



# **Social Action Plan (SAP) of Kabeli-A Hydroelectric Project**

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**WORLD BANK**

Submitted by  
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## List of abbreviations and acronyms

AP	Affected Person
ARI	Acute Respiratory Infections
BOOT	Build, Own, Operate and Transfer
BP	Bank Procedure
BPC	Butwal Power Company
CA	Constitutional Assembly
CBD	Convention on Biological Diversity
CBO	Community Based Organizations
CBS	Central Bureau of Statistics
CCV	Community Consensus Valuation
CDMA	Code Division Multiple Access
CDO	Chief District Officer
CF	Community Forest
CFC	Compensation Fixation Committee
CFUG	Community Forest User Group
Cm	Centimeter
CPR	Common Property Resource
DDC	District Development Committee
DFO	District Forest Office
Dia	Diameter
DoED	Department of Electricity
DWSS	Drinking Water Supply Schemes
EDR	Eastern Development Region
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EPA	Environmental Protection Act
EPR	Environmental Protection Rules
FGD	Focus Group Discussion
FPIC	Free Prior Informed Consent
GAD	Gender Approach to Development
GESI	Gender Equality and Social Inclusion
GoN	Government of Nepal
GRC	Grievances Redress Committee
GRO	Grievance Redress Officer
Ha	Hectare
HCE	Hydro-Consult Engineering Limited

HCPL	Hydro Consult Private Limited
HH	Household
hrs	Hours
IEE	Initial Environmental Examination
IFC	International Finance Corporation
ILO	International Labour Organization
IP	Indigenous People
ISRSC	Informal Sector Research and Study Centre
IVCDP	Indigenous and Vulnerable Community Development Plan
KAHEP	Kabeli-A Hydroelectric Project
KEL	Kabeli Energy Limited
kg	Kilogram
km	Kilometer
kV	Kilovolt
kW	Kilowatt
kWh	Kilowatt hour
LAA	Land Acquisition Act
LACFC	Land Acquisition and Compensation Fixation Committee
LF	Leasehold Forest
LFUG	Leasehold Forest User Group
LGCDP	Local Government and Community Development Program
LRA	Land Reform Act
LRO	Land Revenue Office
m	Meter
m/s	Meter per second
m <sup>2</sup>	Square meter
m <sup>3</sup> /s	Cubic meter per second
masl	Meter above sea level
MoLD	Ministry of Local Development
MoEn	Ministry of Energy
MT	Metric ton
MW	Mega Watt
NCDN	National Committee for Development of Nationalities
NEA	Nepal Electricity Authority
NEFIN	Nepal Federation of Indigenous Nationalities
NFDIN	National Foundation for the Development of Indigenous Nationalities
NGO	Non-Governmental Organization
NHRC	National Human Rights Commission

NPC	National Planning Commission
NTFP	Non Timber Forest Product
OP	Operational Policy
PAF	Project Affected Family
PCPD	Public Consultation, Participation and Disclosure
PDA	Project Development Agreement
PPE	Personal Protective Equipments
PRO	Project Relation Office
PRoR	Peaking Run-of-the-river
PRSP	Poverty Reduction Strategy Paper
R&R	Resettlement and Rehabilitation
SA	Social Assessments
SAP	Social Action Plan
SCP	Safe Construction Practices
SIA	Social Impact Assessment
SLC	School Leaving Certificate
STD	Sexually Transmitted Disease
ToR	Terms of Reference
UNDP	United Nations Development Program
UNDRIP	United Nations Declaration on the Rights of Indigenous Peoples
VDC	Village Development Committees
WID	Women in Development
WN	Ward Number

## Definition of the Nepali terms

<i>Abal</i>	In Nepal, land are classified into four major categories viz. <i>Abal</i> , <i>Doyam</i> , <i>Sim</i> and <i>Chahar</i> according to the productivity of the land. According to this classification <i>Abal</i> land is the best quality of land with good and moist soil. The entire plot can be irrigated by means of irrigation canal or other means and where water used once stay for three to four days.
<i>Adivasi Janajati</i>	A tribe or community having its own territory, own mother tongue, traditional rites and customs, distinct cultural identity, distinct social structure and written or unwritten history (NFDIN Act 2001). It is further divided into Hill <i>Adivasi Janajati</i> and <i>Terai Adivasi Janajati</i> .
<i>Ardha-pakki Ghar</i>	A semi-permanent house. Central Bureau of Statistics (CBS) Nepal defines it as a category of house where either the wall or the roof is constructed with permanent construction materials and other is constructed with temporary materials.
<i>Aushi</i>	New moon day.
<i>Bari</i>	These are the un-irrigated lands where the cultivation of rain-fed crops like maize, millet and pulses is done.
<i>Brahmin(Bahun)</i>	Highest caste of the four major castes of Hindu caste system.
<i>Chahar</i>	Land which cannot be irrigated by means of irrigation channels and is dependent upon rainfall and water does not stay at all.
<i>Chhetri (Kshatriyas)</i>	The second highest caste of the four major castes of Hindu caste system.
<i>Dalit</i>	<i>Dalits</i> a self-designation for a group of people traditionally regarded as untouchables. The <i>Dalits</i> are a mixed population which are divided into two major groups, i.e. Hill cast <i>Dalits</i> ( <i>Kami</i> , <i>Sarki</i> , <i>Damin</i> , <i>Gaine</i> and <i>Badi</i> ) and <i>Terai cast Dalits</i> ( <i>Tamata</i> , <i>Khatwe</i> , <i>Cahamar</i> , <i>Dushad</i> , <i>Mushaha</i> , <i>Batar</i> , <i>Dhobi</i> , <i>Dom</i> and <i>Halkhor</i> ).
<i>Dhamil/Jhakri</i>	Traditional shamanic healers who are supposed to exhort evil spirit from the body of sick people.
<i>Doyam</i>	Good quality land with moist soil. Only 3/4th of the plot can be irrigated by means of irrigation canal or other means and water used once, stays on the land for 2-3 days.
<i>Ganga</i>	A Hindu holy River.
<i>Ghat</i>	Hindu cremation place.
<i>Guthi</i>	Refers to the land allocated for the purpose of covering certain religious, charitable and cultural or social function.
<i>Halliya</i>	Agricultural bounded labourer who works on another person's ( <i>Jamindar</i> ) land. It is officially abolished but still exists in the western part of Nepal.

<i>Hat Bazar</i>	Temporary markets that are opened on the particular week or days or occasions (national and local festivals).
<i>Hill Adivasi Janajati</i>	Hill <i>Janajati</i> includes 24 caste groups, which are <i>Bankariya, Hayu, Kusbadiya, Kusunda, Lepcha, Surel, Baramu, Thami (Thangmi), Chepang, Bhujel, Dura, Pahari, Phree, Sunuwar, Tamang, Chantyal, Gurung (Tamu), Jirel, Limbu (Yakthumba), Magar, Rai, Yakkha, Hyolmo</i> and <i>Newar</i> .
<i>Jamindars</i>	The local landlords.
<i>Kacchi Ghar</i>	A temporary house. CBS Nepal define it as a type of house that is made with non durable materials like wooden flake, bamboo, straw/thatch, mud. Unbaked bricks are mainly used in walls and roof.
<i>Kharbari</i>	A marginal land that is used to grow grasses and fodder trees.
<i>Khet</i>	These are the irrigated lands, where paddy is the primary crop.
<i>Kipat</i>	Traditional land tenure system. In this system, a <i>Kipat</i> owner derives rights by virtue of his membership in a particular ethnic group, and/or its location in a particular area.
<i>Kipatiya</i>	Individual or community holding <i>Kipat</i> .
<i>Kirat</i>	<i>Kirat</i> or <i>Kirati</i> (also spelled as <i>Kirant and Kiranti</i> ) are indigenous ethnic groups of the Himalayas (mid-hills).
<i>Kirat religion</i>	Religion by <i>Kirat</i> people which is based on of shamanism.
<i>Kuse Aushi</i>	A religious festival that falls in new moon day of 5 <sup>th</sup> month, <i>Bhadra</i> (August/September) of the Nepali Year. This festival is observed in the commemoration and respect of the Father.
<i>Makar Sakaranti</i>	A religious festival that falls on the first day of the 10 <sup>th</sup> month i.e. <i>Magh</i> (15 <sup>th</sup> January) of the Nepali Year. <i>Sankranti</i> is the Sanskrit word in Nepalese and Indian Astrology and refers to the transmigration of the Sun from one <i>Rashi</i> (sign of the zodiac) to another. <i>Makar Sankranti</i> refers to the transition of the Sun from <i>Dhanu Rashi</i> (Sagittarius) to <i>Makar Rashi</i> (Capricorn).
<i>Matatirtha Aushi</i>	Festivals that falls on the new moon day of the first month i.e. <i>Baisakh</i> (April/May), of the Nepali Year. This festival is observed in the commemoration and respect of the mother.
<i>Mechi Zone</i>	One of the 14 zones of Nepal that lies in the Eastern part of the country.
<i>Muri</i>	Measurement of unit of the volume of crops.
<i>Nuwagi</i>	A rituals performed during the harvesting of new crops.
<i>Pakho</i>	A generic term used to denote the <i>Bari</i> where maize and millet is cultivated.

<i>Pakki Ghar</i>	A permanent house. According to CBS Nepal, it refers to a house with walls and roof made of permanent construction material like cement, bonded bricks, concrete, stone, slate tile and galvanized sheet.
<i>Parbati</i>	Hindu Goddesses.
<i>Pati</i>	Rest house made for the traveller especially near the religious and cultural places.
<i>Raikar</i>	Land on which taxes are payable to the government and are listed in the official recodes. Rights on <i>Raikar</i> land are limited to occupancy rights, vis-à-vis state. However, these rights can be freely sold or transmitted to any person. It is similar to ownership in practice
<i>Ropani</i>	Commonly used unit of measurement of area of land in the hills of Nepal. One Ropani is equals to 5476 square feet or 508.72square meters.
<i>Sanasti and Dhuli Puja</i>	A rituals performed by the <i>Majhi</i> community.
<i>Shiva</i>	Hindu God also known as <i>Mahadev</i> .
<i>Sim</i>	Land where only half of the plot can be irrigated by means of irrigation channels or other means and water used once stays for only one day.
<i>Srijanga script</i>	Written script of <i>Kirat</i> language, a branch of Sino-Tebetan language family.
<i>Sudeni</i>	Local midwife.
<i>Tamor Basa</i>	<i>Majhi</i> 's deity worship during <i>Ubhauri</i> .
<i>Terai Adivasi Janajati</i>	<i>Terai Adivasi Janajati</i> includes <i>Kisan</i> , <i>Meche (Bodo)</i> , <i>Dhanuk (Rajbansi)</i> , <i>Jhangad</i> , <i>Santhal (Satar)</i> , <i>Dhimal</i> , <i>Gangai</i> , <i>Rajbansi (Koch)</i> , <i>Tajpuriya</i> and <i>Tharu</i> .
<i>Thakurani</i>	<i>Majhi</i> 's deity worship during <i>Ubhauri</i> .
<i>Tukimara</i>	<i>Tukimara</i> is an electronic torch used for lighting.
<i>Ubahuli</i>	Also known as <i>Sakela/Sakewa Ubhauri</i> , a festival celebrated during crop plantation season by the <i>Kirat</i> people of eastern Nepal.
<i>Udyouli</i>	Also known as <i>Sakela/Sakewa Udyouli</i> , a festival celebrated during crop harvesting season by the <i>Kirat</i> people of eastern Nepal.



# EXECUTIVE SUMMARY

## EXECUTIVE SUMMARY

Kabeli-A Hydroelectric Project (KAHEP) involves the construction of a 37.6 MW peaking run-of-the-river hydropower project on the Kabeli River in Eastern Nepal. Hydro-Consult Engineering Limited (former Hydro Consult Private Limited) conducted a participatory Social Assessment (SA) which informed the development of the Social Action Plan (SAP). Both the SA and the SAP are based on local requirements and World Bank environmental and social safeguard policies and International Finance Corporation (IFC) Performance Standards.

Based on the assessment process it is expected that the KAHEP project will have limited direct and indirect social-cultural impacts on four Village Development Committees (VDCs). The key potential impacts relate to permanent impact on 22.508 ha land of which 7.678 ha is agricultural land from 13 households, impact on occasional fishing activities in the downstream of 5.6 km, impact on one temple and three cremation sites due to altered flow in the Kabeli River and other construction related impacts. No physical displacement of population is required and impacts related to occasional fishing and water use in the reduced flow zone will be marginal. The present SAP has been developed based on a comprehensive free, prior and informed consultation process. Plans, strategies and procedures like resettlement compensation and livelihood assistance plan, Vulnerable Community Development Plan, health and safety measures, public consultation and communication strategy, consultation strategy, implementation arrangement, monitoring and evaluation have been developed as an integral part of the SAP of KAHEP.

### I DESCRIPTION OF THE PROJECT

KAHEP is a 37.6 MW peaking run-of-the-river hydropower project on the Kabeli River in Eastern Nepal that forms a natural border between the Panchthar and Taplejung districts. The project area of KAHEP covers four VDCs; Amarpur and Panchami of Panchthar district and Thechambu and Nangkholyang of Taplejung district. Hydro-Consult Engineering Limited (HCE) has carried out the SA in accordance with the Nepal Government's statutory framework, international conventions the government of Nepal has ratified, such as International Labor Organization Convention 169, and World Bank's Policies, Guidelines and IFC's standards. On the basis of SA study a SAP report is prepared.

The major project features of the KAHEP are diversion barrage, side intake, settling basin, headrace tunnel, surge shaft, surface penstock and surface powerhouse. The diversion barrage of 14.3 height with provision for ponding will be constructed at 2.5 km upstream of Kabeli Bazaar in Dhuseni village of Amarpur VDC on the left bank and Khudurke of Thechambu VDC on the right bank. The water will be conveyed by 60.2 m long pair tunnels followed by a 4326.8 m long headrace tunnel to a surface powerhouse located adjacent to the Piple Khola on the left bank of the Tamor River.

### 2 PLANNING APPROACH AND METHODS

This SAP has been developed using participatory planning approach which encourages participation and involvement of all key stakeholders in development planning. The participatory approach is important to ensure that local people, particularly indigenous communities, are consulted and can meaningfully participate in the project planning and development process and that the project is planned and developed with the free, prior and informed consent of local indigenous people. The planning process mainly involves: socioeconomic appraisal, needs identification, their development preferences and continuous consultations with all stakeholders.

The SAP is primarily based on the findings of SA study. The primary data were collected through household questionnaire survey, Indigenous People survey, Focused Group Discussion (FGD), in depth interview and consultation meetings with the various stakeholders and field observation. A cadastral survey around the project impacted areas and asset inventories were carried out to identify the status extent and effect of land loss, assessed entitlements, prepare land loss records with cadastral maps and land compensation award paper. Existing policies, legislation and guidelines related to the hydropower development of Nepal and World Bank's policies and guidelines have been reviewed and documented. The Macro level demographic features were collected from secondary

data published by the Central Bureau of Statistics (CBS), affected District Development Committee (DDC) and affected VDCs.

### 3 DESCRIPTION OF THE SOCIO-CULTURAL ENVIRONMENT

#### 3.1 Project VDCs

Amarpur and Panchami VDCs of Panchthar district and Thechambu and Nangkholyang VDCs of Taplejung district are the project affected VDCs. Major Project structures like headwork, surge shaft, waterways and powerhouse are located in Amarpur VDC. Population of these project VDCs is 21,098 (48.1% male and 51.88% female) having sex ratio of 1:1.07. Average household size is 5.54. The project VDCs has mixed communities including various caste and ethnicities. These communities reflect a wide range of cultural, linguistic and religious background. *Adivasi Janajati*, (*Limbu, Rai, Tamang, Newar and Majhi*) constitute about 53.38% followed by 39.47% Hindu High Caste (*Brahmin/Chettri*) and 6.13% *Dalits* (*Damai, Kami and Sarki*). *Limbu* is the dominant group in all four VDCs. *Nepali, Limbu* and *Bantawa* are the major mother languages spoken by the local population. Similarly, Hindu (53.06%), Kirat (37.05%) and Buddhism (9.52%) are the major religions practiced by the local residents. The literacy rate is 49% (55.3% male and 44.7% female). Like the project districts, the overall economic structure of these project VDCs is characterized by a mixture of farm and nonfarm activities.

#### 3.2 Surveyed households

In total 46 households from the impact zone of three project VDCs (Amarpur 30 HHs, Panchami 2 HHs and Thechambu 14 HHs) were taken for detailed socio-economic survey. The total population of the surveyed household is 363 (51.24% male and 48.76% female) with an average household size of 7.89 that is higher than the national and project VDCs average. Majority of the households (62%) represent joint family structure followed by nuclear (29%) and extended (9%). About 50% of the households follow Kirat religion followed by 34.78% Hindu and 15.22% Buddha religion. The literacy rate of the surveyed household is 84.39%, that is better compared to the average literacy rate of the project VDCs and districts.

About 64.46% of the populations are economically active and most of them are involved in subsistence agriculture. About 43.48% reported agriculture as their only one livelihood source whereas rest of the households are involved in secondary occupations like foreign employment, services and daily wages in addition to agriculture. The average land holding of the surveyed household is 1.59 ha that is higher than the districts (Panchthar 0.81 ha and Taplejung 0.89 ha) and national averages (0.80 ha). In terms of caste and ethnicity, land holding is the highest among *Limbu* (1.74 ha/HHs) and the lowest among *Tamang* (1.24 ha/HHs). Of the total cultivated land, about 54.70% is *Khet* (irrigated land) and 45.29% *Bari* (non irrigated land). Paddy, maize, wheat, and pulses are the major crops produced in the area. Households rear cattle, goats, buffalo, pigs, duck and poultry as an important subsistence activity and source of income. The average annual income of these households is NRs. 163,852.17. It is highest (NRs 301,100.00) for *Brahmin* and lowest (NRs. 86,000.00) for *Majhi*. This average household income is better in comparison to the national figure. Even though most of the households are engaged in agriculture, remittance has the highest contribution (44.92%) in the income of these households. The average annual expenditure is NRs. 121,921.00 that is highest for *Brahmin* (NRs. 225,648.00) and lowest for *Majhi* (NRs. 77,476.00). Among the various expenditure sources, people spent highest amount on food (30.52%) followed by clothing, health and education.

The situation of sanitation in the project areas except Pinasi village is satisfactory. About 65.21% households have access to safe drinking water and about 87% of households have toilet facilities. Typhoid, asthma, anemia, blood-pressure, sugar, lung related diseases and worms are the common disease among the surveyed households. Health facilities in the project area consist of only few health post and sub-health posts. Majority of the population prefer *Dhami/Jhankri* (local healers) for treatment. Firewood is the only fuel used for cooking by all the households. Most of the households (87%) have the access to telephone/mobile service provided through various service provider companies. The Mechi Highway is the only one road network that connects the area with respective district headquarters.

### 3.3 Adivasi Janajati

The project VDCs are mixed communities including various caste and ethnicities in the project areas. *Limbu, Tamang* and *Majhi* are the major *Adivasi Janajati* groups. . These communities reflect a wide range of cultural, linguistic and religious background. Among them, the *Adivasi Janajati* groups have special relationship with the land and territory. They have their attachment to the natural resources and show a sense of ancestral territory. All ethnic groups live in a mixed fashion, without a homogeneous ethnic concentration. Only 13 households will be directly affected through land losses and they belong to different ethnicity as well. The majority of the households in the four VDCs are potential beneficiaries from the SAP program activities and the project.

### 3.4 Gender, disadvantaged and vulnerable groups

In the context of KAHEP vulnerability, refers to households and communities that may have considerable difficulties in participating in the livelihood restoration process and benefit sharing due to serious lack of required skills, resources, experience and organization. In the project area Indigenous Peoples, *Dalits* and women are regarded as the disadvantaged and vulnerable groups.

## 4 PROJECT IMPACT AND IMPACT ANALYSIS

### 4.1 Project impact zones

The project affected VDCs comprise Amarpur and Panchami of Panchthar district and Thechambu and Nangkholyang of Taplejung district. Based on the potential social and environmental impacts of the project, the project-affected areas are classified as direct impact areas and indirect impact areas. The direct impact area includes the reservoir area, the dewater stretch and the areas where most of the construction activities of the project take place. The surrounding area or the indirect impact area consists of areas that will not be directly affected by the construction activities. The area consists of forest areas and settlements within 3 to 4 hours walking distance from the project site.

### 4.2 Project adverse impacts, impact analysis

#### 4.2.1 Impact on land

With the design for a run-off operation, the project impacts on land are relatively small among hydropower generation projects. With the current design, the project will not require relocation of any households and would have no impacts on residential and commercial structures. It will require 22.508 ha of land on permanent basis. Of this land, only 7.678 ha is agricultural land, 1.57 ha is forest land and the rest is the riverine area. The forest lands to be acquired are small areas scatted in several locations for various project works. They are part of the community, leasehold and communal forestry areas. The riverine areas belong to the Government of Nepal (GoN). The project will acquire 25.21 ha of land on temporary basis. Major part of the temporary land required (15.90 ha) lies in the riverine area being occupied by the project facilities such as quarry, muck disposal etc. Construction Contractor shall be made responsible to reinstatement of all the temporary land. All the temporary sites used during construction shall be returned in conditions similar to before lease.

A total 13 households including 6 *Tamang*, 3 *Majhi* and 1 *Limbu*), and 3 *Brahmin/Chettri* HHs will lose 7.678 ha of their land due to permanent acquisition for construction of different project features. The detail of Project Affected Families (PAFs) is presented in following table:

SN	Project features	Number of affected households by land acquired by the project	Family size	Employed member in non-farm activities
1	Reservoir	2	12	2
2	Permanent Camp at Head works	2	25	5
3	Barrage, Operating Platform, Intake	2	17	6
4	Camp site at Powerhouse	2	22	4
5	Powerhouse, Switchyard and tailrace	6	36	2
	<b>Total</b>	<b>13</b>	<b>105</b>	<b>19</b>

Note: Land of one household will be purchased at two different project features (S.N. 4 and 5 of above Table)

Among the PAFs, most of the households (8 HHs) will lose less than 25% of their land and only two household lose more than 50% of their land. Most of the affected land is low quality land from agricultural point of view. The average landholding size of the total PAFs is 3.02 ha, which is higher than the national average and district average. Out of the total 13 families, 19 members are employed permanently in non-farm sector indicating nonfarm employment rate of 1.46 persons per household. The household income, as revealed through the social economic survey, is multi-structure, with agriculture accounting to less than 10% of the average household income. And of the non-farm income, remittance contributes to almost 45%. With all this considered, the impact of loss of private land is relatively small on their household income.

#### 4.2.2 Impacts on fishing

Diversion of the Kabeli River is expected to reduce the riverine fish resources of the Kabeli from November to June for nearly 5.6 kilometers downstream of dam which might have impact on the occasional fishing activities. Surveys and assessment show that there are no households who are doing professional or full-time fishing along this stretch. There are community households from different ethnic backgrounds that are residing close to the river who fish occasionally in this stretch of the river for self-consumption. Discussions with them show that they also fish in the Tamor River area downstream or upstream areas of the Kabeli dam during dry season. The fishing markets are not developed in this area. Some impacts are expected with the reduction of river flow during the dry season, and considering the options people have, the impacts are expected to be small.

#### 4.2.3 Impact on physical cultural resources

One *Pati* (resting place) and two ritual sites of *Majhi* at the close proximity of powerhouse site will experience induced pressure during construction phase. Similarly, the Panchyan Shivalaya Temple at Kabeli Bazar and three cremation sites in the dewater zone (5.6 km) will be affected by the reduced flow. Moreover, the reduced flow might have impacts on religious practices and fish species that are used for customary and ritual practices by *Adivasi Janajati* and local population.

The *Pati* at Pinasi Ghat near the powerhouse can be relocated to an alternative site with consensus of communities if it is affected physically by the construction activities of the project. The minimum mean monthly environmental flow will minimize the impacts on the Panchayan Shivalaya Temple, cremations sites and customary use of fish.

#### 4.2.4 Construction related/contractor operation related impacts

During construction, the increased population will create pressure on the local water supply, health, and sanitation facilities, especially around the construction camps. The construction activities may cause accidents and injuries and influx of people with different social and cultural backgrounds and the sudden inflow of cash at the same time may result into social abuse such as alcohol consumption and prostitution (illegal). These impacts may lead to resentment and friction among local residents and the incoming workers that will affect the peace and harmony of the project area.

The construction related impacts are higher during the peak construction period when the influx of people from outside is high. These impacts are assessed based on experiences of experts and other investment operations. It is difficult to map out the extent of these impacts at this stage.

#### 4.2.5 Impact on *Adivasi Janajati* and disadvantage groups

The indigenous peoples, women, children and vulnerable groups of the project area will also experience the above-mentioned impacts. The project area is a mixed community where indigenous communities or *Adivasi/Janajati* in Nepali, and other groups live together. They are not homogenous settlements for a particular indigenous group. Field studies and consultations with the local communities indicate that, as part of a mosaic community, local people share a common approach to their economic and livelihood activities and therefore they are expected to experience similar economic impacts from the project in spite of their caste and ethnicity differences. However, the impacts may experience some differences when it comes to cultural practices and the ability to participate in the program implementation and avail of benefit opportunities under the project.

### 4.3 Impacted population and assistance approach.

The project is expected to have negative and positive impacts on the local population. They can be categorized into the following groups,

- Affected households through land permanent and temporary loss. The surveys have identified 13 households of 105 people who would lose 7.678 ha of private lands permanently. The contractors are expected to lease about 10 ha of land during the construction phase. The number of households to be affected through the lease will be identified only after the specific locations of lease land are determined and finalized by the contractors.
- Affected households through possible fishery impacts. The expected reduction in fish population in the dry season may affect some households doing some fishing along the 5.6 stretch downstream of the headworks. The community members along the river are practicing some occasional fishing and consultations within the communities have identified a few households who doing fishing more than other members.
- Affected communities through impacts on physical cultural properties, forest areas, public health, safety etc. These are general impacts upon the local population in the four VCDs and are more communal rather than household-specific.
- Vulnerable households in the four project VDCs. These include *Advasi Janjati, Dalit* and women-headed households. Apart from the few losing land and the general impacts mentioned above, they are potential beneficiaries under the project.
- Households within the four project VDCs. The communities, including the above population, will directly benefit from the project assistance.

The SAP program activities are designed with a view to address the project adverse impacts upon the affected population, and to maximize project benefits through its assistance activities to the local communities, including those households directly affected.

- Compensation and livelihood assistance package.
- Community livelihood assistance program
- Community health and safety program
- Indigenous and Vulnerable Community Development Plan including generic and specific measures for enhancement of indigenous communities and vulnerable group. The plan includes agriculture support program, skills training, preferential employment, drinking water, health and sanitation programs, capacity building programs, women and indigenous community focused programs, and strategy for their participation.

## 5 POLICY FRAMEWORK

The objective of the project policy framework is to ensure mitigation of project adverse impacts, culturally appropriate benefits to local communities, indigenous communities in particular and support of all stakeholders of this development project. The policy framework is based on the principle that the affected persons will be able to restore and improve their livelihoods through project assistance in line with relevant government laws, international conventions the Government of Nepal has ratified, the World Bank policies and IFC Performance Standards on indigenous people and involuntary resettlement.

An entitlement matrix is developed as per the project resettlement framework. The matrix will apply to all project components entailing resettlement impacts. If additional resettlement impacts are identified during implementation, the entitlement matrix will be updated by including provision of compensation and assistance for the additional impacts.

## **6 RESETTLEMENT COMPENSATION AND LIVELIHOOD ASSISTANCE PLAN**

As stated previously, project-related land acquisition will not require physical displacement of population, but it could generate loss of assets and adverse impacts on livelihoods. To mitigate such impacts a resettlement compensation and livelihood assistance plan has been designed for KAHEP is based on the entitlement matrix and the KAHEP resettlement policy. This plan meets the requirements of relevant local legislation, including the Land Acquisition Act, 2034 (1977) and ILO Convention 169, as well as the World Bank policy and IFC Performance Standard on land acquisition and involuntary Resettlement, indigenous peoples, and other relevant acts, policies and guidelines related to hydropower development. For this purpose, a set of resettlement principles have been developed to guide project preparation and implementation in the SA report. The Resettlement compensation plan has been prepared based on the general findings of the SA report. Possible impacts, associated losses and corresponding procuring and delivery mechanisms have been presented in the plan.

## **7 INDIGENOUS PEOPLE AND VULNERABLE COMMUNITY DEVELOPMENT PLAN**

The Indigenous Peoples and Vulnerable Community Development Plan (IVCDP) is designed to ensure that indigenous peoples and other vulnerable groups affected by the project are regarded as special interest groups, and that impacts on their livelihoods are minimized and addressed in a sensitive and culturally appropriate manner and that they receive culturally appropriate benefits under the project. The project area is a mixed type of community and there are no homogenous settlements especially for a particular group. So as part of a mosaic community, people share common approach to their economic and livelihood activities and will experience similar economic and livelihood impacts from the project whatever be their caste and ethnicity. However, the impacts may experience some differences when it comes to cultural practices and the ability to participate in the program implementation and avail of benefit opportunities under the project.

The assistance package is developed in a fully transparent and participatory manner, based on the feedback from the consultations with different ethnic groups. Further consultations over the package indicate that a common package of assistance will be appropriate and adequate for to all the impacted population of different case and ethnicity. But some special attention needs to be given to the indigenous and vulnerable communities in addressing some particular impacts upon them and in facilitating their participation to ensure that the project is planned and developed based on free, prior and informed consent from the indigenous communities in the project areas.

The study has identified *Adivasi Janajati*, *Dalits* and Women Headed household as the vulnerable and disadvantage groups for the project area. Among the total 13 PAFs directly affected households, 10 belong to *Adivasi Janajati* households (six *Tamang*, three *Majhi* and one *Limbu*) will lose their lands due to project intervention. However, no *Dalit* and women headed household will be directly affected directly by the project.

The IVCDP includes generic and specific measures. The generic measures are applicable for all communities of the project areas irrespective of the extent of vulnerability and specific measures are targeted for specific community who are considered as vulnerable in the local context. Community groups, particularly poorer women and vulnerable indigenous communities will be supported through grants and skill training to undertake economically viable and sustainable income/employment generating activities such as livestock, agriculture, crafts, and forestry, trade and service sectors. These have been suggested and brought out through the social assessment and consultations with the communities. The specific schemes for different households and groups, and details will be developed later in consultations with the vulnerable households.

The project's SAP includes a strategy for the effective meaningful participation and continuous involvement of affected people, including indigenous communities and other vulnerable groups, throughout the project cycle as an integral part of the IVCDP. Core components of this strategy are (a) the representation of affected people/vulnerable groups on SAP implementation structures; (b) a grievance management system for the resolution of grievances and disputes; and (c) monitoring and

evaluation mechanisms to track implementation issues. The project will adopt mainstreaming and targeted approaches to maximize the project benefits and opportunities for Indigenous communities and vulnerable communities.

## **8 HEALTH AND SAFETY MEASURES**

World Bank Group Environmental, Health, and Safety Guidelines (EHS Guidelines), and IFC Performance Standard 4 are extensively reviewed while proposing the health and safety measures. Following health and safety measures are proposed for both project staffs and local people.

### **8.1 Staff health and safety measures**

Health centers will be established in the project area for attending health matters of workers and local population during construction phase. A health centre will be operated in the project area for attending health matters of workers and local population during construction phase. In addition to this, the contractors will arrange adequate health services to construction workers on the site. Two health clinics will be run throughout the construction at headworks and power site each.

Project contractors in the construction phase and project operator in the operation phase will be made responsible for the occupational health and safety measures for workers and staffs. The construction contractor is responsible for all preparatory works and ensuring drinking water and sanitation facilities required for construction workers before the commencement of work. Health awareness programs will be organized on a regular basis to provide information or instructions to construction workers on health and safety.

### **8.2 Public health measures**

KAHEP is committed to strengthening health facilities, establishment of new water schemes in the project area. Health centers (hospital or clinics) will be established in the project area for attending health matters during construction phase. After the completion of Project, one health clinic (out of the two that will be in operation during construction), will be handed over to the community for operation. The support to drinking water scheme will have positive impacts on general public health. Health awareness programs will be organized on a regular basis to provide information or instructions to local population on health and safety.

## **9 BENEFIT SHARING MEASURES**

### **9.1 Resettlement and rehabilitation actions**

Compensation and development package will be worked out for those 13 families (PAFs) whose land will be acquired to enable their restoration and improvement of their affected livelihoods. The package will include i) cash compensation for lands, crops, trees and other losses, as per the negotiation between the project and the land owners and ii) vocational training assistance for skill development, iii) income generation activities and iv) scientific agriculture technologies and an improve seed program.

### **9.2 Project level measures**

In addition to the resettlement and compensation package that each directly affected household receive, the project impacted VDCs have also been earmarked for special development assistance. The project has set Community Development Initiatives to be invested over a period of four years in infrastructure and development schemes. The implementation of the project will make available all season motorable roads for people living in remote areas where project is located and hence enhance the transportation facilities for the local people. Under social development program, the project will give high priority for the repair and maintenance of existing health posts, educational institutions and contribute to the establishment of new drinking water schemes in the area. The people from affected area stand to gain benefit in terms of job creation and income generation.

### **9.3 CSR activities**

KEL aims to support local socioeconomic development through maximizing the benefits under KAHEP. Part of the assistance includes various CSR activities as per the KEL CSR policy. The CSR



Policy of KEL aims to achieve, consolidate and strengthen Good Corporate Governance including socially and environmentally responsible business practices that balance financial profit with social well being. The CSR commitment of KEL positions its social and environmental consciousness as an integral part of its business plan and its commitment to all its stakeholders including share holders, employees, local communities and the society at large. Apart from the EMP implementation, KEL will develop strategies and put CSR activities in various thematic areas like human rights, transparency and good governance, environment conservation, integrated community development, health education, vocational training, capacity building and disaster management in the project area.

#### **9.4 Support to local development**

KAHEP is committed to strengthen health, drinking water and education facilities so that the wider project-affected-population can enjoy improved health care, drinking water and educational services. KAHEP will provide training and financial services to develop and strengthen the existing cooperatives, savings, and credit association in the project area. It is expected that a minimum of 50 % of the unskilled workforce will originate from the affected villages for the construction phase of the project. KAHEP, in partnership with potential local NGOs, will develop skills refresher courses to meet the needs of interested project affected persons. The project will cause an economic spin-off in the project impact area.

The project will provide 37.6 MW of power to the much needed electricity grid of Nepal. This will have large positive impact on the macro-economic growth of the country. As per the Electricity Act, 50% of the royalty that GoN will receive during the 30 year license period is given to the districts where the project is located that will support their development needs.

Local people have great expectation of rural electrification program from KAHEP. However, much more technical work needs to be done to study the alternatives, technical options and the feasibility before the project can assess its financial implications and affordability for KAHEP. To facilitate possible electrification, KAHEP will undertake a needs assessment within the affected villages, and will work with the World Bank and relevant government agencies to explore various options for local electrification.

## **10 PUBLIC CONSULTATION AND COMMUNICATION STRATEGY**

Public consultation at different levels was used as a tool to inform stakeholders about the proposed action both before and after the development decisions were made. The main objective of the consultation process is to ensure the effective information dissemination and participation of the project affected people in the decision-making process, and that project impacts are minimized and the benefits of the project are shared and delivered to the local population, including indigenous population, in a culturally appropriate fashion. The SA team performed public consultation activities according to the requirements, situations and demands of the concerned population. The local people were involved from the initial phase of SA study. The consultations were carried out during planning stage and are planned to continue during implementation stage. This is a continuous process and feedbacks from the consultations have been incorporated into the SAP.

The local people including indigenous communities and vulnerable people are positive towards the implementation of the project, if they benefit from the project. They pointed out that the smooth operation of the project is possible only through close co-ordination with local people in the planning and implementation stages. *Adivasi Janajatis* want the project because in their view, the project will bring many opportunities to the local residents such as access to electricity, employment, trade, business, and others. They think that they are the first people to benefit because the project is located in their area and they have high level of expectations from the project.

The project team, through the consultations and interactions with the *Adivasi Janajatis*, conclude that the project local indigenous groups welcome and support the project development as planned and designed. The current design of the project, particularly through the SAP and CSR activities, is developed on the basis of the feedback from local communities, particularly the indigenous and vulnerable community groups and has fully incorporated their recommendations. Thus the project

will bring expected benefits to local communities, including indigenous community members, and promote the overall social economic development in the project areas and improve their well-being.

The key findings of the consultations and consideration of the key feedbacks/concerns of the affected communities and other stakeholders in the project design are summarized in the following Table:

**Table: Consideration of the key feedbacks/concerns in the project design**

Category	Key feedbacks/concerns of the community	Incorporation in the project design
Land acquisition related	Land loss due to the construction of the project and mode of compensation	-Minimum land acquisition (With the design for a run-off operation, the project impacts on land are relatively small among hydropower generation projects) -Cash compensation for permanent loss of land as per the negotiation between the project and the land owners.
Fish and fishing activities related	-Impact on downstream communities -impact on fishing and downstream ecosystem	-Construction of fish ladder -10% minimum environmental flow -construction of cold water fish hatchery
Access to forest related	-Possible loss of access to forest and NTFPs	-Development of a plantation site for 1:25 times of the felled trees in the area as identified by the related District Forest Office.
Socio-cultural related	-impact on cremation sites, temples and associated religious activities -impacts on ritual practices	-Minimum flow (10% minimum environmental flow) for cultural and religious survival. -Maintenance of the affected cremation/customary sites
Community services related	Impacts on Water Supply, sanitation and health	-Provision of better levels of services for water supply, sanitation, health and drainage. -Enhancement program on water supply and sanitation in the participation of local people/local authorities/NGOs -Health centers will be opened for attending health matters of workers and local population during construction phase
Project construction and operation related	-Employment in construction, plant operation, and service sector of the project. Support on training for self-employment  -Construction related impact	- Project will employ about 600-800 people at during construction period. It is expected that minimum of 50 % of the unskilled workforce will originate from affected village for the construction phase of the project.  -Project will adopt safe constructional practices.
Project benefit related	Access to irrigation water, provision of electricity supply, domestic water supply from the project as appropriate.	- Establishment of new drinking water supply schemes in the project area. - To facilitate possible electrification, KAHEP will undertake a needs assessment within the affected villages, and will work with the World Bank and relevant government agencies to explore various options for local electrification. - To facilitate possible electrification, KAHEP will undertake a needs assessment within the affected villages, and will work with the World Bank and relevant government agencies to explore various options for local electrification.
Adivasi Janajati and disadvantaged group related	-Meaningful participation in project activities -Self identity	-Respect the self identity and provisions of special programs for preservation and protection of self identity -Design and implementation of IVCDP -Adopting a participation and communication strategy to ensure continuity of consultation

		with and participation local communities in project implementation.
Dam safety related	-Addressing the dam safety issues	-Safety of Dams policy of the World Bank (OP 4.37) will be followed for the project although the headworks of KAHEP will consist of only 14.3 meter high barrage.

The communication strategy is guided by the concepts of Free, Prior and Informed consultation with the affected communities to enable informed participation, leading to lenders' confirmation of broad community support for the project within the affected communities. The feedback from consultations has been, and will continue to be an important component of the planning process leading to the formulation of mitigation measures and compensation plans for project affected communities. The communication strategy involves the identification of project stakeholders, mechanisms for their participation, use of effective communication tools, information disclosure and dissemination.

## **11 IMPLEMENTATION ARRANGEMENTS**

As the project authority, KEL will assume overall responsibility for the management procedures as mentioned in the SAP.

### **11.1 Institutional arrangements**

An organizational setup for SAP implementation will be implemented at central and project level. At the central level, the KEL management will be responsible for overall project coordination and management of SAP implementation and budget arrangement. At the project level, KAHEP will design plans and programs that will be implemented and monitored at project level by the Kabeli A Environment and Community Development Unit (KAECDU) after reviewed by Panel of Expert (PoE). The KAHEP will set up offices for KAECDU with required number of experienced staff to implement the planned activities and also monitor them routinely. Community Guidance Committee (CGC) will be formulated with the representatives from the project impact area.

### **11.2 Grievance redress mechanism**

The project company will establish grievance redress mechanism to allow PAPs to appeal any disagreeable decisions, practices and activities arising from compensation for land and assets. Any grievances and objections related to land acquisition and compensation or entitlement will be referred to the Project Grievances Redress Cell and Grievance Redress Committee (GRC) at local level, Grievances Committee (GC) at central project level and formal court of appeal system. At field project level, the project company will designate a Grievance Redress Officer (GRO) to receive routine emerging complaints of PAPs and stakeholders with clear responsibility to address their concerns. At central level, the Chief District Officer (CDO) and chairman of the KCC will be the independent member for the grievance redress.

## **12 MONITORING AND EVALUATION**

Regular monitoring of SAP implementation will be conducted by the implementing agency as well as by an independent external monitoring and evaluation organization or individual designated by Ministry of Energy (MoEn). For the KAHEP, primary monitoring responsibility will rest with KEL. KEL will establish KAECDU to undertake social and environmental monitoring of the project.

The internal monitoring will be carried out by KAECDU in a regular basis to assess progress against the schedule of action defined in the SAP. An independent external monitoring and evaluation organization or individual designated by MoEn will carry out six-monthly review of the SAP implementation. External monitoring will be conducted during the implementation period to provide independent verification that timely compensation payment and rehabilitation assistance are provided to those entitled, and that grievances are addressed in a prompt manner to resolve the cases.

A Panel of Experts (POE), comprising an environmentalist and sociologist is established as per the World Bank Operational Policies. The Panel will, inter alia, review, comment, provide suggestions or recommendations as it deems necessary and appropriate, or as requested by the KEL or its Consultant on any subject it considers vital to the successful completion and approval of the

environmental and social studies of the project. The implementation of SAP is targeted for completion at the end of 2014. Furthermore, community related works and resolution of issues will continuously be undertaken until completion of SAP implementation.

### **13 COST AND BUDGET**

The total cost estimated for socio-economic and cultural environmental mitigation measures, enhancement measures and monitoring and evaluation activities is NRs 29,579,173.05 (NRs. Twenty Nine Million Five Hundred Seventy Nine Thousands One Hundred Seventy Three only). The Project Company will be responsible for its financing.

## **CHAPTER I**

# **INTRODUCTION OF THE PROJECT**

# I PROJECT INTRODUCTION

## I.1 Project proponent

Butwal Power Company (BPC), a prominent hydropower company in Nepal, is promoting green energy since 1966. BPC owns and operates 12 MW Jhimruk Hydropower Project and 5.1 MW Andhikhola Hydropower Project. Moreover, BPC has 16.88 % and 60 % of shares in 60 MW Khimti Hydropower Project and 4 MW Khudi Hydropower Project respectively. In addition, BPC is developing several new projects, which are under various stages of development.

KAHEP was opened for global bidding to develop under Build, Own, Operate and Transfer (BOOT) model. A joint venture led by BPC won the bid and formed Kabeli Energy Limited (KEL) to develop the project. KEL, in the status of a Project Company, signed a Project Development Agreement (PDA) with Department of Electricity Development (DoED) for the development of KAHEP on 31 January 2010. The address of the project proponent is given below:

### **Kabeli Energy Limited (KEL)**

Ganga Devi Marga-313, Buddha Nagar

P. O. Box: 11728, Kathmandu, Nepal

Tel: +977-1- 4781776/4784026/ Fax: +977-1- 4780994

Email: [kel@bpc.com.np](mailto:kel@bpc.com.np)

Website: <http://www.kel.com.np>

## I.2 Organization Responsible for Preparing the Report

Hydro-Consult Engineering Limited (HCE)<sup>1</sup>, formerly Hydro Consult Private Limited (HCPL), a sister organization of BPC, has conducted the SAP of the KAHEP. HCE specializes in engineering, environment and social consultancy in hydropower, irrigation and other infrastructure development sectors. The address of the consultant is given below:

### **Hydro-Consult Engineering Limited (HCE)**

Buddha Nagar

P. O. Box: 14408, Kathmandu, Nepal

Tel: +977-1-4782507/ Fax: +977-1-4785920

Email: [service@bpch.com.np](mailto:service@bpch.com.np)

Website: <http://www.bpch.com.np>

## I.3 Project Location

KAHEP is a 37.6 MW peaking run-of-the-river (PRoR) hydroelectric project on the Kabeli River in Eastern Nepal (Figure I-1). The Kabeli River forms a natural border between Panchthar and Taplejung districts in the middle mountains of Nepal.

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<sup>1</sup>In 1986 BPC established BPC Hydroconsult as the company's consulting wing for engineering and consulting services in hydropower, water and irrigation sector. BPC Hydroconsult was restructured as a separate entity, Hydro-Consult Private Limited (HCPL) in 2009 that was again converted to a public company; Hydro-Consult Engineering Limited (HCE) in 2012. HCE is a subsidiary of BPC and is recognized as a leading consulting organization and it undertakes multi-disciplinary projects



**Figure I-1: Location Map of KAHEP**

Kabeli is a tributary of Tamor River which is one of the major tributaries of Kosi River system. Project area of KAHEP will cover four Village Development Committees (VDCs) namely: Amarpur, and Panchami of Panchthar district, and Thechambu and Nangkholyang of Taplejung district. The headworks of the project is located in the border of Amarpur and Thechambu VDCs. The approximate longitude and latitude of the proposed intake are  $87^{\circ} 44' 56''$  E and  $27^{\circ} 16' 40''$  N respectively. The tunnel alignment will pass through Amarpur VDC. The powerhouse is located at Pinasi village of Amarpur VDC at an approximate longitude and latitude of  $87^{\circ} 44' 03''$  E and  $27^{\circ} 14' 11''$  N respectively. Geographically, the proposed project lies between  $87^{\circ} 45' 50''$  E to  $87^{\circ} 40' 55''$  E and  $27^{\circ} 17' 32''$  N to  $27^{\circ} 13' 41''$  N.

Two construction camps, one at the headworks area near Kabeli bazaar and another one at the powerhouse area on the left bank of Tamor River and nearby the powerhouse area will be constructed. Separate permanent housings will be constructed at Pinasi village. The total length of dewater stretch from headworks to Kabeli-Tamor confluence is about 5.6 km. The left bank of the dewater zone lies in Amarpur VDC, whereas the right bank lies in Thechambu and Nangkholyang VDCs.

The project area is about 800 km east of Kathmandu. It is about 600 km by Tribhuvan, Prithvi and Mahendra Highway up to Birtamod in Jhapa district. Mechi Highway starts from Charali, located 4 km east from Birtamod Bazaar in Jhapa district along Mahendra Highway and reach Kabeli Bazaar (202 km north) on the left bank of the Kabeli River after crossing Phikkal, Ilam, Ranke, Phidim and Gopetar market areas. Apart from this road, seasonal air services are available from Biratnagar to Taplejung that is further 26 km (gravel road) north from Kabeli Bazaar along the Mechi Highway. Headworks and Powerhouse are the major two sites those are to be connected by motorable roads for the transportation of construction materials. The Headworks and powerhouse are the two major sites of KAHEP, which are to be connected by motorable roads for the transportation of construction materials. The existing community developed earthen track roads will be upgraded for access to headworks and powerhouse sites. The access road to the headworks starts at Chainage 50 km (Mechi Highway) whereas the road to the powerhouse starts at the Chainage 48+000 at Bhanuchowk bazar of Amarpur VDC at Mechi Highway.

## 1.4 Project features

The project features description in this report is as per the Updated Feasibility Study (UFSR, 2011). The project is PRoR type with a proposed installed capacity of 37.6 MW. The gross head and design discharge of the project are estimated at 116.80 m and 37.73 m<sup>3</sup>/s respectively. Major components of the project are briefly described below. The project location map and layout map are given in ANNEX A and ANNEX B respectively. ANNEX C provides the salient features of the project.

### 1.4.1 Headworks

The proposed headworks site is located at an elevation of 560 masl, 5.6 km upstream of Kabeli –Tamor confluence. The headworks will consist of a 14.3 m high barrage, two tunnel intakes, approach tunnels, two underground stilling basins, and an access tunnel. The construction of headworks will require the diversion of the river during the construction time. Therefore, a diversion tunnel has been proposed in this design.

The diversion barrage with provision for ponding will be constructed at 2.5 km upstream of Kabeli Bazaar in Dhuseni village of Amarpur VDC on the left bank and Khudurke jungle of Thechambu VDC on the right bank. A 14.3 m high barrage with floor at 561 masl elevation with a provision for ponding will be constructed. The length of the crest at most narrow section is at least 15 m.



Photo 1: Proposed headworks area

The peaking reservoir in this project has been designed for a total of 6 hour peaking at reduced capacity and in two slots of 4 and 2 hours. The live storage of the reservoir is 0.335 million m<sup>3</sup>. The area of the reservoir for 575.3 masl is 10.60 ha. Also, the minimum drawdown level has been kept at 570.5 masl which is 9.5 m above the river bed. The area of the reservoir for this level is 6.92 ha.

Two side intakes will directly feed two approach tunnels. Two tunnel intakes have been designed to draw 115% of the design flow from the reservoir. The intakes are on the left bank of the river and will take off at a favorable orientation with respect to the barrage axis. Two underground settling basins with two hoppers in each have been proposed on the left bank of the Kabeli River. Patented flushing system called S4 will be used. The length of flushing tunnel is 150 m. Access to the settling basin is required for scheduled and emergency monitoring and maintenance. The total length of the access tunnel is 437 m and the tunnel outlet portal is located on the downstream left bank of the barrage.

### 1.4.2 Waterways

Inverted D-shaped, concrete lined with 3.2 m of diameter and 60.2 m long converging pair tunnels has been proposed from the outlet of the settling basin to start of Headrace tunnel. A 4327 m long D-shaped headrace tunnel of internal diameter of 5.65 m has been proposed to convey the flow after the pair tunnels.

An underground surge shaft is proposed at Pinasi village of Amarpur VDC on the left bank of the Tamor River (Photo 2). The topmost part of the surge shaft will be exposed at ground. Surge shaft of the project is 51.7 m high with 10 m diameter. Outlet portal of the tunnel is proposed in rock outcrop on the right bank slope of the Piple Khola.

The penstock alignment entails 223.3 m long penstock pipe from the tunnel outlet portal to bifurcation and 27.2m long pipe from bifurcation to powerhouse. The internal diameter of pipe is 3.55m with different thicknesses (10mm-20mm) at different sections between tunnel outlet portal to

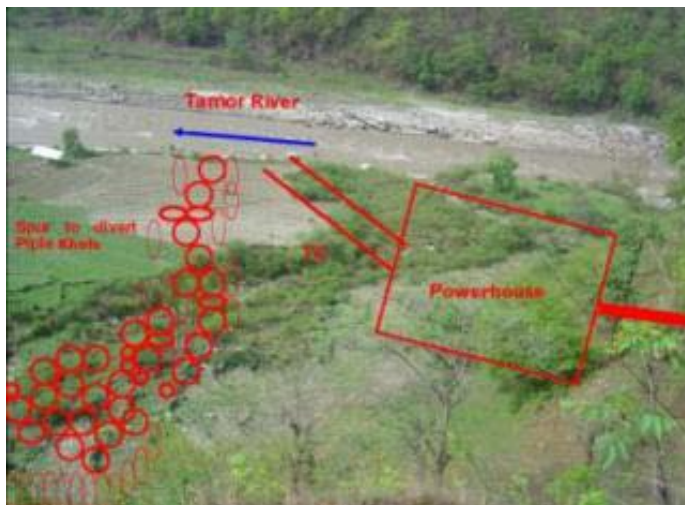


bifurcation point and varies thereafter. The penstock starts at the tunnel outlet portal at an elevation of 539.7 masl (centre level of penstock at tunnel outlet portal) and passes through the hill slope and terminates at the connection to the turbine at an elevation of 457.6 masl. The penstock will be buried in trench. Landscaping of the surface will be carried out after backfilling.

### 1.4.3 Powerhouse and tail race

The proposed powerhouse is semi underground located on almost flat alluvial deposit on the right bank of the Piple Khola (left bank of the Tamor River), Ward number 9 at Amarpur VDC, Panchthar district. The outside dimension of powerhouse is 34.8 m long and 18.6 m wide. Protection of the Piple Khola and some scaling to hill slope is required. The outdoor switchyard with 55.4 m x 38.75 m area is located close to the powerhouse at an elevation of 472.6 masl.

Since the area available for powerhouse is narrow and very close to seasonal tributary the Piple Khola, it is necessary to train the Piple Khola by pushing it on left side. Two long retaining walls are proposed to channelize the Piple Khola longitudinally on both sides. The width of the Piple Khola varies along its longitudinal profile. While it is narrow gully at upper stretch, it widens at lower stretch adjacent to the Tamor River. Likewise, it is necessary to train the Tamor River to prevent powerhouse from flooding even though it lies at safe location on the leeward side of a hill ridge. The earthen bund will be constructed along left bank of the Tamor River from the end of hill ridge-line down to Tamor River to protect powerhouse area from flood.



**Photo 2: Proposed powerhouse location at right bank of Piple Khola near the confluence with Tamor River**

The water will be discharged back to the Tamor River at Pinasi through a 93.1 m long rectangular box culvert type tailrace. Tailrace canal passes through the active channel of the Piple Khola. Shifting of the Piple Khola along left bank by emplacement of spur with the tunnel muck will allow the space for tailrace canal.

