) Energy (2006) has recognized that the promotion of renewable energy sources has great potential to contribute to environmental protection and sustainable rural development and the need to provide support to the rural poor and disadvantaged groups to ensure their access.
-

The Water Resources Act (1992), together with the 1993 Water Resources Regulation, the Water Resources Act is the umbrella act governing water resource management. It addresses the formation of district water resource committees, water users associations, and licensing. However, it does not refer to gender and social inclusion issues and is based on the assumption that all people will receive access to and benefit equally from water and sanitation services, though it has said 33 per cent representation of women will be ensured. The (MOPPW, 2004) define community-based, participatory processes, pro-poor focus, gender dimensions, and service levels.

A study by (CIPRED, 2015) has reviewed the indigenous practices and their concern to address the climate change and DRR related issues and challenges. They mention that in 2002, Nepal Government had legally recognized around 59 indigenous groups who are still dependent on forests and natural resources for their livelihoods and have had a symbiotic relation with the sector for management and conservation of resources. They also mention that as Nepal have ratified many international conventions, including (ILO, 2007), and CBD and adopted UNDRIP in 2007, guaranteeing indigenous people's right, autonomy rule, Free, Prior and Informed Consent (FPIC), land, territories, resources, and forest management, customary laws and institutions, ensuring their full and effective participation at all levels. Though government policies and institutions today have integrated the issues of indigenous people action towards resilience, capacity building of these groups and their adaptive capacity has been studied very little and understanding is also very low to respond to climate change impacts.

Table 3: Synergies of Social Inclusion in policy, acts, plans and programs Climate change

S N	Sectors	Inclusion in Act, Policy and Regulations	Nature conscious in program development	Program implementati on and performance review	Institutional structure and effectiveness	Human resources and capacity	Investment in climate change resilience of vulnerable groups
1	Forestry and biodiversity	<ul style="list-style-type: none"> - review and develop mechanism to implement policies and programs - comply all the relevant policies with national and international commitments - rights to access by ethnic and poor and marginalized not addressed in policies and weak implementation policy 	<ul style="list-style-type: none"> - need based analysis to be conducted and target groups identified - vulnerable and socially excluded not having access to the resources and management - local norms and values not addressed and policy makers not aware in integration - weak coordination among customary governing structures and government bodies 	<ul style="list-style-type: none"> - climate change impacts still need to be monitored for its effectiveness and meaningful participation of the excluded groups - government not reaching the poor, vulnerable and marginalized communities to adapt to climate change impacts 	<ul style="list-style-type: none"> -Currently no institutions exist at Central level and CFUG, BZUC, etc Strengthen and operate fully the coordination committees - customary laws and traditional practices not properly institutionalized and capacitated - 	<ul style="list-style-type: none"> -Limited human resources and lack of required skills and capacity 	<ul style="list-style-type: none"> - 25 per cent to be shared in conservation activities not clear for GESI programs
2	Agriculture	<ul style="list-style-type: none"> -Poor implementation of policies 	<ul style="list-style-type: none"> -Absence of local level coordinated 	<ul style="list-style-type: none"> - market oriented and economic 	<ul style="list-style-type: none"> - Currently Farmers 	<ul style="list-style-type: none"> -Lack of trained human 	<ul style="list-style-type: none"> Inadequate evidence of investment

		and programs on APP and Agro-biodiversity policy	programme and planning	incentive driven programs among the poor and marginalized to be developed	groups formed	resources to adapt to new technologies and genetic resource management	for with respect to GESI or less monitoring
3	Climate Change	<ul style="list-style-type: none"> -Lack or weak implementation of programs in Climate Change - NAPA not having focal persons in all level of institutions Both grassroot level planning tools not inclusive friendly and not recognizing customary laws, practices and institutions 	<ul style="list-style-type: none"> - No joint programs and plans - local and provincial level plans not climate friendly and knowledge gap in addressing the issues of resilience and capacity building 	<ul style="list-style-type: none"> - process of vulnerability assessment not social inclusive - GESI not involved in this process 	<ul style="list-style-type: none"> - NAPA and LAPA indicates in having local level institutions but still not effectively functioning 	<ul style="list-style-type: none"> - Limited human resources and lack of required skills and capacity - building indigenous and dalit capacity with respect to climate in the basin is limited - no proper guidelines to ensure meaningful and effective participation, leadership and decision making 	<ul style="list-style-type: none"> - more funds invested in DRR and less in adaptive management - REDD+ initiative setting aside funds for dalits but no mechanism to monitor or evaluate the impact
4	Energy sector	<ul style="list-style-type: none"> - Inadequate GESI guidelines and policies needed - energy sector not focusing social part 	<ul style="list-style-type: none"> - Inadequate coordination mechanism with other sectors and local level institutions 	<ul style="list-style-type: none"> -Involvement of GESI not inclusive - class, caste, gender, ethnicity, dalit and disabled friendly technology not addressed 	<ul style="list-style-type: none"> - inadequate community and local level institutions and coordinating bodies 	<ul style="list-style-type: none"> - Limited human resources and lack of required skills and capacity 	<ul style="list-style-type: none"> - investment done in alternative energy but needs more monitoring and effectiveness
5	Water sector	<ul style="list-style-type: none"> - integration of GESI inadequate and policy reviews needed 	<ul style="list-style-type: none"> - Inadequate coordination mechanism with other sectors 	<ul style="list-style-type: none"> - develop livelihood and sustainable programs not affecting the marginalized groups 	<ul style="list-style-type: none"> - water users group not having women or other groups representation 	<ul style="list-style-type: none"> - local level skills and capacity needs to be increased 	<ul style="list-style-type: none"> - not known about the investment in the sector targeting the women, Dalit and Janajatis

2.1.3 Assessment of the policy environment in relation to a Social-inclusion-based Approach to EbA

Ecosystem-based adaptation to climate change is a promising path for addressing current economic, social and environmental challenges. Recognizing this context, the ecosystem approach has risen to the forefront of discussions as one proven and promising path for tackling the aforementioned challenges

The Convention on Biological Diversity (CBD) defines the ecosystem approach as “a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. Humans, with their cultural diversity, are an integral component of ecosystems”. More specifically, ecosystem-based adaptation (EbA) is considered as “an approach that help to build resilience and reduce the vulnerability of local communities to climate change”.

While EbA has already been recognized for its tremendous potential, substantial issues remain, including its thorough integration into relevant international and national policies and strategies. An important feature of EbA as compared to other approaches is the pursuit of not only environmental and adaptation benefits, but also of social benefits for the local community including vulnerable groups, such as women, youth and indigenous people (e.g. increases in income, diversification of jobs, educational opportunities and gender equality). Thus, the social dimension needs to be taken into account when developing and implementing EbA to climate change adaptation. Such actions also encompass the design of supporting policies and policy instruments.

The role of ecosystems in adaptation is recognized at the international level under the United Nations Framework Convention on Climate Change (UNFCCC), the Convention on Biological Diversity (CBD) and the United Nations Convention to Combat Desertification (UNCCD). The policy brief is part of the UNEP Policy Series (UNEP, 2013) on Ecosystem Management and represents a collaborative project between Ecologic Institute, UNEP and Cornell University. The brief seeks to address and raise awareness of the social dimension of ecosystem-based adaptation (EbA) to climate change, laying particular emphasis on the social impacts of EbA on the global, national, regional and local levels as well as on social considerations in designing and implementing EbA. While EbA can target specific social or environmental impacts, one of its strengths is in its ability to maximize synergies between multiple environmental, economic and social goals simultaneously.

Social benefits include improved food security, risk reduction via the maintenance and improved delivery of ecosystem services, and local actor empowerment (e.g. through capacity building and social learning). Moreover, EbA can contribute to the MDGs, SDGs and a green economy by enhancing sustainable socio-economic development (via the generation of employment and alternative livelihood opportunities), reducing extreme poverty and hunger and improving gender equality and human health.

In the case of Nepal, IUCN Nepal has already piloted the EbA system and needs to be scaled up, that is the result of EbA has been very positive and especially the climate change vulnerable communities can benefit directly from the activities conducted through EbA in Gandaki River Basin watersheds. Both (MOE, 2010) and LAPA 2011 guidelines raise issues in mainstreaming EbA as a tool, therefore, in case of inclusiveness it is very important to conduct ESIA in the region and social dimension of inclusiveness such as

2.1.4 Gaps, Entry Points, and Potential Actions for Improving Existing Provisions and Mainstreaming Social Inclusion

From the literature review and field visit, it is evident that social inclusion and equity focused programs need to be mainstreamed. Addressing social inclusion depends on the following:

- Commitment at the country and donor levels to change policies and procedures so that gender concerns, class, caste, ethnicity, dalit and underprivileged particularly those of rural poor, women and vulnerable groups or communities are incorporated into programming and policy making;
- Commitment by these same groups to have equitable access, benefit, share and mobilize natural resources ensuring visibility, capacity, and justifying the social justice and reduce the discrimination among the community and their role.

- A universal commitment to keeping gender equity, equality, empowerment and social inclusion just not as a cross cutting theme and a process of integration but address and align on the political agenda.

