

**Improving Climate Resilience of Vulnerable Communities and Ecosystems in the
Gandaki River Basin, Nepal**

Annex 8b: Gender Assessment Report

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Abbreviations

ADB	Asian Development Bank
CAPA	Community Adaptation Plan of Action
CBOs	Community Based Organizations
CBS	Central Bureau of Statistics
CCGAP	Climate Change Gender Action Plan
CITES	Convention on International Trade in Endangered Species of Wild Flora and Fauna
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
DSCWM	Department of Soil Conservation and Watershed Management
EbA	Ecosystem Based Adaptation
Eco-DRR	Ecosystem – Disaster Risk Reduction
EWS	Early Warning System
FECOFUN	Federation of Community Forest Users, Nepal
FGDs	Focus Group Discussions
FNCCI	Federation of Nepalese Chambers of Commerce and Industry
FNCSI	Federation of Nepal Cottage and Small Industries
GAFSP	Global Agriculture and Food Security Program
GCF	Green Climate Fund
GDI	Gender Development Index
GDP	Gross Domestic Product
GEM	Gender Empowerment Measure
GESI	Gender Equity and Social Inclusion
GGI	Gender Gap Index
GLOF	Glacial Lake Outburst Flood
GoN	Government of Nepal
GRB	Gandaki River Basin
HDI	Human Development Index
HPI	Human Poverty Index
I/NGOs	International /Non-Government Organizations
ICIMOD	International Centre for Integrated Mountain Development
IFAD	International Fund for Agriculture Development
ILO	International Labour Organization
LAPA	Local Adaption Plan of Action
MOAD	Ministry of Agricultural Development
MOFALD	Ministry of Federal Affairs and Local Development
MOFSC	Ministry of Forest and Soil Conservation
MOLD	Ministry of Livestock Development
MOPE	Ministry of Population and Environment
MOWCSW	Ministry of Women, Children and Social Welfare
MPI	Multidimensional Poverty Index
MSFP	Multi-stakeholder Forestry Program
NAP	National Adaptation Plan
NAPA	National Adaptation Program of Action

NHRC	National Human Rights Commission
NLFS	National Labor Force Survey
NPC	National Planning Commission
NRM	Natural Resource Management
NTFP	Non-timber Forest Product
NTNC	National Trust for Nature Conservation
PRA	Participatory Rural Appraisal
SAARC	South Asian Association for Regional Cooperation
SDC	Swiss Development Cooperation
TWG	Thematic Working Group
UNDP	United Nation Development Program
UNFCCC	United Nation Framework Convention on Climate Change
USAID	United States Agency for International Development
VDC	Village Development Committee
WCO	Women Children Office
WDO	Women Development Office

1. Introduction

Nepal is facing a wide range of impacts from climate change including changes in rainfall patterns, longer droughts, frequent landslides and soil erosion, flash floods, increased risks of glacial outbursts and rising temperatures. These changes are having negative impacts on agriculture and food security, water resources, forests and biodiversity, health, tourism and infrastructure. This leads to reduced adaptive capacity and increased vulnerability of communities and ecosystems. Accordingly, there is an urgent need to enhance the adaptive capacity and resiliency of both ecosystems and vulnerable communities.

The Government of Nepal (GoN) has given strong emphasis to the river basin approach through different sectorial policies, plans and strategies. It has also started using Ecosystem based Adaptation (EbA) and Ecosystem-based disaster risk reduction (Eco-DRR) through various projects and has recently recommended up-scaling and replicating best practices and learning from past EbA projects to wider areas.

IUCN, as the Accredited Entity (AE) for the Green Climate Fund (GCF), with the Department of Soil Conservation and Watershed Management (DSCWM)/Ministry of Forest and Soil Conservation, and the National Trust for Nature Conservation (NTNC) have collaborated on the development of the proposed project “Enhancing Climate Resilience of Vulnerable Communities and Ecosystems in the Gandaki River Basin”

1.1 Socio Economic Background

Population: According to the 2016 update of the 2011 census, Nepal’s population is 28.33 million. The average annual population growth rate during the period 2012-2016 was 1.14 per cent (ADB, 2017). The population density is 192 persons per km². The sex ratio is 94.6 males per 100 females, meaning that Nepal’s population comprises 48.5 per cent male and 51.8 per cent female. The Census data of 2011 shows that female headed households have increased by 11 percentage points from 14.87 per cent in 2001 to 25.73 per cent in 2011.

Caste/Ethnicity: There are 125 caste/ethnic groups reported in the 2011 census. Chhetri is the largest caste/ethnic group with 16.6 per cent (4,398,053) of the total population followed by Brahman-Hill (12.2 per cent; 3,226,903) and Kirat (5 per cent).

Languages: There were 123 languages reported as spoken as mother tongue in the 2011 census. Nepali is spoken as mother tongue by 44.6 per cent (11,826,953) of the total population followed by Maithili (11.7 per cent 3,092,530) and Bhojpuri (6.0 per cent; 1,584,958).

Religion: Of the ten categories of religion reported in the census, Hinduism is followed by 81.3 per cent (21,551,492) of the population, Buddhism 9.0 per cent (2,396,099) and Islam 4.4 per cent (1,162,370).

Poverty: The Gross Domestic Product (GDP) of Nepal is USD 20.88 billion and GDP per capita USD 2,313 (NLSS -2011). The average annual economic growth rate from 2012-2016 was 1.40 per cent. The Gini Coefficient which measures income inequality was 32.8 in 2014 (ADB, 2017)

In Nepal’s 14th 3-year periodic plan (2016-2019), an average annual growth rate of GDP of 7.2 per cent has been projected. Among other objectives in this plan, is a focus on cross-cutting issues such as gender equality, an inclusive society, environmental protection and capacity development of different institutions.

1.2 Objectives of the Study

This gender assessment aims to provide an overview of the situation of Gender Equity/Equality in Nepal, identifying key gender issues and other categories of discrimination and vulnerabilities especially caste,

poverty and ethnic vulnerabilities relevant to the project. The assessment identifies gender-mainstreaming opportunities within the project components.