### 1.4.4 Camp area

The contractors are responsible for the construction of camps for its work force. The construction camps will be well-managed to comply with the environmental integrity. It is envisaged that two such camps will be required, one at the headworks area near Kabeli bazaar and another one at the powerhouse area on the left bank of the Tamor River and nearby the powerhouse area. Separate permanent housings will have to be constructed by the employer which shall be converted to permanent facilities for operation and maintenance of Kabeli Power Plant. The area for permanent camp has been envisaged at an area close to the surge shaft location (at Pinasi village).

### 1.4.5 Construction materials and quarry sites

The construction materials such as sand, aggregates and boulders required for the project will be sourced from the Tamor and Kabeli River's flood plains. For the headworks area, three locations have been identified along the Kabeli River. The total aggregate production capacity of the three sites is estimated to be 426,000 m<sup>3</sup> with 164,700 m<sup>3</sup> of boulders, 171,400m<sup>3</sup> of cobbles and 25,000m<sup>3</sup> of sand sufficient to meet the headworks aggregate requirements.

For the powerhouse site, two sites have been identified at the Tamor River flood plain for construction aggregate. Of the two sites, the site located on the left bank of the Tamor River with a total aggregate production potential of 190,000 m<sup>3</sup> with 104,500m<sup>3</sup> of boulders, 57000 m<sup>3</sup> of cobbles and 28500m<sup>3</sup> of sand will be used. The site located on the right bank of the Tamor River is an

optional site proposed which will be used only if the tunnel spoil considered to be good for aggregate use does not meet the requirements of the aggregate as envisaged. Nearly 60% of the tunnel muck is considered to be good for the aggregate usage.

As the proposed site are river flood plain areas, trenching operation for material quarrying will be prohibited. Quarrying of aggregates will be carried out through striping operations such that the landscape after the quarry will be same as before, however, the land level will change. Besides, quarry operations will be conducted up to the water level of the river.

#### **1.4.6 Spoil and muck disposal area**

The total amount of the excavation spoil from the barrage, settling basin, headrace tunnel, surge tank, powerhouse and tailrace tunnel is estimated to be 520,000m<sup>3</sup>. Nearly 60% of the excavated material is envisaged to be used for aggregates. However, if all of the excavated material is found to be unsuitable, these have to be disposed safely. Based on this assumption, the spoil disposal sites for the excavated muck have been planned.

In the headworks site with a potential total muck of 270,000m<sup>3</sup>, two sites have been identified on the flood plain area on the left bank of the Kabeli River. Similarly, for the powerhouse area, one site has been identified on the flood plain of the Tamor River slightly upstream of the proposed powerhouse site.

Spoil placement in these sites will be planned in such a way that, the fill surface and outward filling slopes will be protected from erosion by runoff and river flood by installing adequate drainage, toe protection against river erosion, and bioengineering measures as required. After the completion of spoil filling these sites will be developed as sites for recreation or afforestation through proper landscaping after obtaining the consent of the local communities.

#### **1.4.7 Access road**

##### **Alternative analysis for the access road**

Project has reviewed different alternatives for access roads to headworks and powerhouse. Various consultations were held with communities over the alternative road alignments. There were two options considered for the access road to headworks. The first option of the access road alignment to the headworks branches from Mechi highway near the Kabeli Bazaar at Chainage 59+900 km along the left bank of the Kabeli river as proposed by the NEA feasibility study with an approximate length of 2.3 km. The second option of the alignment for headworks branches from Mechi Highway (chainage 50 km from Phidim) near Bijulibhanjyng of Amarpur VDC along the left bank of the Kabeli River with an approximate length of 7.4 km. These two options are all existing tracks used by the local population. In discussing these options, local villagers wanted their tracks to be used as the access road so that they could have improved access. Out of the two alternatives; the second option seems to be promising from all aspects and has been considered as the project road to headworks area.

There were altogether three options considered for the access road to powerhouse. Alternative 1 is to take off from Mildanda near Singhapur bazaar (around 52 km from Phidim) of Mechi Highway with estimated length of 12.2 km to powerhouse area that involves large number of hairpin bends. Alternative 2 is from Bhanuchowk (48 km from Phidim) of Mechi Highway to Panchami VDC which consists of total 15 km long track. The road is opened by the local communities to Pinasi (Majhitar) village with a cost sharing mechanism agreed by the adjoining communities. This road also includes a number of hairpin bends and stream (*Kholsi*) crossings. Alternative 3 is from Salleri of Bharapa VDC (19 km from Phidim) at Mechi Highway to powerhouse area. Out of the three alternatives, alternative 2 from Bhanuchowk bazaar to Pinasi seems to be promising from all aspects and has been considered as the project road to powerhouse area. Local peoples' preferences were given full considerations in deciding the alignment. The decision was made to use existing community tracks at their request.

**Development status of access road**

Project has reviewed different alternatives for access roads to headworks and powerhouse and consulted the local communities for finalizing among the alternatives. Communities in the project area held internal meetings and discussed this issue among them. They saw the project as an opportunity to improve their current road connection to the highway network that creates more opportunities for business in future. The communities decided among themselves, formed road user committees for the existing tracks and quickly widened the original tracks for the project to do the surface upgradation. Before they started widening, they obtained agreement from the few households along the tracks for the widening purpose. Thus, no relocation or land acquisition is expected under the project for both access road to headworks and access road to powerhouse.

The project, after consulting with the communities, made a decision to use the existing road to the headworks (7.4 km) that starts at Chainage 50 km (Mechi Highway) and existing road to the powerhouse (15 km) that starts at the Chainage 48+000 at Bhanuchowk bazar of Amarpur VDC at Mechi Highway as its access roads to headworks and power house respectively. The upgradation activities for the track roads will include backfilling, drainage maintenance and construction of protecting walls.

## **CHAPTER 2**

# **PLANNING APPROACH AND METHODS**

## 2 PLANNING APPROACH AND METHODS

Social Action Plan (SAP) has been developed using participatory planning approach. The approach encourages participation and involvement of all key stakeholders in development planning. The process mainly involves: socioeconomic appraisal, needs identification and their development preferences. It encourages planning to be socially adaptable, culturally acceptable and environmentally viable.

The SAP is primarily based on the findings of Social Assessment (SA) Study. Methods in social assessment of KAHEP were primarily focused around delineating impact areas and identifying project affected individuals, families, communities, and then investigating potential social effects and issues related to these. Accordingly, the SA study adopted an approach of systematic collection of information, both quantitative and qualitative. Both macro (regional/district/VDC) and micro (household) level data were collected from both primary and secondary sources. Therefore, the SAP is based on the firsthand data collected through field study and the data generated through desk study by reviewing of available and relevant literatures. The socio-economic survey was conducted in September-October 2010. Based on socio-economic survey, the assets inventory was carried out in December 2010 and final asset inventory was carried out in March 2011. The final inventory has been considered as cut-off date for the survey.

In order to prepare SAP, baseline socioeconomic information of project-affected households, their needs, priorities, interests and perspectives were collected through the review of literatures and field survey, using the data gathering techniques described below.

### 2.1 Literature review

The review of literatures was mainly concentrated to the past similar studies related to social and environmental assessment of hydropower development. Existing policies, legislation and guidelines related to the hydropower development, World Bank's policies and guidelines and IFC Performance Standards have been reviewed and documented. Similarly, available published literature, documents and maps (topographic maps, land use maps, aerial photographs and cadastral survey maps etc.) related to the project have been reviewed and documented. Macro level demographic data on the various ethnic/caste groups, including demographic information on vulnerable groups, were collected from secondary data published by the District Development Committee (DDC) of the affected Districts. Publications of the Central Bureau of Statistics (CBS) in Kathmandu were extensively used to establish baseline information of the project districts and VDCs.

### 2.2 Field research

Required firsthand data for SAP study were collected through various field methods usually employed in social and biological science researches adopting a participatory approach. The main tools of field research included household survey questionnaire, Indigenous Peoples survey questionnaires, Focus Group Discussions (FGDs), formal and informal discussions, field observation, and interactions and workshops.

#### 2.2.1 Household questionnaire survey

A semi structured interview schedules have been prepared and administered to the sampled households (affected households who will lose their physical assets and properties as per 2010 Engineering Design due to the proposed project activities) to get in-depth responses about demographic and socioeconomic data, physical properties and assets to be acquired by the project, preferred mode of compensation and rehabilitation, agricultural practices, use of natural resources, energy use, agricultural production and sell, health and sanitation, information related to project and perceptions towards the project. The questionnaire also included various gender aspects to analyze the status of women, their attitude towards the project and possible impacts on women due to the implementation of the project. The objectives of the household survey were to prepare profile of affected persons, assess income and expenditures, identify productive activities and plan income restoration. The Household questionnaire (which was translated into Nepali) covered the following topics:

- Household information (details of household head and location of household);
- Household composition and demographic characteristics (household population by age, gender, education, migration status, skills; male-female ratio; household size; student population);
- Household assets (buildings; land holdings; land sales, leasing/renting, etc.);
- Household utilities and services (water, sanitation and energy sources; access to health and educational facilities);
- Land tenure and agricultural activities;
- Types and numbers of livestock;
- Fishing;
- Income and expenditure; and
- Resettlement and compensation preferences.

Similarly the indigenous peoples' survey interview schedule was administered to collect responses about the identities and cultures of Indigenous Peoples, their attachment and relation to the land, natural resources and territory, likely impacts from the projects, including loss of identity, culture, and customary livelihoods, as well as exposure to disease and other risks.

### **2.2.2 Cadastral survey**

A cadastral survey around the project impacted areas has been conducted under the leadership of cadastral surveyor from the District Land Survey Office, Panchthar. This survey identified the extent and effect of land loss, assessed entitlements, prepare land loss records with cadastral maps and land compensation award paper. The technique of the survey was field survey using cadastral survey equipment and review of land record and ownership in the office.

### **2.2.3 Assets inventory**

After socio-economic survey of September-October 2010, first asset inventory was carried out in December 2010 and final asset inventory was carried out in March 2011 after the adoption of alternative headwork access road alignment to prepare a complete inventory of households affected by the project construction. This inventory also records the ownership status of the affected persons such as legal titleholders, non-title holder, encroachers and squatters. The final inventory identified 13 HHs who will lose their assets permanently.

### **2.2.4 Focus Group Discussion**

The FGDs were organized by giving a prior verbal notice and written letter through a runner to the entire project affected VDCs. 14 FGDs have been conducted with the local people in different locations of the project areas to identify the various issues related to the hydropower project development and its socioeconomic consequences and corresponding mitigation measures. 251 individuals representing different impact areas and ethnic groups such as dam site, dewatering zone, access road, powerhouse site, Community Forest User Groups (CFUG), Leasehold Forest User Group (LFUG), *Dalit*, Indigenous communities and women participated in the FGDs. Out of the 14 FGDs, 2 were with women, 1 with *Dalit*, 3 with Indigenous communities, 1 with Kabeli Concern Committee, 1 with CFUG, 1 with LFUG, 1 with local school teachers and the rest 4 FGDs were conducted with mixed group comprising of male, female, Indigenous communities, *Dalit*, *Bahun*, *Chhetri* and so on. The purposes of the FGDs were:

- To provide factual information on the project location, particularly the main project structures such as dam, tunnel, adit portals, powerhouse, surge tank, tailrace and the project access roads besides tentative locations of the quarry sites, construction camps and operation camps of the project;

- To clarify the objective of the SAP and its implementing procedures;
- To discuss on the likely potential impacts of the project from technical considerations during project construction and operation in the project area's physical, biological, social, socio-economic and cultural domain;
- To collect information related to socio-economic and cultural environments of the project areas;
- To collect opinion, perception and attitudes of the people towards KAHEP;
- To get feedback on the likely impacts of the project from local people's perspective particularly on the cultural traditions, customary practices, self identity and attachment to the land and territory, social norms and values of the indigenous people and other groups of the project areas;
- To get baseline information on the cultural, religious, recreational and livelihood dependence of the local people on the dewater stretch of the Kabeli River and corresponding likely impacts due to project development;
- To solicit opinion of the local people on the alternative mitigation measures to abate, or avoid the potential impacts; and
- To solicit opinion of the local people regarding the development aspiration of the project.

Land purchase and mode of negotiation and compensation, livelihood related issues due to loss of land, dewatering, prior information dissemination practices, International Labour Organization (ILO) 169 and rights of the Indigenous communities, rural electrification, current uses of Kabeli river, perceptions towards project, socio-cultural practices associated with River Kabeli, local development needs, likely impacts due to the various project structures and corresponding mitigation measures were the major issues discussed during the FGDs.

### **2.2.5 Formal and informal consultations and discussions**

Informal discussion with local stakeholders and people of different backgrounds and social identities have been conducted to identify key actors and agents associated with various issues of the project and explored the underlying socioeconomic, cultural and political situation that have shaped the life circumstances of the communities of the project areas. These discussions were helpful to recommend community participation, consultation policy, and institutional arrangement for project implementation and to suggest grievance hearing mechanism. These discussions were also helpful to identify roles and responsibilities of different stakeholders to develop equitable benefit-sharing mechanisms.

### **2.2.6 Field observation**

The SAP study team of experts observed and recorded what they saw and hear at the project sites. Site observations were made to obtain supplementary information on different socio-economic and cultural activities in the dam site, dewater stretch, access road, tunnel alignment and power house site. This included recording of physical surroundings, religious sites/structures, ongoing cultural religious activities, processes, and discussions.

### **2.2.7 Workshop/interaction**

The SAP team debriefed the preliminary findings with the stakeholders at different level. The comments and suggestions gathered during the workshop have been utilized to prepare the report.

## **2.3 Preparation of SAP**

The SAP is an integrated document that covers all social aspects of the project design and social implementing instruments in compliance with relevant government and World Bank policies. These include land acquisition, involuntary resettlement, indigenous peoples, health and safety issues,

gender, benefit-sharing, public consultations, participation, and communication. The data collected through various tools and sources and feedback from various consultations have been analyzed by a team of experts and used to develop the SAP. The SAP lays out the socioeconomic background of the project areas, describes and analyzes project adverse social impacts, develops sets of mitigation and benefit sharing measures in line with GoN laws, World Bank safeguard policies and IFC performance standards, and details the implementation arrangements including monitoring, institutional measures to be taken during construction and operation phases. The SAP spells out detail program activities along with corresponding budget to minimize any potential adverse impact as well as to maximize the positive benefits resulting from the implementation of the project. The SAP also include the actions needed to implement these programs along with program schedules, types of monitoring and agencies (project proponent, contractor etc.) responsible for implementing the mitigation plan and other necessary support services including tentative costs to carry out the mitigating measures.

Instead of separating these actions into free-standing action plans as per World Bank safeguard policies, these are packaged into one common and integrated document with these actions described in detailed in separate chapters. This is largely because most of the actions are for the same community and that requires for an integrated approach for implementation engagement. Too many action plans are likely to cause confusion among local stakeholders during implementation, particularly local administration. Besides, the intervening actions under each policy are not extensive to require a separate institutional arraignment. This is also easier for the implementing agency to manage and implement. Considering the above, an integrated packaging is the most preferred packaging of the social interventions under this project.

The SA and SAP Reports, apart from findings of 2010 and 2011 field works and analysis, have been updated based on findings from additional field works, supplementary studies and revisions. Further consultations were also carried out in the field. Apart from improving the SAP, these are also an effort to capture any new development in the project areas since the initial round of field work for the SAP development. The intention is to bring the SAP up to date. These supplementary studies and revisions were done only for the critical issues where ambiguity was encountered. These studies have been listed below in chronological order.

- **Review by Panel of Experts (PoE):** PoE of KAHEP comprised of five members including one environmental and one social expert. Environmental and Social PoE members visited the KAHEP site on December 2011 and reviewed SA/SAP Report. In addition, the environmental and social PoE members also reviewed the bid documents for incorporating environmental and social aspects
- **Review by World Bank Social Development Consultant:** The World Bank Social Development Consultant was engaged from May 15-May 30 2013 to review and update the SA and SAP reports. The consultant carried out a three-day long field visit in the project area. The purpose of the study was to assess the latest status of the project, note the changes in the design, if any, with resultant impacts on the project affected people and keep on records the key findings. In addition, people's attitudes and perceptions towards the project and their views on possible mitigation measures were also solicited. Information were also updated regarding social safeguard compliances focusing on land acquisition for the construction of different physical facilities, collect information about local level social services and development works implemented or planned in future by the project for livelihood improvement of project affected people.

The World Bank, IFC, KEL and HCE teams have worked together to improve and make the SA and SAP Reports bankable. The current SA and SAP reports, therefore, is the updated and revised version that incorporates the findings from the above mentioned studies and subsequent revisions.

## 2.4 Study team

An interdisciplinary core team of experts comprising of Senior Anthropologist/Resettlement Expert, Socio-Environmental, Indigenous People Specialist, and Anthropologist carried out the SA/SAP



study. In addition, the environmentalists have contributed their expertise for the finalization of SA/SAP report (Table 2-1).

**Table 2-1: Study team for SA/SAP**

<b>S N</b>	<b>Name</b>	<b>Expertise</b>
1	Pranav Acharya	Team Leader
2	Hari Prasad Bhattarai	Senior Anthropologist/Resettlement Expert
3	Amrit Poudel	Task Manager/Socio-Environmentalist
4	Hom Prasad Yamphu (Rai)	Indigenous Peoples Specialist
5	Prakash Poudel	Anthropologist
6	Krishna Das Shrestha	Public Relation Officer
7	Balram Bhattarai	Environmentalist
8	Pradip Gautam	Environmentalist
9	Enumerators for Socio-economic household survey	

## **CHAPTER 3**

# **DESCRIPTION OF THE SOCIO-CULTURAL ENVIRONMENT**

### 3 DESCRIPTION OF THE SOCIO-CULTURAL ENVIRONMENT

#### 3.1 The project VDCs

##### 3.1.1 Settlement patterns

The settlements of the project VDCs are scattered in the various locations ranging in the size from as small as two houses to more than 30 houses. The harmony and peace between various caste and ethnic group within these settlements shows the characteristic of the mixed type communities.

The houses are made of mud and stone with stone/slate, corrugated/non corrugated metal sheets and thatched roofs. However, there are few concrete houses in the market areas of Kabeli Bazaar, Singhapur and Bhalu Chowk with more population concentration than other areas. *Dhusenni, Rajabesi and Kabeli Bazaar* are the nearest settlements from the headworks having *Limbus, Tamangs, Brahmins and Chhetries* as the major inhabitants. Similarly, *Majhis, Limbus, Tamangs, Brahmins and Chhetries* are the major inhabitants of Majhitar (Pinasi) and Kodekpa; the nearest settlements from the powerhouse area. Likewise, Jogi Danda (Bhadure), Khalte, Chipewa, Kharelgaun, Khaharegaun and Myakha are the nearest settlement in the downstream areas.



**Photo 3: Kabeli Bazaar on the left bank of Kabeli River**



**Photo 4: Jogidanda downstream settlement**

### 3.1.2 Demography

Demographic characteristics of the project affected VDCs is presented in Table 3-1.

**Table 3-1: Demographic characteristics of the project affected VDCs**

VDCs	Population							Total HH	Average HH Size	M:F
	Total	Sex		Ethnicity						
		Male	Female	Hindu high Cast	Adivasi Janajati	Dalits	Others			
Nangkholyang	4015	1941 (48.34)	2074 (51.66)	741 (18.45)	2965 (73.84)	244 (6.08)	65 (1.62)	730	5.33	1:1.06
Thechambu	3772	1796 (47.61)	1976 (52.39)	1690 (44.80)	1843 (48.86)	233 (6.18)	06 (0.16)	698	5.23	1:1.10
Amarpur	7743	3743 (48.34)	4000 (51.66)	3457 (44.65)	3658 (47.42)	512 (6.61)	116 (1.50)	1375	5.63	1:1.07
Panchami	5568	2669 (47.93)	2899 (52.07)	2439 (43.80)	2796 (50.21)	304 (5.46)	29 (0.52)	1000	5.57	1:1.09
<b>Total</b>	<b>21098</b>	<b>10149</b>	<b>10946</b>	<b>8327</b> (39.47)	<b>11262</b> (53.38)	<b>1293</b> (6.13)	<b>216</b> (1.02)	<b>3803</b>	<b>5.54</b>	<b>1:1.07</b>

Source: CBS, 2001

Note: The figures in parentheses are percentages.

Note: Dalits includes Biswakarm, Dholi (Damai) and Sarki. Likewise, High Caste group includes Hill Brahmins, Chhetri, and Sanyasi (Jogi) in above table.

#### Total population ethnicity and household size

The project VDCs have a population of 21098 with various caste/ethnic groups (Table 3-1). Amarpur VDC has the highest population (7743) followed by Panchami VDC (5568), Nangkholyang VDC (4015) and Thechambu VDC (3772). Among the various ethnic groups, Adivasi Janajati constitute 53.38% of total population of the project VDCs. Among the Adivasi Janajati, Limbus are the dominant group in all the project VDCs. Rai, Tamang, Newar, Gurung, and Majhi are the remaining Adivasi Janajati groups present in the project VDCs. Similarly, Hindu High Caste (Brahmin and Chhetri) constitutes about 39.47% of the total population. 'Dalits'<sup>2</sup> constitute about 6.13% of the total population. Among the VDCs, Nangkholyang is overwhelmingly dominated by Adivasi Janajati (73.84 %) followed by Panchami (50.21 %), Thechambu (48.86 %) and Amarpur (47.42 %). The average household size for the project VDCs is 5.54 (CBS, 2001) which is slightly higher than the national average which is 5.44 in CBS 2001.

#### Sex structure

The total population of the project VDCs is 21098 out of which 10,149 (48.10 %) are males and 10946 (51.88 %) are females. The average male/female sex ratio is 1:1.07 which is lower than the district and the national averages. Among them, Thechambu VDC is the lowest in terms of sex ratio (1:1.10) (Table 3-1).

<sup>2</sup>Dalits of the Project Area includes Sarki, Kami and Damai

### Age structure

**Table 3-2: Age structure of the population of the project affected VDCs**

Districts	VDCs	Population				Total
		< or 9 years	10-14 years	15-59 years	60 or < years	
Taplejung	Nangkholyang	1554	172	684	86	2496
	Thechambu	1075	529	1859	309	3772
Panchthar	Amarpur	2216	1135	3737	573	7661
	Panchami	1424	828	2915	401	5568
	<b>Total</b>	<b>6269</b>	<b>2664</b>	<b>9195</b>	<b>1369</b>	<b>19497</b>
	<b>Percentage</b>	32.15	13.66	47.16	7.02	100.0

Source: CBS, 2001 and District Profiles of Taplejung and Panchthar

Table 3-2 shows the age structure of the project affected VDCs. The children population (below 15 years of age) constitutes 45.81 % that is higher than the national average (39.4 %). Likewise, elder population (60 and above) constitutes 7.02 % of the total population, which is also higher than the national average (6.5 %). The working age population (15-59) is 47.16 %. The analysis of age composition of the project VDCs shows that the dependency ratio<sup>3</sup> of total population regardless of caste/ethnicity is 112.04 that is higher than the national average (84).

### 3.1.3 Literacy

Table 3-3 provides the detail of the literacy status of the project affected VDCs.

**Table 3-3: Literacy population (6 years and above) of project VDCs**

Project VDCs	Can't read and write			Can read only			Can read and write			Not stated		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Nangkholyang	1336	349 (26.1)	787 (73.9)	230	89 (42.6)	132 (57.4)	2021	1153 (57.0)	867 (42.9)	17	08 (47.1)	09 (52.9)
Thechambu	1015	307 (30.2)	708 (69.7)	129	93 (72.1)	36 (27.9)	2091	1147 (54.8)	944 (45.1)	08	-	08 (100)
Amarpur	2529	1018 (40.2)	1511 (59.7)	466	240 (48.5)	226 (51.5)	3302	1768 (53.5)	1534 (46.5)	09	-	09 (100)
Panchami	1784	559 (31.3)	1226 (68.7)	507	338 (66.7)	168 (33.3)	2568	1449 (56.4)	1119 (43.6)	-	-	-
Total	6664	2233 (33.5)	4431 (66.5)	1332	769 (57.7)	563 (42.3)	9982	5517 (55.3)	4464 (44.7)	34	08 (23.5)	26 (76.5)

Source: CBS 2001

Note: The figures in parentheses are percentages

<sup>3</sup>Dependency ratio is defined as the number of people in "dependent ages" of young ages (0-14) and old ages (60 years and above) per hundred people in "economically active ages" of 15-59 years.

In the project affected VDCs, male and female literacy rate for population of six years and above (Can Read and Write) stands at 55.3 % and 44.7 % respectively. The male literacy rate for the project VDCs is lower than the average national literacy rate of male (65.5 %), but the female literacy rate is slightly higher than the average national literacy rate (42.8 %). Among the project VDCs, Nangkholyang has the highest proportion of male literates (57.0 %) and Amarpur has the lowest proportion (53.5 %). Similarly, Amarpur has the highest proportion of female literates (46.5 %) and Nangkholyang has the lowest percentage (42.9 %) (Table 3-3).

### 3.1.4 Economy, livelihood patterns and practices

Like the project districts, the overall economic structure of the project districts is also characterized by a mixture of farm and nonfarm activities. Farm activities include agriculture and livestock raising that are subsistence in nature and are characterized by fragmented land-holding and low inputs. Foreign employment, seasonal migration, small trade and businesses, agro and forest based micro-enterprises and daily wages are the major non-farm activities of the project VDCs. Remittance from Gulf countries like Saudi Arabia, Qatar, UAE, and Malaysia and salary and pension from the armed forces in Britain and India are the major household income sources of the project VDCs. Engagement in Indian and British Army, and Singapore Police are popular especially among the *Adivasi Janajati* groups (*Rai* and *Limbu*) of the project VDCs.

### 3.1.5 Cultural background of the project VDCs

**Table 3-4: Population by mother tongue and religion of the project VDCs**

Population		Project VDCS				Total
		Amarpur %	Panchami %	Thechambu %	Nangkholyang %	
Religion %	Hindu	61.78	52.96	(53.10)	(36.34)	<b>53.06</b>
	Kirat	24.85	42.76	(41.30)	(48.67)	<b>37.05</b>
	Buddha	12.86	4.02	5.33)	(14.62)	<b>9.52</b>
	Christian	0.48	0.23	0	(0.20)	<b>0.28</b>
	Others	0.03	0.02	0.27	(0.17)	<b>0.09</b>
Mother tongue %	Nepali	62.4	53.1	53.1	33.1	<b>50.4</b>
	Limbu	20.1	38.1	38.7	18.8	<b>28.9</b>
	Bantawa	3.8	3.2	1.1	22.8	<b>7.7</b>
	Tamang	12.5	0.4	0.9	1.2	<b>3.7</b>
	Gurung	0	0	4.2	10.1	<b>3.6</b>
	Others	1.2	5.2	2.0	14	<b>5.6</b>

Source: CBS, 2001

#### **Mother tongue**

Nepali is the mother tongue of more than 62 % of the total population in Amarpur VDC which is one of the most affected VDCs by the Project. Likewise; Nepali is the mother tongue of more than 53 % of the total population in Thechambu and Panchami VDCs. The languages reported as mother tongue in the affected VDCs are presented in Table 3-4.

Nepali is used as a lingua franca. Besides, the *Adivasi Janajati* groups use their respective mother tongue to communicate with the other members of their groups. Most of these indigenous languages are in oral traditions. Each of them has a rich oral heritage of traditional folk stories and songs handed down from generation to generation. *Limbu* language has its own script known as *Kirati*

*Srijanga* script. These indigenous languages are categorized as 'The Safe<sup>4</sup> Indigenous Language of Nepal' (ibid pp 29).

### Religion

According to the CBS 2001, Hindu (53.06 %), *Kirat* (37.05 %) and Buddhist (9.52 %) represent the major religions practiced by the people of the project VDCs (Table 3-4). The VDC wise distribution of population by religion is different. The project VDCs, except Nangkholyang, are dominated by Hindus; Amarpur (61.78 %), Thechambu (53.10 %) and Panchami (52.96 %). However, Nangkholyang is dominated by *Kirat* (48.67 %) followed by Hindu (36.34 %) (Table 3-4).

## 3.2 Profile of surveyed households

All the households that are likely to experience physical impacts due to the project as per the Engineering Design of 2010 were selected purposively and interviewed using a structure questionnaire to understand the demographic, economic and cultural environment of the affected families, their perception regarding the project, expected compensation for the lost property, types of resettlement package desired etc. The households included for the survey were taken from the direct impact areas of the project. The direct impact area includes villages where most of the project activities will take place, thus high level of impacts is anticipated (Table 4-1).

A total of 46 households from the project affected VDCs are selected for socio-economic survey. The majority of the households are located in Amarpur VDC (30 HHs) followed by Thechambu VDC (14 HHs) and the remaining (2HHs) are located in Panchami VDC.

### 3.2.1 Demography

The demographic features of the surveyed households are presented in Table 3-5.

**Table 3-5: Demographic features of surveyed households**

Caste ethnicity	Household			Population			Average HH size	Age Groups			
	Total	M. Head	F. Head	Total	M	F		0-4	5-14	15-59	60 above
<i>Limbu</i>	23	22	1	177	90	87	7.69	8	35	114	20
<i>Brahmin</i>	5	5	0	47	23	24	9.4	3	4	33	7
<i>Chhetri</i>	6	6	0	46	25	21	7.66	2	8	29	7
<i>Majhi</i>	5	3	2	32	19	13	6.4	1	9	18	4
<i>Tamang</i>	7	7	0	61	29	32	8.71	7	11	40	3
Total	46	43	3	363	186	177	7.89	21	67	234	41
%	100	93.48	6.52	100	51.24	48.76		5.80	18.45	64.46	11.29

Source: Field Survey, 2010

### Total population and household size by caste/ethnicity

The total population of the surveyed household is 363 which includes 74.38% *Adivasi Janajati* having population of 270 (177 *Limbu*, 61 *Tamang* and 32 *Majhi*) and 25.61% *Brahmin/Chhetri* with population of 93 (47 *Brahmin* and 46 *Chhetri*). The average household size of the surveyed household is 7.89. The highest household size is recorded for *Brahmin* (9.4) followed by *Tamang* (8.71), *Limbu* (7.69), *Chhetri*

<sup>4</sup>According to the criteria set to assess the state of language endangerment in Nepal, proposed by an International Expert meeting at a UNDESCO program, 'Safeguarding of the Endangered Languages', March 10-12, 2003 safe language refers to the languages with little danger of being lost.

(7.66) and Majhi (6.4) respectively (Table 3-5). The average household size for the surveyed households is higher than the national and project VDCs average of 5.44 and 5.54 respectively.

### Sex structure

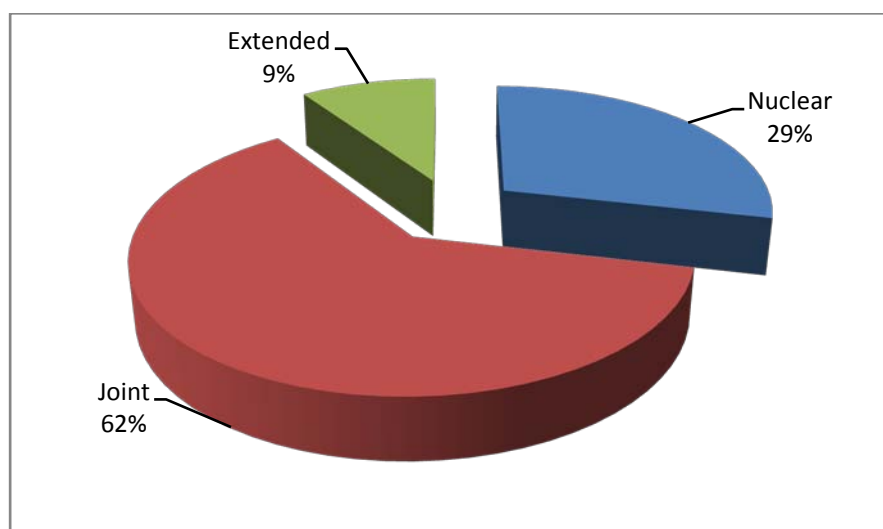
Out of the total population of the surveyed household, there are 186 (51.24 %) male and 177 (48.76%) female. In terms of the caste and ethnicity, the *Majhi* have the higher proportion of male population whereas the *Tamang* have the higher proportion of female population. The sex ratio of the surveyed household is 1:0.95 which is higher than average of the project VDC (1:1.07) and project districts (1:1.03). Out of 46 surveyed households, 43 households (93.48%) are male-headed and only 3 households (6.5%) are female-headed (Table 3-5).

### Age structure

Total population of the surveyed households is divided into four age categories (Table 3-5). Among age categories, 15-59 years age group (economically active population) has the highest proportion (64.46%). The dependent population (below 15 years and above 60 years of age) is 35.52 %. The proportion of below 15 year age group (24.23%) is lower than the national average (39.4 %) and estimated average of the developing countries (35-40%). The lower rate of the population growth of the project districts (1% for Taplejung and 1.45% for Panchthar in 2001) supports these findings.

### Family structure

Three types of family structure are prevailing in the surveyed households; nuclear, joint and extended family. Nuclear family is a family that consists of parents and their unmarried children sharing common kitchen. Similarly, joint family consists of grandparents, parents and their children who share common kitchen. Extended family includes three generations living together sharing common kitchen. The findings from the household survey suggest that the majority (62%) households have joint family structure followed by nuclear (29 %) and extended (9%). This indicates the domination of subsistence economy, which demands constant family labor supply. Chart 3-1 shows the family structure of the surveyed households.



**Chart 3-1: Family structure of the surveyed households**



### 3.2.2 Literacy and education

**Table 3-6: Educational status of population (six years and above)**

VDC	Population									Total
	Illiterate	Literate (informal education)	Literate (Formal Education)							
			Primary	Lower Sec )	Sec.	SLC Passed	P+2/ PCL assed	Bachelor Passed	Master Passed	
Amarpur	37	29	44	27	32	25	18	2	1	215
Panchami	2	0	5	1	2	0	3	0	0	13
Thechambu	13	12	17	27	20	7	7	2	0	105
<b>Total</b>	<b>52</b>	<b>41</b>	<b>66</b>	<b>55</b>	<b>54</b>	<b>32</b>	<b>28</b>	<b>4</b>	<b>1</b>	<b>333</b>
Percent	15.61	12.31	19.82	16.52	16.22	9.61	8.41	1.20	0.3	100

Source: Field Survey, 2010

Table 3-6 presents the distribution of educational attainment of the population aged 6 years and above by VDCs. Among the total population of the surveyed households, about 15.61% are illiterate and rest 84.39% are literate. Out of total literate populations, 41 are literate through informal education whereas 240 are literate through formal education system. The overall literacy of the surveyed household is higher than the VDCs, districts and national average.

### 3.2.3 Religion and language

**Table 3-7: Households by religion and mother tongue**

Religion	Mother tongue				Total
	Nepali	Limbu	Majhi	Tamang	
Hindu	16	0	0	0	16
Buddha	0	0	0	7	7
Kirat	1	22	0	0	23
Total	17	22	0	7	46

Source: Field Survey, 2010

Kirat (50.0%) is the dominant religion among the surveyed household followed by Hindu (34.78%) and Buddhist (15.21%). Similarly, Limbu language is the mother tongue of 47.82% surveyed population followed by Nepali (36.95%) and Tamang (15.21%). The surveyed Majhi households reported that they are using Nepali as the mother language instead of the Majhi language (Table 3-7).

### 3.2.4 House-ownership and kind of house occupied

The CBS Nepal has divided the housing unit into four categories<sup>5</sup>; *Pakki* (permanent), *Ardha-Pakki* (semi-permanent), *Kachhi* (temporary) and others. However, for this study, the housing units of the surveyed households are divided into two major categories; *Pakki*<sup>6</sup> (permanent) and *Kachhi*<sup>7</sup> (temporary) according to the construction material used in wall and roof. The owner of *Pakki* house is considered well off compared to other types. About 52.17% of the surveyed houses are *Pakki* (permanent) whereas the rest 47.83 % are *Kachhi* (temporary), which is higher than the Eastern Development Region (EDR) average for *Pakki* house (24.1%).



Photo 5: A *Kachhi Majhi* House in Majhitar, Pinasi

Table 3-8: Type of house by ethnicity

Type of House	Caste/Ethnicity					Total
	Limbu	Majhi	Tamang	Brahmin	Chhetri	
Made with Mud & Wood ( <i>Kachhi</i> )	13	2	4	1	2	22
Made with Mud, Cement, Stone, Concrete or Brick ( <i>Pakki</i> )	10	3	3	4	4	24
<b>Total</b>	<b>23</b>	<b>5</b>	<b>7</b>	<b>5</b>	<b>6</b>	<b>46</b>

Source: Field Survey, 2010

Table 3-8 shows that, 16 households out of 35 households (45.71%) of *Adivasi Janajati* and 8 households (72.73%) of *Barhmin/Chhetri* are *Pakki* houses.

<sup>5</sup>According to CBS, Nepal has categorized houses into four categories according to the construction material used in wall and roofs of the residential house. *Pakki* (permanent) house refers to a house with walls and roof made of permanent construction material like cement, bonded bricks, concrete, stone, slate tile and galvanized sheet. *Ardha Pakki* (semi permanent) house belongs to the category where either the wall or the roof is constructed with permanent construction materials and other is constructed with temporary materials. In *Kachhi* (temporary house) non durable materials like wooden flake, bamboo, straw/thatch, mud and unbaked bricks are mainly used in walls and roof. Final category includes a very temporary type of residential unit that is made with non-durable materials. These housing units are made with plastic sheets, bamboo and straw/thatch. For this research purpose, the Permanent and Semi permanent house are grouped under *Pakki* house whereas the temporary and final category is grouped under *Kachhi* house.

<sup>6</sup> Includes *Pakki*(permanent) and *Ardha-Pakki* (Semi-Permanent) types of housing unit according to CBS

<sup>7</sup> Includes *Kachhi* (temporary) and other types of housing units according to CBS definition

### 3.2.5 Household economy and livelihood practices

#### Occupation

**Table 3-9: Surveyed households by occupation**

Occupation	Name of VDC			Total
	Amarpur	Panchami	Thechambu	
Agriculture	14	2	4	20
Trade	1	0	0	1
Foreign Employment and Agriculture	9	0	8	17
Service and Agriculture	3	0	0	3
Wages and Agriculture	3	0	0	3
Trade and Agriculture	0	0	0	1
<b>Total</b>	<b>30</b>	<b>2</b>	<b>14</b>	<b>46</b>

Source: Field Survey 2010

The occupation in the surveyed households is a mixture of farm and non-farm activities similar to project districts and VDCs. Of the total surveyed households 45 HHs are engaged in agriculture. However, among them 24 HHs are also engaged in other occupations such as trade, foreign employment and services. One household is engaged in trade only (Table 3-9).

Although large number of household are involved in farm activities, agriculture is not a significant contributor to the household economy (Table 3-14). The major part of the household income is derived from nonfarm activities.

#### Land holdings

**Table 3-10: Households by land holding sizes**

Total area of own land in Hectare	Caste/Ethnicity					Total	%	Cumulative %	
	Limbu	Majhi	Tamang	Brahmin	Chhetri				
Bari	Bari Landless	2	0	1	0	0	3	6.52	6.52
	<0.50	11	3	2	2	5	23	50.0	56.52
	0.50–1.0	8	0	3	2	0	13	28.26	84.78
	1.0–1.50	0	1	1	1	1	4	8.70	93.48
	1.5 – 2.0	1	-	-	-	-	1	2.17	95.65
	>2.0	1	1	-	-	-	2	4.35	100
	<b>Total</b>	<b>23</b>	<b>5</b>	<b>7</b>	<b>5</b>	<b>6</b>	<b>46</b>	<b>100</b>	
Khet	Khet Landless	9	2	1	1	-	13	28.26	28.6
	<0.50	5	3	1	2	3	14	30.43	58.69
	0.50–1.0	5	0	3	1	1	10	21.74	80.43
	1.0–1.50	1	-	1	-	-	2	4.35	84.78
	1.5 – 2.0	1	-	1	1	1	4	8.70	93.48
	>2.0	2	-	-	-	1	3	6.52	100
	<b>Total</b>	<b>23</b>	<b>5</b>	<b>7</b>	<b>5</b>	<b>6</b>	<b>46</b>	<b>100</b>	

Source: Field Survey, 2010

Table 3-10 provides the landholdings of the surveyed households. The cultivated land is divided into two categories viz. *Bari*<sup>8</sup> and *Khet*<sup>9</sup>. The data (Table 3-10) reveals that out of total 46 households, 3 households do not own *Bari* land and 36 households own *Bari* land less than 1 ha. Only 8 households own the *Bari* land more than 1 ha. Similarly, for the *khet* land, 13 household do not own *Khet* land and 24 household own *khet* land less than 1 ha. Only 9 household possess *Khet* land more than 1 hectare.

The main irrigated crops grown are paddy (rice) in the wet season, followed by wheat in the dry season. The main rain-fed crops grown are maize and millet in the wet season along with wheat and barley in the dry season. The intercropping of rain-fed wheat and barley with mustard; and maize with black gram/ soybean/ beans/pigeon peas is also practiced.

**Table 3-1 I: Total landholding by caste/ethnic groups in surveyed households**

Caste/ethnicity	Khet (ha)	Bari (ha)	Total (ha)	Average land Holding (ha)
<i>Limbu</i>	24.92	15.10	40.02	1.74
<i>Majhi</i>	1.38	6.62	8.0	1.60
<i>Tamang</i>	4.11	4.57	8.68	1.24
<i>Brahmin</i>	3.66	4.47	8.13	1.63
<i>Chhetri</i>	5.99	2.41	8.40	1.40
<b>Total</b>	<b>40.06</b>	<b>33.178</b>	<b>73.23</b>	<b>1.59</b>

Source: Field Survey, 2010

Table 3-11 shows that the average land holding of the surveyed household is 1.59 ha that is higher than the national average (0.8 ha) and district averages (0.81 ha for Panchthar and 0.89 ha for Taplejung). In terms of caste and ethnicity, the average land holding is the highest for *Limbu* (1.74 ha) and lowest for *Tamang*(1.24 ha). Similarly according to the land types, the surveyed HHs own an average of 0.88 ha of *Khet* land and 0.72 ha of *Bari* land. The *Limbu* have the highest *Khet* land holding (1.08 ha/HH) whereas the *Majhi* have the lowest *Khet* land Holding (0.27 ha/HH). However, in the case of *Bari* land, *Majhi* have the highest land holding (1.32 ha/HH) and *Chhetri* have the lowest average land holding (0.37 ha/HH).

**Table 3-12: Rented-in<sup>10</sup> and Rented-out<sup>11</sup> land by cast and ethnicity**

Caste/Ethnicity	Rented in land			Rented out land		
	Khet	Bari	Total	Khet	Bari	Total
<i>Limbu</i>	3.20	0.68	3.88	2.59	0	2.59
<i>Majhi</i>	0.40	0	0.40	0	0	0
<i>Tamang</i>	1.01	0.51	1.52	0	0	0
<i>Brahmin</i>	2.64	0	2.64	0	0	0
<i>Chhetri</i>	1.68	0	1.68	0.66	0	0.66
<b>Total</b>	<b>8.39</b>	<b>1.19</b>	<b>9.58</b>	<b>3.25</b>	<b>0</b>	<b>3.25</b>

Source: Field Survey, 2010

<sup>8</sup>These are the unirrigated lands where the cultivation of rain-fed crops like maize, millet and pulses is done.

<sup>9</sup> These are the irrigated lands, where paddy is the primary crop.

<sup>10</sup> Rented-in land is taken by a household/individual on rent from the land owner on an annual basis

<sup>11</sup> Rented-out land is given to a household/individual on rent by the land owner on an annual basis for cultivation.

Table 3-12 shows that households have rented their land (both in and out renting) for cultivation purpose. The surveyed households have rented-in a total 9.58 ha (8.39 ha *Khet* land and 1.19 ha *Bari* land) land for cultivation purpose on an annual basis. In terms of caste and ethnicity, the *Brahmin* have the highest proportion of rented land whereas the *Majhi* possess the lowest proportion. The data in the table also suggest that in comparison to the rented-in lands, very few households have rented-out their land to others for cultivation. Only *Chhetri* (0.66 ha) and *Limbu* (2.59 ha) have given their land to others on the rent for cultivation.

### Animal husbandry

**Table 3-13: Livestock ownership by caste/ethnic groups**

Caste/Ethnicity	Cattle	Buffalo	Chicken	Goat	Pigs	Duck	Others	Total	Average per HH
<i>Limbu</i>	63	12	19	93	44	3	8	242	10.52
<i>Majhi</i>	17	4	36	7	4	0	0	68	13.6
<i>Tamang</i>	23	9	70	52	0	0	0	154	17.42
<i>Brahmin</i>	17	5	33	34	0	0	0	89	17.8
<i>Chhetri</i>	28	5	23	30	2	0	6	94	15.66
<b>Total ( number)</b>	<b>148</b>	<b>35</b>	<b>181</b>	<b>216</b>	<b>50</b>	<b>3</b>	<b>14</b>	<b>647</b>	<b>14.07</b>
Average animals per HH	3.22	0.76	3.93	4.70	1.09	0.07	0.30	14.07	

Source: Filed Survey 2010

Surveyed households rear cattle, goats, buffalo, pigs, duck and poultry. Cattle and buffalo are kept for milk, ghee and manure, while goats, pigs and chicken are kept for meat and income generation. The average livestock size is 3.22 for cattle, 0.76 for buffalo, 4.70 for goat, 3.93 for chicken and 0.07 for pig. The total animal holding size is the largest for *Brahmin* (17.8 animals) and the lowest for *Limbu* (10.52 animals). *Brahmin* and *Chhetri* own more big animals (cow, buffalo) compared to the *Adivasi Janajati* groups. *Adivasi Janajati* own more small animals (chicken, pig, goat, and duck) primarily to meet their food habits. Livestock ownership pattern among the surveyed households is presented in Table 3-13.

### Income

**Table 3-14: Average annual household income by caste/ethnic groups**

Caste/ Ethnicity	Annual Average Income in NRs.						Total	Total HHs	HHs Average Income
	Agri & Livestock	Trade & Business	Service/ Pension	Wages	Remittance	Loan <sup>12</sup> / Interest /Others			
<i>Limbu</i>	228280 (7.8)	196000 (6.7)	854000 (29.1)	124000 (4.2)	1340000 (45.7)	192120 (6.5)	2934400	23	127,582.61
<i>Majhi</i>	3000 (0.7)	0	0	0	168000 (38.8)	262000 (60.5)	433000	05	86,000.00
<i>Tamang</i>	160000 (9.40)	60000 (3.53)	996000 (58.52)	90000 (5.29)	200000 (11.75)	196000 (11.51)	1702000	07	243142.86
<i>Brahmin</i>	151500 (10.1)	34000 (2.3)	60000 (3.9)	0	1260000 (83.7)	0	1505500	05	301,100.00
<i>Chhetri</i>	161000 (16.7)	3300 (0.3)	80000 (8.3)	300000 (31.2)	418000 (43.4)	0	962300	06	160,383.33
<b>Total</b>	<b>703780 (9.33)</b>	<b>293300 (3.89)</b>	<b>1990000 (26.40)</b>	<b>514000 (6.82)</b>	<b>3386000 (44.92)</b>	<b>650120 (8.62)</b>	<b>7537200</b>	<b>46</b>	<b>163852.17</b>

Source: Filed Survey, 2010

<sup>12</sup>Loan borrowed within the last year is taken as the income

Average annual income from farm and off-farm sources is summarized in Table 3-14. Agriculture and livestock contribute 9.33 %, service/job/pension 26.40 %, remittance 44.92 %, wages 6.82 %, trade/business/industry 3.89 % and others 8.62 % to the average annual household incomes.

Although the agriculture is the basic activity of the 46 surveyed households (Table 3-9), the nonfarm activities play significant role in the household economy that contributes 90.67 % of the surveyed households income. If we exclude the loan and other items from the non-farm income sources, the actual contribution of non-farm activities in the household economy is about 82.03 % only.

The average annual household income of the surveyed households is calculated as NRs. 179,457.14. In terms of caste/ethnicity, the average annual household income of *Brahmin* is the highest (NRs. 301,100.00) followed by *Tamang* (NRs. 243,142.86), *Chhetri* (NRs. 160,383.00), *Limbu* (NRs. 127,582.00) and *Majhi* (NRs. 86,000.00). The per capita income for the surveyed population is NRs. 20,763.64 which is higher than the national per capita income of NRs. 15,000.00 (UNDP 2009). In terms of caste/ethnicity, *Brahmins* have the highest (NRs 32,031.91) per capita income followed by *Tamang* (NRs. 27901.63), *Chhetri* (NRs. 20,919.56), *Limbu* (NRs. 16,578.53) and *Majhi* (NRs. 13,531.25).

### Expenditure

**Table 3-15: Annual expenses on different items by caste/ethnic groups**

Caste/ Ethnicity	Annual expenditure in NRs.								Total	Average HHs Expenditure
	Food	Clothing	Education	Health	Transp.	Ritual/ and festival	Loan payback/ Interest <sup>13</sup>	Others		
<i>Limbu</i>	1054338 (46.1)	202900 (8.9)	79000 (3.5)	40000 (1.8)	53000 (2.3)	154000 (6.7)	468000 (20.5)	233685 (10.2)	2284923	99,344
<i>Majhi</i>	174310 (45.0)	36500 (9.4)	17500 (4.5)	19000 (4.9)	2000 (0.5)	25000 (6.5)	28800 (7.4)	84270 (21.8)	387380	77,476
<i>Tamang</i>	230000 (23.11)	90000 (9.04)	320000 (32.16)	120000 (12.06)	35000 (3.52)	100000 (10.05)	60000 (6.03)	40000 (4.02)	995000	187142.85
<i>Brahmin</i>	139020 (12.3)	436000 (38.6)	3000 (0.3)	111000 (9.8)	69500 (6.2)	88000 (7.8)	117600 (10.4)*	164120 (14.5)	1128240	225,648
<i>Chhetri</i>	114020 (14.0)	40000 (4.9)	25000 (3.2)	176000 (21.7)	4000 (0.5)	7000 (0.9)	100500 (12.4)*	346290 (42.6)	812810	135,468
Total	1711688 (30.52)	805400 (14.36)	444500 (7.93)	466000 (8.31)	163500 (2.92)	374000 (6.67)	774900 (13.82)	868365 (15.48)	5608335	121921

Source: Filed Survey, 2010

\* The expenditure on payback of loan and interest for *Brahmin* and *Chhetri* household is for the outstanding loan of previous years because these groups did not borrow any loan within the last year (Table 3-14)

The expenditure of the surveyed households is grouped broadly into two categories: food items and non-food items. Non-food items include expenditures on education, health, transportation, clothing, loan pay back and interest and festivities. The annual average expenditure of the surveyed household is NRs. 121, 921.00 (Table 3-15).

The share of expenditure of the surveyed household on food and non food items consists of 30.52% and 69.48% respectively. The expenditure on food items seems relatively high. This might be because of excessive use of food grains for brewing local liquor among the *Adivasi Janjati* groups.

The non-food expenditure items include clothing (14.36%), education (7.93%), health (8.31%), transportation (2.92%), rituals and festivals (6.67%), payback of loan and interest of borrowed loan (13.82%) and others (15.48%). Similar to the income, the average expenditure is also recorded highest among the *Brahmin* households (Table 3-15).

<sup>13</sup>This includes the payback of the last year loan and outstanding loan, if any

**Loan borrowing****Table 3-16: Households by source of loan by caste/ ethnicity**

Source of loan	Caste/Ethnicity					Total
	Limbu	Majhi	Tamang	Brahmin	Chhetri	
Local Money Lenders	13	2	3	2	0	20 (57.14)
Relatives/ Neighbors	6	1	2	2	2	13(37.14)
Finance/Bank	1	0	1	0	0	2 (5.72)
<b>Total</b>	<b>20</b>	<b>3</b>	<b>6</b>	<b>4</b>	<b>2</b>	<b>35</b>

Source: Field Survey, 2010

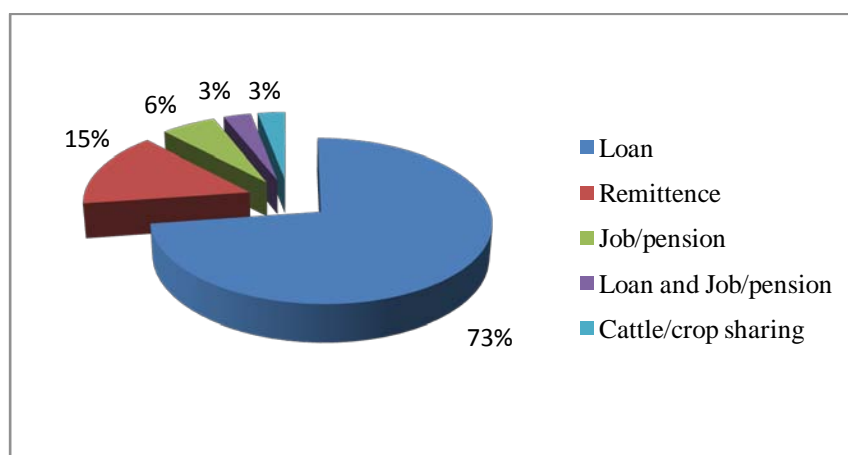
Local money lenders and neighbors/relatives are the major sources of loan of the surveyed households (Table 3-16). A total of 35 households has borrowed loan from different sources that includes the loan taken last year and years before that. Among them, 20 HHs has borrowed from local money lenders; 13 HHs from relatives and neighbors; and only 2 HHs have borrowed from financial institution. The borrower households have to pay 24 to 36 %annual interest for the loan taken. People prefer borrowing from local money lenders and their relatives/neighbors instead of financial institutions because of easy access.

