

Resettlement Planning Document

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WEST SETI HYDROELECTRIC PROJECT

VULNERABLE COMMUNITY DEVELOPMENT PLAN

MAIN REPORT



West Seti Hydro Limited
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TABLE OF CONTENTS

LIST OF TABLES	IV
LIST OF FIGURES.....	V
LIST OF PHOTOGRAPHS	V
ABBREVIATIONS AND ACRONYMS	VI
EXECUTIVE SUMMARY	VIII
1. INTRODUCTION.....	1
1.1 Background	1
1.2 Vulnerable Communities in the Project Area	2
1.3 Purpose of the VCDP	3
1.4 Report Outline.....	3
2. PROJECT DESCRIPTION.....	4
2.1 Project Components	4
2.2 Land Areas Required by the Project	6
2.3 Social Impacts.....	7
3. METHODOLOGY.....	10
3.1 Literature Review	10
3.2 Field Research	10
3.2.1 <i>Initial Community Meetings</i>	10
3.2.2 <i>Household Questionnaire Survey</i>	11
3.2.3 <i>Group Discussions</i>	12
3.2.4 <i>Key Informant Interviews and Checklists</i>	13
3.2.5 <i>Field Observations</i>	14
4. LEGAL AND POLICY FRAMEWORK	15
4.1 International Context	15
4.1.1 <i>World Bank Policy</i>	15
4.1.2 <i>ADB Policy</i>	15
4.2 National Context.....	17
4.2.1 <i>Constitutional Guarantees</i>	17
4.2.2 <i>Land Acquisition Act 2034 (1977)</i>	17
4.2.3 <i>Other Local Legislation</i>	18
4.2.4 <i>National Policy on Land Acquisition, Compensation and Resettlement in Development Projects in Nepal</i>	18
4.2.5 <i>National Policy Relating to the Internally Displaced 2062 (2006)</i>	20
4.2.6 <i>Vulnerable Groups</i>	21
4.3 Involuntary Resettlement Practices in Nepal	22
4.4 WSHEP Approach	24
5. BASELINE DATA	27
5.1 Overview of Vulnerable Communities in Nepal.....	27
5.1.1 <i>Female-headed Households</i>	27
5.1.2 <i>Households Headed by Physically Disabled</i>	27
5.1.3 <i>Adivasi /Janajati</i>	27
5.1.4 <i>Dalit</i>	28
5.2 Vulnerable Communities in the Project Area	31

5.3	Population and Demographic Features	31
5.3.1	<i>Households and Population</i>	31
5.3.2	<i>Age Structure</i>	32
5.3.3	<i>Residential Status and Migration</i>	33
5.4	Settlement and Housing Patterns	33
5.4.1	<i>House Ownership</i>	34
5.5	Cultural Aspects	35
5.5.1	<i>Language</i>	35
5.5.2	<i>Religion</i>	36
5.6	Education and Literacy	36
5.7	Health and Sanitation.....	38
5.7.1	<i>Sources of Water</i>	38
5.7.2	<i>Common Diseases and Methods of Treatment</i>	39
5.8	Land Use, Tenure and Holdings.....	39
5.9	Livelihoods	40
5.9.1	<i>Occupational Status and Skills</i>	40
5.9.2	<i>Agriculture</i>	42
5.9.3	<i>Animal Husbandry</i>	42
5.9.4	<i>Fishing</i>	43
5.9.5	<i>Bee Keeping and Other Natural Resources</i>	44
5.9.6	<i>Off-Farm Income Generating Activities</i>	44
5.10	Income, Expenditure and Subsistence	44
5.10.1	<i>Income</i>	44
5.10.2	<i>Expenditure</i>	45
5.10.3	<i>Food Sufficiency</i>	46
5.10.4	<i>Poverty</i>	47
5.11	Status of Female-Headed Households.....	48
6.	IMPACT ASSESSMENT	51
6.1	Land Acquisition	51
6.2	Loss of Arable Land and Food Grains	51
6.3	Acquisition of Houses / Structures and Relocation of Families	52
6.4	Impacts on Host Communities	52
6.5	Water Supply and Sanitation	52
6.6	Occupational and Safety Hazards	52
6.7	Community Services and Institutions.....	53
6.8	Religious Practice.....	53
6.9	Cultural Aspects	54
6.10	Women and Children.....	54
6.11	Construction Labour Force Impacts.....	55
6.12	Post-Construction Cultural Aspects.....	55
6.13	Existing Water Uses and Water Rights.....	55
6.14	Beneficial Impacts.....	56
6.15	Key Issues Raised by Vulnerable Groups	57
6.15.1	<i>Belapur and Dhungad VDCs</i>	58
6.15.2	<i>Lamikhal and Girichauka VDCs</i>	58
6.15.3	<i>Mahadesthan, Shiolinga and Thalkanda VDCs</i>	59
6.15.4	<i>Barbatta and Banlek VDCs</i>	59

7.	MITIGATION AND DEVELOPMENT MEASURES.....	60
7.1	Resettlement Measures	60
7.2	Compensation and Livelihood Restoration Measures	62
7.2.1	<i>Compensation and Resettlement Assistance.....</i>	<i>62</i>
7.2.2	<i>Training.....</i>	<i>64</i>
7.2.3	<i>Loan Assistance Programme</i>	<i>65</i>
7.2.4	<i>Construction Employment</i>	<i>65</i>
7.3	Additional Mitigation and Development Measures.....	66
7.3.1	<i>Construction Workforce.....</i>	<i>66</i>
7.3.2	<i>Health and Safety</i>	<i>67</i>
7.3.3	<i>Restoration of Access</i>	<i>67</i>
7.3.4	<i>Cultural and Religious Practices</i>	<i>69</i>
7.3.5	<i>Water and Sanitation.....</i>	<i>69</i>
7.3.6	<i>Fishing</i>	<i>69</i>
8.	PARTICIPATION AND MANAGEMENT	70
8.1	Organisational Arrangements.....	70
8.2	WSH Resettlement and Development Division	71
8.3	Resettlement Steering Committee and District Coordinating Committees.....	76
8.4	Community Participation Programme	78
8.4.1	<i>Community Consultation and Participation Structure</i>	<i>78</i>
8.4.2	<i>Communications and Consultation Staff.....</i>	<i>80</i>
8.5	Key Consultation Activities	80
8.6	Grievance Management.....	82
8.7	Monitoring and Evaluation.....	83
8.7.1	<i>Monitoring and Evaluation Framework.....</i>	<i>83</i>
8.7.2	<i>Performance Monitoring</i>	<i>84</i>
8.7.3	<i>Impact Monitoring</i>	<i>84</i>
8.7.4	<i>Evaluation Panel</i>	<i>85</i>
8.7.5	<i>Completion Audit</i>	<i>85</i>
8.8	Disclosure	85
8.9	Reporting	86
9.	IMPLEMENTATION PROGRAMME	87
9.1	Construction Schedule	87
9.2	Relocation Programme.....	87
10.	RESETTLEMENT AND REHABILITATION BUDGET.....	89
11.	CONCLUSION AND RECOMMENDATIONS.....	91
11.1	Key Findings from the Study	91
11.2	Recommendations	92
12.	REFERENCES	94

LIST OF TABLES

Table 2-1: Estimated Land Areas Required by the Project.....	6
Table 2-2: Key Social Impacts.....	8
Table 2-3: Estimated Households Affected by the Project, 1999 and 2007.....	9
Table 3-1: Participants in the Group Discussions.....	12
Table 3-2: Participants in Key Informant Survey	13
Table 4-1: Project Resettlement Principles.....	24
Table 5-1: Indigenous Population in the Project VDCs	28
Table 5-2: Average Household and Per Capita Income of Hill and Terai Dalit.....	29
Table 5-3: Population of Dalits in Project Districts in Relation to Other Groups.....	30
Table 5-4: Total Dalit Population and Households in Project VDCs	31
Table 5-5: Total Population and Households by Dalit Caste Group	32
Table 5-6: Age Structure of Population by VDC.....	32
Table 5-7: Age Structure of Dalit by Caste Group.....	33
Table 5-8: Residential Status of Dalits in the Project Area	33
Table 5-9: Occupancy Status of Houses by Vulnerable Families	35
Table 5-10: Mother Tongue of Population of the Project Districts	36
Table 5-11: Religion of Population of the Project Districts.....	36
Table 5-12: Literacy Rate of FWDR and Nepal	36
Table 5-13: Literacy Status of Dalits over Six Years of Age.....	37
Table 5-14: Literacy Status of Dalits by Caste Group over Six Years of Age.....	37
Table 5-15: Number of Dalit Students Studying Outside the Project Area.....	37
Table 5-16: Health Facilities in the Project Districts	38
Table 5-17: Households by Source of Drinking Water	38
Table 5-18: Methods of Treatment.....	39
Table 5-19: Total Landholding of Dalits	40
Table 5-20: Distribution of Households by Landholding Size.....	40
Table 5-21: Primary Occupation of Dalit Population 15 Years and Older	41
Table 5-22: Skills of Dalit Population by Caste	41
Table 5-23: Division of Labour by Sex	42
Table 5-24: Number of Livestock Owned.....	43
Table 5-25: Number of Livestock by Different Dalit Caste Groups	43
Table 5-26: Dalit Caste Groups Involved in Fishing	43
Table 5-27: Dalit Households Involved in Fishing on Part Time/Full Time Basis by Caste Status	44
Table 5-28: Annual Average Income and Expenditure of Dalit Households	45
Table 5-29: Annual Income of Dalit Households by VDC	45
Table 5-30: Annual Expenditure of Dalit Households by VDC.....	46
Table 5-31: Food Sufficiency Status of Dalit Households by VDCs.....	46
Table 5-32: Distribution of Absolute Poor Households by VDC/Municipality.....	47
Table 5-33: Total Population of Female-Headed Households.....	48
Table 5-34: Population Distribution of Female-Headed Households by Age Group.....	48
Table 5-35: Female-Headed Households by Caste.....	48
Table 5-36: Literary Status of Female-Headed Households (Six Years and Above).....	49
Table 5-37: Number of Sampled Population by Primary Occupation (15 Years and Above)	49
Table 5-38: Landholding of Female-Headed Households.....	49
Table 5-39: Absolute Poor Female-Headed Households by VDC.....	50
Table 6-1: Details of Focus Group Discussions.....	58

Table 7-1: Relocation and Compensation Preferences of Vulnerable Households.....	62
Table 7-2: Compensation Entitlements for Land Losses	63
Table 9-1: Key Project Construction Milestones	87

LIST OF FIGURES

Figure 1-1: General Project Location	1
Figure 2-1: General Map of the Project Area.....	4
Figure 2-2: General View of the Project Area.....	5
Figure 4-1: Flow Diagram of the Land Acquisition Process	19
Figure 6-1: Schools in the Reservoir and Periphery	53
Figure 7-1: Existing and Proposed Foot Bridges	68
Figure 8-1: Overall Social and Environmental Management Structure	70
Figure 8-2: WSH Resettlement and Development Division.....	71
Figure 8-3: Community Participation Structure	79
Figure 8-4: Grievance Redress Procedure.....	83

LIST OF PHOTOGRAPHS

Photo 3-1: Enumerators Collecting Household Information.....	12
Photo 3-2: Group Discussion with Dalit Women	13
Photo 6-1: Gahanan Temple near Bandungrasen.....	54
Photo 6-2: Use of Child Labour for Collection of Turpentine in Lamikhal VDC.....	55
Photo 6-3: Group Discussion with Dalit Women of Banlek VDC Downstream of Reservoir.....	57

ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
ARC	Acquisition and Rehabilitation Committee
ARI	Acute Respiratory Infections
BS	Bikram Sambat
CBO	Community Based Organisation
CBS	Central Bureau of Statistics
CDC	Compensation Determination Committee
CDO	Chief District Officer
CLA	Community Liaison Assistant
COPD	Chronic Obstructive Pulmonary Diseases
DDC	District Development Committee
EIA	Environmental Impact Assessment
EL	Elevation
FGD	Focus Group Discussion
FSL	Full Supply Level
FWDR	Far Western Development Region
GoN	Government of Nepal
GW	Giga Watt
GWh	Giga Watt Hour
ha	Hectare
HDI	Human Development Index
HIV/AIDS	Human Immune Virus / Acquired Immune Deficiency Syndrome
ICS	Improved Cooking Stoves
INGO	International Non-Governmental Organisation
ISA	Initial Social Assessment
LACP	Land Acquisition and Compensation Plan
LACRP	Land Acquisition, Compensation and Rehabilitation Plan
LCF	Local Consultative Forums
M&E	Monitoring and Evaluation
MOL	Maximum Operating Level

MT	Metric Tonne
NARC	Nepal Agricultural Research Council
NGO	Non-Governmental Organisation
NPC	National Planning Commission
PAF	Project Affected Family
PAP	Project Affected Population
PME	Participatory Monitoring and Evaluation
PMF	Probable Maximum Flood
PPTA	Project Preparation Technical Assistance
PUO	Pyrexia of Unknown Origin
RAP	Resettlement Action Plan
R&D	Resettlement and Development
RP	Resettlement Plan
RSC	Resettlement Steering Committee
RUPE	Rural-Urban Linkage Programme
SLC	School Leaving Certificate
SPAF	Severely Project Affected Family
TOR	Terms of Reference
VCDP	Vulnerable Community Development Plan
VGDP	Vulnerable Group Development Plan
VDC	Village Development Committee
VDD	Vegetable Development Directorate
WSH	West Seti Hydro Ltd.
WSHEP	West Seti Hydroelectric Project

EXECUTIVE SUMMARY

Introduction

The West Seti Hydroelectric Project (WSHEP), proposed by West Seti Hydro Ltd. (WSH) in far-western Nepal, intends to export large quantities of electrical energy to India, under a Power Purchase Agreement with PTC (India) Ltd. An Environmental Impact Assessment (EIA) of the project was initiated in 1997, and the EIA report was approved in 2000 by the then Ministry of Population and Environment of the Government of Nepal (GoN). Socio-economic data for the EIA and a Resettlement Action Plan (RAP) was collected in 1997/98 through a field survey of households and economic activities in the reservoir area. This survey covered 1,530 households, located in 84 settlements, which were likely to be affected by the formation of the reservoir.

The number of affected households was updated in 2006/2007, including estimates of households affected by the transmission line and a proposed re-regulation weir. It is currently estimated that the project as a whole will have a direct impact on 2,421 households, of which an estimated 1,579 will require resettlement.

Households Affected by the Project (2007 Estimate)

Project Component	2006	
	Affected Households	Households Requiring Resettlement
Reservoir and dam site		
- below FSL+6 m	933	933
- between FSL+6 m & FSL+96 m	257	257
- above FSL+96 m	490	122
Dam access road (estimate)	40	0
Power station site and access road	35	21
Work areas (estimate)	20	0
Workforce camps/offices (estimate)	200	30
Re-regulation weir (estimate)	150	30
Transmission line	296	186
Total	2,421	1,579

As the WSHEP is likely to have potentially significant impacts on vulnerable social categories, WSH has commissioned a study to prepare a Vulnerable Community Development Plan (VCDP) for the reservoir and downstream areas. The study focuses on the Dalit (so-called "untouchables") and female-headed households only as other potentially vulnerable communities, namely the Adivasi/ Janajati (indigenous nationalities) and households headed by the physically disabled, were not identified among the project-affected population. The VCDP includes reference to:

- potential adverse impacts on vulnerable groups and measures to avoid, mitigate or compensate for these impacts;
- the aspirations, needs and preferred livelihood restoration options of vulnerable groups;
- programmes to support sustainable livelihood systems for vulnerable groups, including measures to ensure that project benefits will accrue to these groups;
- cost estimates for the implementation of programmes; and
- a management and monitoring framework.

Methodology

The VCDP study used both quantitative and qualitative research methods. In the quantitative data sets, both macro (regional/district/VDC) and micro (household) level data were collected. 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 Information Centres of the affected Districts, namely Bajhang, Baitadi, Dadeldhura and Doti. Publications of the Central Bureau of Statistics (CBS) in Kathmandu were extensively used to establish baseline information of the project area Districts and VDCs.

Baseline information on vulnerable project-affected households was collected through literature review and field research. The field research included household questionnaire surveys, focus group discussions, key informant surveys and field observations by a team of experts. A total of 282 households, including 274 Dalit households and eight female-headed upper caste households, were surveyed. In addition, two structured group discussions were held in nine project VDCs, one with a cross section of vulnerable people from the VDC area and one with a group of women from these social categories, to gain further qualitative insights into their socio-economic conditions and resettlement preferences.

Legal and Policy Framework

During the study, international policies/guidelines and national legislation pertaining to involuntary resettlement and vulnerable groups in development planning were reviewed. The review covered relevant World Bank and Asian Development Bank policies on involuntary settlement, GoN acts and policies on land acquisition/appropriation, compensation and resettlement and constitutional guarantees in Nepal. In addition, resettlement practices proposed or followed in major development projects in Nepal were reviewed.

Based on the review, a set of project resettlement principles have been developed for the WSHEP. An Entitlement Matrix has also been prepared to address the range of losses and impacts that will result from project implementation.

Baseline Data

For the VCDP, baseline data on 274 Dalit households and the eight female-headed upper caste households, spread across 11 of the 21 project VDCs, were collected. Of the Dalit households, 28 were female-headed, making the total number of surveyed female-headed households equal to 36.

The Dalits are the single most vulnerable group in the project area. The total number of Dalit households that would potentially be affected at upstream and downstream project sites is 274 (1,981 people). The Dalits are mainly concentrated in Lamikhal, Dhungad, Rayal and Dangaji VDCs, where about 72% of their population lives. Their average household size is 7.2 persons per household, which is higher than the national average (5.4) and the average for the Hill Dalits (4.7).

More than 90% of the surveyed Dalit households have lived in their locality for generations, while 7% of the households have been residing in the area for over six years. It can, therefore, be concluded that the Dalit population in the area is generally stable, and that the area has not seen significant migration.

Dalit settlements are mostly located near settlements of the high caste groups. These settlements are normally heterogeneous in nature, with Dalits of different castes living together. Dalit houses are

generally clustered around those of relatives related by blood and marriage. Most Dalit households have their own houses, but some stay in houses provided by relatives and landlords.

Among the surveyed Dalit population, 56.2% of the people above six years of age are literate. The literacy rate among males is 67.1% while that among females is 32.9%.

Dalit households of the project area own a reported total of 92.94 ha of land, which includes arable and pasture land. On average, each Dalit household in the project area owns 0.33 ha of land.

In the project area, a majority of the Dalit population over 15 years of age is engaged in agriculture. However, the percentage of the population employed in this sector (64%) is less than that of the national average (greater than 80%) and also the average of surveyed households for an EIA update conducted recently in the reservoir area (68.1%).

The annual average income of Dalit households is NRs. 69,313, while their annual average expenditure is NRs. 64,332. Out of 274 Dalit households, 43.8% were classified as absolute poor. This figure is slightly higher than the average of 41.0% for the Far-Western Development Region of Nepal. This is mainly because the Dalits have smaller landholdings, and their level of literacy is less than that of the upper class.

The total population of the 36 female-headed households likely to be affected at project sites is 211, and their average household size is 6.3. About 19.4% and 2.8% of the female-headed households belong to the Chhetri and Thakuri castes, respectively. The remaining families (77.8%) belong to Dalits.

Among the female-headed households, 52.1% of the household members are literate. Thus, the literacy of these families is less than the literacy of Dalit households (56.2%).

About 60.1% of the economically-active population of female-headed households is engaged in agriculture. Other major economic activities pursued by this group are wage labour and service. The annual average income of female-headed households is NRs. 64,461.80, and their annual average expenditure is NRs. 58,263. About 27.8 % of these households are considered as absolute poor.

Impact Assessment

The major adverse impacts of the project on the vulnerable households identified during the study are:

- acquisition of some of the 92.94 ha of land owned by the 274 Dalits households due to formation of the WSHEP reservoir;
- loss of food grain production due to acquisition of arable land, resulting in an annual loss of approximately equivalent to NRs. 6,958,110;
- acquisition of some Dalit houses and relocation of the affected households at an appropriate place in the Terai districts of Kailali and Kanchanpur or in their existing communities;
- acquisition of private land in resettlement areas, loss of food grain production from these lands, potential increased pressure on local resources used by host communities, potential psychological and cultural disturbance to host communities and disturbance to social harmony in the resettlement areas;
- increased stress on local water supplies, health and sanitation facilities due to an increase in population caused by an influx of workers and people attempting to engage in new economic opportunities;
- occupational and safety hazards, especially to Dalits who are more likely to be involved in manual or labour-intensive works related to the project because of their low literacy;

- acquisition of land and property of five primary and three lower secondary/secondary schools in the project area, affecting students from the inundated and non-inundated areas of the project and hindering the movement of students who attend schools on the opposite banks;
- disruption to religious practices from relocation of 20 temples/shrines located in the reservoir displacement area and from the influx of the labourers and other workers for various construction activities;
- disruption of social life caused by the presence of the construction workforce and an anticipated influx of job seekers during the construction period, potentially resulting in some changes in ethnic and community solidarity and occupational patterns in the area;
- increased household burden on women due to involvement of male members in construction activities;
- exploitation of children during construction for menial jobs;
- pressure on existing social services, an increase in the incidence of diseases (sexually transmitted diseases like HIV/AIDS), and the potential for social disturbances due to the influx of construction workers and job seekers into the area;
- altered low river flows during project operation, affecting the cultural (e.g. cremation) and other practices of the people of the downstream villages;
- withdrawal of economic activities after completion of construction.
- However, the project will have the following beneficial effects on vulnerable communities:
- introduction of several opportunities for economic development in the region, e.g. direct and indirect employment, secondary demand for goods and services, and facilitation of markets for external suppliers and retailers, causing an economic spin-off in the project impact area;
- generation of employment opportunities associated with the project and from tourism and other industries that could develop in the area due to increased accessibility and better market opportunities;
- improvement in the socioeconomic status of the rural poor and Dalits of the region from royalties generated from the project.

Mitigation and Development Measures

The VCDP is designed to ensure that vulnerable groups affected by the project are regarded as special interest groups, and that impacts on their livelihoods are minimised and addressed in a sensitive manner. To achieve this, the VCDP focuses on resettlement strategies and compensation options and measures (as detailed in the project's Entitlement Matrix) to support the rehabilitation of affected vulnerable households and to enhance the diversification of their livelihoods. The major mitigation and development measures proposed are:

- relocation based on three broad relocation options: relocation to the Terai, local relocation and self-relocation;
- compensation for land at full replacement cost, with the productivity of land (irrigated or rainfed) recognised in the amount of exchange land provided;
- provision of an additional 20% of land as a direct project benefit;
- provision of land in lieu of loss of access to Seti valley communal resources for households relocating to project sites in the Terai;
- allocation of at least a subsistence level landholding for all landowning households relocating to project sites in the Terai;
- compensation for the loss of private trees based on five years production loss;
- provision of replacement houses or cash compensation at full replacement cost, without deducting the value of salvageable materials from the housing entitlement;
- compensation for other household structures (e.g. water mills) at replacement cost and compensated in cash;

- implementation of training programmes on improved agricultural practices and agricultural farming, fresh vegetable farming and construction, to assist resettled households;
- establishment of a small loan assistance programme, particularly for vulnerable households;
- implementation of a Preferential Employment Policy to achieve the objective of optimising employment for project-affected and local people on project construction activities;
- construction of suspension bridges across the reservoir or set further upstream from the extent of the reservoir, the improvement of existing trails and construction of replacement trails, and the provision of boat access;
- replacement of affected social infrastructure and facilities (e.g. schools and temples) in consultation with affected communities and authorities;
- release of an environmental flow through the dam wall, sufficient to fulfil religious requirements and establishment of a number of cremation sites in the downstream area;
- funding to NGOs or CBOs to support the general development of settlement areas around the reservoir and in the downstream area;
- implementation of a water supply programme in riparian villages in the downstream area that rely on the Seti River as a secondary water source, either through improvement of existing water supplies or construction of new schemes;
- establishment of a sanitation programme in downstream riparian area villages to improve sanitary conditions and public health;
- nutrition programmes, such as the role of alternative nutrition sources and related production improvement, to mitigate the impact on fishing in the downstream area;
- provision of international standard workforce accommodation facilities and prohibition on any worker, other than local workers from project area villages, living outside construction camps;
- provision of high standard facilities at construction camps (health services, water and sanitation facilities, recreational facilities and fair-price shops);
- provision of security measures at construction camps;
- treatment of all sewerage from workforce camps;
- effective control and prevention of sexually transmitted diseases during project construction;
- implementation of occupation health and safety measures, such as fencing, warning systems and regular information campaigns; and
- implementation of a social impact management procedures to address any emergent social/cultural issues.

Participation and Management

An organisational structure and participation strategy has been defined, highlighting the provisions made for vulnerable groups affected by project activities in the reservoir and downstream areas. The project's RP gives a description of the organisational arrangements required for the implementation of the resettlement programme in the three project areas: (a) the reservoir and downstream area, (b) the Terai resettlement areas and (c) the Transmission Line right-of-way

During project implementation, consultation will be required to discuss and finalise particular issues, for incorporation into a future programme of consultation and disclosure. Due to the generally low literacy levels in the project areas, WSH will use a range of communication/ information dissemination mechanisms, including a consultation organisational setup, written documents (information sheets and newsletters), radio broadcasts through local radio stations, community meetings, focus group discussions, participatory appraisal techniques, household interviews and social mobilisation techniques. The resolution of all grievances and disputes will be according to applicable national legislation and international requirements.

Although the GoN will be involved in project developments, WSH will hold overall responsibility for the implementation of compensation, resettlement and other mitigation measures, and for the monitoring of the resettlement programme. The project's socio-economic monitoring and evaluation programme will be coordinated by a Monitoring and Evaluation (M&E) Unit whose main functions will be to (a) record and assess project inputs, outputs and outcomes; (b) provide an ongoing assessment of the efficacy of compensation and resettlement initiatives, identifying problems and successes as early as possible so that timely adjustments of implementation arrangements can be made; and (c) confirm that former livelihoods have been re-established.

Implementation Programme

From the perspective of the resettlement programme, the following are the key construction activities:

- construction of the advanced infrastructure (i.e. roads and bridges) and access to the main construction areas, including workforce camps and borrow areas;
- construction of the coffer dam (project month 20-25), inundating all land below EL 1,130 m in the event of a 1:25 year wet season flood;
- closure of one of the diversion tunnels in month 32, inundating all land below EL 1,188 in the event of a 1:200 flood; and
- completion of the dam embankment in month 44 and commencement of reservoir filling.

These milestones dictate that a large number of affected households will have to be resettled relatively early in the construction process. Prior to the completion of the coffer dam by month 26, approximately 33% of the reservoir affected households must have been relocated, rising to 60% prior to the closure of the diversion tunnel in month 32. By month 44, the relocation of the remaining households in the reservoir inundation area must be completed in preparation for reservoir filling. In addition to the resettlement activities, leasing or compensation agreements must be concluded during various stages of the implementation programme with non-displaced affected households.

The relocation of households will be undertaken in four stages, and villages have been assigned to different relocation stages based on the construction programme and community considerations. A fifth relocation stage, running concurrently with the monitoring programme, has also been included for the potential resettlement of villages outside the reservoir displacement area for safety reasons.

Resettlement and Rehabilitation Budget

As a project-affected group, costs relating to vulnerable groups are detailed in the overall resettlement budget in the project's RP. The resettlement budget amounts to USD 72.3005 million and consists of 11 budget items (with a 10% contingency included in the overall project budget).

Conclusion and Recommendations

The vulnerable people are positive towards the implementation of the project, provided that 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 process. Apart from the considerable economic benefits that would arise from power generation, the project will also generate direct economic benefits to the GoN and the affected districts from royalties and revenues. Other direct project benefits are likely to arise from access to the reservoir area, regional development, employment of local people and general improvement of infrastructure and services in the project-affected VDCs. Thus, this study recommends the construction of the project by implementing the recommendations given in this report.

1. INTRODUCTION

1.1 Background

The West Seti Hydroelectric Project (WSHEP), proposed by West Seti Hydro Ltd. (WSH) in far-western Nepal (Figure 1-1), intends to export large quantities of electrical energy to India, under a Power Purchase Agreement with PTC (India) Ltd.