Table 4: Gaps, issues and entry points

SN	Strategy, Policy, Plans	Objective/Focus (related to nature conservation)	Gaps and Issues	Entry points
1	CBD and MDG	<ul style="list-style-type: none"> Goal 4 of the Sustainable Development objective have addressed to achieve Gender Equality, Social Inclusion, and Human Rights : disaggregation data on food security, education, safety, health, access to alternate energy, land access institutional capacity/ not environment and conservation issues. MDG goal 3 has made an objective in promoting gender equality and empowering women is estimated as achievable by 2015. Conservation and sustainable use of agricultural biological diversity article 17. Encourages parties (...) to promote: (c) "Mobilization of farming communities including indigenous and local communities for the development, maintenance and use of their knowledge and practices in the conservation and sustainable use of biological diversity in the agricultural sector with specific reference to <i>gender</i> roles 	<ul style="list-style-type: none"> However, the present level of gender differences in education, economic, and political achievements indicate that there is risk to attain the goal as well. 	<ul style="list-style-type: none"> Ensure the social inclusion dimensions are addressed by all local, provincial and central level policies based on climate change issues
2	Nepal Interim Constitution 2015	<ul style="list-style-type: none"> Right to Equality, Right to Women, Right to Social Justice highlights that there will no discrimination among the citizens on grounds of religion, race, caste, tribe, sex, origin, language or ideological conviction or any of these 	<ul style="list-style-type: none"> Institutional reformation is still pending and mandate to develop policies and implementation are lacking Budget constraints in implementing programs Inadequate coordination 	<ul style="list-style-type: none"> Revise the community level plans and policies addressing the equity, equality and empowerment issues focusing on climate change Build coordination mechanism

SN	Strategy, Policy, Plans	Objective/Focus (related to nature conservation)	Gaps and Issues	Entry points
			and capacity building among the professionals	among all stakeholders
3	National Biodiversity Strategy 2002 and National Biodiversity Strategy Action Plan 2014	<ul style="list-style-type: none"> • Commits to protect and wisely use the resources • Aims to uplift the livelihoods and socio economic aspect of indigenous people, women by meaningful participation • formulation and implementation of gender-responsive policy and strategy by all the government and non government agencies, • promoting equitable participation of all sections of the society in the development and implementation of conservation policies and programmes and • ensuring equitable access of women and men, including disadvantage social groups to biological resources and benefits sharing 	<ul style="list-style-type: none"> • Inadequate policy and programs on how meaningful participation would be achieved • Lack of addressing access and benefit sharing of the resources and revenues • Participation of women, dalit and Janajati not clearly mentioned • Not focused on the policy issues of mainstreaming gender and social inclusion 	<ul style="list-style-type: none"> • Ensure meaningful participation based on vulnerability mapping and assessment • Ensuring equitable access and benefit sharing to the poor, marginalized ethnic and dalit groups • Ensuring capacity building in conservation awareness and increase participation • Review plans and policies based on inclusion
4	Master Plan for Forestry Sector 1988-2011 and revised plan in 1991	<ul style="list-style-type: none"> • It aims to mobilize, conserve and manage forest resources in a sustainable way and thereby maintain a balance in the demand for and supply of forest products, create income and employment opportunities within the sector for rural forest dependent people, promote people's participation, enhance productivity, and develop appropriate land-use plans with its twelve programs. • contributing in poverty alleviation of local communities by improving 	<ul style="list-style-type: none"> • Women as forest users were recognized but gender and social inclusion was lacking • Not specified the access and benefit sharing issues among the women, dalit, 	<ul style="list-style-type: none"> • 50 per cent women representation in CFUG is ensured but not the ethnic, dalit and marginalized community so ensure their participation • Forest based

SN	Strategy, Policy, Plans	Objective/Focus (related to nature conservation)	Gaps and Issues	Entry points
		<p>their livelihood through promotion of ecosystem services and mitigation and adaptation measures of negative impacts of climate change by sustainable, participatory and decentralized management of forests, plant resources, watersheds, protected area, and bio-diversity resources.</p> <ul style="list-style-type: none"> • Opportunities of income generation of poor, women, indigenous and ethnic people, Madhesi and people from backward class • at least 35 per cent of revenue, accrued from all types of forests management approaches based on community, will be invested for enhancement of livelihood of ultra poor, backward community and indigenous ethnic group of the same region. • Another important aspect mentioned is Gender and social inclusive strategy of forestry sector will be effectively implemented as a model ensuring participation of at least 50 per cent women in the committees of community forests user group. 	<p>Janajati and other groups for their empowerment and leadership</p> <ul style="list-style-type: none"> • 	<p>poverty alleviation program to be focused more towards poor women, ethnic groups and marginalized communities</p> <ul style="list-style-type: none"> • Ensure access to credit facility • Ensure their effective participation in adaptation and mitigation practices to combat climate change
5	Forestry Sector Gender and Social Inclusion Strategy 2065	<ul style="list-style-type: none"> • to prepare gender equality and social inclusion sensitive policy, rules and guidelines, • institutional development with respect to governance and gender equality and social inclusion, • activities, budget and monitoring to be gender and social inclusion responsive and finally • have equal access in resource, decision and benefits. 	<ul style="list-style-type: none"> • Inadequate awareness among the all level of stakeholders (thinking gender still as womens issues and inclusion poorly practiced) • Institutional structure and capacity still weak and not mainstreame 	<ul style="list-style-type: none"> • Local and provincial level institutional setup to ensure to address social inclusion in planning and decision making • Separate budget not only for gender responsive

SN	Strategy, Policy, Plans	Objective/Focus (related to nature conservation)	Gaps and Issues	Entry points
			d	but social inclusive as well while developing programs
6	Community Forest Development Guideline 2009 and Collaborative Forest Directives 2010	<ul style="list-style-type: none"> • Ensure women, dalit, poor and Janajati participation and have at least 50 per cent women representation in decision making bodies • Equitable access to resources, decisions and benefits, program budget and monitoring system institutionalized • 	<ul style="list-style-type: none"> • Lacks disaggregated data about women, men, Dalit, poor, and Janajatis involvement in all project or programme based • Dalit, Janajati quota not clearly mentioned • Inadequate representation of these groups still exists • Professionally only 3.3 per cent staff involved in conservation • women, poor, and disadvantaged households do not have the influence to utilize Community Forest User Groups' (CFUG) funds for their own benefit. • Inadequate influence in decision 	<ul style="list-style-type: none"> • Mention the quota for dalit, janajati and marginalized communities within the community forestry and buffer user committees • Bufferzone community not practicing inclusiveness in the community election

SN	Strategy, Policy, Plans	Objective/Focus (related to nature conservation)	Gaps and Issues	Entry points
			making, planning, lack of awareness, lack of capacity to analyze alternative means of livelihoods, and poor utilization of CFUG funds have resulted in poor implementation	
7	National Agriculture Policy (2004) and Agriculture Perspective Plan (1995-2014)	<ul style="list-style-type: none"> • Agriculture activities implementation possibility all sectors have women involvement and participation by 50 per cent • Women farmers training to be provided in revolving based training process at least to reach all the villages • Information and database to be disseminated where women led activities are carried out • eliminating poverty, enhancing the natural environment, and improving the condition of women. • the plan has given emphasis to incorporate “gender” in all the three focused areas of APP priorities input, output, and impact. • 	<ul style="list-style-type: none"> • Social Inclusion perspective as outlined in the Three year plan is not addressed • Agriculture development sector catering the need based approach especially targeting the women and socially excluded communities participation mechanism not clear. • Ensuring participation of women, the poor’s and the deprived community groups in agriculture 	<ul style="list-style-type: none"> • Identify the gaps why social inclusion has not been conducted and address the issues in local and provincial level • Agriculture sector try to shift the approach from need based to participatory approach where all women especially from poor, janajati and marginalized can be a target group • Develop climate and poor and women friendly agro-

SN	Strategy, Policy, Plans	Objective/Focus (related to nature conservation)	Gaps and Issues	Entry points
			sector monitoring and reporting system not clear	technologies <ul style="list-style-type: none"> Ensure the participation of women, poor and marginalized groups in planning and addressing their need to secure food and adapt to climate change
8	Agrobiodiversity Policy 2063 (2007)	<ul style="list-style-type: none"> to ensure opportunity and equitable benefit sharing from agriculture genetic resources and products access and utilize based on the agro biodiversity policy ensure and prioritize the participation to increase the productivity, employment and income generation for the traditional and indigenous knowledge, skill, technology and experiment, depend on farmers knowledge 	<ul style="list-style-type: none"> No policy provisions for access, exchange and use of germplasm from multilateral systems Absence of provision for designated institutions and legislation for ABS of genetic resources 	<ul style="list-style-type: none"> Built and share knowledge and lessons learning Local and provincial level to secure genetic diversity of local species and sustain the productivity Build all level stakeholders in traditional and indigenous knowledge practices in farming practices Develop institutional mechanisms in local and provincial level to address agro-biodiversity and securing food and livelihoods

SN	Strategy, Policy, Plans	Objective/Focus (related to nature conservation)	Gaps and Issues	Entry points
9	Energy and Climate Change policies	<ul style="list-style-type: none"> “ensuring the participation of poor people, Dalits, marginalised indigenous communities, women, children and youth in the implementation of climate adaptation and climate change related programmes. from the REDD+ program women, marginalized groups and high vulnerable groups of the community especially will target the Adibasi, Janajati and local communities sustainable livelihood will be ensured. 	<ul style="list-style-type: none"> institutional strengthening in rural energy planning and implementation on recommended gender sensitization, gender disaggregated databases, and the commissioning of gender experts in planning and programming is still inadequate 	<ul style="list-style-type: none"> the need is to gather gender disaggregated and ESIA data to address the energy and climate adaptation practices ensure the participation of poor and marginalized communities in EbA activities like water restoration, resource management, agriculture production, soil conservation, alternative energy and sustainable livelihood ensure proper planning initiatives to target REDD+ initiatives by promoting awareness program in local and provincial levels based on inclusion perspective ensure and built capacity of poor, women and marginalized ethnic groups and

SN	Strategy, Policy, Plans	Objective/Focus (related to nature conservation)	Gaps and Issues	Entry points
				<p>vulnerable communities in empowerment, access and benefit</p> <ul style="list-style-type: none"> ensure meaningful participation of the vulnerable groups that is poor, women and marginalized ethnic and dalit groups
10	Climate, Water and Disaster Risk Reduction Strategies	<ul style="list-style-type: none"> policy and strategy defines community-based, participatory processes, pro-poor focus, gender dimensions, and service levels. It prioritizes access to drinking water and sanitation to backward people and ethnic groups, although it does not define these groups more specifically Ensures 33 per cent participation in user groups and committees 	<ul style="list-style-type: none"> Inadequate institutional structures and capacity building Weak coordination and difficult for budget allocation 	<ul style="list-style-type: none"> Establish institutions in local and provincial level and set aside sufficient budget to cater the climate induced DRR Train local and provincial level communities and district level coordination community on addressing poor, women and marginalized ethnic and dalit groups needs Build strong coordination among community to

SN	Strategy, Policy, Plans	Objective/Focus (related to nature conservation)	Gaps and Issues	Entry points
				local and provincial level to address the needs of backward society.