This Gender Equity/Equality assessment provides grounded justification for preparing a Climate Change Gender Action Plan (CCGAP) with indicators, targets and activities identifying women as beneficiaries, leaders and decision makers with tentative cost estimates.

1.3 Method

The assessment is based on a desk review of available literature and data as well as consultation with a wide range of stakeholders from the national level, provincial level, and local level down to the level of vulnerable communities.

- Relevant data and information were collected from published secondary data and publications from the Central Bureau of Statistics of Nepal Census Data of 2011, the World Human Development Report 2016, the National Human Development Report Nepal -2014, the Multidimensional Poverty Index Report from the National Planning Commission of Nepal -2018, World Bank, ADB, the Ministry of Population and Environment, the Ministry of Forest and Social Conservation, and various other reports and publication of INGOs, NGOS working in climate change, forestry, natural resource management (NRM) and disaster risk reduction (DRR) sectors in Nepal.
- The units of analysis used for the gender equity assessment are: the household level for quantitative data wherever it was available, the community level for focus group discussions, and key informant interviews at the national and provincial level. Data and information are disaggregated by gender as well as poverty, caste and ethnic groups as far as possible.
- All 19 districts within the Gandaki River Basin (GRB) were visited by a group of multi sector experts including a gender expert and field facilitators for site specific firsthand information collection and consultation with key stakeholders and vulnerable communities. Information collection was done through direct observation, interviews and focus groups discussion guided by a pre-prepared checklist.

2. A Review of National Gender Policies, Legislation and Strategies

2.1 Gender Equality/Equity in Constitution and Law

The Constitution of Nepal 2015

The Constitution of Nepal is a significant milestone for gender equity and social inclusion (GESI). It enshrines equal rights for women, the poor, the vulnerable and people from different social groups. Positive provisions include affirmative action to address historical disadvantage and a ban on sex or caste/ethnicity-based discrimination.

The article on Rights of Women establishes the right to equal lineage; right to safe motherhood and reproductive health; right to participate in all bodies of the State; right to property and family affairs; and positive discrimination in education, health, employment and social security. It also makes any act of violence against women punishable by law. The Right to Equality further elaborates the special provisions by law for the protection, empowerment or development of citizens. The Right to Social Justice establishes the people's right to participate in state bodies based on the principles of inclusion and proportional representation.

Property Rights (Economic Rights)

Due to a patriarchal and patrilineal system, women in Nepal had been denied full access to and control over family property. The legal framework maintained this discrimination until the 11th Amendment of the Civil Code (commonly referred to as the Women's Bill, 2002), which repealed several discriminatory provisions of the Civil Code along with other acts and entitled women to significant rights. The

amendment provided equal inheritance rights to unmarried daughters and sons (where previously an unmarried daughter had inheritance rights only if she was over 35 years of age) and removed discriminatory conditions that prevented women from having full access to property. Women were granted the right to their husband's property upon divorce and the provision of receiving monthly or yearly support in lieu of property. Widows were given full rights to their property allowing them to use it even if they remarry (where previously they were required to return property to the deceased husband's household upon remarriage).

The Gender Equality Act (2006) advanced the property rights of women even further and gives equal property right on ancestral property to son and daughters. It removed and amended discriminatory language. As per latest census data female ownership of fixed assets is 19.71 percent of households, land or house or both in the name of female member of the household (CBS, 2012)

2.2 Gender Equality and Inclusion Indicators in the Socio-Economic Sector

Multidimensional Poverty Index -2018

The latest 2018 Multidimensional poverty report of the GoN/National Planning Commission (NPC) notes that 28.6 per cent of Nepal's population is multidimensionally poor. However, Nepal has halved its Multidimensional Poverty Index (MPI) from 59 per cent in 2006– to 29 per cent in 2014. Under-nutrition and completion of up to five years of schooling are two key indicators which contributed to the improvement of the MPI. For the first time this report enables the MPI to be disaggregated by the recently formed seven provinces of Nepal, whereby Province 6 and 2 have the highest rate of multidimensional poverty – with every second person being multi dimensionally poor (50 per cent) – followed by Provinces 5 and 7 (approximately 30 per cent being poor) (NPC, 2018). Some of the GRB is in province 5. See Figure 1 for the location of the Provinces



Figure 1: Map of Nepal showing location of provinces

In terms of under nutrition/malnutrition, a 2017 article in the daily newspaper Kantipur reported that in some areas of province 6, girls are highly undernourished compared to boys and even dying due to gender-based discrimination in food distribution and lack of timely health care for girl children. Very heavy workloads of rural and mountain-based women due to male out-migration, gender inequality in the household division of labor, and difficult mountain terrain, women have no time to take care of their children and themselves. This situation is contributing to the poor health outcome for women and girls (Kantipur Daily 2017, Dec.23 Saturday).

In the GRB the situation of under nutrition and malnutrition of girls is not as severe as in far western districts in province 6. Comparatively, the districts of GRB are more accessible. Nevertheless, there are pockets of poverty and certain caste groups including Chepang (in Dhanding and Chitwan), Majhi, Bote, and Tharu who are generally poor, not educated and live in remote areas. Girls get lower less priority in terms of nutritious food, are often subject to child marriage /early marriage, and are not given any priority for education beyond primary level, or health care.

Human development Index (HDI) and Human Poverty Index (HPI)

The Human Development Index (HDI) score for Nepal in 2011 was 0.458, the lowest ranking among countries of the South Asian Association for Regional Cooperation (SAARC), aside from Afghanistan (NPC & UNDP, 2014). Among the ecological regions, the Hills have the highest HDI value at 0.520, compared to the Terai (plains) at 0.468 and the Mountains at 0.440. The Human Poverty Index (HPI) value for Nepal in 2011 is 31.12. Urban-rural differences are considerable, with rural poverty nearly 1.8 times higher than urban poverty.