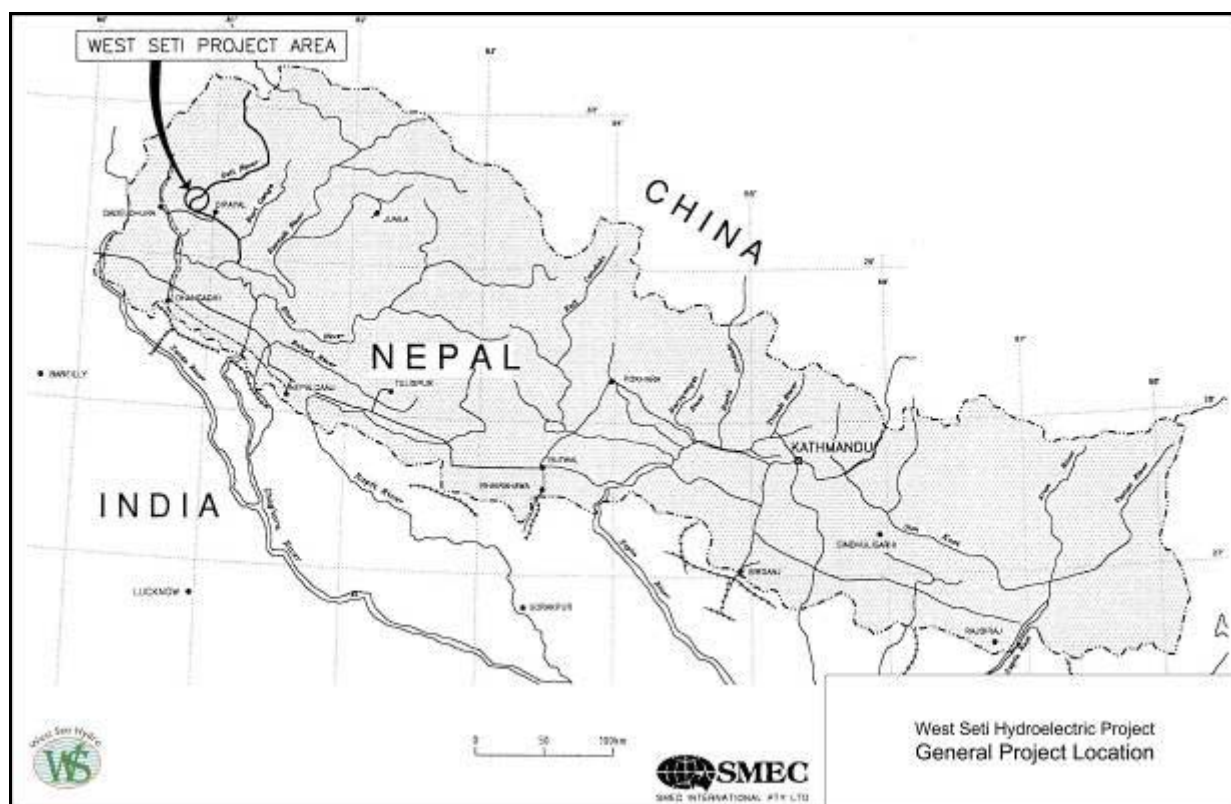


Figure 1-1: General Project Location

An Environmental Impact Assessment (EIA) of the project was initiated in 1997, and the EIA report was approved in 2000 by the then Ministry of Population and Environment of the Government of Nepal (GoN). In the ensuing period, however, only limited in-field project work was undertaken because of the escalating hostilities between the Government and the Maoist insurgents. Project activities have recently resumed following cessation of hostilities in 2006, and preparatory activities are underway to commence implementation of the project.

Socio-economic data for the EIA and a Resettlement Action Plan (RAP) was collected in 1997/98 through a field survey of households and economic activities in the reservoir area. This survey covered 1,530 households, located in 84 settlements, which were likely to be affected by the formation of the reservoir. Since more than eight years have elapsed since the EIA survey, WSH has commissioned a socio-economic survey in the reservoir area to confirm baseline socio-economic conditions in the project area prior to implementation of the project. As the project is likely to have potentially significant impacts on vulnerable social categories, WSH consequently commissioned a study to prepare a Vulnerable Community Development Plan (VCDP).

1.2 Vulnerable Communities in the Project Area

In the context of resettlement planning, vulnerability refers to two socio-economic dynamics. At a general level, it refers to the insecurity experienced by all project-affected persons because of impacts such as the loss of private and communal property and severed/constrained access to social services. At a more specific level, it refers to those persons who, because of their socio-economic position, are especially vulnerable to project-induced impacts.

The Far Western Development District (FWDR), where the project is located, is considered to be one of Nepal's least developed regions with high levels of poverty. Although the sample socio-economic survey recently undertaken by SHAH Consult recorded lower levels of absolute poverty in the reservoir area than that reported for the FWDR as a whole (SCI 2007), the project acknowledges that many affected households may be vulnerable to project-induced changes because of high incidences of poverty. For this reason, a number of measures have been built into the project to support the enhancement and diversification of affected livelihoods. These measures, which are detailed in the project's Resettlement Plan, include (in addition to compensation according to international best practice): (a) the provision of a 20% additional land entitlement to all titled landowning households; (b) the provision of at least a subsistence landholding to all resettling landowning households resettled to project sites in the Terai; (c) the provision of a land-based communal resource entitlement to all households resettling to project sites in the Terai; (d) water supply and sanitation improvement in riparian villages between the dam and re-regulation weir; (e) community development initiatives in the Seti valley; (f) livelihood improvement/diversification programmes; and (g) preferential employment to local people in unskilled construction jobs.

For the VCDP study, the following groups were initially considered as groups who may be especially vulnerable to project-induced impacts:

- female-headed households;
- households headed by the physically disabled;
- Adivasi/Janajati (indigenous nationalities), and
- Dalit (the so-called untouchables).

After a review of information related to these groups in the project area, only female-headed and Dalit households were identified as potentially vulnerable groups. No Adivasi/ Janajati households or households headed by a physically disabled person were identified amongst the project-affected population.¹

However, vulnerability is not a given or static condition and households may become more, or less, vulnerable to project activities as their development cycles and socio-economic circumstances change. The project will, therefore, adopt an approach that acknowledges this dynamic quality of vulnerability, and the identification, assessment and monitoring of vulnerable households and groups will be an ongoing activity, carried out in conjunction with the project's community participation structure, throughout the resettlement programme.

¹ People from indigenous groups constitute only 0.54% of the population in the broader project area (Section 5.1.3; Table 5-1).

1.3 Purpose of the VCDP

The VCDP includes reference to:

- potential adverse impacts on vulnerable groups and measures to avoid, mitigate or compensate for these impacts;
- the aspirations, needs and preferred livelihood restoration options of vulnerable groups;
- programmes to support sustainable livelihood systems for vulnerable groups, including measures to ensure that project benefits will accrue to these groups;
- plans for the involvement of appropriate existing institutions, local organisations and non-government organizations with expertise in matters relating to vulnerable groups;
- cost estimates for the implementation of programmes; and
- a management and monitoring framework.

1.4 Report Outline

Chapter 2 provides a brief description of the WSHEP and its principal social impacts. Chapter 3 describes the methodology used to undertake the preparation of the VCDP. The legal and policy framework for involuntary resettlement and provisions pertaining to vulnerable groups is analysed in Chapter 4. Chapter 5 provides an overview of vulnerable groups in the reservoir and downstream areas, whereas Chapter 6 summarises the key socio-economic impacts that the project is likely to have on vulnerable groups. The mitigation measures for socio-economic impacts as well as other livelihood restoration initiatives are described in Chapter 7, and the project's institutional arrangements for the resettlement programme are summarised in Chapter 8. Chapter 9 summarises the proposed implementation programme, while Chapter 10 provides costs estimates for the implementation of programmes detailed in the report. The findings and recommendations of the study are enumerated in Chapter 11.

The following appendices are included under separate cover:

- 1: Households facing potential relocation
- 2: Dalits interviewed
- 3: Female-headed households interviewed
- 4: Details of female-headed households
- 5: Household survey questionnaire
- 6: Checklist for women group discussions
- 7: Entitlement Matrix
- 8: Resettlement implementation schedule
- 9: Indigenous groups (Adivasi / Janajati) listed in Nepal

2. PROJECT DESCRIPTION

The WSHEP is a storage type project, with a capacity of 750 MW at rated net head, and average annual energy generation of 3,636 GWh. The project will export large quantities of electrical energy to India under a Power Purchase Agreement with PTC (India) Ltd.

The WSHEP is a Build Own Operate Transfer (BOOT) scheme. Construction is scheduled to start in late 2007 and will occur over a period of 66 months (5.5 years).

2.1 Project Components

The main features of the project are summarised below (Figure 2-1 and Figure 2-2).

Storage Dam and Reservoir

A 195 m high concrete-faced, rock-fill storage dam, with twin 12.8 m diameter diversion tunnels and a concrete-lined ungated chute spillway, will be constructed on the Seti River, immediately downstream of its confluence with the Chama Gad. Fill material for the dam wall will be obtained from an area up to 6 km upstream from the dam site, along the left and right banks of the Seti River and Saili Gad. A 35 m high coffer dam (situated some 460 m upstream of the dam wall) and the two diversion tunnels will divert the flow of the Seti River during construction of the main dam wall.

The reservoir will extend some 25 km along the Seti River and a total of 28 km along five tributaries (Chama Gad, Dhung Gad, Saili Gad, Nawaghar Gad and Kalanga Gad). The full supply level (FSL) of the reservoir is EL 1,284 m, and minimum operating level (MOL) is EL 1,225 m. The surface area of the reservoir will be 2,060 ha at FSL. The reservoir will have a total storage capacity of 1,566 million m³, with 926 million m³ of live storage and 640 million m³ of dead storage. The annual seasonal fluctuations in the reservoir water level may be as much as 59 m (from MOL to FSL).

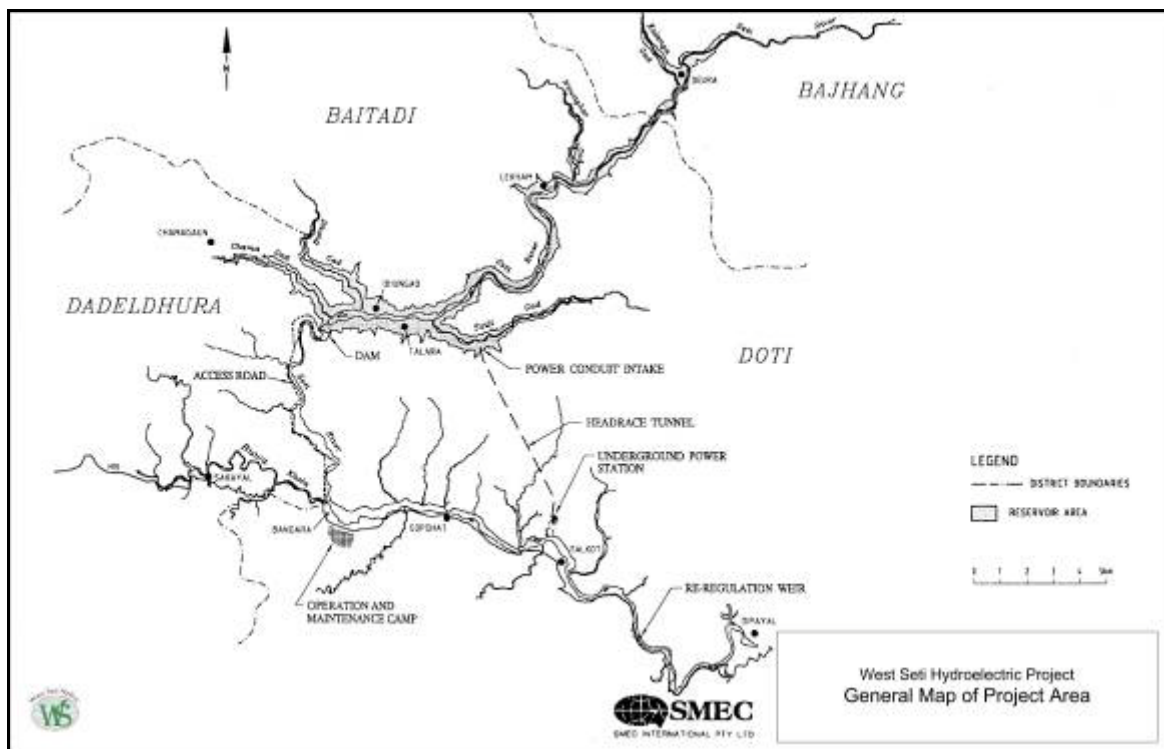


Figure 2-1: General Map of the Project Area

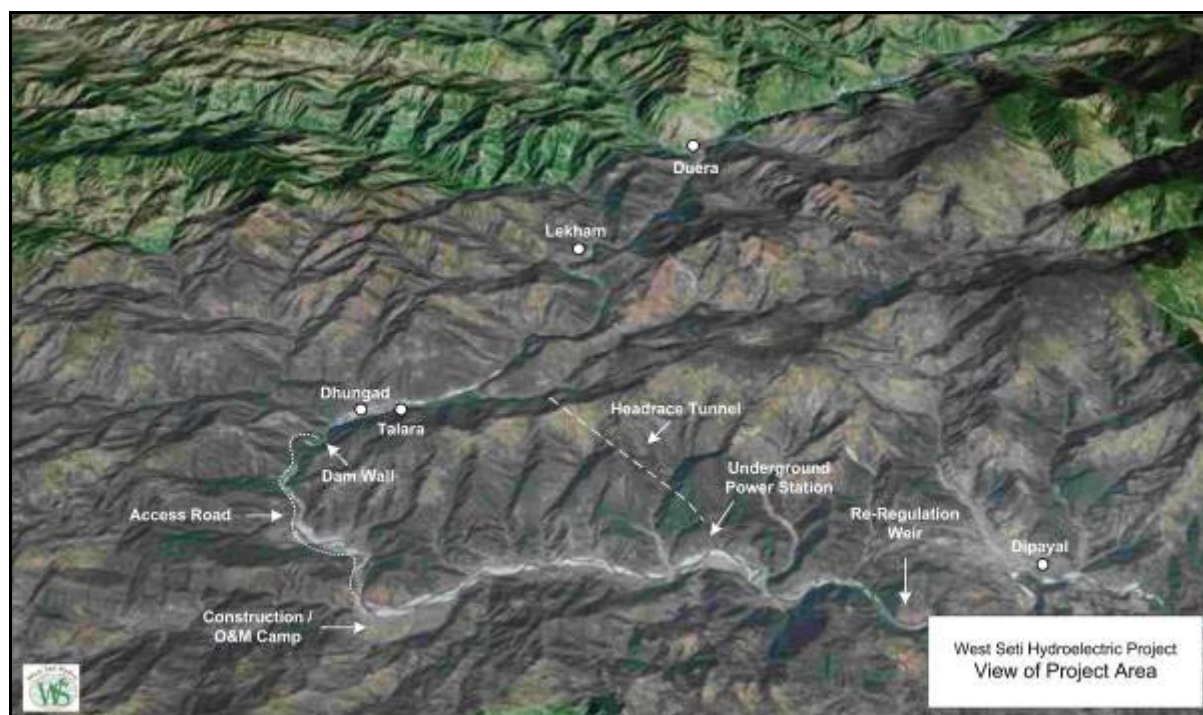


Figure 2-2: General View of the Project Area

Tunnels

A 10 m diameter, 6.7 km long headrace tunnel will be constructed. Its intake will be located 5 km upstream of the dam in the Saili Gad valley. The tunnel will lead to a 167 m deep vertical pressure shaft and a 365 m long pressure tunnel which branches into five 3 m diameter steel-line pressure conduits (one for each turbine-generator unit). A 620 m long tailrace tunnel will be constructed to discharge the flow from the power station back into the Seti River.

Power Station

A power station, situated 300 m underground, will be constructed at Bausi Gara, some 19 km downstream of the dam. It will house four Francis-type vertical shaft turbines connected to four alternators each with an output of 187.5 MW at the rated net head. Surface facilities will include a cable yard and administrative buildings.

Transmission Line

A 132.5 km long, 400 kV double circuit transmission line will convey energy to the Nepal-India border near Mahendranagar in Kanchanpur District. The line will be extended into India to form a suitable link with the Indian Grid.

Re-regulation Weir

A re-regulation weir will be constructed 6 km downstream of the tailrace outlet to regulate river flows and reduce rapid rises/falls in river levels created by power station releases.

Access Roads

Some 20.3 km of permanent access roads will be constructed to provide access to project sites. These include roads to the dam site and spillway area and power station.

Workforce Camps, Work Areas and Office Buildings

Accommodation will be required in the vicinity of the main project sites for the construction labour force and professional supervising staff, as well as for permanent operation and maintenance staff. The main accommodation requirements are for:

- a temporary labour force of up to 3,150 staff during construction (the total workforce will peak at 3,450 workers, but a portion of the locally employed people will live in their homes); and
- a permanent operation and maintenance camp for 80-100 people in the post-construction period (the supervising engineers' camp will be converted to an Operation and Maintenance camp at the end of the construction period).

A number of temporary work areas will be established to serve the various construction sites.

2.2 Land Areas Required by the Project

Table 2-1 details the areas of land required for the various project components. Land acquisition is mainly confined to the reservoir which, together with the dam site and spillway, will total approximately 2,202 ha of land. A 'no habitation' zone up to 90 m above the flood zone has also been proposed for safety reasons. This zone encompasses 1,425 ha of land, of which 228 ha is classified as cultivation. The intent of the 'no habitation' zone is to disallow residential occupation in this zone but to permit resource utilisation (e.g. cultivation) wherever possible.

Other areas of land acquisition include a re-regulation weir site (62 ha including inundated land), work areas (within the reservoir area as well as 5 ha temporary occupation outside the reservoir), workforce camps (21 ha permanent and 6 ha temporary acquisition) and several permanent access roads, including access roads to the spillway and dam site (15 ha).

Land will also be acquired for the construction of transmission line towers from the power station to the Indian border (in the vicinity of Mahendranagar in Kanchanpur District). However, this is not expected to be a major impact because of the relatively small areas affected and the fact that local communities will continue to use the land under the transmission line. An EIA and Resettlement Plan for the portion of the proposed transmission line in Nepal have been prepared.

Table 2-1: Estimated Land Areas Required by the Project

Project Component	Permanent Acquisition (ha)	Temporary Acquisition (ha)
Reservoir (up to FSL 1,284 m)	2,060	-
Reservoir flood zone (1,284 – 1,290 m)	106	-
Dam site and spillway (excluding reservoir area)	36	-
Power station (surface area developments)	20	-
Re-regulation weir (including inundated land)	62	-
Access roads to spillway and dam site	15	-
Transmission line towers	6	-
Temporary transmission line access tracks	-	14
Workforce camp	21	6
Work area (excluding works areas, camps and offices in reservoir area)	-	5
Total	2,326	25

Source: SMEC 2000, SCI 2007.

2.3 Social Impacts

The EIA of the WSHEP demarcated the project area into a reservoir area and a downstream area:

- The reservoir area refers to the area of land that will be acquired to form the dam wall, spillway and reservoir. The most significant social impacts in this area are permanent acquisition of land and other private assets, population displacement and altered access and movement patterns after reservoir inundation. The reservoir area is located in Baitadi, Bajhang, Dadeldhura and Doti Districts, and was demarcated into three zones for the EIA study:
 - below FSL+10 m: covers the reservoir area and the probable maximum flood (PMF) flood level;
 - between FSL+10 m and FSL+100 m: covers the foreshore area demarcated for no habitation due to the risk of landslides; and
 - above FSL+100 m: covers areas in close proximity where households who may own land below FSL+10 m are located.

The reservoir FSL was raised by 4 m, from EL 1,280 m to EL 1,284 m after completion of the 1999 EIA Report. The three reservoir zones are now: FSL+6 m, between FSL+6 m and FSL+96 m, and above FSL+96 m. This change does not have any effect on the resettlement programme, since the displacement/ no habitation zone (below FSL+96 m) remains the same.

- The downstream area consists of the area from the dam wall to a proposed re-regulation weir on the Seti River, some 28 km downstream of the dam wall. It includes access roads to the spillway, dam wall, tailrace outlet and headrace surge shaft, the power station site and various construction camps and works areas. Some permanent land acquisition and population displacement will occur in this area, but the most significant social impacts are related to temporary land acquisition, the presence of a relatively large workforce during the construction phase, and changes to the flow of the Seti River in the post-construction phase. The downstream area is located in Doti and Dadeldhura Districts.

The EIA described and assessed a range of social issues and impacts associated with implementation of the project, as summarised in Table 2-2.

Table 2-2: Key Social Impacts

Direct Impacts	Potential Social Impacts
Inundation of houses/settlements	<ul style="list-style-type: none"> • Changes in household structure and composition • Changes in household support systems • Household conflict (competition over resources) • Loss of place identity/psychological stress • Community disintegration • Increased pressure on local authorities to maintain autonomy
Inundation of agricultural land	<ul style="list-style-type: none"> • Decline in household nutritional standards/increase in poverty amongst households wholly or partly dependent on their fields • Changes in land use patterns; pressure on remaining resources • Alteration of social relations built up around the agricultural resources base
Inundation of other natural resources	<ul style="list-style-type: none"> • Alteration of informal local rules governing access to/use of the natural resource base • Increased pressure on remaining resource base • Changes to household energy use; allocation of household resources to new energy sources
Inundation of schools, temples, foot bridges and pedestrian tracks and other community facilities	<ul style="list-style-type: none"> • Changes to local movement patterns • Constrained access to markets and services • Changes to local support systems/facilities
Downstream impacts	<ul style="list-style-type: none"> • Changes to traditional uses of the river and river water
Construction impacts (temporary/permanent land acquisition; labour force impacts)	<ul style="list-style-type: none"> • Boomtown effects • Socially destabilising effects • Competition for jobs (community strife)

The Resettlement Action Plan (RAP) estimated that some 1,705 households would be affected by the various project components (excluding the transmission line and re-regulation weir), of which 1,155 would require resettlement. It was estimated that 1,530 households in the reservoir area would be affected through the inundation of residential houses and/or cultivation land. The majority of these households were located in the areas below FSL+10 m (53.4% of households) and above FSL+100 m (32.0%); the 'no habitation' zone (FSL+10 m to FSL+100 m) contained less than 15% of the affected households. The RAP estimated that 1,114 (72.8%) of the affected households in the reservoir area would be displaced and relocated to resettlement areas in the Terai and the project area.

It was estimated that a further 175 households in the downstream area would be directly affected by various project activities. Of these, an estimated 41 households would require relocation, with the remaining households affected only in terms of permanent land loss or temporary land occupation.

The number of affected households was updated in 2006/2007, including estimates of households affected by the transmission line and the re-regulation weir. It is currently estimated that the project as a whole will have a direct impact on 2,421 households, of which an estimated 1,579 will require resettlement.

Table 2-3: Estimated Households Affected by the Project, 1999 and 2007

Project Component	1999		2007	
	Affected Households	Households Requiring Resettlement	Affected Households	Households Requiring Resettlement
Reservoir and dam site				
- below FSL+6 m	817	817	933	933
- between FSL+6 m & FSL+96 m	224	224	257	257
- above FSL+96 m	489	73	490	122
Dam access road (estimate)	20	0	40	0
Power station site and access road	35	21	35	21
Work areas (estimate)	20	0	20	0
Workforce camps/offices (estimate)	100	20	200	30
Re-regulation weir (estimate)	to be confirmed	to be confirmed	150	30
Transmission line	to be confirmed	to be confirmed	296	186
Total (to be confirmed)	1,705	1,155	2,421	1,579

The overall aim of the Resettlement Plan, which was approved by the Government as part of the EIA, was to develop resettlement and compensation principles and plans that would ensure the successful re-establishment/rehabilitation of households affected by the project. Specifically, the Plan details:

- household and community resources affected by the project (land, houses, infrastructure, etc.) and replacement resources required for effective household re-establishment;
- the likely number of households affected by the project and the number of households facing resettlement;
- organisational and institutional requirements for resettlement implementation;
- implementation schedules and key milestones;
- proposals for the monitoring of resettlement activities; and
- resettlement costs.

The Resettlement Plan has recently been revised and updated. The key findings and recommendations of the VCDP have been incorporated in the revised RP.

3. METHODOLOGY

The VCDP study used both quantitative and qualitative research methods. In the quantitative data sets, both macro (regional/district/VDC) and micro (household) level data were collected. 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 Information Centres of Bajhang, Baitadi, Dadeldhura and Doti Districts. Publications of the Central Bureau of Statistics (CBS) in Kathmandu were extensively used to establish baseline information of the project area Districts and VDCs.

Baseline information of project-affected households was collected through the field survey, using the data gathering techniques described below.

3.1 Literature Review

The main volume of the EIA report for WSHEP and associated reports prepared by SMEC International Pty. Ltd. (SMEC) were reviewed to determine a frame of reference for the study, to identify data gaps and to present findings in a comparative perspective. Based on previous experience and a review of the project's EIA literature, demographic tables were developed. To populate these tables, a desk study was conducted. All relevant information associated with the socio-economic and cultural environment was reviewed. The following WSHEP reports were, in particular, reviewed:

- Environmental Impact Assessment, Volume 1: Main Report;
- Environmental Impact Assessment, Volume 3: Resettlement Action Plan; and
- Environmental Impact Assessment, Volume 6: Social and Land Use Studies.

Other relevant literature/secondary data sources that were reviewed included:

- the environmental impact reports of the Upper Seti Storage Hydroelectric Project, 2004;
- the environmental impact reports of the Upper Tama Koshi Hydroelectric Project, 2005;
- demographic data of the Central Bureau of Statistics (CBS);
- the 2001 Census conducted by the CBS;
- the Nepal Household Consumption and Living Standards Surveys;
- district and VDC profiles;
- publications of various government offices of the project area districts; and
- publications of international and local non-governmental organizations (NGOs) related to socio-economic, health and development conditions in the Far Western region of Nepal and the project area, where available.
- publications on the status of women, Dalits, lower status castes and tribal communities in Nepal (CEDA 1981, Bhattachan *et al* 2002, Dahal *et al* 2002, Sharma *et al* 1994, Team Consult 1991);
- publications on land acquisition, compensation and resettlement in development projects in Nepal (NPC/ADB 2006).

3.2 Field Research

3.2.1 Initial Community Meetings

Five consultation meetings, including four in the reservoir area and one in the downstream project area, were held (20-27 November 2006) prior to the field survey to ensure that people in the area were informed and prepared for the fieldwork. These meetings were important, firstly, because there had been

little formal contact with the affected communities over the last five years; and secondly, because there may have been socio-political changes in the area since the EIA fieldwork.

The meetings were conducted as follows:

- Deura (20 November 2006): for people from Rayal, Dangaji, Sunkuda, Koiralakot and Parakatne VDCs;
- Moribagar (22 November 2006): for people from Thalakanda, Shivaling, Girichauka and Chhapali VDCs;
- Dhungad (24 November 2006): for people from Dhungad, Sigas and Belapur VDCs;
- Talara (25 November 2006): for people from Lamikhal, Mahadevstan, Dahakalikasthan and Girichauka VDCs; and
- Gopghat (27 November 2006): for people from Warpatta, Banlek, Belapur and Latamandu VDCs in the downstream project area.

The meeting proceedings (including attendance) were recorded and compiled in a separate report by WSH. The meeting deliberations are discussed in a recent report on updated socio-economic conditions in the reservoir area (SCI 2007).

3.2.2 Household Questionnaire Survey

A pre-tested questionnaire was applied by a trained team of enumerators to solicit information from vulnerable households. The questionnaire was completed for 274 vulnerable households located in 11 VDCs (nine in the reservoir area and two in the downstream area). The survey represents a complete census of all affected vulnerable households, except those in Rayal and Dangaji VDCs (Bajhang District) where disturbances created by a small group of business owners prevented all the households from being interviewed. An estimated 30 to 40 vulnerable households in these two VDCs were not interviewed. The interviewed households are listed in Appendix 1.

The 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.

The questionnaire also included various gender aspects to analyse the status of women, their attitude towards the project and possible impacts on women due to the implementation of the project.

The data obtained from the questionnaire survey was entered into a MS Access database for future management and monitoring. A copy of the questionnaire is included in Appendix 5.



Photo 3-1: Enumerators Collecting Household Information

3.2.3 Group Discussions

Two structured group discussions were held in nine VDCs, one with a cross section of vulnerable people from the VDC area and one with a group of women from these social categories, to gain further qualitative insights into their socio-economic conditions and resettlement preferences. Checklist used in the focus group discussion is attached in Appendix 6. The group discussions focused on:

- factors that contribute to the socio-economic conditions of socially excluded/vulnerable groups;
- the potential impact of the project on these factors and on the livelihoods of the socially excluded/vulnerable groups; and
- the measures that should be implemented to restore, diversify and improve their livelihoods.

Occupational caste groups, women and ethnic minorities (Badi) were included in the discussions. These discussions provided the vulnerable people in the project area an opportunity to voice their questions and concerns regarding the project and to provide information on aspects such as their religion, culture, festivals, sources of livelihood and lifestyle.

The number of participants in the group discussions is shown in Table 3-1.

Table 3-1: Participants in the Group Discussions

Location	Date	Number of Participants	
		Male Meeting	Female Meeting
Belapur	December 5, 2006	19	17
Dhungad	December 7, 2006	18	12
Lamikhal	December 8, 2006	19	14
Girichauka	December 9, 2006	15	11
Mahadevsthan	December 10, 2006	10	8
Shivaling	December 12, 2006	9	7
Thalakanda	December 13, 2006	13	9
Warpatta	December 15, 2006	14	10
Banlek	December 15, 2006	11	9
Total		128	97

Source: Field Survey, 2006.



Photo 3-2: Group Discussion with Dalit Women

3.2.4 Key Informant Interviews and Checklists

A key informant survey was also used during the field activities to gather information on socio-economic and cultural activities in the reservoir area. Persons consulted included school teachers, shopkeepers, VDC secretaries and other local leaders. Two sets of checklists were designed (see Appendix 6):

- a VDC level checklist to collect information on topics such as basic demographic and migration patterns, food sufficiency and cropping patterns, existence of user's group/committees, public facilities and infrastructure, labour force availability, existence of archaeological and religious sites and the existence of disadvantaged groups and ethnic minorities;
- an agricultural checklist to collect the prices of various agricultural products.

The number of participants in the key informant survey is summarised in Table 3-2.

Table 3-2: Participants in Key Informant Survey

S.No.	VDC	Number of Participants
1	Belapur	4
2	Dhungad	5
3	Shivalanga	3
4	Thalakanda	3
5	Lamikhal	5
6	Girichauka	3
7	Mahadevsthan	4
8	Royal	2
9	Dangaji	2
10	Warpatta	4
11	Banlek	5
Total		40

3.2.5 Field Observations

Site observations were made to obtain supplementary information on different socio-economic and cultural activities in the reservoir area. This included recording of religious and cultural activities in the reservoir area, as well as of educational and religious sites/structures. A field diary was maintained where daily recordings were made.

4. LEGAL AND POLICY FRAMEWORK

This Chapter provides a summary of national legislation and international policies/guidelines pertaining to involuntary resettlement and vulnerable groups in development planning.

4.1 International Context

While most countries have laws covering land expropriation, few have legislation that specifically addresses involuntary resettlement. In most instances, the safeguard policies of financing agencies such as the World Bank and the Asian Development Bank (ADB) are applied, either as a condition of appraisal where Bank funding is sought for a project, or as a general guide to resettlement planning.