**Food Sufficiency from Self-production****Table 3-17: Households food sufficiency by caste/ ethnicity**

Food secured months	Caste/Ethnicity					Total
	Limbu	Majhi	Tamang	Brahmin	Chhetri	
1-3 Months	5	2	0	0	0	7
3-6 Months	12	3	2	1	2	20
6-9 Months	3	0	2	0	1	6
<b>Total</b>	<b>20</b>	<b>5</b>	<b>4</b>	<b>1</b>	<b>3</b>	<b>33</b>

Source: Field Survey, 2010

Since 90 percent of the surveyed households have income sources other than agriculture and animal husbandry (Table 3-14), the economy of the household is cash based. However, for the purpose of this study, the household whose own agricultural production is adequate for their annual household food demand is considered as the food sufficient household. Only 13 HHs are food sufficient from own agricultural production. Table 3-17 shows that among the total surveyed households, 33 HHs responded that their own production is not sufficient for their annual food demand. Among those, 7 HHs reported that they produce food for one to three months followed by 20 HHs for 3-6 months and 6 HHs for 6 - 9 months. In terms of caste/ethnicity, 7 HHs of *Janajati* sustained for one to three months; 17 HHs sustained up to 6 months; and 5 HHs sustained for 9 months. On the other hand, only 4 HHs (36.4 %) of *Brahmin/Chhetri* reported food deficiency. Excessive use of food grains for brewing local liquor might be one of the reasons for food deficiency among the surveyed *Janajati* households.



**Chart 3-2: Household strategy to food sufficiency**

People usually buy extra food from local market to meet their food demand. The most common strategy adopted to cope with the food shortage is borrowing loan. The survey data show, 24 households (73.0%) borrowed loan to buy food (Chart 3-2).

### Migration

**Table 3-18: Distribution of migrants of surveyed HHs by destination and VDC**

Name of VDC	Total	Percent	India	Overseas
Amarpur	16	45.5	1	15
Thechambu	18	54.5	1	17
<b>Total</b>	<b>34</b>	<b>100</b>	<b>2</b>	<b>32</b>

Source: Field Survey, 2010

The Household survey data shows that 34 individuals from the surveyed households left the country for seeking employment in India and overseas. The out migrant population constituted 9.37% of the total population of the surveyed households. This is higher than the national percentage (6.6%) of out-migration.

### Skill level

**Table 3-19: Household population by skill and caste/ethnicity**

Skill Type	Number of persons					Total
	Limbu	Majhi	Tamang	Brahmin	Chhetri	
Plumbing	1	-	-	-	-	1
Carpentry	3	-	-	1	1	5
Electrical	-	-	-	-	1	1
Health sector	2	-	2	-	-	2
Driving	1	1	5	1	-	8
Sewing and stitching	2	-	-	-	1	3
Handicrafts	1	-	-	-	-	1
Construction	2	-	1	-	-	2
Others	-	1	3	6	1	9
<b>Total</b>	<b>12</b>	<b>2</b>	<b>11</b>	<b>8</b>	<b>4</b>	<b>37</b>

Source: Field Survey, 2010



Out of 234 economically active individual (15-59 years age group) from surveyed households, only 37 people have acquired skills of different kinds (Table 3-19). The most commonly reported skills amongst male population are driving and carpentry. Skills recorded amongst female population are sewing, stitching and weaving.

**Table 3-20: Desired/preferred skill trainings by households**

Desired/ preferred skill	Caste/Ethnicity					Total
	Limbu	Majhi	Tamang	Brahmin	Chhetri	
Agro based	1	1	1	1	1	5 (10.9)
Cottage industry	1	1	0	0	1	3(6.5)
Carpentry	2	0	0	0	2	2(4.3)
Sewing & Stitching	0	0	0	1	1	2(4.3)
Electrical	15	1	4	0	3	23 (50.0)
Plumbing	4	2	2	3	0	11 (23.9)
<b>Total</b>	<b>23</b>	<b>5</b>	<b>7</b>	<b>5</b>	<b>6</b>	<b>46</b>

Source: Field Survey, 2010

Table 3-19 shows that most of the individuals of the surveyed households are unskilled. They showed their willingness for skill trainings from KAHEP during its construction and operation. The preferred trainings are electrical and plumbing (Table 3-20).

### 3.2.6 Access to facilities

#### Drinking water and water Sources

**Table 3-21: Affected HHs by sources of drinking water and caste/ethnicity**

Source of drinking water	Caste/Ethnicity					Total
	Limbu	Majhi	Tamang	Brahmin	Chhetri	
Piped water	9	5	7	4	5	30
Spring	10	0	0	1	1	12
Well/ dug well	4	0	0	0	0	4
<b>Total</b>	<b>23</b>	<b>5</b>	<b>7</b>	<b>5</b>	<b>6</b>	<b>46</b>

Source: Field Survey, 2010

Piped water, springs and wells are the major sources of drinking water for the surveyed households. The surveyed families manage drinking water locally by individual or communal initiatives. From the field study, it is clear that there is no role of the Kabeli River for the drinking water purpose. Considering access to Tap/Pipe and Tube-well as equivalents, 30 households (65.21%) have access to piped water, while 12 (26.09 %) fetch water from nearby springs and rest 4 (9.5%) from well (Table 3-21). In terms of caste and ethnicity, higher proportion of Brahmin/Chhetri (81.8% of total Brahmin/Chhetri) than the Adivasi Janajati (60.0% of the total Janajati households) has piped water facility.



**Photo 6: A Rai woman fetching water from natural well (Kuwa)**

### Irrigation facilities

Most of the cultivated land in the project area is rain fed and the springs and rivulets located within the vicinity are the main source of irrigation in the project area. Most of the springs and rivulets remain dry in the winter season and irrigation from these sources is only during the monsoon season. Although there are few individually constructed temporary irrigation channels in the project area, no systematic irrigation canals can be seen during this study. This shows the poor irrigation condition of the project area. Water from the Kabeli River is not considered suitable for irrigation because there is a common belief that *the water of the Kabeli River does not allow the crops especially paddy to mature*. In addition, the level of water is below than the agricultural fields and it is not possible to irrigate from the Kabeli River especially in the project area.

### Sanitation facility

**Table 3-22: Households by toilet facility and caste/ethnicity**

Toilet facility	Caste/Ethnicity					Total
	Limbu	Majhi	Tamang	Brahmin	Chhetri	
Yes	22	1	7	5	5	40
No	1	4	0	0	1	6
<b>Total</b>	<b>23</b>	<b>5</b>	<b>7</b>	<b>5</b>	<b>6</b>	<b>46</b>

Source: Field Survey, 2010

Household survey data shows that 40 (86.96%) households have toilet facility (Table 3-22). Only 6 households (13.04%) do not have toilet facility. Within Majhi, four (4) Majhi households (out of a total of five) do not have toilets. Households without toilet facility go to the nearby forests and barren lands for defecation.

### Lighting and cooking facility

**Table 3-23: Households by source of lighting by caste/ ethnicity**

Lighting energy source	Caste/Ethnicity					Total
	Limbu	Majhi	Tamang	Brahmin	Chhetri	
Kerosene	15	3	2	1	2	23
Solar Power	8	0	5	4	4	21
Other Source	0	2	1	0	0	2
<b>Total</b>	<b>23</b>	<b>5</b>	<b>7</b>	<b>5</b>	<b>6</b>	<b>46</b>

Source: Field Survey, 2010

Kerosene and solar power are the major sources of the lighting energy for the surveyed households. A total of 23 households use kerosene as a source of lighting energy and 21 household have installed solar panel for lighting (Table 3-23). Two Majhi HHs use *Tukimara*<sup>14</sup> for lighting purpose. The HHs with solar panels are the well off HHs having better income sources compared to others. Firewood is the only fuel that is used for cooking by all the surveyed households.

<sup>14</sup>Tukimara is a device used for lighting. It is an electronic torch that requires 3-4 dry cells of 1.5 Volts battery.

### Communication

**Table 3-24: Households by mode of communication and VDC**

Mode of communication	Name of VDC			Total	Percentage
	Amarpur	Panchami	Thechambu		
CDMA Telephone	-	-	3	3	6.5
GSM Mobile Telephone	28	2	10	36	87
Postal Service	2	-	-	2	4.3
N/A	-	-	1	1	2.1
<b>Total</b>	<b>30</b>	<b>2</b>	<b>14</b>	<b>46</b>	<b>100</b>

Source: Field Survey, 2010

The project area is not connected to landline telephone and internet facilities. Local residents use Code-division Multiple Access (CDMA) and mobile telephones for modern communication purposes. The survey data show that a total of 36 HHs (87 %) have access to mobile telephone service and only 3 HHs (6.5%) use CDMA telephone service (Table 3-24). The data (Table 3-24) indicate that all the surveyed HHs have good access to communication.

### Health

**Table 3-25: Households by occurrence of diseases during previous year**

Suffering from any disease last year	Caste/Ethnicity					Total
	Limbu	Majhi	Tamang	Brahmin	Chhetri	
Yes	6	3	6	5	5	25
No	17	2	1	0	1	21
<b>Total</b>	<b>23</b>	<b>5</b>	<b>7</b>	<b>5</b>	<b>6</b>	<b>46</b>

Source: Field Survey, 2010

The household survey data shows that typhoid, asthma, anemia, blood-pressure, sugar, lung related diseases and worms are frequently occurring disease. In total, at least one member of 25 surveyed HHs (out of 46 HHs) has suffered from the disease last year. In terms of cast and ethnicity, members of 6 Limbu, 3 Majhi, 6 Tamang, 5 Brahmin and 5 Chhetri HHs have suffered from various kind of diseases last year (Table 3-26).



**Photo 7: A Dharmi in Majhitar, Pinasi**

**Table 3-26: Households by health seeking behaviors and VDC**

Health seeking behaviors	Name of VDC			Total
	Amarpur	Panchami	Thechambu	
<i>Dhamiljhakri</i> (spiritual healer)	14	1	2	17
Local <i>Baidya</i> (local healer)	-	-	1	1
Health facilities	5	-	2	7
No sickness observed	10	1	10	21

Source: Field Survey, 2010

Out of 25 HHs suffering from disease previous year, 17 household first consulted local spiritual healers (*Dhamiljhakri*) for treatment and only 7 households consulted local health post (Table 3-26). Most of the surveyed households have a preference to *Dhamiljhakri* during the initial treatment phase.

**Table 3-27: Households preference over maternity health care by VDC**

Maternity Health seeking Behaviors	Name of VDC			Total
	Amarpur	Panchami	Thechambu	
<i>Sudeni</i>	14	-	4	18
Local <i>Baidya</i> or herb specialist	2	-	-	2
Health post and hospital	10	1	10	21
Other	4	1	0	5
<b>Total</b>	<b>30</b>	<b>2</b>	<b>14</b>	<b>46</b>

Source: Field Survey, 2010

In contrast to the general health seeking practice, preference to the maternity health care is different. Out of 46 HHs, 21 HHs reported that they prefer to consult local health posts and hospitals, 18 households prefer local *Sudeni* (midwife) and only 2 household prefer local *Baidya* (herb specialist) for maternity health care services. Five households reported that they do not consult specialists for maternity health care (Table 3-27).

### 3.3 Development and challenges

#### 3.3.1 National development priority

In the history of planned development of Nepal, the overriding objective of development efforts in Nepal is poverty alleviation. In spite of noticeable progress achieved over the past decade, there is still widespread poverty. Though poverty has always been an overriding concern of development efforts in Nepal, it was explicitly stated as an objective only from the Seventh Plan (1985/86-1989/90) onwards. The latter, however, was the first attempt to formulate a separate plan with a long-term poverty alleviation perspective. Towards the end of the Plan period, it was derailed by the Trade and Transit crisis and the resulting economic dislocation in the late eighties. The transition to democracy in 1990, by raising popular expectations and aspirations, gave a new impetus to poverty reduction. The development plans which were formulated subsequently— the Eighth Plan (1992-1997), the Ninth Plan (1997-2002), the Tenth Plan (2002-2007) and the Interim Plan (2007-2010)—specifically had poverty reduction as their main objective. The Ninth Plan also established long-term targets and development indicators for all sectors based on their potential for alleviating poverty.

## **Hydroelectricity**

It is evident that Nepal is experiencing a serious situation of power shortage that resulted more than 16 hours load shedding per day in dry season which is ridiculous. The national economic loss due to prolonged load shedding is not yet calculated.

On the other hand, national development has always been equated with the economic growth that will be achieved through the use of natural resources in Nepal. Particularly, hydro-electricity has been regarded as the backbone of the economic growth of Nepal. It is believed that the investment in hydro would boost economic strength of Nepal. There had never been any precedent of informing the people beforehand about impending potential adverse impacts.

### **The changing context**

By 1980s, it became apparent that many development projects have not fulfilled their promise. The economics of projects and the neglect of social, cultural, and environmental dimensions were criticized. Top down approaches were questioned because they generally imposed programs of social change which did not take into consideration the culture and social structure of specific populations. As in most development projects, the failure of hydro-project/dam projects was attributed to the lack of consideration of the social and cultural dimensions. New concerns and approaches came to replace earlier approaches. Concepts such as local knowledge, equity, accountability, participation, human rights, and sustainable development now dominate the interactions of all stakeholders involved in development practices which can be taken as today's values.

A series of transformations at the global, national, and local levels accompanied the democratization processes of the 1990s, many of which had an effect in the way social and environmental impacts are negotiated and assessed. Some of these transformations led some stakeholders involved in the dam projects to take steps in the right direction regarding issues of equity and distribution of costs and benefits

### **3.3.2 Local development and challenges**

It is observed that progress in essential infrastructure, such as road and telephone to the local communities are made to some extent. Progress in rural electricity generation, irrigation and supply of drinking water are yet to be made. Most of the people do not have easy access to the basic civic amenities like safe drinking water, link roads and transportation, schools, and health services because of difficult terrain. In some areas, community is actively involved in road construction utilizing the District and Village governmental grants from the central government. However, the quality of construction of these roads linking Mechi Highway are weak and if appropriate measures are not taken to improve quality, there is a danger of increasing environmental problems.

#### **Health and sanitation facilities**

Most common diseases in the project area are Diarrhea, Intestinal Worms, Sore eye, Gastritis, Acute Respiratory Infections (ARI) (District Profile and FGD). Diarrhea due to bacteriological contamination of water and food is probably more common in the hot, humid period of the year. Infections of the upper respiratory tract (coughs, colds and runny nose) and ARI are at their peak during the cold season in the project area.

There are midwives "Sudeni" in the villages and traditional healers. The former have a limited knowledge about delivery and postnatal care and cannot deal with serious or complicated cases. Since most of these midwives are elderly, they would not be suitable to be trained as paramedics. Many healers have no apprentices and few practice on a regular basis. It seems that the introduction of medicines, even though on a limited scale, has weakened peoples' beliefs in traditional healing practices.

Health facilities in the project area consist of only few health posts and sub-health posts. For example, the closest health post located at Amarpur-6 and one sub-health post is located at Singapur serve a total population of 7,304 and 1, 64,27,315 m<sup>2</sup>area. It is important to note that, the ratio of one doctor to population is 1:47000 in Panchthar district (CBS, 2001 and District profile Panchthar

2064). The health posts can be characterized as staff absentee and inadequately stocked with medicine. District hospital and health centers are only slightly better in terms of resources and staff. The nearest well equipped Hospitals are Eastern Region Hospital and BP Koirala Health Science Foundation that are located approximately 250 km by road in Biratnagar and Dharan respectively.

The situation of sanitation in the project areas except Pinasi seems quite satisfactory. In the case of Pinasi, most of the households especially *Majhi* indigenous communities have no toilet facilities. Sanitation condition in and around the proposed intake area is found satisfactory. Most of the household have toilet facilities. However, sanitation condition in and around the powerhouse area is not good. There is lack of toilet facilities. These households practice open defecation in nearby open areas.

### ***Drinking water facilities***

Villagers fetch water directly from the streams and creeks. These water resources are located at a distance and time consuming. There is little understanding of the potential health problems of drinking water and the primary concern is whether the water appears clear without sediment. Some elites have managed water supply in their own cost.

### ***Education facilities***

There are primary, secondary and higher secondary schools that are functioning properly. But, they are not well equipped and lack essential infrastructures like library, playground, proper building and classroom, teaching materials and refreshment training to the school teachers. A few students from project areas have to walk for two/three hours daily to attend their classes. For example, the students of Rajabesi have to walk for 2 and half hours to attend their class in Amarpur Higher Secondary School. Villagers have understood the importance of education. Therefore, Amarpur Higher Secondary School is financed by the VDC budget and villagers themselves through household contribution since the local government had neither the funds nor could it provide for teachers. For the higher education, villagers send their children to Panchthar, Ilam, Jhapa, Biratnagar, Kathmandu and even Darjeeling in India, which is very costly.

### ***Transportation and communication***

The project area is located in four VDCs of Taplejung and Panchthar. It has been nearly 22 years that Panchthar and Taplejung districts were linked with Birtamod by Mechi Highway. Surrounding villages/settlements are not adequately linked with link roads and tracks. Though these districts are linked by Mechi Highway, the rural VDCs are remote and inaccessible. The availability of communication facilities (telephone, postal services etc) is limited and mostly concentrated in the market areas like Kabeli Bazaar, Singhapur etc. However, the local people have access to CDMA of Nepal Telecom and NCell mobile services.

### ***Cooking and lighting energy***

The area is not connected with the national electricity grid. Some well-off households have installed their own solar panels for lighting purpose. Majority of the households utilize kerosene lamps for lighting purpose. Fuel wood is the major cooking energy used by all households irrespective of ethnicity and caste. Improved cooking stove has been recently introduced in the project area.

### ***Lack of good governance***

Another challenge is the result of a top-down approach within the government resulting in the lack of meaningful consultation and participation of local peoples. This approach often does not take into consideration local needs, cultural beliefs and values, and ethnicity in relation to achieving policy and planning development projects. To ensure today's values- equity, justice, accountability, participation- while implementing KAHEP can be taken as a prime challenges for good governance.

## **3.4 Adivasi Janajati**

Nepal is a country with vast cultural, linguistic, religious and ethnic diversity. People belonging to different religions, races, speaking more than 92 languages have been residing in this land for

centuries (Dahal, 2003). Diversity gives Nepal her unique character, both in terms of its cultural wealth and complex web of social problems. Another important feature of Nepali society is its stratified structure which is based on the caste groups. The caste system divides and organizes the society in hierarchic caste groups, membership of which is solely determined by birth. Traditionally, indigenous peoples of Nepal have been outside the purview of the Hindu caste system. Indigenous communities interacted with other Hindu caste communities but largely remained separated from the Hindu caste system. The *Dalits* or untouchables are the ones who were at the receiving end of the system. These communities were historically denied access to education, forced to follow occupation not adopted by most and suffered maximum injustice due to social stigma attached to their caste.

In 2001, the CBS provided data on 100 caste/ethnic groups of Nepal and cited 92 different mother tongues. Among them the National Foundation for the Development of Indigenous Nationalities (NFDIN) has classified 59 *Adivasi Janajati*. The population of *Adivasi Janajati* is estimated to be more than 37% in Nepal. CBS 2001 recorded only 43 out of the 59 groups and 16 groups are missing. This can normally be explained by either, two or more groups being lumped together, some groups being included under the category of unidentified caste/ethnic groups or by certain groups listed are not found. Consequently, the exact number of *Adivasi Janajati* is still not determined. Among them *Magar* (7.14%), *Tharu* (6.75%), *Tamang* (5.64%), *Newar* (5.48%), *Rai* (2.79%), *Gurung* (2.39%), and *Limbu* (1.58%) are the largest groups (Dahal 2003).

### 3.4.1 Definition of *Adivasi Janajati* (Indigenous Peoples)

By the National Foundation for the Development of Indigenous Nationalities (NFDIN) Act 2001, GoN has identified and officially recognized 59 indigenous communities referred to as *Adivasi Janajati* in Nepali and Indigenous Nationalities in English. Recently formed a High Level Taskforce for the Revision of the List of Indigenous Nationalities 2009 has updated the list of *Adivasi Janajatis* to 81 and recommended to the government for their official recognition. In Nepal, *Adivasi Janajati* means- "a tribe or community having its own territory, own mother tongue, traditional rites and customs, distinct cultural identity, distinct social structure and written or unwritten history" (NFDIN Act 2001).

The World Bank OP 4.10 does not define the term indigenous peoples or tribal people. However, it states that for the purpose of the OP, the term "indigenous peoples" refers to "a distinct, vulnerable, social and cultural group" possessing a number of characteristics in varying degrees. These characteristics include:

- self-identification as members of a distinct indigenous cultural group and recognition of this identity by others;
- collective attachment to geographically distinct habitats or ancestral territories in the project area and to the natural resources in these habitats and territories;
- customary cultural, economic, social, or political institutions that are separate from those of the dominant society and culture; and
- an indigenous language, often different from the official language of the country or region.<sup>15</sup>

In summation, the OP 4.10 specifies some characteristics of indigenous peoples that include: self-identification as indigenous peoples and recognition by others; "collective attachment" to distinct habitats or territories and the natural resources therein; the presence of "customary cultural, social, economic or political institutions" separate from those of the dominant society; and an indigenous language, often different from the national language. In this context as mentioned in the policy, World Bank's characteristics on Indigenous Peoples (OP 4.10, 2005) may be applied to the ethnic groups on the project area in the following ways:

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<sup>15</sup>World Bank's Policy on Indigenous Policy- OP 4.10

"Thus, the *Adivasi Janajati* of the project area should be considered as 'Indigenous Peoples' according to World Bank policy on Indigenous Peoples. The ethnic groups of the project VDCs are recognized by the government. They belong to the officially recognized 59 indigenous groups."

### 3.4.2 National legal and policy framework

Specific policy initiatives for the advancement of indigenous peoples and other disadvantaged groups started in 1997 with the ninth and tenth national development plans. Addressing the shortcomings of earlier plans, the current plan now includes the objective of promoting the economic and cultural development of indigenous peoples by increasing their access to administrative, social and economic resources.

The National Foundation for Development of Indigenous Nationalities Act 2002 established the first comprehensive policy and institutional framework regarding indigenous peoples. The Act created the National Foundation for Development of Indigenous Nationalities as a successor to the National Committee for the Development of Nationalities of Nepal. NFDIN is a semi-autonomous body that acts as the State's focal point for indigenous policy, with a mandate to make recommendations to the Government on measures to promote the development of indigenous groups in the social, economic and cultural areas. It has the Prime Minister as its chair, the Minister of Local Development as its co-chair, and a vice-chairperson that functions as its chief executive and who is selected from among names provided by the Nepal Federation of Indigenous Nationalities, the main national collation of indigenous organizations. Also, NFDIN has a Governing Council and an Executive Committee, both composed mostly of indigenous members. Functionally, the Ministry of Local Development oversees the activities of NFDIN, and the development and execution of Government policy on matters of indigenous peoples more generally.

The current Interim Constitution of 2007 recognizes the diversity of Nepal (Article 3), and defines the country as a secular, inclusive and democratic State (Article 4). The Interim Constitution further recognizes the status of all mother tongues as national languages, enabling their use in the governmental sector (Article 5). Each community has the right to preserve and promote its language and cultural heritage, as well as to receive basic education in its mother tongue (Article 17). In addition, the document explicitly recognizes the rights of indigenous peoples to "participate in State structures on the basis of principles of proportional inclusion" (Article 21), and, further, authorizes the State to implement special measures "for the protection, empowerment and advancement of indigenous nationalities" (Article 13).

Together with the various provisions of the Interim Constitution and the NFDIN Act, 2002 other pieces of recent legislation address specifically the situation of and call for specific measures in relation to the *Adivasi Janajati* and other marginalized groups. These include the Local Self-Government Act (1999); the Three Year Interim Plan (2010); the 2007 amendments to the Nepal Civil Service Laws, Military Act and Police Regulation; and the Ordinance on Inclusion in Public Service (2009). The preamble to the Local Self-Governance Act, 2055 (1999) acknowledges the historical exclusion of indigenous communities and the need to incorporate them into the development process. The Civil Service Act includes a quota (reservation) system that specifies: "out of the 45 % of new recruitments reserved for various under-represented groups, 27 % are allocated to *ethnic groups*". The Police Regulation and the Armed Police Regulation have similar provision, in order to make the police force more inclusive. The Ordinance on Inclusion in Public Service likewise demonstrates attention to the problem of under-representation by providing a quota system that benefits indigenous peoples.

The National Human Rights Commission (NHRC), which is constituted as autonomous body, has recently started to incorporate attention to the rights of indigenous peoples within the framework of its 2008-2010 Strategic Plan, which includes a strategic area of work on "minorities". In addition, NHRC has issued recommendations in a number of specific cases and on measures for legal reform concerning indigenous peoples.



### 3.4.3 International legal and policy framework

International human rights regimes have made major advances in recent years to clarify what are the rights of indigenous peoples in international law. Clarifying the rights context for the proposed KAHEP will be an essential step in identifying stakeholder groups that are entitled to a formal role in the consultative process, and eventually in negotiating project-specific agreements such as project benefits, livelihood restoration, mitigation measures and compensation.

The GoN has ratified International Labor Organization Convention No.169 and supported the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) in 2007. In this regard, Convention 169 has significant legal attributes as a treaty, according to the Nepal Treaty Act. ILO 169 specifies that indigenous peoples have rights to the natural resources of their territories, including the right to participate in the use, management, protection and conservation of these resources.<sup>16</sup>

A major component of ILO 169 is consultation with indigenous peoples and involving them in decision making at all levels (Article 6).<sup>17</sup> Most pertinent to hydropower projects is Article 16, which prohibits the relocation of indigenous peoples, and, where absolutely necessary, it “shall take place only with their free and informed consent. Where their consent cannot be obtained, such relocation shall take place only following appropriate procedures established by national laws and regulations, including public inquiries where appropriate, which provide the opportunity for effective representation of the peoples concerned.”<sup>18</sup> Article 16 further states that indigenous peoples have the right to return to their traditional lands once the reason for their relocation no longer exists and where that is not possible, land of similar quality shall be provided (except if they opt for monetary compensation).

Among other relevant provisions of the convention, Article 7 states: “The peoples concerned shall have the right to decide their own priorities for the process of development as it affects their lives, beliefs, institutions and spiritual well-being and the lands they occupy or otherwise use, and to exercise control, to the extent possible, over their own economic, social and cultural development.” Similarly, Article 15: “The rights of the people concerned to the natural resources pertaining to their lands shall be specially safeguarded. These rights include the right of these peoples to participate in the use, management and conservation of these resources.”<sup>19</sup>

UNDRIP also recognizes the right of indigenous people over the “lands, territories and resources which they have traditionally owned, occupied or otherwise used or acquired” as well as the “right to own, use, develop and control the lands, territories and resources that they possess by reason of traditional ownership or other traditional occupation or use, as well as those which they have otherwise acquired” (Article 26).

### 3.4.4 Socioeconomic status of Adivasi Janajati

There are disparities among different *Adivasi Janajati* groups. The *Adivasi Janajati* are a diverse group in Nepal and do not all come under one socio-economic system. While *Adivasi Janajati* groups such as *Rajis* are engaged in hunting and collecting food, *Chepangs* and *Kusundas* are occupied in slash and burn, shifting cultivation and depend mainly on natural resources. On the other hand, *Newars* and *Gurungs* are more exposed to modernity and are involved in service, industry and commerce. Thus, educational attainment and representation in Government and NGOs are not uniform among the different *Adivasi Janajati* groups.

There are disparities in terms of socio-economic standing in *Adivasi Janajati* groups. According to Nepal Federation of *Adivasi Janajati* (NEFIN 2005), 10 out of 59 *Adivasi Janajati* are “endangered”, 12 are “highly marginalized”, 20 are “marginalized”, 15 are “disadvantaged” and 2 are “advanced” or

<sup>16</sup> Article 15 (2)

<sup>17</sup> Article 6 also calls upon signatories to carry out consultations “in good faith and in a form appropriate to the circumstances, with the objective of achieving agreement or consent to the proposed measures’.

<sup>18</sup> ILO, “C169 Indigenous and Tribal Peoples Convention, 1989”, [www.ilo.org](http://www.ilo.org)

<sup>19</sup> ILO, “C169 Indigenous and Tribal Peoples Convention, 1989”, [www.ilo.org](http://www.ilo.org)

better off on the basis of a composite index consisting of literacy, housing, land holdings, occupation, language, education, and population size (Table 3-28).

**Table 3-28: Classification of Adivasi Janajatis**

Region	Classification of Adivasi Janajatis				
	Endangered	Highly marginalized	Marginalized	Disadvantaged	Advantaged
Mountain (18)		Shiyar, Shingsawa (Lhomi), and Thudam	Bote, Dolpo, Larke, Lhopa, Mugali, Tokpegola, and Walung	Bara Gaule, Byansi (Sauka), Chhairotan, Mabarphali Thakali, Sherpa, Tangbe, and Tingaunle Thakali	Thakali
Hill (24)	Bankariya, Hayu, Kusbadiya, Kusunda, Lepcha, and Surel	Baramu, Thami (Thangmi), and Chepang	Bhujel, Dura, Pahari, Phree, Sunuwar, and Tamang	Chhantyal, Gurung (Tamu), Jirel, Limbu (Yakthumba), Magar, Rai, Yakkha, and Hyolmo	Newar
Inner Terai (7)	Raji, and Raute	Bote, Danuwar, and Majhi	Darai, and Kumal		
Terai (10)	Kisan, and Meche (Bodo)	Dhanuk (Rajbansi), Jhangad, and Santhal (Satar)	Dhimal, Gangai, Rajbansi (Koch), Tajpuriya, and Tharu		

Source: NEFIN, 2005

In terms of representation in Nepal's power structures, *Janajatis* other than *Newars* constitute a small percentage. However, in Constitutional Assembly (CA) member election 2008, of total 601 CA members, 36.3 % of elected members (216) are *Adivasi Janajati*. This marks a dramatic increase of *Janajati* representation in the nation's highest policy making body as compared to the 24.3 % of the House of Representative members in the 1999 election.

Nepal Living Standard Survey, 2003/04 shows that the national literacy rate (15 years and above) is 48 %. Male and female literacy rate stands at 63 % and 39 % respectively. The male and female literacy rate (6 years and above) stands at 62.1% and 37.6% in EDR. According to the Census 2001, the national average literacy rate is 53.7 %. The literacy rate varied widely among the various caste/ethnic groups in the Census 2001. While *Newar/Thakali* figured with the highest proportion of literates at 72 %; the literacy rate of *Limbu* is 59 %, *Rai* 58.8 %, *Magar* 57.7 %, *Gurung* 57.6 %, *Sherpa* 45.8 %, *Tamang* 42.0 %, and *Majhi* 37.4 %.

Poverty is rampant among *Dalits* and *Janajatis*. A high incidence of poverty is found among *Dalits* (46%) (NLSS 2003/04). During 1995/96 to 2003/04, the poverty decline occurred more than 20% among *Hill Janajati* compared to 46% *Hill Brahmin/Chhetri* (UNDP 2009).

According to the CBS 2001, the national average literacy rate for women is 42.5 %. The literacy rate for *Janajati* women is 43 %. Among the *Janajati* groups, *Newar* and *Thakali* female literacy rates stand highest at 63.4 % and 62.5 % respectively. The female literacy rate of *Limbu*, *Rai*, *Magar*, *Gurung*, *Sherpa*, *Tamang* and *Majhi* is within 25 to 50 percentages.

### 3.4.5 Adivasi Janajatis in the project VDC

The project VDCs has mixed communities. These communities reflect a wide range of cultural, linguistic and religious background.

## Demography

The population of *Adivasi Janajati* is 11,262 of the project VDCs, which is 53.4 % of the total population. In the project VDCs, the distribution of *Adivasi Janajati* groups shows that there are Nangkholyang (73.84%) with an absolute majority of *Adivasi Janajati* followed by Panchami (50.21%) Thechambu (48.86%), and Amarpur (47.42%) (Table 3-29). *Adivasi Janajati* is 53.40 % of the total population of four project VDCs.



Photo 8: Limbu Adivasi Janajati

Table 3-29: Indigenous Population in the project VDCs, 2001

District	VDCs	Total VDC Population	Total Population of Indigenous Peoples*	
			Number	% of VDC Population
Taplejung	Nangkholyang	4015	2965	73.84
	Thechambu	3772	1843	48.86
Panchthar	Amarpur	7743	3658	47.42
	Panchami	5568	2796	50.21
<b>Total</b>		<b>21089</b>	<b>11262</b>	<b>53.40</b>

Source: CBS, 2001

\* Limbu, Rai, Tamang, Gurung, Sunuwar, Sherpa, Newar and Majhi

### Adivasi Janajati communities

Within indigenous groups of the project affected VDCs, the first three major indigenous groups are *Limbu* (56%), *Rai* (14%) and *Tamang* (10%). Amarpur is the most affected VDC by the project activities and most of the affected households are from *Limbu*, *Tamang* and *Majhi* indigenous groups. Each of these groups is briefly described below:

#### Limbu

*Limbus* were the *Kipat*<sup>20</sup> holders in the eastern hill district of Nepal. They occupied these areas under *Kipat* tenure by virtue of being "first settlers". The most important characteristic of this form of land tenure is the inalienability of the land: as *Kipat* land was tied to the social group, it could not be sold to immigrants by virtue of its nature (Remgmi, 1978). According to the Land Evictions of the Country Code (1963), *Kipat* which lacks official documents, is equivalent to *Raikar*<sup>21</sup> lands on which taxes can be levied. This has led to the loss of indigenous based communal ownership i.e. transforming *Kipat* land into *Raikar* land which can be used, transferred, and disposed of by anyone. Numerous linguistic

<sup>20</sup>Traditional land tenure system. In this system, "A *Kipat* owner derives rights by virtue of his membership in a particular ethnic group, and/or its location in a particular area. In contradiction to the *Raikar* system of land tenure and its derivatives, therefore, *Kipat* represents a communal form of land tenure." (Regmi 1978:534).

<sup>21</sup> *Raikar* is a form under which the state functions as the landowner.

relics still bear witness of the period in which the *Limbu* were the first settlers in their territory. For example, there are many places-Thechambu, Nangkholyang, Angbung (later became Amarpur) and rivers-Tawama (later became Tamor), Kawama (later became Kabeli), Fawakhola etc were named in *Limbu* language. *Limbu* as one of the major indigenous communities of the project area, hold their ancestral lands; their languages are in common practice, their ethnological history is alive, they have their own myths, customs, rituals and the traditional socio-political institutions are still effective to some extent, and their tangible cultural heritage is still safe. The *Limbu* (they call themselves "Yakthumba") can be considered as the 'original' inhabitants of the area since all other groups have migrated to the area at a later date, according to historical evidence (Caplan, 1970). They now comprise 53.40 % of the total population of the project VDCs (Table 3-29). *Limbu* of the project areas consists of number of sub-group (*thar*) which may be referred to as sub-tribes. Some, such as *Mennyangbo* are found in the Thechambu VDC, *Khimding* in the Nangkholyang VDC, *Hembya* and *Lingden* in the Amarpur VDC and *Sigu* in the Panchami VDC. Many of the *Limbu* have inter-married with *Rai* and other indigenous and caste groups.

### *Rai*

*Rai* is another *Adivasi Janajati* group that have migrated to the present locality from 18<sup>th</sup> century onward from Majhi Kirat (Middle Kirat region). *Rais* are viewed as the largest *Kirati* group. There are more than twenty eight linguistically and culturally distinct groups subsumed under the ethnonym "*Rai*" and numbered among the "autochthonous" inhabitants of the eastern Nepal hill area, who are generally known as *Kirat* (Gaenzle, 2000). It was only during the course of the past century that this title became an ethnonym for the corresponding groups (Yamphu, 2007). However, the term "*Rai*" is not by origin an ethnonym but a title conferred by Hindu rulers upon one segment of the tribal chieftain of East Nepal in recognition of their semi-autonomous status, but also with the idea of incorporating them into the state administrative system. *Rai* is a title conferred upon the *Jamindars* (landlords). In the project area, there are *Thulung*, *Dumi*, *Sampang* and *Chamling Rais*. These *Rai* communities are found in both upstream and downstream area of the project.

### *Tamang*

*Tamang* form one of the major Tibeto-Burman speaking communities in Nepal, and maintain a belief that they originally came from Tibet (Bista, 1967). Originally, they were the inhabitants of just surrounding of the Kathmandu valley that have migrated to the present locality in 1750 BS (18<sup>th</sup> century) from Trisuli (based on local informant). Seventh generation of *Nishur Tamang* people now are living in the project area. *Tamang* living in the project area retain very little of their original culture, art, or religion. They usually adopt the cultural patterns of their immediate neighbors. There are many sub-groups (*thar*) in *Tamang* community such as *Nisur*, *Pakhrin*, *Waiba*, etc. *Tamang* of the project area are Buddhist and they have their own monastery (Gumba). Every ritual of *Tamang* is guided by Lamaism. Mostly, *Tamang* are found in the upstream area of the project.



**Photo 9: Tamang Adivasi Janajati**

### *Majhi*

*Majhi* (traditionally known as fisherman) are one of the indigenous communities of Nepal. The main traditional occupation of the *Majhi* people is boat building and riverain transport services. The *Majhi* people are only found in Pinasi-9 of Amarpur, near the powerhouse site. The *Majhi* of Pinasi Amarpur-9 have lost their mother tongue. They are economically, socially and politically weak group. According to the NEFIN's classification, *Majhi* is defined as a highly marginalized group.

Newar

Newar are the indigenous inhabitants of Kathmandu valley. They are scattered across the country especially in every market town and village in the outlying districts, the hills and the Terai. According to the NEFIN's classification, Newar is defined as advantaged group. However, in the project site, Newar community lived in the downstream area (Amarpur-7, Apegauda) and has more than 10 households. They called themselves as Newar, however, they have totally lost their culture and language and their traditional life style.

**Self-identity**

**Oral literature and language**

The Adivasi Janajati communities especially, Limbu are very rich in language and oral literature in the project area. Limbu language has its own script known as Kirati Srijanga script. The villages and rivers are named in Limbu language which later changed with Hindu meanings. For example Amarapur (Angbung "L"), Kabeli Khola (Kawama "L"), Thechambu, Nangkholyang, Panchami (Simbuwa "L"), Bijuli Bhanjyang (Khekmakham "L") etc. are later changed names. They have myths and mythology attached with this territory.



**Photo 10: Srijanga script**

As reported during consultations, Amarapur was originally inhabited by Lepcha and Limbu forefathers defeated them and acquired Amarapur. Present Sangdang, Sigu and MayongThebe clans of Limbu were once Lepcha. Some historical sites of Limbu are also located in the project area. An historical palace is located in the top of Amarapur VDC ward no 3 where remainders of old palace are still found. According to myths, two clan groups of Limbu- Thindaling Khokyang and Yonghyang had fought in that place.

Adivasi Janajati communities of the project areas have practiced traditional occupation, possessed indigenous knowledge, and preserved it for a long time. Limbu have profound attachment to their land and territory that invigorates various components of culture. Their culture, traditional customs and socio-political institutions are alive, strong and effective to a great extent because their language is alive and have their own mythology or values, norms and belief system. The Limbus as dominant group even within the Adivasi Janajati groups who were enjoying ethnic autonomy till some decades ago and have remained intact. In the project area, cultural enrichment does not produce racial enmity or inter-group conflicts; rather it helps to increase the feeling of brotherhood and cooperation. However, advancement in the stages of development and frequent contact with outside world may lead to cultural destruction.

In the project area, there are no cultural and archaeological sites that are directly affected and would therefore have to be moved. Based on the FGD discussions and field visit, did not encounter any items of archaeological importance. No evidence of prehistoric human habitation; no stone implements or other indications of Paleolithic or Neolithic habitation were found. However, there are some sacred places and historical sites associated with the existence of Limbu that are located in the near vicinity from the project area.

**Kipat –Subangi**

It can be argued that the Kipat was the basis of cultural autonomy of Limbu. Kipat seemed as a symbol of ethnic and political identity among the Limbu. Kipat was first introduced in 1774 and the government has tried to withdraw these rights by forcing the Kipatiya to abide by national policies

and regulations that undermine the autonomy granted in the *Kipat* system (Caplan, 1970). But the emergence of *Kipat* system is not clear. In this regard, Gaenszle writes, "While the origin of the *Kipat* system is not entirely clear, it already existed under the Sen Kings in Kirat, as only those plots of land that were held in *Kipat* at the time were recognized by the Gorkhalis" (Regmi, 1978: 537, cited by Gaenszle, 2000). According to the Land Evictions of the Country Code (1963), *Kipat* which lacks official documents, is equivalent to *Raikar* lands on which taxes can be levied. This has led to the loss of indigenous based communal ownership i.e. transforming *Kipat* land into *Raikar* which can be used, transferred, and disposed of by anyone.

The main characteristic of the *Kipat* system is the inalienability of the land. The *Kipat* land was tied to the social group and in the course of time, it had become the socio-political address of the *Limbu*. *Limbu* use *Kipat* refers to the specific plots of land they farm, the term means much more than that. Everyone can find a *Limbu* talking about *Kipat* with pride and possessiveness. *Kipat* means land their ancestors cleared and made land that they did not have to buy. *Kipat* means old thing; It counts them to past that is more glorious than that of other ethnic groups in Nepal. Only those *Limbu* who are the descendants, direct or adopted, of the original ancestors who first settled in the village can hold *Kipat* rights to the lands in *Limbuwan*. *Kipat* connects them with more than the past grandeur of their *Kiranti* ancestors. They are not like others, such as *Brahamins*, *Chhetris*, *Sherpas*, *Tamang*, *Newars* and *Gurungs*, who had moved into *Limbuwan* after the unification of the Kingdom. *Kipat* draws a conceptual boundary between those who are footed in the land and history of *Limbuwan* and those who are not.

Later, the *Kipat* system was abolished through Land Reform Act 1964. As a result *Limbu* and *Rai* are historically deprived of land and natural resources. The dominant groups have expropriated land, habitats, water and other natural resources<sup>22</sup> that were once communally owned known as *Kipat* by the *Limbus*.

### **Ritual practices, traditional institutions, and customary laws**

The traditional systems of the indigenous groups of the project area like worshipping villages, places, hills, mountain, rivers, streams, lakes, ponds, and trails are still in practice. They believe that deities are living on the earth. Deities are not represented in human figure icons, rather are worshipped in the form of natural objects like stone, trees etc. It is believed that deities seem to be sensitive to humans and appear to their devotees through the medium of humans (shamans, spirit possessors). Service to deities is performed by their respective priests or shamans. Regular worship is not compulsory and offerings are given on particular occasion and deities are propitiated when needed. Myths and tales describe the greatness of such traditions. The reasons for the tradition of practicing rituals rely on the ground that deities are of cruel nature and they are propitiated than adored. Rituals for the propitiation of deities are performed to recover from ailments, to ensure wellbeing of children, to secure economic activities, to relieve anxieties, and to restore hope and confidence. Festivals in honor of the deities are celebrated and special sacrifices are performed in order to avoid trials and tribulations. These rituals are just the means to achieve an end.

### **Cultural and archaeological sites**

The SA team carried out a screening exercise to map out cultural and archaeological sites located in the project VDCs. There are no cultural and archaeological sites (especially of *Adivasi Janjati*) located within the project area but there are some sites located in the surrounding VDCs (Table 3-30). None of them will be affected directly, however, indirect impact may be observed on some cultural and ritual activities associated with these cultural sites.

<sup>22</sup>Special Rapporteur on the situation of human rights and fundamental freedoms of Indigenous peoples Report 2007-A/HRC/12/34/Add.3



**Table 3-30: Cultural and archaeological sites of Adivasi Janajati located in the project VDCs**

S N	Name of cultural/archaeological resources	Area located	Distance	Time you worship	Socio-cultural importance	Associated with
1.	Phaudar Paty	Mechi Highway	2km from Singapur		Historical	
2.	Hillihang Palace	At the meeting point of Nagi, Amarpur and Panchami VDCs.	It is 4km from Hembyegaun	In December	Ancient palace of Limbu King	It is associated with the existence of <i>Yakthumba</i> in the present territory.
3.	Khalanga Palace	Amarpur-3	3 km from Hembyagaun, Amarpur-6	Morning/Evening but occasionally	Ancient palace of Limbu King	It is associated with the existence of <i>Yakthumba</i>
3	Shingha Devi	Amarpur-6,	3.5km from Rajabesi	Chandipurne (Full Moon Night of Baishak)	Religious	Power
4.	Manghim	Prunedanda, Thechambu	2km from headwork	Morning/Evening but occasionally	Historical/cultural site of Limbu ethnic group	It is associated with the existence of <i>Yakthumba</i>
5	Chetlung	Amarpur-4	4km from Hembyagaun		Historical boarder that divides ethnic territory	It is associated territory and autonomy of <i>Limbu</i> clans

Source: Field Study 2010

### 3.5 Gender, disadvantaged and vulnerable groups

#### 3.5.1 Vulnerable communities in Nepal

Vulnerability is a multi-dimensional concept that needs to be defined within the specific contexts in order to be meaningful and useful for project impacts and planning purposes. In the context of the KAHEP, vulnerability refers to the households and the communities that may have considerable difficulties in participating in the livelihood restoration process and benefit sharing due to serious lack of required skills, resources, experience and organization. KAHEP tends to produce benefits that accrue to groups other than those who bear the social and environmental costs. Those who bear the costs are quite often poor, and vulnerable or unrepresented such as *Adivasi Janajati*, women and *Dalits*. It should also be understood that vulnerable groups face considerable problems in the adjustment to new sites and transition to different livelihood systems. Care must be taken and provided additional measures to ensure that they too become project beneficiaries.

National Living Standard Surveys for 1996 and 2003, Human Development Report 2009 and major other statistical sources in Nepal clearly demonstrate that women, disadvantaged Janjatis and *Dalits* are not just excluded socially but are also likely to be economically backward compared to other groups. The degree of vulnerability of these three groups increases if they are landless, live in remote locations and work as marginalized farmers or agriculture laborers. Therefore, the above three groups are disadvantaged in terms of:

- (i) access to livelihood, assets and services;
- (ii) social inclusion and empowerment;
- (iii) poor resource base and are considerably below the poverty line;
- (iv) highly dependent on natural resources, are only partially integrated into market economic activities;

- (v) socio-economic marginalization; and
- (vi) cultural criteria.

### 3.5.2 Vulnerable communities in the project area

Based on above stated criteria, the following groups are considered vulnerable groups:

- Indigenous Peoples (*Adivasi Janajati*);
- *Dalits*; and
- Women headed households.

#### ***Adivasi Janajati***

The sub-section 3.4 describes the status of socio-economic situation of *Adivasi Janajati* and their related rights. In consideration of above issues, *Adivasi Janajati* have been considered as vulnerable group in the project area.

#### ***Dalits***

The term *Dalits* refers to people who are religiously, culturally, socially, economically and historically oppressed, excluded and untouchables. The *Dalits* community lives in many regions of Nepal, practices many faiths, is multi caste and multi lingual and embraces a rich multi-cultural diversity. However, confusion yet exists, which group falls in the category of *Dalits* (Bennet, 2006). For instance, Ministry of Local Development (1997) defined 23 groups as *Dalits*, while *Dalits* Commission (2003) and Dahal et al (2002) classified 19 groups and the Census 2001 identified and counted only 16 *Dalits* groups. Despite national and international provisions legislating against discrimination, *Dalits* are the *de facto* 'untouchables' of contemporary Nepal. They are frequently denied access to public places and the right to drink water from public wells. They are the victims of violence because of social taboos. They endure an estimated 205 forms of discriminatory practice in their daily lives.<sup>23</sup>

The name '*Dalits*' mean the oppressed. It is a term used by the *Dalits* themselves to denote their protest. In the past, the term '*Dalits*' was used to refer to all of those groups who were oppressed, but in contemporary Nepali parlance, it is used to refer only to those officially categorized within the ex-untouchable castes by law and for a couple of decades it has been used as a common identity of a group of people, who are legally ex-untouchables and behaviorally present untouchables (Kisan; 2009). The state of untouchability is the first and foremost identity of *Dalits*.

According to the Census 2001, *Dalits* comprises 13 % of the total population but the figure is contested. *Dalits* are more than 30% of the population in 211 VDCs of west and far-west hills and eastern Tarai. Hill *Dalits* such as Kami, Damai and Sarki are widely distributed and they comprise 81, 71, and 55 % respectively of VDCs population. In 31 districts, *Dalits* population is higher than 12 %. They are in absolute majority in 12 VDCs of 8 districts. Another fact is that *Dalits* people outnumber Yadav in 8 districts of eastern Tarai (Sharma, 2007 pp.51).



**Photo 11: Interaction with *Dalits* at Amarpur-4, Bhaluchowk**

<sup>23</sup>Bhattachan, KB. etc. Al. 2003. *Existing Practices of Caste-based Untouchability in Nepal and Strategy for a Campaign for its Elimination*. Kathmandu: Action aid Nepal.



A study shows that 23% of hills origin *Dalits* and 44% of Madhesi *Dalits* are entirely landless<sup>24</sup> along with the *Haliyas* (a kind of bonded labor) who were working on other people's land. The literacy level of *Dalits* groups is much lower (33.8%) than the national average of 54.1% (CBS, 2001). Literacy among the Terai *Dalits* is lower (21.1%) compared to that of the Hill *Dalits* (41.9%). Considering the health and nutritional status, the life expectancy of *Dalits* at birth is 57.7 years compared to the national figure of 60.4 years (CBS, 2001).

There are nearly about 110 *Dalits* households distributed in the ward no 3, 4, 6 and 8 of Amarpur VDC. The largest group is that of the metal workers, the Biswakarma, including Kami (blacksmiths) and Sunar (gold workers). Damai (tailor) is another dominant group in the Amarpur VDC. The average family size of the *Dalits* was 6. The project will not directly affect any *Dalit* household.

### **Women**

As per the 2001 Census, women constitute almost 43 % of the labor force, 48 % in agriculture and 34 % in the non-agriculture sector. In addition, about 5 % of the households reported some land in legal ownership of female. Similarly, only 0.8 % households have house (ownership) in women's name. Only 5.4 % households reported ownership of livestock, despite multiple credit-institutions targeting and funding this activity for women. Only 0.8 % household had all three, house, land and livestock in female ownership. Female headed households, which constituted about 15 % of the total surveyed households, owned smaller land holdings than male headed ones. Compared to male heads, female heads of the households are educationally much more disadvantaged.

The overall literacy rate of women in Nepal is only 42.49 %, which is remarkably low as compared to men, i.e. 65.08 %, leading to a gender gap of 22.6 %. Women's contributions to the economy in the form of household maintenance and care work continue to remain unaccounted for (CBS 2001).

As in other parts of the country, women are often dominated by men in the project area also. Women are generally involved in household activities like cooking, washing, rearing of children and agricultural activities. However, a few women in the project area are engaged in skilled works that includes teaching, small businesses, sewing and knitting of household woolen mats, etc. Women have larger workload in the home but their work is not generally evaluated because men work outside the home and they are considered as the main earner for the family. Women are often deprived of the decision making authority and pursuing alternative sources of livelihood. In the project area, women have user rights over the land and forest, but are rarely allowed to inherit the land they use. The family also controls women's agricultural labor through various social mechanisms. Women are not commensurate for the labor they expend on the land in both farm and nonfarm activities.

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<sup>24</sup>Sustainable Development Forum. 2006. Ownership of *Dalits* in Land: A Study. Kathmandu: Sustainable Development Forum

## **CHAPTER 4**

# **PROJECT IMPACT AND IMPACT ANALYSIS**

## 4 PROJECT IMPACT AND IMPACT ANALYSIS

### 4.1 Project impact zones

The project affected VDCs comprise Amarapur and Panchami of Panchthar district and Thechambu and Nangkholyang of Taplejung district. Amarapur VDC will be the most affected VDC as the major project structures like Headworks, Surgeshaft, Waterways and Powerhouse are located in this VDC. Thechambu VDC will experience impacts due to the dam construction and dewater stretch. The total length of dewater stretch from headworks to the Kabeli-Tamor confluence is about 5.6 km. The left bank of the dewater zone lies in Amarapur VDC, whereas there are Thechambu and Nangkholyang VDCs along the right bank.

Based on the potential social and environmental impacts of the project, the project-affected areas are classified as direct impact areas and indirect impact areas. The direct impact area includes the dewater stretch and the areas where most of the construction activities of the project take place and high level of impacts are anticipated. In the project area most of the construction activities are carried out in Dhuseni, Pinasi, Dubichaur, Phodarpati of Amarapur VDC and Khudurke of Thechambu VDC. The dewater stretch lies along Dhuseni, Rajabesi, and Kabeli Bazaar of Amarapur VDC, Kharelgau of Thechambu VDC and Kaharegau of Nangkholyang VDC.