Global Gender GAP Index (GGI), World Economic Forum

The Global Gender Gap Index (GGI) measures gender parity between males and females. The GGI for Nepal is 0.661, and Nepal ranks 110 out of 144 countries measured. Nepali women are progressing in terms of political representation they rank 68 out of 110. In health and survival, they rank 92. However, in terms of economic opportunity (115) and educational attainment (123) they are ranking far behind their global women counterparts.

The Gender Development Index (GDI), UNDP

The Gender Development Index (GDI), score for Nepal for 2011 was 0.534. Among the ecological regions, the GDI value based on the geometric mean is the highest for the Hills at 0.515, followed by the Terai at 0.458 and the Mountains at 0.430. Gender disparities in health, education and income remain major challenges across Nepal. Nationally, the average income of women is 57 per cent lower than the average for men, whereas 80.1 per cent of women are economically active which is a paradox that reflects the lower economic status of women.

The Gender Empowerment Measure (GEM), UNDP

The Gender Empowerment Measure (GEM) for Nepal in 2011 was 0.568. Among ecological regions, the Mountains have the lowest value at 0.483, while the Hills have the highest at 0.572. This is due to the low share of Mountain women in Parliament at 18.6 per cent, compared to 28.9 per cent for the Hills and 32.9 per cent for the Terai, as well as low combined income values. Among development regions, the Far Western region (now province 6) has the lowest GEM value of 0.523, primarily due to its low share of women in administrative and professional positions. The Eastern region has the highest GEM at 0.575, followed by the Central and Western regions.

Employment, Income and Labor Migration

The proportion of economically active women in Nepal is quite high compared to other South Asian Countries. According to the National Labor Force Survey, 80.1 per cent of women are economically active compared to 87.5 per cent of men (NLFS, 2014). This is in part due to the predominance of women in subsistence agriculture, where women are highly active following high levels of male outmigration. Of those employed, 89 per cent of women are engaged in agriculture and forestry compared to 70 per cent of men. However, the wages of women lag well behind those of men. In non-agricultural wage employment, women are concentrated in low-paying and less-productive jobs of low capital intensity. Female migration is also increasing, with official figures reaching 11,007 in 2008 (of a total of 266,666 migrants in that year), although this probably understates the volume given the numbers migrating without official permission (ADB, 2010). It has been estimated that 11 per cent of

total remittances are from women migrants. The Foreign Employment Act, 2007 aims to protect the rights of workers and professionals.

Health

In Nepal the maternal mortality ratio is 229 deaths per 100,000 live births, which is quite high (PEHRC, 2016). The government's Second Long-Term Health Plan (1997–2017) gives high priority to improving neonatal and maternal health outcomes and includes many initiatives to improve access for the poorest and socially excluded, including a safer motherhood program, and a female community health volunteer program, which are quite successful.

Major health problems specific to women-specific are prolapsed uterus, under nutrition and anemia due to heavy workloads, combined with inadequate access to nutritious food during menstrual cycles and post-delivery. This situation is prevalent in the far western areas, as well as in some parts of the Terai, where patriarchal and gender discriminatory norms are stronger, and the overall poverty level is very high. One study estimated that more than 600,000 women in Nepal are suffering from uterus prolapse (ICIMOD, 2011).

Education

The share of total enrolment for girls is 50.4 per cent at primary level, 50.5 per cent at lower secondary, and 50.4 per cent at basic levels. This clearly demonstrates that the gender parity has been achieved in basic education, including primary and lower secondary education (1.02 at primary level, 1.02 at lower secondary level and 1.02 at basic level) (WEF, 2016). However, in terms of adult literacy rate, there is wide gender gap where 75 per cent of males and only 57 per cent of females are literate.

There is a huge disparity among boys and girls in terms of dropout rates from secondary school education. Early marriage is a main cause of girls dropping out of school, and economic condition and poverty is the main reason boys drop out.

Human Trafficking

Trafficking of children and women in Nepal is a pressing issue. Around 16,500 Nepali citizens, mostly unmarried women and children, were trafficked in 2014-16, according to a national report released by the National Human Rights Commission (NHRC, 2016)(cited in e-kantipur). The Nepal Police records indicate 1,233 women and children missing (i.e. likely trafficked) in a three-month period after the Gorkha earthquake. 85 per cent of rescued trafficking victims had never been to school, which indicates a nexus with gender discrimination, illiteracy and poverty, in this case natural disaster and climate hazard is also a key trigger. The Human Trafficking and Transportation (Control) Act, 2007, provides for the protection and rehabilitation of trafficking victims.

2.3 Policy and Institutional Environment towards a Gender Equity-based Approach to Ecosystem based Adaptation (EbA)

2.3.1 The Evolution of Climate Change Policy and Gender and Inclusion Policy in Nepal

There are a range of laws, policies and programs related to climate change adaptation in Nepal. This part of the assessment examines their evolution and the extent to which they take gender into account and future prospect for Gender Equality based Approach to EbA.

National Adaptation Plan of Action, NAPA (2010) Nepal submitted its NAPA to the UNFCCC Secretariat in September 2010. Seven Thematic Working Groups (TWG) contributed to the NAPA development process, including 1. Agriculture and food security (nutrition) 2. Climate induced disasters 3. Forests and biodiversity 4. Public Health (WASH), 5. Tourism, natural and cultural heritage 6. Urban settlements and infrastructure, and 7. Water resources and energy. Gender and inclusion and livelihoods and

governance are two cross cutting themes aimed at addressing the different sector specific aspects of climate change. Each group is supposed to assess the gender implications for their theme.

Local Adaptation Plan of Action, LAPA (2011) The Government of Nepal has approved the LAPA framework with the objective of supporting climate adaptation at the local level to ensure mainstreaming climate adaptation into development planning framework in the leadership of local government bodies. LAPAs were introduced as a mechanism for formulating the National Adaptation Plan. Four directive principles guide their development: a bottom up approach, inclusiveness, responsiveness and flexible processes. The planning units for LAPAs were Village Development Committees (VDCs) and municipalities. Following the restructure of local government under the newly federated structure of Nepal, the new municipalities are now the planning units for LAPAs.