4.1.1 World Bank Policy

The overall objectives of the World Bank's Operational Policy 4.12 on involuntary resettlement are:

- to avoid or minimise involuntary resettlement by exploring all viable alternative project designs;
- where population displacement is unavoidable, to conceive and execute resettlement activities as sustainable development programmes;
- to meaningfully consult with affected persons and provide them opportunities to participate in planning and implementing resettlement programmes; and
- to assist displaced persons to improve their livelihoods and standards of living or at least to restore them, in real terms, to pre-displacement levels or to levels prevailing prior to the beginning of project implementation, whichever is higher.

4.1.2 ADB Policy

The ADB published its Policy on Involuntary Resettlement in November 1995. It has also prepared the following additional policies and tools dealing with involuntary resettlement:

- Policy on Indigenous Peoples (1998);
- Handbook on Involuntary Resettlement (1998); and
- Gender Checklist: Resettlement (2003).

The overall objective of the ADB's Policy on Involuntary Resettlement is to ensure that no one is disadvantaged by ADB-financed projects, and that the livelihoods of affected people are restored and wherever possible enhance through using resettlement as an opportunity for development. The basic principles of the ADB policy are:

- involuntary resettlement should be avoided where feasible;
- where population displacement is unavoidable, it should be minimized by exploring all viable project options;
- people unavoidably displaced should be compensated and assisted, so that their economic and social future would be generally as favourable as it would have been in the absence of the project;
- people affected should be informed fully and consulted on resettlement and compensation options;
- existing social and cultural institutions of resettlers and their hosts should be supported and used to the greatest extent possible, and resettlers should be integrated economically and socially into host communities;

- the absence of a formal legal title to land by some affected groups should not be a bar to compensation;
- particular attention should be paid to households headed by women and other vulnerable groups, such as indigenous peoples and ethnic minorities, and appropriate assistance provided to help them improve their status;
- as far as possible, involuntary resettlement should be conceived and executed as a part of a project; and
- the full costs of resettlement and compensation should be included in the presentation of project costs and benefits.

The ADB also requires the borrower to follow good practice in the resettlement planning stage, where the following key elements are required to be incorporated:

- Take all steps to minimise or eliminate involuntary resettlement where feasible by exploring viable alternative design options.
- Define the parameters of likely resettlement at an early Initial Social Assessment (ISA) stage, and include appropriate Terms of Reference (TORs) for a Project Preparation Technical Assistance (PPTA) feasibility study.
- Conceptualise and implement resettlement measures as development programmes, to be part of all projects, including sector, private sector and co-financed projects, and loans to development finance institutions.
- Complete socioeconomic surveys and census of people affected early in the project preparation to identify all losses from land acquisition and all affected persons and to avoid an influx of outsiders or speculators.
- Involve all stakeholders in a consultative process especially all affected persons, including vulnerable groups.
- Compensate all affected persons, including those without title to land, for all their losses at replacement rates (the costs of resettlement and compensation may be considered for inclusion in bank loan financing for a project);
- Where relocation of housing is required, develop relocation options in consultation with affected persons and host communities, in order to restore living standards. Where income and livelihoods are affected, establish appropriate income restoration programmes with objectives to improve, or at least restore, their productive base.
- Provide a social preparation process for people affected when they are vulnerable, or when there is social tension associated with displacement. Prepare a time-bound Resettlement Plan with appropriate provisions and sources of funding before appraisal, with a summary Resettlement Plan before the management review meeting. Include a summary resettlement plan in the draft report to the president of the Board. Involve specialists in resettlement and social sciences and people affected, in the planning, implementation and monitoring of the Resettlement Plan.

The ADB Handbook on Involuntary Resettlement defines vulnerable groups as ‘those that fall below the poverty line, those without legal title to assets, households headed by women, indigenous people, ethnic minorities, pastoralist and others that are not protected by national land compensation legislation’. Groups such as isolated communities, the disabled or those unable to work (elderly, children) or those that are left behind when the majority of their communities relocate are also considered vulnerable in resettlement.

In Nepal, the ADB policy on involuntary resettlement has been followed on the Kali Gandaki “A” Hydropower Project, Road Network Development Project (RNDP). It is also to be implemented on the Decentralised Rural Infrastructure and Livelihoods Project.

4.2 National Context

Like most countries, Nepal does not have legislation that specifically addresses involuntary resettlement. There is legislation covering land acquisition/appropriation and constitutional guarantees to the right to property and the right to compensation for property acquired under the law. Recently, the country's National Planning Commission (NPC), with assistance from the ADB, has prepared a policy paper on land acquisition, compensation and resettlement.

4.2.1 Constitutional Guarantees

The Constitution of Nepal 1990 (Article 11 and Article 15) establishes the right to property as a fundamental right, stating that "all persons shall have the ... freedom to acquire and enjoy property or dispose it off by sale or otherwise". The Constitution also declares that "no person shall be deprived of his property except in accordance with the law". Yet there is no constitutional obligation for the State to pay compensation for the acquisition of personal property. The right to receive compensation is, therefore, not a fundamental right, and the law may or may not require for compensation to be paid. It does, however, remain a legal right because of the "moral obligation to pay for what you take" (Thapa 1988). Since it is a legal (rather than a fundamental) right, an aggrieved person can only challenge the correctness of the legal procedures adopted by the implementing authority, not the basis and actual amount of compensation (Molnar and Ragsdale 1991).

Article 19 of the Interim Constitution 2063 (2007), Right to Property, states that "(1) Every citizen shall, subject to the laws in force, have the right to acquire, own, sell and otherwise dispose of the property. (2) The State shall not, except in public interest, requisition, acquire or create any encumbrance on the property of any person. Provided that this clause shall not be applicable on property acquired through illegal means. (3) Compensation shall be provided for any property requisitioned, acquired or encumbered by the State in implementing scientific land reform programme or in public interest in accordance with law. The compensation and basis thereof and operation procedure shall be as prescribed by law."

4.2.2 Land Acquisition Act 2034 (1977)

The acquisition of land is governed by the Land Acquisition Act 2034 (1977), first promulgated in 1961 (Land Acquisition Act 2018). The cumbersome procedures of the Act reportedly contributed to project delays, and a new version of it was promulgated in 1977 in an effort to streamline the acquisition process. The revised Act restricted the extent to which objections to acquisition notifications could delay the acquisition process, but it also came under criticism because it had "considerably narrowed the areas of fairness and justice to people in general and ... significantly increased the powers of arbitrariness of government machinery" (Thapa 1988).

Along with this general criticism, the Act has other practical constraints, including the following which are probably the most important:

- Land acquisition rules and detailing procedures, such as the rates for different classes of land, were published in 1969 through the Land Acquisition Guidelines 2026. However, the guidelines are based on the old Act and have yet to be revised in accordance with current Act. The only guidelines in place are, therefore, obsolete.
- The Act has no provisions for granting compensation to people who do not have title/ ownership of land.
- There is no provision to address the hardships caused to the project affected family by delays in compensation payments.

- The Act does not have provisions to ensure that the people, especially indigenous peoples, vulnerable groups and ethnic minorities, affected by the project are able to make proper use of the compensation money to resettle to a living standard not less than that they were enjoying prior to the project.
- The key stipulations of the Act are as follows:
- A Compensation Determination or Fixation Committee (CDC) shall be established to ascertain compensation for land/property acquisition. The CDC shall normally consist of district-level government officials (such as the Chief District Officer and the Land Revenue Officer) and project representatives.
- The acquisition and compensation procedure shall consist of (i) initial procedures, (ii) a preliminary investigation process, (iii) acquisition notification, (iv) compensation notification and (v) appeal procedures (see Figure 4-1).
- Compensation shall be paid (i) for damages caused from investigations during the preliminary process and (ii) for the land and property permanently acquired (including, standing crops, trees and houses).
- Compensation shall be in cash (lump sum), except where the landowner has lost all his/her landholdings (in which case the landowner can opt for replacement land, and the CDC can also award a hardship allowance) and Guthi (religious trust) land which must be replaced with other land.
- The CDC must take account of the land ceiling (maximum permitted size of individual landholdings) prescribed in the Land Act 2021 so that compensation to a landowner does not exceed the 'ceiling amount' to which he/she is entitled.

A registered tenant is entitled to 50% of the compensation awarded to the landowner.

4.2.3 Other Local Legislation

The Public Roads Act 2031 (1974) deals exclusively with temporary acquisition of land. Although the Act was formulated specifically for temporary occupation (compulsory leasing) of land associated with road construction and expansion, its provisions may also be applicable to other instances of temporary land acquisition.

4.2.4 National Policy on Land Acquisition, Compensation and Resettlement in Development Projects in Nepal

This Policy was prepared in September 2006 by the NPC with ADB assistance. The Policy was approved by a ministerial working committee and the NPC but is yet to be approved by the GoN. The Policy's has the following guiding principles:

- Appropriate and adequate compensation for the loss of assets or income is a fundamental right of all project affected persons. Physically displaced people must be relocated with basic amenities such as school, health posts and other facilities.
- Vulnerable groups such as Janajati/Adivasi, Dalits, landless, women, especially women-headed households, differently-abled, poverty groups and senior citizens are entitled to special benefit and assistance packages in addition to compensation and resettlement.
- All affected persons should be assisted to restore at least their pre-project income and livelihood sources.
- The absence of legal title to land should not be a bar for compensation, resettlement and rehabilitation assistance.

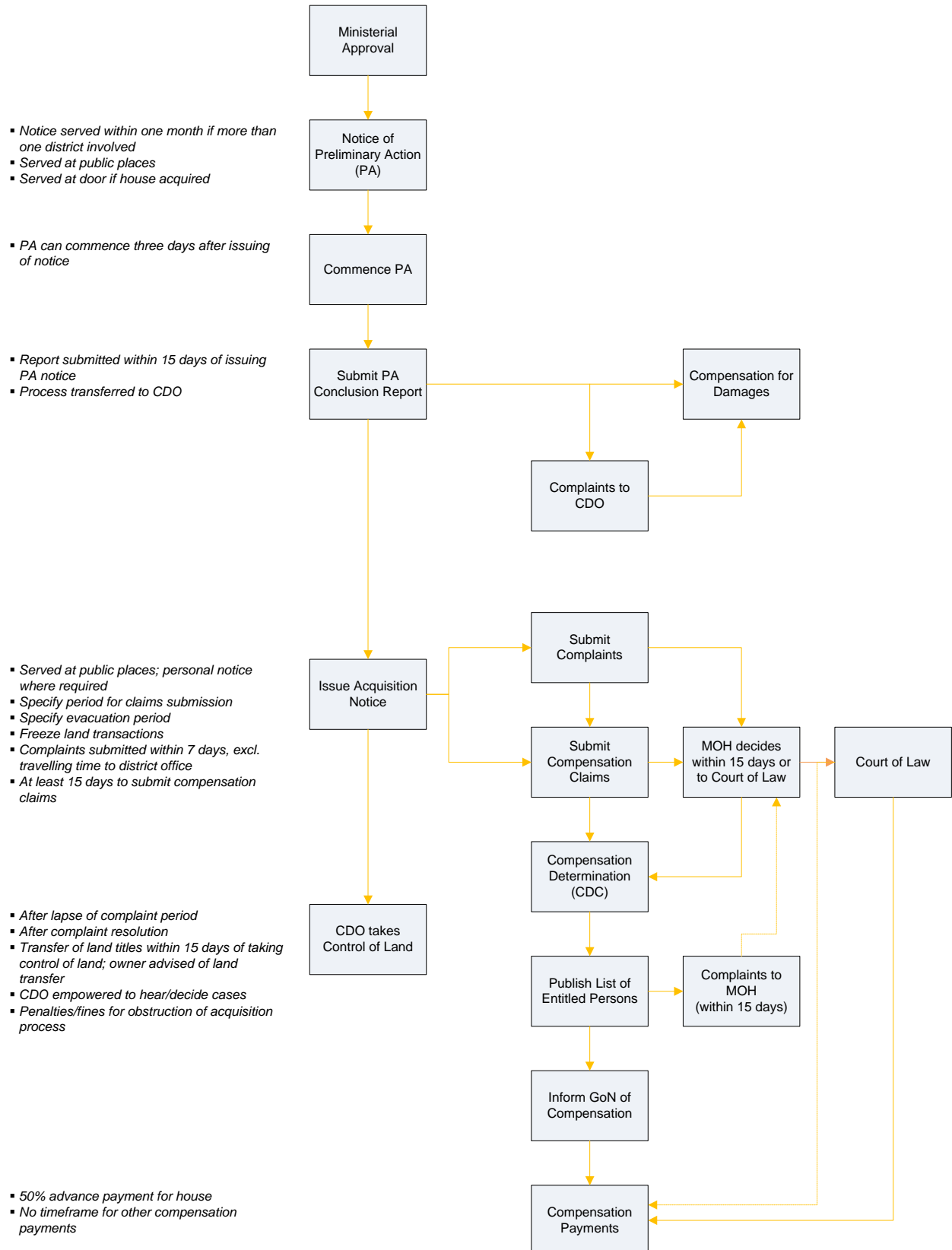


Figure 4-1: Flow Diagram of the Land Acquisition Process

Incorporating the provisions of the ADB's and World Bank's involuntary resettlement policies, and building on current resettlement practices in the country, the Policy establishes a range of compensation entitlements for people affected by development projects. Amongst others, this includes:

- cash compensation at full market value (equivalent to replacement value) for all acquired land if provision of replacement land is not feasible, with the stipulation that a person who becomes a marginal landholder as a result of land acquisition should be provided with replacement land of equivalent productivity or value;
- cash compensation at replacement cost for loss of all structures (residential, business and other structures), with no deduction for depreciation or for salvageable materials; or provision of a replacement house;
- cash compensation for private trees based on the annual value of the produce;
- compensation for the loss of income from rented buildings;
- cash compensation for the loss of standing crops; and
- compensation to registered tenants and sharecroppers, equivalent to 50% of the compensation for the concerned area of land and lost crops.

A new (and possibly contentious) provision for transmission lines and similar linear developments is a Policy recommendation that land in the project's right of way (i.e. below the transmission lines) should be acquired and leased back – with land use restrictions if required – to the original owner. The compensation entitlement will be the “value of the land at the cut-off date minus the value of the rental for the period of lease”.

The Policy states that squatters and non-titled landholders are not entitled to compensation for the land they occupy. However, those who have earned their livelihoods from access to/use of the land for more than three years prior to the project's compensation cut-off date should, wherever possible, be provided with replacement land on a lease basis. They should also be assisted in their efforts to legalise their tenure in order to qualify for compensation.

Rehabilitation measures proposed by the Policy include:

- proper resettlement planning, including developed relocation sites with amenities/easy access to amenities;
- for resettled farming communities, homesteads sites of sufficient size for storage of agricultural produce, keeping of livestock and for kitchen gardens;
- employment on the project, where possible, to at least one member of each affected household, with half of the employment opportunities reserved for women; and
- additional relocation and rehabilitation support measures, particularly to displaced households, severely affected households, women and vulnerable people.

4.2.5 National Policy Relating to the Internally Displaced 2062 (2006)

This Policy was recently formulated by GoN and brought into effect in March 2006. The Policy does not have specific provisions relating to compensation, relocation and rehabilitation of people affected by development projects. Nevertheless, it has recognised the need to safeguard the rights of displaced people by paying proper compensation, resettling them through proper planning and preparing specially targeted programmes for women, senior citizens, children, orphans and disabled persons.

4.2.6 Vulnerable Groups

The Constitution of Nepal 1990 defines the country as a multi-ethnic, multilingual, democratic, independent, sovereign Hindu and Constitutional Monarchical Kingdom, officially recognizing Nepal's ethnic diversity. The Interim Constitution 2007 not only acknowledges Nepal as a multi-ethnic, multilingual but also declares it a secular state. This Constitution gives special attention to the upliftment of groups like Dalits, Adivasi/ Janajati, women and Madhesi . According to the Legal Code of 1963, nobody could claim superiority on the basis of race, caste and creed, and everyone was equal before the law.

The National Policy on Land Acquisition, Compensation and Resettlement in Development Projects in Nepal (Section 4.2.4) contains some sections on vulnerable groups (including indigenous groups). Its major recommendations are as follows:

- **Section 3 (Guiding Principles):** Vulnerable groups such as Janajati/Adivasi, Dalits, landless, women, especially women-headed households, differently-able, poverty groups, and senior citizens shall be entitled to special benefit and assistance packages in addition to compensation and resettlement.
- **Section 5.5 (Relocation and Rehabilitation):**
 - *No.41:* Relocation shall be taken as a development strategy for the affected vulnerable people. A Vulnerable Group Development Plan (VGDP) shall be prepared as an integral part of the Land Acquisition and Compensation Plan (LACP) or Resettlement Plan (RP). All LACP or RP shall include plans to improve the livelihoods and access to other development initiatives for the benefit of local labourers, artisans, female-headed households and through a local savings and credit and other income generating schemes. Skill training programs shall be initiated through local community based organizations (CBOs) and NGOs, and the cost of such programs shall be paid by the project.
- **Section 6 (Implementation of the Policy):**
 - *No. 72:* Members of vulnerable groups immediately adjacent to acquired land, but whose land has not been acquired, shall be entitled to land acquisition and relocation with full allowances if, without such acquisition, the remaining community would have very few members and have, as a result, lost their social support networks.
 - *No. 73:* The project-affected population (PAP) from the Vulnerable Groups (VG) shall be given preference in the allotment of land as compensation on land-for-land basis. One member of each project-affected family (PAF) of the VG shall get a one-time additional financial assistance, equivalent to 365 days' minimum district wage rate, for the loss of customary rights/usages of forest produce/income or livelihood source.
 - *No. 74:* Preference for pre-built houses at resettlement sites shall be given to members of the VGs.
 - *No. 75:* Disadvantaged Adivasi/Janajati or Dalit groups shall be re-settled close to their natural habitats in a compact block (if they prefer) so that they can retain their ethnic, linguistic and cultural identity and social and economic structure/network if the impact on these social categories falls under the vulnerability criteria.
 - *No. 76:* Losses affecting women and other vulnerable members of the family shall be paid directly to the affected member in both cash and through other rehabilitation measures/ assistance.
 - *No. 77:* Adivasi/Janajati, Dalit and female-headed household PAPs shall get land free of cost for community and religious gatherings in a resettlement zone.

- No. 78: Disadvantaged Adivasi/Janajati, Dalit and female-headed families residing in the project-affected areas and having fishing rights in the river/pond/dam shall be given fishing rights in the reservoir area when constructed.
- No. 79: VG PAPs losing businesses shall be given preference for alternative business sites with good *market opportunities/access and in project employment or preference in project constructed new business premises. They will also get support in income generation schemes (savings/credit, skills training, entrepreneurial opportunity, etc.)*.
- No. 80: Relocation sites should ensure that the VG has access to public facilities such as water use, school, health services, employment opportunities etc.
- No. 81: *Social awareness training on gender and equity issues shall be provided for successful integration of the VG into the host community.*

The Local Self Governance Act 1999 and the National Dalit Commission, established in 2002, aim to increase Dalit participation in governance with improved protection of rights. The Local Self Governance Act 1999 has provisions for representation of women, economically backward groups, ethnic communities and indigenous peoples at village and ward level development committees and has sanctioned authority to the village community to operate programs.

The Tenth Five Year Plan (2002-2007), Nepal's Poverty Reduction Strategy, is the first national plan to have social inclusion as an important element of the poverty profile in Nepal. The Plan also gave priority consideration to major social variables such as gender, ethnicity and caste related differentials, which exacerbate the intensity and depth of poverty.

In brief, in the context of Dalits in Nepal, the Legal Code of 1963, the Constitution of Nepal 1990 and the Interim Constitution 2007 are the legal measures to abolish untouchability. Similarly, the Ninth and Tenth Five Year Plans are instrumental in the process of empowerment of Dalits in Nepal. The National Dalit Commission is advocating the rights of Dalits in Nepal and promoting reservation for Dalit children in schools as well as employment for Dalits in government and other semi-government and private organizations.

4.3 Involuntary Resettlement Practices in Nepal

The GoN has thus far prepared and applied the following project-specific policies and guidelines for involuntary resettlement:

- Arun-III Access Road: Land Acquisition Guidelines 2045 (1989) (Guidelines issued by the GoN pursuant to Sections 16 and 27 of the Land Acquisition Act 2034 (1977) and meant for the Arun-III Access Road Project activities only);
- Arun-III Hydroelectric Project: Land Acquisition Guidelines 2050 (1993); and
- Melamchi Water Supply Project: Resettlement Policy 2059 (2001).

The guidelines for the Arun-III Access Road provided that the compensation package for PAFs include cash for assets acquired or damaged due to the project and a rehabilitation grant to cover suffering and hardship caused. The rehabilitation grant was to be based on family size and other criteria determined by an Acquisition and Rehabilitation Committee (ARC). A 30-day notice for the affected families to file complaints was made mandatory. For severely project affected families (SPAFs), the compensation was to include employment for at least one member, including the provision of training, in addition to the allowances specified for the PAFs. The project was to assist the purchase of substitute assets where PAF/SPAFs wished to do so.

In the case of the land acquisition guidelines for the Arun-III Hydroelectric Project, rehabilitation and other matters were to be derived from a Land Acquisition, Compensation and Rehabilitation Plan (LACRP) prepared for the project. SPAFs were defined as homeless due to acquisition of the land by the project, having no other landholding other than those acquired by the project, or unable to maintain their economic status prior to the acquisition of land for the project because the compensation amount received was too low, or those affected as a result of acquisition of house or land which was the main source of income or who were dependent upon or depended on such source of income. The guidelines contained no special compensation provisions or different types of mitigation measures for vulnerable people or indigenous groups.

The Melamchi Water Supply Project Resettlement Policy contained the following provisions:

- compensation at market value without depreciation;
- representation of affected families in the CDC;
- minimizing time between the notice of acquisition and compensation award;
- the date of the census survey as cut off date; living in the area for three years in case of non-titled holders;
- priority to indigenous people, ethnic minorities, female-headed families, the helpless, extremely poor, old, socially and economically deprived;
- land-for-land compensation as far as possible;
- appropriation of land only after full compensation and resettlement;
- active involvement of SPAFs in the resettlement process;
- displacement allowances as per entitlement matrix;
- supplementary activities, such as health, education, rural electrification and income generating activities for social upliftment;
- no felling of trees as far as possible and compensation for loss of assets;
- resettlement as a community, including shifting of socio-cultural institutions for large scale displacement;
- priority for provision of basic services previously enjoyed at the resettlement site;
- providing public land (as per the policy of the “Commission for Resolving Problems of Landless Squatters”) to non-registered tenants/landless squatters living in the project area for the past three years;
- training and employment of at least one member of the SPAFs, making necessary provisions in the construction contract;
- permitting PAFs to use their property until full compensation payment;
- advance compensation payment and displacement allowances for SPAFs;
- resettlement plan to include detailed activities, estimates, compensation amounts and responsibilities of agencies related to the project;
- project to bear the registration fees and other government fees needed for the purchase of land from the compensation amount anywhere in the country within one year;
- avoiding damage to standing crop, with pay full compensation where this is unavoidable;
- formation of Local Consultative Groups for advice on investment of compensation amount in productive sectors;
- provisions to integrate the displaced families with the host families, with basic facilities provided to the host families as well;
- acquire entire land if the land remaining after acquisition of its required portion is less than 2.5 *ana*² in Kathmandu Valley and 8 *ana* in Melamchi Valley and provide replacement of the area of land acquired or pay cash to equivalent land, including replacement facilities and compensation as per the Entitlement Matrix for SPAFs;

² 1 *ana* = 31.81 m²

- include complaint-hearing provision in Resettlement plan for matters other than provisioned in the existing laws.

The resettlement policy for the Melamchi Water Supply Project also does not contain any special provisions for the vulnerable or indigenous people.

4.4 WSHEP Approach

The WSHEP will require substantial land acquisition and resettlement, with impacts on settlement patterns, social networks, community bonds and livelihoods. The scale of population displacement will require not only compensation and resettlement assistance as traditionally defined but committed support to affected persons to ensure that their livelihoods are restored. At the same time, the Project will be a major development intervention, with the potential to contribute substantially to local and regional social and economic development, and, therefore, to the diversification and improvement of livelihoods. To ensure that both the overall objectives of the Resettlement Plan and the associated development potentials are achieved, a set of resettlement and livelihood restoration principles have been developed, based on ADB policies and local practice, to guide Project preparation and implementation. These principles are detailed in Table 4-1.

Table 4-1: Project Resettlement Principles

Principle	Guideline
<p>Principle 1: Population displacement and resettlement will be minimised wherever possible.</p>	<p>a. The Project will be guided by the principle of avoiding or minimising involuntary resettlement wherever possible.</p> <p>b. To reduce impacts on livelihoods, non-habitation land uses (e.g. cultivation) will be allowed to continue in areas required by the Project until a suitable period before a specific area of land is required for Project development.</p>
<p>Principle 2: All Project impacts will be identified and all losses properly recorded.</p>	<p>a. An inventory of Project-affected assets and resources will be undertaken in full consultation with the concerned households, communities and authorities.</p> <p>b. Untitled landowners will be assisted in their efforts to obtain Government registration of their land for compensation purposes, provided that their eligibility for such assistance has been confirmed through the community participation structure.</p> <p>c. A database of all Project-affected persons will be established which will include the following for each household:</p> <ul style="list-style-type: none"> • an inventory of landholdings and non-retrievable improvements (buildings and structures) to determine fair and reasonable levels of compensation and mitigation; • census information, detailing household composition and demography; • current livelihood earning activities. <p>d. The asset inventories will be used to determine entitlements and to assist with the identification of severely Project-affected persons, while the census information will be used to monitor household reestablishment. All information will be entered into the database to facilitate planning, implementation, and monitoring and evaluation.</p>
<p>Principle 3: Land acquisition, resettlement planning, budgeting and implementation will be an integral part of the Project.</p>	<p>a. Land acquisition and involuntary resettlement will be integral components of the Project. The following approach will be adopted:</p> <ul style="list-style-type: none"> • land acquisition and resettlement costs will be built into the overall Project budget as an upfront cost; • an institutional and organisational framework will be established as an

Principle	Guideline
	<p>integral part of the Project's management structure. These mechanisms and arrangements will ensure that compensation, resettlement and household re-establishment are carried out promptly and effectively;</p> <ul style="list-style-type: none"> • land acquisition and resettlement schedules will be integrated with the Project's development schedule. Areas required by the Project will only be occupied after acquisition and resettlement procedures have been successfully completed.
<p>Principle 4: Ongoing and meaningful public consultation will occur.</p>	<p>a. Persons whose livelihoods and standards of living will be adversely affected by Project activities - whether through involuntary resettlement, loss of assets or through being deprived of resources - have the right:</p> <ul style="list-style-type: none"> • to be informed in time of Project proposals/implementation schedules; • to be consulted on measures to restore their livelihoods, and to participate in the final selection and design of such measures; and • to be informed of displacement and land acquisition dates sufficiently in advance of actual implementation. <p>b. Consultation and participation will occur throughout the Project cycle - preparation, implementation and monitoring/evaluation.</p> <p>c. A Project liaison and participation structure will be established and given official recognition within the Project's institutional framework. It will:</p> <ul style="list-style-type: none"> • create avenues for the sharing of information; • build local capacity to assess Project impacts and implementation issues, and to identify remedial/corrective measures; • promote participation in resettlement planning and implementation.
<p>Principle 5: Affected persons will be assisted to restore, and ultimately to improve, their livelihoods.</p>	<p>a. The Pre-project livelihoods of affected persons will be restored and ultimately improved through the provision of:</p> <ul style="list-style-type: none"> • fair, equitable and prompt compensation for the loss of assets directly attributable to the Project; • housing support (cash or replacement housing) and residential site support (replacement site or cash) where physical relocation is required; • planned resettlement sites, prepared prior to physical relocation, including land preparation and infrastructure provision; • resettlement support measures (e.g. evacuation and displacement allowances) where physical relocation is required; and • a suite of income and livelihood restoration measures.
<p>Principle 6: Vulnerable groups will be specifically catered for.</p>	<p>a. Particular attention will be paid to collective adverse impacts on vulnerable groups/social categories such as the elderly and physically disabled, female-headed households and indigenous groups who may be vulnerable to changes brought about by Project activities or excluded from its benefits. Members of these groups are often not able to make their voice heard effectively, and account will be taken of this in consultation and planning processes, as well as in the establishment of grievance procedures.</p>
<p>Principle 7: Host communities will be considered as Project-affected parties.</p>	<p>a. Large numbers of households will be relocated to the Terai. The surrounding host communities will be considered as Project-affected parties and compensated according to the same principles for any losses incurred as a result of resettlement activities. Host communities will be represented on the Project's community liaison and participation structure so that they can participate in the planning and implementation of Project-related activities in their areas and benefit from developments associated with the resettlement programme.</p>

Principle	Guideline
<p>Principle 8: Grievance and monitoring procedures will be in place.</p>	<p>a. Accessible grievance procedures will be implemented, with particular concern for the situation of vulnerable groups.</p> <p>b. Monitoring procedures will be implemented to assess the effectiveness of land acquisition, compensation, resettlement and livelihood restoration. Monitoring will be an ongoing activity, employing mechanisms such as internal (performance) monitoring, standardised (quantitative) socio-economic monitoring, participatory (qualitative) socio-economic monitoring and external evaluation.</p>
<p>Principle 9: Resettlement and livelihood restoration will be integrated into the regional socio-economic development context.</p>	<p>a. Resettlement planning will be integrated with reference to:</p> <ul style="list-style-type: none"> • current/planned government developments in the Project and resettlement areas, including initiatives to address poverty; and • current/planned NGO/funding agency initiatives in the region.
<p>Principle 10: Resettlement planning and implementation will comply with all legal and policy provisions.</p>	<p>a. Resettlement planning and implementation will comply with Project policies and the provisions of relevant legislation pertaining to:</p> <ul style="list-style-type: none"> • environmental management; • public participation and disclosure; • land tenure, occupation, acquisition and compensation; • local government, development and service provision.