The surrounding area or the indirect impact area consists of areas that will not be directly affected by the construction activities. The area consists of forest areas and settlements within 3 to 4 hours walking distance from the project site. However, supplying of raw material and goods for construction activities and the contribution of labor to the project by the settlements could indirectly disturb the biotic and social environment in this area. Table 4-1 and Table 4-2 give the details of the settlements under direct and indirect impact Areas respectively.

**Table 4-1: Settlements in the direct impact area and associated impact**

S.N	Impact zone	Impact	Location/Settlements
1	Reservoir	<b>Inundation of land:</b> - 0.293 ha of agricultural land -0.57 ha of forest land -9.11 ha of riverine area <b>Construction related impacts</b>	Dhuseni of Amarapur VDC and Khudurke of Thechambu VDC
2	Barrage, operating Platform, sensor building and intake	<b>Permanent loss of land:</b> -0.954 ha of agricultural land -0.03 ha of forest land -2.68 ha of riverine area <b>Construction related impacts</b>	Dhuseni of Amarapur VDC
3	Powerhouse, switchyard, surgeshaft and penstock alignment	<b>Permanent loss of land:</b> -2.182 ha of agricultural land -0.97 ha of forest land -1.47 ha of riverine area <b>Construction related impacts</b>	Pinasi of Amarapur VDC
4	Campsite at headworks	<b>Permanent loss of land:</b> -0.709 ha agricultural land <b>Temporary acquisition of land:</b> -2.20 ha agricultural land <b>Construction related impacts</b>	Dhuseni of Amarapur VDC
5	Campsite and engineer's camp at powerhouse	<b>Permanent loss of land:</b> -3.54 ha agricultural land <b>Temporary acquisition of land:</b> -3.70 ha agricultural land <b>Construction related impacts</b>	Pinasi of Amarapur VDC
6	Quarry sites, aggregate crushing, storage and batching plant at headworks	<b>Temporary acquisition of land:</b> -3.50 ha riverine area -1.0 ha agricultural land <b>Construction related impacts</b>	Rajabesi and Dhuseni of Amarapur VDC
7	Quarry sites, aggregate	<b>Temporary acquisition of land:</b>	Pinasi of Amarapur VDC

	crushing, storage and batching plant at powerhouse	-3.30 ha riverine area -2.41 ha agricultural land <b>Construction related impacts</b>	
8	Spoil/muck disposal (Headworks)	<b>Temporary acquisition of land:</b> -4.60 ha riverine area	Dhuseni of Amarpur VDC
9	Spoil/muck disposal (Powerhouse)	<b>Temporary acquisition of land:</b> -4.50 ha riverine area	Pinasi of Amarpur VDC
10	Tunnel alignment	<b>Construction related impacts</b>	Dhuseni, Dubichaur, Phodarpati and Pinasi of Amarpur VDC
11	Downstream (5.6 km from headworks to Tamor-Kabeli confluence)	<b>Reduce flow:</b> -3 cremation sites, and 1 temple - impact on fishing	Dhuseni, Rajabesi, and Kabeli bazaar of Amarpur VDC, Kharelgau of Thechambu VDC and Kaharegau of Nangkholyang VDC
12	Access roads	<b>Dust, noise, safety</b>	Amarpur and Panchami VDC

Source: Field survey, 2010

Note: Existing community tracks after surface upgradation will be used as access roads to the headworks and the powerhouse.

**Table 4-2: Settlements in the indirect impact area**

Districts	VDCs	Settlements in Indirect Impact Area
Panchthar	Amarpur	Bhanuchowk, Kurledanda, Simle (Aapegauda), and Bhadure (Jogidanda), Madibung and Jarayotar
	Panchami	Tilhar
Taplejung	Thechambu	Khalte, Chiphewa
	Nangkholyang	Myakha

Source: Field survey, 2010

## 4.2 Project adverse impacts

### 4.2.1 Impact on land

#### Loss of land

With the design for a run-off operation, the project impacts on land are relatively small among hydropower generation projects. The project will acquire 22.508 ha of land on permanent basis (Table 4-3). However, KAHEP does not require any physical relocation of households, and would have no impacts on residential or business structures. Of the land use types acquired permanently, only 7.678 ha is agricultural land and 1.57 ha is forest land, the rest is the riverine area. The forest lands to be acquired are small areas scattered in several locations for various project works. Out of total 1.57 ha forest land required, 0.21 ha area belongs to Thulo Dhuseni Community Forest (CF), 0.12 ha belongs to Kabeli Garjite CF, 0.97 ha belongs to Pinasi Leasehold Forest (LF) and 0.27 is communal national forest land. The riverine areas belong to the GoN.

**Table 4-3: Land required for construction of the project (in ha)**

Project Component sites	Land acquisition (ha) according to the Land Category						Total
	Private land (Cultivated and Marginal)		Forest land		River		
	Temp-acquired	Perm-acquired	Temp-acquired	Perm-acquired	Temp-acquired	Perm-acquired	
Reservoir	0	0.293	0	0.57	0	9.11	9.973
Barrage, Operating Platform, Intake	0	0.954	0	0.03	0	2.67	3.654
Sensor Building	0	0	0	0	0	0.01	0.01
Powerhouse and Switchyard	0	2.182	0	0.27	0	1.47	3.922

Surgeshaft and Penstock Alignment	0	0	0	0.7	0	0	0.7
Access Road to Headworks	0	0	0	0	0	0	0
Access Road to Powerhouse	0	0	0	0	0	0	0
Campsite at Headworks	2.20	0.709	0	0	0	0	2.909
Campsite at Powerhouse	3.70	0	0	0	0	0	3.70
Engineer's Camp at Powerhouse (Permanent)	0	3.54	0	0	0	0	3.54
Quarry Sites at Headworks	0	0	0	0	3.50	0	3.50
Quarry Sites at Powerhouse	1.01	0	0	0	3.30	0	4.31
Aggregate Crushing, Storage and Batching Plant etc (Headworks)	1.0	0	0	0	0	0	1.0
Aggregate Crushing, Storage and Batching Plant etc (Powerhouse)	1.40	0	0	0	0	0	1.40
Spoil/Muck Disposal (Headworks)	0	0	0	0	4.60	0	4.60
Spoil/Muck Disposal (Powerhouse)	0	0	0	0	4.50	0	4.50
<b>Total</b>	<b>9.31</b>	<b>7.678</b>	<b>0.00</b>	<b>1.57</b>	<b>15.90</b>	<b>13.26</b>	<b>47.718</b>

Source: Field Survey, 2010

### Land for Access road

The project has chosen existing community developed tracks (about 15km for powerhouse and about 7.4 km for headworks) from the Mechi Highway as access roads to the powerhouse and the headworks area. The communities have widened the original tracks for the project to do the surface upgradation and the upgradation activities for the track roads will only include backfilling, drainage maintenance and construction of protecting walls. Thus, no relocation or land acquisition is expected under the project for both access road to headworks and access road to powerhouse.

### Temporary land use

The project will acquire 25.21 ha of land on temporary basis (Table 4-3). Major part of the temporary land required (15.90 ha) lies in the riverine area being occupied by the project facilities such as quarry, muck disposal etc. The agricultural lands required temporarily are the sites of construction camps and storage facilities totaling of 9.31 ha. The proposal does not envisage usage of the forest area for temporary use. Construction Contractor shall be made responsible to reinstatement of all the temporary land. All the temporary sites used during construction shall be returned in conditions similar to before lease.

#### 4.2.2 Impacts on fishing

Diversion of the Kabeli River is expected to reduce riverine fish resources of the Kabeli from November through June for nearly 5.6 kilometers downstream. The communities living close to the river usually go for fishing when they are free from the agricultural works. The collected fish is used for household consumption and also sold occasionally within the community if the catch is surplus. The fishing markets are not developed in the areas. Based on FGD with local communities, there are no professional (fulltime) fishermen along the dewatering stretch of the Kabeli River. People involved in occasional fishing are from different ethnic backgrounds and used traditional gears for fishing.

### 4.2.3 Impact on physical cultural resources

A rest house (*Pati*), Pinase Ghat, for resting when funeral procession takes place is located in the powerhouse site. This *Pati* is likely to be affected by the project due to its close proximity to the project construction sites.

Panchayan Shivalaya Temple located about 2.5 km downstream at Kabeli Bazar is an important religious temple where people gather to worship *Shiva* and *Parvati*<sup>25</sup>. It hosts different religious performances in different occasion that require fresh water of the Kabeli River basically for bathing and cleaning the temple. The rituals and cultural activities related with the temple is likely to be affected due to reduced flow in the Kabeli River.

There are three cremation sites (Kholakharka cremation site, Kabeli cremation site and Sirupa cremation site) located at the dewater stretch. The Kabeli cremation site is one of the most common sites in the dewater stretch located about 2.5 km downstream at Kabeli Bazaar. People from surrounding VDCs also bring dead bodies to cremate at this site with a long-lived belief that if dead are cremated in the Kabeli River, they will go to heaven. The altered river flows will impact the Kabeli cremation site to some extent.

Hindu pilgrims from the surrounding VDCs come to take religious bath at Tamor and Kabeli Rivers to worship in every religious day like *Aushi*, *Kuse Aushi*, and *Matatirtha* as per their accessibility to the rivers. In the dry season, reduced flow at dewater stretch will affect this activity related with Kabeli River.

*Majhi* community of Pinasi village performs rituals like *Udyouli* and *Ubhauli*, *Dhuli Puja*, *Sansari Puja*, *Tamor Puja* etc. in the Tamor River. Among them, *Sansari* and *Dhuli Puja* spots are located in the temporarily affected land of the powerhouse site. The construction activities at powerhouse site will impact such ritual practices.

It is reported that Trout (*Schizothorax* sps.) and Stone carp (*Psilorhynchus pseudochenius*) are ritually required for *Adivasi Janajati* (*Limbu*, *Rai* and *Majhi*) to worship and propitiate their clan deities and for other ritual performance. Low flow of water in the Kabeli River at the dewater stretch during the dry season might result in decline of such fish species.

### 4.2.4 Construction related/contractor operation related impacts

During construction, the project area will witness an increase in population due to an influx of workers and service providers. The increased population will further strain the local water supply, health, and sanitation facilities, especially around the construction camps. In addition, lack of proper sanitary measures and increases in water pollution and waste can lead to outbreak of epidemics and diseases such as jaundice and typhoid, particularly among the elderly, women, and children. The influx of a labor force from other areas will probably spread sexually transmitted diseases, including HIV.

The construction activities such as blasting, using heavy equipment and working in dangerous areas may cause accidents and injuries. The sufferers will most probably be construction workers although injuries to local people are also possible.

The existing civic amenities in the project area are in poor condition and the project area has limited local level institutions. The influx of workers and job seekers into the project area could put extra pressure on public facilities like transportation, health posts, police posts and schools in the project area especially in Ward No. 5, 6, and 9 of Amarpur VDC.

The influx of large number of people with different social and cultural backgrounds and the sudden inflow of cash at the same time may result in social abuse such as alcohol consumption, prostitution (illegal), etc. These impacts may lead to resentment and friction among local residents and the incoming workers that will affect the peace and harmony of the project area.

### 4.2.5 Impacts on Adivasi Janajati and disadvantaged groups

*Adivasi Janajati*, *Dalits* and women are considered as vulnerable groups in the project area. These groups are expected to experience the same physical and economic impacts experienced by the

<sup>25</sup>Hindu God and Goddess

larger population largely due to the same economic livelihood patterns and engagements. However, due to low level of marketable skills and lack of proficiency in competencies of these vulnerable groups it is most likely that many of these groups in the project area will be in a disadvantageous position to avail of employment opportunities during the construction phase. These vulnerable groups will need extra consideration and attention for their meaningful participation in the project cycle.

### 4.3 Impact analysis

#### 4.3.1 Impact on land

##### Affected population due to permanent acquisition of land

A total 13 households will be directly affected by permanent acquisition of their land for construction of different project features. These directly affected household (13 HHs) who lose their assets due to project activities area termed as Project Affected Population (PAF). Detail about the PAF and their assets loss are presented in Table 4-6. In terms of caste and ethnic groups, 10 HHs from indigenous people (6 *Tamang*, 3 *Majhi* and 1 *Limbu*), and 3 *Brahmin/Chettri* HHs will lose their land permanently.

##### Land loss percentage and land holding

Permanent land loss is of concern in terms of land utility and services rendered in the long term to the land owners. Among the 13 PAFs\*, most of the households (8 HHs) will lose less than 25% of their land and only two household lose more than 50% of their land. Land loss percentages of PAFs are presented in Table 4-4. The highest loser household will lose about 70.59 % of its ancestral land (Table 4-6). The two families who lose more than 50% of their ancestral land are financially and socially well off families. A total of six (6) family members of these families are in nonfarm activities (Table 4-6) and agriculture is not their primary source of livelihood. The key impact to the individual owner relates to loss of ancestral land, a sense of attachment to the ancestral land. None of the affected families are physically and economically displaced completely.

**Table 4-4: Land loss percentage of Affected Households**

Percentages of land loss	Total HHs
<10%	4
10-25%	4
25-50%	2
>50%	2
<b>Total</b>	12*

Source: Field Survey, 2010

\*One HH members were unavailable during HHs survey as they had migrated from the Project area

The average landholding size of the total PAFs is 3.02 ha, which is much higher than the national average of 0.8 ha (15.74 *Ropanies*) per household and district average of 0.81 (Panchthar district) and 0.89 (Taplejung district) (CBS, 2001).

The affected private land is agricultural land. The quality of land in Nepal is categorized into four categories. This categorization is based on the quality of productivity and fertility. *Abal* means grade "A" or high quality land, *Doyam* means grade "B" or medium quality land, *Sim* means grade "C" or lower quality land and *Chahar* means "D" grade land or lowest quality land. None of the "A" grade (*Abal*) land is affected by the project. Most of the affected land falls under "C" grade (*Sim*), which is low quality land from agricultural point of view (Table 4-5).

**Table 4-5: Land loss by land type**

SN	Land type	Affected land area (ha)
1	<i>Pakho Sim</i>	5.573

2	Khet Sim	1.86
3	Khet Doyam	0.245
<b>Total</b>		<b>7.678</b>

Source: Field Survey, 2010

Note: Pakho: Unirrigated land and Khet: Irrigated land

### **Employment and income structure of PAFs**

Out of the 13 PAFs, the information of one project affected family is not accessible during the time of the preparation of this report. So analysis of rest 12 PAF is presented herewith. The average annual gross income per PAF accounts about NRs 201,958.00 indicating the average per capita income of 23,080.95 (US\$ 324.17), which is lower than the national average US\$540 (CBS, 2004, UNDP, 2004).

Out of the total family members (105) of 12 PAFs, 19 members are employed permanently in non-farm sector indicating employment rate of 1.46 per household. As shown in the Table 4-6 the non-farm employment has largely contributed to the annual income of the household. Although, the primary occupation of the PAFs is agriculture related activities, the main income source of the affected households is from off farm economic activities. The household income, as revealed through the social economic survey, is multi-structure, with agriculture accounting to less than 10% of the average household income. And of the non-farm income, remittance contributes to almost 45%. With all this considered, the impact of loss of private land is relatively small on their household income. Employment and income structure of PAFs are presented in the Table 4-6.



**Table 4-6: Land loss percentage, employment, and income structure of the affected households due to permanent land loss**

SN	Name of owner	Total land holding (ha)	Affected land area (ha)	Remaining land area (ha)	Land loss %	Family size	Employed family member in non-farm activities	Annual Income (NRs)	Annual Expenditure (NRs)
1	Khadka Prasad Tamang	1.26	0.236	1.024	18.73	9	1	215,000.00	412,000.00
2	Dilli Prasad Tamang	1.16	0.057	1.103	4.9	3	1	120,000.00	110,000.00
3	Aas Bahadur Tamang	1.01	0.510	0.5	50.49	8	2	320,000.00	95,000.00
4	Bhim Bikram Tamang	1.98	0.185	1.795	9.34	17	3	580,000.00	120,000.00
5	Nanda Kumar Tamang	2.15	0.442	1.708	20.56	5	2	130,000.00	122,000.00
6	Indra Prasad Tamang	1.53	0.510	1.02	33.33	12	4	336,000.00	234,000.00
7	Purna Bahadur Majhi <sup>26</sup>	5.738	1.28	4.458	22.30	3	1	120,000.00	86,700.00
8	Dilli Kumar Prasai <sup>27</sup>	3.06	2.16	0.90	70.59	15	4	352,500.00	84,580.00
9	Tika Prasad Majhi	2.27	0.299	1.971	13.17	11	-	35,000.00	149,820.00
10	Shree Lal Majhi	1.913	0.124	1.789	6.48	5	-	37,000.00	82,200.00
11	Padam Prasad Baskota <sup>28</sup>	3.92	1.37	2.55	34.95	7	-	28,000.00	28,900.00
12	Krishna Prasad Younghang	13.01	0.235	12.775	1.8	10	1	150,000.00	120,000.00
13	Brishpati Upreti	Absent <sup>29</sup>	0.27	-	-	Absent	-	-	-
<b>Total</b>		<b>39.001</b>	<b>7.678</b>	<b>31.323</b>	<b>19.69</b>	<b>105</b>	<b>19</b>	<b>2423500</b>	<b>1645200</b>

<sup>26</sup>Purna Bahadur Majhi, the Household head jointly own the affected land with his son Gopal Majhi and spouse Dhanmaya Majhi.

<sup>27</sup> Dilli Kumar Parsain is the HHs head but the affected land is in the name of his mother Jamuna Devi Parsai

<sup>28</sup> Padam Prasad Baskota is the HHs head but the affected land is in the name of his spouse Radhika Devi Baskota.

<sup>29</sup> Absent implies those households who have migrated from the Project area and were unavailable during HHs survey.

### 4.3.2 Impacts on fishing downstream

The impact on the occasional and recreational fishing activities in 5.6 km reduced flow stretch during the dry season will be small. Surveys and assessment show that there are no households who are doing professional or full-time fishing along this stretch. There are community households of settlements residing close to the Kabeli River who fish occasionally in this stretch of the river for self-consumption and occasional selling within the community if the catch is surplus. Discussions with them show that they also fish in the Tamor River area downstream (maximum 5.6 km from dam) or upstream areas of the Kabeli during dry season. During the wet monsoon, there will be enough water in the river for fishing. Some impacts are expected with the reduction of river flow during the dry season, and considering the options people have, the impacts are expected to be small.

### 4.3.3 Impact on physical cultural resources

One *Pati* (resting place) at Pinasi Ghat near the powerhouse site will experience induced pressure due to its close proximity. This *Pati* is of local nature and does not have historical and archeological significance. The *Pati* can be relocated to an alternative site with consensus of communities if it is affected physically by the construction activities of the project.

The Panchayan Shivalaya Temple and cremations sites located at the downstream are not likely to be severely affected because the Kabeli River will not be completely dry throughout the year. There will be at least 10% minimum dry flow in the Kabeli River around the year. During consultation, the affected communities agreed on the measures for channelizing the environmental flow for maintaining the religious and cultural practices at the downstream areas for cremation, religious and ritual practices. Other two cremation sites (Kholakharka and Sirupa cremation sites) do not have cultural attachment to the local residents like Kabeli cremation sites. In addition, for Kholakharka cremation site, the local residents have option of going to Khibuna cremation site at the Phawa Khola -Kabeli confluence upstream of the dam. Similarly, for Sirupa cremation site, there is option of going to Dhobhan cremation site at the Kabeli-Tamor Confluence.

The ritual practices that are performed by the *Majhi* community of Pinasi village will be affected only during the construction period. The ritual sites are temporarily affected and will be handed over to the *Majhi* community after project completion.

Impact on customary use of fish is inevitable since the flow in the Kabeli river (5.6 km dewater stretch) during dry season will be low. However, the Trout (*Schizothorax* spp.) and Stone carp (*Psilorhynchus pseudochenius*) will be available in the Tamor River and upstream of the dam throughout the year and impact on customary use of fauna will be negligible.

### 4.3.4 Construction related/contractor operation related impacts

The construction related impacts are higher during the peak construction period when the influx of people from outside is high. However, the impacts on public health and safety, pressure on public institution and structures and possible conflict among project workers and local population will be of concern throughout the construction period. These impacts are assessed based on experiences of experts and other investment operations. It is difficult to map out the extent of these impacts at this stage.

### 4.3.5 Impact on Adivasi/Janajati and disadvantaged groups

The indigenous people or *Adivasi/Janajati* and disadvantaged groups of the project area, though belong to different ethnicity and/or group, share common approach and patterns in their economic and livelihood activities. The project area is a mixed community where *Adivasi/Janajati* and other groups live together. Generally, as part of a mosaic community, people adopt similar approach to livelihood activities. The Indigenous Peoples, women, children and vulnerable groups of the project area are expected to experience similar physical and economic impacts from the project in spite of their caste and ethnicity differences.

However, given their low level of education and skills, *Majhi* households of Amarpur-9 Pinasi that reside near the powerhouse area would need more attention and support to ensure their

meaningfully participation in the project and truly sharing the benefits from the project. These specific measures for Majhi, along with the indigenous community focused programs, are considered and included in the design of the program interventions and implementation arrangements in the SAP.

## **CHAPTER 5**

# **POLICY FRAMEWORK**

## 5 POLICY FRAMEWORK

This chapter describes the overall project policy framework to address social impacts, including impacts of land acquisition and indigenous peoples. This policy framework applies to all activities to be undertaken under the project. All relevant social impacts under the project, including those identified and those unanticipated at the planning stage, will be addressed following this policy framework.

### 5.1 Summary of legal framework

The study recognizes the need to support restoration of livelihoods of adversely affected people and lays down norms for rehabilitating the affected people and broadly outlines an approach and institutional framework to achieve its objectives. A number of legal components directly or indirectly associated with the project are discussed in the SA, EIA and IEE documents. The most relevant legal instruments to the current study are highlighted below. Further, SA team also reviewed the responsibilities of the local, district, and central level institutions and recommended steps to ensure necessary coordination during the project implementation.

#### 5.1.1 Government of Nepal laws and policies on Land Resettlement

Table 5-1 provides a brief account of the relevant resettlement policies and legal framework in the context of Nepal.

**Table 5-1: Key Policy/Law/Regulations of Nepal**

SN	Policy/law/regulation	Applications
<b>1</b>	<b>Hydropower Development Policy, 1992 and 2001</b>	
	Policy Document	Focuses on conservation of the environment while developing hydropower, transmission and distribution projects. It further mentions that it is the project developer's obligation to relocate and resettle the families being displaced by the project, as per the standards set by the Government.
<b>2</b>	<b>Land Acquisition Act, 1977 as amended in 1992</b>	
	Clause 3	Acquire land for any public purpose, subject to the award of compensation.
	Clause 4	Institutions seeking land acquisition may also request GON to acquire the land under the regularity provisions subject to be compensated by such institutions' resources.
	Clause 6	If the land has to be acquired for institutions other than the local governance bodies and institutions fully owned by the government, the Land Acquisition and Compensation Fixation Committee (LACFC) has to consider the following in fixing the compensation amount: (i) Price of land prevailing at the time of notification of land acquisition; (ii) Price of standing crops and structures; and (iii) Loss incurred by the AP by being compelled to shift his or her residence or place of business in consequence of the acquisition of land.
	Clause 9	Duration of compensation days will be determined by LACFC
	Clause 10	Provision for the affected households to take the crops, trees and plants from land and salvageable from the structures.
	Clause 11	Any grievances and objections will be referred to the Grievances Redress Committee (GRC) The Act assigns the Chief District Officer (CDO) as the sole responsibility to chair land acquisition activities and to address the grievances related to the RP implementation activities.
	Clause 13	GoN forms a LACFC under the chairmanship of CDO of the restrictive districts. The other members to be included in the Committee comprise the Chief of Land Revenue Office (LRO), an Officer assigned by CDO, representative from District Development Committee (DDC), Concerned Project Manager, and VDC representative.
	Clause 27	Provisions for land acquisition through the mutual agreement with the plot owners, where the process of land acquisition as per Act is not required.

<b>3</b>	<b>Land Reform Act, 1964 as amended 1997</b>	
	Section 25	Sets the ownership rights to the actual tiller on the land
	Section 26	Sets 50% ownership right to tenant. Tenants have prerogative right on the structures and access in the land property.
<b>4</b>	<b>Land Revenue Act, 1977</b>	
	Section 8	Registration, change of ownership, termination of ownership right and maintenance of land records are done by local land revenue ( <i>Malpot</i> ) office.
	Section 16	If the concerned owner did not pay land revenue for long period of time the government can collect revenue through auction of the concerned parcel.
<b>5</b>	<b>Water Resource Act, 1992</b>	
	Section 16	States that if private land has to be used in order to utilize water resources, the licensed person can request the government to acquire the land through standard procedures (Land Acquisition Act, 1977).
<b>6</b>	<b>Electricity Act, 1992</b>	
	Section 33	States that if private land has to be used in order to utilize water for resource development including electricity generation, transmission and distribution, the licensed person can request the government; and the government could acquire the land through standard procedures (Land Acquisition Act, 1977) as it does for organized institutions.
<b>7</b>	<b>Electricity Rule, 1993</b>	
	Rule 66	GON has full rights to prohibit use of land or places of generation, transmission, or distribution infrastructures or, other structures, for other specific purposes in and around them through publication of public notice in GON gazette from time to time. It further states that no building construction or tree plantation is allowed within the specified limit in and around the electricity transmission and distribution lines.
	Rule 87	Land and property owners of acquired or restricted property shall be paid full compensation amount as determined by the compensation fixation committee as per Rule 88.
	Rule 88	A compensation fixation committee under the chairmanship of GON-appointed person, comprising of concerned person or the representative of the project (usually project Manager of PMO), an expert appointed by GON in the field of electricity, property owner or his/her representative, representative of the Land Revenue Office, representative of the concerned Village Development Committee/Municipality shall decide the compensation of the affected land and property
<b>8</b>	<b>Guthi Corporation Act, 1976</b>	
	Section 42	<i>Guthi</i> (religious trust) land acquired for a development must be replaced with other land, rather than compensated in cash
<b>9</b>	<b>Forest Act, 1993</b>	
	Clause 68 (1)	Government may permit the use of any part of government-managed forest, leasehold forest or community forest, if there is no alternative for the implementation of a plan or project of national priority without significantly affecting the environment.
	Clause 68 (2)	if any loss to persons or community is involved while permitting use of such land, it is required to compensate the loss.
<b>10</b>	<b>Electricity Development and Management Act 2005</b>	
	Section 19	The developer could apply to GON for land and property acquisition required for the hydropower development and the GON will arrange acquisition of such land and property after examining the application of the developer in case of private land. In case of the government land and property, the property will be made available on lease agreement.
	Section 40	The developer should compensate the affected parties as per the prevailing laws.
	Section 41	The developer should execute the rehabilitation and resettlement of the affected parties as an integrated program.

<b>11</b>	<b>Water Resources Regulation, 1993</b>	
	Rule 17	Obliges the proponents to analyze environmental impacts of the proposed action and include impact mitigation measures and environment protection measures including arrangements for the settlement of displaced people.
<b>12</b>	<b>Local Self Governance Regulation, 2000</b>	
	Article 7 (68)	Empowers VDC/s to monitor and supervise development works implemented in the VDC/s.

### 5.1.2 GoN Policies on Indigenous Peoples and other Vulnerable Communities

#### The Interim Constitution of Nepal 2063 (2007)

The Interim Constitution of Nepal commits the government for the protection and development of indigenous communities and other marginalized communities. Article 21, Right to Social Justice guarantees the rights of the economically, socially or educationally backward women, *Dalits*, indigenous peoples, *Madhesi* communities, oppressed classes, poor farmers and labors to take part in the structures of the State on the basis of the principle of 'proportional inclusion'. Similarly, Article 35, Policies of the State (10) states that the State has compulsory obligation to pursue a policy of uplifting the economically and socially backward indigenous peoples, *Madhesi*, *Dalit*, marginalized communities, and workers and farmers living below the poverty line, by making a provision of reservation in education, health, housing, food sovereignty and employment, for a certain period of time.

#### The Three Year Interim Plan (2007-2010)

Nepal does not have a standalone policy on Indigenous Peoples and other vulnerable communities, however, in the Tenth Plan significant emphasis has been placed on delivering basic services to the disadvantaged and indigenous people, *Dalits*, women, disabled and other vulnerable groups including the *Adivasi / Janajati*. One of the main thrusts of the Tenth Plan is the implementation of targeted programs for the uplift, employment and basic security of *Dalits*, indigenous people and disabled peoples. The policy provision also outlines that the government should pilot strong and separate package of program of basic security for vulnerable sections of society. The Three Year Interim Plan (TYIP) (2007-2010) includes the following policies for inclusive development of *Adivasi/Janajatis* and other vulnerable groups:

1. Creating an environment for social inclusion;
2. Participation of disadvantaged groups in policy and decision making;
3. Developing special programs for disadvantaged groups;
4. Positive discrimination or reservation in education, employment, etc.;
5. Protection of their culture, language, and knowledge;
6. Proportional representation in development; and
7. Making the country's entire economic framework socially inclusive.

#### National Foundation for Upliftment of *Adivasi/Janajati* Act, 2058 (2002)

For the welfare of *Adivasi/Janajati*, the government set up a National Committee for Development of Nationalities (NCDN) in 1997. In 2002, Parliament passed a bill for the establishment of an autonomous foundation named 'National Foundation for Upliftment of Indigenous Nationalities,' which came into existence in 2003 replacing the NCDN. Government of Nepal has identified and legally recognized 59 indigenous communities. They are officially referred to as *Adivasi Janajati* in Nepali and Indigenous Nationalities in English as per the National Foundation for Upliftment of *Adivasi/Janajati* Act, 2058 (2002). One can find vast disparities in terms of socio-economic standing among the *Adivasi Janajati* groups. According to Nepal Federation of *Adivasi Janajati* (NEFIN) 10 of the 59 *Adivasi Janajati* are "endangered", 12 "highly marginalized", 20 "marginalized", 15 "disadvantaged" and 2 are "advanced" or better off on the basis of a composite index consisting of literacy, housing, landholdings, occupation, language, graduate and above education, and population size.

This Foundation has been working for the preservation of the languages, cultures, and empowerment of the marginalized ethnic nationalities. More specifically, the Foundation has following objectives:

1. To make overall development of the *Adivasi/Janjati* by formulating and implementing the social, educational, economic and cultural programs;
2. To preserve and promote the language, script, culture, literature, arts, history of the *Adivasi/Janjati*;
3. To preserve and promote the traditional knowledge, skill, technology and special knowledge of the *Adivasi/Janjati* and to provide assistance in its vocational use;
4. To encourage the *Adivasi/Janjati* to be participated in the mainstream of overall national development of the country by maintaining a good relation, goodwill, and harmony between different *Adivasi/Janjati*, castes, tribes and communities; and
5. To provide assistance in building an equitable society by making social, economic, religious and cultural development and upliftment of *Adivasi/Janjati*.

### **ILO Convention 169 and UNDRIP**

A major component of ILO 169 is consultation with indigenous peoples and involving them in decision making at all levels (Article 6).<sup>30</sup> Most pertinent to hydropower projects is Article 16, which prohibits the relocation of indigenous peoples, and, where absolutely necessary, it “shall take place only with their free and informed consent. Where their consent cannot be obtained, such relocation shall take place only following appropriate procedures established by national laws and regulations, including public inquiries where appropriate, which provide the opportunity for effective representation of the peoples concerned.”<sup>31</sup> Article 16 further states that indigenous peoples have the right to return to their traditional lands once the reason for their relocation no longer exists and where that is not possible, land of similar quality shall be provided (except if they opt for monetary compensation).

Among other relevant provisions of the convention, Article 7 states: “The peoples concerned shall have the right to decide their own priorities for the process of development as it affects their lives, beliefs, institutions and spiritual well-being and the lands they occupy or otherwise use, and to exercise control, to the extent possible, over their own economic, social and cultural development.” Similarly, Article 15: “The rights of the people concerned to the natural resources pertaining to their lands shall be specially safeguarded. These rights include the right of these peoples to participate in the use, management and conservation of these resources.”<sup>32</sup>

UNDRIP also recognizes the right of indigenous people over the “lands, territories and resources which they have traditionally owned, occupied or otherwise used or acquired” as well as the “right to own, use, develop and control the lands, territories and resources that they possess by reason of traditional ownership or other traditional occupation or use, as well as those which they have otherwise acquired” (Article 26).

### **Local Self-Governance Act, 1999**

The Local Self-Governance Act, 1999 commits municipalities for the promotion, preservation, and protection of language, religion, culture of indigenous people and their welfare in the municipal area. The Act empowers municipalities to formulate and implement periodical and annual plans within their own jurisdiction. Periodic plans integrate different thematic plans according to social, economic, environment, physical, financial, and institutional aspects. The Act provides municipalities to follow planned development programs and prioritize programs that can increase productivity, contribute to upgrading living standards, and generate income and employment opportunities. The Act also requires that local programs provide direct benefits to women and disadvantaged groups, and use community groups in the planning and execution of development programs.

<sup>30</sup> Article 6 also calls upon signatories to carry out consultations “in good faith and in a form appropriate to the circumstances, with the objective of achieving agreement or consent to the proposed measures’.

<sup>31</sup> ILO, “CI 69 Indigenous and Tribal Peoples Convention, 1989”, [www.ilo.org](http://www.ilo.org)

<sup>32</sup> ILO, “CI 69 Indigenous and Tribal Peoples Convention, 1989”, [www.ilo.org](http://www.ilo.org)



## Gender policy in the context of Nepal

The government of Nepal since the early 1990 has been making significantly increasing commitment to gender equity equality and empowerment of the women in its policies plans and programs. The constitution of 1990 included some equality promoting measures along with barring any discrimination between citizen on the basis of sex caste ethnicity and religion (Acharya 2007)<sup>33</sup>.

The governments introduced Gender Approach to Development (GAD) in 1990 to enable women and men to participate equally in public and private life and realize their full potential in the development (Acharya 2003)<sup>34</sup>. Preceding this, the government policies towards this were more protection and welfare oriented including the Sixth Plan (1980-1985), which introduced the notion of Women in Development (WID) by implementing various programs to integrate women in development as well to full fill their practical needs. However, a gender approach was only fully reflected in Ninth Plan (1997-2002), which in order to achieve goal of poverty alleviation/reduction adopted mainstreaming of gender, eliminating gender inequality, empowerment of women as its major strategies. Similarly the Local Self Government Act, 1999 also give priority for the gender issue, recognizing the importance of the women in the decision making level for maintaining the good governance practices.

The Tenth Plan (2002-2007) as Poverty Reduction Strategy Paper (PRSP) identified gender and inclusion as its main strategies. The First Three Years Interim plan (2008-2010), emphasized the post conflict reconstruction rehabilitation, continued the long term goal of poverty reeducation through gender mainstreaming and social inclusion.

The Interim Constitution of Nepal, 2063 (2007), putting gender in its preamble, aims to solve the existing problems and issue regarding gender through reconstructing of the nation. The Constitution guarantees Right to Equality as the Fundamental Rights so that all the citizens are treated equally no matter of their cast, class, sex and gender. Likewise the constitution protects the rights of women by recognizing it as the Fundamental Rights which focuses on the equal share in the ancestral property. Furthermore the Constitution guarantees the 33% participation of women in all sectors and urges concerned authority to conduct special package and program for, mainstreaming of the gender and women particularly.

In 2007, the Ministry of Local Development (MoLD) prepared the Gender Responsive Local Government Budget Directives to engender every stage of local planning process as well as the institutional Mechanism. It has made provision for a gender resource person at a local level, skill enhancement of local authorities and formulation of local level gender policy under the border convention and declarations (Committee on Elimination of Discrimination against Women, Beijing Platform for Action and Millennium Development Goal), of which Nepal signatory. The Ministry of Local Development, since 2006 has been implementing the “Local Government and Community Development Program” (LGCDP) with the strategic goal of ‘promotion of inclusive local democracy through local community led development’. To achieve this goal the LGCDP Gender Equality and Social inclusion Strategy, 2009 was developed by MoLD to mainstream gender and social inclusion in the local development system, structure processes and mechanisms. Meanwhile, a Gender Equality and Social Inclusion (GESI) section has been established under MoLD to institutionalize GESI approaches. From 2011 the MoLD is planning to apply sector-wide approaches to rural infrastructure and adopt the single window system to ensure the gender and social inclusion approach.

### 5.1.3 World Bank Policy Guidelines

The World Bank Policy on involuntary land acquisition recognizes lost assets or income as fundamental right of all project affected persons and that physically displaced people must be relocated with basic amenities like school, health posts etc. Likewise, all affected persons, entrepreneur, or institution should be assisted to restore at least their pre- project income and livelihood sources. The following documents apply to involuntary resettlement for projects under World Bank funding:

<sup>33</sup> Acharya, Meena (2007) “Gender Equality and Empowerment of Women in Nepal” UNFPA Kathmandu Nepal

<sup>34</sup> Acharya, Meena (2003) Effort at Promotion of Women in Nepal”, Tanka Prasad Acharya Memorial Foundation and Fedrich-Ebert-Stiftung (FES), Kathmandu.

- Operational Policies OP 4.12 and Bank Procedure BP 4.12 on involuntary resettlement 2001.
- Operational Policies OP 4.10 and Bank Procedure BP 4.10 on Indigenous People July 2005.

Following are the guiding principles of World Bank's policy on involuntary resettlement.

- a) Involuntary resettlement should be avoided where feasible, or minimized, exploring all viable alternative project designs.
- b) When resettlement is unavoidable, resettlement activities should be conceived and executed as sustainable development programs, providing sufficient investment resources to enable persons displaced by project to share in project benefits.
- c) Displaced persons should be meaningfully consulted and should be given opportunities to participate in planning and implementing resettlement programs.
- d) Displaced persons should be assisted in their efforts to improve their livelihoods and standards of living. In the absence of possibilities to improve their standards of living, it should in the least be restored to levels that existed prior to the project.
- e) The borrower prepares a resettlement plan if more than 200 families are affected and an abbreviated resettlement plan is required if less than 200 families are affected.
- f) Absence of legal title to land should not be a bar for compensation, resettlement, and rehabilitation assistance. Vulnerable groups such as indigenous people, women-headed households, and senior citizens should be entitled to special benefit package in addition to compensation and resettlement.

### **Special Considerations for Indigenous Peoples**

- i) Indigenous Peoples are closely tied to land, forests, water, wildlife, and other natural resources, and therefore special considerations apply if the project affects such ties. In this situation, when carrying out the social assessment and preparing the SAP, the borrower pays particular attention to:
  - ii) the customary rights of the Indigenous Peoples, both individual and collective, pertaining to lands or territories that they traditionally owned, or customarily used or occupied, and where access to natural resources is vital to the sustainability of their cultures and livelihoods;
  - iii) the need to protect such lands and resources against illegal intrusion or encroachment;
  - iv) the cultural and spiritual values that the Indigenous Peoples attribute to such lands and resources; and
  - v) Indigenous Peoples' natural resources management practices and the long-term sustainability of such practices.

#### **5.1.4 IFC's Performance Standards on Social and Environmental Sustainability**

IFC applies the Performance Standards to manage social and environmental risks and impacts and to enhance development opportunities in its private sector financing in its member countries eligible for financing. The IFC Performance Standard 5 on Land Acquisition and Involuntary Resettlement apply to involuntary resettlement for projects. As per the Performance Standard 5, involuntary resettlement should be avoided or at least minimized. However, where it is unavoidable, appropriate measures to mitigate adverse impacts on displaced persons and host communities should be carefully planned and implemented.

Other project related IFC standards that are reviewed for project development are summarized below:

*Performance Standard 1: Social and Environmental Assessment and Management System*

Performance Standard 1 underscores the importance of managing social and environmental performance throughout the life of a project (any business activity that is subject to assessment and management).

*Performance Standard 7: Indigenous Peoples*

Performance Standard 7 recognizes that Indigenous Peoples, as social groups with identities that are distinct from dominant groups in national societies, are often among the most marginalized and vulnerable segments of the population. Their economic, social and legal status often limits their capacity to defend their interests in, and rights to, lands and natural and cultural resources, and may restrict their ability to participate in and benefit from development. They are particularly vulnerable if their lands and resources are transformed, encroached upon by outsiders, or significantly degraded. Their languages, cultures, religions, spiritual beliefs, and institutions may also be under threat. These characteristics expose Indigenous Peoples to different types of risks and severity of impacts, including loss of identity, culture, and natural resource-based livelihoods, as well as exposure to impoverishment and disease.

Private sector projects may create opportunities for Indigenous Peoples to participate in, and benefit from project-related activities that may help them fulfill their aspiration for economic and social development. In addition, this Performance Standard recognizes that Indigenous Peoples may play a role in sustainable development by promoting and managing activities and enterprises as partners in development.

Performance Standard 7 also needs to demonstrate Informed Consultation and Participation among the project affected population and Broad Community Support (BCS) for the project to consider approving IFC's investment in the project. PS7 Guidance Note (para GN27) is clear on when to "facilitate a process of FPIC", i.e., when the project may result in the following adverse impacts:

- Impacts on lands and natural resources subject to traditional ownership or under customary use;
- Relocation of Indigenous Peoples from lands and natural resources subject to traditional ownership or under customary use;
- Significant impacts on critical cultural heritage that is essential to the identity and/or cultural ceremonial, or spiritual aspects of Indigenous Peoples lives; or
- Use of cultural heritage, including knowledge, innovations or practices of Indigenous Peoples for commercial purposes.

However, the project will not result in any of these impacts to a level of significance that warrants the determination of FPIC.

*Performance Standard 8: Cultural Heritage*

Performance Standard 8 recognizes the importance of cultural heritage for current and future generations. Consistent with the Convention Concerning the Protection of the World Cultural and Natural Heritage, this Performance Standard aims to protect irreplaceable cultural heritage and to guide clients on protecting cultural heritage in the course of their business operations. In addition, the requirements of this Performance Standard on a project's use of cultural heritage are based in part on standards set by the Convention on Biological Diversity.

## **5.2 Project policy framework**

The objective of this framework is to ensure greater acceptability of the project to the locals and is expected to facilitate its effective implementation.

This framework is based on the principle that the affected persons will not suffer further from the hardship than they were before the project implemented. The general principles of the framework are given below:

- i. Adverse impacts on persons affected by the project would either be avoided to the extent possible or minimized.

- ii. Where the negative impacts are unavoidable, the project affected persons irrespective of their legal title will be assisted in regaining their standard of living. Vulnerable groups will be identified and assisted to improve their standards of living.
- iii. All information pertaining to SAP preparation and implementation will be disclosed to all concerned, and people's participation will be ensured in planning and implementing the project.
- iv. The Project Affected Persons (PAPs) will receive compensation for lost assets at replacement cost and the compensation will be available prior to the taking over of assets.
- v. Appropriate grievances redressing mechanism will be established in the project and all the grievances will be settled in timely and efficient manner.
- vi. All consultation with PAPs shall be documented. Consultation will continue during the implementation of resettlement and rehabilitation works
- vii. Avoid any disruption of socially and culturally sensitive areas. If impacted shall be conserved following the laws and World Bank' OP 4.11.
- viii. Consultation with potential affected persons will be held among local population after designating the proposed Headwork, and Powerhouse areas and alignment of access roads as a part of the environmental assessment study.
- ix. Delivering R&R entitlements and compensation for lost asset based on the entitlement framework.
- x. Physical works will not commence on any portion of land before compensation and assistance to the affected population have been provided in accordance with the policy framework.
- xi. As far as possible project plans to conduct its construction activity after the harvests to avoid damage to crops. In case damage to standing crop is unavoidable project will provide compensation as per the provision of LA Act and at replacement cost for the loss.
- xii. Particular attention will be paid to adverse impacts on vulnerable households/ social categories such as the elderly and physically disabled, female-headed households, Dalits and indigenous groups who may be vulnerable to changes brought about by project activities.
- xiii. Indigenous communities will be meaningfully consulted to ensure their full participation and the project is designed on the basis of free, prior and informed consent of the indigenous communities.
- xiv. Adequate and culturally appropriate measures will be designed to ensure their full participation in the project planning and implementation and sharing of project benefits.
- xv. Land donation will be discouraged under the project and where it is agreed between the community and individual members the donation practice will be accepted under the project only when they meet the criteria set out in the Entitlement Matrix. Lack of title will not bar project affected people from receiving resettlement benefits.
- xvi. Benefit Sharing – promote local development in a sustainable way as far as possible.

### 5.3 Project entitlement matrix

An entitlement matrix has been developed as per the project resettlement framework which outlines various types of losses as the result of the project and proposes corresponding modes of compensation (Table 5-2). The matrix will apply to all project components entailing resettlement impacts. If additional resettlement impacts are identified during implementation, the entitlement matrix will be updated by including provision of compensation and assistance for the additional impacts by mutual consent between local people (impacted persons) and project authority.

The entitlement matrix has been prepared in accordance with the GoN and in compliance with the World Bank policies and IFC standards. All involuntary lands and assets acquisition will be compensated as per the negotiation between the project and the land owners so that the economic and social future of affected person/family would be as favourable as it would have been in the absence of the Project.

**Table 5-2: Entitlement matrix for KAHEP**

Types of impact	Entitled persons/families/entities	Entitlements
1. Loss of private lands (7.678 ha)	Titleholder- 13 PAFs	<ol style="list-style-type: none"> <li>1. Cash compensation as determined through negotiation. Land compensation/registration shall be paid and done in favor of both the land owner and spouse</li> <li>2. An assistance package that includes, but not limited to, the following <ul style="list-style-type: none"> <li>• Vocational training to affected families on the sustainable utilization of the compensation,</li> <li>• Preferential employment during the construction phase,</li> <li>• Trainings on scientific agriculture technologies and an improved seed program, and</li> <li>• Training for skill up gradation.</li> </ul> </li> </ol>
2. Loss of public lands under GoN ownership	Government of Nepal	<ol style="list-style-type: none"> <li>1. Lease fee will be paid to GoN as per government legislations in the context of the hydropower project.</li> </ol>
3. Loss of standing crops and private trees (141 trees and poles)	Owner(s) with legal title, share croppers	<ol style="list-style-type: none"> <li>1. 60 days' advance notice to harvest standing seasonal crops,</li> <li>2. Cash compensation for crops (or share of crops) equivalent to prevailing market price, if harvest is not possible, and</li> <li>3. Cash compensation equivalent to prevailing market price for the trees and poles.</li> </ol>
4. loss of forest area (1.57 ha) (About 0.21 ha of Thulo Dhuseni CF and 0.12 ha of Kabeli Garjite CF, 0.97 ha of LF and 0.27 ha communal forest land due to permanent project structure).	2 Community Forest User Groups, Local residents, 1 Leasehold Forest, Communal forest users (10 HH)	<ol style="list-style-type: none"> <li>1. All the cut forest biomass will be the property of land owners or the Forest User Groups as per Forest Act and Rules. They can sell the biomass to the project (if they want) or consume by themselves,</li> <li>2. The forest vegetation loss will be compensated on the basis of the Working Guidelines for Acquisition of Forest Land for other Development Purposes, 2006. As per the Guidelines the project will carry out plantation of 25 trees for each tree felled (i.e.1:25) by the project in the area as identified by the related District Forest Office/Community Forestry Committee. The project will manage the plantation area for 5 years at its own cost and handover the plantation to forest community or the local forest office, and</li> <li>3. Restoration of forest area giving assistance to expanding management capability at similar locations.</li> </ol>
5. Impact on Fishing (5.6 km reduced flow zone)	Communities residing between dam and Tamor Confluence (5.6 km dewater stretch) who are engaged in occasional fishing	<ol style="list-style-type: none"> <li>1. Provision of Fish ladder in the project design,</li> <li>2. Release of 10 % of the mean monthly flow of the driest month throughout the year,</li> <li>3. Construction and operation of a cold water fish hatchery</li> <li>4. Livelihood support through employment, skill training and capacity development, and</li> </ol>

			<ol style="list-style-type: none"> <li>5. Training programs to enhance employment on construction works and preferential employment to the extent possible</li> <li>6. Continuous monitoring during operation and if necessary, build spawning ponds at headworks</li> <li>7. Priority consideration in reservoir fishing</li> </ol>
6. Impact on Physical Cultural Resources	<ol style="list-style-type: none"> <li>a. <i>Pati</i> (rest house) at Pinasi <i>Ghat</i></li> <li>b. Panchyan Shivalya Temple in Kabeli )</li> <li>c. Impact on three (3) cremation sites</li> <li>d. Impacts on religious &amp; ritual practices</li> <li>e. Impact on customary use of fauna</li> </ol>	<p>Users from Pinasi (Majhitar, Amarpur-9) and Kodekpa (Panchami-9)</p> <p>Local communities of Kabeli area</p> <p><i>Rai</i> and <i>Limbu</i> community of Kabeli area</p>	<ol style="list-style-type: none"> <li>1. Relocation of <i>Pati</i> (rest house), if needed</li> <li>2. Rehabilitation of all the facilities in an equal or better condition than they were before</li> <li>3. Release of 10 % of the mean monthly flow of the driest month throughout the year</li> <li>4. Channelize the environmental flow near the temple, cremation and religious ritual sites</li> <li>5. Consultations and negotiation to determine culturally acceptable method of transposition and the relocation to nominated cremation sites, if required</li> <li>6. Provision of fish ladder for the movement of fish species for customary use</li> </ol>
7. Construction Related/ Contractor Operation related Impacts(Public Health, Safety , Civic Amenities and Possible conflict)		The local residents, project staffs, construction workers	<ol style="list-style-type: none"> <li>1. Provision of better levels of services for water supply, sanitation, health and drainage.</li> <li>2. Enhancement program on water supply and sanitation in the participation of local people/local authorities/NGOs</li> <li>3. A health center for attending health issues of workers and local population during construction phase</li> <li>4. Two health clinics at headworks and powerhouse site each throughout the construction period and one clinic will remain permanently during operation</li> <li>5. Safe Construction Practices (SCP) mandatory to all contractors</li> <li>6. Fencing in the construction sites</li> <li>7. Warning sign/post for dangerous areas</li> <li>8. Emergency response mechanism at site</li> <li>9. Funds for improvement of existing infrastructure as needed during the construction phase.</li> <li>10. Additional drinking water and sanitation facilities for the workers.</li> <li>11. Additional health service centers and market.</li> <li>12. Funds for the support of schools and health post.</li> <li>13. Repair and maintenance of public places like <i>Pati</i>, <i>Pauwa</i>, <i>Chautari</i>, etc</li> <li>14. Restriction on alcohol at camp site.</li> <li>15. Priority for employment to locals during the construction period. The project will require about 600-800 people at the peak construction period. It is expected that</li> </ol>

		<p>minimum of 40-50 % of the unskilled workforce will originate from affected villages for the construction phase of the project.</p> <p>16. The project contractor will be made responsible for the Social security enhancement programs with the consent and participation of concerned government authorities and the local people</p>
<p>8. Impacts on <i>Adivasi Janajati</i> and disadvantaged groups (There will be no ethnicity-specific physical or economic adverse impacts on these groups, but they will experience the same impacts experienced by the larger population).</p>	<p><i>Adivasi Janajati</i> households, women, children, <i>Dalits</i> of project area</p>	<ol style="list-style-type: none"> <li>1. Training on alternative subsistence and livelihood opportunities</li> <li>2. Training programs for at least one member from each of the affected vulnerable households to participate in livelihood empowerment activities to enhance employment on construction works</li> <li>3. Employment of at least one member from each affected <i>Adivasi Janajati</i> and disadvantage group households in project construction and maintenance work</li> <li>4. Specific interventions will be worked out with the <i>Janajati</i> households to protect and preserve indigenous cultures and traditions of the locality. The program will be a part of IVCDP and will be launched and continued during the construction of the project.</li> <li>5. Loan assistance program for the vulnerable women headed and Dalit households. The terms and condition of the program will be formulated with the participation of the concerned vulnerable women headed and <i>Dalit</i> households and project management.</li> <li>6. Supplementary infrastructure facilities in the <i>Majhi</i> households, including latrine construction and drinking water facilities</li> <li>7. Preference to qualified <i>Majhi</i> community in recruitment of community facilitators</li> <li>8. Additional health and hygiene training programs targeting vulnerable community members;</li> <li>9. Specific provisions will be worked out with the <i>Adivasi Janajati</i> and disadvantaged groups to guarantee and increase their participation (described detailed in Section 7.6 under heading Strategy for vulnerable people's participation)</li> <li>10. Acknowledging the rights of women for their active participation in the decision-making process.</li> </ol>

## **CHAPTER 6**

# **RESETTLEMENT COMPENSATION AND LIVELIHOOD ASSISTANCE PLAN**



## 6 RESETTLEMENT COMPENSATION AND LIVELIHOOD ASSISTANCE PLAN

This resettlement compensation and livelihood assistance plan designed for KAHEP (Table 6-1) is based on the entitlement matrix and the KAHEP resettlement policy. This plan meets the requirements of relevant local legislation, including the Land Acquisition Act, 2034 (1977), ILO Convention 169 as well as the requirements of the World Bank policy and IFC Performance Standard on land acquisition and involuntary Resettlement, Indigenous community and other relevant acts, policies and guidelines related to hydropower development. KAHEP is committed to ensure that all compensation and resettlement activities associated with the project as a whole are undertaken in compliance with relevant local legislation. For this purpose, a set of resettlement principles have been developed to guide project preparation and implementation in the SA report. The Resettlement compensation plan has been prepared based on the general findings of the SA report. There will be implementation plans based on these and they will be developed in consultations with the affected communities. The details of the possible impacts, associated losses and corresponding procuring and delivery mechanisms are presented in Table 6-1.