Climate Policy Nepal (2011): Nepal's Climate Change Policy of 2011 recognizes that there are differential impacts of climate change on communities. It acknowledges that the impact of climate change is greater in poor, developing, landlocked countries and on rural women. The Policy provides for women's participation in the implementation of climate adaptation programs. Section 8.4.2 of the Policy calls for "ensuring the participation of poor people, Dalits, marginalized indigenous communities, women, children and youth in the implementation of climate adaptation and climate change related programs." The policy provides for capacity building of local bodies and the implementation of local level activities.

National Adaptation Plan (2017): Nepal has initiated the NAP formulation process based on UNFCCC COP decisions and on 'initial guidelines (Decision 5/CP.17)' and the technical guidelines developed by the LDC Expert Group (LEG).

The NAP has two key objectives: (i) reducing vulnerability to the impacts of climate change by building adaptive capacity and resilience; and (ii) facilitating the integration of climate change adaptation, in a coherent manner, into relevant new and existing policies, programs and activities, in particular development planning processes and strategies, within all relevant sectors and at different levels, as appropriate (GON/MOPE NAP: 2017). The NAP has 7 thematic working groups and 2 cross cutting working groups on gender and inclusion and Livelihood and governance.

Sector Specific Gender Policies and Guidelines – The Ministry of Federal Affairs and Local Development GESI Policy, the Ministry of Urban Development GESI Operational Guidelines, the Ministry of Forest and Soil Conservation GESI Strategy, the Ministry of Education Consolidated Equity Strategy, and the Ministry of Health GESI Operational Guidelines – recognize the need to address GESI issues programmatically and institutionally to achieve sector objectives. However, so far, the Ministry of Population and Environment, which is the focal ministry for climate change, does not have a standalone GESI strategy/policy or operational guidelines for climate change.

All of the sector specific GESI strategies and guidelines emphasize participation of Women, Dalits, Adibasi/Janajatis, Madhesis, Muslims, persons with disability, and excluded communities in the formulation, implementation, monitoring and evaluation of sector policies, plans and programs (GESI Framework, IDPG Nepal -2017). They also recognize the need to identify the specific barriers faced by women, the poor, the vulnerable and the excluded in the concerned sector and plans to address it to the extent possible to achieve the overall sector objective.

2.4 Institutional Entry Points, for Mainstreaming Gender Equality/Equity in Climate Change Adaptation

2.4.1 The Government of Nepal's Existing Institutional Mechanisms for GESI and Climate Change

The Climate Change Council: The government established the Climate Change Council in 2009. It is headed by the Prime Minister and it provides coordination, guidance and direction for the formulation and implementation of climate change-related policies.

Central Level: The National Planning Commission (NPC); the Ministry of Women, Children and Social Welfare (MOWCSW) and its Department of Women Development; the Ministry of Federal Affairs and Local Development (MOFALD) and its Dalit and Adibasi/Janajati coordination committees; constitutionally established:

- National Commissions for Women, Dalits, Indigenous Nationalities, Madhesi, Muslims, and Tharus
- A National Inclusion Commission that is mandated to protect the rights of Khas Aryas, and “backward” classes, persons with disabilities, senior citizens, laborers, peasants, minority and marginalized communities, people of the Karnali, and the indigent class.

Gender/GESI Focal Points are appointed in the NPC, MOFALD, MOWCSW and the ministries of Education, Health, Urban Development, Forest and Soil Conservation, Agriculture and Population and Environment. The Ministry of Women, Culture and Social Welfare is the focal ministry for Gender and Social Inclusion thematic group under the NAP process.

District Level: At the district level there are numerous institutional structures including, Women and Children Offices (WCOs), Social Committee with a Social Development Officer of District Development Committees (DDCs); Indigenous/Janajati District Coordination Committees and Dalit Class Upliftment District Coordination Committees, the Gender Mainstreaming Coordination Committees (GMclimate change), and GESI Implementation Committees.

Village/Municipality Level: At the village and municipality level there is a Representative Integrated Planning Committee in each VDC; Ward Citizens' Forum and Citizen Awareness Centers where women, disadvantaged and marginalized groups are represented.

Climate specific, sector specific and local government level institutional frameworks provide the enabling environment and working conditions for gender equity/equality mainstreaming and its implementation through climate change adaptation programs and projects. They are relevant for Ecosystem based adaptation projects as well.

2.4.2 Institutional Efforts for GESI mainstreaming in NRM including Agriculture

Agriculture and Forestry: The Ministry of Agriculture started integrating women into its training programs in the 1990s and has established institutional structures to support gender mainstreaming in its departments, divisions, policies, and programs. It has 6 per cent women's representation among staff, yet it's Gender Equity and Environment Division still faces challenges in implementing its responsibilities due to a lack of gender sensitivity, small budgets, and the lack of a gender results monitoring mechanism. The Ministry plans to set up *farmers' consultative committees and village agriculture committees* to ensure farmers' participation in agriculture related activities and decision-making processes. Proportionate representation of Women, Dalits, Madhesi, and Adivasi Janajatis will be ensured in these committees (ADB, 2010)

The Ministry of Forest and Social Conservation has its own well-developed GESI strategy and Gender focal points at the ministry level represented by a joint secretary as well as five gender focal points

placed in all five departments (Risal, 2016). However, the implementation of the GESI strategy is very weak. Community based forest management by users group, an innovative and a worldwide replicated practice of forest management for which Nepal is one of the pioneers, falls under this ministry. The gender and socially inclusive results seen at the grass root forest users group level has not been translated into national level institutional structures of the ministry, which is a critical gap.

Federation of Community Forest Users Group (FECOFUN) has effectively influenced community-based forest policy and associated development processes. It has established rules to include women in the decision-making arena and it supports local forest user groups to include women and disadvantaged people in forest management, and users committee and groups. By law, one-third of the executive committee members of community forest user groups must be women.