An Entitlement Matrix (Appendix 7) has been prepared to address the range of losses and impacts that will result from Project implementation. Because of the complexity of the Project, the entitlements and livelihood restoration measures detailed in the Entitlement Matrix are regarded as the minimum to be made available under the Project. The Project will be responsive to new livelihood and social development opportunities that may arise as a result of the Project and that would be conducive to broad-based socio-economic development in the region.

5. BASELINE DATA

5.1 Overview of Vulnerable Communities in Nepal

The concept and meaning of “vulnerable groups” vary in different contexts. Due to this ambiguity, a clear definition of vulnerable groups in Nepal for their identification and study is difficult. As such, the following groups were considered potential vulnerable groups for this study:

- female-headed households;
- households headed by the physically-disabled;
- Adivasi/Janajati (indigenous nationalities), and
- Dalit (the so-called untouchables).

After review of data and information related to these groups in the project area, only female-headed households and the Dalit were identified as groups that merited consideration in the study. The issues and reasons leading to this decision are discussed in the following sections.

5.1.1 Female-headed Households

In 2001, women headed 15% of the households in Nepal (CBS, 2001). They were legal owners of land in less than 11% households, and 7% of female members of households owned livestock. The status of women varies with the region of the country, caste and ethnicity. Women from Tamang, Gurung, Magar and Sherpa castes enjoy greater freedom and have a significant role in household decisions compared to women from Brahmin, Chhetri and Dalit castes (CEDA, 1981).

In the Far Western Development Region (FWDR), women belong to the Hindu caste group. They have lower social status than men and are dominated by the male members of the family. Although they are responsible for most household chores, women have an insignificant role in household decisions. Women labourers are paid lower wages. Thus, the status of women in the project VDCs is poor. Consequently, female-headed households are considered vulnerable in this study.

5.1.2 Households Headed by Physically Disabled

Estimates of the disabled population in Nepal range widely. Data from the 2001 census shows that the disabled comprised 1.6% (0.37 million) of the total population of Nepal (CBS, 2001).

During the field survey conducted for this study, households headed by the physically disabled were not found among the project-affected families. As such, this group was not considered in the study.

5.1.3 Adivasi /Janajati

The 59 indigenous groups (Adivasi/Janajati) listed in Nepal (Appendix 9) account for 37% of the total population of Nepal (CBS, 2001). Janajati generally live in the eastern and central hills and the far-eastern and western Terai plains. As a result, their population in the project districts is very low – 0.5% in Bajhang, 0.7% in Baitadi and 4% in both Doti and Dadeldhura.

In the project VDCs, people from indigenous groups constitute only 0.54% of the population (Table 5-1). The only VDC with a relatively large portion of indigenous people is Dahakalikatshan (8.33% of the population). Dahakalikasthan is marginally affected by the Project and has only four project-affected households, all non-Adivasi/Janajati.

Table 5-1: Indigenous Population in the Project VDCs

District	VDC	Total Population	Adivasi/Janajati Population 2001*	
			Number	% of VDC Population
Baitadi	Dhungad	2,319	0	0.00
	Shivaling	3,522	1	0.03
	Sigas	3,510	2	0.06
	Thalakanda	2,463	1	0.04
Bajhang	Dangaji	3,482	6	0.17
	Koiralakot	3,219	0	0.00
	Parakatne	3,931	0	0.00
	Royal	6,091	25	0.41
	Sunkuda	5,910	68	1.15
Dadeldhura	Belapur	6,738	29	0.43
Doti	Banlek	4,322	9	0.21
	Barpata	3,908	4	0.10
	Chhapali	2,978	1	0.03
	Dahakalikasthan	2,594	216	8.33
	Girichauka	2,900	0	0.00
	Lamikhal	4,074	7	0.17
	Latamandu	5,308	28	0.53
	Mahadevsthan	4,430	4	0.09
Pachanali	3,211	0	0.00	
Total		74,910	401	0.54

Source: CBS (2001); * Based on NEFIN's classification of indigenous nationalities in Nepal.

During the field survey, Adivasi/Janajati households/families were not found among the project-affected families. Consequently, these communities have been excluded from this study.

5.1.4 Dalit

In Nepal, the term Dalit traditionally connotes the untouchables, low castes and castes from whom water is not accepted and whose touch requires purification by the "holy water". Of late, this term has also been used to refer to the disadvantaged, downtrodden, marginalized and oppressed groups.

Dalit is not a homogeneous group, and its heterogeneity extends to language, religion and culture. Each cultural group within this broad category is endogamous by nature, with marriages performed within the group and rituals performed by the group's own priests.

Based on heterogeneity and hierarchy, Dalits can be categorized into three broad regional groups:

- Hill Dalit, consisting of Kami, Sarki, Damai, Gaine and Badi;
- Terai Dalit, consisting of Tatma, Mushahar, Khatwe, Bantar, Dushad, Paswan, Dhobi, Chamar, Chidimar, Patharkat, Dom and Halkhor;
- Newar Dalit, consisting of Kusule, Kasai, Pode, Chyame and Halahulu.

Each broad cultural group has its own language or mother tongue. Most Dalits practice Hinduism, but their practices and rituals vary locally. Some Dalits have adopted Christianity as well.

The *Dalit Bikas Samiti* (Dalit Development Committee), formed in 1997, identified 23 castes in Nepal as Dalits. However, the *Rastriya Dalit Ayog* (National Dalit Commission), constituted in 2002, lists 28 Dalit castes (Appendix 9). According to the 2001 census, there were only 16 Dalit groups in Nepal with a

population 2,675,817, i.e. 11.6% of the total population of the country (CBS, 2001). Of the total Dalit population, 1,615,577, i.e. 64.5%, were Hill Dalits. Between 1991 and 2001, the Dalit population increased by 474,036, i.e. about 2%.

The literacy level of Dalit 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).

The major means of livelihood of the Dalit are traditional occupations, such as metal works, making gold and silver ornaments, sewing clothes, leather work and wage labor. The average land holding per household among Dalits is 6.96 *ropani*³ (0.36 ha), which is almost a third of land holding of the average Nepali household (Team Consult, 1998). With this amount of land, Dalits can feed themselves only for 3 to 4 months a year. Landlessness is quite common among Dalits, especially among the Terai Dalits. Almost 50% of Dalit households have low levels of housing made of timber walls and thatched roof. The household income of Dalit is also very low (Table 5-2).

Table 5-2: Average Household and Per Capita Income of Hill and Terai Dalit

Dalit Group	Average Household Size	Average Annual Household Income (NRs)	Average Annual per Capita Income (NRs)
Hill Dalit	4.7	56,942.70	13,340.00
Terai Dalit	5.2	48,257.30	10,866.60

Source: Nepal Living Standard Survey, 2003.

Clearly, the Dalit are the poorest people in Nepal. Between 60 to 70% of the Dalits live below the poverty line (Sharma *et al*, 1994). Socioeconomic indicators, too, show that the Dalits are the most deprived group of people in Nepal, their Human Development Index (HDI) value being the lowest (0.239) in the country – much lower than the highest HDI of 0.457 of the Newar community and the national average HDI of 0.325 (NESAC, 1998).

In the project districts, only Hill Dalits are present. They form 15.8% of the total population in Dadeldhura, 10.9% in Baitadi, 12.9% in Bajhang and 17.5% in Doti (Table 5-3). The average Dalit population in the four districts is 14.3%, which is higher than the national average of 11.6%. Among the project-affected families, about 19% of the households are Dalits. This figure is higher than the corresponding national and district averages.

³ 1 hectare = 19.65 *ropani*

Table 5-3: Population of Dalits in Project Districts in Relation to Other Groups

Class of Hindu	Caste	Dadeldhura		Baitadi		Bajhang		Doti	
		Total Population	% of District Total	Total Population	% of District Total	Total Population	% of District Total	Total Population	% of District Total
High caste Hindus	Brahmin	22,560	17.9	47,350	20.2	18,010	10.8	19,013	9.2
	Chhetri	64,759	51.3	112,794	48.1	106,775	63.9	109,217	52.6
	Thakuri	4,489	3.6	19,284	8.2	9,376	5.6	8,766	4.2
Middle caste Hindus	Sanyasi	2,128	1.8	3,766	1.6	2,180	1.3	995	0.5
Vulnerable groups or Dalits	Kami	9,646	7.6	14,360	6.1	13,201	7.9	16,644	8
	Damai	3,662	2.9	3,612	1.6	3,637	2.2	10,789	5.2
	Sarki	6,632	5.3	7,436	3.2	4,630	2.8	9,000	4.3
	Badi	0		20	0	2	0	13	
Total		113,876	90.3	208,622	89	157,811	94.5	174,437	84
Other/ethnic/caste groups: Total		12,286	9.7	25,796	11	9,215	5.5	33,329	16
Total population of district		126,162	100	234,418	100	167,026	100	207,766	100

Source: CBS, Census Survey, 2001.

Unlike the Dalits of central and eastern hilly regions of Nepal, Dalits of the project area are highly specialized in different kinds of occupations. Based on profession, they can be categorized into the following hierarchical groups:

1. Kami or Lohar (Blacksmith), involved in manufacture and repair of iron tools
 - Tamta (Coppersmith)
 - Parki (Reed worker)
 - Sunar (Goldsmith)
 - Chunara (Reed worker)
 - Ukhada (Raikal) (Reed worker)
2. Sarki (leather worker)
 - Bhul (leather worker), involved in carrying manure and disposing off dead animals
3. Damai / Dholi (Tailor)
4. Ode (Mason)
5. Badi (Musicians and clay workers)
6. Bhad (Musicians and clay workers)

Among these groups, the Badi is a special group that deserves mention in the context of the WSHEP. Traditionally, Badis earned their living as musicians and performers. In recent years, Badi women in Terai districts, such as Bardiya and Banke, have engaged in prostitution. Although Badi women in the project districts still practice their traditional profession, there is a likelihood of these women being attracted to flesh trade, both in the project area and in surrounding districts, once the project starts. This possibility stems from the fact that the onset of the project will provide greater access to the locals, and the Badi in the project area will eventually come in contact with the Badi women of other districts, especially those from the Terai.

Most Dalit groups in the project area are heavily dependent on the high caste groups for their livelihood based on a patron-client relationship. Even today, they have the lowest social status, and water and cooked food served by them are not accepted by members of the higher caste. With the commencement

of project-related activities, the Dalits, along with the high caste groups, will be displaced from their present area.

In consideration of the above issues, the Dalits have been considered as vulnerable groups in the project area.

5.2 Vulnerable Communities in the Project Area

For the VCDP, all VDCs affected by the reservoir area and downstream activities are considered as project VDCs. A total of 21 VDCs qualify as project VDCs. Of these, 15 VDCs are affected by reservoir area activities and six by downstream activities. One of these VDCs (Belapur) is affected by activities in both the reservoir and downstream areas.

During the group discussions conducted as part of the field study (Section 3.2.3), the survey team attempted to identify the vulnerable population in the project area in accordance with the criteria discussed in Section 5.1. These efforts resulted in the identification of 274 Dalit households and eight female-headed, non-Dalits households in the project area. Thus, a total of 282 households were considered vulnerable and were surveyed for the purpose of the VCDP study. Of the surveyed households, 36 were female-headed and the rest were Dalits. Of the female-headed households, 28 were Dalit families. These households were spread across 11 of the 21 project VDCs.

As Dalits are the major vulnerable group in the project area, the present study basically focuses on them as the single most vulnerable group. Consequently, a detailed analysis of Dalits is presented from Sections 5.3 through 5.10. Details of female-headed households are presented and analyzed in Section 5.11.

5.3 Population and Demographic Features

5.3.1 Households and Population

The total number of project-affected Dalit households in the 11 project VDCs is 274, and the total Dalit population is 1,981 (Table 5-4). The Dalits are mainly concentrated in Lamikhal, Dhungad, Rayal and Dangaji VDCs, where about 72.5% of their population lives. Their average household size is 7.2 persons per household, which is higher than the national average (5.4) and the average for the Hill Dalits (4.7).

Table 5-4: Total Dalit Population and Households in Project VDCs

VDC	Population			No. of Households	Household Size
	Male	Female	Total		
Dhungad	196	195	391	57	6.86
Shivaling	45	36	81	8	10.13
Thalakanda	33	23	56	7	6.57
Dangaji	95	81	176	24	7.33
Rayal	139	123	262	36	7.28
Belapur	51	53	104	12	8.67
Banlek	75	57	132	18	7.33
Barbatta	26	25	51	9	5.67
Girichauka	40	28	68	8	8.5
Lamikhal	306	293	599	88	6.81
Mahadevsthan	35	26	61	7	8.71
Total	1,043	939	1,981	274	7.19

Source: Field Survey, 2006.

The sex ratio of Dalits in the project area is quite high, standing at 110.9 males per 100 females. In the project areas, Dalit females are burdened with household chores and other activities such as fodder collection for animals, fetching water, rearing children, etc. Thus, they are more vulnerable and at a higher risk of early mortality than the Dalit men. This factor, combined with the poor health facilities available in the project area, explains the unusual sex ratio.

Only four Dalit groups, viz. Kami, Damai, Sarki and Badi are affected by the project. As shown in Table 5-5, the Kami group has the highest number of households (152) and population (55.2%) in the project area, followed by Sarki (78; 28.7%), Damai (42; 15.5%) and Badi (2; 0.6%). In the Dalit hierarchy, Kami are considered superior, followed by Sarki, Damai and Badi.

Table 5-5: Total Population and Households by Dalit Caste Group

Caste Group	Population			No. of Households	Household Size
	Male	Female	Total		
Damai	158	150	308	42	7.33
Kami	572	521	1,093	152	7.19
Sarki	307	261	568	78	7.28
Badi	6	6	12	2	6.00
Total	1,043	939	1,981	274	7.23

Source: Field Survey, 2006.

5.3.2 Age Structure

The young Dalit population (below 15 years of age) constitutes 40.5% of the total Dalit population in the project area (Table 5-6). This figure is slightly higher than the corresponding national average (39.4%) but lower than the corresponding Dalit average (43%). Likewise, the elderly Dalit population (older than 60 years) forms 6% of the total Dalit population in the project area. This is lower than the national average (6.5%) but higher than the Dalit average (5.3%). Thus, the dependency ratio (ratio of young and elderly population) of Dalits in the project area is quite high.

Table 5-6: Age Structure of Population by VDC

VDC	Population				
	< 9 Years	10-14 Years	15-59 Years	≥ 60 Years	Total
Dhungad	130	42	190	29	391
Shivaling	29	13	36	3	81
Thalakanda	16	4	33	3	56
Dangaji	39	21	105	11	176
Rayal	68	27	142	25	262
Belapur	33	12	55	4	104
Banlek	29	18	77	8	132
Barbatta	16	7	23	5	51
Girichauka	18	8	38	4	68
Lamikhhal	167	77	327	28	599
Mahadevsthan	21	7	33	0	61
Total	566	236	1059	120	1,981
Percent	28.6	11.9	53.5	6.0	100.0

Source: Field Survey, 2006.

All Dalit groups in the project area have a relatively good percentage of elderly population (Table 5-7). The youth population is the highest among the Badi (50%), followed by Damai (44.1%), Sarki (39.9%) and Kami (39.6%).

Table 5-7: Age Structure of Dalit by Caste Group

Occupational Caste		Population					Total
		< 4 Years	5-9 Years	10-14 Years	15-59 Years	≥ 60 Years	
Damai	No.	47	46	43	154	18	308
	%	15.3	14.9	13.9	50	5.9	100
Kami	No.	149	163	121	587	73	1,093
	%	13.6	14.9	11.1	53.7	6.7	100
Sarki	No.	78	80	69	313	28	568
	%	13.7	14.1	12.1	30.4	4.9	75.2
Badi	No.	0	3	3	5	1	12
	%	0	25	25	41.7	8.3	100
Total		274	292	236	1,059	120	1,981

Source: Field Survey, 2006.

5.3.3 Residential Status and Migration

Data from the field survey shows that more than 90% of the Dalit households in the project area have lived in their locality for generations, while 7% of the households have been residing in the area for over six years (Table 5-8). It can, therefore, be concluded that the Dalit population in the area is generally stable, and that the area has not seen significant migration. However, approximately 3% of the Dalit households have migrated into the project area within the last six years.

Table 5-8: Residential Status of Dalits in the Project Area

Occupational Caste	Length of Residence					Lifelong	Total
	< 1 Year	1-2 Years	2-4 Years	4-6 Years	> 6 Years		
Damai	0	0	1	0	1	40	42
Kami	0	0	0	1	16	135	152
Sarki	0	0	0	4	3	71	78
Badi	0	0	0	0	1	1	2
Total	0	0	1	5	21	247	274
Percentage	0	0	3		7	90	100

Source: Field Survey, 2006.

Permanent migration from the area is very rare, but temporary migration for work is quite common. Outward migration is generally seasonal and is aimed at supplementing household income through employment in India. Migration for education and service is also reported in the area.

5.4 Settlement and Housing Patterns

Dalit settlements are mostly located near settlements of the high caste groups. These settlements are normally heterogeneous in nature, with Dalits of different castes living together. Dalit houses are generally clustered around those of relatives related by blood and marriage.

Settlement patterns in the reservoir area reflect the distribution of arable land and the development of market areas. Many of the larger settlement areas (e.g. Dhungad, Talahera, Lekam, etc) were established in proximity to valley cultivation land, while others (e.g. Deura) developed as market areas along trade routes. Other settlements such as Manthala, Serod and Chaudam are located at the middle hills of Seti River basin.

Population concentrations of Dalits households in the reservoir area basically occur in the main Seti River valley (e.g. settlements of Dhungad and Talara), further upstream at settlements such as Serod, Chaudam, and along some of the tributaries (e.g. the settlements of Chamagaun and Nwaghari). Deura

and Bagthala, the latter situated above the headwaters of the reservoir on the Kalanga Gad, and, to a lesser extent Dhungad, are important market areas.

There are numerous other scattered settlements or household clusters in the reservoir area, ranging in size from five houses to more than 15 houses. Some households have more than one residential house, situated in different settlements at different elevations (i.e. valleys, hills/ridges). These houses are occupied at different times of the year, either during the agricultural periods or harvesting time. This practice is not common. It is, nevertheless, found throughout the reservoir area.

In some households, there are multiple families living together (e.g. father's and son's families living in one household). Although there is some sharing of resources (e.g. livestock and storage areas), each nuclear family has its own allocated space in the house (i.e. bedroom and kitchen) and generally functions as a separate entity.

Houses are mainly constructed of stone with mud mortar, timber beams and pillars and slate tile or thatched roofs. Houses commonly have two storeys, although triple-storey houses are occasionally found in some Dalit settlements. The ground floor is generally used as a livestock/ barn and for the storage of fuel wood and fodder, while the rooms on the top floor(s) are used as kitchens, bedrooms and grain stores.

Normally, there are no toilets in the Dalit houses, and open defecation near the village or along river bank is a common practice among the Dalit households of the area. Water sources for various purposes are located slightly away from the villages, and most Dalits settled along the Seti River use river water for various purposes. In the project area, Dalits and the upper caste group share their water sources; however, the latter get preference over the former in accessing these sources.

The settlement and housing patterns observed in the reservoir area are also evident in the downstream project area. However, the Mahakali Rajmarg from Attariya to Syaule and Seti Rajmarg from Syaule to Silgadhi have brought changes to these housing patterns. The most obvious is the development of market areas along the road and associated population concentration in areas such as Gopghat and Dipayal (the latter located outside of the downstream project area).

5.4.1 House Ownership

Most Dalit households have their own houses, but some stay in houses provided by relatives and landlords. Of the 274 surveyed Dalit households, 93.1% owned houses, 0.7% rented houses and 3.3% stayed in houses provided free of charge by family, relatives or landlords (Table 5-9). The remaining either squatted or lived in other types of housing.

Table 5-9: Occupancy Status of Houses by Vulnerable Families

VDC	Occupancy Status							Total
	Own House	Rental	Provided by Family/Relative	Provided by Landlord/Employer	Squatting	Other	No Response	
Dhungad	50	0	2	1	1	3	0	57
Shivaling	8	0	0	0	0	0	0	8
Thalakanda	4	1	1	0	0	0	1	7
Dangaji	23	0	0	0	1	0	0	24
Royal	36	0	0	0	0	0	0	36
Belapur	12	0	0	0	0	0	0	12
Banlek	18	0	0	0	0	0	0	18
Barbatta	9	0	0	0	0	0	0	9
Girichauka	7	0	0	0	0	0	1	8
Lamikhal	81	1	5	0	0	0	1	88
Mahadevsthan	7	0	0	0	0	0	0	7
Total	255	2	8	1	2	3	3	274
Percentage	93.1	0.7	2.9	0.4	0.7	1.1	1.1	100

Source: Field Survey, 2006.

5.5 Cultural Aspects

One of the dominant cultural features of the people of the project districts is the Hindu caste culture. Mostly, Hindu caste groups, such as Brahmin, Thakuri, Chhetri and Sanyasi, and the low caste Hindu groups (such as Dalits) live in the project-area VDCs, especially in the reservoir and downstream areas. The social structure of the Hindu caste culture is strictly hierarchical with Brahmins at the top and Dalits at the bottom in this hierarchical structure. In other words, the dichotomy of purity (Suddha) and impurity (Asudha) are concepts of Hindu culture that refer to states of people, objects and actions. Interaction between castes and between men and women is regulated by rules of purity and impurity.

Each cultural group is endogamous. Members of a particular group marry within their groups. There are very few instances of inter-caste marriages within the project area.

The social structure and cultural patterns of Dalits has already been discussed in Section 5.1.4. The status of Dalit women, as a whole, is lower compared to Dalit males of this area. The women have little education, and a very few are employed in government or non-governmental organizations.

5.5.1 Language

Nepali is the mother tongue of more than 95% of the population of the project districts and VDCs (Table 5-10). However, this statistical data is a misnomer in the sense that the Nepali language spoken in this area is very different from the Nepali language spoken by the people of Kathmandu valley and the eastern and central regions of Nepal. The Nepali language spoken in this area is a mixture of the Kumaoni and Garhwali languages spoken in the north-eastern hill regions of Uttarakhand, India.

Table 5-10: Mother Tongue of Population of the Project Districts

District	Total Population	Population with Nepali as Mother Tongue	
		No.	%
Dadeldhura	126,162	121,437	96.3
Baitadi	234,418	232,313	99.1
Bajhang	167,026	655,678	99.2
Doti	207,766	199,049	95.8

Source: CBS, 2001 Census.

The Dalits of the project area also speak the Nepali language. All respondents of the 274 Dalit households surveyed stated that their mother tongue was Nepali.

5.5.2 Religion

An overwhelming majority (99%) of the people in the project districts follows the Hindu religion (Table 5-11). In Doti, about 1.1% of the total population is Buddhists.

Table 5-11: Religion of Population of the Project Districts

District	Total Population	Hinduism		Buddhism		Others	
		No.	%	No.	%	No.	%
Dadeldhura	126,162	125,086	99.1	856	0.7	220	0.2
Baitadi	234,418	233,897	99.8	50	0.0	471	0.2
Bajhyang	167,026	166,635	99.8	334	0.2	57	0.0
Doti	207,066	204,543	98.8	2,284	1.1	239	0.1

Source: CBS, 2001 Census.

All of the 274 surveyed Dalit households practice Hinduism. Thus, the Dalit society is fully guided by the Hindu culture. This type of homogeneity in culture requires focused attention in resettlement planning lest it creates problems in social harmony.

5.6 Education and Literacy

The literacy rate of the FWDR is lower than the national average (Table 5-12). As mentioned in Section 5.4, the nation-wide literacy status of Dalits is much lower than the national average.

Table 5-12: Literacy Rate of FWDR and Nepal

Region	Literacy Rate %		
	Male	Female	Both Sexes
FWDR	64.7	33.2	48.7
Nepal	65.5	42.8	54.1

Source: CBS, 2001 Census.

Among the surveyed Dalit population, 56.2% of the people above six years of age are literate (Table 5-13). The literacy rate among males is 67.1% while that among females is 32.9%. This literacy rate is good compared to the literacy rate of the country by sex (male 65.5% and female 42.8%) and the nation-wide Dalit population. A good number of male and female Dalits of the project areas have passed the School Leaving Certificate (SLC) and higher examinations. Currently, most Dalit children of school-going age have access to education.

Table 5-13: Literacy Status of Dalits over Six Years of Age

Population	Illiterate	Literate					Total
		Able to Read and Write	Primary	Lower Secondary	Secondary and SLC	Intermediate and Above	
Male	243	80	393	102	25	19	619
Female	475	30	206	47	13	7	303
Total	718	110	599	149	38	26	922
Percentage	43.78	6.71	36.52	9.09	2.32	1.58	56.22

Source: Field Survey 2006.

The literacy rate of Badi in the project area is very high in comparison to the national figure (Table 5-14), obviously due to their small population in the project area. The survey data indicates that all Badi children in this area are currently studying at the primary level. Some people from the Damai and Kami groups have passed the Intermediate and Bachelor's degree.

Table 5-14: Literacy Status of Dalits by Caste Group over Six Years of Age

Education		Damai	Kami	Sarki	Badi	Total
Illiterate		108	389	218	3	718
Literate	Able to read and write	20	62	27	1	110
	Primary	89	338	165	7	599
	Lower Secondary	16	91	42	0	149
	Secondary	4	22	12	0	38
	SLC	4	4	9	0	17
	Intermediate (10+2)	3	2	0	0	5
	Bachelors (B.A.) and above	3	1	0	0	4
Total literate		139	520	255	8	922
Total		247	909	473	11	1640
Literate Dalit, % (Field Survey, 2006-07)		56.28	57.21	53.91	72.73	56.22
Literate Dalit, % (2001 Census)		43.5	41.3	38.3	33.5	-

Source: Field Survey, 2006; CBS, 2001 Census.

Among the surveyed households, 16 Dalit students are studying outside the project area (Table 5-15), mostly in western Terai districts such as Kailali, Kanchanpur and Bardiya. Of the 16 students, 14 are from the Kami group and one each from the Damai and Sarki groups. This trend is quite encouraging as it is exposing the Dalit people to higher education, thereby increasing their chances of quality jobs and helping them empower themselves.

Table 5-15: Number of Dalit Students Studying Outside the Project Area

Occupational Caste	Education in					Total
	Same District	Western Terai District	Other Terai District	Other Parts of Nepal	Outside Nepal	
Damai	0	1	0	0	0	1
Kami	4	10	0	0	0	14
Sarki	0	1	0	0	0	1
Badi	0	0	0	0	0	0
Total	4	12	0	0	0	16

Source: Field Survey, 2006

5.7 Health and Sanitation

The project districts have a very few hospitals and primary health centres (Table 5-16). As such, Dalits, like other people of these districts, have to rely on health posts and health sub-posts for health care. These posts and sub-posts are often inadequately staffed and are unable to deal with the full range of health issues and cases.

Table 5-16: Health Facilities in the Project Districts

District	Hospital	Health Centre	Health Post	Health Sub-Post
Baitadi	1	2	10	55
Bajhang	1	2	10	36
Dadeldhura	2	1	9	17
Doti	2	2	10	39

Source: NRA, 1997; Department of Health, HMIS Section.

Two hospitals are located within 30 km of the immediate project area at Silgadhi and Rajpur (near Dipayal), but they are inadequate to meet the needs of the local population. The District Hospital at Silgadhi is poorly staffed and ill-equipped. The Korean-financed hospital at Rajpur is also understaffed, with only one qualified doctor. Consequently, many patients visit Tim Hospital in Amargadhi Municipality of Dadeldhura district and Dhangadhi Hospital in the Terai, located about 38 km and 160 km away, respectively, from the project districts.

Recorded hospital attendance rates in 2006 indicate that more than 40% of the cases come from the four project districts. Diarrhea was the main type of diseases recorded. Falls/injuries/fractures, gastritis, skin diseases, oral and dental problems, Chronic Obstructive Pulmonary Diseases (COPD), Acute Respiratory Infections (ARI), eye diseases, Pyrexia of Unknown Origin (PUO), abdominal pains, ear diseases and pneumonia are the other most common diseases reported from the project districts.

The present sanitation facilities in the reservoir area are quite poor. Most of the people use river and spring water for drinking, washing and cleaning. Open defecation along rivers or in open fields is common practice in the project area. A very few houses have toilet facilities.

5.7.1 Sources of Water

The major sources of drinking water for Dalits in the project area are rivers, springs and piped water (Table 5-17). A large number of Dalit households (56.8 %) in this area use rivers/streams for several purposes, including drinking, cleaning, washing, defecating and cremating the dead. This is particularly the case for villages like Dhungad, Lamikhal, Moribagar and Deura where most Dalit households residing along the banks of the Seti River use water from this river or its tributaries for different purposes. Of the remaining Dalits, 35.54% use piped water and 7.67% use ditch or spring water for drinking, cleaning, washing, etc. However, all Dalits use Seti River for cremation.

Table 5-17: Households by Source of Drinking Water

Source	No. of Households	Percentage
Piped water	102	35.54
Ditch/spring	22	7.67
River/stream	163	56.79
Total⁴	287	100

Source: Field Survey 2006.

⁴ Multiple responses were made by some households. Thus, the total number of households exceeds 274.

Until a few years ago, Dalits in the FWDR were prohibited from using the sources of water used by the so-called upper class. This practice has changed, and Dalits are allowed to share the same sources of water nowadays.