Source: Compiled from various documents

2.2 Summary of Lessons Learned from Current and Recent Past Projects

Key lessons learnt

1. International and national strategies to address social inclusion are in place but implementation at the local and provincial levels is weak
2. Understanding of climate change impacts and adaptation practices is weak among the various ethnic groups, dalits and disabled groups and communities.
3. Customary laws and institutions which are the back bone of traditional knowledge and a base for scientific analysis is lacking and every day the practices are vanishing
4. The issues of rights is not addressed among the social excluded groups and there is no focused intervention to increase their access, visibility, capacity to lead, decision making, and empowerment
5. Local initiatives focused on climate change impacts and building resilience depend very much on traditional knowledge and practices and solutions come from there, but key policy makers and implementers has been avoiding the inbuilt mechanism within these ethnic and dalit groups especially.
6. It is the poor, women and marginalized groups and communities who resolve first without any technology to overcome climate change or DRR impacts, thus as we know climate change and DRR knows no boundaries, low income communities and caste/class or gender, these are the ones who suffer the most and they need to be treated fairly, equally and equitably to get the benefits and combat the risks.
7. Not understanding how climate vulnerable communities address their situation will have severe impact in the whole policy and implementation level, where these communities themselves are not capable to do so.
8. Policies and plans are failing to recognize and address structural inequality that could be driving climate change and not being responsive enough to address the needs of vulnerable groups and communities for adaptation and resilience building
9. Therefore, key issues revolve around how to invest in community building and vulnerable group leadership, not to politicize climate change and DRR risk factors in the name of vulnerable groups, build unique alliances to best leverage power, abilities and assets to achieve change, be able to prioritize community scale ownership especially EbA practice to be more resilient, equitable, and democratic and be scalable to all level and among vulnerable groups.
10. The whole climate governance factor example the program to be more accountable, responsive and inclusive by nature and based on community solutions funded through international and national agencies and support the local level existing institutions. There is a need to make

climate change response mechanisms more communicative, to ensure participatory in leadership and decision making, to promote collaboration, and to build trust and promote inclusiveness within the policies and implementation.

11. The Declaration on Social Justice for a Fair Globalization at the International Labor Conference (2008, 97th session) needs to be assessed as a means to benefit from globalization, respond to growing challenges posed by globalization, such as income inequality, continuing high levels of unemployment and poverty, vulnerability of economies to external shocks, and the growth of both unprotected work and the informal economy. These issues need to be addressed resilience capacity of vulnerable groups in the Gandaki River Basin.
12. Social inclusion cannot be addressed only at the local level, but it has to be addressed from individual to global perspective by promoting visibility, consideration, access to social interaction, rights participation and having resources to participate.
13. Social inclusion is not sufficiently responsive to social dimensions such as culture, environment, economic, legal, relational, social, spatial, political and physical making climate change impacts responses weak.
14. Not all vulnerable groups and communities in the Gandaki River Basin are capable of decision making, have equal access or benefit sharing, so current and new programs in the area will have both positive and negative impacts. For example, the social inequalities today can be minimized after the project intervention among the vulnerable groups and more opportunities can come up due to this project intervention.

3. Baseline

3.1 Social Inclusion in National and Local Programmes

In the Gandaki River Basin various government, non-government and local CBOs are active in implementing the government policy to ensure sustainable livelihoods, conservation of resources and to tackle climate change impacts to reduce vulnerabilities. So far, all sectors of programs and policies have considered social inclusion and gender equality as a cross-cutting theme in order to implement and mainstream the policies to increase human, social, financial, natural and physical assets. However, from the field studies it is clear that not all programs have equal strength and some have weaknesses. The following table analyzes how social inclusion has been practiced and the strengths and weaknesses of various approaches.

Table 5: Assessing the strengths and weakness of current and new programs in vulnerable areas

Sectors	Current and new programs	Strengths	Weakness
Forest conservation, biodiversity conservation and ecosystem knowledge	Bio engineering Biogas Improved cooking stove Plantation MAPs plantation Control illegal harvest Improved cow and goat shed Embankment improvement Nursery establishment Grazing control	Bio-engineering controlling landslides Women's ARI improved Health improved Greenery maintained Supply of fire wood and fodder increased Income generated through MAPS Wildlife increase Eco-tourism promoted	Not all sites covered and expensive doing bio-engineering Human resources not capable Not having social inclusive policies Income generation activities not reaching the poor and marginalized Access and benefit sharing not equal among

	<p>Review community forestry plans</p> <p>Awareness and capacity building in conservation and management of ecosystems</p> <p>Introduction of EbA programs</p> <p>Organic farming training</p> <p>Customary laws and practices in natural resource management</p>	<p>Less cattle eaten by wild animals</p> <p>Multipurpose species introduced where climate resilient species grown</p> <p>Control grazing mechanism in place</p> <p>CO² maintained</p> <p>Participation increased</p> <p>Water sources managed</p> <p>EbA initiation as best option for resilience building and adaption practices</p> <p>Traditional practices and norms and values easily applicable</p>	<p>the poor and marginalized</p> <p>Governance structure weak</p> <p>Traditional practices ignored</p> <p>Poor and marginalized not having access to improve stoves and biogas</p> <p>Training capacity not reaching the poor and marginalized</p> <p>Only highly landslide prone areas having embankment and landslide control</p> <p>Not all communities practicing EbA</p> <p>Traditional knowledge and practices not well documented</p> <p>Rights aspects are not addressed of the poor and marginalized groups to land, forest and other resources.</p>
Agriculture	<p>Promotion of horticulture</p> <p>Improved varieties of crops introduced</p> <p>Insect and pest management training</p> <p>Tunnel introduction in off season varieties</p> <p>Seed storage</p> <p>Irrigation management</p> <p>Vegetable farming</p> <p>Using tractor, threshers in low lands</p> <p>Introduction of chemical fertilizer</p> <p>Preparation of manure training</p>	<p>Improved varieties increasing productivity and mitigating food insecurity</p> <p>Health improvement</p> <p>Off season farming generating income</p> <p>Local seeds storage capacity built</p> <p>Water management for irrigation</p> <p>Habit of green vegetable intake</p> <p>Child nutrition value increased</p> <p>New technology increase productivity</p>	<p>Landless or people with less land having no option to do alternate agriculture</p> <p>Climate change increasing pests and insects</p> <p>People depending more on chemical fertilizer</p> <p>Poor and marginalized not getting alternate opportunities in farming</p> <p>Labor cost increasing</p> <p>Poor not able to afford new technology</p> <p>New technology not women friendly</p>

		Traditional knowledge supporting climate change initiatives	Not being able to store traditional varieties of seeds More crop diseases increased and no knowledge of management
Livestock	Promotion of new improved breeds Stall feeding Feeding trough distribution Pasture land management Cattle shed improvement Fodder tree plantation to mitigate GHG Management of feed crop	Improved milk production Income generation facilitated Stall feeding practiced decreasing grazing and control grazing practices Use cement feeding trough Controlled grazing after pasture management Less damage to cattle by wild animals Women having easy access to fodder collection Improved fodder species also mitigating GHG Controlled grazing saving time Increase in no of improved breeds	Poor and marginalized not aware on livestock farming practices reducing GHG Poor and marginalized not having access to improved breeds having less land and no knowledge Cattle disease increase in improved breeds than local ones Policy not strong to address livestock breeding program addressing climate resilient breeds Cattle herders travelling long distance to water the cattle Knowledge gap in livestock management and rotational grazing practices
Watershed management	Storage of water Plantation in landslide areas Drainage management Water sources protection Terrace improvement Control shifting cultivation in sloppy areas Improved farming and agriculture practices Develop and manage irrigation facilities DRR plans initiation	Water sources managed Capacity of local community developed in storing water or harvest rain water Both roadside drainage and agriculture drainage improved Less soil erosion Agro-forestry practices by farmers Shifting cultivation minimized by planting cash tree crops like chiraito, chirui, Uttis,	Embankment improvement costly and can not be done by communities alone Water storage and harvesting technology not assessed by poor and marginalized Poor and marginalized farmers not having alternate option in farming practices Not all community having watershed management capacity