National Federation of Irrigation Water Users Association is quite similar to FECOFUN in terms of purpose, but it has not yet been as successful in representing the voices of their women and poor members in the policy and development arenas. There is a potential for developing organizational coalitions and networking activities in the agriculture sector for advocating the rights of women and small farmers and influencing policy.

Though the forestry and agriculture sectors have made efforts to mainstream gender in policy and strategy, effective institutional frameworks and adequate human resource for gender and social inclusion remain of utmost importance. The establishment of gender divisions/units and provision of a fulltime gender focal person with TOR in these ministries could contribute to positive outcomes, if they have adequate institutional authority and targeted budgets (Risal, 2016). Improved accountability to gender and inclusion mainstreaming from the various department and division heads is also required, currently there is a gap in this aspect.

2.4.3 Gaps in climate change policies from a gender equity mainstreaming perspective

Nepal's NAPA /NAP acknowledges gender specific vulnerabilities and women are recognized as a vulnerable group, but it does not provide any specific targets for women's involvement or capacity building, nor does it contain any gender specific projects. The NAPA project profiles generally target vulnerable groups and communities and recognize that climate change impacts affect poor communities more severely.

Although at the local level women are environmental managers, they are usually not included in the decision-making process of NAPA projects. Even though gender analysis and gender mainstreaming are mentioned in the NAPA document, they are not prioritized in the NAPA project profile. Climate Experts underline the importance of gender mainstreaming in climate change programs, but the process for developing one of the most important climate change related programs (NAPA) was in the end not very consultative and inclusive for women (Mainlay & Tan, 2012).

Although various sector ministries have taken the lead and developed their own sector specific Gender Equality and Social Inclusion (GESI) strategy, policy or guideline, the Ministry of Population and Environment does not have a standalone GESI strategy/policy or operational guidelines for climate change which is a **critical gap** in the sector.

3. Baseline

3.1 A "Gendered" assessment of vulnerability in to climate change and climate change induced disasters the Gandaki River Basin

Adaptation efforts may be unsuccessful if isolated in sector-specific strategies. Multi-sectoral, and multi-stakeholder approaches appear to tackle interlinked issues more effectively, e.g., food and nutrition security, with health, water management, livelihoods, gender considerations" (IUCN, 2017)

Vulnerability status of proposed project sites of Gandaki River Basin: The NAPA analyzed the districts in the Gandaki River basin with respect to climate change vulnerability. The following table presents the status of the 19 districts in the GRB in terms of vulnerability (IUCN, 2018).

Table 1: Climate change vulnerability status of the Gandaki River Basin, 19 districts

Vulnerability status	Districts
Very high	Lamjung
High	Chitwan, Dhading, Gorkha, Manang,
Medium	Mustang, Nawalparasi, Makawanpur, Tanahu, Kaski, Parbat, Baglung, Myagdi, Rasuwa
Low	Syangja, Gulmi, Arghakhanchi, Nuwakot
Very low	Palpa

Project Communities

There are 1,172,558 households in the GRB (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, with a focus on women headed household. In the following para brief status of socio-economic and environmental development of the project area is highlighted.

Social development status: The GRB is inhabited by more than 40 ethnic groups, and indigenous communities and in the Terai there are mostly Tharus, an indigenous community, and Khas- Aryan groups. In 2014, the Human Development Index (HDI) for all ethnic groups in the GRB was 0.482 compared to the national average of 0.490 (NPC & UNDP, 2014). Ethnic groups have comparatively lower literacy levels (66.93 per cent) compared to national average of 69.73%. Likewise, the life expectancy at birth of the ethnic group was 69.86 years compared to national average of 71 years. Average HDI, adult literacy rate and life expectancy values of these districts are also lower than the national average. Average HDI of 19 districts in the GRB is 0.501. Kaski have highest HDI of 0.576 followed by Manang with HDI of 0.568. With an HDI of 0.461 for both Dhading and Rasuwa they are lowest in the rank among the 19 GRB followed by Nuwakot with HDI of 0.466

Economic development status: The overall per capita income for people in GRB is Rs 49,362, while the per capita income for ethnic groups is Rs 37,720 as compared to a national average of Rs 51,879 (NPC & UNDP, 2014).

The average human poverty index (HPI) of the GRB is 30.27, compared to the national average of 31 (NPC & UNDP, 2014). The HPI of ethnic communities in the GRB is higher than the GRB average, and the HPI in five districts - Dhading, Rasuwa, Nuwakot, Mustang, and Gorkha -is very high (42.24 in Dhading). Kaski is the richest district with the lowest HPI of 16.50, followed by Chitwan with a HPI of 4.80. Rasuwa is poorest amongst 19 districts with the highest HPI of 42.24, followed by Nuwakot with a HPI of 35.66, Dhading with a HPI of 33.38 and Mustang 31.16 (NPC & UNDP, 2014).

Agriculture and tourism are the two major sectors of the economy. Remittances are significantly contributing to the economy in the GRB, as number of migrant household from this area is highest in the entire country. Climate change has impacted the farming systems in the GRB.

Environmental context: This basin is the biggest of Nepal's four river basins in terms of total glacier area coverage. It contains 1025 glaciers, 338 lakes and is susceptible to frequent glacial lake outburst floods (GLOFs) (Final Report Desakota Part II). There has been increased frequency and intensity of rain, flood and landslides (Shrestha, 2003). The basin is particularly vulnerable to water-induced hazards during the monsoon season. Of the 2,719 fatalities that resulted from floods and landslides in Nepal between 2000 and 2014, 939 (35 per cent) occurred in the GRB, which has only 22 per cent of Nepal's land area.