5.7.2 Common Diseases and Methods of Treatment

The most common diseases in the project area are diarrhea, pneumonia, abdominal pain, cough, cold, fever, headache and gastric. As indicated in Table 5-18, about 35.4% of Dalits surveyed utilize the services of certified medical doctors for treatment, 2.92% use local *Baidhyas* (herbal medical practitioners) and 24.82% use *Dhamis* and *Jhakris* (local faith healers). The remaining 18.61% and 18.25% use services of health posts and health assistants, respectively, for treatment. However, the number of health workers in the health posts is very low, and the services provided by these institutions are poor. Very few prescriptive medicines are available at the health posts. Pathological testing facilities are available only at the district hospitals.

Table 5-18: Methods of Treatment

Method of Treatment	No. of Households	Percentage
Doctor	97	35.40
Local <i>Baidhya</i>	8	2.92
<i>Dhami / Jhakri</i>	68	24.82
Health posts	51	18.61
Health assistants	50	18.25
Total	274	100.00

Source: Field Survey, 2006.

5.8 Land Use, Tenure and Holdings

Three types of cultivated land are recorded in the project area: *khet* (irrigated land), *bari* (dry land) and *kharbari* (thatch/grass fields). Other major land uses are forests and grassland, the latter used for grazing and mostly communally-owned. Most of the forested areas are government-owned and are moderately to sparsely dense. Households use a wide variety of forest resources to meet or supplement their subsistence requirements. These resources include fodder, fuel wood, timber for house construction, furniture and implements, fruits, vegetables and medicinal plants.

Subsistence agriculture is the dominant economic activity in the project area. Cultivation occurs in the valleys and on hill slopes, and is either irrigated (*khet*) or rainfed (*bari*). Irrigation water is nearly exclusively obtained from the tributaries of the Seti River.

Valley cultivation is highly productive for rice and wheat production, and average crop yields are significantly higher than district averages. The valley floor cultivation areas around Dhungad, Talara, Lekham and Deura are the most productive areas in the reservoir area. Paddy and wheat are also cultivated on irrigated hill slopes, while the dominant crops on rain-fed hill slopes are upland rice, millet and/or maize, followed by wheat in winter. However, millets, maize and wheat are also cultivated in the lowland *khet*.

Land tenure is predominantly in the form of freehold (*raikar*). Cultivation land is registered under terms of the Land Act 2021 (and amendments). Owners are issued land ownership certificates (*lal purja*), and land records and cadastral maps are maintained at the District Land Revenue and Survey Offices. Land ownership is transferred through generations, and land transactions between non-related persons also take place when the land is sold. *Guthi* land (land belonging to religious trusts) is also found in the project area.

Dalit households of the project area own a reported total of 92.94 ha of land (Table 5-19). This includes almost equal areas of *khet* and *bari* land and some area of *kharbari* land. *Kharbari* provides thatch for roofing houses and fodder for animals while *khet* and *bari* provide food grains for human beings and fodder for animals. Thus, land is a very important source of income.

Table 5-19: Total Landholding of Dalits

VDC	Total Landholding by Land Type (ha)							
	Khet		Bari		Kharbari		Total	
	Area	%	Area	%	Area	%	Area	%
Dhungad	5.09	12.04	12.88	30.34	1.58	19.27	19.55	21.04
Shivaling	0.81	1.92	1.63	3.84	1.63	19.88	4.07	4.38
Thalakanda	3	7.09	0.2	0.47	0.46	5.61	3.66	3.94
Dangaji	4.68	11.07	4.43	10.44	0.97	11.83	10.08	10.85
Rayal	5.45	12.89	5.04	11.87	1.37	16.71	11.86	12.76
Belapur	2.39	5.65	4.33	10.2	0.1	1.22	6.82	7.34
Banlek	1.83	4.33	0.76	1.79	0.76	9.27	3.35	3.6
Barpatta	1.02	2.41	0.51	1.2	0.31	3.78	1.84	1.98
Girichauka	1.78	4.21	0.41	0.97	0	0	2.19	2.36
Lamikhal	14	33.1	10.43	24.57	0.92	11.22	25.35	27.28
Mahadevsthan	2.24	5.3	1.83	4.31	0.1	1.22	4.17	4.49
Total	42.29	100	42.45	100	8.2	100	92.94	100

Source: Field Survey 2006.

On average, each Dalit household in the project area owns 0.33 ha (or 6.6 *ropani*) of land. This land holding is slightly lower than the area of 0.36 ha reported in an earlier study (Team Consult, 1998).

All Dalit households of the project-area own some amount of land (Table 5-20). However, most of the households (74.8%) own small areas of land (up to 0.5 ha). Only 15 Dalit households (5.47%) own more than 1 ha of land. This land holding size is better than the national average land holding size (0.95 ha per household).

Table 5-20: Distribution of Households by Landholding Size

Land Holding Size (ha)	No. of Households	Percentage
Up to 0.5	205	74.82
0.51 – 0.75	33	12.04
0.76 – 1.0	21	7.66
1.1 – 1.25	8	2.92
1.26 – 1.50	1	0.37
> 1.50	6	2.19
Total	274	100

Source: Field Survey 2006.

5.9 Livelihoods

5.9.1 Occupational Status and Skills

In the project area, a majority of the Dalit population over 15 years of age is engaged in agriculture (Table 5-21). However, the percentage of population employed in this sector (64%) is less than that of the national average (greater than 80%) and also the average of surveyed households for the EIA update (68.1%). Service (11.87%) and wage labour (10.56%), either locally or outside the project area, are the other major occupations of the Dalits. Services taken up by Dalits include working as guards in India,

teaching in rural areas of Nepal, etc. Employment of Dalits in the service and wage labour sectors is higher than that of other caste group. According to the social survey conducted for the EIA update study, employment of other caste groups in these sectors is 10.4% and 4.9%, respectively.

Table 5-21: Primary Occupation of Dalit Population 15 Years and Older

Occupation	Male	Female	Total	Percentage
Agriculture and animal husbandry	273	461	734	64.05
Business and industry	18	1	19	1.66
Service	131	5	136	11.87
Wage labour	106	15	121	10.56
Student	42	17	59	5.15
Fishing	4	1	5	0.44
Unable to work	14	30	44	3.84
Other	6	22	28	2.44
Total	594	552	1,146	100.0

Source: Field Survey, 2006.

A total of 293 adult Dalits of the project area (over 15 years of age) earn their livelihoods through different skills (Table 5-22). Dalit males normally work as tailors, masons, clay workers, goldsmiths, carpenters, ironsmiths and drivers. Some women possess skills in tailoring. A large number of women also help their male family members in manufacturing iron tools.

Table 5-22: Skills of Dalit Population by Caste

Skill Type	No. of Persons				Total	%
	Badi	Damai	Kami	Sarki		
Mason	1	1	15	22	39	13.3
Carpenter	-	2	9	3	14	4.8
Tailor	1	68	18	25	112	38.2
Manufacturing iron tools	-	1	37	10	48	16.4
Shoemaker	-	-	4	12	16	5.5
Weaving	-	-	2		2	0.7
Driver	-	-	6	1	7	2.4
Construction	-	-	1		1	0.3
Goldsmith	-	1	13	2	16	5.5
Clay work	4	-	7	8	19	6.5
Bamboo work	-	-	3		3	1.0
Others	-	-	4	12	16	5.5
Total	6	73	119	95	293	100.0

Source: Field Survey, 2006.

In most cases, the division of labour by sex is quite obvious in Nepal. Ploughing and woodwork are considered heavy works and are, therefore, performed by male members of the society. Among the Dalits households of the project area also, these works are mostly conducted by male members (Table 5-23). Cooking is generally done by females. Other works, such as crop harvesting, fuel-wood collection, collection of water and house construction, are shared by both sexes.

Table 5-23: Division of Labour by Sex

Activities	Division of Labour (No. of Households)				
	Men	Women	Both	No Answer	Total
Ploughing	261	1	2	10	274
Woodwork	224	10	28	12	274
Crops harvesting	4	27	236	7	274
Fuel wood collection	11	86	172	5	274
Collection of water	6	133	132	3	274
Cooking	8	194	66	6	274
House construction / maintenance	133	17	117	7	274

Source: Field Survey, 2006.

5.9.2 Agriculture

Agriculture is the primary occupation and source of income of the Dalits in the project-area VDCs. Data collected during the field survey shows that the average land productivity is 2.5 MT/ha for paddy, 2.9 MT/ha for wheat, 2.2 MT/ha for maize, 2.2 MT/ha for millet and 0.86 MT/ha for pulses. The unit prices for these crops collected during the survey were NRs. 14,000, NRs. 11,000, NRs. 9,000, NRs. 8,000 and NRs. 25,000, respectively.

The above statistics indicate that the agriculture sector contributes approximately NRs. 24,640 or US\$ 373 (assuming US\$ 1 = NRs.66) to the household income of each Dalit family. This amounts to 34.5% of the total income of these families (Table 5-29). This contribution is smaller than the contribution of the agriculture sector to the national economy (about 38%); however, it is a significant livelihood source for Dalits in the project area considering the fact that a smaller percentage (64.05%) of the Dalit population participates in agriculture and that the agricultural system in the project area is still unsophisticated and based heavily on climate.

5.9.3 Animal Husbandry

Another important component of the household income of Dalits in the project area is animal husbandry, which contributes 10.9% of their total income. Dalits rear goats, cows, buffaloes, sheep, pigs, poultry and cattle. Cattle and buffalo are reared for milk, ghee and manure while pigs, goats, and sheep are kept for meat and for sale. Poultry (chicken and ducks) are reared for eggs, meat and sale.

A total of 2,593 animals are owned by the 274 Dalit households of the project area (Table 5-24). On average, a Dalit household owns approximately 10 animals. The main types of animals owned by these households are chicken (41.3%), cows/oxen (25.5%), goats/sheep (23.1%) and buffaloes (8.9%). Animal husbandry is practiced at relatively larger scales in VDCs like Lamikhal, Rayal and Dhungad.

Table 5-24: Number of Livestock Owned

VDC	Cow/Ox		Buffalo		Goat/Sheep		Fowls		Other		Total
	No	%	No	%	No	%	No	%	No	%	
Dhungad	106	16.0	44	18.9	120	20.0	141	13.2	0	0	411
Shivaling	33	5.0	11	4.7	24	4.0	41	3.8	2	6.4	111
Thalakanda	23	3.5	11	4.7	20	3.3	20	1.8	2	6.4	76
Dangaji	51	7.7	16	6.9	72	12.0	115	10.7	2	6.4	256
Royal	93	14.1	25	10.8	105	17.5	224	20.9	16	51.6	463
Belapur	33	5.0	25	10.8	18	3.1	3	0.3	1	3.2	80
Banlek	41	6.2	15	6.5	22	3.7	37	3.5	0	0	115
Barbatta	5	0.8	4	1.7	14	2.3	0	0	0	0	23
Girichauka	18	2.7	12	5.2	19	3.2	24	2.2	2	6.5	75
Lamikhali	237	35.8	62	26.7	169	28.2	429	40.1	4	12.9	901
Mahadevsthan	21	3.2	7	3.0	16	2.7	36	3.4	2	6.4	82
Total	661	100.0	232	100.0	599	100.0	1,070	100.0	31	100.0	2,593
Percentage	25.5	-	8.9	-	23.1	-	41.3	-	1.1	-	100

Source: Field Survey, 2006.

Among the Dalits of the project area, the Kami and Sarki own the highest number of animals (Table 5-25). This is not surprising because these groups have larger land holdings than other Dalit groups. Animal ownership among the Badi is very small, firstly, because the number of surveyed Badi households is very low and, secondly, because they own very little land.

Table 5-25: Number of Livestock by Different Dalit Caste Groups

Caste Group	Types of Animal Domesticated												Total
	Cow/Ox		Buffalo		Goat/Sheep		Fowls		Pigs		Other		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
Badi	0	0	0	0	6	1	10	0.9	0	0	0	0	16
Damai	98	14.8	33	14.2	85	14.2	199	18.6	9	32.1	0	0	424
Kami	378	57.2	140	60.3	351	58.6	614	57.4	16	57.1	1	33.3	1,500
Sarki	185	27.9	59	25.4	157	26.2	247	23.1	3	10.8	2	66.7	653
Total	661	100	232	100	599	100	1070	100	28	100	3	100	2,593

Source: Field Survey, 2006.

5.9.4 Fishing

Fishing is one of the major economic activities of the Dalits of the project area. A total of 141 Dalit households (51.5%) are involved in fishing (Table 5-26). It is interesting to note that 117 Dalit households (42.7%) have been involved in fishing for generations. This means that fishing is not only an important income source but also a source of protein for the Dalits of this area.

Table 5-26: Dalit Caste Groups Involved in Fishing

Caste Group	Period Involved in Fishing								Total
	1 Year		2 - 5 Years		> 5 Years		Generations		
	HHs*	%	HHs	%	HHs	%	HHs	%	
Badi	0	0	0	0	0	0	1	0.85	1
Damai	0	0	1	33.33	2	10.53	21	17.95	24
Kami	2	100	2	66.67	11	57.89	73	62.39	88
Sarki	0	0	0	0	6	31.58	22	18.8	28
Total	2	100	3	100	19	100	117	113.59	141

Source: Field Survey, 2006; * HH - Households.

Fishing as a full time activity is practiced by only three Dalit households only (Table 5-27). However, 101 households (71.6%) are involved in fishing on a part-time basis.

Table 5-27: Dalit Households Involved in Fishing on Part Time/Full Time Basis by Caste Status

Occupational Caste	Time Devoted to Fishing								Total
	Full-Time		Part-Time		Sometime		For Recreation		
	HHs*	%	HHs	%	HHs	%	HHs	%	
Badi	0	0	1	0.99	0	0	0	0	1
Damai	1	33.33	19	18.81	4	11.43	0	0	24
Kami	1	33.33	59	58.42	26	74.29	2	100	88
Sarki	1	33.33	22	21.78	5	14.29	0	0	28
Total	3	100	101	100	35	100	2	100	141

Source: Field Survey, 2006; * HH – Household.

5.9.5 Bee Keeping and Other Natural Resources

Bee keeping for honey production is a regular activity of many families in the reservoir area. Honey produced in the area is mainly consumed with wheat bread (*Mada*). Sale of honey is nominal because of a lack of market.

The reservoir area is also rich in fruits such as oranges, mangoes, papaya, banana and Licchi (*Litchi chinensis*). Licchi finds major use in the production of ghee which the Dalits consume themselves. A large number of fodder trees are also available in the reservoir area. These trees are very useful for animal husbandry.

5.9.6 Off-Farm Income Generating Activities

The major off-farm income activities of the Dalits are service inside and outside Nepal, business, wage labour, cottage industry and fishing. Approximately 36% of the Dalits are employed in these sectors (Table 5-21), earning 54.5% of their total household income from them (Table 5-29). However, according to the EIA update survey, a smaller percentage (31.9%) of people from other castes is employed in these sectors, earning only 40.2% of their average annual income through them.

Most Dalits lack adequate educational qualifications for quality jobs. Thus, they are employed in low level jobs in India and in urban areas of Nepal. A few Dalits work as school teachers in rural Nepal. Generally, one or more male members of Dalit households work in India as wage labourers. Some of them work in various sectors in the urban and rural parts of Nepal.

5.10 Income, Expenditure and Subsistence

5.10.1 Income

The annual average income of Dalit households is NRs. 69,313 (Table 5-28). This income is far less than the average household income of the households surveyed for the EIA update study (NRs. 112,821). VDCs like Shivaling, Thalakanda and Belapur have the highest income Dalit households in the project area.

Table 5-28: Annual Average Income and Expenditure of Dalit Households

VDCs	Annual Average Income Per Household (NRs)			Annual Average Expenditure Per Household (NRs)		
	Income	No. of HHs*	Total Income	Expenditure	No. of HHs	Total Expenditure
Dhungad	61,598	57	351,1086	58,138	57	3,313,866
Shivaling	99,611	8	796,888	52,596	8	420,768
Thalakanda	80,368	7	562,576	70,589	7	494,123
Dangaji	67,699	24	1,624,776	64,057	24	1,537,368
Royal	73,831	36	265,7916	71,508	36	2,574,288
Belapur	79,550	12	954,600	78,146	12	937,752
Banlek	60,456	18	1,088,208	52,656	18	947,808
Barbatta	52,406	9	471,654	47,500	9	427,500
Girichauka	63,780	8	510,240	68,880	8	551,040
Lamikhal	71,601	88	6,300,888	67,406	88	5,931,728
Mahadevsthan	73,300	7	513,100	70,126	7	490,882
Total	-	274	18,991,932	-	274	17,627,123
Weighted ave.	-	-	69,313	-	-	64,332

Source: Field Survey, 2006; * HH - Households.

Dalit households earn their income from two sources: from agriculture and animal husbandry and from off-farm activities. Agriculture and animal husbandry account for 45.5% of the average annual income of the Dalits (Table 5-29). Off-farm activities like service, trade, cottage industry, pension, labour and wages, professional services, fishing, etc. are responsible for 54.5% of the average annual income.

Table 5-29: Annual Income of Dalit Households by VDC

VDCs	Annual Average Income per Family (NRs.) from Different Sources						
	Agriculture	%	Livestock	%	Off Farm	%	Total
Dhungad	17,633	28.63	4,542	7.37	39,423	64	61,598
Shivaling	29,781	29.89	14,580	14.64	55,250	55.46	99,611
Thalakanda	20,082	24.98	21,143	26.31	39,143	48.7	80,368
Dangaji	24,403	36.04	7,317	10.81	35,979	53.14	67,699
Royal	27,632	37.43	7,241	9.81	38,958	52.77	73,831
Belapur	24,333	30.58	7,633	9.59	47,583	59.81	79,550
Banlek	16,100	26.63	2,161	3.57	42,194	69.79	60,456
Barbatta	14,517	27.7	1,667	3.18	36,222	69.12	52,406
Girichauka	19,350	30.34	11,055	17.33	33,375	52.33	63,780
Lamikhal	27,926	39.01	3,976	5.55	39,699	55.44	71,601
Mahadevsthan	48,943	66.77	4,500	6.14	19,857	27.09	73,300
Total	270,700	-	85,815	-	427,683	-	784,200
Percentage	34.52	-	10.94	-	54.54	-	100

Source: Field Survey, 2006.

5.10.2 Expenditure

The annual average expenditure of Dalit households is NRs 64,332 (Table 5-28). This expenditure is far less than the average household expenditure of the households surveyed for EIA update study (NRs 99,740).

The expenditure of Dalit households can be broadly categorized under two heads: expenditure on food items and expenditure on non-food items. The non-food expenditure items include energy, medicine, education, clothing, festivals, etc. As shown in Table 5-30, the Dalits spend more money on food items

(67.16%). About 29.68% of the total expenditure is accounted for by expenses on medicine, education, clothing and festivals. Another non-food expenditure is energy (3.16%).

Table 5-30: Annual Expenditure of Dalit Households by VDC

VDC	Annual Average Expenditure per Household (in NRs.) on Different Items						
	Food Item	%	Light and Fuel	%	Others	%	Total
Dhungad	42,317	72.79	2,216	3.81	13,605	23.4	58,138
Shivaling	39,636	75.35	1,968	3.74	10,992	20.89	52,596
Thalakanda	50,226	71.15	1,363	1.9	19,000	26.92	70,589
Dangaji	41,544	64.85	2,013	3.14	20,500	32.01	64,057
Rayal	46,647	65.23	2,392	0.33	22,469	31.42	71,508
Belapur	60,026	76.81	2,620	3.35	15,500	19.83	78,146
Banlek	35,033	66.53	1,706	3.24	15,917	30.23	52,656
Barbatta	31,037	65.34	1,907	4.02	14,556	30.64	47,500
Girichauka	42,235	61.31	1,895	2.75	24,750	35.93	68,880
Lamikhal	41,320	61.3	2,053	3.05	24,033	35.65	67,406
Mahadevsthan	47,674	67.98	2023	2.88	20,429	29.13	70,126
Total	449,695	67.16	21,155	3.16	198,750	29.68	669,600

Source: Field Survey, 2006

The average income and expenditure patterns of the Dalits are positive. They make an average net savings of NRs 4,981 from their annual average income. The Dalit communities use this annual saving to fulfil their social obligations such as marriages of children, festivals and death rituals.

5.10.3 Food Sufficiency

Out of the total 274 Dalit households surveyed, 37.6% reported sufficiency of food throughout the year (Table 5-31). This seems realistic because some of the Dalit households in the project area, apart from growing for food grains on their land, also collect food grains from their patrons (upper class Hindu families) through the *Balighare* system. Under this system, the Dalit families provide their traditional occupational services to their patrons, the *Balighare* households.

Table 5-31: Food Sufficiency Status of Dalit Households by VDCs

VDC	Food Sufficiency Status								Total HHs
	<3 Months		3-6 Months		6-9 Months		Sufficient		
	HHs*	%	HHs	%	HHs	%	HHs	%	
Dhungad	15	34.88	20	27.4	6	10.91	16	15.53	57
Shivaling	0	0	4	5.48	2	3.64	2	1.94	8
Thalakanda	1	2.33	0	0	3	5.45	3	2.91	7
Dangaji	2	4.65	6	8.22	4	7.27	12	11.65	24
Rayal	0	0	11	15.07	11	20	14	13.59	36
Belapur	1	2.33	4	5.48	5	9.09	2	1.94	12
Banlek	6	13.95	6	8.22	4	7.27	2	1.94	18
Barbatta	6	13.95	3	4.11	0	0	0	0	9
Girichauka	1	2.33	3	4.11	2	3.64	2	1.94	8
Lamikhal	11	25.58	15	20.55	17	30.91	45	43.69	88
Mahadevsthan	0	0	1	1.37	1	1.82	5	4.85	7
Total	43	100	73	100	55	100	103	100	274
Percentage	15.7	-	26.6	-	20.1	-	37.6	-	100

Source: Field Survey, 2006; * HH - Households.

As shown in Table 5-31, 15.7% of Dalit households produce grain sufficient for only three months of the year. Similarly, 26.6% and 20.1% of households have sufficient food for three to six and six to nine months, respectively.

5.10.4 Poverty

Since the beginning of the Eight Plan (1992-1997), poverty reduction has been the most important development objective of the country. Nevertheless, despite a gradual decline in the incidence of poverty (Poverty Trend in Nepal, CBS, 2005) across all development regions, regional disparities are still significant. In the fiscal year 2003/04, the incidence of poverty in the MWDR and FWDR was 44.8% and 41.0%, respectively, which is significantly higher than the national average of 30.8%. By ecological region, the incidence of poverty is higher in the hill and mountain regions.

In order to identify the absolute poor among the surveyed households, the concept of Basic Needs Income (BNI) developed by the country's National Planning Commission (NPC) in 2001 and adapted by the Tenth Plan (2002-07) was used (NPC, 2002). For this purpose, the annual per capita BNI for Nepal for year 2007 was estimated at NRs 9,143 by incrementing the published 2001 BNI for Nepal (NRs 6,100) by the Consumer Price Index (CPI) (Ibid, 2002:26). The BNI for the surveyed households was then calculated by multiplying the estimated 2007 per capita BNI by the average household sizes, and households with annual incomes below this BNI line were defined as absolute poor, and the rest were defined as non-poor.

Using this approach, 43.8% of the surveyed Dalit households were classified as absolute poor (Table 5-32). This figure is slightly higher than the FWDR average of 41.0%, mainly because the Dalits have smaller landholdings and their level of literacy is less than that of the upper class.

Table 5-32: Distribution of Absolute Poor Households by VDC/Municipality

VDC	Absolute Poor		Non-Poor		Total
	Number	Percent	Total	Percent	
Banlek	9	50.0	9	50.0	18
Warpata	4	44.4	5	55.6	9
Belapur	7	58.3	5	41.7	12
Dangaji	15	62.5	9	37.5	24
Dhungad	27	47.4	30	52.6	57
Girichauka	6	75.0	2	25.0	8
Lamikhal	28	31.8	60	68.2	88
Mahadevsthan	5	71.4	2	28.6	7
Rayal	14	38.9	22	61.1	36
Shivaling	2	25.0	6	75.0	8
Thalakanda	3	42.9	4	57.1	7
Total	120	43.8	154	56.2	274

Source: Household Survey, 2006.

The largest proportion (75%) of the absolute poor Dalit households lives in Girichauka VDC. Shivalinga VDC has the lowest proportion (25%) of absolute poor Dalit households.

The project area is quite poor in terms of clean drinking water facilities, health services (including doctors and nurses available for treatment), quality education centres and many other facilities such as toilets, telecommunication and roads. As such, life in this area is challenging. In terms of availability of these facilities, the whole project area is poor, and poverty is common.

5.11 Status of Female-Headed Households

Altogether 36 households in the project area are female-headed vulnerable families. The total number of people in these 36 families is 211, of which 98 are males and 113 females (Table 5-33). Their average household size is 6.3, which is less than the average household size of Dalit households (7.2) but higher than the national average (5.6) and the average for the Hill Dalits (4.7).

Table 5-33: Total Population of Female-Headed Households

VDCs	Population			Number of Households	Household Size
	Male	Female	Total		
Dhungad	29	36	65	13	5
Thalakanda	12	10	22	4	5.5
Dangaji	2	5	7	1	7
Rayal	2	3	5	1	5
Belapur	3	3	6	1	6
Girichauka	10	9	19	2	9.5
Lamikhal	40	47	87	14	6.2
Total	98	113	211	36	6.3

Source: Field Survey, 2006.

About 37% of the population of the female-headed households is below 15 years of age while 6.6% is above 60 years of age (Table 5-34). Therefore, the economically active population of female-headed households is 56.4%.

Table 5-34: Population Distribution of Female-Headed Households by Age Group

VDC	Population Distribution				Total Population
	< 10 Years	10 - 15 Years	15 - 60 Years	> 60 Years	
Dhungad	22	4	34	5	65
Thalakanda	6	1	13	2	22
Dangaji	2	0	4	1	7
Rayal	2	0	3	0	5
Belapur	3	0	3	0	6
Girichauka	6	0	12	1	19
Lamikhal	25	7	50	5	87
Total	66	12	119	14	211
Percentage	31.28	5.69	56.4	6.64	100

Source: Field Survey, 2006.

About 19.4% and 2.8% of the female-headed households belong to the Chhetri and Thakuri castes, respectively (Table 5-35). The remaining families (77.8%) belong to Dalits.

Table 5-35: Female-Headed Households by Caste

Caste	No. of Households	Percentage
Brahmin	0	0.0
Chhetri	7	19.4
Thakuri	1	2.8
Occupational Caste	28	77.8
Total	36	100.0

Source: Field Survey, 2006.

Among the female-headed households, 52.1% of the household members are literate (Table 5-36). Thus, the literacy of these families is less than the literacy of Dalit households (56.2%) (Table 5-13). Of the literate population, 69.3% are male and 30.7% female. This literacy rate is good compared to the literacy rate of the country by sex (male 65.5% and female 42.8%) and the nation-wide Dalit population. A few people from these families have SLC and higher level education.

Table 5-36: Literary Status of Female-Headed Households (Six Years and Above)

Population	Illiterate	Literate					Total
		Able to Read and Write	Primary	Lower Secondary	Secondary and SLC	Intermediate and Above	
Male	12	6	37	10	5	3	61
Female	69	5	16	4	2	0	27
Total	81	11	53	14	7	3	88
Percentage	47.93	6.51	31.36	8.28	4.14	1.78	52.07

Source: Field Survey, 2006.

Approximately 60% of the economically-active population of female-headed households is engaged in agriculture (Table 5-37). Other major economic activities pursued by this group are wage labour (13.5%) and service (12.8%).

Table 5-37: Number of Sampled Population by Primary Occupation (15 Years and Above)

Occupation	Male	Female	Total	Percentage
Agriculture and Animal Husbandry	14	66	80	60.15
Business and Industry	0	0	0	0
Service	15	2	17	12.78
Labour and Wage	12	6	18	13.53
Student	10	5	15	11.28
Unable to Work	0	1	1	0.75
Other	0	2	2	1.5
Total	51	82	133	100

Source: Field Survey, 2006.

None of the female-headed households is landless (Table 5-38). 72.2% of these households own less than 0.5 ha of land, some 8.4% have more than 1.0 ha of land while 19.5% have landholdings between 0.5 ha and 1 ha.

Table 5-38: Landholding of Female-Headed Households

Landholding Size (ha)	No. of Households	Percentage
Up to 0.5	26	72.2
0.51 – 0.75	5	13.9
0.76 – 1.0	2	5.6
1.1 - 1.25	1	2.8
1.26 – 1.50	0	0.0
> 1.50 ha.	2	5.6
<i>Total</i>	36	100

Source: Field Survey, 2006.

The annual average income of female-headed households is NRs. 64,461.80 (Tables 1 and 2 of Appendix 4). About 29% of this income is generated from agriculture, 14% from livestock and the remaining 58% from off-farm income activities. The major off-farm income activities include service inside and outside Nepal, wage labour, cottage industry and fishing.

Similarly, the annual average expenditure of the female-headed households is NRs. 58,263 (Table 3 of Appendix 4). About 70% of this expenditure is on food items, 3% on light and energy and the remaining 27% on others items such as education, festivals, clothing, medicines, etc.

Out of the 36 vulnerable families surveyed, 61.1% (i.e. 22 families) reported sufficiency of food for the whole year (Table 4 of Appendix 4). However, 11.1%, 13.9% and 13.9% of the households reported sufficiency of food for less than three, between three to six months and between six to nine months, respectively.

Applying the criteria defined for poverty in Section 5.10.4, 27.8 % of the female-headed households would be considered as absolute poor and the remaining as non-poor (Table 5-39).

Table 5-39: Absolute Poor Female-Headed Households by VDC

VDC	Absolute Poor		Non-Poor		Total
	Number	Percent	Percent	Percent	
Dhungad	5	38.5	8	61.5	13
Thalakanda	1	25.0	3	75.0	4
Dangaji	1	100.0	0	0.0	1
Rayal	0	0.0	1	100.0	1
Belapur	0	0.0	1	100.0	1
Girichauka	0	0.0	2	100.0	2
Lamikhal	3	21.4	11	78.6	14
Total	10	27.8	26	72.2	36

Source: Household Survey, 2006.