		Neem, coffee, tea, Community well prepared for climate induced DRR	and skills Vulnerable communities not having access to DRR
Off farm initiatives	Eco-tourism promotion Sewing and tailoring Basket making from NTFP Wiring, cooking, plumbing and house construction training Maintenance training on cycle, motorcycle. Small tea shops and business	Income generated Women capable of doing their own sewing and tailoring Men having extra income Livelihood improved Home stay and tourism generating income	Off-farm activities not reaching the poor and marginalized Capacity and training inadequate among the local community to do off farm Poor and marginalized not having budget to start up small scale business
Capacity building	<ul style="list-style-type: none"> • Training in climate change, its impacts and adaptation measures. • EbA training • Agroforestry training for reutilization of abandoned and underutilized agriculture lands. • Innovative use of agriculture and livestock breeding training • Training in water harvesting • Watershed management training • MAPs and NTFP production and marketing training • Training in disaster risk response mechanism • Fruit and vegetable farming training • Bio-char production and use training • Village Animal Health Worker Training • sewing activities focusing to marginalized communities. • Gender and social inclusion 	<p>Increase the knowledge of local community in EbA and adaptation practices</p> <p>Strengthens the agroforestry practices and underutilized areas control of soil erosion</p> <p>Increase knowledge in community resilience practices</p> <p>Water sources maintained and storage capacity built</p> <p>Income generated through MAPs and NTFP</p> <p>Income generated through horticulture and vegetable farming</p> <p>Improved soil quality</p> <p>Alternate technology of farming practices adopted</p> <p>Support in infrastructure development like tunnel, green house, etc.</p>	<p>Not all vulnerability communities have access to training and capacity building</p> <p>Regular monitoring and evaluation of training not conducted to know the effectiveness</p> <p>Poor and marginalized not being inclusive in trainings</p> <p>Trainings not adequately designed for illiterate community</p> <p>Community and information dissemination weak regarding new technology</p> <p>Inadequate awareness in climate change impacts and coping strategies</p>

	training <ul style="list-style-type: none"> • Participatory monitoring and evaluation training • Training on preparing financial models in the local and provincial states • Knowledge documentation training • Stakeholders workshop for sharing lesson learning • Preparation of LAPA and CAPA • Improved livestock breed training 		
--	--	--	--

3.1 An assessment of the Current State and Trends in Social Inclusion in the Project Area

In the Gandaki Basin, large sections of the rural and urban population lack minimal access to water for drinking, sanitation and irrigation, their livelihoods depend on agriculture, wage earning, ecosystem services, and rain-fed agriculture, they live in fragile dwellings and have weak social support networks. These people are most likely to be affected by climate change. To address this situation, adaptation and resilience-building requires integrated and holistic management of natural, human, cultural, physical and financial capitals.

This approach requires continued generation of new and synthesized knowledge and effective practices to help support the formulation and implementation of development policies, strategies and practices to meet the emerging challenges. As cited in the (MoSTE, 2015) report it most of the adaptation responses are done locally where mechanisms are developed and practices based on better options seek to respond to immediate climate risks, such as water shortages, crop failures, flood disasters, accelerated soil erosion, mass wasting and infrastructure damage.

Some specific groups within the Gandaki River Basin like small farm holders, cattle herders, poor and marginalized ethnic and dalit communities, elderly people, children and women are particularly vulnerable due to climate change and are impacted mostly. Both gender equity and social inclusion has been strongly advocated and addressed, mostly by the non-government sectors as they have to comply with their donor's requirement. However, the level of social inclusive participation, decision making, leadership roles played by poor, women, marginalized ethnic groups, dalits and disabled people is more on paper and policy, than in practice. The trend of social inclusion has been observed and collected from the field as given in the table 6.

Table 6: Trends in social inclusion in the Gandaki River Basin

Trends and Gaps	Participation	Climate change knowledge	Adaptation practices	EbA	Coping strategies	Vulnerability extent
Thematic sectors						
Forest and resource management	Low in decision level and planning level and benefit	Local knowledge in predicting climate change high	Low knowledge and participation in decision	Low level of participation not having access to the	Low among poor and vulnerable groups	High among poor and marginalized Extent is

	sharing	Invasive species increasing Fire hazards	making	resources and opportunities	interests are not addressed in coping strategies	highly vulnerable Policies and management framework not inclusion friendly
Water management	No decision making power. Long distance travel for water fetching	Water sources drying up	No storage capacity among poor and marginalized	Low level of EbA in other part of areas except Kaksi	Very low among landless and least land marginalized groups Not affordable	High among women and marginalized groups Extent high Cost effectiveness plans and technology not inclusive friendly
Agriculture management	Low in farming and adopting alternate practices Local knowledge high	Knowledge low in poor and marginalized predicting climate change impacts and agriculture impact	Traditional practices introduced Not new technology among the vulnerable groups	Poor and marginalized not benefiting	Very low among landless and least land marginalized groups Not affordable	High among poor the marginalized High Landless and least land people highly vulnerable and no option
Livestock management	Low participation in livestock breeding and no knowledge No policy for pro poor and marginalized for their participation	Livestock management practices changing due to climate change	Poor not being able to have access to livestock farming	Poor and marginalized having less knowledge on EbA based livestock management	Very low among landless and least land marginalized groups Not affordable	Highly vulnerable are poor and marginalized Policies and plans making them more vulnerable
Rural transport and infrastructure management	Needs not assessed fully and very low especially for the vulnerable communities Work as labors	Low knowledge among poor and vulnerable groups Highly vulnerable due to climate change impact damaging infrastructure and DRR prone	Less access to the resources and development	EbA not friendly towards poor and marginalized especially having access to transport, and infrastructure management	Very low among landless and least land marginalized groups Not affordable	Rural poor and marginalized highly vulnerable towards development projects They not having access and funds to cope with DRR and climate impacts
Livelihood initiatives	Low level of participation of poverty alleviation	Diverse group of people and culture having response	Low level of adaptation to cope with climate	EbA to support more to poor and marginalized	Very low among landless and least land marginalized	Poor, women, ethnic and marginalized groups highly

	programs Poor and marginalized ethnic groups, dalits and disabled community not having opportunity to participate in income generation	practices towards climate change but not addressed and considered in planning and design to secure livelihoods	adaptation among poor and marginalized Climate change responses not sustaining the livelihoods of the poor and marginalized	on off farm based livelihood opportunities so far not inclusive	groups to sustainably cope with climate change impacts and secure livelihoods	vulnerable and extent to secure livelihood is very poor
Cross cutting theme						
Traditional and social institutions	Local community having high belief in social and cultural traditions and stable institutions making people participate Low level of participation in traditional knowledge practices especially younger generation, poor and marginalized communities	Disintegrating local knowledge responding to climate change among the poor and marginalized communities Low involvement of social institutions to address climate change impacts and adaptation practices Good traditional and indigenous knowledge not being documented	Poor, women, ethnic groups, marginalized communities' knowledge in climate adaptation low and responses are weak not having capacity and ability	EbA not focusing on traditional practices and strengthening social institutions	Traditional and indigenous knowledge not taken in account in any policy papers to address the coping strategy to address poor and vulnerable groups needs	Identify key traditional and indigenous practices to address local level responses and adapt accordingly Ensure the participation of social institutions, dalit groups in planning tools for adaptation and mitigation approaches Local and provincial level introduce and address customary law and practices responding to climate change impacts
Social inclusion and governance	Good governance practices not inclusive and participatory	Climate governance not addressing poor, women, ethnic and marginalized groups needs and vulnerability context	Good governance, social justice and knowledge in governance is weak among the poor, women and marginalized communities	EbA initiatives to considering inclusiveness and governance practices low	Poor, women, ethnic groups, marginalized groups not having access to or participate in decision making, implementation and planning	Awareness to be raised in social justice, climate governance and EbA mechanisms in local and provincial level Community governance

						structure to be strengthened
--	--	--	--	--	--	------------------------------

Source: model adopted and modified from MoEST, 2015 and field study, 2017

Varying the ethnic diversity, having poor and marginalized groups such as dalits and disabled people in the community, the trend of social inclusion to first identifying the vulnerable groups, then addressing the climate change impacts to build the resilience capacity and ensuring how can they be considered to have a full and meaningful participation in decision making and leadership has been a greater challenge. It has been observed from various policy reviews and international and national commitments social inclusion especially gender has already been mainstreamed in planning processes, but inclusiveness has not been strongly adopted by the government initiation.

3.2 A socially disaggregated assessment of Vulnerability in the project area to Climate Change and Natural Disasters

The pre-feasibility study had highlighted 19 districts of Gandaki River Basin based on the (MOE, 2010) which were vulnerable towards climate change vulnerability and identified three (Mustang, Manang and Rasuwa) are in the Mountain category, 14 (Arghakhanchi, Gulmi, Palpa, Baglung, Parbat, Myagdi, Syangja, Kaski, Tanahun, Lamjung, Gorkha, Nuwakot, Dhading and Makwanpur) in the Hill category and two (Nawalparasi and Chitwan) in the Terai and further field analysis was done to identify the key sites within these districts for field and district level consultations (see table 1).

Based on the NAPA combined vulnerability index, 57.96 per cent of households in high vulnerable districts does not know about climate change, whereas the majority of households (53.18 per cent) in the very high vulnerable districts have some knowledge of climate change.

According to climatic zones, the 95 per cent of households of sub-alpine districts have not heard about climate change.

The NAPA vulnerability index measurement does not consider details of caste, ethnicity and marginalized community that belong to these groups.

In relation to the issue of social inclusion, relevant questions were developed to verify the extent of impact of climate change on gender, caste, ethnicity and marginalized communities, based on their knowledge and adaptation practices. In terms of vulnerability; one district is in the very high vulnerable group, five in the high vulnerable group, eight are moderately vulnerable, four are in the low vulnerable group, and one in very low vulnerable group (MOPE, 2010)¹. There is a high percentage of households living in the medium to high climate change vulnerable districts.