**Table 6-1: Resettlement compensation and livelihood assistance plan of KAHEP**

Possible Impacts	Type of Loss	Program Activities	Delivery Mechanism
<b>1. Loss of Land</b>	<p>The project will acquire 22.508 ha of land on permanent basis. Of the land use types acquired permanently, only 7.678 ha is agricultural private land.</p> <p>Project will acquire 1.57 ha forest land and 13.26 ha riverine area that are government owned lands.</p>	<p>Project will directly negotiate with the land owners and purchase the required land for the project. Compensation will be as per market price and with the consent from landowners.</p> <p>Government owned lands will be procured on lease until the Generation License is valid on BOOT basis.</p>	<p>Landowners of the permanently acquired lands of project components and project facility sites will be compensated in cash as per the negotiation between the project and the land owners.</p> <p>Lease contract will be signed with the concerned government agencies for Government owned lands.</p>
<b>2. Loss of standing crops and private trees</b>	<p>Possible loss of standing crops during permanent and temporary acquisition. Loss 67 mature trees and 74 poles from private lands</p>	<p>A 60 days advance notice will be given to the owner to harvest standing seasonal crops during acquisition.</p> <p>The value for trees will be determined with the consent of the owner.</p>	<p>Cash compensation for crops (or share of crops) equivalent to prevailing market price, if harvest is not possible in given time.</p> <p>All the cut and removed biomass will be the property of tree owners. The compensation of trees in the temporary lands will be paid as per market price at replacement cost. The compensation of trees in the permanently acquired land will be included in the total price of the acquired land.</p> <p>Plantation of 25 seedlings for loss of one standing biomass as replacement plantation</p>
<b>3. Loss of forest area</b>	<p>1.57 ha of forest land will be lost. About 0.21</p>	<p>Compensation of the forest loss on the basis of</p>	<p>Plantation of 25 seedlings for loss of one standing biomass (tree species)</p>

Possible Impacts	Type of Loss	Program Activities	Delivery Mechanism
	<p>ha of Thulo Dhuseni CF, 0.12 ha of Kabeli Garjite CF, 0.97 ha of LF and 0.27 ha communal forest land due to permanent project structure</p> <p>Loss of access to fuel wood, grazing and fodder, herbs, and wild fruits.</p>	<p>the government policy decision of 1:25 i.e. plantation of 25 trees for each tree felled for the project.</p> <p>Provision of handing over removed biomass to Forest User Groups as per Forest Act and Rules.</p> <p>Provision of alternative energy schemes to conserve forest resources.</p>	<p>with the support from the CFUGs and LFUG and in the places where the CFUGs or LFUG want as per the respective forest loss. The overall costs will be borne by the proponent for five years after the plantation with the support from the CFUGs and LFUG.</p> <p>Purchase of the cut biomass from the CFUGs and LFUG if they are willing to sell it to the project.</p> <p>Restoration of forest area giving assistance to expanding management capability at similar locations</p>
<b>4. Loss of Fishing</b>	<p>Reduced flow during November-June in Kabeli river below dam (5.6 km) will have effects on riverine fish resources due to change in hydrological regime. The low catch will have effect on protein supplement of occasional fishing communities.</p>	<p>Provision of Fish ladder in the project design will be ensured.</p> <p>Mechanism of monitoring of Fish Movements after one year operation of power plant. Provision of cold water fish hatchery</p>	<p>Release of 10 % of the mean monthly flow of the driest month throughout the year to sustain fish population.</p> <p>Construction and operation of a cold water fish hatchery</p> <p>Livelihood support to these communities through employment, skill training and capacity development</p> <p>Training programs to enhance employment on construction works and preferential employment to the extent possible</p>
<b>5. Impact on physical cultural resources</b>	<p>A rest house (<i>Pati</i>) at powerhouse site due to construction.</p> <p><i>Panchayan Shivalaya</i> located about 2.5 km downstream at Kabeli Bazar due to reduced flow in Kabeli River.</p> <p>Three cremation sites located at the dewater stretch due to reduced flow of river.</p> <p>Religious and ritual activities in the dewater stretch of Kabeli due to reduced flow.</p>	<p>Provisions for restoration and continuation of religious and ritual activities with consultation among local stakeholders.</p>	<p>If needed, relocation will be carried out with the consent of rest house users. Rehabilitation of all the facilities in an equal or better condition than they were before</p> <p>10 % mean monthly flow of the driest month will be maintained throughout the year for ecological, cultural and religious survival.</p> <p>The environmental flows released will be canalized in the stretch of the cremation sites, and Panchayan Shivalaya temple so that sufficient water is available for cremation and religious performance.</p> <p>Adoption of culturally accepted method of transposition and relocation to nominated cremation sites, if required.</p>

Possible Impacts	Type of Loss	Program Activities	Delivery Mechanism
	Possible decline of Trout ( <i>Schizothorax</i> spp.) and Stone carp ( <i>Psilorhynchus pseudochenius</i> ) in the dewater stretch that are ritually important for local residents.		A fish ladder will be constructed for the movement of fish population.
<b>6. Construction related impacts</b>	<p>The influx of workers and service providers during construction will put extra demand on local public facilities and institution; water supply, health, and sanitation facilities, especially around the construction camps. Lack of sanitary measures and increased human activity can lead to outbreak of diseases like jaundice, typhoid and sexually transmitted diseases.</p> <p>Unsafe construction can lead to occupational health and safety hazards</p> <p>The increase in human activities with different social and cultural backgrounds and sudden flow of cash may result into alcohol</p>	<p>Provision of better services including water supply, sanitation, health, education, roads and public transports, and drainage will be ensured.</p> <p>Provision of clean water and safe sanitation facilities to all workers by the contractors</p> <p>Provision of mobilizing the local institutions with financial and technical backstopping by KEL and KAECDU.</p> <p>Provision of contractual obligations for contractors to provide the personal safety tools and adequate Insurance facility to all the workers.</p> <p>Provision of reporting health and safety issues of workforce camps by the contractor's health and safety officer to the KEL.</p> <p>Developing measures to prevent and mitigate labor force impacts with the participation of affected communities and incorporating these into</p>	<p>Kabeli-A Environment &amp; Community Development Unit (KAECDU) together with the local committee will continuously monitor local water supply sources and sanitation in quantity and quality.</p> <p>Enhancement program (maintenance, upgrading and new installations) for water supply and sanitation will be carried out in the participation of local people/local authorities/NGOs</p> <p>Enhancement programs on health, drinking water, sanitation, social security etc will be appropriately designed and implemented with proper consultation and representation of the local stakeholders</p> <p>Health camp will be operated in the project area for attending health matters of workers and local population during construction phase.</p> <p>Basic medical checkups for baseline information on STD, HIV/AIDS and other transmitted diseases will be carried out to all staff and construction workers.</p> <p>A health center at powerhouse and headwork site will be operated throughout the construction for attending health issues of workers and local population. One clinic will be handed over to the community during operation.</p> <p>Adequate sports facility, recreation centers and cultural programs shall be the part of the facilities to the workers. These components shall be adequately addressed in the contract documents.</p>

Possible Impacts	Type of Loss	Program Activities	Delivery Mechanism
	<p>abuse and prostitution (illegal) that may deteriorate the peace and harmony of the project area.</p>	<p>contractual implementation arrangements with adequate financial provision.</p>	<p>Project contractors in the construction phase and project operator in the operation phase will be made responsible for the occupational safety and hazard of workers.</p> <p>Awareness camps will be organized once in every month in each of the work force camps for the social obligations and good behavior.</p> <p>Contractors will be obliged to report the compliance mechanism of the contractual clause and any incidents of mishaps and penalties shall be documented and reported to project management.</p> <p>The project will require about 600-800 people at the construction period. It is expected that minimum 40- 50 % of the unskilled workforce will originate from affected village for the construction phase of the project. The Contractor will provide construction related jobs to the eligible local people during construction period in different capacities (skilled, unskilled and others) in the priority order from the Seriously Project Affected Families (SPAF) to the Project Affected Families (PAF) and people from the region of influence with equal representation from vulnerable groups (indigenous and disadvantages groups and women).</p>
<p><b>7. Impact on Adivasi Janajati and disadvantaged groups</b></p>	<p><i>Adivasi Janajati</i> and disadvantaged groups are considered as vulnerable groups in the project area. These groups will experience similar impacts from the project as part of a mixed community. However, the level of these impacts for these groups might be higher because of their low marketing skills and lack of professional competencies.</p>	<p>Appropriate decision making- processes and mechanism will be used that enable informed participation by <i>Adivasi Janajati</i>, and result in the demonstrable acceptance of key decision.</p> <p>Project affected <i>Adivasi Janajati</i> participation on such processes will be guided by free, prior and informed consent that can be achieved through formal and informal representative bodies.</p>	<p>As a part of the SAP, Indigenous And Vulnerable Community Development Programs will be designed and implemented in meaningful participation of Indigenous communities.</p>

## **CHAPTER 7**

# **INDIGENOUS AND VULNERABLE COMMUNITY DEVELOPMENT PLAN**

## 7 INDIGENOUS VULNERABLE COMMUNITY DEVELOPMENT PLAN

The Indigenous and Vulnerable Community Development Plan (IVCDP) is designed to ensure that vulnerable groups affected by the project are regarded as special interest groups, and that impacts on their livelihoods are minimized and addressed in a sensitive manner. The project area is a mixed type of community and there are no homogenous settlements especially for a particular group. The *Adivasi Janjati* and disadvantaged groups of the project area, though belong to a different ethnicity and/or group, share common approach to their economic and livelihood activities. These groups will experience similar impacts from the project as part of a mosaic community. There are no specific impacts especially for this group. A common package that is developed for the project impacts will be applicable to all the affected population. However, the magnitude of these impacts for these groups might be higher because of their low marketing skills and lack of professional competencies. Therefore, KAHEP will give extra consideration to *Adivasi Janajati* and disadvantaged groups that will minimize the magnitude of impacts and provide benefits; and will ensure their participation in the project cycles.

### 7.1 Defining vulnerable communities

In Nepal, there are several factors that could determine a group's vulnerability. Even though gender, caste and ethnicity have been officially acknowledged as primary factors that determine a group's backwardness; other factors such as region, economic status and patronage network play an equally important role. Thus, terminologies such as vulnerable groups are fluid in nature and can differ in meaning depending on the factors they represent. Nevertheless, policies and literature on development including the Tenth National Plan (2002–2007) have identified three major groups as more vulnerable than others in the context of Nepal—women, *Dalits* and *Adivasi/Janajati*. Therefore, the above three groups are disadvantaged in terms of (i) access to livelihood, assets and services; (ii) social inclusion and empowerment; (iii) legal inclusion and representation in Government; and (iv) economic marginalization.

### 7.2 Vulnerable communities in the project area

In the context of the KAHEP, vulnerable groups refers to households and communities who may face considerable difficulties (either due to project induced effects or in general terms) in participating in benefit sharing of the project due to serious lacks of required skills, resources, experience and organization.

Stakeholders' consultations and household survey during the Social Assessment Study have identified the presence of *Adivasi Janjati* (*Rai, Limbu, Tamnag and Majhi*) and *Dalits* (*Kami, Sarki and Damai*) in project areas. In total, six *Tamang*, Three *Majhi* and One *Limbu* household will lose some of their lands due to project intervention. Although there are *Dalit* household in the affected area, none of them are going to be affected directly by the project. In addition, no women headed households will be affected directly by the project.

### 7.3 Relevant policies on Indigenous Peoples and other vulnerable communities

Nepal does not have a standalone policy on Indigenous Peoples, however in the Tenth Plan significant emphasis has been placed on delivering basic services to the disadvantaged and indigenous people, *Dalits*, women, disabled and other vulnerable groups including the *Adhibasi / Janajati*. One of the main thrusts of the Tenth Plan is the implementation of targeted programs for the upliftment, employment and basic security of *Dalits*, indigenous people and disabled peoples. The policy provision also outlines that the government should pilot strong and separate package of program of basic security for vulnerable sections of the society. The Three Year Interim Plan (2007-2010) includes the following policies for inclusive development of *Adivasi/Janajatis* and other vulnerable groups:

- Creating an environment for social inclusion;
- Participation of disadvantaged groups in policy and decision making;

- Developing special programs for disadvantaged groups;
- Positive discrimination or reservation in education, employment, etc.;
- Protection of their culture, language, and knowledge;
- Proportional representation in development; and
- Making the country's entire economic framework socially inclusive.

NFIN Act 2002, National Human Rights Action Plan 2005, Environmental Act 1997, and Forest Act 1993 have emphasized protection and promotion of vulnerable groups in general, indigenous peoples' knowledge, and cultural heritage in particular. In 1999, the Local Self-Governance Act was amended to give more power to the local political bodies, including authority to promote, preserve, and protect the indigenous community's language, religion, culture, and their welfare.

ILO Convention 169 and UNDRIP emphasizes consultation with indigenous peoples and involving them in decision making at all levels, their rights in the decisions over their development priorities as well as their rights to participate in the use, management and conservation of these resources, the need and requirements of free, prior and informed consent.

World Bank policy on indigenous people emphasized to design and implement projects in a way that fosters full respect for indigenous peoples' dignity, human rights, and cultural uniqueness so that they

- Receive culturally compatible social and economic benefits, and
- Do not suffer adverse effects during the development process.

## **7.4 Generic measures for enhancement of vulnerable groups**

The generic measures are applicable for all communities of the project areas irrespective of the extent of vulnerability. The indigenous communities and other identified vulnerable communities will be covered and will benefit from these generic measures. In addition to these, some specific measures are designed and targeted for indigenous and other vulnerable communities (These are detailed in the next section).

### **7.4.1 Agriculture support program**

There are extreme possibilities of commercial promotion of normal and off season fresh vegetables due to prevalence of vegetable based suitable ecological niches across diverse agro-ecological zones, suitable topography and market demands in the project area. Such demand will be automatically increased when KAHEP starts construction activities. In this background, the commercial promotion and marketing of normal and mostly off season fresh vegetables could be the best options in improving the food security and livelihoods for the vulnerable communities in the project area.

Similarly, commercial promotion of comparative advantageous small sized livestock animals like goats and pigs (swine) could be the best options in improving the living conditions of vulnerable people. Particularly there is great scope of pig farming and quality meat production in the districts including the present project area. Hence the vulnerable communities can take advantages by the adoption of commercial production and marketing of improved breeds of pigs for enhancing their living conditions.

A farmers' support/agricultural extension program will be implemented in the project area to assist vulnerable households. The program will focus on agricultural and animal husbandry support services. Priority will be given to vegetables and other daily consumer products grown locally for construction camp consumption. This program will provide training in high breed animals husbandry, agricultural and fresh vegetable farming. These programs will focus on:

- Imparting commercial vegetable production training and providing back stopping supports like input supply such as improved varieties of seeds and seedlings, agricultural tools and materials. Besides, the training program will focus on the topics such as (a) selection of seeds; (b) nursery management; (c) use of fertilizers; (d) integrated pest management; (e) irrigation techniques; (f) appropriate cropping patterns and (g) methods of harvesting, processing and storage;

- Imparting improved goat raising training and providing improved breeds of goats and bucks for animal diversification and productivity enhancement; and
- Imparting improved pig raising training and providing improved breeds of piglets as an alternative access to income generating opportunities.

The program will consist of lectures from agriculture experts, demonstration of new techniques and dissemination of information. The program will be undertaken in co-ordination with the Nepal Agricultural Research Council (NARC). Assistance from the District Agricultural Office and Sub-centers will be sought. KAHEP will coordinate these activities in collaboration with the appropriate agencies/NGOs.

#### **7.4.2 Skills training related to construction works**

In addition to the above programs, specific training programs will be conducted in construction related skills such as electrical wiring, plumbing, automobile maintenance, masonry and welding to enhance the employment opportunities of affected people on construction works of KAHEP.

#### **7.4.3 Preferential employment strategy**

A Preferential Employment Policy and Strategy will be developed during the preparation of the Tender document for the project in consultation with the contractors and local government to achieve the objective of optimizing employment for project-affected and local people on project construction activities.

The following measures will be implemented:

The Policy will contain procedures and mechanisms to enhance the employment of project affected households, local people and other vulnerable groups in unskilled job categories. It will specify (a) recruitment eligibility (people from project-affected settlements, followed by other local residents and Nepalese citizens), (b) age requirements (the minimum age requirement in the public sector should be applied to avoid child labor), and (c) recruitment and selection procedures to be followed by the contractor and subcontractors.

Preferential employment guidelines will be incorporated in the tender and the contractor documents. Contractors will be required to follow these guidelines, and all proposals will need to indicate proposed steps to implement a preferential employment policy, including on-the-job training.

KAHEP will assist with (a) the establishment of a database of job seekers from the project-affected households, and (b) the development of job advertising and recruitment procedures.

To further ensure transparency of recruitment and selection procedures, consideration will be given to the establishment of an Employment Task Group, consisting of KAHEP officials and representatives from the contractor, affected communities (including vulnerable groups) and other stakeholders. The Task Group will coordinate, review and monitor all matters relating to the implementation of the Preferential Employment Policy.

To the extent possible, KAHEP and its contractors will employ and promote the employment of local job seekers with appropriate educational qualifications in the semi-skilled category. Where local people are employed in these job categories, it will be accompanied by on-the-job training and skills transfer. The project will require about 600-800 people during the construction period. It is expected that minimum of 40-50 % of the unskilled workforce will originate from affected village for the construction phase of the project.

Nepali Information Sheets will be distributed to project-affected and surrounding settlements and will be announced from local FMs in local languages, well in advance of the commencement of construction activities. These Sheets will set out (a) the number of construction jobs available to the local population, (b) the job advertising, recruitment and selection procedures that will be followed and (c) the time frame for the recruitment of job seekers over the course of the construction period. By means of the community consultation structures and the distribution of job advertising sheets, local residents will be informed in advance of job opportunities and recruiting dates.



#### **7.4.4 Drinking water, health and sanitation support programs**

The access to safe drinking water facilities is one of the fundamental rights of the people. Access to safe drinking water, personal, domestic and environmental hygiene and sanitation are directly associated with health condition of the people. Many of the common and killer diseases are related to unsafe drinking water and poor hygiene and sanitation. There are acute problems of safe drinking water facilities at the settlements of vulnerable communities. In this context, some Drinking Water Supply Schemes (DWSS) will be constructed at appropriate locations of project impacted areas. In course of constructing such schemes, there will be active participation of beneficiaries (vulnerable peoples) of the project area. It is expected that 25% cost will be borne by the respective beneficiary communities in the form of kind or labor for local ownership and longer run sustainability of the schemes. The schemes will be handed over to the respective communities/ user groups after accomplishment of construction works. The user groups will be provided repair and maintenance training. Project will establish a revolving fund in each scheme so that repair and maintenance work will be done by the beneficiary communities themselves.

Similarly these peoples will be imparted health and sanitation trainings so that they will undertake home stead and community sanitation campaigns to keep their homes and community well sanitized. Many vulnerable households lack HH toilets. Project will provide material supports for the construction of HH toilets for selected vulnerable communities.

#### **7.4.5 Capacity building programs**

Carefully designed activities will be provided to address the capacity enhancement needs of vulnerable community. More often than not indigenous people including other vulnerable groups cannot endure the competition with their dominant culture groups who are better organized and have privileged education and skills. The vulnerable community or their institutions, owing to lower or mediocre level of educational achievement fare poorly in their capacity. Thus, vulnerable community will need increased capacity building with the necessary knowledge and skills to participate in the local development activities.

A local NGO along with government service providers will be involved in mobilizing the vulnerable community for group formation and strengthening. Likewise qualified members of local ethnic groups, including women will be engaged by the KAHEP management to undertake information dissemination works, preparing the beneficiary groups for project activities and contributory works. The project will identify the leadership of indigenous people / ethnic groups in the project area conduct a series of interaction meetings and will involve their representatives in social development related activities.

### **7.5 Specific measures for vulnerable community development**

The specific targeted program will be especially important to assist affected households of vulnerable groups for planning for the changes that the project will have on their lives and livelihoods. Community groups, particularly poorer women and vulnerable indigenous communities will be supported through grants and skill training to undertake economically viable and sustainable income/employment generating activities. These activities will be chosen by these communities and are likely to include activities based on available local resources such as livestock, agriculture, crafts, and forestry, trade and service sectors

#### **7.5.1 Women focused programs**

Small loan assistance program will be development particularly for vulnerable women headed households. An agreed amount of money will be allocated as a revolving fund to provide loans for small income generating projects. Co-ordination and links will be established with the local credit groups, cooperatives or field offices of the Agricultural Development Bank to ensure long term sustainability of the program. Besides, the following measures need to be undertaken to ensure that women's livelihoods are restored or even improved compared to what existed before project implementation.

- Income generating program will be designed to ensure that women derive a reliable income by engaging in activities that are within their capacity, taking into account the availability of resources and the type of enterprises that they are already engaged in;

- Capacity enhancing assistance will be provided that improve the access of women to skills training for off-farm employment such as tailoring and weaving, small goods shops; marketing - buying and selling local produce; processing of locally produced products;
- Social awareness campaigns and training opportunities will be organized to increase women's integration into social and economic mainstream; and
- Project will strengthen Women's Community based and nongovernmental organizations by providing training and advisory supports once during construction period.

### 7.5.2 Indigenous People focused programs

While the project will have some adverse impact on indigenous communities, it has been assessed that they will also experience some positive impacts due to various development interventions like improved road access which come along the development of KAHEP. Indigenous community focused program aims to unleash their potential by enabling them to get organized, generate resources and learn skills through training. Thus, some specific programs will be prepared and implemented to minimize adverse impacts while maximizing project benefits to indigenous communities. These program activities are proposed based on the assessment of project impacts, both positive and negative, and the consultation feedback of concerns and requests from the indigenous communities and other vulnerable communities these include:

- Employment of at least one member from each affected indigenous community household will be guaranteed in project construction and maintenance work;
- At least one member from each of the affected indigenous community households will be involved in livelihood enhancement activities such as skills training for income generation and other livelihood improvement activities;
- Preference will be given to qualified indigenous community individual in recruitment of community facilitators, who will maintain frontline contact with the community in implementing IVCDP activities;
- Supplementary infrastructure facilities will be developed for the *Majhi* households at Pinasi, such as latrine construction and drinking water facilities;
- Small loan assistance program will be developed, particularly for vulnerable indigenous community households in order to promote their income opportunities; and
- Organizations of indigenous communities will be supported to protect and preserve their indigenous cultures, language and traditions based on their proposal.

These will be further detailed in the SAP implementation plan, which will be developed together with the indigenous communities and other vulnerable groups, as well as individual households.

## 7.6 Strategy for vulnerable people's participation

The development of the SAP followed a participatory approach to enable local communities, particularly the indigenous and other vulnerable communities to have a role in the SAP planning and development process. To date, indigenous and other vulnerable communities have been interviewed on an individual basis, consulted in group discussions and meetings in order to understand and collect their views on their needs, priorities, and preference regarding the project implementation. Separate focus group discussions were held with indigenous communities and other vulnerable communities to assess the project impacts and benefits to these groups. Accordingly, the SAP, including IVCDP has been prepared with their feedback of concerns, requests and recommendations fully considered in the SAP.

The SAP implementation will continue this participatory approach to enable meaningful and effective participation of indigenous and other vulnerable communities. The project's SAP includes a strategy for the ongoing involvement of affected people, including vulnerable groups, in project preparation and implementation. Core components of this strategy are (a) the representation of affected people/vulnerable groups on SAP implementation structures; (b) a grievance management system for

the resolution of grievances and disputes; and (c) monitoring and evaluation mechanisms to track implementation issues. The detailed implementing plans will be developed jointly with the indigenous and other vulnerable communities. The project team will work with them on the community schemes. For household-specific schemes and activities, the project team will work with individual households belonging to indigenous and other vulnerable communities to develop and implement their household-specific schemes.

Outcome of SA programs and plans developed for indigenous communities and other vulnerable communities will be disseminated through appropriate means of communication. KAHEP will use a range of communication/information dissemination mechanisms, including written documents (information sheets and newsletters), FM radio broadcasts through local radio stations, community meetings, focus group discussions, participatory appraisal techniques, household interviews and social mobilization techniques. A key focus of these consultations will be the project's Entitlement Matrix and impact mitigation measures. These topics will be further discussed extensively to ensure that individual households are aware of the different compensation and impact mitigation measures so that they can make informed choices. In particular, it will be important for the indigenous and other vulnerable households to have a thorough understanding of the following:

- Entitlements for the loss of private assets (land, trees and other assets);
- Entitlements for the loss of access to communal resources; and
- Entitlement eligibility criteria.

The project will adopt mainstreaming and targeted approaches to maximize the project benefits and opportunities for indigenous communities and other vulnerable communities.

Mainstreaming approach includes increased participation and proportionate representation of indigenous communities and vulnerable communities in various user groups and committees formed under the project promoted and sponsored social development activities so that their needs, priorities, interests and perspectives are reflected in project planning and implementation.

Targeted approach will cater poor and disadvantaged indigenous communities and other vulnerable communities through livelihood enhancement skills training activities to enable them to take full advantage of project opportunities and benefits, including employment opportunities. Livelihood enhancement skills training will be targeted to these groups on the basis of their specific needs and priorities.

## **CHAPTER 8**

# **HEALTH AND SAFETY MEASURES**

## 8 HEALTH AND SAFETY MEASURES

World Bank Group Environmental, Health, and Safety Guidelines (EHS Guidelines), and IFC Performance Standard 4 are extensively reviewed while proposing the health and safety measures. The objective of the EHS Guidelines is to identify the project EHS hazards early in the project cycle and develop strategies and plans to avoid, minimize and or response to the potential hazards and accordingly implement the EHS plan and monitor the EHS performance in the project cycle. Performance Standard 4 on community health, safety and security addresses the client's responsibility to avoid or minimize the risks and impacts to community health, safety and security that may arise from project activities while acknowledging the public authorities ' role in promoting the health, safety and security of the public. Following health and safety measures are proposed for both project staffs and local people.

### 8.1 Staff health and safety measures

Staffs and constructional workers health and safety measures are described below:

#### 8.1.1 Occupational health and safety measures

Project contractors in the construction phase and project operator in the operation phase will be made responsible for the following occupational health and safety measures for workers:

- The contractor(s) will be made responsible to adopt Safe Construction Practices (SCP) in order to minimize construction related accidents;
- Trainings will be provided to all construction workers about SCP;
- Fencing will be done to restrict public movement around the construction sites;
- Protective gear such as helmets, boots, gloves and masks will be provided to construction workers, supervisors and visitors;
- Warning signs/posts will be installed for informing the local people about the potentially dangerous areas such as quarry site, weir site (dam site), tunnel outlets and tailrace outlet;
- Only authorized persons will be given responsibility to operate machinery and other heavy equipment;
- Temporary support structures will be constructed to avoid rock falls, erosion and landslides during construction. Soil excavation during monsoon in unstable areas will be minimized, if not totally avoided;
- Adequate lighting and ventilation facilities will be maintained at all construction sites;
- Emergency equipment like first-aid kits, flashlights, fire extinguishers, siren, emergency vehicles and phones will be made available at construction sites;
- Qualified medical personnel will be appointed at the construction sites to oversee emergencies related to occupational health and safety;
- An Emergency Response Contingency Plan will be prepared to appropriately deal with emergencies. The workers will be trained to follow the plan in case of accidents;
- The contractor(s) or the client will obtain insurance against any possible injury to all project staff/workers including client's personnel. Furthermore, the responsible party will also obtain third party insurance against any possible injury to visitors and possible victims; and
- All workforce camps health and safety issues shall be reported by the contractor(s) health and safety officer to KEL.

#### 8.1.2 Health facilities

A health center will be established in the project area for attending health matters of workers and local population during construction phase. In addition, the contractors will arrange adequate health services to construction workers on the site. Two health clinics will be run throughout the construction, one each at the headworks and the powerhouse site.

Basic medical checkups for baseline information on Sexually Transmitted Disease (STD), HIV/AIDS and other transmitted diseases will be carried out to all staff and construction workers. The workers and staff will be checked up regularly to monitor their health status.

### **8.1.3 Drinking water and sanitation facilities and solid waste management**

The construction contractor is responsible for all preparatory works and ensuring drinking water and sanitation facilities required for construction workers before the commencement of work. The construction contractor shall then report to the KEL and receive approval to proceed with the proposed work. The contractor shall be responsible for providing adequate safe water supply, maintain a suitable sanitary condition with proper drainage, and establish proper solid waste disposal sites within the camp. The project contractors will be made responsible to adopt the following measures for solid waste management:

- A solid waste collection and storage system will be established in all the construction related camps and construction sites. The collected waste will be segregated as to the property of the waste such as degradable, glass, metals, plastics, cloths and leather etc and will be stored in separate bonded areas. These materials will be disposed as to the recommendations and approval of the project environmental officer. The contractor will be made responsible for the measure;
- Garbage containers of adequate size will be placed at critical places in the construction related camps and construction sites. The garbage will be collected daily and segregated while storing. The contractor will be made responsible for the measure.

### **8.1.4 Awareness raising programs and trainings**

Health awareness programs will be organized on a regular basis to provide information or instructions to construction workers on health including the dangers and consequences of STD and HIV/AIDS. The contractor will be made responsible for imparting the awareness program on human trafficking to the construction workers.

## **8.2 Public health measures**

Public health measures for local people are described below:

### **8.2.1 Health facilities**

KAHEP is committed to strengthening health facilities of each affected VDCs so that the wider project-affected-population (and not just those compensated or employed as a result of the project) can enjoy improved health care services. As mentioned above, a health center will be established for attending health matters of workers and local population during construction phase. After the completion of the Project, one health clinic (out of the two that will be in operation during construction), will be handed over to the community for operation.

A health check up campaign will be launched before the construction work in the project area for basic medical checkups of local residents on STD, HIV/AIDS and other transmitted diseases for baseline information.

### **8.2.2 Drinking water supply and sanitation**

KAHEP will contribute to the establishment of new water schemes in the areas where people are fetching drinking water from water holes and rivers and will help to strength existing community-level water supply facilities in the settlements of the project affected VDCs. It is intended that in the long-term the schemes will be community managed in compliance with the Rural Water Supply national policy of Nepal. The support to drinking water scheme will have positive impacts on general public health; will make the water collection easier and less time-consuming to women and children who are generally in charge of it.

### **8.2.3 Awareness raising programs and trainings**

Health awareness programs shall be organized on a regular basis to provide information or instructions to local population on health including the dangers and consequences of Sexually

Transmitted Disease (STD) and HIV/AIDS. The contractor will be made responsible for imparting the awareness program on human trafficking to the local people.

#### **8.2.4 Participation of indigenous and other vulnerable groups in the public health program**

Local communities are mixed ethnic-wise. The indigenous and other vulnerable groups are living together with other non-vulnerable members. The public health schemes will benefit all community members, including the indigenous and other vulnerable community members. In the design and implementation of these schemes, the project team will give particular attention to indigenous and other vulnerable group members to make sure that their concerns and requests are taken into consideration and they can equally benefit from these schemes.

## **CHAPTER 9**

# **BENEFIT SHARING MEASURES**



## 9 BENEFIT SHARING MEASURES

While the primary beneficiaries of hydropower usually live far away from the project sites, other groups of people in the project-affected area primarily sustain most of the negative impacts of the project. In view of that KEL- the proponent of KAHEP- has committed to support measures for development and welfare opportunities for local and regional communities that are negatively affected by the project. To enhance the benefit of project to the local population, and especially those affected by the project, two categories of local development fund will be available. The first will be used for affected VDCs over three and half years during the construction period. The second category requires, as mandated by national legislation<sup>35</sup>, that 50% of the royalty that GoN receive during 30 years license period has to be given to project located districts for local development activities in a wider area comprising both directly and indirectly affected communities. The modalities for utilization of the royalty received will be determined by the local administrative bodies of GoN independently, whereas for the first category, investment plan will be developed by KAECDU in collaboration with Project Affected People (PAP).

### 9.1 Resettlement and rehabilitation actions

The location and design of the KAHEP have been finalized with the aim of minimizing adverse impacts on local people and their natural environment. With the current design and location, the project construction activities do not require acquisition of houses and associated resettlement problems. However, the construction of the project require some lands to locate construction camp, batching and crushing plants, storage ground, reservoir, spoil deposit site, borrow areas, and access road.

Land Acquisition Act 1977 and World Bank's safeguard policies that govern Resettlement and Rehabilitation (R&R) will be taken together to ensure that an equitable system of R&R and benefit-sharing is worked out for people affected by the project. The project staffs have consulted comprehensively with the PAP, explaining necessity of the project, discussing with them the options for resettlement and rehabilitation as well as local area development.

An adequate compensation package will be worked out for those 13 families (PAFs) whose land will be acquired. Apart from the compensation for the acquired land, they will also receive compensation for crop, tree and other assets loss, if any. In order to help the PAP recover from any loss of livelihood and also in order to help those interested in setting up additional income-generation schemes, the project will also offer training on skill development and income generation activities, scientific agriculture technologies and an improve seed program.

### 9.2 Project level measures

In addition to the resettlement and compensation package that each directly affected household receive, the project impacted VDCs - Amarpur and Panchami of Panchthar district and Thechambu and Nangkholyang of Taplejung district - have also been earmarked for special development assistance. The project has set Community Development Initiatives to be invested over a period of four years in infrastructure and development schemes. The local people and project proponent together will lead the local area development exercise, and fund will be invested choosing from all the following infrastructures schemes they would like to see implemented in the affected village.

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<sup>35</sup>The 1992 Hydropower Policy in Nepal and the 1992 Electricity Act has required hydropower above 1 MW to obtain a license and pay royalty to the government. However, they did not specify how the amounts received should be used. In 1999, the local Self Governance Act and Local Self- Governance Regulations recognized the necessity to redistribute part of the royalty to communities in the vicinity of the project since these communities contribute to the project benefits by sacrificing their access to or use of land and other resources in the project-affected areas. The regulation requires that the central government allocate 10% of the hydropower royalty to district where the hydropower project is located.

In 2004, the second amendment of the Self-Governance Regulations increased the district's share of the royalty to 12 %. It also required the central government to distribute another 38% of hydropower royalty among districts of the development regions where the hydropower project is located.

In addition, the 2001 Hydropower Policy specifies that 1% of the royalty shall be provided to the Village Development Committee (VDCs) that are directly affected by the hydropower infrastructures with the sole purpose of expanding village electrification of these VDCs.

### 9.2.1 Access roads

The implementation of the project will make available all season motorable roads for people living in remote areas where project is located and hence enhance the transportation facilities for the local people. Besides, some of the amount from allocated fund will be invested to open and/or improve rural access road and foot trails in the affected VDCs. Apart from improved access for rural communities, families along the new access road will also get benefit of increased land price. These will benefit local communities in the long run.

### 9.2.2 Health facilities

Under social development program the project will give high priority for the repair and maintenance of existing health posts, educational institutions and contribute to the establishment of new drinking water schemes in the area (details are provided in Environmental Management Plan (EMP) in the EIA report). Apart from establishing medical clinics on site within the construction camp staffed with qualified medical workers, the project is committed to strengthen health facilities for each affected VDCs so that the wider project affected population can enjoy improved health care services. Further, the project will implement necessary environmental control measures at the construction site; including dust control, waste management and sanitation, and trainings and awareness raising programs for their workers and locals on public health and safety measures (details are provided in EMP in the EIA report).

### 9.2.3 Employment

The people from affected area stand to gain benefit in terms of job creation and income generation. During construction period, the project will give first priority to recruit required employees from the local area. Both skill and unskilled workers willing to work in the project will be selected from the project affected families and local areas as far as possible. It is expected that minimum of 50 % of the unskilled workforce will originate from affected village for the construction phase of the project. This phase will employ about 600-800 people at the peak period.

Besides, the locally employed people will receive number of skill training on technical aspect like electromechanical works, house wiring, vehicle repair, welding and fabrication brick/block laying etc based on their skill and nature of work offered. Similarly, the project will encourage and help local people to initiate different types of commercial activities like teashops, groceries, lodges etc. in the vicinity of the contractors' base camp at the dam and powerhouse site which ultimately helps in job creation and self employment.

There are always opportunities for locals to avail jobs from petty contractors working for the project during construction and also from the local NGOs/CBOs as the part of the task of SAP will either be implemented by contracting or in collaborative approach with them.

## 9.3 CSR activities

KEL will conduct various CSR activities as per the KEL CSR policy. The CSR Policy of KEL aims to achieve, consolidate and strengthen Good Corporate Governance including socially and environmentally responsible business practices that balance financial profit with social well being, particularly the well-being of indigenous and other vulnerable community groups. The CSR commitment of KEL positions its social and environmental consciousness as an integral part of its business plan and its commitment to all its stakeholders including share holders, employees, local communities and the society at large.

The Project Company will adopt the following strategies in order to implement the CSR activities:

- Build on core strengths and comparative advantage
- Take ownership to minimize/ address unavoidable and unintended damage
- Develop customized and needs based programs, giving particular attention to indigenous and other vulnerable community groups
- Emphasize sustainability
- Engage in-house facility for co- coordinating roll out of CSR activities

- Maximize outcomes through strategic partnerships
- Mainstream CSR into the core business plan of KEL

The Project Company proposes, apart from the EMP implementation, put into practice the activities following themes as per its CSR commitment:

- Human rights, particularly the rights of indigenous community groups as declared in various relevant policies;
- Transparency and good governance
- Environment conservation
- Integrated community development that fill the gaps in the statutory resettlement and rehabilitation program of the government and ensure that the qualities of lives of communities are positively impacted at project areas.
- Education, including formal and informal education and vocational training that contribute towards sustained income generation and self sufficiency
- Health as an integral component of better quality of life with special focus on vulnerable groups.
- Disaster Management including preparedness, capacity building as well as emergency response leveraging core competency of the KEL in situations of disasters.

The CSR activities will be carried out through adaptive management and further detailed during the construction phase after identifying needs of the local population. The modalities will be developed to cater the wider population of the project area.

## **9.4 Support to local development**

### **9.4.1 Strengthening of local economy**

Local economic benefits from the project are those, which accrue to employees and the wider community, over and above the benefits accruing from alternative income generating activities. These include:

- Direct employment of local people during construction and operation of the project;
- Induced employment and increased trade in service industries, particularly during the dam and powerhouse construction period;
- Benefits from indirect employment and trade, industries and commercial activities, which will be established as a result of the greater availability of development infrastructures including electricity and road; and
- Particular attention and efforts to ensure indigenous community and other vulnerable groups enjoy culturally appropriate benefits from these support.

Similarly, during the construction phase, the generation of local employment opportunities will act as a catalyst to stimulate the local economy. Increased income in the area will encourage the formation and growth of local businesses, which will in turn create new indirect employment opportunities. Similarly, the availability of cash from employment and provision of goods and services will result in opportunities for investment. As a result, new shops, hotels and residential structures will be established to meet the demand of the construction related population for essential commodities. Employment opportunities directly or indirectly related to the project will also provide opportunity for local people to enhance their skills in different trades.

Thus, the construction of the project will cause an economic spin-off in the project impact area. If properly managed and controlled by KAHEP and the district authorities, such impacts are expected to be high in magnitude, regional in extent and of medium duration.

During the operation phase, in addition to employment, the main economic benefits of the project will be activities resulting from availability of power locally. Due to increased accessibility and better

market opportunities developed during the construction phase, economic activities may still continue in the project areas. All of this will create employment opportunities and means of livelihood for households, including vulnerable families, of the project area. FGDs with local businessmen and traders in both districts reveal that there is considerable potential for development in the retail, construction, hotel and industrial sectors. The lack of reliable, economic power supplies is considered to be a constrain development in the region and KAHEP is expected to fulfil this gap. However, market areas, houses, hotels, etc. may also be deserted if other economic activities do not fill in for the economic activities prevailing during the construction phase.

As per the Electricity Act, 50% of the royalty that GoN will receive during the 30 year license period will be given to the districts where the project is located. Utilization of this revenue by the districts for infrastructure and other development activities can ultimately lead to improvement in the socioeconomic status of the project areas.

#### **9.4.2 Drinking water**

KAHEP will contribute in the establishment of new water schemes in the areas to strengthen existing community-level water supply facilities (such as fetching water from wells and springs) in the settlements of the project affected VDCs. It is intended that in the long-term the schemes will be managed by the community in compliance with the Rural Water Supply national policy of Nepal. Thus, supports to drinking water scheme will have positive impacts on general public health. It will make the water collection easier and less time-consuming to women and children who are generally in charge of it.

#### **9.4.3 Rural electrification**

The project area has no electricity facilities. However, some households have solar panels installed for lighting purpose only. Local people have great expectation of rural electrification program from KAHEP. This is their strongest request coming out of the consultation process. However, much more technical work needs to be done to study the alternatives, technical options and the feasibility before the project can assess its financial implications and affordability for Kabeli Hydro project. KEL is in discussion with the government and the World Bank to explore the options of rural electrification. KAHEP will undertake a needs assessment within the affected villages, and will work with the World Bank and relevant government agencies to explore various options for local electrification.

#### **9.4.4 Training and financial services**

This component benefits two different categories of affected people: those who will receive compensation, part of which may be in cash; and people from the area who do not lose physical assets and will not receive cash compensation, but can benefit from the project. KAHEP will provide training and financial services to develop and strengthen cooperatives, savings, and credit association, which at present are available in the project areas. The expected results of the training and financial services are:

- Improved Inputs and Business Practices;
- Planning and Record Keeping;
- Savings and Credit; and; and
- Small Holder Associations.

#### **9.4.5 Education**

KAHEP is committed to strengthen education opportunities in the affected villages. Possible activities and support include: improvement of the existing school structures (i.e., classrooms, library, recreation and sanitation facilities); construction of new structures; and, provision of teaching materials and equipment. Educational institution for support will be identified through series of consultations with local communities.

## 9.5 National level benefits

The project will provide 37.6 MW of power to the much needed electricity grid of Nepal. This will have large positive impact on the macro-economic growth of the country by reducing the dependency on load shedding. Moreover, Hydroelectric being clean renewable energy will also protect the environment.

## 9.6 CSR and Benefit Sharing Activities during Planning Stage

Under CSR, some local development works were planned for execution by the Project. However, due to delayed progress in project implementation, only limited activities under CRS were implemented in a slow pace. The Project, however, has implemented number of local development and social service programs as follows:

- Nursery development for seedling production of different tree and NTFPs/ cash crop species which are already distributed to the locals;
- Bio-engineering works in the access roads to control soil erosion and potential landslides;
- Support to sanitation facilities to the school with separate toilets for boys and girls;
- Construction of water tanks to provide easy access to water supply in the village
- Free dental camp to the local public; and
- Supports to local youth clubs.

KEL has established a nursery for production of seedlings of different plant species to be useful for bio-engineering and livelihood enhancement activities. Amriso (*Thysanolaena maxima*), Vetiver, Bamboo are grown in the nursery for the purpose of Bio-engineering and slope stabilization. In addition, seedlings of Amriso (*Thysanolaena maxima*), coffee, sacrum and other locally suitable species and improved seeds have been distributed to local people for their livelihood improvement.

CSR is a key tool to make good rapport and create an enabling environment for project implementation and execution. Thus support to village school construction including its toilets for girls and boys which has helped to minimize the girl's dropout rate. Similarly, free dental camp for local community along with health/hygiene training for teachers by expert dentists from "Heath & Development Society Nepal", have been accomplished as part of CSR initiatives. In addition to this the KEL is also supporting Local club for sport and cultural promotion as the part of its CSR and Benefit Sharing Strategy. Table 9-1 highlights the major activities undertaken by the project at local level during planning stage.

**Table 9-1: Initiation of Key Mitigation, CSR and Benefit Sharing activities of KAHEP**

SN	Activities	Location	Outcomes
1	Bioengineering along the Access Road (Headworks)	Amarpur-5	Slop stability
2	Dental Camp	Amarpur-5	More than 600 people from the affected VDCs and surrounding were benefitted.
3	Health/hygiene training for teachers by expert dentists	Amarpur-5	19 teachers from the school of the Affected VDCs were participated.
4	Singa Marga School Building Construction	Amarpur-5	Design of this 3 room building is based on Earth Quick Resistance.
5	Toilet Construction at Singa Marga School	Amarpur-5	Separate toilet for boys and girls aiming to reduce girls' dropout rate.
6	Water tank Construction	Amarpur-5	Easy Access to safe drinking water.
7	Rural Electrification Scoping Study	All affected VDCs	Electricity facility to the affected area that falls beyond 2.5 right of way of the transmission line.
8	Support for Thechambu Youth Club	Thechambu	Promotion of the local sports and culture

9	Support for Dhurbatara Youth Club	Amarpur	Promotion of the local sports and culture
10	Nursery Establishment	Amarpur-5	Production of seedlings of different plant species to be useful for bio-engineering and livelihood enhancement activities.

Source: KEL, 2013

## **CHAPTER 10**

# **PUBLIC CONSULTATIONS**

## 10 PUBLIC CONSULTATIONS

### 10.1 Introduction

Successful implementation of the project requires coordinated efforts of various stakeholders at different levels. Hence, consultation at different levels was used as a tool to inform and educate stakeholders about the proposed action both before and after the development decisions were made. Public consultation was useful for gathering socio-environmental data, understanding likely impacts and communities' needs and preferences. The various alternatives could be evolved and sustainable mitigation measures could be formulated through consultations. It assisted in identification of the problems associated with the project as well as the needs of the population likely to be impacted. This participatory process helped in reducing the public resistance to change and enabled the participation of the local people in the decision making process. The involvement of the various stakeholders ensured that the affected population and other stakeholders are informed consulted and are allowed to participate at various stages of project preparation. Different strategies have been adopted for public consultation during planning and implementation stages.

### 10.2 Objectives

The main objective of the consultation process is to minimize negative impact of the project and to maximize the benefits of the project. Public consultation was an integral part of the process throughout the planning and execution of the project. The SA/SAP team performed public consultation activities according to the requirements, situations and demands of the concerned population. The local communities were involved and participated in SA study and development of the SAP. Among others, women, disadvantaged groups, indigenous groups and local institutions were encouraged to present their views through formal and informal interactions. Other objectives of the consultation process were the following:

- Information dissemination;
- Consultation over impacts and impact mitigation approach as well as measures;
- Consultation over project benefits and gauge public views of and expectations from the project;
- Consultations with different groups (indigenous, caste, vulnerable and disadvantaged groups etc.);
- Development of a public consultation and participation strategy; and
- Development of a communication strategy.

### 10.3 Consultations during planning stage

#### 10.3.1 Stages and levels of consultation

Public consultations were conducted both at screening stage as well as project preparation stage. Consultation made at screening stage played an important role in scoping the level and extent of consultation to be taken in the project preparation stage. Public consultations have been held at three levels as follows:

**Community level** involving project affected persons, local communities and their representatives as well as indigenous community groups and other vulnerable groups; and political party representatives at community level;

**District level consultations** involving NGOs, CBOs, District Officers, revenue department, etc and;

**Central level workshop** involving Ministry of Science, Technology and Environment, Ministry of Energy and related organizations.



### 10.3.2 Tools for consultation

Public Consultation was done using various tools including, interviews with government officials, questionnaire based information with stakeholders, formal presentation of project proposals at district level seminars and workshops are briefly discussed below:

#### *During scoping stage*

(i) *FGDs*

Public consultations at local and district level at different locations of the project were carried out to inform about the project features and possible environmental issues of its implementation (Table 10-1). In addition, local population's views, suggestions and concerns regarding the implementation of the project were collected.

**Table 10-1: Public consultation carried out at different levels during Scoping**

SN	Place	Date	Target Population
<b>Public consultation conducted at local level by Scoping Team</b>			
1	Rajabesi Village of Amarpur-6, Panchthar district	April 27, 2010	Affected population of Amarpur by headworks and access road
2	Pinasi village of Amarpur -9, Panchthar district	April 28, 2010	Affected population of Amarpur and Panchami by powerhouse and access road
3	Khahare village of Nangkholyang-6, Taplejung district	April 29, 2010	Affected population of Nangkholyang by reduced flow
4	Kharelgaun of Thechambu-6, Taplejung district	April 29, 2010	Affected population of Thechambu by the reduced flow
5	Bhanuchok village of Amarpur-4, Panchthar district	April 30, 2010	Affected population of headworks, powerhouse, access road and tunnel alignment area
<b>Public consultation conducted at district level by Project Team</b>			
6	District Headquarter (Phidim) of Panchthar District	April 23, 2010	Representatives from political parties, media persons, NGOs, and social workers
7	District Headquarter (Phidim) of Panchthar District	April 23, 2010	Representatives from DDC, VDC, NGOs, Industry etc.
8	District Headquarter (Phungling Bazaar) of Taplejung District	May 24, 2010	District level governmental agencies
9	District Headquarter (Phungling Bazaar) of Taplejung District	May 24, 2010	Representatives from political parties, media persons, NGOs, and social workers

(ii) *Formal consultation*

The scoping team also visited the government institutions and line organizations related to the project implementation at the district level and informed about the project implementation. In addition, separate district level public consultations were also carried out by the Kabeli Project team (Table 10-2).

**Table 10-2: Formal consultation carried out with district level line agencies by the Scoping Team**

S.N.	Institutions	Date	Key Personnel
1	District Forest office (DFO), District Development Office (DDO) and Rural Energy Development Program (REDP) of Taplejung District	April 29, 2010	Local Development Officer (LDO), REDP personnel, Assistant Forest Officers (AFOs) and Forest Rangers
2	DDO, DFO and REDP of Panchthar district	April 30, 2010	LDO, REDP personnel and AFOs

**During SA and SAP study stage***(i) FGDs*

FGDs were organized by giving a prior verbal notice and written letter through a runner to the entire project affected VDCs. 14 FGDs have been conducted with the local people in different locations of the project areas to identify the various issues related to the hydropower project development and its socioeconomic consequences and corresponding mitigation measures (ANNEX). 251 individuals representing from different impact areas and groups such as dam site, dewatering zone, access road, powerhouse site, CFUG, LFUG, *Dalit*, indigenous communities and women participated in the FGDs. Out of the 14 FGDs, 2 were with women, 1 with *Dalit*, 3 with indigenous communities, 1 with Kabeli Concern Committee, 1 with CFUG, 1 with LFUG, 1 with local school teachers and the rest 4 FGDs were conducted with mixed group comprising of male, female, indigenous communities, *Dalit*, *Brahmin*, and *Chhetri*.

*(ii) Informal discussions*

Informal discussion with local stakeholders and people of different backgrounds and social identities have been conducted to identify key actors and agents associated with various issues of the project and explored the underlying socioeconomic, cultural and political situation that have shaped the life circumstances of the communities of the project areas. These discussions were helpful to recommend community participation and consultation policy and institutional arrangement for project implementation and to suggest grievance hearing mechanism. These discussions were also helpful to identify roles and responsibilities of different stakeholders to develop equitable benefit-sharing mechanisms.

*(iii) Formal consultations*

Formal consultation meetings with identified stakeholders (VDC, DDC, NGOs, political parties, ethnic organizations, and DFO) working at local and district levels have been conducted to know their views on the likely impacts of the project on local people and community, development infrastructure, and the project induced economic and social development opportunities (ANNEX). More specifically, these consultations meetings were useful to formulate SAP particularly to develop resettlement and rehabilitation policy.

**After preparation of the draft report***Public consultation/hearing*

After the completion of the EIA and SA/SAP draft reports, the summary of the report was prepared in simple Nepali language which was distributed during the public consultation meetings. One Public Consultation Meeting (public hearing) was conducted at the project site to share the findings of the assessment, explain how the concerns have been incorporated, to obtain further feedbacks from the affected people and stakeholders to incorporate suggestions and inputs; to determine local perception about the project; and to ascertain local development needs and potentials.

In order to conduct the public hearing, Public Notice was published in a national daily newspaper about the time and place of the public consultation meeting. The electronic media like FM was used to inform the stakeholder about the date of public consultations. Furthermore, the notice was circulated to the concerned local stakeholders prior to this public consultation meeting. The findings of the assessment were presented to district level stakeholders and central level stakeholders.

The study team has performed two district level consultations each at Phidim (district headquarter of Panchthar) and Phugling (district headquarter of Taplejung) involving the government offices, political parties, INGOs, NGOs and media personnel of Panchthar and Taplejung districts to incorporate regional concerns of project development. In addition, one national level consultation at Kathmandu was conducted among the national level stakeholders of the project to complete the public consultation exercise. The public consultations carried out at project, district and national levels are summarized in Table 10-3. The details about the consultations are presented in ANNEX.