6. IMPACT ASSESSMENT

As stated in Chapter 5, implementation of the WSHEP will have an impact on 21 VDCs of Bajhang, Baitadi, Dadeldhura and Doti districts. Of these VDCs, 15 will be affected by reservoir area activities and six by downstream project activities. One of these VDCs (Belapur) is affected by both reservoir and downstream activities. Although Dalits reside in all of the 21 affected VDCs, survey of vulnerable households was conducted only in those VDCs that are directly affected by project activities, i.e. in nine of the 15 reservoir area VDCs and two of the six downstream VDCs.

This chapter discusses the socioeconomic and cultural impacts of the WSHEP on the baseline conditions of the vulnerable population identified in the project area. It covers impacts during the pre-construction, construction and operation phases of the project. The analysis presented here is based on data collected from the 282 vulnerable household/families surveyed during the course of this study. Mitigation and development measures are detailed in Chapter 7.

6.1 Land Acquisition

Due to the formation of the WSHEP reservoir, some of the 92.94 ha of land owned by the 274 surveyed Dalits households (Section 5.8) will be inundated. This land will be acquired by the project before construction starts. As a result, some Dalit households will lose all of their land while others may lose only a fraction.

Before construction starts, the acquired land will be compensated for on a land-for-land or a cash-for-land basis at an appropriate location near existing settlements of land owners, in appropriate project districts or in the Terai, with 20% additional land being provided for land holders using the replacement cost method. The acquisition and resettlement process will affect small portions of four hilly districts and potentially two Terai districts of the FWDR.

Since the project intends to provide land-for-land compensation, the impacts due to land acquisition will last only a short period because the resettled people will start cultivation on their replacement land once land is allocated. Livelihood restoration programmes implemented by the project will also help mitigate the problem of landlessness in the long run. As the major sources of livelihood of the Dalit communities are agriculture and animal husbandry, acquisition of the land, unless properly mitigated, will create impacts on their income sources, and result in food deficits. This problem will arise in nine VDCs of the project area. Thus, the impacts from land acquisition will be short in duration, high in magnitude and regional in extent.

6.2 Loss of Arable Land and Food Grains

Dalit households of the project area own a reported total of 92.94 ha of land (Table 5-19). Acquisition of arable land (*khet* and *bari*) owned by the vulnerable families will affect the production of food grains and result in an annual loss of approximately equivalent to NRs. 6,958,110 (Section 5.9.2). However, the land-for-land compensation provided by the project in the Terai or locally (Section 6.1) will enable the affected families to begin cultivation in the resettlement area from the ensuing season. A combination of replacement land and cash for investment in other productive resources will also be considered. In addition, the project will compensate the affected families for the loss of food grains for one year. Thus, the impact likely from loss of arable land and food grains will be short in duration, high in magnitude and regional in extent.

6.3 Acquisition of Houses / Structures and Relocation of Families

Project activities will lead to the acquisition of some Dalit houses. The affected households will be relocated at an appropriate place in the Terai districts of Kailali and Kanchanpur or in the vicinity the project VDCs. A list of households facing possible relocation is presented in Appendix 1.

Loss of houses will require displaced vulnerable households to resettle at new places. Unless properly planned, resettlement will result in loss of communal harmony and require the households to adjust to a new locality with a different society, thereby subjecting them to psychological and emotional distress. It will deprive the households of the natural resource base, such as fishing, bee keeping, honey production and other forest products, at their present settlements. Obviously, the resettled families will have to take up new means of livelihood in their new locality, and this could create problems in sharing of resources, such as forest and forest-based products, drinking water, schools and health posts, at the resettlement sites. Thus, the impact of acquisition of houses and relocation of families will be high in magnitude, medium-term in duration and regional in extent.

6.4 Impacts on Host Communities

Resettlement of vulnerable households to the Terai will necessitate acquisition of private land in the concerned districts. Although land for resettlement will only be purchased from larger landowners, impacts may occur on surrounding households that rely on access to the land (e.g. through sharecropping arrangements) for food grain production. These host communities could also face increased pressure on their local resources, such as forests and forest-based products, drinking water, schools and health facilities. The resettlement programme could affect the host community psychologically and culturally and disturb the social harmony in the resettlement areas. Thus, the impact on host communities will be high in magnitude, long in duration and regional in extent.

6.5 Water Supply and Sanitation

During construction, the project area will witness an increase in population due to an influx of workers and businessmen involved in the hotel and other industries. The increased population may further stress the local water supply, health and sanitation facilities, especially around the engineer's, contractors' and labour camps. This may generate conflicts among the existing and new users of the facilities and may give rise to dissatisfaction among the former. 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, children and the poor Dalit households. Consequently, this impact is expected to be low in magnitude, short-termed in duration and local in extent.

6.6 Occupational and Safety Hazards

Compared to other caste groups, Dalits are more likely to be involved in manual or labour-intensive works related to the project because of their low literacy. Their involvement in such construction activities, especially those that involve blasting, use of heavy equipment and working in dangerous areas such as in rivers, tunnels and on steep slopes, may cause accidents and injuries. Unsafe construction practices could further make them prone to construction-related accidents. Thus, in terms of occupational and safety hazard, Dalits will be vulnerable during construction. This impact is expected to be moderate in magnitude, short-termed in duration and local in extent.

6.7 Community Services and Institutions

Most of the potential impacts of the project on existing services and facilities in the project area are expected to occur during the construction phase. Information collected during the EIA and the field survey in 2006 shows that the land and property of five primary and three lower secondary/secondary schools in the project area needs to be acquired (codes S1, S6, S8, S9, S12, S14, S21 and S22 in Figure 6-1). This will affect students from the inundated and non-inundated areas of the project. The creation of the reservoir will also hinder the movement of students who attend schools on the opposite bank, e.g. students of Lamikhal and Girichauka VDCs who attend the school located at Dhungad VDC.

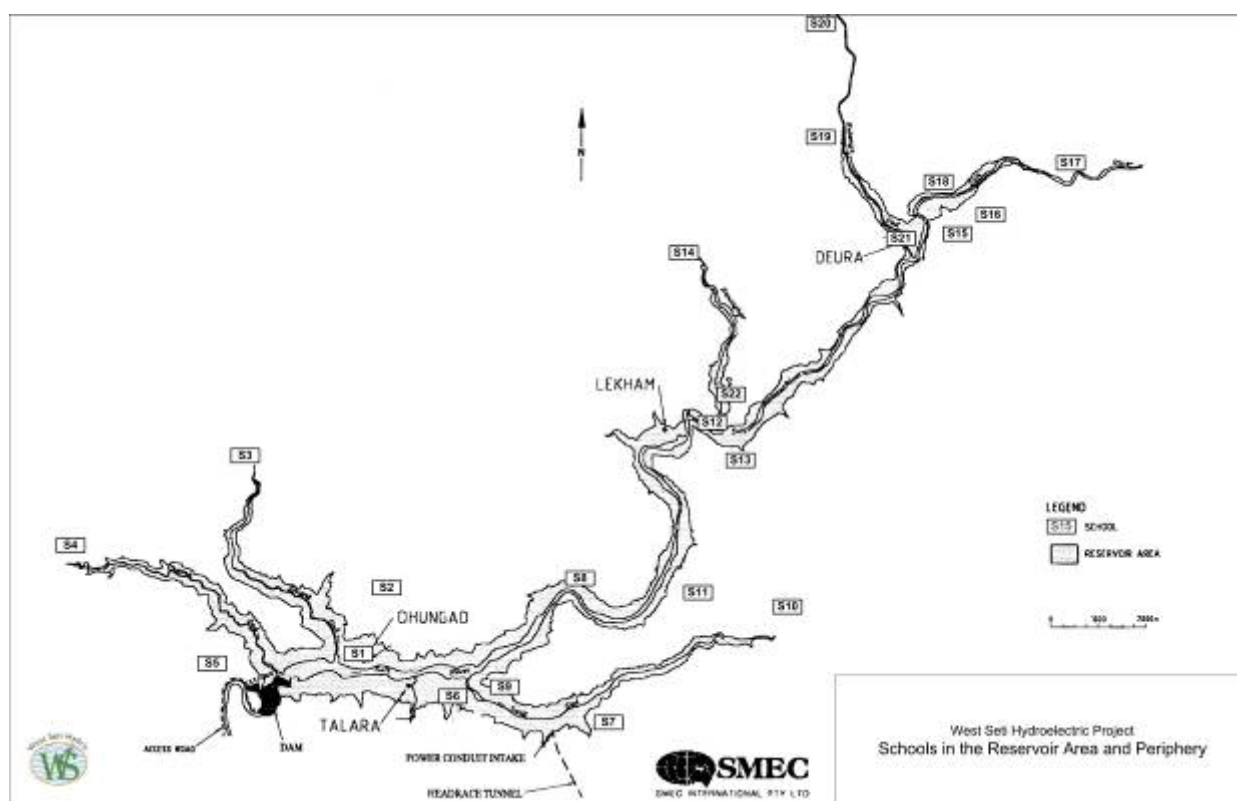


Figure 6-1: Schools in the Reservoir and Periphery

The influx of workers and job seekers into the project area could also put pressure on public facilities like health posts, police posts and schools in the project area, especially in Bandungrasen and Gopghat in the downstream area. Similar impacts can be envisaged in resettlement areas in the Terai as well. As the existing community services in the rural belts of the Terai are in poor condition and the project area has limited local level institutions for delivery of such services, extra pressure on these services and institutions can lead to adverse impacts like social instability. This impact is expected to be moderate in magnitude, site specific and of medium duration.

6.8 Religious Practice

The EIA and recent socio-economic update study refer to 20 temples/shrines that are located in the reservoir displacement area and would therefore have to be moved. In addition, Gahanan Temple, located at the confluence of Seti River and Ruwa Khola near Bandungrasen, is an important religious site where people gather to worship *Shiva* and *Durga* (Photo 6-1). This site is also the venue for *melas* (fairs) where more than 5,000 devotees from various VDCs of Doti and Dadeldhura districts congregate during *Tij*, *Shivaratri*, *Mangishankriti* and *Deura Parba* festivals.

As it is located at the initial point of the proposed project access road, the temple is likely to be affected during construction because of the influx of the labourers and other workers for various construction activities. As they also participate in the fairs held at the temple, the Dalits will be affected due to project activities. However, this impact will be short in duration, local in extent and low in magnitude.



Photo 6-1: Gahanan Temple near Bandungrasen

6.9 Cultural Aspects

An important social impact in the project area during construction will be an overall disruption of the traditional cultural ways of people living in and near the project area. Disruption of social life will also be caused by the presence of the construction workforce and an anticipated influx of job seekers during this period. Eventually, some changes in ethnic and community solidarity and occupational patterns can be expected in the area. These impacts are expected to be high in magnitude, local in extent and of short and long term.

In addition, impounding of the reservoir will inundate some *ghats* (cremation sites) present in the reservoir area. At the same time, it will also significantly reduce the volume of water available at the downstream *ghats*. Thus, cremation activities in these areas will be affected adversely. This impact will be long in duration, site specific and moderate in magnitude.

6.10 Women and Children

Due to the anticipated involvement of male members in construction activities, the women of the project area may be burdened with roles that are in addition to their traditional roles of mothers (child rearing, child bearing), producers (work done for payment, home production) and community managers (activities undertaken by women at the community level). On the other hand, the steady income earned by the male members will, to some degree, reduce the financial burden on the women. The extra income generating capacity of male members, however, could increase the consumption of alcohol and further aggravate the plight of women. This impact is expected to be low in magnitude, local in extent and for a medium duration.



Photo 6-2: Use of Child Labour for Collection of Turpentine in Lamikhal VDC

During the field survey, child labour was observed to be a common practice in the project area. Despite GoN's ban, child labour remains a potential temptation in any economically poor region such as the project area. Thus, the exploitation of children during construction for menial jobs cannot be ruled out. This impact is expected to be low in magnitude, of local extent and short in duration.

6.11 Construction Labour Force Impacts

The influx of construction workers and job seekers into the project area may have a number of impacts on the social environment of the vulnerable communities. Potential impacts include:

- pressure on existing social services;
- increase in the incidence of diseases (sexually transmitted diseases like HIV/AIDS);
- social problems like unrest and disputes between the work force and local communities;
- disturbances to social practices.

The occurrence and significance of the impacts will largely depend on the composition of the work force, the anticipated social disturbances being higher with a more foreign workforce. In any case, the impact is expected to be moderate in magnitude, site specific in extent and for a short duration.

6.12 Post-Construction Cultural Aspects

After completion of construction, outsiders will eventually depart to their respective places, and the impacted region will slowly return to its normal social conditions. The altered low river flows will continue to affect the cultural practices of the people of the downstream villages who cremate their deceased near Seti River. Thus, the impact on this ritual will be high in magnitude, local in extent and of long term duration.

6.13 Existing Water Uses and Water Rights

Due to the storage and diversion of water at the dam, the existing water uses and rights associated with the Seti River, namely drinking water supply and cremation, will be significantly affected during the operation of the project. In addition, downstream residents using tail water discharge for bathing and

washing will be impacted by variations in river flows associated with peaking; however, this impact will largely be a cause for inconvenience only as the variation of tail water levels will be controlled by the stipulated technical and environmental criteria. As there are no local irrigation schemes drawing water from the Seti River within the project area, impacts on the water rights of irrigators can be ruled out. Thus, the impact of the project on existing water uses and rights is expected to be low in magnitude, local in extent and long in duration.

6.14 Beneficial Impacts

Construction Phase

Implementation of the project will introduce several opportunities for economic development in the region. Initially, the region will benefit from the generation of employment opportunities for the local people and from secondary demand for goods and services to be supplied to different aspects of the project. With the resulting increase in income, the local people will seek better quality goods and services, thereby facilitating the market for external suppliers and retailers and providing exposure to larger market forces. Consequently, economic activities in areas like Dhungad, Talara, Gillabagar, Bandungrasen, Gopghat and Talkot near the project sites will further increase. In addition, new shops, hotels and residential structures will be established to meet the demand of the outside construction-related population for essential commodities. Employment opportunities directly or indirectly related to the project will also provide a chance 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 the WSH and the district authorities, such impacts are expected to be high in magnitude, regional in extent and of medium duration.

Operation Phase

After the completion of construction, withdrawal of economic activities will be witnessed in the project area. As the construction-related work force leaves the area, markets and facilities developed to meet their demands will face a slump due to decreased money flows and reduced economic growth. Many will leave the area or will shift to other occupations. 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.

Due to increased accessibility and better market opportunities developed during the construction phase, economic activities may still continue in the project areas. Furthermore, access to the site and the creation of an approximately 30 km long, 200 m deep, starfish-shaped lake due to reservoir impoundment may increase the potential for tourism in the area. This industry can flourish in the area if the local government can encourage local investors to set up restaurants and resorts on hill tops and operate trekking routes in the area, especially to areas like the Khaptad National Park. With development of the tourism industry, other activities such as safe boating, cage aquaculture, bee keeping and honey production will also grow. All of this will create employment opportunities and means of livelihood for households, including vulnerable families, in the project area.

As per the Electricity Act, 50% of the royalty that GoN will receive during the 30 year license period is to be given to the districts where the project is located. Utilization of this revenue by the districts for infrastructure and other development activities could ultimately lead to improvement in the socioeconomic status of the rural poor and Dalits of the region. Thus, this impact is expected to be high in magnitude, long term in duration and regional in extent.

6.15 Key Issues Raised by Vulnerable Groups

Between 19 and 28 November 2006, a series of public consultation meetings were organized at four different locations in the reservoir area and one at Gopghat located downstream of the reservoir. The affected people were informed about these meetings through public notices posted at various locations of the affected VDCs. At the meetings, the affected people were informed about the future project activities and about compensation, resettlement and rehabilitation processes and principles.

From the first week of December 2006, a social survey team visited the site to collect data required for preparing the VCDP. During the survey two structured group discussions were held in each of the nine VDCs, one with a cross section of socially excluded/vulnerable people from the VDC area and one with a group of women from these social categories, to gain further qualitative insights into socio-economic conditions and resettlement preferences of these groups. The group discussions covered the following topics:

- services and facilities in the VDC (e.g. schools, health facilities);
- economic activities and income sources;
- development projects/initiatives, NGO activities;
- household division of labour;
- women's livelihood sources and contribution to household incomes;
- resettlement preferences of men and women; and
- roles of men and women in resettlement and compensation planning and implementation.

The group discussions were conducted by a sociologist and field supervisors using a structured discussion guide. The results of the discussions were properly recorded.

Details of the group discussions are presented in Table 6-1. The main issues raised in the meetings at various locations are summarized in the following sections.



Photo 6-3: Group Discussion with Dalit Women of Banlek VDC Downstream of Reservoir

Table 6-1: Details of Focus Group Discussions

Location	Date	Number of Participants	
		Male Meetings	Female Meetings
Belapur	December 5, 2006	19	17
Sigas	December 6, 2006	-	-
Dhungad	December 7, 2006	18	12
Lamikhal	December 8, 2006	19	14
Girichouka	December 9, 2006	15	11
Mahadevsthan	December 10, 2006	10	8
Dahakalikasthan	December 10, 2006	-	-
Chhapali	December 11, 2006	-	-
Shivling	December 12, 2006	9	7
Thalakanda	December 13, 2006	13	9
Barbatta	December 15, 2006	14	10
Banlek	December 15, 2006	11	9
Total		128	97

Source: Field Survey, 2006.

6.15.1 Belapur and Dhungad VDCs

Two meetings with Dalit communities were organized at Sirod of Belapur VDC on 5 December 2006 and at Dhungad of Dhungad VDC on 7 December 2006. At each place, separate meetings were held with male and female group of the communities. The main issues raised in these meetings were:

- provision of fair compensation against lost assets and natural resources by the project;
- employment opportunities for the local people, including women and Dalit, during construction and operation phase of the project based on their qualification and skills;
- arrangement of skill development training for the local people;
- arrangement of resettlement before start of construction activities;
- provision of basic infrastructures, such as drinking water, health services, schools, road, etc., in resettlement areas;
- livelihood restoration programme for the Dalits who depend heavily on the resources of the local upper class and on natural resources such as fish, bee and *Cheuri Ghee* (a fruit obtained from forest); and
- provision of houses and minimum land for subsistence in the resettlement areas.

6.15.2 Lamikhal and Girichauka VDCs

Separate meetings with Dalits men and women were organized at Bali Talahera of Lamikhal VDC on 8 December 2006 and at Girichauka VDC on 9 December 2006. The issues listed in Section 6.15.1 were also raised at these meetings. In addition, the following issues were brought up:

- provision of house and minimum land as compensation to the landless and homeless Dalits also for their substance living in the resettlement areas;
- compensation for registered land that was washed away by Seti River during the 2001 floods;
- provision of 60% additional compensation for Dalits against loss of communal resources;
- provision of fair compensation for land and houses, along with resettlement, for Dalits who reside above the reservoir level but have a significant portion of their limited land in the reservoir inundation area and who depend heavily on the forest and other resources of the reservoir area;
- preference for “land for land and house for house” compensation;

- preference for cash compensation by some households who will lose more than one house due to implementation of the project.

6.15.3 Mahadesthan, Shivlinga and Thalkanda VDCs

Separate meetings with Dalit men and women were organized at Aadhket of Mahadevsthan VDC, Moribagar of Shivlinga VDC and Lekham Basti of Thalakanda VDC on 10, 12 and 13 December 2006, respectively. The major issues raised in these meetings were:

- need for positive role of the project in uplifting the living standards of the affected Dalit people in resettlement areas;
- proper arrangement of resettlement for the minority people (Dalits);
- representation from Dalit community in committees formed by the project;
- compensation to the landless and homeless Dalits in the form of house and minimum land for their subsistence living at the resettlement area;
- provision of fair compensation against lost assets and loss of natural resources;
- employment opportunities for local people, including women and Dalits, during construction and operation phase of the project based on their qualification and skills;
- appropriate arrangements replacement housing and land for minority groups (Dalits) in resettlement areas;
- provision of 60% additional compensation for Dalits for loss of communal resources.

6.15.4 Barbatta and Banlek VDCs

Separate group meetings were organised with Dalit men and women at Simihar of Barbatta VDC and Bundergresan of Banlek VDC on December 15, 2006. Both VDCs are affected by downstream activities. The main issues raised at these meetings were:

- employment opportunities and skill development training for the local people of downstream area as well, based on their qualification and skills;
- arrangement of livelihood restoration programmes for the affected people in the downstream areas;
- management of drinking water facilities in the downstream areas where the Seti River is an important secondary source of drinking water;
- sufficient riparian release for the cremation activities at *ghats* present between the dam and the tailrace outlet;
- fair compensation by the project against lost assets.

To sum up, the main issues raised in the meetings were as follows:

- employment opportunities for displaced and other project-affected households.
- loss of forest vegetation and resources;
- process of land acquisition and compensation; compensation at prevailing market price; transparent and acceptable determination of land prices;
- interaction with local people and local leaders before and during implementation of the project; and
- interest in being shareholders of the project.

7. MITIGATION AND DEVELOPMENT MEASURES

The VCDP is designed to ensure that vulnerable groups affected by the Project are regarded as special interest groups, and that impacts on their livelihoods are minimised and addressed in a sensitive manner. To achieve this, the VCDP focuses on:

- resettlement strategies for vulnerable groups;
- compensation options, with particular reference to vulnerable groups; and
- measures to support the successful reestablishment of displaced vulnerable households.

Although national laws and policies form the basis for the measures outlined in this Chapter, internationally accepted principles of equity underpin the recommendations. For reference, the project's Entitlement Matrix, which is based on the Project's resettlement principles detailed in Chapter 4 and applicable to all project-affected households, is attached as Appendix 7 to this report. Issues of relevance from the Entitlement Matrix are further elaborated on in this Chapter.

7.1 Resettlement Measures

Three broad relocation options have been developed for the project:

- **relocation to the Terai** – involving relocation to designated resettlement sites in the Terai (mainly Kailali District), on land purchased and prepared by WSH. This option will be available to households whose subsistence cultivation/economic activities are severely affected by Project implementation, as well as to other households who meet qualifying criteria (e.g. social considerations);
- **local relocation** – involving relocation within the local community; i.e. within the same village, or to neighbouring villages, or to a project-established relocation village. This option will be available to displaced households whose subsistence cultivation/economic activities are marginally/not severely affected by project implementation; and
- **self-relocation** – involving individual relocation to any area outside the local community identified by a household (e.g. to an area where relatives are living). This option will be available to households who meet qualifying criteria.

A range of criteria will be defined and applied, in consultation with the community participation structure, to determine resettlement eligibility and the relocation options available to each household. The following criteria are likely to form the basis of this exercise:

- **Location of household in relation to project displacement areas.** Affected households will be categorised as follows: (a) households located in any of the defined project displacement areas; (b) households located in areas that, although outside the displacement areas, are considered to be unsafe by the project authorities and the community participation structure; (c) all other affected households. As involuntary resettlers, all households in the first two categories will automatically qualify for resettlement, with the relocation options available to them determined by application of the other criteria. Households in the last category will qualify for voluntary resettlement if they meet any of the remaining eligibility criteria. Their relocation options will also be determined accordingly.
- **Land loss/impact on household subsistence and livelihood.** Affected households will be grouped into three broad categories, corresponding to the degree and type of impact (permanent or temporary) on household subsistence: (a) household subsistence severely affected through the

permanent loss of cultivation land or disruption to economic activity; (b) household subsistence marginally/not severely affected through the permanent loss of cultivation land or disruption to economic activity; and (c) household subsistence temporarily affected during the construction period. Appropriate criteria will be applied for the classification of households into the first two categories, and hence for the determination of resettlement eligibility. A criterion commonly used, namely more than 50% cultivation land loss, will be used as an overall guideline, but additional context-specific criteria will be applied to further assess resettlement eligibility, since a simple percentage cut-off potentially ignores complex socio-economic processes. One important factor is the loss of irrigated cultivation, since this land type plays an important role in household agricultural production. Another is the size of household landholdings, both before and after land acquisition. Resettlement eligibility will, accordingly, be more properly established by assessing the current size and mix (irrigated/rainfed) of household landholdings, percentage land loss across the two main land types, and the size and mix of household landholdings after acquisition.

- **Socio-economic considerations.** This set of criteria includes factors such as (a) village/ settlement context and existing social/support networks; (b) the stage that a household has reached in its development cycle; (c) off-farm economic activities; and (d) physical isolation after reservoir inundation.

Through the application of these criteria, the resettlement eligibility of each affected household – and the resettlement options of qualifying households – will be determined. This will be done in consultation with a Resettlement Steering Committee (RSC), Local Consultative Forums (LCFs) and the West Seti Coordinating Community Committee (see Chapter 8) to ensure that the exercise is undertaken in a manner that is fair to affected households and the project.

Since cultivation land (irrigated land in particular) is mainly concentrated in the base of the valleys and lower foot slopes along the Seti River and its tributaries, it is estimated that most of the households located below FSL+6 m, a majority of the households situated between FSL+6 m to FSL+96 m and a small portion of households located above FSL+96 m will suffer severe land losses and, therefore, qualify for relocation to the Terai. It is anticipated that most displaced households in the downstream area will relocate locally. Based on the above, it is anticipated that all 91 vulnerable households below FSL+96 m will qualify for relocation to the Terai (or for any of the other resettlement options). For the remaining 164 vulnerable households above FSL+96 m, the application of the social criteria listed above will be an important exercise. Social criteria are rarely applied in the determination of resettlement eligibility, often to the detriment of those households who remain behind while their neighbours are resettled to new areas. Because of the inclusion of the social criteria, it is anticipated that many of the 164 vulnerable households in question will qualify to move with the households on whom they are economically-dependent. For the same reason, it is anticipated that the 27 directly affected vulnerable households at project sites in the downstream area will relocate locally to maintain their existing economic relationships.

The preliminary relocation preferences of vulnerable households are shown in Table 7-1. The majority (58.4%) have indicated a preference for relocation to Kailali and Kanchanpur Districts (where the project's resettlement sites will be located) or to other areas in the Terai (9.5%). Nearly 8% indicated a preference for relocation within their current (hill) districts. However, 23% either did not know or provided no answer, which indicates a substantial degree of uncertainty over their future livelihoods.

Table 7-1: Relocation and Compensation Preferences of Vulnerable Households

VDC	HHs	Resettlement Preference						
		Don't Know/ No Answer	Current District	Other Hill District	Kailali District	Kanchan-pur District	Other Terai District	Other
Banlek	18	-	11	1	5	1	-	-
Barbata	9	2	5	-	-	1	-	1
Belapur	12	-	-	-	7	3	2	-
Dangaji	24	8	1	-	4	11	-	-
Dhungad	57	12	1	-	8	20	14	2
Girichauka	8	6	-	-	1	1	-	-
Lamikhal	88	11	-	-	34	35	8	-
Mahadevsthan	7	4	-	-	3	-	-	-
Royal	36	19	3	-	5	7	2	-
Shivaling	8	-	-	-	7	1	-	-
Thalakanda	7	1	-	-	2	4	-	-
Total	274	63	21	1	76	84	26	3
Percentage	100.0	23.0	7.7	0.4	27.7	30.7	9.5	1.1

Source: Field Survey, 2006.

WSH's Livelihoods and Development Unit (see Section **Error! Reference source not found.**) will, with the support of the relevant RSC Task Group, finalise the relocation choices of vulnerable groups. This will be undertaken in a sensitive and flexible manner to allow qualifying households the opportunity to choose from a range of viable options.

The design of relocation sites (in the Terai and locally) will take account of the requirements and needs of all social categories, including those of vulnerable households. Impacts on host communities will also be considered a project cost and properly mitigated. A participatory assessment of existing community services in host communities will be undertaken once resettlement areas are finalised. Where required, new facilities will be constructed or existing facilities will be upgraded and extended to the benefit of both the resettled and host communities. Host communities will be represented on the project's consultation and participation structure to ensure that their concerns and needs are incorporated into the resettlement programme.

7.2 Compensation and Livelihood Restoration Measures

7.2.1 Compensation and Resettlement Assistance

The project's Entitlement Matrix (Appendix 7) is based on international and local best practices. Based on past experience, it acknowledges the need for giving preference to land-based resettlement. Most households in the project area practice subsistence farming, with few people skilled in other activities, or with access to steady streams of cash income. This necessitates resettlement and compensation options that will promote the restoration and improvement of livelihoods without compounding the uncertainty created by resettlement. The preferred form of compensation for cultivation land losses will therefore be the provision of suitable replacement land, with cash compensation available as a secondary or supplementary option.

However, because replacement agricultural land is not readily available in the project area, it is impossible to resettle large numbers of displaced households onto other land in the area without seriously affecting their and other local residents' subsistence production levels. Out-of-area resettlement to the Terai is consequently the only feasible way of providing the majority of displaced households with replacement land, an option also preferred by most affected households.

The entitlements for land losses are summarised in Table 7-2. The basic principle is that land will be compensated at full replacement cost, with the productivity of land (irrigated or rainfed) recognised in the amount of exchange land provided.