Impact assessment and alternatives

For this study, an impact evaluation was conducted and their levels were identified based on the following guidelines:

A variety of impacts are identified and addressed in the ESIA, as described below:

- **Negative** – an impact that is considered to represent an adverse change from the baseline, or introduce a new undesirable factor
- **Positive or beneficial** – an impact that is considered to represent an improvement to the baseline or introduces a new desirable factor

¹ MOPE 2010. National Adaptation Plan of Action to Climate Change. page 11 Table 2.2

- **Direct (or primary)** – impacts that result from a direct interaction between a planned Project activity and the receiving environment (e.g. between occupation of the pipeline corridor and pre-existing habitats)
- **Secondary** – impacts that follow on from the primary interactions between the Project and its environment as a result of subsequent interactions within the environment (e.g. loss of part of a habitat affects the viability of a species population over a wider area)
- **Indirect** – impacts that result from other activities that are encouraged to happen as a consequence of the Project (e.g. new business set up to cater for increased traffic on roads)
- **Transboundary** – impacts that extend or occur across a national boundary
- **Cumulative** – impacts that act together with other impacts, from the same or other projects, to affect the same environmental or social resource or receptor. The following types of cumulative impact are discussed in this ESIA:
 - **Additive** - impacts that may result from the combined or incremental effects of future activities (i.e. those developments currently in planning and not included as part of the baseline)
 - **In-combination** - impacts where different types of impact from the project being considered are likely to affect the same environmental or socioeconomic features. For example, a sensitive receptor being affected by both noise and dust during construction could potentially experience a combined effect greater than the individual impacts in isolation.
- **Short-term** – impacts that are predicted to last only for a limited period (e.g. during pipeline construction) but will cease on completion of the activity, or as a result of mitigation/reinstatement measures and natural recovery (e.g. temporary employment of unskilled workers during construction)
- **Long-term** – impacts that will continue over an extended period, (e.g. disturbance from inspection vehicles travelling to and from the ROW during pipeline operations) but cease when the Project stops operating. These will include impacts that may be

The most pressing challenges for adaptation to climate change in the study area boil down to four main issues that respondents consistently emphasized were related to degradation of natural resources and watershed management. These are:

- availability of water,
- soil erosion
- illegal resource use and
- unplanned development creating landslides.

Rural communities in Nepal are faced with far-reaching changes in terms of not only climate change, but also population growth, economic changes, and the erosion of traditional practices, customary law and institutions. The challenge of adapting to these changes is great, with vitally important implications for livelihood and food security. Adger et al. 2004 explains that the fundamental aspect of the capacity to adapt to climate changes is the performance and structure of institutions, and, more generally, governance. The CBS (CBS, 2016) also mentions the perceptions of households on the main reasons behind climate change. 59.1 per cent of households attribute deforestation as the main cause of climate change followed by natural disasters (40.8 per cent), industrialisation (24.4 per cent), urbanisation (29.7 per cent) and human intervention (33.3 per cent) among other reasons. Perceiving deforestation as a major cause of climate change is seen higher in urban households (62.8 per cent) in comparison to rural (57.6 per cent).

Table 7: Impacts and alternatives

Attributes	Issues in all sectors	Receptors	Potential Impact	Vulnerable Groups
Forest, Ecosystem Services and biodiversity Conservation	Forest degradation, fire hazard, invasive species, thorny plants growing Ecosystem damaged Loss of species Illegal trade and collection Customary conservation practices reducing Traditional knowledge of management vanishing Landslides Water sources drying out	People	Smoke creating problems in health Difficult to have equal access to fire wood Landslide creating shifting of people People not obeying government rules and management practices People using chemical and pest control mechanism damaging health, reproductive health...etc.	Ethnic groups in all areas Dalit and marginalized Poor and disadvantage groups
		Wildlife	Smoke creating dry lands, forest degradation, Fire hardy species increasing Loss of flora and fauna important to the relevant areas (eg Sal, Champ, Darr, Bijay Sal...etc and bats, fox, decreasing) Reduction of manures Increase in invasive species Habitat degradation Floral and faunal diseases increasing	Forest dwellers Eco-tourism depended enterprises Women, cultural values Indigenous people
		Livelihoods	Livelihood options limited Change in daily livelihood strategy Impacting women's health and poor not having alternatives Vulnerability increases and access limited Roles and responsibility diversification Change in livestock grazing impacting livelihood of herders	Forest dwellers Eco-tourism depended enterprises Women, cultural values Indigenous people
		Policies and strategies	Customary practices reducing Norm and values not accepted easily Government policy and strategies weak implementation Decision making capacity limited to elites Inadequate awareness creating policy law implementation Policies developed as NAPA, LAPA and climate change policy 2011, NPC having social inclusion policy ensuring inclusion practices	Ethnic groups Customary laws abiding groups Socially excluded groups mostly women, dalit, ethnic groups and poor
Agriculture	Loss of old and traditional varieties Effect on productivity of crops and cereals Increase in pests and diseases Market value Increase use of chemicals and	People	Farming practices intensified People not having alternatives of farming in the mountains Health issues eating more chemicalized products Hampering reproductive health of	

	pesticides Soil damages Drying of soil Less knowledge in adapting new farming practices Soil erosion and more barren areas Less irrigation Rainfall reductions creating problem in seasonal cropping pattern		women	
		Farming practices	Soil degradation using chemical Loss of indigenous crops Low production and high market value Alternative cropping knowledge less Intensified farming practices Soil testing not affordable by farmers Decreasing in irrigation facility making farmers migrate to low land Shifting cultivation having both negative and positive impacts Green house farming practices increasing Productivity has gone down in maize, millet, wheat, potatoes and mostly replaced by high breed seeds	Poor and marginalized farmers Women farmers
		Livelihoods	Forced to migrate Limited lands of poor and marginalized having no alternative means to survive Food insecurity Increase poverty Subsistence farming	Poor and marginalized Children Women Ethnic groups like Magars and Tamang
		Policies and strategies	APP addressing social inclusive in farming practices Climate resilient crop production strategies still not comprehensive Cultural and traditional practices eroding and not yet addressed how to integrate in new policies and plans GESI inclusive but vulnerable groups and coping strategies still not addressed Climate resilient technology adopted mainly by elite communities	Marginalized and poor farmers Livestock herders Women and dalit farmers All poor and marginalized ethnic groups
Livestock	Grazing land decreasing Grasslands affected by not having snow covers and hampering the grass flushes Traditional livestock pattern changing Limited access in community forests for grazing Improved livestock not	People	People having difficult in coping with human wildlife conflicts Costing high to raise cattle Facing hardship in raising cattle especially in the mountain People travelling longer distances for herding Health hazard among the herders not having safety precautions	Poor and marginalized herders Elderly generation men doing livestock farming Mountain tribal cattle herders

	<p>adaptable to climate risks</p> <p>Livestock value and market increasing</p> <p>Increase in livestock diseases</p> <p>Grazing lands having invasive species</p> <p>More non-palatable species increasing</p>			
		Livelihoods	<p>Young generations not doing herding</p> <p>Grazing land reduction decreasing livestock number</p> <p>Difficult in coping with diseases in livestock</p> <p>Livestock getting costlier and poor farmers not able to sustain to cope with climate risks</p> <p>Not having good shelters making cattle's die during winter</p> <p>Traditional grazing practices hindered</p>	<p>Poor and marginalized communities</p> <p>Cattle herders</p> <p>Women farmers in low lands</p> <p>Yadav families of low land</p>
		Livestock	<p>Impact on livestock breeding</p> <p>Non palatable species increase making livestock grazing difficult</p> <p>Improved breeds not climate friendly</p> <p>Productive livestock options limited to rich families and farmers</p>	<p>Poor and marginalized communities</p> <p>Cattle herders</p> <p>Women farmers in low lands</p> <p>Yadav families of low land</p>
Water Resources	<p>Forest degradation making water resources drying out</p> <p>Springs drying out</p> <p>Drought prolonging</p> <p>Wetlands not managed</p> <p>Rainfall having high impact to restore springs</p> <p>Watershed not well managed</p> <p>Affecting crop production and livelihood</p> <p>Weak resilient capacity restoring water sources</p> <p>Drying up river sources and less flows</p> <p>Snow melting faster</p> <p>Influence in hydro dams</p>	People	<p>Women walking long distances for water fetching</p> <p>Increase in water borne diseases having health hazards</p> <p>Irregular rainfall impacting in farming practices</p> <p>Food insecurity and poverty increasing</p> <p>Migration of people in places of having all resources accessible</p>	<p>Poor and marginalized women, men and ethnic groups especially in the mountains</p> <p>Cattle herders</p>
		livelihoods	<p>Shift in farming practices</p> <p>Drought making water springs dry and livelihoods difficult</p> <p>No knowledge of water storing and harvesting technologies</p> <p>Travel long distances to fetch water</p> <p>Difficult for cattle herders to find water</p> <p>Drinking water becoming lesser</p>	<p>All class, caste, gender and ethnic groups</p> <p>Cattle herders</p> <p>Poor and marginalized women farmers</p>