Events tend to be more common in the mid hills, especially the districts of Parbat, Syangja, Gorkha, Dhading, and Nuwakot – Dhading had the highest incidence of floods and landslides with 123 events over the 15-year period. However, more families are affected downstream, with Nawalparasi having the highest number of affected families (8,187 out of 22,637) (Ministry of Home Affairs disaster database, 2015 cited in HIAware Research 2017). Although the most common climate induced disasters are floods and landslides, the greatest economic loss in the basin is from forest fires which are worsened by wind in the dry season. The severity of landslides has been further aggravated by the Gorkha Earthquake 2015.

The GRB is a home for most of the species stated in CITES Category I that are present in Nepal. It is also a Trans Himalayan migratory corridor for many bird species. There is expanding proliferation of invasive species (field visit/direct observation) and various scientific studies have indicated climate change as driving force (Dukes, 2011).

In the GRB, 72.4 per cent of households depend solely on forests to meet their energy requirement (Subedi, et al., 2015).

3.2 Current State and Trends in Gender Equality in the GRB

Out of GRB's total human population of about 5.13 million 46 per cent are male and 54 per cent female. The male to female ratio is 0.85:1. The population increased at an average annual rate of 0.41 per cent over the past decade (CBS, 2011). The average family size is 4.21 which is less than national average of 4.88. Two mountain districts, Manang and Mustang, have the lowest number of households and female population.

The male literacy rate is remarkably higher (80 per cent) than the female literacy rate (65 per cent) in the GRB, this sex-based difference in literacy is, however, lower than national average difference which is 75 per cent for male and 57 per cent for female.

The under five mortality rates for both boy and girl children is the same - 34 per cent - which reflects a better survival status and non- discrimination for girl child in terms of survival in this area (Table 2)

Table 2: Key sex disaggregated socio-economic indicators of the Gandaki River Basin

Indicators	Mountain (upstream)	Hills (midstream)	Terai (downstream)	Total
Area (km ²)	7363	21013	4400	32776
Population				
Male	32,229	1,757,681	582,762	2,372,672
Female	31,061	2,087,469	640,730	2,759,260
Total	63,290	3,845,150	1,223,492	5,131,932
Population Density people/sq ² km	9	183	278	157
Literacy Rate (per cent)				
Male	73	80	82	78
Female	56	64	67	62
Total	65	72	74	70
Economically Active (per cent)				
Male	75	60	64	67
Female	69	59	53	60
Total	72	60	58	63
Under five mortality (per cent)				
Male	29	33	40	34
Female	24	32	45	34
Total	27	33	43	34

(CBS, 2011)

Caste/ethnicity and religion

Hinduism is the dominant religion (83 per cent) followed by Buddhism (13 per cent), Christianity (2 per cent) and Islam (1 per cent) in the GRB. The major caste/ethnic groups in the landscape are Bramhin, Chhetri, Magar, Gurung and Kami. Other castes, such as Newar, Tamang, Tharu, Sarki, and Damai/Doli are also found in the landscape, but their population size is small. The landscape is rich in linguistic diversity where more than 50 different languages spoken.

Landholdings

Most households in the GRB have landholdings of less than 1 ha. Moreover, only 3 per cent of households have landholdings of more than 2 ha. This shows that the land highly fragmented. Furthermore, except Dhading, Gorkha and Manang, all districts have landless households with Syangja is having the highest landless households.

Fifty to 80 per cent of the population in the GRB depends on agriculture for their livelihood. The major cereal crops grown are paddy, maize, wheat, millet, barley and buckwheat. Improved varieties of crops are also grown throughout the region. (MoFSC, 2016).

Energy consumption

The sources of energy for cooking in the GRB are fuel wood, LPG (gas), Biogas, Kerosene, Electricity and animal dung cake. Fuel wood is the most common source of energy and been used by 72.4 per cent of households, followed by LPG (Subedi, et al., 2015). Women in the project area contribute up to 70 per cent of the labor required for water management and more than 65 per cent in firewood collection and fodder collection (field observation, key informant interview from project area).

Women's Access to information, institutions and opportunities

The GRB is comparatively advanced in terms of gender equality compared with the far western region (province 7) and Central –Eastern Terai region (province 2) where gender based discrimination is widespread and many harmful practices like segregation, keeping women and girls out of the home during menstruation (*chaupadi*) and child delivery is very much alive in the far west, and *pardha* (veil) system and women's seclusion from men is still practiced in the Terai. Tibeto-Burman ethnic groups and Tharus which are dominant in this region are comparatively more advanced in terms of treating women equally and women are to some extent engaged in enterprise and market-oriented trading activities as well agriculture.

In GRB there is strong presence of women led community organizations like mother's group (aama Samuha), natural resource management and conservation groups e.g. CFUGs, buffer zone conservation groups, farmers groups, saving credit groups and cooperatives and female community health volunteers group which will be instrumental to reach and deliver project specific services and technologies to women.

Women, migration and their role in decision making in GRB

Women participate in the household decision making processes in this area and they play an active role in community management including, drinking water management, natural resource management and conservation.

The GRB are listed within the top 10 districts with migrant household /population, reflecting a high rate of male migration from 41 per cent of total households in Myagdi to 54 per cent of total households in Gulmi and Arghakhanchi districts, the highest in Nepal (CBS, 2012).

Migration has a direct implication on decision-making roles and responsibilities for women who become the de facto household heads in the absence of men. This brings both opportunity as well as challenges for women to adapt to climate risk and vulnerabilities.

With all three levels of election - national parliament, provincial and local bodies - completed under the federal system of governance and around 33 per cent of women being represented in the local governing bodies as Mayors and deputy mayors as well as members, there is huge opportunity to promote the leadership of community women as well as to enhance the effectiveness of and engagement of women representatives in the project. However, there is still a patriarchal bias to accept women's leadership amongst male leaders and most of the women being elected for the first time in the leadership position are learning by doing and need support to enhance their effectiveness.

3.3 A gender disaggregated assessment of Vulnerability in the project area

Vulnerability in GRB continues to be highly correlated with gender, caste, ethnicity, regional identity, and geographic location and poverty. Women, because of gender based discrimination and ingrained patriarchal socio economic and political system and their lower socio-economic status in comparison to men, are more vulnerable to impacts of climate change and natural disasters.