**Table 10-3: Consultations carried out at project, district and national levels**

S.N.	Place	Date	Participation
<b>Public consultation conducted at project area</b>			
1	Bhanuchowk of Amarpur VDC, Panchthar district	July 13, 2011	Affected population of project area, representatives of political parties, teacher, youth, social worker, Adivasi Janajati, Dalits and other key stakeholders.
<b>Public consultation conducted at project districts</b>			
2	District Headquarter (Phungling Bazaar) of Taplejung District	July 14, 2011	CDO, VDC secretaries of the concerned VDCs, DFO, ADO, REDP personnel, journalist, representatives of political parties, youth clubs, NGOs, and other key stakeholders.
3	District Headquarter (Phidim) of Panchthar District	July 15, 2011	CDO, VDC secretaries of the concerned VDCs, DFO, ADO, REDP personnel, journalist, representatives of political parties, youth clubs, NGOs, and other key stakeholders.
<b>Public consultation conducted at Kathmandu</b>			
4	Kathmandu	August 1, 2011	Constitutional Assembly Member, representation from affected population of project area/VDCs, political parties, government officials, World Bank, NGOs, and other stakeholders.

### 10.3.3 Findings from consultations and measures taken

The local people including indigenous communities and vulnerable people are positive towards the implementation of the project, if they benefit from the project. They pointed out that the smooth operation of the project is possible only through close co-ordination with local people in the planning and implementation stages. *Adivasi Janajatis* want the project because in their view, the project will bring many opportunities to the local residents such as access to electricity, employment, trade, business, and others. They think that they are the first people to benefit because the project is located in their area and they have high level of expectations from the project. The project team, through the consultations and interactions with the *advasi Janajatis*, conclude that the project local indigenous groups welcome and support the project development as planned and designed. The current design of the project, particularly through the SAP and CSR activities, is developed on the basis of the feedback from local communities, particularly the indigenous and vulnerable community groups and has fully incorporated their recommendations. Thus the project will bring expected benefits to local communities, including indigenous community members, and promote the overall social economic development in the project areas and improve their well-being.

The key findings of the consultations and consideration of the key feedbacks/concerns of the affected communities and other stakeholders in the project design are summarized in the following Table:

**Table 10-4: Consideration of the key feedbacks/concerns in the project design**

Category	Key feedbacks/concerns of the community	Incorporation in the project design
Land loss related	Land loss due to the construction of the project and mode of compensation	-Minimum land requirement (With the design for a run-off operation, the project impacts on land are relatively small among hydropower generation projects) -Cash compensation for permanent loss of land as per the negotiation between the project and the land owners.
Fish and fishing activities related	-Impact on downstream communities -impact on fishing and downstream ecosystem	-Construction of fish ladder -10% minimum environmental flow -Construction of cold water fish hatchery
Access to forest related	-Possible loss of access to forest and NTFPs	-Development of a plantation site for 1:25 times of the felled trees in the area as identified by the related District Forest Office.
Socio-cultural related	-impact on cremation sites, temples and associated religious activities -impacts on ritual practices	-Minimum flow (10% minimum environmental flow) for cultural and religious survival. -Maintenance of the affected cremation/customary sites
Community services related	Impacts on Water Supply, sanitation and health	-Provision of better levels of services for water supply, sanitation, health and drainage. -Enhancement program on water supply and sanitation in the participation of local people/local authorities/NGOs -Health center will be opened for attending health matters of workers and local population during construction phase
Project construction and operation related	-Employment in construction, plant operation, and service sector of the project. Support on training for self-employment  -Construction related impact	- Project will employ about 600-800 people at during construction period. It is expected that minimum of 50 % of the unskilled workforce will originate from affected village for the construction phase of the project.  -Project will adopt safe constructional practices.
Project benefit related	Access to irrigation water, provision of electricity supply, domestic water supply from the project as appropriate.	- Establishment of new drinking water supply schemes in the project area. - To facilitate possible electrification, KAHEP will undertake a needs assessment within the affected villages, and will work with the World Bank and relevant government agencies to explore various options for local electrification. - To facilitate possible electrification, KAHEP will undertake a needs assessment within the affected villages, and will work with the World Bank and relevant government agencies to explore various options for local electrification.
Adivasi Janajati and disadvantaged group related	-Meaningful participation in project activities -Self identity	-Respect the self identity and provisions of special programs for preservation and protection of self identity -Design and implementation of IVCDP
Dam safety related	-Addressing the dam safety issues	-Safety of Dams policy of the World Bank (OP 4.37) will be followed for the project although the headworks of KAHEP will consist of only 14.3 meter high barrage.

### 10.3.4 Site Visit and Consultations by World Bank Group (WBG) Safeguard Specialists

Various project site visit and consultations have been carried out by World Bank, IFC, KEL and HCE teams after preparation and first public disclosures of SA and SAP reports (Table 10-5). Local level consultations at different locations of project area have been conducted to receive feedbacks and concerns of local community on project implementation. Meetings with Road User Committees, Forest User Group, Concern committees, local political leaders and other eminent personalities of Project Area have also been conducted to receive the general concern of the community at large. On site observation and verification also have been carried out at the same time during subsequent field visits.

**Table 10-5: Consultation and site visit carried out at project area by different WBG teams**

SN	Site visit	Team members	Date	Locations of consultation	Target groups for consultation
1	WB Site Visit	Michael Haney (TTL and Sr Energy Specialist), Gulgoren Ayse Cansiz (Sr Electrical Engineer), Drona Ghimire (Environmental Specialist), Pravin Karki (Sr Energy Specialist), Mudit Narain (Energy Analyst), Chaoua Zhang (Senior Social Sector Specialist), Claudia Sadoff (Lead Economist)	May 17-20, 2010	Scoping phase	Scoping Phase
2	WB-IFC joint site visit	Chaohua Zhang, Drona Raj Ghimire, Jorge E Villegas (Environment, Social & Governance Department, IFC), Sameer Kumar Singh and (Sr Environmental Specialist, IFC).	July 25-28, 2011	Project area	Road User Committees, Forest User Group, Concern committees, local political leaders and other eminent personalities of Project Area
3	WB Site Visit	Stephen F Lintner (Sr Technical Advisor), Sanjay Srivastava (Regional Safeguards Advisor), Gaurav D Joshi (Environmental Specialist), Michael Haney, Chaohua Zhang, Drona Raj Ghimire	September 3-7, 2011	Project Area	Road User Committees, Forest User Group, Concern committees, local political leaders and other eminent personalities of Project Area
4	WB site visit	Zia Al Jalaly (Sr Social Development Specialist), and Parthapriya Ghosh (Senior Social Development Specialist).	December 14-16, 2012	Project area	Road User Committees, Forest User Group, Concern committees, local political leaders and other eminent personalities of Project Area
5	WB Consultant site visit	Ishwor Neupane (WB hired Social Development Consultant)	May 2013	Project area	Different stakeholders

The pertinent issues rose during various site visits and consultation are summarized below:

- KAHEP is mile stone and it will bring new avenues in Eastern Region after its completion;
- Community people are hopeful to receive the local level employments as their caliber and educational background;
- Communities are supportive towards development of KAHEP;
- KAHEP should facilitate in electrifying our area to start entrepreneur activities such as establishment of diary cooperatives and milk collection and chilling centers, poultry farming, oil propellers, Rice and flour mills and TV, radio repairing shops etc.
- KAHEP should organize vocational training and self employment programs to enhance the skills of local youths;
- Women group opinioned that project should provide training on income generation and self employment and also provide skill enhancement training to female health workers especially on health and sanitation and safe delivery to decrease mortality rate;
- Technical support to local health centers;
- Support to local schools with education materials, toilets and provision of drinking water supply.
- The rationale of widened access road was often questioned by the villagers because of delayed construction of Project activities.
- Local women showed their concerns on the availability of power from the Project. They were currently overloaded with the physically arduous works like grinding and milling of food grains from which they would be relieved after the power operated processing mills.
- Local villagers were solely depending on solar or kerosene light for lighting and were looking forward the availability of rural electrification from the Project.
- One major expectation of the local peoples including APs is employment opportunity to the youths in the village. Currently, the Project has employed 11 local people in different positions.
- Availability of works in the village would not only prevent potential outmigration of the youths but also contribute to local economy by injecting their income on different income generating activities (IGAs).

## 10.4 Consultation strategy during implementation

Several additional rounds of consultations are also planned during SAP implementation. Measures include PAF representation and participation in SAP implementation, grievance procedures and SAP monitoring. The specific aims of the consultation are to:

- a. Improve project design and prevent conflicts and delays in implementation;
- b. Facilitate development of appropriate and acceptable entitlement options;
- c. Increase long term project sustainability and ownership;
- d. Reduce problems of institutional coordination;
- e. Make the R&R process transparent and reduce leakages;
- f. Increase effectiveness of sustainability of income restoration strategies, and improve coping mechanisms; and
- g. Pay particular attention to indigenous and other vulnerable groups on their needs, views and participation.

### 10.4.1 First round of consultations

The purpose of the first round of consultations is to disseminate information on SAP entitlement package and options for each impact category to PAFs. This will involve explaining the Entitlement

Framework and resettlement options to the PAFs and soliciting their support and co-operation. This round will also finalize agreement on the various community and group entitlements provided in the entitlement framework.

#### **10.4.2 Second round of consultations**

The second round of consultation involves agreements on compensation and assistance options, entitlements with PAFs, completion of a PAF identity card indicating the accepted entitlement package.

#### **10.4.3 Third round of consultations**

The third and final round of formal PAF consultations will occur when compensation and assistance are provided and actual resettlement begins. These consultations will be managed and carried out by the Project management.

#### **10.4.4 Continued Participation**

Continued participation of the various stakeholders especially the project affected will be worked out to ensure time bound and effective achievements of the implementation of the various EIA/SA/SAP measures proposed. A community relation program will be developed to establish constant communication and participation of the affected communities. The program will

- Provide project affected communities with regular information on the progress of project work and related implications;
- Maintain awareness of socio-cultural issues among communities;
- Receive feedback directly from the affected communities and PAF in development of SAP and EMP implementation and monitoring;
- Ensure complaints are dealt according to the complaints procedure (Refer grievance redress mechanism); and
- Ensure appropriate processes and measures are utilized including consideration of indigenous and vulnerable community in communication and implementation activities.

KAECDU established at project level will be responsible for effective implementation of the program. The consultations and FGDs will be organized with the project affected and the various stakeholders at regular intervals as a part of the continue consultation exercise of the program.

## **CHAPTER II**

# **COMMUNICATION STRATEGY**



## II COMMUNICATION STRATEGY

Better communication means better performance and frequent communications keep stakeholders in the loop. KEL is aware about the public involvement in every stage of the project. KEL believes that two way communications between the project and the project affected people/beneficiaries is very important for smooth and unhindered project construction and operation. In order to achieve this, KEL will adhere with all the stipulated requirements for communication and information dissemination requirements stipulated in Environmental Protection Rules (EPR 1997), donor guidelines and prevalent best practices. From the initial phases of environmental and social study, KEL, EIA and SA study team have encouraged participation of the local residents of the project area.

The communication strategy will be guided by the concepts of Free, Prior and Informed consultation<sup>36</sup> with the affected communities to enable informed participation, leading to lenders' confirmation of broad community support for the project within the affected communities. The feedback from consultations has been, and will continue to be an important component of the planning process leading to the formulation of mitigation measures and compensation plans for project affected communities.

The framework and approach of the communication strategy used by KEL is described below:

### II.1 Project stakeholders identification

Public Consultation, Participation and Disclosure (PCPD) programs were developed and implemented taking into account the various areas of influence that were identified during scoping exercises as part of the SA study. Based on these recognized areas of influence, KAHEP stakeholders comprise six main groups:

- Communities/families/ individuals who are directly affected by the Project, including indigenous and other vulnerable community groups;
- Government agencies at the district, regional and national levels;
- Local Government Bodies ( VDCs and DDCs);
- The broader interested regional and national community;
- Political parties, Community Based Organizations (CBOs) and NGOs operating in the Project area; and
- International NGOs, international organizations, and the local, regional and international media.

### II.2 Mechanisms for stakeholders' participation

It is the developer's (KAHEP) responsibility to inform all relevant stakeholders of the project so that they will be fully informed about the likely impacts and the best benefits they will receive from the project. KAHEP is committed to assist affected persons, households, families, and communities in making an informed choice about compensation and livelihood restoration. KAHEP's Project Management is responsible for informing all the relevant stakeholders well in advance by giving notice at the appropriate time about the project scope and impacts, implementation steps, compensation and livelihood restoration options, and in general encouraging participation of local stakeholders in

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<sup>36</sup>**Free**– the client or its representatives have not coerced intimidated or unduly incentivized the affected population to be supportive of the project;

**Prior**– Consultation with project-affected communities must be sufficiently early in the project planning process; and,

**Informed**– Consultation with all project-affected communities on project operations and potential adverse impacts and risks, using methods of communication that are inclusive, culturally appropriate and adapted to the community's language needs and decision making.

the decision-making process and implementation of the SAP. Particular attention will be given to indigenous and other vulnerable groups in selecting appropriate mechanisms and process of information dissemination and communication to ensure their full participation.

### **11.3 Communication tools**

KEL will use various communication tools like Print (brochure, leaflet, flyer, newspaper both local and national.), Electronic (FM radio) in disseminating the project related information to the project affected people and the community.

### **11.4 Information disclosure and dissemination**

The draft and final SA and SAP will be disclosed in BPC/KAHEP and World Bank's website and made available to wider audience and national and international levels of stakeholders. At local level, information dissemination and consultation will continue throughout SAP implementation. Information has been disseminated to Affected Persons (APs) at various stages. At the initial stage, the Project Relation Office (PRO) of KAHEP informed potential APs and the general public of the project through conducting mass meetings and land requirement through leaflets and publication in local media outlets and newspapers. In addition, PRO conducted consultations and disseminate information to all APs during these initial stages to create awareness of the project.

Project brochures having details of the project specific information were prepared in Nepali and local languages and distributed to the affected APs, local governments and interested local NGOs and CBOs at this stage and also will be disseminated after finalizing the detail project report. Summary of the major findings of SA and main provisions of the SAP were translated into Nepali and local indigenous languages and were distributed to the participants and interested people before and during public hearing meetings. The brochures provided information on the project alignment, potential impacts and its gravity and steps taken by the project to minimize the impacts. These and similar efforts of information dissemination and disclosures will also be continued during project implementation and operation periods.

At the implementation stage, PRO combining with VDCs and Kabeli Concern Committee will provide information to APs on R&R Policies and features of the RP. Basic information such as sub-project location, impact estimates, entitlements, and implementation schedule will be presented to APs and general public. KAHEP project relation office shall organize and will be responsible for the presentation and dissemination of information sought by APs on related issues. A field team from the project management unit should regularly provide information at the site level to the APs, local government and NGOs as and when required during planning and implementation of RP.

### **11.5 Communications activities**

The communication activities and information dissemination tools to be used prior construction, during construction and operation phases of the KAHEP are given in Table 11-1.

**Table 11-I: Public Consultation and Information Dissemination for KAHEP**

<b>S.N</b>	<b>Stages of the Project</b>	<b>Communication Activities</b>	<b>Medium of Communication</b>	<b>Stakeholders</b>	<b>Status</b>	<b>Responsibility</b>
1	Scoping and TOR stage	FGD, Key Informant, formal and informal consultation	Verbal explanation about the project, Dissemination of leaflet containing about the project salient features and possible impacts	Project affected community/local people, project VDCs and DDCs	<b>Completed</b> A total of 9 public consultations were held at different levels (VDC and district level). Refer: Scoping Document of Kabeli A HEP	Proponent and consultant
2	Environmental and Social Impact Assessment (field study)	FGD, Meetings, Interactions, formal and informal consultation	Print (flyer), Verbal explanation about the project, Dissemination of leaflet containing about the project salient features and possible impacts	People of project affected VDCs (Amarpur, and Panchami of Panchthar district and Thechambu and Nangkhola VDC of Taplejung district)	<b>Completed</b> 14 Consultation and FGDs were conducted in project affected VDCs ( <b>ANNEX D</b> )	Proponent and consultant
3	After preparation of EIA/SA/SAP Study Report	Public Hearing at local, district and central level	public notice, Distribution of draft EIA/SA/SAP reports summary in Nepali	Project affected people/communities/PAFs/VDCs/District and Central level	Three local and district level consultation were carried out in project area and one central level consultation was carried out in Kathmandu.	Proponent and consultant
		Continuation of consultations	Verbal explanation about the project update information	Project affected people/communities/PAFs	Numbers of consultations have been carried out by World Bank, IFC, KEL and HCE teams at different dates (Table 10-5).	Proponent and consultant
4	Implementation stage	FGD, Consultation	Verbal	PAFs	<b>Due</b>	Proponent and consultant

## **CHAPTER 12**

# **IMPLEMENTATION ARRANGEMENTS**

## **12 IMPLEMENTATION ARRANGEMENTS**

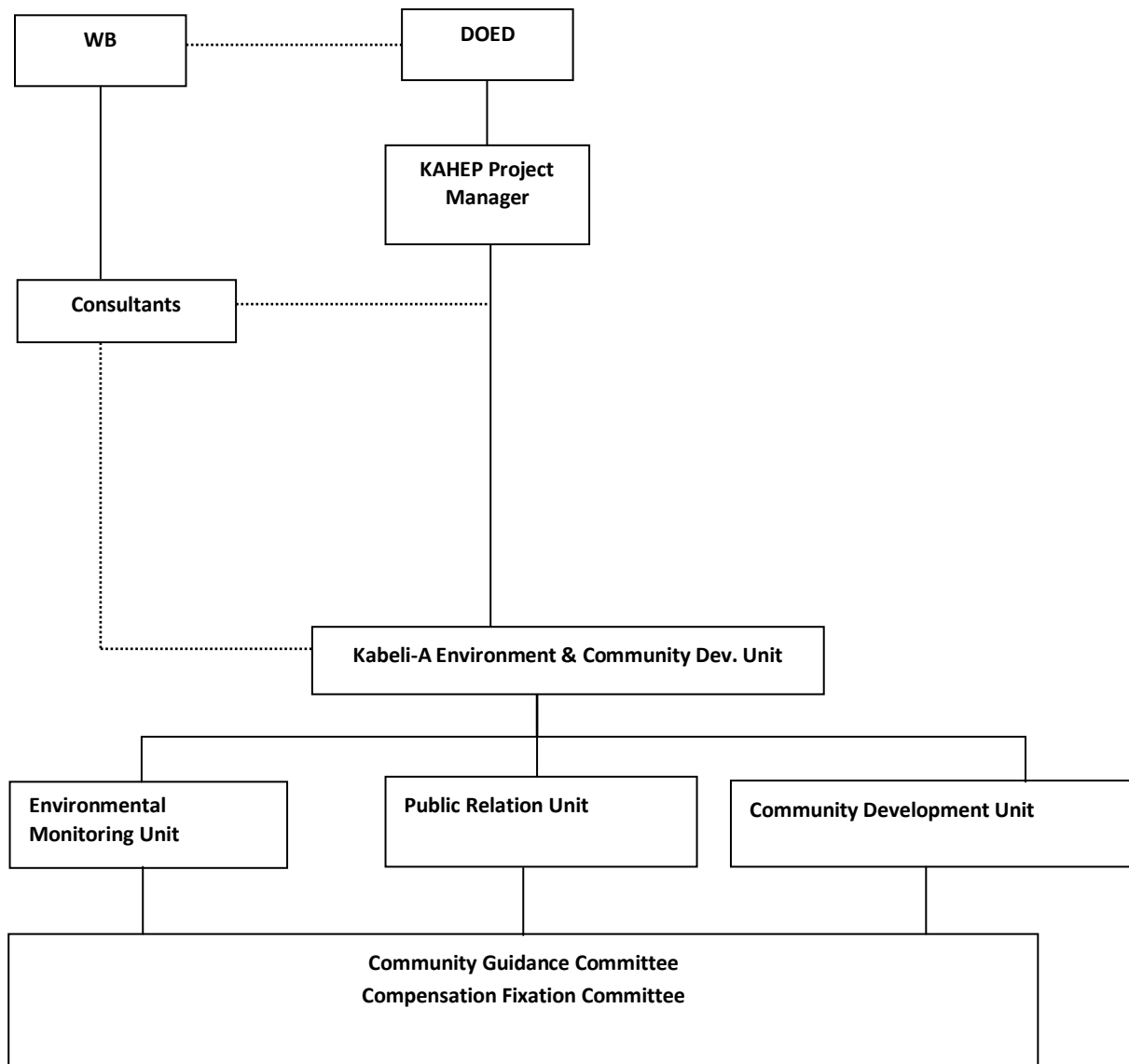
This section outlines the organizational framework to be established for the SAP implementation. As the project authority, BPC will assume overall responsibility for the management procedures as mentioned in the SAP. Key activities to be undertaken to ensure effective implementation of resettlement, compensation and rehabilitation activities are:

- Implementation of procedures to minimize adverse social impacts including acquisition of land and assets throughout the planning, design and implementation phases and accurately record all project-affected persons, by means of census and asset verification and quantification exercises, and the issuing of identification;
- Establishment of systems and procedure for the co-ordination of resettlement and compensation activities;
- Establishment of Community Guidance Committee at VDC level or package level where it is appropriate and practicable to address the social issues associated with the project. The objectives of this participation program will be to: (a) ensure ongoing dissemination of project information to affected households, (b) structure, regulate and strengthen communication between roadside communities, (c) involve affected communities and local government structures in social impact management, grievance resolution and monitoring;
- Distribution of copies of the approved Entitlement Policy, and follow-up community meetings to ensure full comprehension of its contents;
- Capacity-building initiatives to create a supportive environment for the implementation of RAP activities, including training on accepted resettlement and rehabilitation practices, training in the establishment of compensation plans for affected household;
- Co-ordination with other government line agencies like Department of Forestry and Ministry of Local Development to ensure effective delivery of mitigation and rehabilitation support measures; and
- Collaboration with non-governmental agencies to provide grassroots expertise and resources in areas such as project information campaigns, poverty alleviation and income generation projects, and impact monitoring.

### **12.1 Institution arrangement**

From the previous experiences it was noticed that timely engagement of local people through a local organization can facilitate the Resettlement and Rehabilitation work effectively. KAHEP will be the primary agency to plan, implement and monitor the project mitigation and management plan. A comprehensive Environmental Mitigation and Management Plan (EMMP) will be prepared in accordance with the EPA 1997 and EPR 1999.

An organizational setup for SAP implementation is necessary for effective coordination to ensure compliance with policies and procedures, land loss and resettlement activities and implementation of mitigation measures. To ensure the achievement of these activities, organization for SAP implementation and management will occur at both central and district project level.



**Figure 12-1: Organization chart for planning and implementation of EMP and SAP**

*Note: Bold line is the line of command*

**12.1.1 Central level arrangement**

The KEL management will be responsible for overall project coordination and management of SAP implementation and budget arrangement. KAHEP Project manager will lead the overall management of social issues, review and approval of SAP and monitoring of timely and successful implementation of SAP.

**12.1.2 Project level arrangement**

KAHEP will design plans and programs that will be implemented and monitored at project level by the KAECDU after reviewed by Panel of Expert (PoE). The programs will include activities related to social screening; SA; socio-economic baseline survey; preparation of land requirement plan; resettlement compensation and livelihood assistance plan and IVCDP as part of SAP. The KAHEP will set up offices for KAECDU with required number of experienced staff to implement the planned activities and also monitor them routinely. KAHEP will develop a ToR for hiring the PoE and the required number of employees for the KAECDU office detailing about the number of required employees, their expertise, job descriptions and accountability.

Community Guidance Committee (CGC) will be formulated with the representatives (elected or accepted personals from villages) from each of the direct project impact area. A ToR for will be

developed detailing about the number of required for the committee, their expertise, job descriptions and accountability. This organization will be supported by the project and will work in close co-operation with the DDCs, VDCs, DFOs, CFUGs and NGOs during the implementation phase. The KAECDU will liaise with all relevant local GOs and NGOs.

## **12.2 Institutional responsibilities**

The major responsibilities of each institutional unit for the SAP implementation are described below:

### **Project management**

- Responsible for overall project coordination and management of SAP implementation and budget arrangement
- lead the overall management of social issues, review and approval of SAP and monitoring of timely and successful implementation of SAP

### **KAECDU**

- Implement and monitor plans and programs designed by KAHEP at project level
- Implement and monitor activities related to social screening; SA; socio-economic baseline survey; preparation of land requirement plan; resettlement compensation and livelihood assistance plan and IVCDP as part of SAP
- Conduct community related mitigation measures on behalf of the proponent
- Establish strong links into the community, and be kept informed of all project activities which affect the community.
- Assess the needs of local community development and facilitate Project management for the implementation of CSR plan and benefit sharing measures

### **Community Guidance Committee**

- Link and communicate the Project with local community in an organized way.
- Work in close co-operation with the DDCs, VDCs, DFOs, CFUGs and NGOs during the implementation phase
- Ensure ongoing dissemination of project information to affected households,
- Structure, regulate and strengthen communication among the communities,
- Involve affected communities and local government structures in social impact management,

## **12.3 Grievance redress mechanism**

The project company will establish grievance redress mechanism to allow PAPs to appeal any disagreeable decisions, practices and activities arising from compensation for land and assets. There is the potentiality for two types of grievances: grievances related to land loss and grievances related to compensation or entitlement.

All grievances relating to the project including land purchase and compensation or entitlement will be referred to the Project Grievances Redress Cell, Grievance Redress Committee (GRC) at local level, Grievances Committee (GC) at central project level and formal court of appeal system.

The project company will designate a Grievance Redress Officer (GRO) to receive routine emerging complaints of PAPs and stakeholders with clear responsibility to address their concerns. PAPs as well as local people can lodge their complaints at this cell related to acquisition and construction related activities. Grievance recording register will be established at KAHEP site offices and all grievances, filed orally or in writing, will be registered.

The local level GRC will be comprised of GRO, one representative from Kabeli Concern Committee and one representative from the civil contractors. The chair and the convening person will be the

GRO and this committee will meet every week or as deemed necessary to review all cases referred to by the cell.

The central project level GC will be comprised of Project Manager, Chief District Officer (CDO) and Chairman of the Kabeli Concern Committee (KCC). The CDO and the Chairman of KCC will be the independent members of this committee. This committee will convene as deemed necessary and the Project Manager will be the chair and the convening person. The GC will look after the grievances that cannot be resolved at the site by GRO, and GRC.

Proposed mechanism for grievance resolution is given below:

**Stage 1:**

Complaints of PAPs on any aspect of compensation, or unaddressed losses shall in first instance be settled verbally or in written form in field based project office. The complaint can be discussed in an informal meeting with the PAP by the concerned personnel to settle the issues at the local level to GRO. The community consultation, involvement of social and resettlement experts will facilitate the process in this regard. All the grievances will be reviewed and the decision will be made and informed in writing to the complaining party within two weeks of receipt of the complaint.

**Stage 2:**

If the complaining party is not satisfied with the response from the cell, the complaining party can appeal to the GRC. While lodging the complaint, the complaining party must produce documents to support his/her claim. All the grievances will be reviewed and a decision will be informed to the concerned party within two weeks of the receipt of complaint.

**Stage 3:**

If the complaining party is not satisfied with the response from the GRC, the complaining party can appeal to the GC. While lodging the complaint, the complaining party must produce documents to support his/her claim. All the grievances will be reviewed and a decision will be informed to the concerned party within four weeks of the receipt of complaint.

Any complaining party can exercise its constitutional right to approach the court of law at any time if he/she chooses to do so.

## **12.4 Present Status of Implementation**

At field project level, the project has already established a Public Information Centre (PIC) at site. Currently, the Project has employed 11 local people in different positions viz gauge reading-4, nursery-1, Public Relation Assistants-3, Overseer-1, Supervisor-1 and Office Assistant. Three Public Relation Assistants (PRAs) are deployed by the Project in different locations of the Project area. The roles of PRAs are important for timely communication, information dissemination, identification and documentation of issues and grievances and resolving them on time at local level. In other words, these are the front line staff to work as mediator between Project and the people. The Key roles of PRA include, however, not limited to the followings:

- Disseminate project related information on a continuous basis to the people;
- Collect information pertaining to peoples' grievances and issues and take them to proper forum/ authority for timely resolution;
- Hold periodic meetings of the local people including APs and the concerned committee to manage local level contentious issues;

A project introduction and a SAP activities till now has been developed in booklet form and distributed among the communities and updated project and SAP activities will be provided through publication media from the PIC



## **CHAPTER 13**

# **MONITORING AND EVALUATION**

## 13 MONITORING AND EVALUATION

Regular monitoring of SAP implementation will be conducted by the implementing agency as well as by an independent external monitoring and evaluation organization or individual designated by Ministry of Energy (MoEn) to verify:

- Actions and commitments described in the SAP are implemented fully on time;
- Eligible affected people received their full compensation entitlements within agreed timeframe;
- SAP actions and compensation measures are effective in sustainably enhancing (or at least restoring) affected peoples' living standards and income levels;
- Complaints and grievances lodged by project affected people are followed up and that where necessary, appropriate corrective actions are implemented; and
- If necessary, changes in SAP procedure are made to improve delivery of entitlements to project affected people.

For the KAHEP, primary monitoring responsibility will rest with KEL. KEL will establish KAECDU to undertake social and environmental monitoring of the project.

### 13.1 Internal

The internal monitoring will be carried out by KAECDU in a regular basis to assess progress against the schedule of action defined in the SAP. Activities to be undertaken by KAECDU will include;

- Liaison with the SAP implementation team, land negotiation and purchase team, construction contractor and project affected communities to review and report progress against the SAP;
- Assess the progress on implementation of action and commitment describe in SAP;
- Verification that land loss and compensation entitlements are being delivered in accordance with the SAP;
- Verification that agreed measures to restore or enhance livelihood are being implemented;
- Identification of any problem, issue or cases of hardship resulting from the resettlement process;
- Assess project affected peoples' satisfaction with resettlement outcomes through informal village head and household interviews;
- Collect record of grievances, and follow-up to check that appropriate correction action have been undertaken and that outcome are satisfactory; and
- Prepare brief quarterly progress and compliance report for KEL and external monitoring team, World Bank and MoEn.

### 13.2 External

An independent external monitoring and evaluation organization or individual designated by MoEn will carry out six-monthly review of the SAP implementation. External monitoring will be conducted during the implementation period to provide independent verification that timely compensation payment and rehabilitation assistance are provided to those entitled, and that grievances are addressed in a prompt manner to resolve the cases. An evaluation of the achievement of the objective of SAP activities- compensation and restoration or improvement of PAP living standards- will be conducted as part of the project midterm review and before the project closure.

Activities that will be undertaken by the consultants include:

- Review of internal monitoring procedures and reporting to ascertain whether these are being undertaken in compliance with SAP;

- Review of internal monitoring record as a basis for identifying any areas of non-compliance, any recurrent problems, or potentially disadvantaged groups or households;
- Review grievances record for evidence of significant non-compliance or recurrent poor performance in resettlement implementation;
- Discuss with KEL, KAECDU staff, and others involved in land negotiation and purchase , compensation disbursement or livelihood restoration to review progress and identify critical issues;
- Survey affected households and enterprises to gauge the extent to which project affected peoples' standard of living and livelihood have been restored or enhanced as a result of the project;
- Access overall compliance with the SAP requirements; and
- Prepare a summary monitoring report for KEL (KAECDU), MoEn and World Bank on progress of SAP implementation, any issue arising and any necessary corrective actions.

**Table 13-1: SAP monitoring framework**

SN	Parameters	Indicators	Methods	Frequency	Responsibility
1	Performance against SAP	Progress in signing land purchase agreements Payment of compensation entitlements completed Amended land ownership certificate Social investment activities initiated	Review of land purchase and compensation records, record at land revenue office, consultation with PAP,	Quarterly	KAECDU, M&E Expert
2	Restoration of income and livelihood	Resumed pre-project income/livelihood activities Number of PAP received agriculture assistance/training Change in income and expenditure pattern of the PAP	Record of income and yield achieved, social survey report	Six month	KAECDU, M&E Expert
3	Level of PAP satisfaction	Response of PAP about their pre and post project quality of life and livelihood If PAP experienced any hardship as a result of project	Discussion with PAP	Monthly	KAECDU, M&E Expert
4	Consultation and grievances	Understanding of PAP about the land purchase and compensation process as well as avenues for expressing a grievances Identified grievances and outcomes	Discussion with PAP, record review	Ongoing	KAECDU, M&E Expert
5	Public health, sanitary condition and safety	Status of health institution, frequency and type of disease observed, scatter waste in the area	Review of health institution record, interaction with health practitioners and locals, observation	Twice a year	KAECDU, M&E Expert
6	Employment status	Number of PAP and locals engaged in construction workforce	Interaction with locals and review of employment record	At least once a year	KAECDU, M&E Expert
7	Public facilities and infrastructure	Improved and new infrastructures in the area	Site observation and discussion with locals	Once a year	KAECDU, M&E Expert

8	Training and skill development	List of training provided and change in skill level	Record review, discussion with PAP and locals	Once a year	KAECDU, M&E Expert
9	Status of women children and disadvantaged group	Satisfaction of these groups	Interaction and discussion with these groups	Once a year	KAECDU, M&E Expert
10	Anti socio-cultural activities	Decreased/increased social abuse and or offences	Police record and discussion with locals	Twice a month	KAECDU, M&E Expert

### 13.3 Panel of expert

A Panel of Experts (POE), comprising an environmentalist and sociologist is established as per the World Bank Operational Policy on Environmental Assessment, Involuntary resettlement of Indigenous people for the project preparation phase. The Panel shall, inter alia, review, comment, provide suggestions or recommendations as it deems necessary and appropriate, or as requested by the KEL or its Consultant on any subject it considers vital to the successful completion and approval of the environmental and social studies of the project. The key tasks of the POE are to:

- Carry out an independent review of the EIA and SA processes and steps followed and provide guidance on the treatment of environmental and social issues associated with the Project at critical stages of EIA and SA;
- Review the methodology, work-plan, approaches to consultations proposed by the EIA and SA team and provide expert opinion and advice on them as well as review EIA and SA reports;
- Provide specialized guidance on the main and critical environmental and social issues of the Project such as environmental flows, cumulative impact assessment, and construction stage impacts, and advise the EIA and SA teams on the preparation of the Environmental Management Plan (EMP) and SAP of the KAHEP in compliance with relevant national and World Bank policies;
- Advise KEL on incorporation of the environmental and social findings and recommendations into the project and on ensuring adequate interaction between the Engineering Consultant and EIA & SA teams, providing timely and strategic social and environmental inputs to the Engineering Consultant in potential conflict areas with locals and helping avoid unnecessary delay in the implementation of EMP and SAP;
- Assess and advise on incorporating the environmental and social obligations in bidding documents and contract documents; and
- Review and advice on the implementation of the agreed and approved social and environmental action plans.

The POE shall provide report to KEL including the topics reviewed, area of concern, request for additional analysis and conclusion and recommendation for action, if any. The KEL will forward the report to the financing agencies (World Bank and any others), including a statement of actions taken on the recommendations of the previous meeting of the Panel.

### 13.4 Implementation schedule

The implementation of SAP is targeted for completion at the end of 2014. Furthermore, community related works and resolution of issues shall continuously be undertaken until completion of SAP implementation. Implementation of SAP begins upon its approval by World Bank. Major activities during SAP implementation include final determination of costs for permanent land loss as per SAP policy of the project; documentation, processing and payment of relocation compensation, implementation of IVCDP, health and safety related programs, CSR activities; and supervision and

monitoring of SAP. External monitoring team shall be engaged to oversee the implementation of the SAP to ensure that its provisions are properly followed. The detail of the implementation schedule of SAP is presented in the following Table 13-2. The detail implementation schedule of the project is presented in ANNEX F.



## **CHAPTER 14**

### **COST AND BUDGET**

## 14 COST AND BUDGET

### 14.1 Cost estimation

All costs for SAP implementation as summarized in Table 14-4 will be borne by the project proponent (KAHEP), other than the cost allocated for the mitigation of construction related impacts that will be borne by the project contractor. It will be responsibility of the proponent to make the contractor responsible for the allocation of cost for the construction related impacts as mentioned in the Table 14-4. The personnel involved in SAP monitoring will be remunerated by the proponent. Further, the proponent will be responsible to provide all the logistic support for the regular SAP monitoring. All financial responsibility and authority for SAP implementation will be with the project management of KAHEP. The project management will make a contractual document for the allocation of budget before the implementation of the project. Estimated cost for socio-economic and cultural environmental mitigation measures, enhancement measures and monitoring and evaluation activities are described below.

#### 14.1.1 Permanent loss

##### Cost estimation of private land

There are different categories of land in the project area. Most of the affected land by land use is *Pakho Sim* followed by *Khet Sim* and *Khet Doyam*. During field work, local key informants and knowledgeable persons were consulted to obtain land price of the area. Some records of present land transaction were also reviewed. Cost estimation of private land was made through FGDs and individual consultation with the property owners. The cost of land varies according to land quality and land use. The estimated present land value for the project area is higher than the government valuation for land registration. The total cost estimated for the private land is NRs.11,076,641.00 (Table 14-1).

**Table 14-1: Estimated cost for private land**

SN	Land type	Affected land area (ha)	Rate/ha (NRs)	Total amount (NRs)
1	<i>Pakho Sim</i>	5.573	1,376,200.00	7,669,563.00
2	<i>Khet Sim</i>	1.86	1,572,800.00	2,925,408.00
3	<i>Khet Doyam</i>	0.245	1,966,000.00	481,670.00
<b>Total</b>		<b>7.678</b>		<b>11,076,641.00</b>

Note: *Pakho*: Unirrigated land and *Khet*: Irrigated land

##### Cost estimation of private trees

During field survey, the tree owners and local key informants were consulted to estimate price of affected trees. The local valuation was done on the basis of types, girth, height and productivity of the trees. The estimation is based on the present market value and productivity of trees. A total of 141 numbers of trees and poles will be lost from the private land due to permanent acquisition. The estimated cost of affected trees is given in Table 14-2.

**Table 14-2: Estimated cost of loss of trees in Private land**

Tree class	Unit Price	Affected trees	Total amount (NRs)
Tree (Timber and Fuel wood)	10000/Tree	67	670,000.00
Poles (Timber and Fuel wood)	1000/Poles	74	74,000.00
<b>Total</b>		<b>141</b>	<b>744,000.00</b>



### 14.1.2 Cost estimated for mitigation measures of loss of access to NTFPs

A total amount of NRs. 2,967,750.00 is estimated for the mitigation measures for the possible loss of access to NTFPs. NRs. 1,842,750.00 has been allocated for compensatory plantation, NRs. NRs. 800,000.00 has been allocated for clearance and stockpiling of felled forest products, NRs. 100,000.00 has been allocated for the technical and financial assistance to the affected user's groups and NRs. NRs. 225,000.00 has been allocated for the supervisory works. The total estimated cost has been sorted as a part of biological impact mitigation in the EMP of the project.

**Table 14-3: Cost estimated for mitigation measures of possible loss of access to NTFPs**

Items	Estimated amount (NRs.)
Compensatory afforestation as per the Forest Guideline, 2006, calculations as per forest norms	1,842,750.00
Clearance and stockpiling of the felled forest products	800,000.00
Joint supervision with the official of district forest to mark the trees and poles for felling	225,000.00
Technical and financial assistance to the affected community and leasehold forest user group	100,000.00
<b>Total</b>	<b>2,967,750.00</b>

### 14.1.3 Cost estimated for mitigation measures for loss of fishing

An estimated amount of NRs. 500,000.00 has been allocated as an alternative to fishing support to the affected communities through skill training and capacity development. Additionally, about NRs. 5,699,914.00 has been allocated for the construction of fish ladder for the migratory fish and the amount is included in the project civil cost.

### 14.1.4 Cost estimated for mitigation measures of socio-cultural impacts

An estimated amount of NRs. 4,500,000.00 has been allocated for the canalization of the environmental flows released in the stretch of the affected cremation sites, and *Panchayan Shivalaya* temple for the cultural and religious survival. An estimated amount of NRs. 1,350,000.00 has been allocated for improvement of existing physical cultural resources as needed.

### 14.1.5 Construction related impacts

Project contractors in the construction will be made responsible for the construction related mitigation measures that includes health care facilities also. In addition, an estimated lump sum amount of NRs. 5,000,000.00 has been allocated for the mitigation measures for the construction related impacts.

### 14.1.6 Cost estimated for capacity and skill development programs to PAFs and affected communities

An estimated lump sum amount of NRs. 2,000,000.00 has been allocated for the capacity and skill development programs for PAFs and affected communities.

### 14.1.7 Cost estimation for IVCDP

The IVCDP include generic and specific measures. For generic measures agriculture support program, skills training related to construction works, preferential employment strategy, capacity building program, and health and safety programs, and for specific measures women and Indigenous People focused programs will be launched.

An estimated cost of lump sum NRs. 3,500,000.00 has been allocated for both generic and specific measures for effective implementation of the IVCDP. The cost is only the estimated value at this phase based on the expert judgment and not yet finalized, as the project is its initial phase the activities/items under each programs for both the measures have not been calculated. The cost will be finalized after consultation with the project team, local people and local organization.

#### 14.1.8 Cost estimation for community development initiatives

A total lump sum amount of NRs. 3,000,000.00 is separated for the community development initiatives during construction phase of project.

#### 14.1.9 Cost estimation for monitoring and evaluation

The internal monitoring will be carried out by KEL (KAECDU). An estimated amount of NRs. 1,000,000.00 has been allocated in lump sum for the internal monitoring. The staffing and other logistic support for the internal monitoring will be an integral part of overall Environmental Management Plan as defined in EIA of KAHEP.

#### 14.1.10 Total cost estimation

Total cost estimation under various heading is given in the Table 14-4.

**Table 14-4: Total cost estimation for SAP implementation**

SN	Description	Estimated Cost (NRs.)	Remarks
<b>A</b>	<b>Mitigation and enhancement action</b>		
<b>1</b>	<b>Mitigation cost for permanent loss of land</b>		Included in project civil cost
	Cost estimated for permanent acquisition of private land (7.678 ha)	11,076,641.00	
	Cost estimated for loss of private trees and poles (141 numbers)	744,000.00	
	<b>Forest Land</b>		Also a part of biological impact mitigation
	Compensatory afforestation as per the Forest Guideline, 2006, calculations as per forest norms	1,842,750.00	
	Clearance and stockpiling of the felled forest products	800,000.00	
	Joint supervision with the official of district forest to mark the trees and poles for felling	225,000.00	
	Technical and financial assistance to the affected community and leasehold forest user group	100,000.00	
<b>2</b>	<b>Mitigation cost for loss of fishing</b>		
	Construction of fish ladder	5,699,914.00	Also a part of biological impact mitigation
	Skill training and capacity development to impacted communities	500,000.00	
<b>3</b>	<b>Mitigation cost for socio-cultural impacts</b>		
	Provision for water supply arrangements in the event of affects to on use water sources on permanent basis	3,500,000.00	Included in EMP of EIA
	Improvement of existing physical cultural resources as needed	1,350,000.00	
<b>4</b>	<b>Mitigation cost for construction related impacts</b>	5,000,000.00	
<b>5</b>	<b>Cost estimated for capacity and skill development programs to PAFs and affected communities</b>	2,000,000.00	
<b>6</b>	<b>Cost estimated for IVCDP</b>	3,500,000.00	
<b>7</b>	<b>Cost estimated for community development initiatives</b>	3,000,000.00	
<b>B</b>	<b>Monitoring and evaluation</b>		
<b>8</b>	<b>Cost estimated for monitoring and evaluation</b>	1,000,000.00	

<b>9</b>	<b>Management costs for program implementation</b>		Included in EMP of EIA
<b>10</b>	<b>Total*</b>	<b>28,170,641.00</b>	
	<b>Total Contingency cost (5% of total estimated cost)</b>	<b>1,408,532.05</b>	
	<b>Total SAP implementation cost</b>	<b>29,579,173.05</b>	

Note: \* Total cost excludes cost already included as a biological impact mitigation cost and EMP of EIA of KAHEP as coated in above Table.

**In words: NRs. Twenty Nine Million Five Hundred Seventy Nine Thousands One Hundred Seventy Three Only.**

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GoN (1992)	<i>Electricity Act, 1992</i> , Government of Nepal, Kathmandu, Nepal
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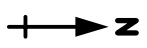
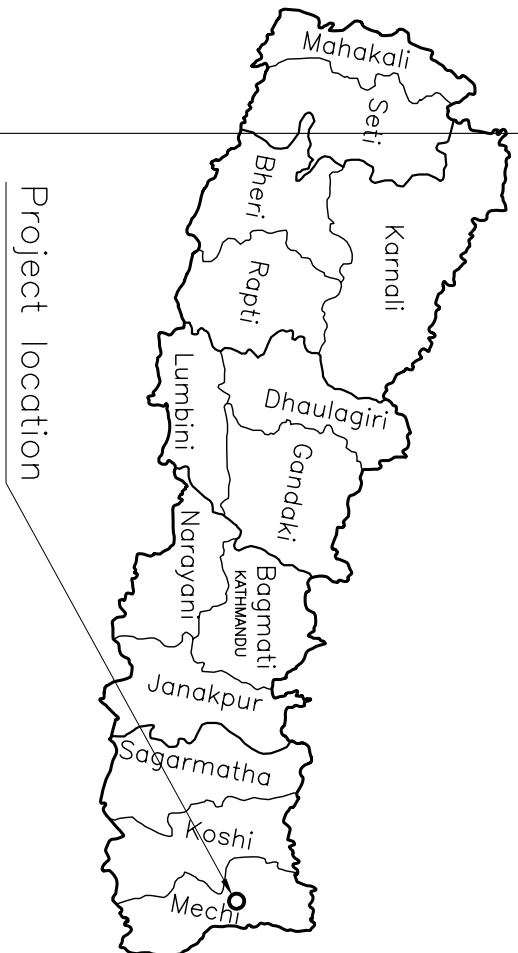
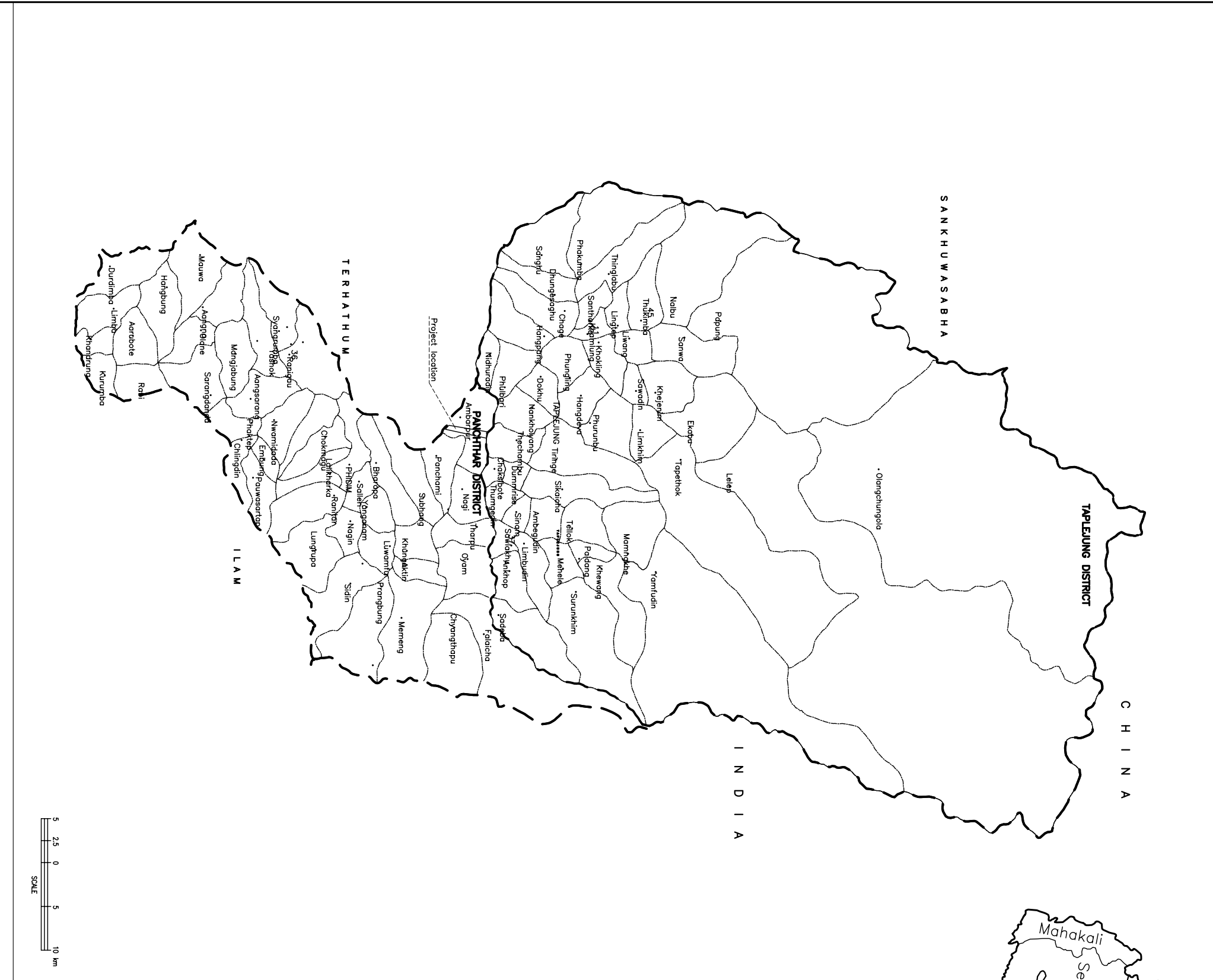
**ANNEX A**

**PROJECT LOCATION MAP**

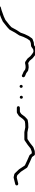


**KABELI-A HYDROELECTRIC PROJECT**  
**SAP**

JULY 2013





**LEGEND**

-  District boundary
-  VDC boundary
-  Project location boundary

KABELI – A HRDROELECTRIC PROJECT

**PROJECT LOCATION**

June 2010

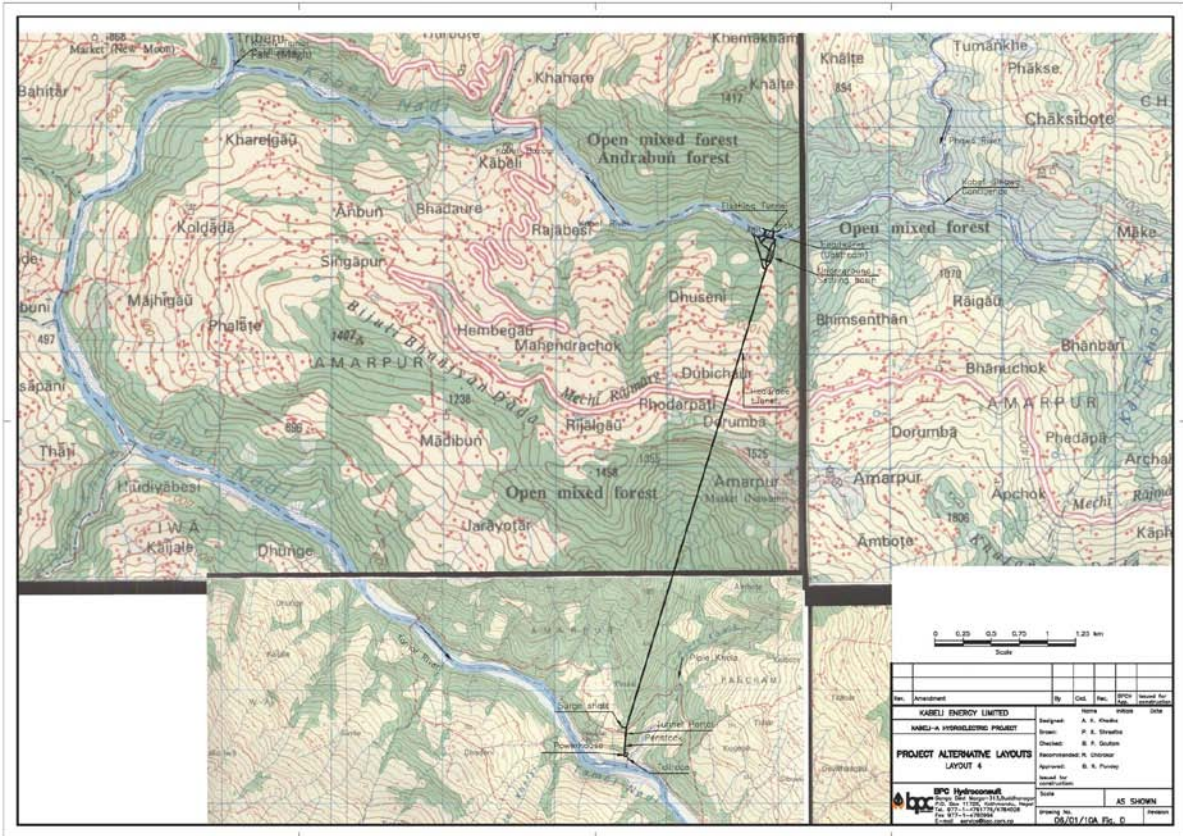
Figure 1

**ANNEX B**

**PROJECT LAYOUT MAP**

**KABELI-A HYDROELECTRIC PROJECT**  
**SAP**

JULY 2013



Layout of KAHEP

## **ANNEX C**

# **SALIENT FEATURES OF THE PROJECT**

**KABELI-A HYDROELECTRIC PROJECT**

**SAP**

JULY 2013

**TABLE: SALIENT FEATURES OF KAHEP**

SN	Items	Description												
1.	<b>Project Name</b>	Kabeli-A Hydroelectric Project												
2.	<b>Location</b>	Amarpur and Panchami VDCs of Panchthar District and Thechambu and Nangkholyang of Taplejung District												
2.1	<b>Project Boundaries</b>	<table> <tr> <td>East</td> <td>87° 45' 50"</td> <td>E</td> </tr> <tr> <td>West</td> <td>87° 40' 55"</td> <td>E</td> </tr> <tr> <td>North</td> <td>27° 17' 32"</td> <td>N</td> </tr> <tr> <td>South</td> <td>27° 13' 41"</td> <td>N</td> </tr> </table>	East	87° 45' 50"	E	West	87° 40' 55"	E	North	27° 17' 32"	N	South	27° 13' 41"	N
East	87° 45' 50"	E												
West	87° 40' 55"	E												
North	27° 17' 32"	N												
South	27° 13' 41"	N												
3	<b>Type of Development</b>	Peaking Run-of-the-river (PROR)												
4	<b>Hydrology at intake</b>													
	Catchment area	862.3 km <sup>2</sup>												
	100 year flood (Q <sub>100</sub> )	1860 m <sup>3</sup> /s												
	Probable maximum flood (Q <sub>1000</sub> )	2650m <sup>3</sup> /s												
	Mean monthly flow	61.4 m <sup>3</sup> /s												
	40 percentile flow	37.73 m <sup>3</sup> /s												
	Monsoon Design Discharge	40 m <sup>3</sup> /s												
5.	<b>Headworks</b>													
	Type/Length of weir/height	Barrage with 4 radial gates; 3 weir bays and one sluice bay												
	Full supply level	575.3 m												
	Peaking reservoir net live storage capacity	0.335 million m <sup>3</sup>												
	Crest elevation	561.5masl for barrage bays and 561.0 for sluice bay												
	Gate Size	10 m Width * 9.0 m Height each												
	Intake type	Tunnel intake on left bank												
	Intake size at trash rack	2 nos. 5.4m Width * 5.8m Height												
	<b>Riparian/downstream Release</b>	<b>0.86 m<sup>3</sup>/s</b> (10% of average monthly minimum)												
6.	<b>Diversion during construction</b>													
	Diversion flood (5 year dry season flow)	154 m <sup>3</sup> /s												
	Diversion tunnel	240m long; 4.8m diameter D-shaped tunnel												

SN	Items	Description
	Coffer Dams	80m at upstream side 90m long at downstream side
<b>7.</b>	<b>Approach Tunnel from Intake to Settling Basin</b>	
	Number	2 (1 each starting from either intake)
	Length	80.9 m
	Type	Inverted D shaped; Concrete lined
	Cross section	Internal Finished Diameter 3.2 m
<b>8.</b>	<b>Settling basin</b>	
	Type	Underground settling basin
	Number	2 basins with 2 hoppers in each
	Length of uniform section	76 m
	Total length including transition	113 m
	Width	15.8 m each
	Height	17 m
	Flushing system	S4 system
	Flushing tunnel length and size	150 m long; 2.25 m D-shaped tunnel with 1.75 m dia. MS pipe
<b>9.</b>	<b>Access tunnel</b>	
	Length	437 m
	Type	Inverted D shaped; shotcrete and rock bolt lined
	Cross section	Internal diameter 4 m
<b>10.</b>	<b>Waterways</b>	
<b>10.1</b>	<b>Covering Pair Tunnels from outlet of settling basin to start Headrace Tunnel</b>	
	Length	60.2 m
	Type	Inverted D shaped; Concrete lined
	Cross section	Internal Finished Diameter 3.2 m
<b>10.2</b>	<b>Headrace Tunnel</b>	

<b>SN</b>	<b>Items</b>	<b>Description</b>
	Length after pair tunnels	4327 m
	Type	Inverted D shaped; Shotcrete lined and Concrete lined
	Cross section	Internal Finished Diameter 5.65 m
<b>10.3</b>	<b>Surge Shaft</b>	
	Type	Underground and exposed to surface
	Internal diameter	10 m
	Height	51.7 m
<b>10.4</b>	<b>Penstock</b>	
	Material	Mild steel
	Length before bifurcation	223.3 m
	Length after bifurcation	27.2 m each
	Internal Diameter	3.55 m
	Shell Thickness	10-20 mm; partly ribbed
<b>11</b>	<b>Powerhouse</b>	
	Powerhouse type	Semi-underground
	Powerhouse size (L*B*H)	34.8 x 18.6 x 31.8 m
<b>12</b>	<b>Tailrace</b>	
	Design tailwater level	458.5 masl
	Length	93.1 m
	Cross-section	4.9 m wide * 4.65 m high Rectangular box culverts
	Longitudinal slope	1 in 1500
	100 year flood (Q100) in Tamor River	5800 m <sup>3</sup> /s
	Probable maximum flood (Q1000) in Tamor River	8260 m <sup>3</sup> /s
<b>13.</b>	<b>Turbine</b>	
	Turbine type	Vertical Axis Francis
	Number of units	2
	Rated speed	375 rpm

<b>SN</b>	<b>Items</b>	<b>Description</b>
	Turbine Axis Level	457.64 masl
<b>14.</b>	<b>Power and energy output</b>	
	Gross head	116.8 m
	Rated net head	111.64 m
	Design discharge	37.73 m <sup>3</sup> /s
	Installed capacity	37.6 MW
	Annual estimated energy per excluding 6% outage	201.0 GWh
	Firm energy excluding outage	149.4 GWh
	Secondary energy excluding outage	51.6 GWh
<b>15.</b>	<b>Transmission line (Not part of the project)-to be built by NEA</b>	
	Voltage	132 kV
	Length	77 km
<b>16.</b>	<b>Access road</b>	
	To headworks	7.4 km from Mechi highway
	To powerhouse	15 km from Bhanuchowk at Mechi Highway
<b>17.</b>	<b>Project Cost</b>	
	Total cost	70.84 Million US\$
	Per kW cost	1884 US\$
<b>18.</b>	<b>Financial analysis</b>	
	Net present value (NPV)	13.09 Million US\$
	Simple payback period	6.9 years
	Return of interest (RoE)	15.38 %
	Internal rate of return (IRR)	12.71 %

Source: UFSR 2011 and Additional Report to UFSR 2011



## **ANNEX D**

# **SUMMARY OF FOCUS GROUP DISCUSSIONS**

**KABELI-A HYDROELECTRIC PROJECT**

**SAP**

JULY 2013

## Summary of the FGD findings

A total of 14 FGDs with the local people have been conducted in different location of the project areas to identify the various issues related to the hydropower project development and its socioeconomic consequences and corresponding mitigation measures. A total of 251 individuals of representing different impact areas and groups such as dam site, dewatering zone, access road, powerhouse site, CFUG, LFUG, Dalits, Indigenous Peoples (IPs) and women participated in the FGDs. Out of the 14 FGDs, 2 were with women, 1 with Dalit, 3 with IPs, 1 with Kabeli Concern Committee, 1 with CFUG, 1 with LFUG, 1 with local school teachers and the rest 4 FGDs were conducted with mixed group comprising of male, female, IPs, Dalit, Bahun, Chhetri and so on.