			Irrigation becoming difficult Alternate ways of living in dry lands to be adopted Restoration of water sources hindering livelihoods	
		Policies and strategies	Water restoration and harvesting practices to be ensured in policies based on social integration and vulnerability mapping EbA as a tool for restoration to scale up widely Water resource management awareness targeting vulnerable communities Dealing with water borne diseases Ensure bio-engineering policies and plantation	Poor and marginalized group suffering from technology Women Farmers of all groups
Climate Change	Not having climate change impact knowledge Observing patterns change in rainfall, snow fall, increase in hail storm, cloud bursting, More health hazard Farming practices being difficult Shift of flowering season in floral species Water sources drying out More drought and disaster like fire and landslides increasing	People	Increase in health hazard like coughing, fever, throat infections, stomach problems, increase in child mortality Food insecurity among the poor Poor facing adaptive and resilient practices having no skills and knowledge Old age, children and women health hazard more Livestock dying of cold and cattle herders facing problems due to the loss	
		Livelihoods	Production of crops damaged and food insecurity increased Poverty among less land holder increasing because do not adapt easily to climate smart adaptation practices More health issues and less coping strategies impacting women, elderly people and children Difficult in surviving strategies in too cold or too hot climatic conditions Livelihoods based on farming and livestock facing problems	Poor and marginalized communities in all regions Women, old people and children Farmers and cattle herders
Disaster Risk Reduction	Landslides by development activities River cutting Floods Displacement of communities Socio-economic damages Livelihood impacted Increase in dust and waste pollution Fire hazard Drought	People	Suffering from health hazards Food insecurity Loss of land and agricultural crops Migration and shift	Poor and marginalized communities both in the hills and low lands Women and dalit groups
		Livelihoods	Migration costing more money Difficult to adapt to new areas Damages to infrastructures such as	Poor and marginalized groups.

			public schools, houses, agriculture fields, drinking water, irrigation, etc.	
--	--	--	--	--

The pre-feasibility study had identified vulnerable groups as per the (MOE, 2010) table as mentioned above. There are 1,172,558 households in the Gandaki River basin (CBS, 2011). Among these households, the project aims to cover at least 195,912 (16.71 per cent) of households directly through project inputs and another 10 per cent indirectly through spill-over effects. The project will focus on 45 per cent of households from the very high, 25 per cent from high, 15 per cent from medium, 10 per cent from low and 5 per cent from very low vulnerable groups as presented in Table 8.

Table 8: Beneficiary household coverage target

Vulnerability status	Districts	Total HHs		Coverage per cent	Total HH targeted
		No.	Per cent		
Very high	Lamjung	42,079	3.59	45	18,936
High	Chitwan, Dhading, Gorkha, Manang,	274,299	23.39	25	68,575
Medium	Mustang, Nawalparasi, Makawanpur, Tanahu, Kaski, Parbat, Baglung, Myagdi, Rasuwa	557,037	47.51	15	83,556
Low	Syangja, Gulmi, Arghakhanchi, Nuwakot	239,852	20.46	10	23,985
Very low	Palpa	59,291	5.06	5	2,965
Total		1,172,558	100	100	198,016

As Nepal is undergoing federal and provincial election processes, to be completed in December 2017, there was no government structure below the national level that the pre-feasibility team could consult with at the time of preparing this study. Accordingly, this will be undertaken during the full feasibility study. The details of the overall population, literacy, caste and ethnicity and income level has been identified using CBS 2011 updated version 2014 and HDI report 2014. The detailed analysis is shown in table 9:

Table 9: Detail demographic and socio-economic data of the field used as baseline for this study and vulnerable communities

SN	caste/ethnicity	Total	Male	Female	per cent	Vulnerable communities	Gender	Extent	Areas
1	All Caste	5131932	2372672	2759260	100				
2	Brahman – Hill	1069578	491041	578537	20.84	Poor and marginalized	both	Medium	Almost all the areas except for urban sites
3	Magar	789157	353246	435419	15.38	Poor and marginalized	Both (more women)	Highly	All the sites
4	Chhetree	653507	298025	355482	12.73	Poor and marginalized	both	Medium	More in rural areas

5	Tamang	521872	252060	269812	10.17	Medium, poor and marginalized	Both (more women)	Highly	Rural sites
6	Kami	356368	159158	197210	6.94	Poor	both	Highly	Both urban and rural
7	Gurung	348433	156495	191938	6.79	Poor and marginalized	women	Medium	More in rural
8	Newar	234677	109595	125082	4.57	Poor and marginalized	women	Highly	Rural area
9	Tharu	166988	80258	86730	3.25	Poor and marginalized	both	highly	In low lands especially
10	Sarki	163726	72555	91171	3.19	Poor and marginalized	both	highly	All sites
11	Damai/Dholi	146871	66089	80782	2.86	Poor and marginalized	Both	highly	All sites (in Meghang whole community is affected)
12	Kumal	74206	33994	40212	1.45	Poor and marginalized	both	highly	Rural areas
13	Chepong/Praja	66678	33693	32985	1.30	Poor and marginalized	both	highly	Makwanpur and rural sites
14	Thakuri	58627	26713	32398	1.14	poor	women	medium	Rural sites only
15	Musalman	52625	27164	25461	1.03	Poor and marginalized	both	highly	Rural sites
16	Gharti/Bhujel	46941	21526	25415	0.91	Poor and marginalized	both	highly	Rural sites
17	Sanyasi/Dashnami	36519	16908	19611	0.71	Poor and marginalized	both	highly	Rural sites
18	Rai	30036	14500	15536	0.59	poor	women	highly	Rural sites
19	Others	25657	14023	11634	0.50	Poor and marginalized	both	highly	Rural sites
20	Chamar/Harijan/Ram	25008	12779	12229	0.49	Poor and marginalized	both	highly	Rural sites
21	yadav	21663	11457	10206	0.42	Poor and marginalized	both	highly	Rural sites in low lands
22	Ghale	17117	7756	9361	0.33	Poor and marginalized	both	highly	Rural sites
23	Darai	15916	7357	8559	0.31	Poor and marginalized	both	highly	Rural sites
24	Teli	14446	7875	6571	0.28	Poor and marginalized	both	highly	Rural sites
25	Kathbaniyan	12329	6547	5782	0.24	Poor and marginalized	both	highly	Rural sites
26	Kewat	11446	5607	5839	0.22	Poor and marginalized	both	highly	Rural sites
27	Chhantyal/Chhantel	9274	4187	5087	0.18	Poor and marginalized	both	highly	Rural sites in low

									lands
28	Badi	9005	4206	4799	0.18	Poor and marginalized	both	highly	Rural sites
29	Dalit others	8461	4058	4403	0.16	Poor and marginalized	both	highly	Rural sites
30	Bote	8456	4049	4407	0.16	Poor and marginalized	both	highly	Rural sites
31	Koiri/Kushwaha	7668	4093	3575	0.15	Poor and marginalized	both	highly	Rural sites
32	Majhi	7652	3789	3863	0.15	Poor and marginalized	both	highly	Rural sites
33	Brahmu/Baramo	7316	3288	4028	0.14	Poor and marginalized	both	highly	Rural sites
34	Thakali	7173	3328	3845	0.14	poor	women	medium	Rural sites
35	Kurmi	6603	3519	3084	0.13	Poor and marginalized	both	highly	Rural sites
36	Kahar	6556	3281	3275	0.13	Poor and marginalized	both	highly	Rural sites
37	Terai others	5936	3090	2846	0.12	Poor and marginalized	both	highly	Rural sites
38	Dhobi	5714	2913	2801	0.11	Poor and marginalized	both	highly	Rural sites
39	Dusadh/Pasawan/Pasi	5591	2891	2700	0.11	Poor and marginalized	both	highly	Rural sites
40	Hajam/Thakur	5011	2809	2202	0.10	Poor and marginalized	both	highly	Rural sites
41	Dura	4875	2191	2777	0.09	Poor and marginalized	both	highly	Rural sites
42	Musahar	4848	2431	2417	0.09	Poor and marginalized	both	highly	Rural sites
43	Rajbhar	4444	2234	2210	0.09	Poor and marginalized	both	highly	Rural sites
44	Kalwar	4186	2404	1782	0.08	Poor and marginalized	both	highly	Rural sites
45	Mallaha	3822	2044	1778	0.07	Poor and marginalized	both	highly	Rural sites
46	Danuwar	3802	1863	1939	0.07	Poor and marginalized	both	highly	Rural sites
47	Sonar	3317	1596	1721	0.06	Poor and marginalized	both	highly	Rural sites
48	Gaine	2833	1346	1487	0.06	Poor and marginalized	both	highly	Rural sites
49	Haluwai	2781	1548	1233	0.05	Poor and marginalized	both	highly	Rural sites
50	Lhopa	2564	1232	1332	0.05	Poor and marginalized	both	highly	Rural sites
51	Brahman - Tarai	2390	1231	1159	0.05	poor	women	medium	Rural sites
52	Sunuwar	2284	1134	1150	0.04	Poor and marginalized	both	highly	Rural sites