On the other hand, poor Dalits, because of their poverty and caste-based discrimination and their settlement location usually near the landslide prone river banks, are more vulnerable. Similarly, certain poor ethnic groups who are primarily dependent on forests and water resources for their livelihoods are vulnerable. These three groups are potential target groups for the project. Even within the better off districts of the GRB, there are pockets of poverty in certain geographic and remote areas. These sites are vulnerable to climate change and climate induced disaster.

Beliefs, Perception and Stereotypes related to gender

In the project area across mountains, hills and Terai (plains) beliefs, perception and stereotypes related to gender are similar. However, there are location specific differences. In the mountain area there is more equality between the sexes and women are engaged in tourism related activities, hotel business, livestock raising and agriculture. Men share household activities of cooking and child care.

This pattern is similar in hill areas. Women in hill areas are more literate and due to relatively easy access to roads, electricity, mobile phone, radio and television, to some extent internet, and proximity to urban cities and exposure to the outside world hence they are much aware about their disadvantaged position. However, within the hills there are remote areas and poverty pockets where women are discriminated against.

In the Terai certain caste groups (e.g. Chepangs, Tharus, Mahji, Mushars, and Madhesis) practice early and child marriage, and dowry systems.

It is a commonly held perception in the GRB that women are caretakers and nurturers and their role is more appropriate within the household. However, with the new political system, and exposure to the outside world due to radio, FM, TV, and mobile phone, even illiterate women are becoming more aware. Their engagement in various community groups helps them to understand about climate change risk and adaptation.

The division of labor is based on socially prescribed gender roles. Men do more of the outside work, political work, trading and marketing, and paid jobs, whereas women are more engaged in household work, care work and agriculture work. In this GRB 60 per cent of females are economically active compared to 67 per cent of males.

Key Climate Change Risks in the Gandaki River Basin

1. "Gendered" vulnerability to climate and disaster risk –women and disadvantaged group are more vulnerable
2. Negative impact on agriculture, food security and livelihoods

3. Abandoned/fallow land in hills due to degradation, siltation, no irrigation and low productivity (affecting food security)
4. Less snow in mountains, fast melting glaciers and high possibility of glacial lake outburst flood (GLOF)
5. Frequent Landslides/ floods /forest fires in the hills
6. Deforestation and forest degradation
7. Drought, drying up of springs and decrease in surface water in the hills and the Terai
8. Floods/ River cutting/Fertile soil erosion in the Terai and hills
9. Increased incidence of Forest fire due to drought and dry wind from February till May
10. Increase in invasive species in forests and agriculture land
11. Loss of biodiversity

(Source: Field Study Reports, pre- feasibility report, expert group consultation, Secondary literature, IUCN/NTNC 2018 Nepal)

The national climate change impact survey (CBS, 2016) indicates that about half of the surveyed households (49.33 per cent) have heard about climate change. Most households in the mountain area (63.59 per cent) and female respondents (60.92 per cent) were found to have not heard about climate change.

Based on the country's ecological belts, up to 80.35 per cent of the households in Mid-western mountain have not heard about climate change. Households from the Terai (51 per cent) are found to be more informed. Most households (59 per cent) noted that deforestation was the main cause for climate change. While 41 per cent of households believed that it is caused by natural phenomenon, 33 per cent of households think human interventions and 30 per cent of households think urbanization are major causes of climate change.

The survey reveals that almost all households have observed an increase in the incidence of drought (99.33 per cent) in last 25 years followed by disease/insect (97.69 per cent) and sporadic rain (93.07 per cent). The survey shows that 74.29 per cent of total households have observed changes in water sources. The findings of this survey match with our findings about key climate change risks gathered from field visits, direct observation, key informant interviews in the proposed project districts of GRB, and triangulation with climate change expert opinion.

Differentiated Impact of Climate Change Risk on Women in GRB

In the following section, an attempt has been made to assess how climate change risk is having a differentiated impact on women.

In Nepal, agriculture accounts for nearly 70 per cent of total employment and contributes nearly one-third of Nepal's gross domestic product (GDP). Women in Nepal constitute 72.8 per cent of the agricultural labor force, (MOAD, 2017). The impacts of climate change are not 'gender neutral' – women's high dependence on agriculture means climate impacts on the sector have a disproportionate effect on women.

As high as 80 per cent of women are involved in agriculture and livestock sector in the GRB, and a trend of "feminization of the agricultural sector" is emerging as an outcome of high male outmigration. The role of women and their informed and meaningful engagement in the sector is critical for food security. This issue needs to be taken into account seriously by the project when designing adaptation activities and interventions. The paradox is despite their substantive engagement in the sector, they are not

treated as farmers and they don't have the same access to land, water, seeds, training and credit as men. Only 10 per cent of the total farms of Nepal are owned by women or jointly owned (MOAD, 2015).

People in the GRB are highly dependent on forest resources for their food, household energy, and livelihoods. As almost three fourths (72.4 per cent) of households solely depend on forest to fulfill their household energy, the pressure on forest is increasing (MoFSC, 2016) and women who are primarily responsible to collect fire wood and fodder must travel longer and further to collect fire wood as well as fodder for their livestock. This gender specific role and need of women must be considered by the project.

A recently published, first of its kind, national household survey on impact of climate change in Nepal (CBS, 2016) reports that the highest percentage of sample households (92.03 per cent) observed invasive creeper species in agricultural land and that this has contributed to a decrease in their income. This is an area for consideration by the project - to enhance income and employment opportunity for women through eco-tourism and off farm skill development training, in addition women responsive agriculture interventions.

The NAPA 2010, states that women's access to water resources would decrease leading to an increase in their workload, with detrimental effects on their reproductive health. As we explained earlier in this report an alarming health issue for rural women in Nepal is uterus prolapse due to heavy workloads and inequitable division of labor.