Table 7-2: Compensation Entitlements for Land Losses

Category	Entitlement
Landowning households relocating to Project sites in the Terai	<ul style="list-style-type: none"> • In the determination of land exchange ratios, the household's total landholding, including homestead site, will be taken as cultivation land and classed as irrigated, rainfed or a combination of irrigated and rainfed. • In addition to land exchange based on productivity, landowners will be provided with a further 20% of their landholdings as a direct project benefit. • Since the homestead residential site is included as cultivation land, each household will be allocated a 300 m² (0.59 <i>ropani</i>) residential plot as an additional project benefit. • An additional 0.47 ha (nearly 14 <i>kattha</i> or 9.237 <i>ropani</i>) of cultivation land (based on a 50-50 irrigation-rainfed split) will be provided as compensation for loss of access to Seti valley communal resources. • Landowning households whose land entitlement as determined in the above calculation is less than the subsistence land requirement in Kailali District will be allocated a subsistence landholding.
Landowning households relocating locally	<ul style="list-style-type: none"> • Full replacement of the portion of land acquired, including the homestead site, with the productivity of land recognised in the amount of replacement land or compensation provided. • An additional 20% of the acquired portion as a direct project benefit. • Since the homestead residential site is included as cultivation land, each household will be allocated a 300 m² (0.59 <i>ropani</i>) residential plot as an additional project benefit.
Household losing land but not requiring resettlement	<ul style="list-style-type: none"> • Full replacement of the portion of land acquired, with the productivity of land recognised in the amount of replacement land or compensation provided. • An additional 20% of the acquired portion as a direct project benefit.
Households whose land is required for temporary occupation during construction of the project	<ul style="list-style-type: none"> • Leasing of land based on a formal leasing contract which will specify: the lease period, the formula for the calculation of rent, the form and frequency of payments, and that the land will be returned to the owner at the end of the lease period in its original condition.

Apart from the additional land (20%) provided to households, the provision of land in lieu of loss of access to Seti valley communal resources and the requirement that all landowning households relocating to project sites in the Terai should be allocated at least a subsistence level landholding are significant project benefits. The subsistence level landholding (excluding the household's residential plot) determined by the project ranges from 1.98 ha (2.92 *bigha* or 38.92 *ropani*) if the landholding consists only of rainfed land or 1.18 ha (1.74 *bigha* or 23.19 *ropani*) if the landholding consists only of irrigated land. Approximately 38% of the households scheduled for resettlement to the Terai (many of whom are vulnerable households; see landholding sizes reported in Section 5.8) will have land entitlements that are lower than the subsistence landholding requirement and will therefore be given additional land to bring them up to a subsistence landholding.

Similarly, all houses affected by the project will be valued at full replacement cost, with households given the option of requesting replacement houses or cash compensation. Other household structures (e.g. water mills) will be valued at replacement cost and compensated in cash. The value of salvageable materials will not be deducted from the housing entitlement.

The construction of replacement houses will comply with all building and town planning requirements. Households with more than one house can choose between having the same number of replacement houses constructed or to have one house constructed and to receive cash compensation for the remaining houses.

The following additional resettlement measures will be implemented to support the reestablishment of affected households, including specific additional measures for vulnerable households:

- evacuation allowances for the removal of household belongings, displacement allowances to cover any additional costs associated with relocation and cultivation disruption allowances to non-displaced households who lose some land to the project;
- an additional rehabilitation allowance for vulnerable households to assist them in their livelihood restoration/improvement efforts;
- provision for the payment of compensation for crop losses or short-term food support where households are prevented from immediately cultivating their replacement land;
- provision of a tube well for domestic water to each household relocated to project relocation sites in the Terai and suitable replacement sources to households who relocate locally; provision of pit latrines to households resettling to project relocation sites;
- assistance to relocated households with the construction and installation of improved cooking stoves (ICS). The aim is to have these stoves built on-site, using local materials and skills. A qualified NGO will be contracted to train women as ICS builders and to provide support to the women for the duration of the ICS construction programme.

7.2.2 Training

A training programme will be instituted to assist resettled households, particularly those that have moved to the Terai, with the reestablishment of their livelihoods. A basic skills training programme will also be conducted to improve the construction employment prospects of affected persons.

Improved Agricultural Practices

This programme will provide training in improved agricultural farming and fresh vegetable farming. The programme will include all households with a focus on vulnerable households.

Relocation to the Terai will enhance access to agricultural marketing facilities. Consideration will be given to the establishment of a committee to manage a Rural-Urban Linkage Programme (RUPE) and promote the sale of surplus agricultural products. Assistance from the District Agricultural Office and Sub-centres will be sought. WSH will coordinate these activities in collaboration with the appropriate agencies.

Improved Agricultural Farming

Resettlement to the Terai requires new farming techniques. A farmers' support/agricultural training programme will be implemented with the overall objective of enabling resettled households to function as sustainable subsistence farming enterprises and to improve their farming practices. Specific aims will be to provide advice on local crops and farming practices, including visits by successful local farmers to resettled farmers and farming demonstration days, where necessary; and to monitor household adaptation to local farming conditions.

The training programme will focus on the following topics (a) selection of seeds; (b) nursery management; (c) use of fertilisers; (d) integrated pest management; (e) irrigation techniques; (f) appropriate cropping patterns and (g) methods of harvesting, processing and storage.

The programme will consist of lectures from experts, demonstration of new techniques and dissemination of information. The programme will be undertaken in co-ordination with the Nepal Agricultural Research Council (NARC).

Fresh Vegetable Farming

The main objective of this training programme will be to increase vegetable production, thereby contributing to an improvement of the health and economic status of affected households. The programme will consist of lecture and practical training sessions. Priority will be given to women as trainees.

The training programme will focus on (a) selection of seeds; (b) nursery management; (c) use of fertilisers; (d) integrated pest management; (e) irrigation techniques; (f) appropriate cropping patterns and (g) methods of harvesting, processing and storage.

This programme will consist of lectures from experts, demonstration of techniques and dissemination of information. WSH will consult with the Vegetable Development Directorate (VDD) in designing and implementing the programme.

Construction Training

Additional to the above programmes, basic training programmes will be provided in construction related skills such as electrical wiring, plumbing, automobile maintenance, masonry and welding.

7.2.3 Loan Assistance Programme

Consideration will also be given to the establishment of a small loan assistance programme, particularly for vulnerable households. To provide loans for small income generating projects, an agreed amount of money will be allocated to a revolving fund. To facilitate the distribution of loans, co-ordination will be established with the district level offices of the Agricultural Development Bank.

7.2.4 Construction Employment

The RP discusses the implementation of a Preferential Employment Policy to achieve the objective of optimising 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 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, namely 18 years, should be applied), and (c) recruitment and selection procedures to be followed by the contractor and sub-contractors.
- Preferential employment guidelines will be incorporated into tender and 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.

- WSH will assist with (a) the establishment of a database of job seekers from the project-affected households and (b) the development of transparent 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 WSH 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, WSH 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.
- Nepali Information Sheets will be distributed to project-affected and surrounding settlements 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 LCFs and the distribution of job advertising sheets, local residents will be informed in advance of job opportunities and recruiting dates.

Although the aim of the Policy will be to enhance employment across all social categories in the affected communities, it will contain procedures that give preference, wherever possible, to the training and employment of eligible members from vulnerable households.

7.3 Additional Mitigation and Development Measures

The project's EIA and RP include a range of additional measures to address adverse socio-economic impacts likely to occur during project construction and operation. These measures, which are applicable to all affected communities, including vulnerable groups, are summarised below.

7.3.1 Construction Workforce

Even though the employment of local job seekers will be promoted, a substantial workforce is likely to be based in various construction camps, particularly in the downstream area, during the construction period. The following measures will be introduced to minimise adverse workforce-induced impacts and enhance potential benefits:

- provision of international standard workforce accommodation facilities and prohibition on any worker, other than local workers from project area villages, living outside construction camps;
- provision of high standard facilities at construction camps (health services, water and sanitation facilities, recreational facilities and fair-price shops). These camps will be designed, in consultation with local authorities and community representatives to (a) maximise local service provision (e.g. through a properly-designed market area), (b) minimise informal settlement development and (c) promote the use of some construction infrastructure as community facilities in the post-construction phase;
- provision of adequate security measures at construction camps and control over the movement of workers outside construction camps after working hours;

- regular liaison with local authorities, NGOs and CBOs, by means of a structured consultation programme, to enhance the provision of basic services by local entrepreneurs and to discuss workforce issues and community concerns and agree on corrective measures.

Separate drinking water supply and sanitation facilities will be provided at the workforce camps. Facilities will include safe and adequate drinking water supply, sufficient toilet facilities, proper waste disposal and adequate camp drainage to prevent surface water ponding and prolonged wet conditions. A strict policy of toilet use by workers will be enforced. Induction training will be provided to the workforce on good personal hygiene and sanitation practices.

All sewerage from workforce camps will be treated. Effluent will be of acceptable quality for use on agricultural fields or discharge into the Seti River. Water quality in the Seti River upstream and downstream of workforce camps will be monitored. Solid waste will be collected from camps each day and disposed off at an appropriate site away from habitation.

A project health centre will be provided for the diagnosis and treatment of workers, whilst existing local health centres in the immediate project area will be enhanced to improve the treatment of people in neighbouring villages.

The control and prevention of sexually transmitted diseases during project construction will involve (a) screening of workers; (b) worker education on responsible sexual practices, STD (e.g. HIV) prevention and condom use; (c) provision of free or reduced cost condoms to the workforce and local villagers; (d) community awareness programmes on STDs; and (e) provision of early diagnosis and treatment of STD cases in the workforce and neighbouring communities to prevent spread, and the provision of counselling for infected people and their families.

7.3.2 Health and Safety

Construction activities will generate a range of impacts that may be adverse to the living and health conditions of construction communities; for example, increased dust and noise levels, and increased vehicular traffic. There would also be safety issues during project operation; e.g. risks associated with relatively large and rapid increases in river flows between the tailrace outlet and the re-regulation weir.

Procedures to limit health and safety impacts during project construction and operation will include (a) keeping stockpiling materials and earth and gravel roads damp; (b) imposing and controlling speed limits for all construction vehicles and maintaining vehicles in good order; (c) fitting silencers to ventilation fans and other equipment; (d) fencing off of high risk construction sites to prevent accidents, and prohibition of entrance into hazardous areas without permission; (e) warning systems at blasting sites and for flood flows over the spillway; (f) regular information campaigns downstream of the tailrace outlet to make communities aware of project operation procedures and river flows; and (g) regular liaison with local authorities and community representatives to discuss security and safety risks and management plans.

7.3.3 Restoration of Access

Access restrictions created by the project will be mitigated by the construction of suspension bridges across the reservoir or set further upstream from the extent of the reservoir (Figure 7-1), the improvement of existing trails and construction of replacement trails, and the provision of boat access.

With regard to the reservoir area, the following measures will be implemented:

- Six suspension bridges are proposed around the reservoir to reinstate pedestrian access. The bridges will be located so that the maximum bridge length is 170 m and walking distances are minimised. Bridges will be constructed at 1,290 m or above, out of flood level. The final locations of the footbridges will be determined in consultation with affected communities once new resettlement patterns around the reservoir are established.
- Where possible, minor trails will be upgraded to establish a major trail down the right and left banks of the reservoir. Where trails do not currently exist, new trails will be established. Trails that are damaged by construction activities will be repaired immediately. Where a section of a trail is closed off by construction activities, an alternative section will be established immediately.
- Boat transport will be provided from the hillside behind Dhungad to the spillway area below Ratamati.
- The Chainpur road, up to 6 m above FSL, will be replaced at a higher elevation further to the north. Commercial enterprises located along this section of the road at Deura will be relocated to the new roadside if desired by the owners.

In the downstream area, the following measures will be implemented:

- If altered river flows cause excessive access restrictions between the tailrace outlet and the re-regulation weir, a footbridge will be constructed across this stretch of the Seti River.
- Trails that are damaged by construction activities will be repaired immediately. Where a section of a trail is closed off by construction activities, an alternative route will be established immediately.
- Access will be improved from the dam site to the Seti Rajmarg (Highway) by the construction of the spillway road. Access will also be improved across the Seti River at Talkot with the construction of the power station bridge.

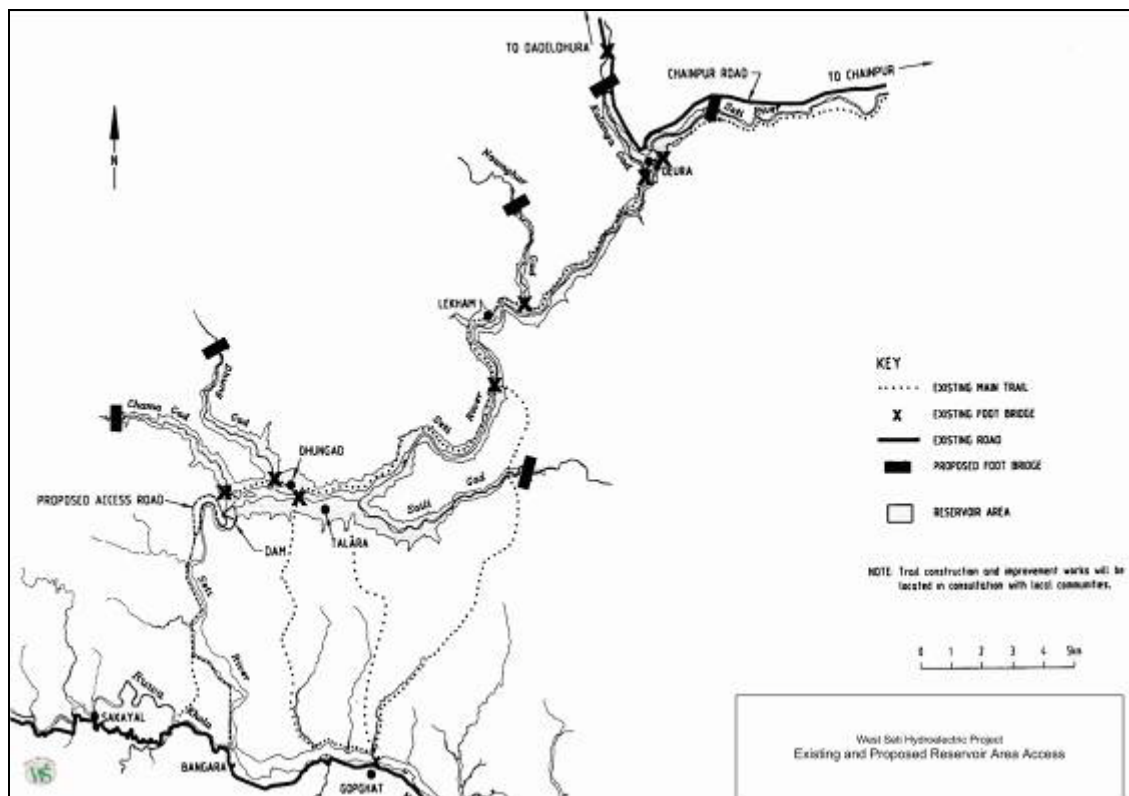


Figure 7-1: Existing and Proposed Foot Bridges

Affected schools (see Figure 6-1) will be replaced in consultation with affected communities, either in the Terai resettlement areas or in the reservoir periphery.

7.3.4 Cultural and Religious Practices

The following measures will be implemented to minimise any cultural and religious impacts associated with construction activities and a reduced flow in the Seti River:

- The release of an environmental flow through the dam wall will occur as part of the project. This flow will be sufficient to fulfil the religious requirements (i.e. cremation, religious bathing and ceremonial activities) and other non-consumptive needs of downstream communities. The possibility of establishing a number of cremation sites in the downstream area will be assessed in consultation with affected communities.
- Community structures/facilities in the downstream area affected by project activities will be immediately repaired or replaced in areas identified in consultation with local communities and authorities.
- Funds will be made available to suitable NGOs or CBOs to support the general development of settlement areas around the reservoir and in the downstream area.
- Social impact management procedures, involving local authorities, community leaders/representatives and special interest groups, such as vulnerable groups, will be implemented via the community participation structure to address emergent social/cultural issues (e.g. changes to the position of women; changes to relations between caste/ethnic groups; shifts in occupational patterns across caste/ethnic lines and the displacement of traditional craft practices).

7.3.5 Water and Sanitation

The Seti River is a secondary/supplementary source of domestic water in the villages downstream of the dam wall, and the requirement for potable water from the River will be replaced by a reticulation system to each village, thereby improving existing water supplies. Potable water will be supplied year-round in all villages in the riparian area, between the dam and the re-regulation weir. Water will either be supplied by improving existing village schemes, constructing new village facilities or by installing a piped reticulation system from the reservoir.

A sanitation programme will also be established in all riparian area villages to improve sanitary conditions and public health, and thereby improve the quality of catchment runoff harvested for village supplies. This programme will consist of sanitation education and training in the construction and maintenance of sanitation facilities.

7.3.6 Fishing

An important river resource that will be affected by the altered flow regime below the dam wall will be fish. Individuals and households fish for dietary and income purposes, with the importance of this activity being greatest during winter, when flow rates are comparatively low and fish stocks high.

Fishing is an important livelihood earning activity of vulnerable households, and measures will be implemented to ensure that this impact is properly addressed. Mitigation measures will focus on replacing the economic and dietary role of fish in the community. Mitigation measures will be developed in consultation with affected communities once these roles are understood more thoroughly. Nutrition programmes, such as the role of alternative nutrition sources, including vegetables, chicken and eggs, and related production improvement, will be considered.

8. PARTICIPATION AND MANAGEMENT

To date, vulnerable households have been interviewed on an individual basis, participated in group discussions and meetings and have had access to project material through various Information Sheets. The project’s RP 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 vulnerable groups on organisational structures; (b) an ongoing, structured participation programme; (c) a grievance management system for the resolution of grievances and disputes; and (d) monitoring and evaluation mechanisms to track implementation issues.

This Chapter describes the organisational structure and participation strategy detailed in the project’s RP, highlighting the provisions made for vulnerable groups affected by project activities in the reservoir and downstream areas.

8.1 Organisational Arrangements

WSH will be directly responsible for the implementation, management and supervision of the project, including environmental and social management. The environmental and social components of the project will be managed under the WSHEP management structure illustrated in Figure 8-1.

An independent Evaluation Panel will be convened by WSH to ensure that a high standard of implementation is achieved.

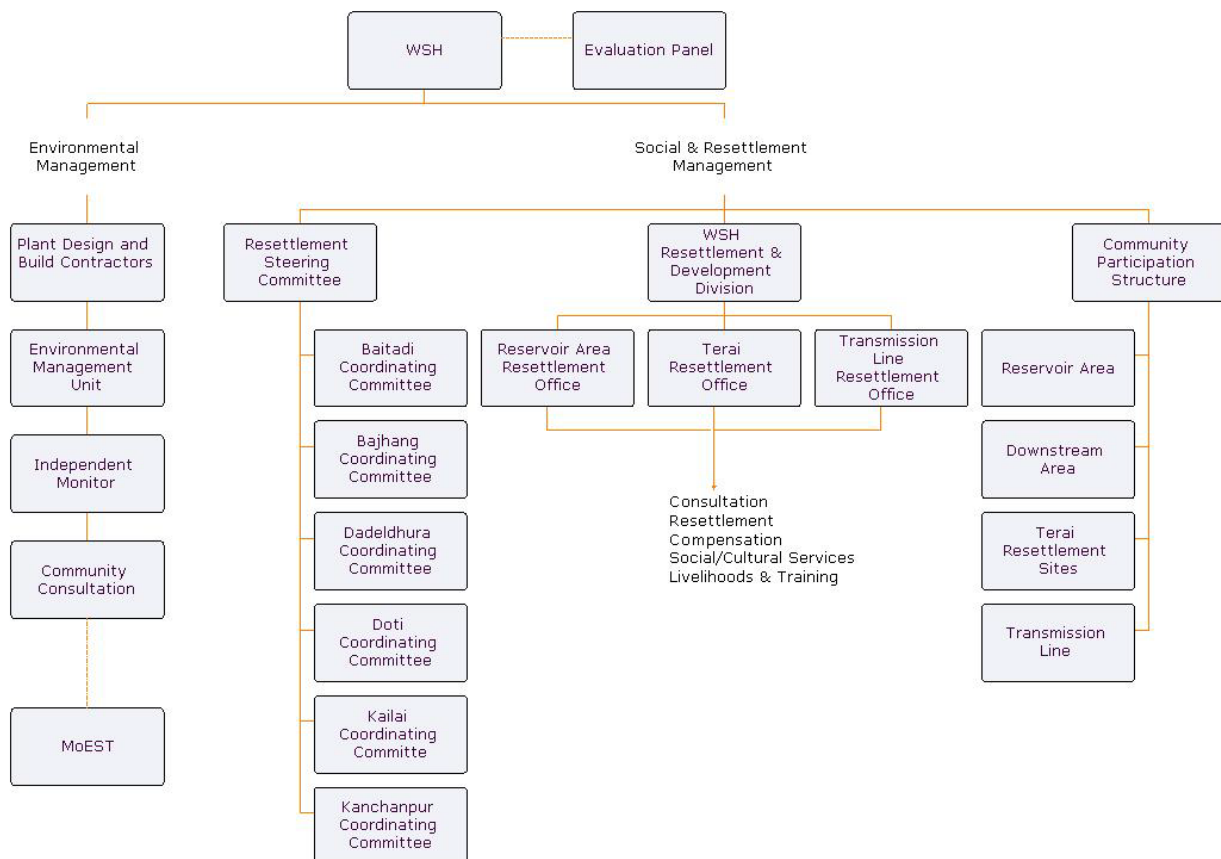


Figure 8-1: Overall Social and Environmental Management Structure

The resettlement programme will be managed and coordinated through:

- a Resettlement and Development Division (RDD) within WSH, consisting of three resettlement field offices and a technical support branch;
- a Resettlement Steering Committee and district-level coordinating committees; and
- a community participation structure representing affected communities.

Vulnerable groups will be ensured representation in the organisational structure. WSH will also be responsible for ensuring the early involvement of NGOs to undertake awareness raising and training programmes and prepare affected households and communities – including vulnerable groups – for the changes facing their lives and livelihoods.

8.2 WSH Resettlement and Development Division

A Resettlement and Development Division (RDD), a component of the Management and Administration Contractor appointed by WSH, will be created at the commencement of the project to execute the resettlement programme, coordinating and managing the day-to-day implementation of resettlement activities. The RDD will consist of a resettlement field operations branch and a technical and field support branch (Figure 8-2).

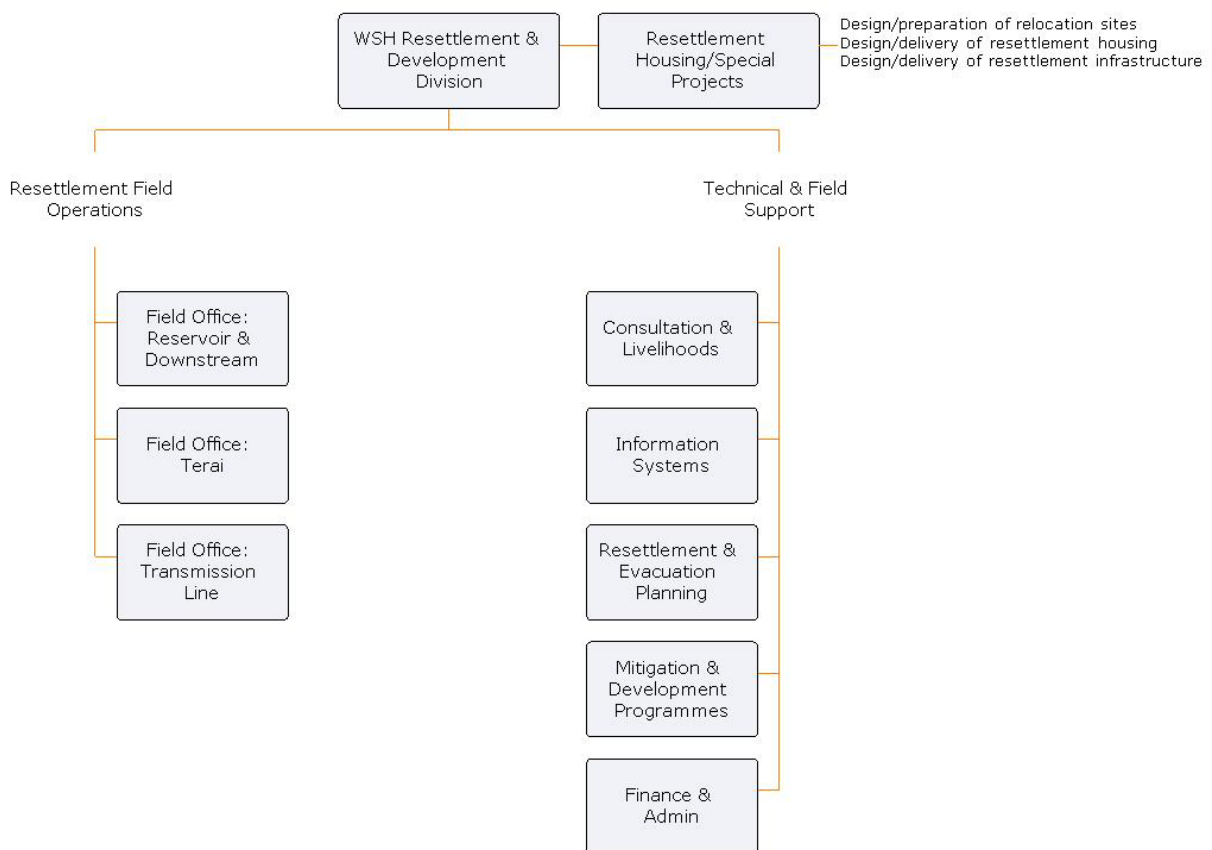


Figure 8-2: WSH Resettlement and Development Division

An organisational structure has been prepared which details the Units and Sections within the RDD as well as managerial and senior staff positions (see the Resettlement Plan). All managerial and senior staff will have appropriate tertiary qualifications and experience in subject fields such as land acquisition and resettlement, compensation, consultation/stakeholder liaison, community development, women in

development, field surveys, GIS and information systems, and project management. Priority will be given to the appointment of Nepalese, particularly from the Far-Western Development Region.

Other specialists and NGOs will be appointed on short-term or contract assignments to assist with the preparation and implementation of specific projects/initiatives in areas such as institutional development, vocational training, agriculture, irrigation, livestock, social forestry, water and sanitation, health/nutrition and small enterprise development.

All RDD staff will undergo induction and orientation training at the start of their assignments. Training will occur as staff members are appointed, with the bulk of the training taking place during the mobilisation period. Training focus areas will include:

- international best practice resettlement requirements;
- the project's social context;
- the project's resettlement objectives, principles and procedures;
- the project's compensation framework and entitlement matrix;
- land acquisition processes;
- project development and resettlement schedules;
- livelihood restoration and diversification; and
- community participation and development, including women in development and current approaches and initiatives in Nepal for the development of vulnerable communities such as Dalits and indigenous groups.

8.2.1 Technical and Field Support Branch

The Technical and Field Support Branch will undertake overall planning and coordination of the project's resettlement and livelihood restoration programme, in conjunction with the Resettlement Field Offices. This will entail the establishment of operational institutions and uniform procedures and standards, the preparation of plans and schedules, and the coordination and monitoring of implementation activities. In preparing and coordinating project-wise plans and activities, particular attention will be paid to:

- establishing effective liaison and consultation mechanisms between WSH, affected communities, district and local government and other stakeholders;
- establishing procedures for updating/gathering socio-economic baseline information to the requisite standards for resettlement implementation and subsequent impact monitoring;
- setting up standardised asset verification and land acquisition procedures;
- establishing uniform databases of affected persons;
- integrating construction, land acquisition and resettlement activities;
- establishing systems for prompt and effective delivery of compensation and other resettlement/rehabilitation entitlements; and
- establishing procedures for ongoing internal monitoring and review, and prompt implementation of corrective actions.

The Technical and Field Support Branch will consist of the following Units:

- Consultation and Livelihoods;
- Information Systems;
- Resettlement and Evacuation Planning;
- Mitigation and Development Programmes; and
- Finance and Administration.

Consultation and Livelihoods Unit

This Unit will coordinate the project's consultation, livelihood restoration and social/cultural services initiatives. Its **Consultation Section** will design and coordinate the project's consultation and participation programme. A collaborative (partnership) approach will be adopted so as to build trust, to improve the quality of decisions and to promote sustainable development. Key focus areas of the Section include:

- institutional and process development, and engagement protocols;
- stakeholder liaison and consultation programmes;
- preparation and dissemination of project information to affected communities and other stakeholders;
- ongoing monitoring of community reactions to project implementation; and
- management of the project's grievance resolution procedure.

The Section will also provide technical assistance to WSH's media/communications specialists with the running of the project's information centres.

The Unit's **Livelihoods and Training Section** will plan and coordinate the resettlement programme's training and livelihood restoration initiatives. This will entail:

- undertaking needs assessments in consultation with the community consultation structures;
- planning and coordinating training programmes (vocational, agricultural, nutritional, etc.);
- coordinating the preparation and implementation of livelihood restoration projects;
- coordinating the appointment and work of contracted NGOs;
- liaising with the Mitigation and Development Projects Unit on the preparation of projects to be implemented by the Unit;
- participating in the management of the project's preferential employment initiatives;
- participating in monitoring exercises to gauge the effectiveness of livelihood restoration initiatives, and preparing plans for the implementation of corrective measures.

The Unit's **Social/Cultural Services Section** will plan and coordinate the rehabilitation of vulnerable households and groups affected by project implementation. The Section will ensure that all legislation/policy directives pertaining to vulnerable groups are incorporated into the resettlement programme. The Section will also coordinate the activities of an RSC Task Group on vulnerable households and women.

Information Systems Unit

This Unit will consist of the following Sections: land acquisition, social baseline, GIS/information systems and monitoring and evaluation. The **Land Acquisition Section** will plan and manage the project's land acquisition programme. This will entail:

- planning, scheduling and supervision of asset verification activities;
- liaison with the project's engineering and survey staff for the confirmation, survey and pegging of project affected areas, and integration of the land acquisition programme into the overall project construction schedule;
- ongoing interaction and coordination with relevant district officials to ensure that all legal and procedural requirements are met and land titles are transferred in an efficient and timely manner;
- training and supervision of asset verification field teams;
- management and quality control of asset recording methods/procedures;

- supervision and coordination of NGOs appointed to assist landowners with updating of land titles;
- assisting the GIS/IS Section in setting up and managing a computerised land ownership and acquisition database; and
- technical assistance to the Terai land purchase teams and other field staff as required.