53	Lohar	2116	1095	1021	0.04	Poor and marginalized	both	highly	Rural sites
54	Bin	2010	1055	955	0.04	Poor and marginalized	both	highly	Rural sites
55	Kanu	1635	1048	587	0.03	Poor and marginalized	both	highly	Rural sites
56	Limbu	1620	862	758	0.03	Poor and marginalized	both	highly	Rural sites
57	Gaderi/Bhedhar	1572	814	758	0.03	Poor and marginalized	both	highly	Rural sites
58	Badhaee	1482	762	720	0.03	Poor and marginalized	both	highly	Rural sites
59	Khawas	1477	658	819	0.03	Poor and marginalized	both	highly	Rural sites
60	Sherpa	1315	709	606	0.03	poor	women	medium	Rural mountain
61	Pahari	1291	632	659	0.03	poor	women	highly	Rural sites
62	Hyolmo	1126	532	594	0.02	Poor and marginalized	both	highly	Rural sites
63	Marwadi	1065	582	483	0.02	poor	women	medium	Rural sites
64	Baraee	1062	593	469	0.02	Poor and marginalized	both	highly	Rural sites
65	Kayastha	1025	521	504	0.02	Poor and marginalized	both	highly	Rural sites
66	Rajput	1025	571	454	0.02	Poor and marginalized	both	highly	Rural sites
67	Bangali	991	685	306	0.02	Poor and marginalized	both	highly	Rural sites
68	Undefined Others	940	473	467	0.02	Poor and marginalized	both	highly	Rural sites
69	Bhote	935	457	478	0.02	Poor and marginalized	both	highly	Rural sites
70	Kumhar	817	439	378	0.02	Poor and marginalized	both	highly	Rural sites
71	Foreigner	802	497	305	0.02	Poor and marginalized	both	highly	Rural sites
72	Dhankar/Kharikar	670	327	343	0.01	Poor and marginalized	both	highly	Rural sites
73	Kisan	633	270	363	0.01	Poor and marginalized	both	highly	Rural sites
74	Mali	616	297	319	0.01	Poor and marginalized	both	highly	Rural sites
75	Dhunia	566	263	303	0.01	Poor and marginalized	both	highly	Rural sites
76	Kamar	525	256	269	0.01	Poor and marginalized	both	highly	Rural sites
77	Yakkha	404	201	203	0.01	Poor and marginalized	both	highly	Rural sites
78	Nuniya	363	268	95	0.01	Poor and	both	highly	Rural sites

						marginalized			
79	Dhanuk	338	229	109	0.01	Poor and marginalized	both	highly	Rural sites
80	Sudhi	298	168	130	0.01	Poor and marginalized	both	highly	Rural sites
81	Satar/Santhal	232	118	114	0.00	Poor and marginalized	both	highly	Rural sites
82	Pattharkatta/Kushwadi ya	168	83	85	0.00	Poor and marginalized	both	highly	Rural sites
83	Lodh	165	91	74	0.00	Poor and marginalized	both	highly	Rural sites
84	Dom	150	79	71	0.00	Poor and marginalized	both	highly	Rural sites
85	Thami	139	77	62	0.00	Poor and marginalized	both	highly	Rural sites
86	Dhandi	129	68	61	0.00	Poor and marginalized	both	highly	Rural sites
87	Tatma/Tatwa	126	81	45	0.00	Poor and marginalized	both	highly	Rural sites
88	Rajbansi	114	72	42	0.00	Poor and marginalized	both	highly	Rural sites
89	Natuwa	85	40	45	0.00	Poor and marginalized	both	highly	Rural sites
90	Jhangad/Dhagar	70	48	22	0.00	Poor and marginalized	both	highly	Rural sites
91	Dhimal	51	27	24	0.00	Poor and marginalized	both	highly	Rural sites
92	Punjabi/Shikh	50	30	20	0.00	Poor and marginalized	both	highly	Rural sites
93	Jirel	46	21	25	0.00	Poor and marginalized	both	highly	Rural sites
94	Chamling	38	17	21	0.00	Poor and marginalized	both	highly	Rural sites
95	Kalar	33	16	17	0.00	Poor and marginalized	both	highly	Rural sites
96	Khatwe	33	15	18	0.00	Poor and marginalized	both	highly	Rural sites
97	Rajdhob	29	25	4	0.00	Poor and marginalized	both	highly	Rural sites
98	Bantaba	22	10	12	0.00	Poor and marginalized	both	highly	Rural sites
99	Gangai	22	8	14	0.00	Poor and marginalized	both	highly	Rural sites
100	Bantar/Sardar	20	20	0	0.00	Poor and marginalized	both	highly	Rural sites
101	Halkhor	19	12	7	0.00	Poor and marginalized	both	highly	Rural sites
102	Lhomi	14	5	9	0.00	Poor and marginalized	both	highly	Rural sites

10 3	Nachhiring	14	7	7	0.00	Poor and marginalized	both	highly	Rural sites
10 4	Dev	12	7	5	0.00	Poor and marginalized	both	highly	Rural sites
10 5	Kulung	12	12	0	0.00	Poor and marginalized	both	highly	Rural sites

Within the Gandaki river basin there are around 105 castes and ethnicities with Brahman-hill and Chhetri making up 33 per cent, indigenous groups around 39 per cent, Dalits 9 per cent and other groups which are marginalized and scattered in the study area comprise 19 per cent. During the study, it was noted that in most of the vulnerable groups belonged to poor and marginalized and they were more highly vulnerable in the rural sites than urban areas.

Table 10 shows population, family size, literacy rate, poverty rate and HDI showing the variation in the Gandaki River Basin. The main purpose of this table is to show the indices and factors that are important to consider when vulnerability groups are further identified. The NHDR report 2014 strongly emphasized that inclusive development subsumes non-income dimensions of well-being, and includes distribution not only across individuals, but also across groups differentiated by gender, ethnicity, regional location, and so on. Another key factor is SIA also assesses these indicators to identify climate vulnerable groups in the study area.

Table 10: Population status, literacy rate and poverty index of Gandaki River Basin

SN	District	Households	Total population ²	Male	Female	Family size	Literacy ³ rate in per cent	Poverty index ⁴	HDI
1	Gulmi	64821	280160	120885	158165	4.32	72.6	27.4	.464
2	Baglung	61482	268613	117997	150616	4.36	71.9	27.3	.478
3	Rasuwa	9,778	43,300	21,475	21,825	4.43	54	42.2	.461
4	Nuwakot	59,215	277,471	132,787	144,684	4.69	59.8	35.7	.466
5	Manang	1480	6538	3661	2877	4.42	74.8	25.5	.568
6	Mustang	3354	13452	7093	6359	4.01	66.2	31.2	.508
7	Gorkha	66506	271061	121041	150020	4.08	66.3	33.6	.481
8	Lamjung	42079	167724	75913	91811	3.99	71.1	27.0	.507
9	Dhading	73851	336067	157,834	178,233	4.55	62.9	33.4	.461
10	Chitwan	132462	579984	279087	300897	4.38	70.7	24.8	.551
11	Syangja	68881	289148	125833	163315	4.20	76.6	25.3	.493
12	Tanahun	78309	323288	143410	179878	4.13	74.8	29.7	.506
13	Palpa	59291	261180	115840	145340	4.41	76.2	24.6	.510
14	Nawalparsi	128793	643508	303675	339833	5.00	70.8	28.0	.493
15	Kaski	125673	492098	236385	255713	3.92	82.4	16.50	.576

² CBS, 2011- Central Bureau of Statistics National Census Report, 2011. Kathmandu

³ UNESCO, 2013- Literacy Status in Nepal (Literacy age group by 5+), UNESCO, Kathmandu

⁴ NHDR, 2014- National Human Development Report for Nepal, 2014, UNDP, Kathmandu

16	Myagdi	27762	113641	51395	62246	4.09	71.9	28.5	.490
17	Makwanpur	86127	420477	206684	213793	4.88	67.9	28.4	.497
18	Parbat	35719	146590	65301	81289	4.10	73.8	24.6	.410
19	Argakhanchi	46835	197632	86266	111366	4.22	72.6	27.4	.482

Source: CBS 2011: NHDR, 2014 and UNESCO, 2013

The Human Poverty Index and HDI indicates that within the Gandaki River Basin the average HPI is 4.2 and the HDI ranges from .45 to .499 making it higher and changing. Social sector policies need to recognize caste and ethnic dimensions of human development in order to address climate change impacts and the capacity of people to apply adaptive practices.

Clear and ongoing caste and ethnic inequalities are revealed in different educational achievements and earnings. This strengthens the argument for deliberate strategies to increase inclusiveness by providing educational and economic opportunities for disadvantaged ethnic and caste groups such as the Dalits and Muslims. Besides this, literacy among these vulnerable groups affects peoples' ability to adapt to new technologies. With respect to climate change, urban people seem to be taking up new technologies and are more aware of climate change and its responses.

According to (CBS, 2016) report, it is important to know the occupation of vulnerable groups as classified in (MOE, 2010). For the project to initiate new programs and address climate change issues based on social inclusion, occupation matters (see Table 11).

Table 11: Household head by Occupation

Analytical Domain	Occupation (%)							Total
	Agriculture	Salary/ Wage	Non-Agri. business	Household work	Seeking job	No work	Unable to work	
NAPA Combined Vulnerability Index								
Very High	51.15	16.46	12.96	7.65	0.08	9.17	2.53	100
High	66.86	11.06	7.51	3.59	0.14	6.80	4.04	100
Moderate	59.44	13.15	8.46	6.91	0.17	7.62	4.25	100
Low	56.53	12.87	10.48	5.29	0.16	11.02	3.65	100
Very Low	57.15	10.68	13.80	4.13	0.09	11.73	2.43	100
Analytical Domain	Income Sources (%) ⁵							
	Agriculture	Salary/ wage	Non agri- business	Remittance	Others			
NAPA Combined Vulnerability Index								
Very High		71.1	45.2	22.3	17.9	10.3		
High		86.1	26.8	14.5	36.6	8.0		
Moderate		84.4	39.6	19.6	30.1	13.3		
Low		74.0	42.7	21.0	30.3	12.0		
Very Low		82.9	38.7	27.6	37.1	19.5		

Source: (CBS, 2016)

In Nepal the main income source of vulnerable groups are agriculture, followed by salary/wage and then remittance being the third highest income generation factor.

Both big farm holders and small holders are directly impacted by climate change making the areas food insecure and requiring people to adapt by changing their food habits.

3.3 The Role of Social Groups in Natural Resource Use and Management

The key roles played by various social, ethnic groups in natural resource use and management are indicated below based on the field knowledge and reports. Women, poor, ethnic groups, marginalized communities, dalits and disabled groups have substantial roles in using resources, but limited access to manage and benefit share and these groups have lesser roles in politics.