The NAPA, states that climate induced resource conflicts increase social violence, violence against women, anxiety and depression in women. This is a serious gender issue and the project will have to design interventions bearing in mind women's role in water management, forest conservation and other natural resource conservation, and introduce technologies to reduce their work burden and engage them in effective management and governance of natural resources.

Barriers/Challenges to Gender Responsive Climate-resilient Solutions

There are several key barriers to the introduction and implementation of gender responsive climate resilient solutions as presented below:

1. Lack of sex-disaggregated data, information, monitoring and evaluation

- Lack of sex- disaggregated data of climate vulnerability and risk resulting in poor understanding of gender-differentiated risk of climate change and climate induced disaster
- Non-Inclusion of gender specific indicators in the entire monitoring and evaluation cycle of climate change projects and programs of government and NGOs/INGOs

2. Women's negligible representation in climate change policy, leadership and decision making

- Lack of conscious effort to increase representation of women in climate leadership and decision making
- Lack of opportunity for women and their representative organizations' views being represented in formal climate change policy, leadership and decision-making
- Lack of planned and quality training on gender and climate change to women and men policy makers, decision makers, and implementers
- Lack of planned, regular training and awareness raising activities on gender equity, climate risk and locally appropriate adaptation measures, focused on rural women and disadvantaged people

3. Heavy unpaid workload especially of rural women and inequitable division of labor

- Women contribute their substantive labor (unpaid) in agriculture and natural resource management which does not reflect in corresponding increase in income, and meaningful representation at decision making forums and committees.
- Women reported during field visit difficulties in adapting agricultural practices to climate change patterns. The burden posed by the demand for increased agricultural production/ yields amidst changing climate pattern is taking its toll on women, who are managing agriculture and livestock in the absence of males.
- Due to social norms and inequitable gender division of labor; unpaid work is assigned to women and girls especially collecting firewood, water, fodder, livestock care, farm care, and they are highly impacted by climate change. In addition to this, women must do domestic work like child care, cooking and cleaning, which is the cause of “gendered” vulnerability to climate change.

4. Low level of education /illiteracy/ climate risk awareness and access to information

- Women’s limited access to climate risk information, early warning systems and training is making them more vulnerable and restricting their capacity to adapt.
- Women’s high level of illiteracy, low level of education and awareness is a barrier

5. Gender discrimination, cycle of poverty, and physical vulnerability of girls and women

- Early and child marriage of girls, no opportunity for economic and social advancement, repetitive life -cycle of poverty and disempowerment
- Climate induced disaster is increasing the vulnerability of girls and young women in terms of safety and security, increasing risk of human trafficking and exploitative work in entertainment sector as seen after earthquake and floods
- Women-headed households, that have increased following male out-migration, are particularly vulnerable to climate induced disasters with the loss of family support networks. Girls and young boys are vulnerable to school drop outs.

6. Limited livelihood options and access to productive assets

- Low access to finance, family property, productive assets and restricted access to markets due to gender norms, restrict women’s capacity to livelihood diversification which is a key activity for adaptation.

7. Migration/ increase in fallow land and land degradation

- High out-migration of youth/ men after climate induced disaster and poverty leads to a lack of labor, increase in underutilized farm land/ fallow land and land degradation, mostly in rural areas.
- Implications on food security, health and nutrition of women and children

3.4 Recommendations: Key Gender-related Activities to address gendered climate risk and barriers

- **Build Gender Equity, Climate Change Awareness and Adaptation Capacity**
 - 1) Develop GESI and climate change mainstreaming strategy for the Eco System Based Adaptation
 - 2) Develop GESI and climate change training manual for implementing partners and local government
 - 3) representatives
 - 4) Plan and provide regular training on Gender Equity, Women’s empowerment and climate change at all levels central, provincial, local and community level, for both men and women

- 5) Increase access of women to information and capacity building training on climate risk and adaptation measures,
 - 6) Ensure women's participation in workshops/ meetings
 - 7) Train women to improve their capacity in weather observation and forecasting
 - 8) Actively engage and train women in fresh water conservation, management and its effective allocation for household use and irrigation
- **Address lack of sex disaggregated climate change data and information**
 - 1) Develop gender-sensitive early warning systems
 - 2) Develop gender-responsive maps and analysis of hazards and vulnerabilities
 - 3) Systematic collection and update of sex disaggregated data of climate vulnerability and risk
 - 4) Use of gender responsive climate change monitoring and evaluation indicators in the entire project cycle
 - **Livelihood diversification and alternative livelihood promotion for women and youth**
 - 1) Effective use and promotion of cooperatives, micro finance and other banking facilities for livelihood diversification of women and disadvantaged people
 - 2) Integrate gender analysis and value-chain analysis to improve agribusiness, reduce poverty, and improve inclusive markets
 - 3) Promotion of ecotourism and skill training in bakery, homestay, nature guide, handicrafts, cook amongst youth both female and male
 - 4) Research and introduce new agriculture production practices and technology suitable to women in light of feminization of agriculture
 - 5) Introduction of more climate resilient seeds and other farm inputs and extension services appropriate for women
 - 6) Introduce and promote micro insurance for crops, livestock, fruits and weather-based insurance scheme
 - **Engage Women in Climate Change Planning, Implementation and Monitoring**
 - 1) Promote and adapt bottom up approaches to climate change adaptation planning like LAPA and CAPA, for which Nepal is a pioneer
 - 2) Ensure equal engagement of women, and disadvantaged communities in local adaptation planning, its implementation and monitoring
 - 3) Tackle gender inequality at the broader level-for adaptation financing to be effective and equitable from –legislative, policy, programs, to market level
 - 4) Effective implementation of already existing provisions in constitution, law, sectoral programs and policies related to gender equality, women's empowerment, social inclusion to enhance resilience
 - **Knowledge Management and Documentation**
 - 1) Systematic documenting of traditional and local knowledge of climate change and adaptation practices of women and disadvantaged people especially Chepang, Majhi, Mushar, Bote, Tharus, Dalits, and indigenous people more dependent on forest and water for their livelihoods.

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