Land acquisition and mode of compensation, livelihood related issues due to the loss of land, dewatering, prior information dissemination practices, ILO 169 and rights of the IPs, rural electrification, current uses of Kabeli river, perceptions towards project, socio-cultural practices associated with River Kabeli, local development needs, likely impacts due to the various project structures and corresponding mitigation measures were the major issues discussed during the FGDs. The participants freely discussed on the issues and expressed their ideas, views, suggestion, and comments on the various components of the project. The moderator (study team member) introduced the issues and agendas of the discussion and kept the discussion going, and tried to prevent domination of the discussion by a few participants.

SN	FGDs and Consultation Meetings Held	Date	Participants								
			Sex		Caste/Ethnicity			Occupation			Total
			M	F	Br/Ch	IP	Dalit	Primarily farming +supplementary fishing	Job and business	Other (leaders, school teacher)	
1	Amarpur-6, Women	30/09/2010	-	14	14	-		14			14
2	Thechambu-5, Downstream community	01/10/2010	14	02	03	13	-	07	04	05	16
3	Amarpur-6 Community Forest	02/10/2010	25	01	12	13	01	24	-	02	26
4	Amarpur-8, Downstream community	03/10/2010	11	07	07	08	03	18			18
5	Amarpur-6 Kabeli Concern Group	04/10/2010	22	-	13	09	-	18		04	22
6	Amarpur-9, Pinase affected communities of Panchami VDC	05/10/2010	21	03	08	15	01	23	-	-	23
7	Amarpur-9, Pinase affected Majhi indigenous community and Leasehold forests, Amarpur VDC	05/10/2010	11	06	01	16	-	17			17
8	Nangkholyang-5, affected communities	07/10/2010	27	11	10	28	-	25	05	08	38

9	Nangkholyang-5, School teachers	21/10/2010	06	-	03	03				06	06
10	Thechambu-5 Indigenous peoples and VDC representatives	08/10/2010	25	02	05	21	01	21	06	-	27
11	Thechambu-5 women group	08/10/2010		07	01	06		07			07
12	Amarpur-6, Indigenous peoples of four affected VDCs	08/10/2010	19	-	01	18		15	03	2	20
13	Dalit people of Amerpur VDC	09/10/2010	7	3			10	8	2		10
14	Amarpur-9 Pinase, Consultation Meeting with Majhi Indigenous Community	05/10/2010	10	7		17		17			17
	<b>Total</b>		<b>188</b>	<b>63</b>	<b>78</b>	<b>167</b>	<b>16</b>	<b>214</b>	<b>20</b>	<b>27</b>	<b>251</b>

\*M=Male, F=Female, Br=Brahmin, Ch=Chettri, IP=Indigenous People

### Focus Group Discussion with the Representatives of the Project Affected VDCs of Taplejung and Panchthar Districts

The FGD meeting was organized by the SA consulting team by giving a prior verbal notice through a runner to the entire project affected VDCs. The main objectives of FGD were to collect information on socio-cultural landscapes, human-environment interactions, and livelihood practices, the views of local people towards the project, their perceptions, aspirations and expectations. FGDs were organized to collect the information on local development and their felt needs, their roles on project implementation, possible mitigation measures and institutional arrangements. Separate FGDs were organized for indigenous peoples, women, *Dalits* and affected households and other marginalized groups as they may have different agendas, interests and aspirations than the dominant groups. The following table gives the details of FGDs and consultation meeting conducted. However, the purpose of the focus group discussion meeting was:

- To provide factual information on the project location, particularly the main project structures such as dam, tunnel, adit portals, powerhouse, surge tank, tailrace and the project access roads besides tentative locations of the quarry sites, construction camps and operation camps of the project.
- To clarify the objective of the Project SA and its procedures
- To provide potential impacts of the project from technical considerations during project construction and operation in the project area's physical, biological, social, socio-economic and cultural domain.
- To collect information on the project areas physical, biological and socio-economic and cultural environments from the local peoples' perspective

- To collect opinion of the people on the project
- To get feedback on the potential impacts of the project in the eyes of the local people particularly on the local infrastructure, social norms and culture and on the physical and biological environments
- To solicit opinion of the local people on the alternative mitigation measures to abate, or avoid the potential impacts
- To solicit opinion of the local people with regard to the development aspiration of the project.

The focus group discussion meetings were non-formal meetings. The meetings started with the consent of the members present. To start the meeting, lead member of the consulting team first introduced the consulting members with a note on the objective of the meeting. Then the project layout and its different components and their physical location in the field were explained with details of the type of construction and operation activities of the project. Then the forum was opened for public debate on the different issues.

**Community/groups Consulted:** Downstream community

**Venue:** Amarpur-8, Anpegaund (Simle)

**Date:** 17 Ashoj, 2067 (October 03, 2010)

**Summary of the FGD:**

<b>Perception towards the project:</b> Local people are positive towards the project.			
<b>Major themes and issues discussed</b>		<b>Major themes and issues raised</b>	<b>Suggested mitigation measures/expectations</b>
<b>Baseline information</b>	Demographic	Most of the downstream communities partially dependent on fisheries are Indigenous peoples and <i>Jogi</i> .	
	Socio-cultural		
	Settlement pattern	Scattered, thatched roof house, more slope village	
	Access to natural resources	Easy access	
	Others	<ul style="list-style-type: none"> <li>• Some of the household of <i>JogiDanda</i> can sustain for only 2 months on their farming production</li> <li>• But the households of <i>Anpegaunda</i> won at least 5 to 6 <i>Ropani</i> (0.25-0.30 ha) land and they can sustain for 5 to 6 months on their production</li> <li>• No one employed in civil service/army/policy</li> <li>• Downstream communities lack socio, economic and political power to seek development benefits</li> </ul>	
<b>Development infrastructure</b>	Schools	High schools are located at distance	Support schools
	Health and sanitation	Health posts are located at distance (about 2 hrs walk). Common disease diarrhea, fever, Uterus prolepsis, gastric etc. The health posts can be characterized as frequently incompletely staffed and poorly equipped. People have toilet facility	Support health posts
	Drinking water	Severe problem of drinking water	Support supply of drinking water.
	Transportation and communication	No link road to Mechi Highway, no transportation facilities to hospital, and school. Availability of CDMA but not properly functioning	
	Irrigation	Most of the farmers depend on rain as their source of irrigation	Support irrigation. According to the participants " <i>Siyakhola</i> " will be appropriate source of irrigation which is already surveyed for the same purpose.

	Energy use	Firewood, and kerosene	Rural electrification.
	Electricity	No electricity from national grid	Rural electrification.
	Security	Satisfactory	
<b>Impacts on Livelihood</b>	Impact on fishery	Animal rearing has also supported household expenditures. Kabeli River is used as a source of drinking water for animal, and for recreational fishing by downstream communities..	Support livelihood restoration of affected communities through employment, skill training and capacity development  Recognizing livelihoods rights as prerequisites.
	Loss of agricultural land		
	Loss of forest land		
<b>Impacts on other</b>	Cultural Heritage	<i>Shiva</i> temple is located at the bank of Kabeli river. Ritual performances are likely to be affected due to low flow of water in the dry season.	Minimum flow for cultural and religious survival.
	Cremation sites	Adverse impacts in cremation sites and religious activities in the dry season due to low flow of water.	Minimum flow for cultural and religious survival.
	Rituals	<u>Rituals and customary use of flora and fauna:</u> Hindu <i>Brahmins/Chhetris</i> and non-Hindu have a ritual of purification obtained by bathing in the holy river-Kabeli. Worship Kabeli <i>Ganga</i> in every religious day like <i>Aushi, Kuse Aushi, Matatirtha</i> . Affected communities repeatedly raised the concerns that the construction of dam will have impacts on religious activities.	Minimum flow for cultural and religious survival.
	Religion	<u>Holiness of the river:</u> They respect Kabeli as a holy river and they called it <i>Kebli Ganga</i> . Hindu pilgrims from the surrounding Districts and VDCs come to take religious bath ( <i>Makkar</i> ) in January/February every year.	Minimum flow for cultural and religious survival.
	Downstream ecosystem	The impacts of blocking the river may change on downstream ecosystem including effects on riparian plant-life, decline of fish and other aquatic species.	Minimum flow for downstream ecosystem.
<b>Beneficial impacts</b>		Electricity, employment, economic activities etc.	
<b>Local development needs and priority</b>		<ol style="list-style-type: none"> <li>1. Employment</li> <li>2. Drinking water</li> <li>3. Irrigation and development of scientific agriculture system</li> <li>4. Electricity and link roads</li> <li>5. Support to health post and schools</li> </ol>	

**Community/groups Consulted:** Community Forest User Groups-Thulodhuseni Community Forest and Panchakholi Community Forest

**Venue:** Amarpur-6, Rajabesi

**Date:** 16 Ashoj, 2067 (October 02, 2010)

**Summary of the FGD:**

Perception towards the project: All participants are positives towards the project.			
Major themes and issues discussed	Major themes and issues raised	Suggested mitigation measures/expectations	
<b>Baseline information</b>	<b>Thulodhuseni Community Forest Amarpur-6, Panchthar</b> <ul style="list-style-type: none"> <li>Area: 19 ha</li> <li>User Households: 135</li> <li>Population: 135*6= 810 (approximately)</li> <li>Ethnic Composition: <i>Tamang</i> in majority (an indigenous community)</li> </ul>		
	<b>Panchakanya Kholi Community Forest Amarpur-5 Panchthar</b> <ul style="list-style-type: none"> <li>Area:</li> <li>User Households: 227</li> <li>Population: 227*6=1362</li> <li>Ethnic Composition: Mixed</li> </ul>		
<b>Development infrastructure</b>	Schools	High schools are located at distance and lack infrastructures. Schools are being run by community through donation from each household.	Support schools
	Health and sanitation	Common disease diarrhea, fever, Uterus proleptis, gastric etc. Health posts are incompletely staffed and poorly equipped. Majority of population have toilet facility	Support heath posts
	Drinking water	Severe problem of drinking water. Most of the household fetch water from natural stream or creeks.	Support supply of drinking water.
	Transportation and communication	No link road to Mechi Highway, no transportation facilities to hospital, and school. Availability of CDMA and NCell mobile network but not properly functioning and are concentrated in the market area.	Support link road construction in assistance with the villagers.
	Irrigation	Most of the farmers depend on rain as their source of irrigation.	Support irrigation
	Energy use	Firewood and Kerosene	Rural electrification
	Electricity	No electricity from national grid. Some elites have managed solar system at their homes.	Rural electrification
Security	Satisfactory		

<p><b>Impacts on Livelihood</b></p>	<p>Possible loss of forest land and NTFPs</p>	<p>Forest clearances will impact the forest dependent people on various ways. Households dependent in the CFs mainly collect NTFPs, fire wood, agricultural tools, dry hay, fodder, cut branches, weeds etc. In average, 50 bundles of fodder are collected from each CFs per day. Similarly, 10 bundle of firewood in average is collected by each family annually from each CFs. A household has to pay Rs. 2 per bundle of firewood as tax. The community user groups have created a "Fund" of collected tax and support to the vulnerable groups in the time of need.</p> <p><b>Herbs found:</b> <i>Kali Jhar, Amala, Harrow, Barrow, Kurilo, Jhyau, Titepati, Ban Lasun, Ban Tarul, Bhyakur, Gujurgana, Harchur, Chyau, Timur, Chabo, Simali</i>, etc., but these are not extensively used in daily life.</p>	<ul style="list-style-type: none"> <li>• Provisions of programs for plantation, with protection and conservation of flora and fauna species.</li> <li>• Awareness raising programs</li> <li>• Education on possible impacts and mitigation measures</li> <li>• Support livelihood restoration of affected households through employment, skill training and capacity development</li> </ul>
<p><b>Impacts on other</b></p>	<p>Cultural Heritage</p>	<p><i>Shiva</i> temple is located at the bank of Kabeli river. Ritual performances are likely to be affected due to low flow of water in the dry season.</p>	<p>Minimum flow for cultural and religious survival</p>
	<p>Cremation sites</p>	<p>Adverse impacts in cremation sites and activities in the dry season due to low flow of water.</p>	<p>Minimum flow for cultural and religious survival.</p>
	<p>Rituals</p>	<p><u>Rituals and customary use of flora and fauna:</u></p> <ul style="list-style-type: none"> <li>• <i>Totela 'N'</i>, <i>Kokomdu 'T'</i> and <i>Mephe 'L'</i> has a high ritual and cultural values for <i>Tamang</i> and <i>Limbu</i> indigenous groups. They use <i>Kokomdu</i> in every life cycle ritual. Similarly <i>Jhakri Syaula</i> is fundamental for <i>Tamang</i> shaman.</li> <li>• <i>Harro</i> and <i>Barro</i> are used in offering god and goddess especially by Hindu people. Brahmin/Chhetri make use of <i>Totela 'N'</i> while worshipping "Saguni deity" in Dashain festival. Similarly, <i>Kush</i>, <i>Dattawan</i> and <i>Siwali</i> are religious herb/plants that are required in Hindu cultures and worshipping.</li> <li>• A climber plant called "<i>Bhorla</i>" whose leaves are used for making leaf plates (<i>Duna Tapari 'N'</i>) for rituals and pujas of Hindu</li> </ul>	<p>Minimum flow for cultural and religious survival.</p>
	<p>Religion</p>	<p><u>Holiness of the river:</u> They respect Kabeli as a holy river and they called it <i>Kebli Ganga</i>. Hindu pilgrims from the surrounding Districts and VDCs come to take religious bath (<i>Makkar</i>) in January/February every year.</p>	<p>Minimum flow for cultural and religious survival.</p>



	Downstream ecosystem	The impacts of blocking the river may involve changes on downstream ecosystem including effects on riparian plant-life, decline of fish and other aquatic species.	Minimum flow for downstream ecosystem.
	Free Prior Informed Consent (FPIC)	Full information before construction activities	
<b>Information, participation, and Institutional arrangement</b>	Institutional arrangement	Kabeli Concern Committee	
		Electricity, employment, economic activities etc.	
<b>Beneficial impacts</b>		<ol style="list-style-type: none"> <li>1. Employment</li> <li>2. Drinking water</li> <li>3. Irrigation and development of scientific agriculture system</li> <li>4. Electricity and link roads</li> <li>5. Support to health post and schools</li> </ol>	
<b>Local development needs and priority</b>			

**Community/groups Consulted: Downstream affected communities Thechambu, Nangkholyang and Amarpur VDCs**

**Venue: Thechambu-6, Kabeli Bank**

**Date: 15 Ashoj, 2067** (October 01, 2010)

<b>Perception towards the project:</b> Local people are positive towards the implementation of the project			
<b>Major themes and issues discussed</b>		<b>Major themes and issues raised</b>	<b>Suggested mitigation measures/expectations</b>
<b>Baseline information</b>	Demographic	Most of the downstream communities are Indigenous peoples and <i>Jogi</i> . Among them <i>Limbu and Rai</i> are dominant groups.	
	Socio-cultural		
	Settlement pattern	Scattered, thatched roof house, more slope village	
	Access to natural resources	Easy access	
	Others	<ul style="list-style-type: none"> <li>Some family members collect sand and gravel in the summer season from the Kabeli River for six months (March to September). Fishing is major contributor of protein supplement.</li> <li>Women are in majority in these households.</li> </ul>	
<b>Development infrastructure</b>	Schools	High schools are located at distance and it lack infrastructures. Schools are being run by community through donation from each household.	Support schools
	Health and sanitation	Common diseases are diarrhea, fever, Uterus proleptis, gastric etc. Health posts are incompletely staffed and poorly equipped. People have no toilet facility and defecate in open area.	Support health posts
	Drinking water	Severe problem of drinking water. Most of the household fetch water from natural stream or creeks.	Support supply of drinking water.
	Transportation and communication	No link road to Mechi Highway, no transportation facilities to hospital, and school. Availability of CDMA but not properly functioning.	Assist construction of rural motorable road linking to Mechi Highway with joint effort of community and the project.
	Irrigation	Most of the farmers depend on rain as their source of irrigation.	Support irrigation.
	Energy use	Firewood and Kerosene. Firewood mostly collected from the private and community forests.	Rural electrification
	Electricity	No electricity from national grid	Rural electrification

	Security	Satisfactory	
<b>Impacts on Livelihood</b>	Loss of fishing	Kabeli river is used as source of drinking water for animals, and recreational fishing for most of the villagers. Fish species found in the Kabeli river are (14): <i>Asala, Katle, Sar, Tite, Bam, Kabre, Buduna, Lohori, Siyo, Gardi, Dhotre, Faketa, Thema, Jalkapur</i> . Other aquatic lives are (6): <i>Paha, Gangata, Jalayo, Panihas</i> , and Snake. These fish and aquatic life may decline due to low flow of water.	Support livelihood restoration of affected communities through employment, skill training and capacity development.  Recognizing livelihoods rights as prerequisites.  Special programs for affected community.
	Possible disasters	There is a risk of flood and other disasters due to possible damage on dam and altering the flow.	Provision of rescue and mitigation plan for possible disaster.
	Loss of forest land		
<b>Impacts on other</b>	Cultural Heritage	<i>Shiva</i> temple is located at the bank of Kabeli river. Ritual performances are likely to be affected due to low flow of water in the dry season.	Minimum flow for cultural and religious survival.
	Cremation sites	Adverse impacts in cremation sties and religious activities in the dry season due to low flow of water. Blocking the river will leave adverse impact on the downstream cremation sites which are serving the project VDCs.	Minimum flow for cultural and religious survival.
	Rituals	<u>Rituals and customary use of flora and fauna:</u> Hindu <i>Brahmins/Chhetris</i> and non-Hindu have a ritual of purification obtained by bathing in the holy river-Kabeli. Worship Kabeli <i>Ganga</i> in every religious day like <i>Aushi, Kuse Aushi, Matatirtha</i> . Affected communities repeatedly raised the concerns that the construction of dam will have impacts on religious activities.	Minimum flow for cultural and religious survival.
	Religion	<u>Holiness of the river:</u> They respect Kabeli as a holly river and we call Kebli <i>Ganga</i> . Hindu pilgrims from the surrounding Districts and VDCs come to take religious bath (Makkar) in January/February every year.	Minimum flow for cultural and religious survival.
	Women and children	Women dependent on river activities are likely to suffer	
	Downstream	The impacts of blocking the river may involve changes on	Minimum flow for downstream

	ecosystem	downstream ecosystem including effects on riparian plant-life, decline of fish and other aquatic species.	ecosystem.
<b>Indigenous peoples</b>	Rituals and cultural heritage	<u>Rituals and customary use of fish</u> : Impacts on cultural life of indigenous peoples such as <i>Asala</i> (Trout) and <i>Tite</i> (Stone carp) fish ritually required for <i>Limbu</i> and <i>Rai</i> indigenous communities. <i>Gali sarap</i> ritual associated with Kabeli river practiced by <i>Limbu</i> community.	Cultural Flow Release will be the best way to meet the cultural needs of the indigenous and local people.
<b>Information, participation, and Institutional arrangement</b>	FPIC	Full information	
	Institutional arrangement	Community participation, consultation and major issues related with the project and communities will be dealt through Kabeli Concern Group.	
<b>Beneficial impacts</b>		Electricity, employment, economic activities etc.	
<b>Local development needs and priority</b>		<ol style="list-style-type: none"> <li>1. Employment</li> <li>2. Drinking water</li> <li>3. Irrigation and development of scientific agriculture system</li> <li>4. Electricity and link roads</li> <li>5. Support to health post and schools</li> </ol>	

**Community/groups Consulted: Indigenous communities Thechambu VDC, Taplejung**

**Venue: Shree Chandeshowri Primary School, Thechambu-5, Khemkham, Taplejung**

**Date: 22 Ashoj, 2067** (October 08, 2010)

<b>Perception towards the project:</b> All participants are positives towards the project.			
<b>Major themes and issues discussed</b>		<b>Major themes and issues raised</b>	<b>Suggested mitigation measures/expectations</b>
<b>Baseline information</b>	Demographic	<i>Limbu</i> is the dominant group in Thechambu VDC. Second dominant group is <i>Brahman/Chhetri</i> .	
	Socio-cultural		
	Settlement pattern	Scattered, thatched roof house, more slope village	
	Access to natural resources	Easy access	
<b>Development infrastructure</b>	Drinking water	Severe problem of drinking water. Most of the household fetch water from natural stream or creeks.	Support supply of drinking water.
	Transportation and communication	No link road to Mechi Highway. Availability of CDMA but not properly functioning.	Assist rural motorable road with joint effort-community and the project linking to Mechi Highway
	Irrigation	Most of the farmers depend on rain as their source of irrigation.	Support irrigation.
	Energy use	Firewood and Kerosene. Firewood mostly collected from the private and community forests.	Rural electrification
	Electricity	No electricity from national grid	Rural electrification
	Security	Satisfactory	
<b>Impacts on Livelihood</b>	Loss of fishing	There some households in the downstream from ward no. 4, 5, 7 and 8 who depend on river activities for their supplementary income.	Support livelihood restoration of affected communities through employment, skill training and capacity development.  Recognizing livelihoods rights as prerequisites.  Special programs for affected households.

	Loss of agricultural land	<u>Loss of land:</u> Acquisition of agricultural land for the construction of the project	
	Loss of forest land	<u>Loss of forest:</u> Quarry site may impact the Private forests	
	Mode of compensation	Affected land should be evaluated in the participation and consent of affected households, representatives of Concern group and local people. In other words, a committee or body should be formed representing the local people, affected households and the proponent. This committee will evaluate the land and determine the cost. Much land was not registered during the cadastral of 2032 in fear of owner's need to pay more land tax. But it is mentioned in <i>Sat Number Fatwari</i> (a legal document that was in force before cadastral map). Therefore, the project has to compensate the land traditionally occupied and reflected in the <i>Sat Namber Fatwari</i> but not in the cadastral map.	
	Downstream ecosystem	<u>Downstream ecosystem:</u> The blocking of the river may changes the downstream ecosystem including effects on riverine and riparian plant-life, decline of fish and other aquatic species.	Minimum flow for downstream ecosystem.
<b>Impacts on other</b>	Cremation sites	<u>Cremation sites:</u> Adverse impacts in the cremation sties and the religious activities in the dry season due to low flow of water. The impact can be felt mostly at the cremation site of Kabeli, which is commonly used not only by Thechambu but also by other VDCs.	Minimum flow for cultural and religious survival
	Rituals	<i>Limbu</i> indigenous community have some fundamental ritual practices like <i>Nuwagi</i> , clan deity etc. that require <i>Asala</i> fish (very fresh). Therefore, blocking the river will have negative implication for the customary use.	Minimum flow for cultural and religious survival
	Language		
	Religion	<u>Holiness of the river:</u> They respect Kabeli as a holly river and we call <i>Kebli Ganga</i> . Hindu pilgrims from the surrounding Districts and VDCs come to take religious bath ( <i>Makkar</i> ) in January/February every year.	Minimum flow for cultural and religious survival
	Health and sanitation		
	Women and children		
<b>Indigenous peoples</b>	Land and territory	<u>Land and territory:</u> Their culture, way of life, folklore, religious practices are inextricably linked with their relationship with this land and territory and nature. <u>Traditional ownership of land:</u> We some 10 HHs hold traditional ownership over the land and forest in the upstream zone. Such land and forests should be evaluated	Respect the traditional ownership of land  Provisions of special programs for preservation and protection of indigenous culture

		in the participation and consent of affected households, representatives of Concern group and local people. In other words, Much land area was not registered during the cadastral of 2032 in fear of owner's need to pay more land tax but is mentioned in <i>Sat Number Fatwari</i> (a legal document that was in force before cadastral map). Therefore, the project has to compensate the land traditionally occupied and reflected in the <i>Sat Number Fatwari</i> but not in the cadastralmap.	Respect indigenous peoples rights
	Rituals and cultural heritage	<u>Rituals and customary use of fish</u> : Impacts on cultural life of indigenous peoples such as <i>Asala</i> and <i>Tite</i> fish ritually required for <i>Limbu</i> and <i>Rai</i> indigenous communities. <i>Gali sarap</i> ritual associated with Kabeli river practiced by <i>Limbu</i> community.	Cultural Flow Release (CFR) will be the best way to meet the cultural needs of the indigenous and local people.
	Self-identity	<u>Self-identity</u> : They call themselves <i>Limbu</i> , or <i>Subba</i> or <i>Yakthumba</i> . But at the local level, they are mostly know from their clan name such <i>Mannyanbo</i> in Thechambu, <i>Khimding</i> in Nangkholyan etc.	Programs for protection and preservation of self identity.
	Natural resources	Still <i>Subbas</i> of Thechambu collect <i>Asuli</i> from the inhabitant of Amarpur (War no.2, 5, 6 and 7) for using forest of Thechambu,	Respect indigenous peoples rights. Recognize traditional ownership, possession of land and natural resources.
<b>Information, participation, Institutional arrangement</b>	FPIC	Full information. No complete information about Kabeli A hydro-project. Similarly no information on environmental impacts, impacts on cultural life, impacts on bio-diversity etc.	
	Institutional arrangement	Community participation, consultation and major issues related with the project and communities will be dealt through Kabeli Concern Group. For this purpose, Kabeli concern group should be capacitated and recognized with certain entitlement as the representative of the affected areas.	
<b>Beneficial impacts</b>		Electricity, employment, economic activities etc.	
<b>Local development needs and priority</b>		<ol style="list-style-type: none"> <li>1. Employment</li> <li>2. Drinking water</li> <li>3. Irrigation and development of scientific agriculture system</li> <li>4. Electricity and link roads</li> <li>5. Support to health post and schools</li> </ol>	

**Community/groups Consulted: Kabeli Mother Saving Group Rajabesi, Amarpur Panchthar**

**Venue: Amarpur-6, Rajabesi**

**Date: 14 Ashoj, 2067** (September 30, 2010)

Perception towards the project: All participants are positives towards the project.			
Major themes and issues discussed	Major themes and issues raised	Suggested mitigation measures/expectations	
<b>Baseline information</b>	Demographic	This Amarpur VDC is dominated by women. However, female headed household are nonexistent. Girls are married between 17 to 18 years of age. Social preference goes to son while giving child birth. Mixed caste/ethnic groups. Most of the young (both male and female) migrate to different areas in search of job and employment.	
	Socio-cultural		
	Settlement pattern	Scattered, thatched roof house, more slope village	
	Education and literacy	Most women of this VDC have attended at least primary education. There is no discrimination between son and daughter on sending school. Every family sends their children to school. Most of the older women are literate through informal education. Many girls have completed SLC but are unemployed. However, we hardly find women who completed Intermediate or Bachelor's Degree but we can find many women/girls studying in these levels	
	Property ownership pattern	Land and other family assets are owned by male. However, this pattern of property ownership is being changed i.e. now new couples started to own jointly. The property in the name of Husband will only transfer in the name of wife after his death	Women empowerment through awareness raising programs on human rights, capacity development programs etc.
	Violence Against Women (VAW):	Women violence is severe. Women violence is fueled by alcohol, traditional perception towards women and patriarchy environment. Comparatively, the situation of single women is good. They have formed their alliance. They are not discriminated to take part in social functions, rituals and other ceremonies. But, still they have no environment to indulge freely as other women can.	Women empowerment through awareness raising programs on human rights, capacity development programs etc.
	Women Participation	Exclusion of women in decision making process in household matters. It is nearly 70 per cent. Public	Women empowerment program through awareness raising programs



		participation seems to be increased but still not equal access to key role in decision making	on human rights, capacity development programs etc.
<b>Development infrastructure</b>	Schools	There is one Amarpur Higher Secondary School at Amarpur-4, one Singhapur Secondary School at Singhapur and a Primary School at Kabeli. The students from Rajabesi have to walk two and half hour for Higher Secondary and one and half hour for Secondary School. But, this Secondary School is being run from VDC sources and household donation. The donation is annually collected from the villagers. Households are categorized A, B and C according to household income.	Support to local educational institutions
	Health and sanitation	Common disease diarrhea, fever, Uterus proleptis , gastric etc. Health posts are frequently incompletely staffed and poorly equipped. Women suffer from Uterus proleptis diseases. Women do not like to share such diseases in their family. There is no separate consultation centre for women. Generally delivery is done at home with the help of local expert "Sudeni" (Midwife). Two health posts-one health post and another is sub-health post. For the women of Rajabesi, it takes at least 1.30 hour walk to nearest health post. No transportation facilities though there is Mechi Highway because no provisions of local transportations for local people. Health Assistance and medicine are hardly available at the time of need. Some awareness rising programs about family planning are being implemented by the VDC. Most of the women do not share their disease with their family members.	<ul style="list-style-type: none"> <li>• Need of Ambulance</li> <li>• Help to extend health services</li> <li>• Help to establish Women Consultation Centre</li> <li>• Awareness raising program focusing women's health problems</li> </ul>
	Drinking water	Severe problem of drinking water especially in Ward No. 8 and 9. Most of the household fetch water from natural stream, khola or creeks and some few households fetch water from Kabeli river.	<ul style="list-style-type: none"> <li>• Support on supply of drinking water</li> <li>• Support on protection of traditional water resources like ponds, tapes and springs</li> </ul>
	Transportation and communication	No link road to Mechi Highway, no transportation facilities to hospital, and school. Availability of CDMA but not properly functioning	Assist rural motorable road with joint effort-community and the project linking to Mechi Highway
	Irrigation	Most of the farmers depend on rain as their source of irrigation	Support irrigation.
	Energy use	Firewood and Kerosene. Firewood mostly collected from the private and community forests.	Rural electrification
	Electricity	No electricity from national grid	Rural electrification

	Security NGOs	Satisfactory	
<b>Impacts on Livelihood</b>	Loss of fishing	There some households from ward no. 4, 5, 7 and 8 who collect gravel, sand and engage in occasional fishing for supplementary income.	Support livelihood restoration of affected communities through employment, skill training and capacity development  Recognizing livelihoods rights as prerequisites.  Special programs for affected communities.
<b>Impacts on other</b>	Cremation sites	Impacts on cultural life of all communities- caste and ethnic groups	Minimum flow for cultural and religious survival
	Rituals		Minimum flow for cultural and religious survival
	Religion		Minimum flow for cultural and religious survival
	Health and sanitation	Pollution, communicable disease, women's security will be of great concern. In this regards, women and children are the most vulnerable groups	Awareness raising programs
	Women and children	Sexual abuse of women and children, exploitation and marginalization, prostitution, women trafficking, gender disparity, family partition, overload of household work etc are the possible impacts to bear by women and children.	Women empowerment through awareness raising programs on human rights, capacity development programs etc.
	Downstream ecosystem		
<b>Indigenous peoples</b>	Land and territory		
	Rituals and cultural heritage		
	Self-identity		
	Natural resources		

<b>Information, participation, and Institutional arrangement</b>	FPIC	Full information	
	Institutional arrangement	Women development programs should be implemented through women network.	
<b>Beneficial impacts</b>		Electricity, employment, economic activities etc.	
<b>Local development needs and priority</b>		<ol style="list-style-type: none"> <li>1. Employment</li> <li>2. Drinking water</li> <li>3. Irrigation and development of scientific agriculture system</li> <li>4. Electricity and link roads</li> <li>5. Support to health post and schools</li> </ol>	

**Community/groups Consulted: Indigenous nationalities of four affected VDCs –Amarpur and Panchami (Panchthar) Thechambu, and Nangkholyang (Taplejung)**

**Venue: Bijuli Bhanjyang-6, Amarpur, Panchthar**

**Date: 22 Ashoj, 2067** (October 08, 2010)

Perception towards the project: All participants are positives towards the project.		
Major themes and issues discussed	Major themes and issues raised	Suggested mitigation measures/expectations
Indigenous peoples	<p>Land and territory</p> <p><u>Land and territory:</u> The culture, way of life, folklore, religious practices are inextricably linked with their relationship with this land and territory and nature.</p> <p><i>This land and territory is where we belong – it is our forefathers' gift to us and has made us who we are. We know its ways: and the things that happened here are known and remembered, so that the stories the old people told are still alive here.</i></p> <p><i>This is the place where we know where to find all that it provides for us – food from hunting and fishing, and farms, buildings and tool materials, medicines. Also the spirits around us know us and are friendly and helpful.</i></p> <ul style="list-style-type: none"> <li>• Kipat system-Subangi</li> </ul>	<p>Respect the traditional ownership of indigenous people over land</p> <p>Provisions of special programs for preservation and protection of indigenous cultures and literatures</p> <p>Respect indigenous peoples rights</p>
	<p>Rituals and cultural heritage</p> <p><u>Rituals and customary use of flora and fauna:</u> <i>Makchiri Maklang Phung</i> (a black flower having smell), <i>Namyoba</i> (Titepati), <i>Shiru</i>, <i>Sidingba</i> (Arerikada), <i>Tongsing</i>, <i>Yukniba</i> (Harkato), <i>Sarpa Gandha</i>, <i>Ban Lasun</i>, <i>Sunkhari Phul</i> etc are ritually required plants located in the project area.</p> <p><i>Tite</i> and <i>Asala</i> fish are used in rituals. A fish named <i>Papoi</i> (<i>Limbuni Machha</i>) with which a myth is attached. Similarly, Leopards found in the dam site area related with the myth of origin of <i>Limbu</i> community.</p> <p>A special bird, <i>Chingjingna</i> (<i>Muste Chara</i>) is related with (<i>Limbu</i>) ethnic history and has a customary use in <i>Limbu</i></p>	<p>Provisions of special programs for preservation and protection of indigenous culture</p>

		rituals. This bird is found around the inundation area.	
	Self-identity	<ul style="list-style-type: none"> <li>• Our language, territory. Most of the places and things are named in Limbu language which later changed with Hindu meanings. For example Amarpur (Anbung "L") , Kabeli Khola (Kawama "L"), Thechambu, Nangkholyang, Panchami (Sibuwa "L"), Bijuli Bhanjyang (Khekmakham "L") etc.</li> <li>• We have myths and mythology attached with this territory. For example, firstly, this area Amarpur was inhabited by Lepcha and our forefather defeated them and acquired this land. Still some clan of Lepcha are with Limbu such as Sangdang, Sigu and Mayong The clans of Limbu are once Lepcha.</li> <li>• We have historical place located in the top of ward no 3 of Amarpur where remainders of old palce are still found. According to myths, two clan groups of Limbu-Thindaling Khokyang and Yonghyang had fought in that place.</li> <li>• We have oral literatures like Mundhum, Palam and other folk songs. We have traditional dance and music like Dhan Nach, and Chyabrung that are distinct from other communities.</li> </ul>	Respect the self identity and provisions of special programs for preservation and protection of self identity
	Main festivals	<ul style="list-style-type: none"> <li>• Udhouli and Ubhouli</li> <li>• Chsok (Nuwangi), Makkar Sankranti and Saune Sankranti, Chaite Dashain</li> <li>• Dewali, Khola Puja, (Majhi)</li> </ul>	
<b>Information, participation, Institutional arrangement and</b>	FPIC	Full information	
	Institutional arrangement	Community participation, consultation and major issues related with the project and communities will be dealt indigenous peoples' organizations. There should be separate programs for indigenous peoples	
<b>Beneficial impacts</b>		Electricity, employment, economic activities etc.	
<b>Local development needs and priority</b>		<ol style="list-style-type: none"> <li>1. Employment</li> <li>2. Electricity</li> <li>3. Special programs for indigenous peoples</li> </ol>	

## Community/groups Consulted: Affected communities of Panchami VDC

**Venue:** Amarpur-9, Pinase, Powerhouse

**Date:** 19 Ashoj 2067 (October 05, 2010)

<b>Perception towards the project:</b> All participants are positives towards the project. But doubtful, what sorts of impacts people will suffer in the future due to the project activities.			
<b>Major themes and issues discussed</b>		<b>Major themes and issues raised</b>	<b>Suggested mitigation measures/expectations</b>
<b>Baseline information</b>	Demographic	<i>Limbu (Sigu)</i> is the dominant group in Panchami VDC..	
	Socio-cultural		
<b>Development infrastructure</b>	Schools	Schools and health posts are located at distance.	
	Health and sanitation	Poor condition	
	Drinking water	Problem of drinking water. Most of the household fetch water from natural stream, khola or creeks.	Support supply of drinking water.
	Transportation and communication	No link road to Mechi Highway. Availability of CDMA but not properly functioning.	Support rural motorable road with joint effort-community and the project linking to Mechi Highway
	Irrigation	Most of the farmers depend on rain as their source of irrigation	Support irrigation.
	Energy use	Firewood and Kerosene. Firewood mostly collected from the private and community forests.	Rural electrification
	Electricity	No electricity from national grid	Rural electrification
	Security	Satisfactory	
<b>Impacts on Livelihood</b>	NGOs		
	Loss of agricultural land	Temporary camp on the agricultural land	
	Mode of compensation	<i>Compensations of loss of land. We agree the valuation determined by the village representatives, representatives of affected households and other jointly. But, if we are going to be displaced from this area, the compensation paid to affected/displaced household should be enough to restore our livelihood in another place.</i>	
	Loss of forest land	Forests will be impacted due to project activities	
	Downstream ecosystem		
	Cultural Heritage	<i>Satighat (Pinasi Ghat)</i> is of historical significance that will be affected by the project activities especially by the camp and powerhouse construction	

<b>Impacts on other</b>	Cremation sites		
	Rituals	<i>Udhyouli and Ubhauri, Dhuli Puja, Sansari Puja, Tammar Puja</i> etc. rituals are performed in the Tamor river. Among them <i>Sansari</i> and Puja spots are located close to the powerhouse site.	
<b>Information, participation, Institutional arrangement and</b>	FPIC	Full information	
	Institutional arrangement	Community participation, consultation and major issues related with the project and communities will be dealt through Kabeli Concern Group.	
<b>Beneficial impacts</b>		Electricity, employment, economic activities etc.	
<b>Local development needs and priority</b>		<ol style="list-style-type: none"> <li>1. Employment</li> <li>2. Drinking water</li> <li>3. Irrigation and development of scientific agriculture system</li> <li>4. Electricity and link roads</li> <li>5. Support to health post and schools</li> </ol>	

**Community/groups Consulted: Majhi and Leasehold Forest Groups**

**Venue: Amarpur-5, Pinase**

**Date: 19 Ashoj, 2067** (October 05, 2010)

Perception towards the project: All participants are positives towards the project.			
Major themes and issues discussed	Major themes and issues raised	Suggested mitigation measures/expectations	
<b>Baseline information</b>	Demographic	<ul style="list-style-type: none"> <li>• Total Household 17 at Pinase out of which 2 households are <i>Prasain</i> and the rest are <i>Majhi</i></li> <li>• Approximate population 120</li> <li>• 2 HH out of 15 HH <i>Majhi</i> are totally involved in fishing.</li> <li>• 2 HH out of 15 HH are landless. Dependent on rented land</li> <li>• 1 HH out of 15 HH have food sufficiency.</li> <li>• Most of the <i>Majhi</i> 14 out of 15 suffer from food deficiency. Loan, fishing, remittance, and daily wages are other means of coverage.</li> </ul>	
	Leasehold forests	<ul style="list-style-type: none"> <li>• Pinasi Leasehold Forest Group includes 7 (2 household <i>Prasain</i> and 5 households <i>Majhi</i>) households</li> <li>• Majuwa Leasehold Forest Group includes 6 households</li> <li>• Devithan Leasehold Forest Group includes 6 households</li> <li>• Legally Pinasi Leasehold Forest is registered in the District Forest Office of Panchthar and other two Leasehold Forests are under the process of registration.</li> <li>• Most of the households are from <i>Majhi</i> indigenous community of these Leasehold Forest Groups except two <i>Prasain</i> Households</li> </ul>	
	Socio-cultural	<i>Majhi</i> community has some fundamental rituals-like <i>Tamor Puja</i> , death rituals etc associated with <i>Tamor</i> river. The <i>Majhi</i> seem to have lost their language totally and marginalized community. <i>Majhi</i> community is socially, economically and politically the weakest communities in the affected areas. There is not a single person who passed SLC from <i>Majhi</i> .	
	Settlement pattern	Scattered, thatched roof house	
	Access to natural	Easy access	



	resources		
<b>Development infrastructure</b>	Schools	Schools are at distance. At least one and half hour walk.	
	Health and sanitation	Health posts are also at distance. At least 2hrs walk. Most of the Majhi households have no toilet facilities.	
	Drinking water	There is facility of pipe water.	
	Transportation and communication	No link road to Mechi Highway. Communication facility is available through CDMA.	Assist rural motor able road with joint effort-community and the project linking to Mechi Highway
	Irrigation	Severe problem of irrigation. Most of the farmers depend on rain as their source of irrigation	Support irrigation.
	Energy use	Firewood, Kerosene from the private forest and community forest	Rural electrification
	Electricity	No electricity from national grid	Rural electrification
	Security	Satisfactory	
	NGOs		
<b>Impacts on Livelihood</b>	Loss of fishing	Many households do fishing in the Tamor for household consumption. But 2 out of 15 HH of Majhi are mainly dependent on the fishing as their source of livelihood.	Recognizing livelihoods rights as prerequisites.
	Loss of agricultural land	<u>Loss of land:</u> Agricultural land occupied by Majhi and other local community.	Proper compensation and restoration of livelihood of the affected households.
	Loss of forest land	<u>Loss of forest:</u> Some leasehold forest that are traditionally owned by indigenous <i>Majhi</i> communities who lack legal entitlement.	Respect traditional ownership of <i>Majhi</i>
	Mode of compensation	Fair and proper compensation with the participation of affected community and households.	
<b>Impacts on other</b>	Cultural Heritage		
	Cremation sites	Project may impact the cremation sites due to project construction.	Protection of cremation site
<b>Indigenous peoples</b>	Land and territory	<u>Traditional ownership of forest land:</u> <ul style="list-style-type: none"> <li>Pinase Leasehold Forest (about 4.5 ha) is traditionally occupied by the <i>Majhi</i></li> <li>The so called <i>Majuwa</i> and <i>Devithan</i> Leasehold forests have been hitherto used by <i>Majhi</i> indigenous</li> </ul>	Respect traditional ownership of land and forest  Special programs for dependent households on leasehold forests

		community traditionally. These forest areas left to be registered during the cadastral of 2032 BS.	
	Rituals and cultural heritage	<ul style="list-style-type: none"> <li>• A particular burial site is located in the Pinase Ghat (Pinase Cremation site). Death ritual of <i>Majhi</i> community is partly conducted at the bank of Tamor river nearby burial site. Mourning period is up to 10 days. Before the purification, the son of dead person has to stay two nights in the burial site. It is on the sixth and seventh day since the death of a family member.</li> <li>• They have distinct birth and marriage rituals than other ethnic groups. They also observe <i>Udyouli</i> and <i>Ubhauli</i> rituals like other indigenous communities of Nepal. In <i>Ubhauli</i>, they worship <i>Tamor Bassha</i>, <i>Thakurani</i> offering egg, milk and sacrificing a cock. Basically they do this on the bank of Tamor rivier to beg forgiveness for their mistakes committed knowingly or unknowingly (spitting, crossing etc) that may heart <i>Tamor Bassha Thkurani</i>.</li> <li>• <i>Majhi</i> community observes "<i>Dewali</i>" rite twice a year. In <i>Dewali</i> rite they worship their ancestors and clan deity. They observe this ritual in the household premises. Sacrifice seep, and chicken. They sing and dance collectively in the day of <i>Dewali</i> throughout night</li> <li>• An old paty (place for the rest in the time of funeral procession) and temple are located in the Powerhouse site.</li> </ul> <p><u>Rituals and customary use of fish:</u> <i>Asala</i> fish is ritually required for <i>Majhi</i>.</p>	<p>There should not be restriction performing these rituals at traditional sites. Similarly, there should not be restriction on fishing. Historical and religious sites and spots should be protected and preserved</p> <p>The socio-cultural rights should be ensured and respected</p>
	Self-identity	<u>Self-identity:</u> They call themselves <i>Majhi</i> . <i>Pinasi</i> is also understood as <i>Majhitar</i> . Their traditional occupation was boat making and crossing the Tamor river.	Respect self identity
	Natural resources	The surrounding forest areas seem to be traditionally occupied by the <i>Majhi</i> though they have no legal entitlement. These forests are serving fuel wood, timber, fodders, weeds and other NTFPs to the community.	Recognize traditional ownership, possession of land and natural resources.
<b>Information, participation, Institutional arrangement</b>	FPIC	Full information. No complete information about Kabela A hydro-project.	
	Institutional arrangement	<i>Majhi</i> are one of the vulnerable groups of the project areas. They have their ethnic organization <i>Majhi Utthan Sang</i> .	