Table 12: Role of Social Group in Natural Resource Use and Management

Social groups	Role in politics and influence	NRM use and access	NRM management	NRM conflict resolution
Brahmin elite	High	High in hills and mountains	Majority of the participation in top management body Key decision makers of plans and policies Key leadership position Control resources Key role in benefit sharing	High involvement
Chettree elite	High to medium	High in all sectors	Key decision makers Key leaders	Medium involvement
Brahmin poor	Low	High	Low in management and decision making Not participatory in management bodies No roles in benefit sharing	Low but more in conflict due
Chettree poor	Low	High	Low participation in decision making and leadership No role in benefit sharing	Low participation
Tamang	Medium	High in use and medium in access	High in mountain areas but low in terai areas Medium access to benefit sharing	Low participation
Magar	Low	High in use and low in access	Low participation in decision making and leadership Low in benefit sharing	Low participation
Dalits	Low	High in use and low in access	Low participation in decision making and leadership	Low participation
Disabled groups	Low participation	High in use and less access	Low participation in decision making and leadership	Low participation
Other minority group (muslims, musahar,	Low participation	High in use and less access	Low participation in decision making and leadership	Low participation

sonaha, etc)				
Other groups	Medium	High in use and access	Low participation in decision making and leadership	Medium participation based on population representation

3.4 Recommended Key Social Inclusion -related Activities

The following table provides a summary of the key activities that will enable social equity. A social inclusion action plan should be included as an appendix of the project document (see example below as Appendix 2).

Table 13: Summary of key activities

SN	Sectors/cross sectors	Key aspects to be considered
1	Ecosystem based adaptation and natural resource management (Forest and Biodiversity)	<ul style="list-style-type: none"> • Promote plantation of native and fast growing tree species • Promotion of community based watershed management practices • Introduce MAPs and NTFP among the poor and marginalized groups • Roadside development build drainage systems • Embankment improvement • Forest fire and landslide control
2	Agriculture (Agroforestry)	<ul style="list-style-type: none"> • Fruit nursery and plantation • Utilization of abandon and underutilized agriculture lands through agroforestry practices. • Soil fertility improvement through bio-char and green manure production. • Promote commercial vegetable and fruit production through agroforestry. • Fodder and forage development through agroforestry to provide support for livestock based economy development.
3	Climate change indicators	<ul style="list-style-type: none"> • Flood, landslides, crop cycle, water source, drought, plants and invasive species
4	Economy and Market potential	<ul style="list-style-type: none"> • Cooperative based marketing
5	Gender and Social Inclusion prospective	<ul style="list-style-type: none"> • Awareness, training and promotion of income generation activities focusing women, poor, marginalized and Dalit households. • Involve women, poor and marginalized vulnerable communities in preparing plans and implementation • Involve women, school children, vulnerable communities in monitoring climate change impacts and develop tools

6	Watershed conditions and management possibilities	<ul style="list-style-type: none"> • Watershed areas of Parbati Kunda, Kalika and Gosaikunda Rural Municipality are highly vulnerable to climate change and DRR • Water source protection, water harvesting and management to be initiated • Improve irrigation canal and drainage systems to be maintained • Promote bio-engineering activities for soil conservation and landslides rehabilitation and check-dam construction along river and stream bank to protect paddy field from cutting and siltation. • Reform land use practices in landslide areas protecting physical infrastructures
7	Monitoring and Evaluation and Knowledge Management (including Traditional Knowledge)	<ul style="list-style-type: none"> • Promote Participatory Monitoring and Evaluation activities. • Develop criteria and indicators focusing to target accomplishment with beneficiary's households (women, poor, disable, ethnic groups, marginalized and Dalit households). • Provide training to selected elected members of Municipality, Rural Municipality and their staff and community group members about Participatory Monitoring and Evaluation process, criteria and indicators.

References

- CBS, 2011. *National Census Report, 2011*. s.l.:Government of Nepal, National Planning Commission, Central Bureau of Statistics.
- CBS, 2012. *National Population and Housing Census*. s.l.:Government of Nepal, National Planning Commission, Central Bureau of Statistics, Kathmandu.
- CBS, 2016. *National Climate Change Impact Survey . A Statistical Report*. s.l.:Government of Nepal, National Planning Commission, Central Bureau of Statistics, Kathmandu.
- CIPRED, N. a., 2015. *Climate change and indigenous peoples policies and practices in Nepal..* s.l.:NEFIN and CIPRED, Kathmandu..
- GoN/MoFSC, 2014. *Nepal Biodiversity Strategy and Action Plan 2014-2020*. s.l.:Government of Nepal, Ministry of Forests and Soil Conservation, Kathmandu, Nepal..
- GoN, 2011. *National Framework on Local Adaptation Plans for Action*. s.l.:Ministry of Science Technology and Environment, Government of Nepal.
- GoN, 2014. *National Human Development Report for Nepal*. s.l.:Government of Nepal, National Planning Commission and UNDP, Kathmandu.
- GoN, 2015. *Nepal's Constitution*. s.l.:Constitutional Assembly Secretariat, Singha Durbar, Kathmandu.
- Gurung. O, M. T. M. T., 2014. *Perspectives on Social Inclusion and Exclusion in Nepal*. s.l.:Tribhuvan University, Central Department of Sociology/Anthropology, Kathmandu.
- HMGN/MFSC, 2002. *Nepal Biodiversity Strategy*. s.l.:His Majesty's Government of Nepal, Ministry of Forest and Soil Conservation, Kathmandu, Nepal.
- HMGN, 1989. *Master Plan for Forestry Sector*. s.l.:Ministry of Forest and Soil Conservation, His Majesty's Government of Nepal, Singh Durbar, Kathmandu..
- ILO, 2007. *ILO Convention No 169 in Nepali*. s.l.:International Labour Organization, Retrieved from http://www.ilo.org/indigenous/resources/publication/WCMC_150567/lang_en/index.htm.
- IPCC, 2007. *Climate Change 2007: The Physical Science Basis, Contribution of Working Group I to the Fourth Assessment Report*. s.l.:Intergovernmental Panel on Climate Change, 996, Solomon, s., Qin, d., Manning, M., Chen, .
- IPCC, 2010a. *Review of the IPCC processes and procedures, 32nd session. Busan, Seoul: the Inter academy council (IPCC-xxxII/doc. 7)*. s.l.:Intergovernmental Panel on Climate Change.
- IPCC, 2010. *Review of the IPCC processes and procedures, 32nd session. Busan, seoul: the Inter academy council (IPCC-xxxII/doc. 7)*. s.l.:Intergovernmental Panel on Climate Change.
- IPCC, 2014. *Climate Change 2014, Synthesis Report Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. s.l.:Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)). IPCC, Geneva, Switzerland.
- IUCN/HMGN, 1988. *The National Conservation Strategy for Nepal*. s.l.:International Union for Conservation of Nature and His Majesty's Government of Nepal.
- Labonte R, H. A. a. K. X., 2011. *Indicators of Social Exclusion and Inclusion: A Critical and Comparative Analysis of the Literature..* s.l.: Ottawa: Institute of Population Health, University of Ottawa .
- Labonte R, H. A. a. K. X., n.d. *Indicators of Social Exclusion and Inclusion: A Critical and Comparative Analysis of the Literature..* s.l.:Ottawa: Institute of Population Health, University of Ottawa.

- MOE, 2010. *National Adaptation Programme of Action to Climate Change*. s.l.:Ministry of Environment,Kathmandu.
- MOE, 2011. *Climate Change Policy*. s.l.:Ministry of Environment, Kathmandu.
- MOPPW, 2004. *Rural Water Supply and Sanitation Policy & Strategy*. s.l.:Ministry of Physical Planning and Works.
- MoSTE, 2015. *Indigenous and Local Knowledge and Practices for Climate Resilience in Nepal, Mainstreaming Climate Change Risk Management in Development*. s.l.:Ministry of Science, Technology and Environment (MoSTE), Kathmandu, Nepal..
- ODI, 2016. *Resilience Scan January-March 2016, A review of literature, debate and social media activity on resilience, Published by ODI. Practical Strategies to Promote Social Integration”, unpublished*. s.l.:Overseas Development Institute.
- UN, 2011. *The social dimensions of Climate change- discussion draft by UN Task Team*. s.l.:United Nations.
- UN, 2013. *A New Global Partnership: Eradicate Poverty and Transform Economies through Sustainable Development. Report of the High-Level Panel of Eminent Persons on the Post-2015 Development Agenda*. New York. s.l.: United Nations. <http://www.un.org/sg/management>.
- UN, 2015. *Millennium Development Goals and Beyond 2015*. s.l.:United Nations Development Programme Publication.
- UNDESA, 2007. *Final Report on the Expert Group Meeting on “Creating an Inclusive Society*. s.l.:United Nations Department of Economic and Social Affairs.
- UNEP, 2013. *UNEP 2013: The Social Dimensions of Ecosystem Dimensions, UNEP policy brief. 2013..* s.l.:United Nations Environment Programme.
- UNESCO, 2013. *Literacy Status in Nepal (Literacy age group by 5+)*. s.l.:United Nations Educational, Scientific and Cultural Organization, Kathmandu.
- UNFCCC, 2013. *Best practices and available tools for the use of indigenous and traditional knowledge and practices for adaptation, the application of gender-sensitive approaches and tools. technical paper; fccc/tP/2013/11*. s.l.:United Nations Framework Convention on Climate Change.
- UNFCCC, 1992. *United Nations Framework Convention on Climate Change, Internal Agreements*. s.l.:s.n.