<b>Beneficial impacts</b>		Electricity, employment, economic activities etc.	
<b>Local development needs and priority</b>		<ol style="list-style-type: none"><li>1. Employment</li><li>2. Irrigation and development of scientific agriculture system</li><li>3. Electricity and link roads</li><li>4. Support to health post and schools</li></ol>	

**Community/groups Consulted: Downstream affected communities Nangkholyang VDC, Taplejung**

**Venue: Nangkholyang-6, Mewakha**

**Date: 21 Ashoj, 2067** (October 07, 2010)

Perception towards the project: Local people are positive			
Major themes and issues discussed	Major themes and issues raised	Suggested mitigation measures/expectations	
<b>Baseline information</b>	Demographic	Most of the downstream communities partially dependent on fisheries and other river activities are <i>Rai, Newar</i> and <i>Limbu</i> .	
	Socio-cultural		
	Settlement pattern	Scattered, thatched roof house, more slope village	
<b>Development infrastructure</b>	Schools	High schools are located at distance and lack infrastructures.	Support schools
	Health and sanitation	Common disease diarrhea, fever, Uterus prolepsis, gastric etc. Health posts are frequently incompletely staffed and poorly equipped. People have no toilet facility and defecation in open area.	Support health posts
	Drinking water	Problem of drinking water. Most of the household fetch water from natural stream, khola or creeks.	Support supply of drinking water.
	Transportation and communication	No link road to Mechi Highway, no transportation facilities to hospital, and school. Availability of CDMA but not properly functioning.	Support rural motorable road with joint effort-community and the project linking to Mechi Highway
	Irrigation	One of the problems they have been facing is irrigation as they said. Most of the farmers depend on rain as their source of irrigation	Support irrigation and supply of drinking water. According to the participants "Khokse Khola" will be appropriate source of irrigation and drinking water for the affected areas.
	Energy use	Firewood and Kerosene. Firewood mostly collected from the private and community forests.	Rural electrification
	Electricity	No electricity from national grid	Rural electrification
	Security	Satisfactory	
NGOs			

<b>Impacts on Livelihood</b>	Loss of fishing	There are some HH who are engaged in collection of gravel and sand and fishing activities for supplementary income.	Support livelihood restoration of affected communities through employment, skill training and capacity development  Recognizing livelihoods rights as prerequisites.
	Possible disasters	There is a risk of flood and other disasters due to possible damage on dam and altering the timing the stream flow.	Provision of rescue and mitigation plan for possible disaster
	Loss of forest land		
<b>Impacts on other</b>	Cultural Heritage	Shiva temple is located at the bank of Kabeli river. Ritual performances is likely to be affected due to low flow of water in the dry season.	Minimum flow for cultural and religious survival
	Cremation sites		Minimum flow for cultural and religious survival
	Rituals	<u>Rituals and customary use of flora and fauna:</u> Hindu <i>Brahmins/Chhetris</i> and non-Hindu have a ritual of purification obtained by bathing in the holy river-Kabeli. Worship Kabeli in every religious day like <i>Aushi, Kuse Aushi, Matatirtha</i> . Affected communities repeatedly raised the concerns that the construction of dam will have impacts on religious activities.	Minimum flow for cultural and religious survival
	Language		
	Religion	<u>Holiness of the river:</u> They respect Kabeli as a holly river and call the river Kabeli <i>Ganga</i> . Hindu pilgrims from the surrounding Districts and VDCs come to take religious bath ( <i>Makkar</i> ) in January/February every year.	Minimum flow for cultural and religious survival
	Health and sanitation		
	Women and children		
	Downstream ecosystem	The impacts of blocking the river may involve changes on downstream ecosystem including effects on riparian plant-life, decline of fish and other aquatic species.	Minimum flow for downstream ecosystem
	Land and territory		
	Rituals and cultural	<u>Rituals and customary use of fish:</u> Impacts on cultural life of	Cultural Flow Release (CFR) will be

<b>Indigenous peoples</b>	heritage	indigenous peoples as <i>Asala</i> and <i>Tite</i> fish ritually required for <i>Limbu</i> and <i>Rai</i> indigenous communities. <i>Gali sarap</i> ritual associated with Kabela river practiced by <i>Limbu</i> community.	the best way to meet the cultural needs of the indigenous and local people.
	Self-identity	Most of the indigenous communities of the downstream areas introduce themselves as <i>Rai</i> , <i>Limbu-Khimding</i> , and <i>Shrestha</i> .	
	Natural resources		
<b>Information, participation, and Institutional arrangement</b>	FPIC	Full information	
	Institutional arrangement	Community participation, consultation and major issues related with the project and communities will be dealt through Kabela Concern Group.	
<b>Beneficial impacts</b>		Electricity, employment, economic activities etc.	
<b>Local development needs and priority</b>		<ol style="list-style-type: none"> <li>1. Employment</li> <li>2. Drinking water</li> <li>3. Irrigation and development of scientific agriculture system</li> <li>4. Electricity and link roads</li> <li>5. Support to health post and schools</li> </ol>	

**Community/groups Consulted: Kabeli Concern Group**

**Venue: Amarpur-6, Office of Bijulibhanjyang Community Forest, Phaudarpaty**

**Date: 18 Ashoj, 2067** (October 04, 2010)

<b>Perception towards the project:</b> Local people are positive			
<b>Major themes and issues discussed</b>	<b>Major themes and issues raised</b>	<b>Suggested mitigation measures/expectations</b>	
<b>Baseline information</b>	Demographic		
	Socio-cultural		
	Settlement pattern		
	Access to natural resources		
	Others		
<b>Development infrastructure</b>	Schools	High schools are located at distance and lack infrastructures.	Support schools
	Health and sanitation	Common disease diarrhea, fever, Uterus proleptis, gastric etc. Health posts are frequently incompletely staffed and poorly equipped. People have inadequate toilet facilities.	Support health posts
	Drinking water	Problem of drinking water. Most of the household fetch water from natural stream, khola or creeks.	Support supply of drinking water.
	Transportation and communication	No link road to Mechi Highway, No transportation facilities to hospital, and school. Availability of CDMA but not properly functioning.	Support rural motorable road with joint effort-community and the project linking to Mechi Highway
	Irrigation	One of the problems they have been facing is irrigation as they said. Most of the farmers depend on rain as their source of irrigation	Support irrigation
	Energy use	Firewood and Kerosene. Firewood mostly collected from the private and community forests.	Rural electrification with the provision of no load shading
	Electricity	No electricity from national grid	Rural electrification with the provision of no load shading
	Security	Satisfactory	
	NGOs		
<b>Impacts on Livelihood</b>	Loss of fishing	It is mainly the indigenous peoples, marginal farmers, landless laborers who depend on the river resources to support their income. Whether it is fishing in the river, collecting sand and gravel or using forest produce.	Livelihood restoration programs

	Loss of forest land	<p>Impacts on community forests: <i>Kabeli Garjite, Thulo Dhuseni and Pachkanya Kholi</i> community forests. Special attention should be paid so that minimum forest/trees are cleared/submerged. At least 75 to 150 households are primarily depending for forest products in Panchakanya Kholi community forest.</p> <p>Forests located at the headworks areas will be affected. It is the source of forest products for Amarpur VDC. Especially, local people of ward no. 2, 4, 5, 6 and 7 collect NTFPs from this forest paying tax or "Asuli" to the forest owner <i>Subbas</i>. Each household who collect NTFPs from the forest pay <i>Asuli</i> of Rs. 150 per year.</p>	Replacement of community forest in another area with the provisions of programs for plantation, protection and conservation of plant species.
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<b>Impacts on other</b>	Cremation sites	<i>Shiva Panchayan</i> temple and downstream cremation sites will be affected due to low flow of water in the river in the dry season.	<p>Cultural Flow Release (CFR) will be the best way to maintain cremation activities and to meet the cultural needs of the indigenous and local people. CFR can be defined as "cultural requirements and planned flow release program for culturally approved development."</p> <p>Another option is to release more than 10 per cent water in the time of need or in the day of cremation.</p> <p>For Ward No. 1, 2, 3, 4 and 5, and Ward No. 7, 8 and 9 of Amarpur VDC, <i>Khibuna</i> and <i>Tamor</i> cremation site will be the alternative respectively if proper foot trails are constructed. If we adopt this option, one foot trail of 2 to 3 km length for <i>Khibuna</i> cremation site and another foot trail of 3 km length for <i>Tamor</i> cremation site are to be constructed.</p>
	Rituals	<u>Rituals and customary use of flora and fauna:</u> Hindu <i>Brahmins/Chhetris</i> and non-Hindu have a ritual of purification obtained by bathing in the holy river-Kabeli. Worship Kabeli Ganga in every religious day like <i>Aushi, Kuse Aushi, Matatirtha</i> . Affected communities repeatedly raised the concerns that the construction of dam will have impacts on religious activities.	CFR will be the best way to maintain cremation activities and to meet the cultural needs of the indigenous and local people.
	Language		
	Religion	<u>Holiness of the river:</u> They respect Kabeli as a holly river and we call it Kabeli Ganga. Hindu pilgrims from the surrounding Districts and VDCs come to take religious bath ( <i>Makkar</i> ) in January/February every year.	CFR will be the best way to maintain cremation activities and to meet the cultural needs of the indigenous and local people.

	Downstream ecosystem	The impacts of blocking the river may involve changes on downstream ecosystem including effects on riparian plant-life, decline of fish and other aquatic species.	Minimum flow for downstream ecosystem
<b>Indigenous peoples</b>	Rituals and cultural heritage	<u>Rituals and customary use of fish:</u> <i>Asala</i> and <i>Tite</i> fish are ritually required for <i>Limbu</i> and <i>Rai</i> communities. <i>Gali sarap</i> ritual associated with Kabeli river practiced by <i>Limbu</i> community.	CFR will be the best way to maintain cremation activities and to meet the cultural needs of the indigenous and local people.
<b>Information, participation, and Institutional arrangement</b>	FPIC	Full information	
	Institutional arrangement	Community participation, consultation and major issues related with the project and communities will be dealt through Kabeli Concern Group. Recognition of Kabeli Concern Group	
<b>Beneficial impacts</b>		Electricity, employment, economic activities etc.	
<b>Local development needs and priority</b>		<ol style="list-style-type: none"> <li>1. Employment</li> <li>2. Drinking water</li> <li>3. Irrigation and development of scientific agriculture system</li> <li>4. Electricity and link roads</li> <li>5. Support to health post and schools</li> </ol>	

**Community/groups Consulted: Dalit community**

**Venue: Amarpur-6, Bhaluchowk**

**Date: 23 Ashoj, 2067** (October 09, 2010)

Perception towards the project: The participants were found not well informed about the project.			
Major themes and issues discussed	Major themes and issues raised	Suggested mitigation measures/expectations	
<b>Baseline information</b>	Demographic	There are nearly about 110 <i>Dalit</i> household distributed in the ward no 3, 4, 6 and 8 of Amarpur VDC. <i>Kami</i> and <i>Damai</i> are the dominant <i>Dalit</i> caste group. Among them the number of the latter one is somehow greater than the first. Sex ratio among the <i>Dalit</i> is nearly 50-50. The average family size among the dalit was reported to 6.	
	Religion	Most of the <i>Dalit</i> of Amarpur practiced Hinduism. Nowadays some of them have reported change their religion to Christianity.	
	Access to natural resources	Like the other groups the <i>Dalits</i> also enjoying on the available natural resource. The available grazing land is not sufficient for them. Generally they collect necessary firewood and fodder from the nearest community and government forests. In addition to this the necessary housing materials like wood timber and <i>Khar</i> (thatch) from the forest and private land. According to them there is no constraint for them to use the available forest resource according to the rule of the particular institutions.	
	Educational Status	Nearly about 35 percent <i>Dalit</i> are illiterate among them male contributing 40 % and female 60 %. Altogether 60 to 70 individuals have passed SLC level and about 20-25 intermediate passed. Only 10 -15 have attended the university education among them women's are very few in number. Due to the poor economic status they have no access to the private boarding school.	Increase income generating program to the poor and oppressed groups
<b>Development infrastructure</b>	Schools	Schools are located near to the major <i>Dalit</i> settlement. Though, the school enrolment rate among the <i>Dalit</i> is high, the school attendance rate is very low.	
	Health and sanitation	The overall health status among the <i>Dalit</i> is not satisfactory. Health centre located near their settlement always face the scarcity of medicine, manpower. Moreover they felt a kind of discrimination on healthy service being <i>Dalit</i> which may be in the form of misbehave, and lack of concern etc. Nowadays the toilet culture is increasing among the <i>Dalits</i> also. Majority of them have built temporary toilet which dramatically reduced the open excreta which was prevalent in the past.	Support health posts
	Drinking water	Scarcity of drinking water during the dry season is one of the major problems especially for the <i>Dalits</i> of ward no 6 and 3. Like the other community the <i>Dalits</i> also are not well confident about the hygiene.	Support supply of drinking water.

	Energy use	Almost all <i>Dalits</i> of Amarpur use firewood for cooking and Kerosene for lightening purpose. They collect necessary firewood from community and government forests located near to their settlements.	Rural electrification
	Electricity	No electricity from national grid	Rural electrification
	Participation of <i>Dalits</i>	In present time <i>Dalit</i> have reservation quota for every organization like CFUG, Political Parties, Kabeli Hydro Concern Group etc. So the presence of the <i>Dalit</i> in public sphere is increasing but their real participation is not achieved till now due to their lower access to the decision making level. According to them <i>“The majority of the inhabitants of this area are Limbus, so they occupy every top post of all Political parties, Social Organization, School and all other place where there is the exercise of power and prestige. They are very wealthier than us. In other words they are the manager and Distributor of this area. They along with some influential Brahmins and Chhetries take all the decision even that is not related to them. we have to obey their decision. Well talking about the Kabeli Concern Committee there is our representative also but the representation is only in paper but not in practice. These days we have heard that the Adabeshi Janajati have organized many secret meetings separately and they are going to force the project to fulfill all their demands without consulting with the other oppressed groups like us. Therefore it creates great doubt within us whether this committee headed by them works for our welfare. So we think there is great risk of further marginalization to us from the service and facility provided by the project.</i>	Increase meaningful participation of the poor and oppressed groups
<b>Impacts on other</b>	Health and sanitation	Health problems ( outbreaks of various kind of communicable disease due to poor level of sanitation especially in the construction camp).	Increase health facility (hospital and medical personals)
	Women and children	Weakening Social Security (robbery, murder, insecurity especially for women’s due to the immigrant workers, increased alcoholism and violence)	Increase training and awareness program Increase the presence and number of security system and personals
	Environment	Environmental Pollution (air pollution due to smoke and dust particles that were released during construction activities)	Proper management of the sewage and discarded items during construction Increase training and awareness program
<b>Information,</b>	FPIC	Full information	

<b>participation, and Institutional arrangement</b>	Institutional arrangement	They have formed a <b><i>Dalit Organization</i></b> at VDC level which works for the empowerment, development and welfare of the <i>Dalits</i> . In addition, they have democratically formed executive body. Presently the committee tries to make link to Governmental organizations, Nongovernmental organizations political parties and others. In addition, they are planning to make socioeconomic profile of the <i>Dalits</i> of Amarpur VDC.
<b>Beneficial impacts</b>		<ul style="list-style-type: none"> <li>• Employment opportunity which ultimately increases their income level</li> <li>• Utilization of the local resources</li> <li>• Market access to their Agricultural and other caste specific skill and products</li> <li>• Electrification.</li> </ul>
<b>Local development needs and priority</b>		<ul style="list-style-type: none"> <li>• Priority to the local <i>Dalit</i> in employment according to their skills and capabilities</li> <li>• Vocational Training to the <i>Dalits</i> like handicrafts weaving</li> <li>• Assistance for making permanent toilet for <i>Dalit</i> and others</li> <li>• Conform the facilities and quota reserve for the <i>Dalits</i> so that other groups may not misuse the facility delivered to the <i>Dalits</i></li> <li>• Consultation, Involvement and coordination with the <i>Dalit</i> Committee</li> <li>• Programs must be conducted according to the democratic system.</li> </ul>

## **ANNEX E**

# **LIST OF PARTICIPANTS IN CONSULTATIONS/FGDS**

**KABELI-A HYDROELECTRIC PROJECT**

**SAP**

JULY 2013

## List of Participant in Consultations/FGDs

### Consultation Meeting With the Majhi Adivashi/Janajatiu of the Powerhouse Area

Date: 2067/06/19 (October 05, 2010)

Venue: Amarpur -9 Majhitar Pinase

S.N	Name	Age	Sex	Occupation/ Organization	Address	Contact No.
1	Purna Bahadur Majhi	70	M	Agriculture	Amarpur-9	-
2	Dambar Bahadur Majhi	65	M	Agriculture	Amarpur-9	-
3	Hari Maya Majhi	55	F	Agriculture	Amarpur-9	-
4	Tika Prasad Majhi	55	M	Agriculture	Amarpur-9	-
5	Gopal Majhi	25	M	Agriculture	Amarpur-9	-
6	Jes Bahadur Majhi	84	M	Agriculture	Amarpur-9	-
7	Shree Prasad Majhi	47	M	Agriculture	Amarpur-9	-
8	Gagan Majhi	24	M	Agriculture	Amarpur-9	-
9	Jeevan Majhi	27	M	Agriculture	Amarpur-9	-
10	Kal Maya Majhi	52	F	Agriculture	Amarpur-9	-
11	Saradha Majhi	35	F	Agriculture	Amarpur-9	-
12	Man Kumar Majhi	22	M	Agriculture	Amarpur-9	-
13	Nirmala Majhi	25	F	Agriculture	Amarpur-9	-
14	Kamala Majhi	35	F	Agriculture	Amarpur-9	-
15	Kumari Majhi	28	F	Agriculture	Amarpur-9	-
16	Narayan Majhi	20	M	Agriculture	Amarpur-9	-
17	Dilli Kumar Parsain	55	M	Agriculture	Amarpur-9	-
18	Abishek B.C	30	M	Environmental Engineer-	Kathmandu	-
19	Hari Bhattraai	47	M	Anthropologist	Kathmandu	-
20	Hom Prasad Rai			IP. Exerts	Kathmandu	9841488786
21	Pralhad Parsain	32	M	KEL-PRA	Amarpur-9	
22	Amrit Poudel	30	M	Environmentalist/ HCPL	Kathmandu	
23	Prakash Poudel	25	M	Anthropologist /HCPL	kathmandu	

## Consultation Meeting With the Representatives of Kholi Panchakanya and Thulo Dhuseni Community Forest User Groups

Date: 2067/06/16 (October 02, 2010)

Venue: Amarpur-5 Dhusani

S.N	Name of the Participants	Age	Sex	Occupation/ (Organization)	Address	Contact No.
1	Bishnu Prasad Katuwal	31	M	Agriculture	Amarpur- 6	
2	Dil Bahadur Tamang	49	M	Agriculture	Amarpur- 5	9742602564
3	Tika Maya Katuwal	58	F	Agriculture	Amarpur- 6	
4	Dal Bahadur Bhatteari	44	M	Agriculture	Amarpur- 5	9742637086
5	Punya Prasad Oli	35	M	Agriculture	Amarpur- 7	
6	Kul Bahadur Basnet	54	M	Agriculture	Amarpur- 5	
7	Dil Bikram Thapa	43	M	Agriculture/Vice president KHEAP Concern Group)	Amarpur- 7	9742638955
8	Dhan Bahadur Tamang	53	M	Agriculture/(Treasurer Kholi Panchakanya C.F	Amarpur- 6	9742630704
9	Amrit Bahadur Basnet	55	M	Agriculture/(President Kholi Panchakanya C.F.)	Amarpur- 6	9742629686
10	Ram Prasad Tamang	28	M	Agriculture/ (Secretary Thulo Dhuseni C.F.)	Amarpur - 5	9742616817
11	Harka Thapa	36	M	Teacher	Amarpur- 7	9742618171
12	Indra Narayan Adhakari	52	M	Agriculture	Amarpur- 6	9742605874
13	Nanda kumar Tamang	57	M	Agriculture	Amarpur- 2	9741063209
14	Laxmi Hembya	40	M	Agriculture	Amarpur- 6	9742637061
15	Narendra Prakash Shrestha	53	M	Agriculture	Amarpur- 5	026-690649
16	Nar Bahadur Hemba	58	M	Agriculture	Amarpur- 6	9742637067
17	Machindra Bikram Tamang	55	M	Agriculture	Amarpur- 5	023-691983
18	Prem Prasad Adhakari	64	M	Agriculture	Amarpur- 6	
19	Harka Bir Tamang	55	M	Agriculture	Amarpur-5	9742637351
20	Nar Bahadur Tamang	71	M	Agriculture	Amarpur- 5	-
21	Santa Bahadur Tamang	53	M	Agriculture	Amarpur- 5	9742656163
22	Ram Kumar Khati	53	M	Agriculture	Amarpur- 5	
23	Bhola Gautum	26	M	Student	Amarpur- 6	9742637533
24	Hari Prasad Rizal	48	M	Agriculture	Amarpur- 6	9742604230



25	Pashang Tamang	42	M	Agriculture	Amarpur- 5	-
26	Laxmi Prasad Hembya (Ga)	32	M	Agriculture	Amarpur- 6	9742629931
27	Krishna Bahadur Poudel	45	M	Agriculture	Amarpur- 6	9742665308
28	Parbat Krishna Pokherel	29	M	Admin Officer -KEL	Kathmandu	9841532467
29	Krishna Das Shrestha	46	M	PRO -KEL	Kathmandu	9752001382
30	Abhishek B.C.	30	M	Environm,ental Engineer	Kathmandu	9841579575
31	Shalik Ram Shigdel	30	M	Botanist-(NESS)	Kathmandu	9841242334
32	Hom Prasad Rai	38	M	I.P. Exerts	Kathmandu	
33	Amrit Poudel	30	M	Environmentalist/ HCPL	Kathmandu	
34	Prakash Poudel	25	M	Anthropologist/HCPL	Kathmandu	

### **Focused Group Discussion with Dalits of Project Area**

Date: 2067/6/23 (October 09, 2010)

Venue: Amarpur-4 Bhaluchock

<b>S.N</b>	<b>Name</b>	<b>Age</b>	<b>Sex</b>	<b>Occupation/ Organization</b>	<b>Address</b>	<b>Contact No.</b>
1	Shrawan Kumar Rashaily	48	M	Agriculture/Goldsmith	Amarpur-4	9742637025
2	Dil Kumar Nepali	47	M	Teacher	Amarpur-4	023-690481
3	Uday Bahadur Khatti	51	M	Goldsmith	Amarpur-4	023-693540
4	Dhan Kumar Nepali	30	M	Tailoring	Amarpur-4	9742633711
5	Sarita Kalikota	21	F	Student	Amarpur-4	9742619315
6	Buddiman Sundas	36	M	Tailoring /Agriculture	Amarpur-4	
7	Junita Sundas	15	F	Student	Amarpur-4	
8	Ram Chandra Nepali	43	M	Teacher	Amarpur-4	023-697622
9	Amrit Poudel	30	M	Environmentalist/HCPL	Kathmandu	
10	Prakash Poudel	25	M	Anthropologist/ HCPL	Kathmandu	9841746447

## Consultation with of the VDC representatives of and the affected communities of Panchami

Date: 2067/06/19 (October 05, 2010)

Venue: Amarpur-9 Pinasi

S.N	Name of the Participants	Age	Sex	Occupation/ (Organization)	Address	Contact No.
1	Kumar Chaulagain	32	M	Agriculture	Panchami- 8	-
2	Ganesh Sigu	62	M	Agriculture	Panchami- 8	-
3	Devi Prasad Subedi	66	M	Agriculture	Panchami- 8	-
4	Biddh Pati Subedi	56	M	Agriculture	Panchami- 8	-
5	Jagat Bahadur Humjan	68	M	Agriculture	Panchami- 8	-
6	Dill Kumar Parsain	58	M	Agriculture	Amarpur- 9	-
7	Deu Kumar Tamang	42	M	Agriculture	Panchami- 8	-
8	Surendra Tamang	32	M	Agriculture	Panchami- 8	-
9	Ganesh Parsain	30	M	Agriculture	Amarpur- 9	-
10	Narayan Majhi	18	M	Agriculture	Amarpur- 9	-
11	Gayatri Chaulagain	29	F	Agriculture	Panchami- 8	-
12	Madeni Prasad Acharya		M	Agriculture	Panchami- 8	-
13	Bhumi Prasad Chaulagain		M	Agriculture	Panchami- 8	-
14	Jagat Shrestha		M	Agriculture	Panchami- 8	-
15	Bhagirath Barayali		M	Agriculture	Panchami- 8	-
16	Shran Sigu		M	Agriculture	Panchami- 8	-
17	Khagendra Sigu		M	Agriculture	Panchami- 8	-
18	Shree Prasad Majhi		M	Agriculture	Amarpur- 9	-
19	Prasad Singh Majhi		M	Agriculture	Amarpur- 9	-
20	Tika Prasad Majhi	58	M	Agriculture	Amarpur- 9	-
21	Man Kumari Majhi		F	Agriculture	Amarpur- 9	-
22	Ram Kumar Maghi		M	Agriculture	Amarpur- 9	-
23	Kamala Majhi	35	F	Agriculture	Amarpur- 9	-
24	Jas Bahadur Majhi		M	Agriculture	Amarpur- 9	-
25	Prahlad Parsain	32	M	PRA-KEL	Amarpur- 9	9742637603

26	Sona Limbu	17	F	PRA-KEL	Panchami- 8	
27	Hom Prasad Rai	38	M	IP Expert	Kathmandu	
28	Hari Prasad Bhatteari	46	M	Anthropologist/TU	Kathmandu	
29	Krishna Das Shrestha	46	M	PRO-KEL	Kathmandu	
30	Dr. Mukesh Kumar Chalishe	53	M	Zoologist/TU	Lalitpur	
33	Raj Kapur Napit	49	M	Fish Export	Lalitpur	
34	Salil Devkota	42	M	Environment Engineer	Kathmandu	
35	Abihsek B.C.	30	M	Environment Enginee	Kathmandu	
36	Amrit Poudel	30	M	Environmentalist/HCPL	Kathmandu	
37	Prakash Poudel	25	M	Anthropologist/HCPL	Kathmandu	

**Joint Consultation with of the representatives Indigenous People of Amarpur, Panchami, Thechambu and Nangkholyang VDCs**

Date: 2067/06/23 (October 09, 2010)

Venue: Amarpur-6 Bijuli Bhanjyang

S.N	Name of the Participants	Age	Sex	Occupation/ (Organization)	Address	Contact No.
1	Bhabani Prasad Lingden	52	M	President KEHP-Concern Group	Amarpur- 3	9742612060
2	Bhim Raj Manyangbo	30	M	KEHP-Concern Group	Thechambu-4	9742639581
3	Bikram Hemba	42	M	Agriculture	Amarpur- 6	9742711901
4	Mahesh Manyangbo	43	M	Teacher	Panchami- 8	023-691108
5	Laxmi Prasad Hemba	40	M	President-NEFIN Amarpur	Amarpur-6	9742637061
6	Dev Manyangbo	51	M	President-NEFIN	Thechambu-4	9742045844
7	Prem Raj Sigu	40	M	Teacher	Amarpur-6	9742636901
8	Tara Bahadur Rai	50	M	Agriculture	Nangkholyang-6	9742601604
9	Dipendra Sigu	24	M	Agriculture	Amarpur- 9	9814958715
10	Laxmi Prasad Shrestha	45	M	Secretary NEFIN-Amarpur	Amarpur- 6	9742607119
11	Jaya Bahadur Rai	37	M	Agriculture	Amarpur- 1	-
12	Dil Bahadur Khaling	39	M	Agriculture	Amarpur- 1	9742637023
13	Ran Dhoj Hemba	67	M	Agriculture	Amarpur- 9	-

14	Mani Lingden	22	M	Student	Amarpur- 4	9742633749
15	Narayan Hemba	60	M	Agriculture	Amarpur- 9	9742629880
16	Dhiren Lingden(Bhim)	27	M	Agriculture	Amarpur- 3	024-690838
17	Sundar Rai	20	M	Agriculture	Amarpur- 2	024-690858
18	Bhim Raj Hemba	44	M	Agriculture	Amarpur- 6	9742637008
19	Ganga Chauhan	44	M	Agriculture	Amarpur- 9	9742601580
20	Krishna Das Shrestha	46	M	PRO-KEL	Kathmandu	-
21	Sona Sigu	18	F	Student	Panchami-8	-
22	Hom Prasad Rai	38	M	IP Expert	Kathmandu	-
23	Hari Prasad Bhattarai	46	M	Anthropologist	Kathmandu	-
24	Amrit Poudel	32	M	Environmentalist/HCPL	Kathmandu	
25	Prakash Poudel	25	M	Anthropologist/HCPL	Kathmandu	9841746447

### VDC Level Consultation, Nangkholyang

Date: 2067/06/21 (October 07, 2010)

Venue: Nangkholyang - 5

S.N	Name of the Participants	Age	Sex	Occupation/ (Organization)	Address	Contact No.
1	Narayan Shrestha	32	M	Labor	Nangkholyang-5	
2	Buddhi Bahadur Sunuwar	72	M	Agriculture	Nangkholyang-5	
3	Krishna Bahadur Subba	45	M	Agriculture	Nangkholyang-5	
4	Kaji Man Shrestha	46	M	Agriculture	Nangkholyang- 5	
5	Gopi Shrestha	45	M	Business	Nangkholyang- 5	023-694401
6	Jas Bahadur Limbu	35	M	Labor	Nangkholyang- 5	
7	Naresh Shrestha	35	M	Business	Nangkholyang- 5	
8	Chandra Narayan Shrestha	60	M	Agriculture	Nangkholyang-5	
9	Chandra Narayan Shrestha	53	M	Agriculture	Nangkholyang-5	
10	Tara Prasad Upreti	58	M	Agriculture	Nangkholyang- 5	023-696860
11	Jamuna Shrestha	26	F	Agriculture	Nangkholyang- 5	9742622407
12	Shayam Maya Limbu	23	F	Agriculture	Nangkholyang- 5	9806030575
13	Binita Kandel	21	M	Agriculture	Nangkholyang- 5	9842605286

14	Farendira Karki	18	M	Agriculture	Nangkholyang-5	
15	Purna Bahadur Rai	42	M	Agriculture	Nangkholyang-6	
16	Bhim Narayan Shrestha	50	M	Agriculture	Nangkholyang-5	
17	Salik Ram Khattiwada	35	M	Agriculture	Nangkholyang-5	
18	Buddiman Rai	20	M	Student	Nangkholyang-6	
19	Rumendra	35	M	Agriculture	Nangkholyang-7	
20	Dhan Narayan Shrestha	69	M	Agriculture	Nangkholyang- 5	
21	Dharma Prasad Upreti	65	M	Agriculture	Nangkholyang-6	
22	Rabindra Upreti	33	M	Business	Jhapa	9842691670
23	Hasta Bahadur Subba	45	M	Agriculture	Nangkholyang-5	
24	Kul Prasad Khattiwada	57	M	Agriculture	Nangkholyang- 5	9842636955
25	Sujan Limbu	20	M	Student	Nangkholyang- 5	
26	Sujan Limbu	20	M	Student	Nangkholyang- 5	
27	Sita Rai	20	F	Student	Nangkholyang-6	
28	Asha Maya Subbha	43	F	Agriculture	Nangkholyang- 5	
29	Dhan Maya Shrestha	25	F	Agriculture	Nangkholyang-5	
30	Kishor Upreti	20	M	Student	Nangkholyang- 5	
33	Krishna Maya Tokoju	57	F	Agriculture	Nangkholyang-5	
34	Shyam Bahadur Khimding	43	M	Agriculture	Nangkholyang- 5	
35	Sharmila Mukhuya	32	F	Agriculture	Nangkholyang-5	
36	Santosh Subbha	17	M	Student	Nangkholyang- 5	
37	Manuka Shrestha	31	F	Agriculture	Nangkholyang-5	
38	Bal Bahadur Rai	42	M	Business	Nangkholyang- 6	
39	Parabata Shrestha	39	F	Agriculture	Nangkholyang-5	
40	Tulshi Maya Shrestha	57	F	Agriculture	Nangkholyang-5	
41	Janardan Khatiwada	44	M		Nangkholyang- 5	
42	Hom Prasad Rai	38	M	IP Expert	Kathmandu	
43	Hari Prasad Bhattarai	46	M	Anthropologist	Kathmandu	
44	Amrit Poudel	30	M	Environmentalist/ HCPL	Kathmandu	
45	Prakash Poudel	25	M	Anthropologist/ HCPL	Kathmandu	

## Consultation Meeting with the teachers of Nangkholyang

Date: 2067/06/21 (October 07, 2010)

Venue: Nangkholyang- 8, Kuwa Panchami Dada

S.N	Name	Age	Sex	Occupation/ Organization	Address	Contact No.
1	Devendra Khimding	32	M	Teacher	Nangkholyang- 4	9807988309
2	Yaggya Prasad Khattiwada	47	M	Teacher	Nangkholyang- 3	9842773715
3	Hem Raj Ktattiwada	38	M	Teacher	Nangkholyang- 5	9741122053
4	Dil Kumar Rai	47	M	Teacher	Nangkholyang- 8	9742609107
5	Gangaram Khimding	25	M	Teacher	Nangkholyang- 5	9742706144
6	Ghana Shyam Poudel	50	M	Teacher	Nangkholyang- 5	9842629615
7	Hari Prasad Bhatteari	46	M	Anthropologist	Kathmandu	
8	Hom Prasad Rai	38	M	IP expert	Kathmandu	
9	Prakash Poudel	25	M	Anthropologist/HCPL	Kathmandu	

## Consultation Meeting With the representative of KAHEP Concerned Group

Date: 2067/06/18 (October 04, 2010)

Venue: Bijuli Bhanjyhg Community Forest Office, Faudar Party Amarpur- 6

S.N	Name of the Participants	Age	Sex	Occupation/ (Organization)	Address	Contact No.
1	Bhabani Prasad Lingden	52	M	President KEHP-Concern Group	Amarpur- 3	9742612060
2	Dil Bikram Thapa	43	M	Agriculture/Vice president KHEAP Concern Group)	Amarpur- 7	9742638955
3	Indra Narayan Adhakari	52	M	Agriculture	Amarpur- 6	9742605874
4	Bhim Wagle	32	M	Agriculture	Amarpur- 2	9742637100
5	Raj Kumar Basnet	51	M	Agriculture	Amarpur-8	9742046286
6	Chhtra Bahadur Katuwal	35	M	Agriculture	Amarpur- 8	9804910003
7	Dipendra Sigu	24	M	Agriculture	Amarpur- 9	9814958715
8	Janardan Khattiwada	44	M		Nangkholyang5	9741122053
9	Hem Raj Khattiwada	38	M	Teacher	Nangkholyang-5	
10	Gopi Krishna Bhandari	47	M	Business	Amarpur-4	024690013
11	Laxmi Prasad Oli	44	M	Agriculture	Amarpur- 5	9742610562

12	Bhuwani Prasad Lingden	59	M	Social Service	Panchami-1	9742601494
13	Khadak Bahadur Khaling	39	M	Agriculture	Amarpur-1	9742645094
14	Amrit Bahadur Basnet	55	M	Agriculture/(President Kholi Panchakanya C.F.)	Amarpur- 6	9742629686
15	Nar Bahadur Hemba	58	M	Agriculture	Amarpur- 6	9742637067
16	Chitra Bahadur Karki	38	M	Agriculture	Panchami	9742640330
17	Ganga Chauhan	44	M	Agriculture	Amarpur- 9	9742601580
18	Bhim Raj Hemba	44	M	Agriculture	Amarpur- 6	9742637008
19	Binod Hemba	45	M	Agriculture	Amarpur- 6	-
20	Aaita Raj Hemba	45	M	Agriculture	Amarpur- 6	9742636918
21	Surya Prasad Hemba	21	M	Agriculture	Amarpur- 6	-
22	Santa Bahadur Khattri	25	M	Agriculture	Amarpur- 9	-
23	Sona Sigu	18	F	PRA-KEL	Panchami- 8	
24	Prahlad Parsain	32	M	PRA-KEL	Amarpur- 9	
25	Krishna Bahadur Poudel	45	M	PRA-KEL	Amarpur- 6	9742665308
26	Krishna Das Shrestha	46	M	PRO -KEL	Kathmandu	9752001382
27	Parbat Krishna Pokherel	29	M	Admin Officer -KEL	Kathmandu	9841532467
28	Shalik Ram Shigdel	30	M	Botanist-NESS	Kathmandu	9841242334
29	Abhishek B.C.	30	M	Environmental Engineer (NESS)	Kathmandu	9841579575
30	Hom Prasad Rai	38	M	Indigenous Expert(HCPL)	Kathmandu	
31	Hari Prasad Bhattra	46	M	Anthropologist	Kathmandu	
32	Amrit Poudel	30	M	Environmentalist/ HCPL	Kathmandu	
33	Prakash Poudel	25	M	Anthropologist/HCPL	Kathmandu	

## VDC level Consultation, Amarpur

Date: 2067/06/20 (October 06, 2010)

Venue: Amarpur-7 Ghumtibazar

S.N	Name	Age	Sex	Occupation/ Organization	Address	Contact No.
1	Ganga Chauhan	44	M	Agriculture	Amarpur- 9	9742601580
2	Bhim Raj Hemba	44	M	Agriculture	Amarpur- 6	9742637008
3	Bhim Hemba	27	M	Agriculture	Amarpur- 6	-
4	Binod Hemba	45	M	Agriculture	Amarpur- 6	-
5	Sujan Limbu	25	M	Agriculture	Amarpur-7	-
6	Bijaya Hemba	24	M	Agriculture	Amarpur-7	-
7	Sunil Limbu	22	M	Agriculture	Amarpur- 7	-
8	Hari Prasad Bhatteari	46	M	Anthropologist	Kathmandu	-
9	Hom Prasad Rai	38	M	IP Expert	Kathmandu	-
10	Amrit Poudel	30	M	Environmentalist/HCPL	Kathmandu	-
11	Prakash Poudel	25	M	Anthropologist/ HCPL	Kathmandu	-

## VDC Level Consultation, Thechambu

Date: 2067/06/22 (October 08, 2010)

Venue: Shree Chandashawari Lower Secondary School Thechambu-5 Chifewa Consultation Meeting With the Affected Downstream Communities Date: 2067/06/17 Venue: Amarpur-8 Aapagauda

S.N	Name of the Participants	Age	Sex	Occupation/ (Organization)	Address	Contact No.
1	Dev Limbu	50	M	Business	Thechambu- 4	9742045824
2	Ram Kumar Limbu	28	M	Agriculture	Thechambu-5	9742637504
3	Ram Prakash Limbu	22	M	Agriculture	Thechambu- 6	-
4	Rupa Limbu	30	F	Agriculture	Thechambu-6	-
5	Prasad Singh Limbu	63	M	Agriculture	Thechambu- 5	-
6	Shran Kumar Limbu	69	M	Agriculture	Thechambu- 5	-
7	Khil Lal Devkota	64	M	Agriculture	Thechambu- 6	-
8	Purna Bahadur Limbu	49	M	Agriculture	Thechambu- 5	-
9	Harka Bahadur Manangbo	53	M	Agriculture	Thechambu- 6	-



10	Lila Bahadur Limbu	55	M	Agriculture	Thechambu- 6	-
11	Dil Prasad Manangbo	50	M	Agriculture	Thechambu- 5	-
12	Gopal Nepali	43	M	Agriculture	Thechambu- 5	-
13	Dhoj Man Ratna	60	M	Agriculture	Thechambu- 5	-
14	Dinesh Limbu	38	M	Agriculture	Thechambu- 5	-
15	Buddhi Raj Limbu	32	M	Agriculture	Thechambu- 5	
16	Mahesh Manangbo	43	M	Teacher	Thechambu- 5	032-691188
17	Maham Lal Manangbo	79	M	Agriculture	Thechambu- 6	023-696215
18	Kumar Dahal	35	M	Teacher	Thechambu-2	9842943239
19	Sarad Kumar Manangbo	70	M	Agriculture	Thechambu- 5	
20	Dal Bahadur Dahal	62	M	Teacher	Thechambu- 2	
21	Purna Tiwari	51	M	Business	Thechambu- 4	
22	Narayan Poudel	45	M	Health workers	Thechambu- 4	9742607326
23	Sachin Manangbo	25	M	Student	Thechambu- 4	023-696405
24	Manoj Limbu	30	M	Agriculture	Thechambu-3	9742607172
25	Bhim Raj Limbu		M	Agriculture	Thechambu- 5	-
26	Mangal Kumari Sudha	35	F	Agriculture	Thechambu- 5	-
27	Machindra Manangbo	60	M	Agriculture	Thechambu- 5	-
27	Krishna Das Shrestha	46	M	PRO-KEL	Kathmandu	-
28	Hari Prasad Bhattarai	46	M	Anthropologist	Kathmandu	-
29	Hom Prasad Rai	38	M	IP Expert	Kathmandu	-
30	Amrit Poudel	30	M	Environmentalist/ HCPL	Kathmandu	-
31	Prakash Poudel	25	M	Anthropologist /HCPL	Kathmandu	-

S.N	Name of the Participants	Age	Sex	Occupation/ (Organization)	Address	Contact No.
1	Brikha Bahadur Shrestha	52	M	Agriculture/Fishing	Amarpur- 8	
2	Shree Prasad Shitula	31	M	Agriculture/Fishing	Amarpur- 8	
3	Dil Bahadur Shrestha	32	M	Agriculture/Fishing	Amarpur- 8	
4	Prahlad Bhattarai	53	M	Agriculture/Fishing	Amarpur- 8	
5	Laxmi Jogi	20	M	Agriculture/Fishing	Amarpur- 8	

6	Dal Bahadur Shrestha	43	M	Agriculture/Fishing	Amarpur- 8	
7	Bir Bahadur Shrestha	42	M	Agriculture/Fishing	Amarpur- 8	
8	Bom Bahadur Neupane	32	M	Agriculture/Fishing	Amarpur- 8	
9	Januka Shrestha	24	F	Agriculture/Fishing	Amarpur- 8	
10	Bir Bahadur Jogi	28	M	Agriculture/Fishing	Amarpur- 8	
11	Raj Kumar Jogi	17	M	Agriculture/Fishing	Amarpur- 8	
12	Hom Prasad Rai	38	M	IP Expert	Kathmandu	-
13	Hari Prasad Bhattarai	46	M	Anthropologist	Kathmandu	-
14	Amrit Poudel	32	M	Environmentalist/HCPL	Kathmandu	
15	Prakash Poudel	25	M	Anthropologist/HCPL	Kathmandu	9841746447

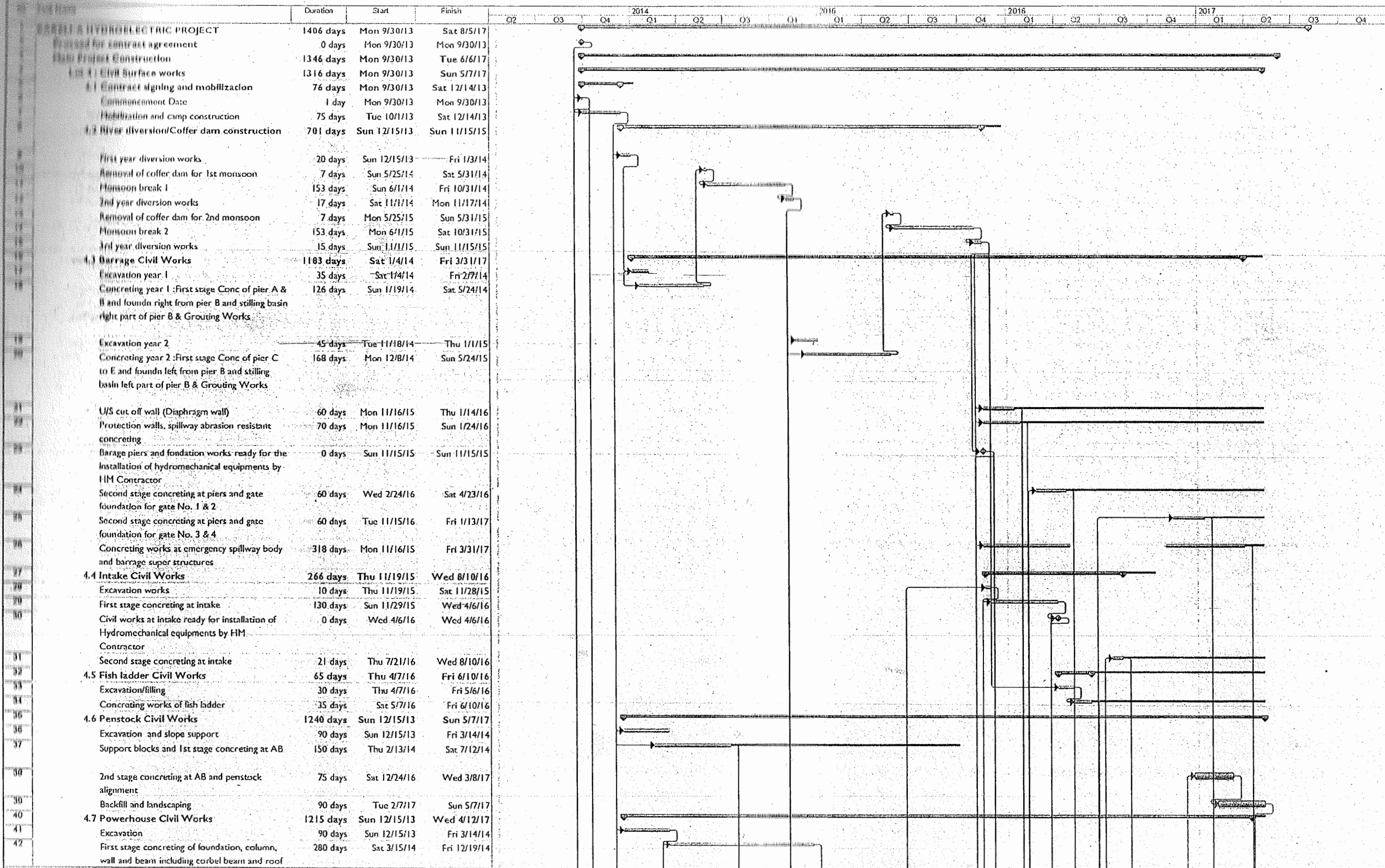
**ANNEX F**

**IMPLEMENTATION SCHEDULE OF THE  
PROJECT**

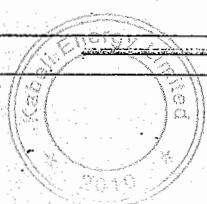
**KABELI-A HYDROELECTRIC PROJECT**  
**SAP**

JULY 2013

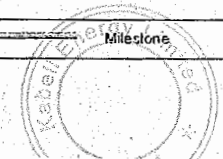
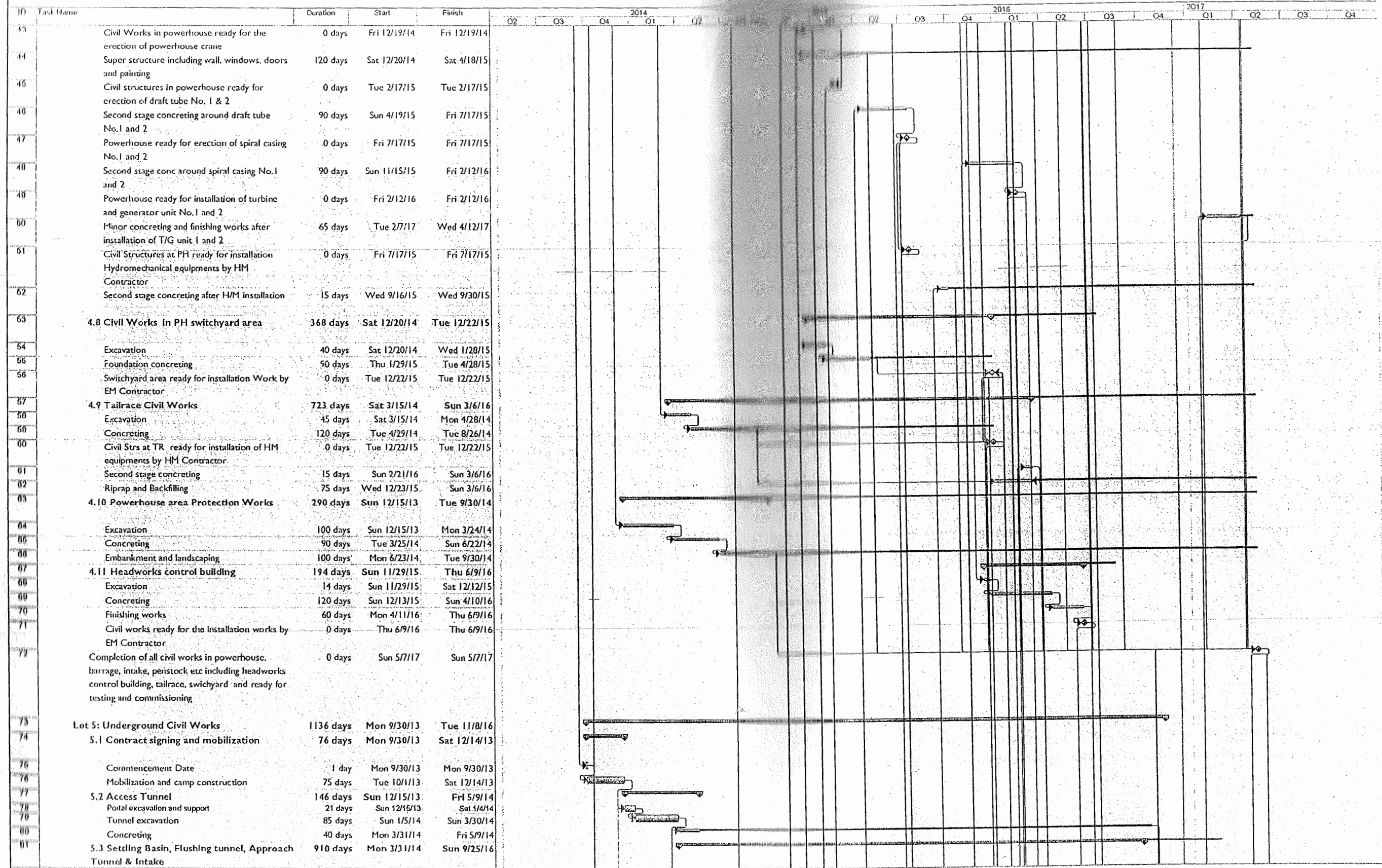
Kabeli - A Hydroelectric Project  
Construction Schedule



Project: Kabeli-A Hydroelectric Project    Critical    Task    Milestone    Stack    Summary    Project Summary

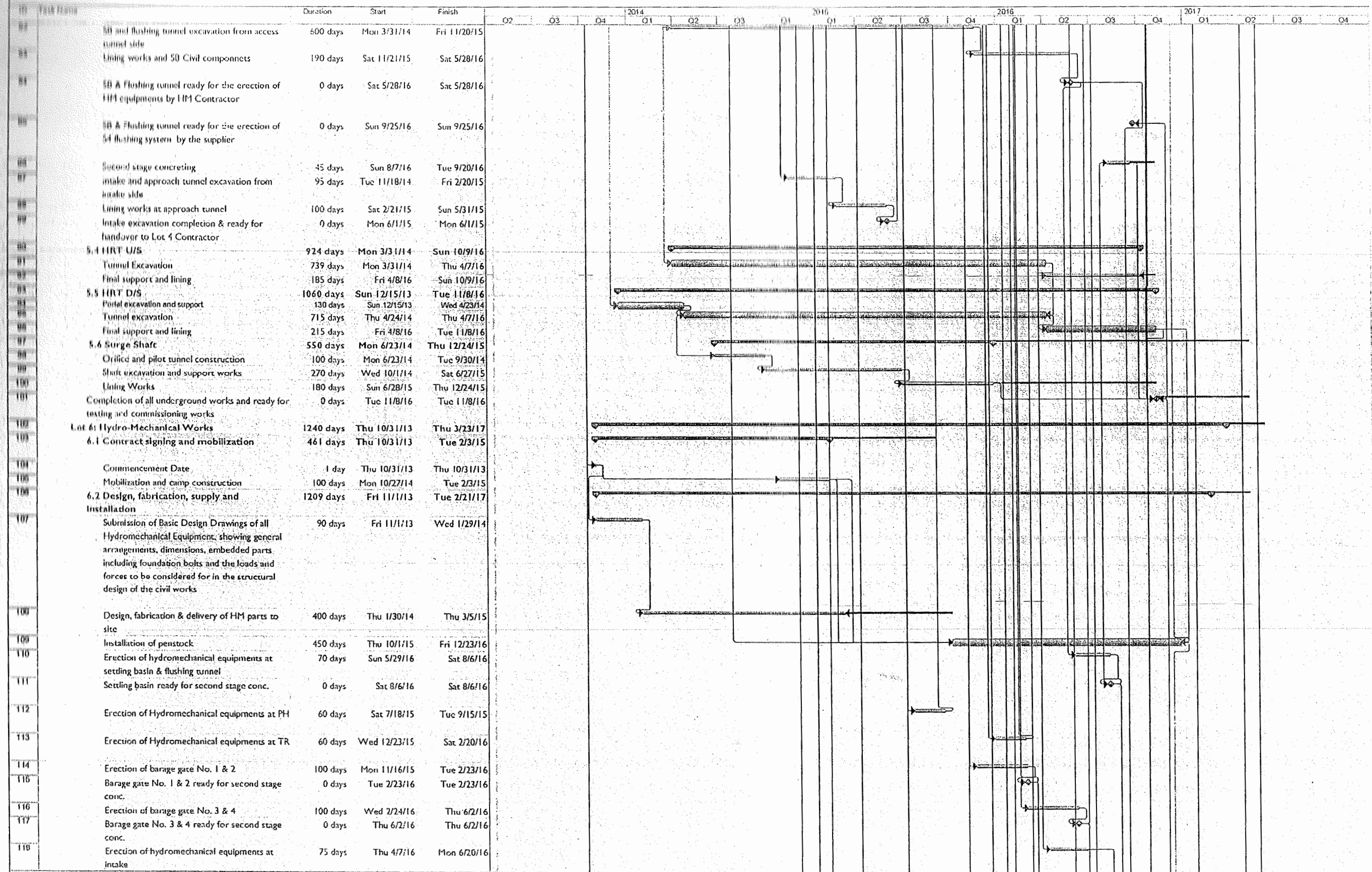


Kabeli - A Hydroelectric Project  
Construction Schedule

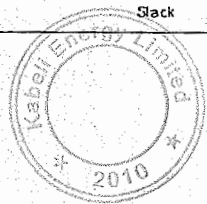




Kabeli - A Hydroelectric Project  
Construction Schedule



Project: Kabeli-A Hydroelectric Project    Critical    Task    Milestone    Slack    Summary    Project Summary



Kabeli - A Hydroelectric Project  
Construction Schedule