The **Social Baseline Section** will plan and coordinate all census/household surveys and related socio-economic data gathering exercises. Key functions will include:

- preparation of survey instruments (including pre-testing and translation into Nepali);
- training of enumerators/surveyors;
- supervision of surveys;
- database design and maintenance, in conjunction with the GIS/IS Section; and
- supervision of data entry, including quality control.

The **GIS/IS Section** will be responsible for preparing and managing the project's resettlement management system, which will consist of:

- a relational database management system to manage all non-spatial data such as household demographics, resettlement packages and compensation payments;
- a geographic information system for the storing, analysis and mapping of spatial data and its related attributes (e.g. resettlement sites, location of relocated households and infrastructure mapping); and
- a project management system for programme planning, resource allocation, budgeting and performance monitoring.

A monitoring and evaluation programme will be instituted to monitor resettlement implementation. It will consist of performance monitoring, impact monitoring and a completion audit. The programme also makes provision for the appointment of an Evaluation Panel to provide guidance to the RDD. The **M&E Section** will coordinate all matters relating to this programme, including:

- preparation of monthly and quarterly internal monitoring reports;
- coordination of qualitative and quantitative impact monitoring studies;
- supervision of agencies contracted to undertake specific monitoring tasks;
- liaison with the Evaluation Panel; and
- establishing and maintaining a computerised monitoring management system, in consultation with the GIS/IS Section.

Resettlement and Evacuation Planning Unit

The physical evacuation and relocation of displaced households will occur in a number of stages over a period of approximately five years. It will be a major undertaking that will require careful planning, execution and monitoring. The Resettlement and Evacuation Planning Unit will be responsible for the detailed planning of each resettlement stage and the execution and supervision of the physical evacuation programme.

The Unit's **Resettlement Planning Section** will be responsible for resettlement planning. This will entail:

- preparing and maintaining a detailed resettlement implementation programme and schedule;
- undertaking detailed planning of each resettlement stage;
- coordinating the allocation of relocation sites to specific communities/villages;

- liaising with the Terai Resettlement Office regarding the stage-wise preparation of relocation sites;
- liaising with the Resettlement Housing and Special Projects Division regarding the stage-wise delivery of resettlement housing and infrastructure; and
- preparing relocation and transitional support schedules in conjunction with the Unit's Evacuation Planning and Logistics Section.

The **Evacuation Planning and Logistics Section** will be responsible for:

- preparing evacuation and relocation schedules, in conjunction with the community consultation structures;
- announcing and distributing evacuation schedules in the project areas and through the media;
- arranging transport and transit requirements (where necessary);
- maintaining moveable assets registers where required; and
- coordinating and supervising the physical evacuation process.

Mitigation and Development Projects Unit

Various mitigation and development projects will be implemented at the different project sites. Some of these are required for the purposes of impact avoidance or mitigation, while others will be implemented to support local/community development. The Mitigation and Development Projects Unit will plan, coordinate and manage all these initiatives.

Two sections will be set up within the Unit, one focussing on the downstream area and reservoir periphery, and the other on the Terai resettlement districts/VDCs and the transmission line. Key functions of the two Sections will include:

- assessing mitigation/development requirements in conjunction with the RDD's Livelihoods and Training Section, community consultation structures and district government officials;
- preparing detailed descriptions of projects to be implemented;
- appointing specialists/contractors and coordinating detailed project planning exercises;
- overseeing the implementation of projects in conjunction with WSH's Resettlement Housing and Special Projects Division; and
- providing support to communities and their representatives with the running/maintenance of projects, in conjunction with the Livelihoods and Training Section.

Finance and Administration Unit

A Finance and Administration Unit will be established to set up and manage the project's compensation system and to provide administrative support to the RDD Units and Field Offices. The Unit will specifically be responsible for:

- establishing and maintaining a computerised compensation management system, in conjunction with the Information Systems Unit;
- ongoing liaison with the District Coordinating Committees, CDCs (where established) and other officials involved in compensation determination;
- ensuring that assistance is provided to affected persons to secure the necessary documentation required to qualify for compensation entitlements;
- ensuring the prompt payment of compensation and other entitlements; and
- the issuing of compensation certificates.

8.2.2 Resettlement Field Operations Branch

Three Resettlement Field Offices will be established, one for each of the project's main resettlement components (reservoir area, Terai resettlement sites and the transmission line), to manage the project's day-today consultation and resettlement activities.

Headed by Resettlement Managers, the Field Offices will be structured to provide and manage the following services within their areas of operation:

- stakeholder liaison; community consultation and participation;
- resettlement planning and management;
- compensation planning and management;
- livelihoods and social/cultural services;
- GIS/information systems.

The Terai Field Office will also have a Land Assessment and Purchase Section and a Farm Planning and Development Section to manage the establishment of the project's relocation sites. The Farm Planning and Development Section will liaise closely with WSH's Resettlement Housing and Special Projects Division regarding the preparation of relocation sites and the construction of replacement houses and other resettlement infrastructure.

The Field Offices will be staffed by experienced specialists and support staff and will liaise on an ongoing basis with affected households, community structures, 'host' communities, contractors and government officials to ensure proper integration of the project's construction, resettlement and livelihood restoration/rehabilitation activities.

8.2.3 Resettlement Housing and Special Projects

A Resettlement Housing and Special Projects Division will be established to oversee the preparation of project relocation sites and the construction of replacement housing and structures, community facilities and other resettlement infrastructure. This Division will work closely with the various Units of the RDD and the Resettlement Field Offices to ensure that resettlement housing and infrastructure are delivered on schedule. Overall, the Division will be responsible for:

- managing all matters relating to the replacement of affected infrastructure, services, housing and structures, including complementary planning and coordination with the Resettlement Field Offices and relevant Government officials;
- appointing and supervising contractors; and
- overseeing the preparation of resettlement sites and the construction of replacement buildings and structures.

To ensure that resettlement sites and replacement structures are completed on schedule and according to agreed standards, the Division will be headed by an experienced Civil Engineer and include appropriate engineers, technicians and support staff. The Section will have requisite knowledge of building standards, guidelines and practices in Nepal.

8.3 Resettlement Steering Committee and District Coordinating Committees

A Resettlement Steering Committee (RSC) will be created to coordinate the project's resettlement activities. The RSC will have representation from:

- the community consultation structures;
- the District Coordinating Committees (DCCs);
- other district/local stakeholders as required;
- regional/national government; and
- WSH (who will act as secretariat).

The RSC will provide an avenue for complementary planning and coordination of resettlement activities, ensuring adherence to the project's resettlement and compensation policies. The RSC will have the following key functions:

- finalising the project's compensation and resettlement entitlements;
- acting as a mechanism for information exchange, complementary planning and coordination of implementation activities;
- ensuring adherence to the project's resettlement and compensation policies;
- assessing the progress and efficacy of the resettlement programme and suggesting modifications where necessary;
- identifying issues/areas of concern and suggesting corrective measures;
- assisting with the identification of socio-economic development opportunities for resettled and local communities; and
- assisting the DCCs and community consultation structures where necessary to explain the process of compensation and resettlement to their constituencies.

The RSC will meet regularly to assist with coordination of all resettlement tasks, and especially with those requiring inputs from government departments. In addition, it is envisaged that RSC Task Groups will be established (some continuing as standing committees for the duration of the project) to investigate and coordinate the following issues/topics:

- compensation rates and payment procedures;
- resettlement eligibility;
- livelihood restoration;
- vulnerable groups (e.g. Dalits, female-headed and other vulnerable households); and
- grievance and dispute resolution.

The Task Groups will consist of delegated RSC members, other community representatives as required (e.g. Dalit and women representatives on the RSC Task Group on vulnerable groups), staff from WSH's RDD and subject specialists as necessary.

District Coordinating Committees (DCCs) will be established for each of the project districts. The DCCs will play an important role in the management and coordination of compensation and resettlement activities within their respective districts, especially those requiring district government inputs. The DCCs will have the following membership:

- president of the District Development Committee (currently Local Development Officer), who will also be the DCC chairperson;
- representatives from the community consultation structures;
- the following district officials: Chief District Officer, Land Revenue Officer, District Forest Officer, District Education Officer, District Health Officer, and an official from the Survey Office;
- WSH (secretariat);
- other district stakeholders as required.

The DCCs will have the following key functions:

- assisting with the coordination of asset verification surveys and land acquisition processes;
- assisting with the coordination of land title transfers;
- determining/confirming compensation rates;
- confirming affected households and their entitlements;
- assisting with the coordination of mitigation and development projects in the districts;
- assisting with the management of the project area so as to prevent/minimise the possibility of speculative incursions; and
- representing district issues/interests on the RSC.

The DCCs will assume many of the functions of the Compensation Determination Committees (CDCs) as provided for by the Land Acquisition Act (1977). In addition, they will play an important supportive role by coordinating district-level inputs required for the implementation of the resettlement programme.

8.4 Community Participation Programme

A structured community participation programme is vital to the success of the resettlement programme. The overall objective of the programme is to involve affected communities in the decision-making process, leading to a joint effort between WSH and project communities that would produce better decisions than if each had acted independently. To achieve this objective, the affected communities must be:

- kept informed about project developments;
- afforded the opportunity to express their concerns and views;
- assured that their concerns, views and suggestions will be taken into account in the planning and decision making process.

The specific aims of the community participation programme are therefore to (a) create avenues for the sharing of information, views and concerns; and (b) build local awareness and capacity to participate in the assessment of impacts, the design of mitigation measures, and the planning and implementation of resettlement activities.

8.4.1 Community Consultation and Participation Structure

A community consultation and participation structure is required to create a forum for community involvement in the planning and management of compensation, resettlement and livelihood restoration activities. A proposed overall consultation/participation structure for the project as a whole is illustrated in Figure 8-3. This structure consists of community committees at the various project sites, organised by district where necessary.

In the case of the reservoir area, four district committees will be established, each representing affected households from the concerned VDCs in the particular district. An overall committee for the reservoir area will be formed from representatives from the four district committees.

In the downstream area, up to four committees are envisaged: (a) a committee dealing with the mitigation of impacts resulting from a reduced river flow between the dam wall and the tailrace outlet, as well as with the management of impacts associated with construction activities, workforce camps, etc.; (b) a committee representing households/communities affected by the access road to the dam wall; (c) a committee representing households/communities affected at the power station site; and (d) a committee representing households/communities affected by the re-regulation weir. A similar approach will be

followed in the formation of consultation structures at the project's relocation sites in the Terai and for the transmission line.

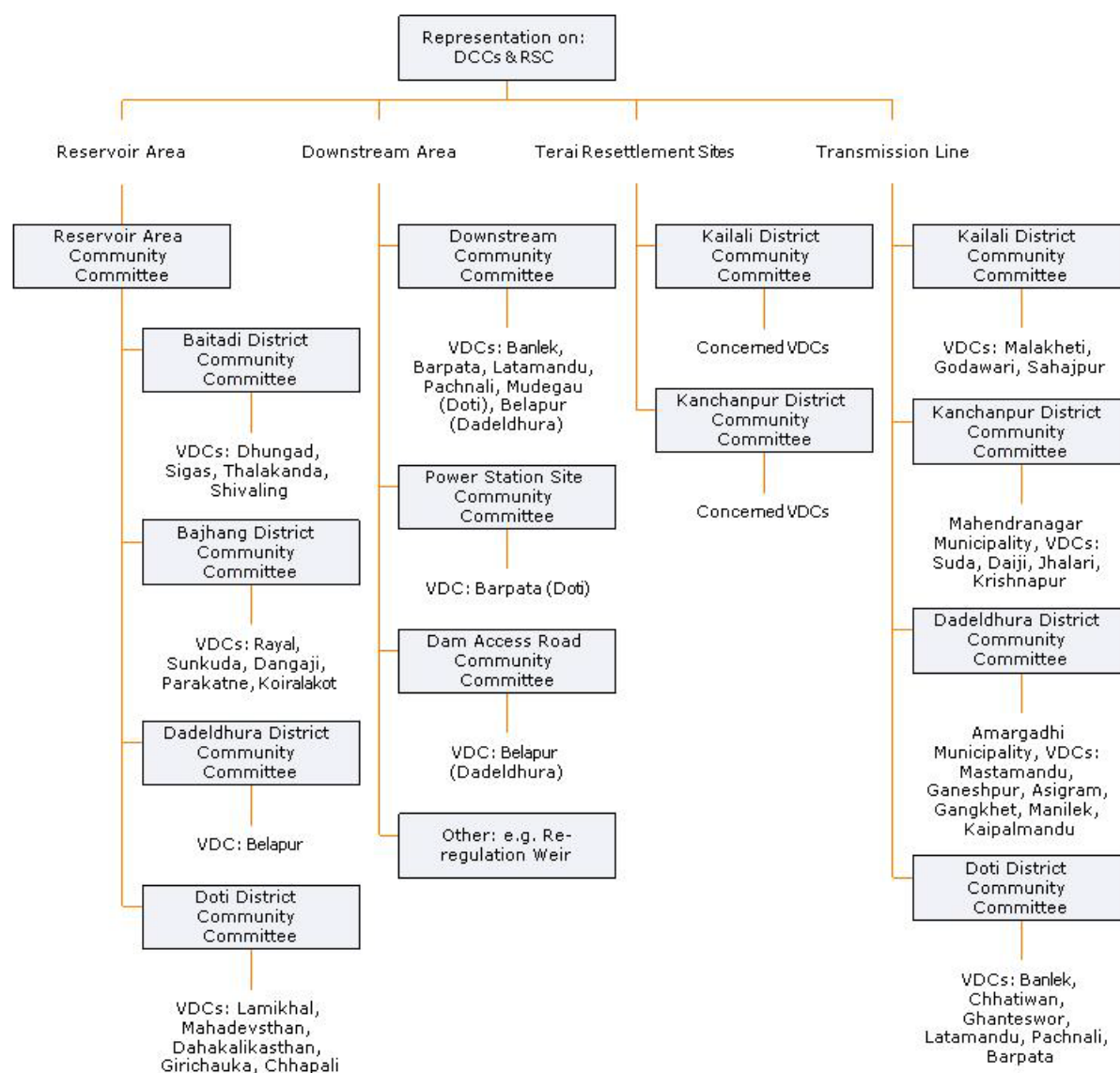


Figure 8-3: Community Participation Structure

As representatives of the communities in their areas of operation, the committees would have the following key functions:

- negotiating overall agreements on behalf of their 'constituencies';
- representing their constituencies on other project committees - e.g. District Coordinating Committees;
- advising households of project-related matters (e.g. resettlement schedules and compensation issues);
- assisting with the identification/confirmation of vulnerable households that may require additional transitional support;
- acting as the first point of call for the resolution of grievances and disputes; and
- assisting with the planning and coordination of participatory monitoring and evaluation exercises in their areas of operation.

The following community committees have already been established during the course of 2007-2008:

- two committees representing affected communities in the reservoir area (West Seti Concern Committee and West Seti Concern Main Committee);
- one committee representing riparian villages in the area between the dam wall and the power station site (West Seti Downstream Concern Committee); and
- one committee representing affected households at the power station site (West Seti Power Station Concern Committee).

8.4.2 Communications and Consultation Staff

An exercise was recently completed for the recruitment of eight Communication and Consultation Officers (CCOs). Advertisements were placed at the project's information centres (see the Resettlement Plan for further details), in newspapers in the Far-Western Development Region and the Kathmandu valley, as well as on the radio. Application forms were posted on the WSH website and at the information offices. Interviews with short-listed applicants were held on 28-29 September 2008 in Dhangadhi and Mahendranagar. Priority was given to the employment of applicants from project affected areas and from disadvantaged groups. The interview and selection process was observed by members of the various community committees. The officers, who will manage the information centres and assist with other consultation activities, will be appointed in November 2008.

Community Liaison Assistants (CLAs) are also being deployed to ensure that information dissemination and consultation occur at household level. Seven CLAs have already been employed from the affected communities, including one from the Dalit community. A further 13 CLAs will be employed, including from vulnerable groups. The main functions of the CLAs are:

- to support the community committees in the execution of their work;
- to provide affected households with information on all aspects of the resettlement programme;
- to record grievances, concerns and suggestions of affected households for discussion with the community committees;
- to meet regularly with the community committees and RDD staff to discuss household concerns, implementation constraints and work plans; and
- to assist with data gathering, fieldwork arrangements and meeting arrangements.

8.5 Key Consultation Activities

Consultation with vulnerable groups occurred during the initial preparation of the EIA, and more specifically for the preparation of the VCDP. Further consultation will be required to discuss and finalise particular issues, for incorporation into a future programme of consultation and disclosure. WSH will facilitate the process through the R&D Division.

Due to the generally low literacy levels in the project areas, WSH will use a range of communication/information dissemination mechanisms, including: through the consultation structure outlined above, written documents (information sheets and newsletters), radio broadcasts through local radio stations, community meetings, focus group discussions, participatory appraisal techniques, household interviews and social mobilisation techniques.

Apart from issues that may emerge over the course of the project, issues specific to vulnerable groups are discussed below.

Compensation and Relocation Options

Although vulnerable households have given an indication of their preferences around relocation options during the VDCP household survey, more comprehensive consultation will be required around each option and its implications. This will occur through small group discussions on a village level and individual household interviews.

A key focus of these consultations will be the project's Entitlement Matrix and resettlement measures. These topics will be discussed extensively to ensure that individual households are aware of the different resettlement and compensation components so that they can make informed choices. In particular, it will be important for vulnerable households to have a thorough understanding of the following:

- entitlements for the loss of private assets (land, buildings, trees and other assets);
- entitlements for the loss of access to communal resources;
- resettlement eligibility criteria and relocation options (local relocation, relocation to the Terai, self-relocation); and
- displacement and evacuation allowances.

It will also be important for vulnerable households to participate in the finalisation of relocation sites in the Terai, around the reservoir area and in the downstream area. Potential sites have been identified in the Terai and have to be finalised through further consultation with all stakeholders. Thereafter, those being resettled will be involved in planning and layout of relocation sites, for example, the allocation of residential plots. Relocation sites around the reservoir area and in the downstream area need to be confirmed with displaced households, including vulnerable households, once their resettlement options and the exact project land requirements in the downstream area are finalised.

Social Preparation Programmes

A social preparation programme will be implemented to assist affected households to plan for the changes that the project will have on their lives and livelihoods. This programme will, amongst others, cover the following:

- project information campaigns to ensure transparency of procedures;
- awareness-raising campaigns on compensation and rehabilitation entitlements and payment procedures;
- campaigns to promote the opening of bank accounts for compensation payments;
- campaigns to promote the updating of land records;
- assistance with the preparation of paperwork for compensation payments; and
- resettlement and livelihood support to vulnerable groups.

For vulnerable groups, who are often excluded from mainstream decision-making processes, the social preparation programme will be especially important. The RSC Task Group on vulnerable groups will provide a forum for discussion of the needs of vulnerable groups, for the finalisation of the social preparation programme as it relates to vulnerable groups and for the identification of agencies to assist with social preparation activities.

It is envisaged that the following agencies/institutions will assist with social preparation programmes for vulnerable groups:

- community committees;
- project-affected VDCs and DDCs;

- NGOs with capabilities in the fields of education, training/capacity building, financial assistance and in raising awareness of vulnerable groups around their rights and opportunities;
- women's groups and CBOs; and
- national and district Government departments and line agencies that focus on women, children, Dalits, social welfare and local development.

8.6 Grievance Management

A grievance redress procedure is fundamental to achieving transparency in the resettlement process: it is an essential mechanism for people to voice their concerns, for corrective actions to be implemented, and for the overall satisfactory implementation of the resettlement programme. Effective implementation of project-related developments will require the placement of a formal grievance management system on a project level, and access by stakeholders to national institutions. The resolution of all grievances and disputes will be according to applicable national legislation and international requirements.

The following principles will be upheld, essential prerequisites in the management process:

- openness/transparency and accessibility to all stakeholders;
- independence and impartiality on the part of any individual or body reviewing grievances or disputes, to foster the trust and confidence of all parties involved; and
- the maintenance of confidentiality – confidentiality of the complainant, if so requested, and to information provided by any of the parties to a complaint.

Responsibility for matters relating to grievance and dispute resolution within WSH will lie with the Liaison and Participation Unit of the R&D Division. As set out in Figure 8-4, the approach will in all instances be to firstly address and resolve grievances through the project organisational structure, commencing at the level of LCFs before proceeding to the RSC Grievance Resolution Task Group, a body that will be set up solely for the purpose of addressing grievances. The main function of the Task Group, which will have representation from the affected communities and local/district authorities, will be:

- to provide a support mechanism to affected persons regarding land/property acquisition and relocation;
- to record, investigate and assess grievances; and
- to resolve grievances, in accordance with project policies and applicable local legislation, and provide prompt feedback to the aggrieved parties.

The resolution of all grievances and disputes will be according to applicable legislation. Grievances and disputes that cannot be resolved through project-related mechanisms will have recourse to national law through the judiciary. While the R&D Division will assist affected persons (through an appointed NGO) to update their land ownership records and to secure the necessary documentation required for compensation, the project's grievance resolution mechanism will not provide legal advice to persons contesting a decision arrived at under the land acquisition procedures. Contested decisions that seek redress through national legal processes should be advised by appropriate legal representation as such legal advice is not within the mandate of WSH.

A written record of all grievances and disputes will be kept by WSH or a nominated agent. These records will be monitored regularly by the RSC and through the monitoring and evaluation process described in Section 8.7 of this Chapter.

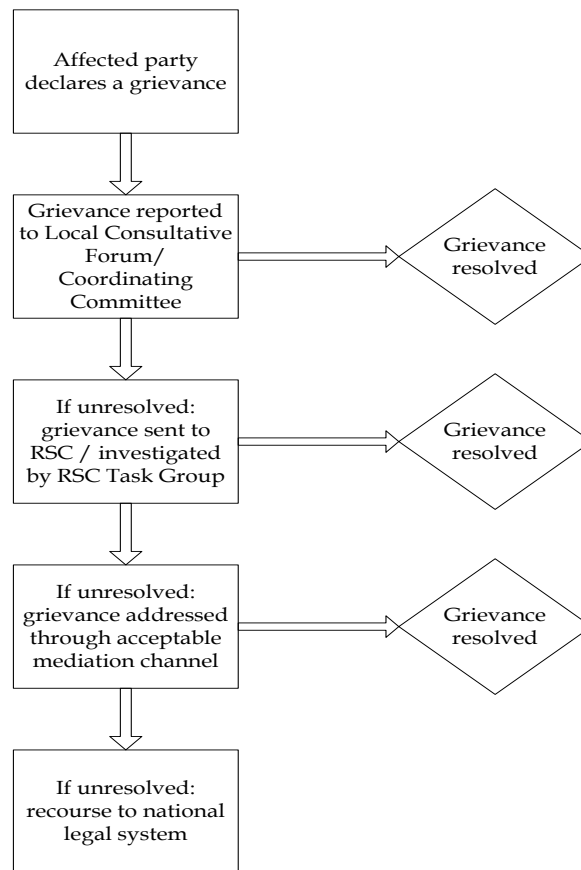


Figure 8-4: Grievance Redress Procedure

8.7 Monitoring and Evaluation

Although the GoN will be involved in project developments, WSH will hold overall responsibility for the implementation of compensation, resettlement and other mitigation measures, and for the monitoring of the resettlement programme. The project’s socio-economic monitoring and evaluation programme is detailed in the RP. It will be coordinated by the Monitoring and Evaluation (M&E) Section of the R&D Division, and involve consultation structures such as the community committees and the RSC as well as external agencies. The duration of the programme will be determined in consultation with the affected community and other stakeholders.

The main functions of M&E Section will be to (a) record and assess project inputs, outputs and outcomes; (b) provide an ongoing assessment of the efficacy of compensation and resettlement initiatives, identifying problems and successes as early as possible so that timely adjustments of implementation arrangements can be made; and (c) confirm that former livelihoods and living standards have been re-established.

8.7.1 Monitoring and Evaluation Framework

WSH’s M&E Section will be established at an early stage to undertake preparatory activities for the implementation of the monitoring and evaluation programme. This will include the establishment of a monitoring management system, incorporating a monitoring database that is linked to existing databases, and early training/capacity-building programmes amongst affected communities to prepare them for participation in the programme.

The overall aim of the programme will be to measure the extent to which the goals of the RP and the VCDP have been achieved. Indicators and targets will be established by WSH in consultation with the RSC and community committees. While indicators will be established for the resettlement and livelihood restoration process as a whole, they will be disaggregated to ensure that social variables are properly accounted for, such as for vulnerable groups.

The monitoring and evaluation programme will entail performance and impact monitoring, as well as the appointment of an Evaluation Panel. A completion audit will also be undertaken at a suitable period after the conclusion of the resettlement programme.

8.7.2 Performance Monitoring

Using input/output indicators, progress with resettlement and livelihood restoration will be measured against scheduled actions and performance milestones; for example, the establishment of institutional structures; number of public meetings and consultation; and the operation and implementation of compensation, grievance and other necessary procedures. This will be undertaken by the M&E Section, together with the various community committees and the RSC.

8.7.3 Impact Monitoring

Impact monitoring will focus on the effectiveness of resettlement and livelihood restoration measures, the identification of constraints and recommendations for any corrective measures. While internal monitoring reports will be a source of information, impact monitoring will require the generation of new data to compare against pre-displacement (baseline) conditions. This will occur at two levels:

- households and businesses: through the use of quantitative (standardised) socio-economic and health survey instruments; and
- groups/communities: through the use of qualitative (participatory) monitoring and evaluation techniques.

In both cases, external agencies will be appointed to conduct the monitoring exercises, coordinated by the M&E Section.

Standardised (Quantitative) Monitoring

Using standardised survey instruments, the socio-economic status of the affected population will be tracked and measured against baseline conditions. This will occur bi-annually in the short term but annually over the longer term.

Participatory (Qualitative) Monitoring and Evaluation

A community-based participatory monitoring and evaluation (PME) programme will be implemented to gauge the effectiveness of mitigation measures in meeting the needs of affected households, and assessing the attitudes and opinions of affected people to both general and specific elements of the resettlement programme. Affected communities, including vulnerable groups, will be assisted in:

- developing their own criteria for acceptable standards of living;
- assessing their pre-project (baseline) standard of living based on their own criteria;
- monitoring their progress towards recovering their pre-project standard of living;
- evaluating the effectiveness of mitigation measures; and
- developing and communicating their own solutions to outstanding problems.

8.7.4 Evaluation Panel

An Evaluation Panel will be appointed to provide guidance to the project's R&D Division. Comprising specialists with expertise in resettlement and development processes, the Panel will undertake bi-annual/annual evaluations of the resettlement and livelihood restoration programme. This will, amongst others, entail:

- examining internal and external monitoring reports;
- analysing budgets and expenditure in relation to realities on the ground;
- site visits and consultation with the affected population, with special attention to vulnerable groups, to verify the success of implementation;
- evaluating project institutions, including capacity and operational constraints; and
- advising WSH and affected communities of any emergent issues and corrective measures.

In addition to the various indicators assessed in the monitoring and evaluation programme, the Panel will consider process indicators (e.g. capacity of WSH, community participation structures, government agencies and NGOs to fulfil their respective roles; and the effectiveness of the grievance management system) and sustainability indicators (e.g. sustainability of livelihood restoration initiatives, and of resource utilisation patterns in the project area).

8.7.5 Completion Audit

At the conclusion of the resettlement programme, a completion audit will be undertaken by an independent agency. The overall aim of the audit will be to verify that resettlement and livelihood restoration activities have been undertaken in compliance with the objectives and principles of the RP and the VCDP. Specific aims of the audit will be to: (a) confirm that all physical inputs specified in the plans have been delivered; (b) confirm all outputs achieved under the resettlement programme, and whether the outcomes of the resettlement programme have had the desired beneficial impacts; and (c) describe any outstanding issues that require attention prior to programme closure.

8.8 Disclosure

The VCDP has been developed in consultation with vulnerable households, other residents in the project area, the NGO Federation of the four project districts and district level government officials. The RP and a recently completed update survey of a sample of households in the reservoir area have also been prepared in consultation with affected persons, and they have been informed about the likely impacts of the project. This also included consultations with village leaders and government agencies and departments.

Disclosure of the VCDP and RP by WSHEP will take place during the pre-construction phase of the project. A necessary prerequisite of this is the preparation of a brochure in Nepali covering all pertinent project issues.

With regard to vulnerable groups, the disclosure process will involve WSH staff re-engaging with these groups so that they are fully aware of the project's impacts, benefits and provisions for various types of entitlements. Nepali summaries of the VCDP and RP will be made available to vulnerable groups.

Specifically, disclosure will cover:

- a description of the project, its aims and components;

- a map or diagram of the affected areas, or else physically showing the affected areas to households;
- a timetable when each of the project activities will take place, including estimated start and completion dates;
- expected social, economic and environmental impacts and safeguards;
- the project's Entitlement Matrix, including who will be entitled to compensation, what losses will be compensated, and what entitlements affected persons will receive;
- an outline of relocation and livelihood support measures; and
- an outline of how consultation with/participation of affected communities will continue.

In addition, WSH will establish its own website where the VCDP and RP will be lodged. The two documents will also be disclosed on the ADB website. WSH will also circulate the VCDP and RP to all relevant local government offices. Further disclosure will occur during project implementation as necessary.

8.9 Reporting

The resettlement programme will require adequate reporting of the activities and findings of the R&D Division, and the distribution of such reports to vulnerable groups and other stakeholders. Reporting of relevance includes:

- Minutes of the meetings of community committees, the RSC and other project-related committees. In addition to formal reporting of these meetings, community committee members and RSC members, including those from vulnerable groups, will be required to provide adequate report-backs to the communities they represent. This will require training/capacity building in record keeping, and in appropriate report back methods (including participatory techniques).
- Reporting as part of the M&E programme will produce the following documents: a) internal monthly progress reports, compiled by the M&E Section of WSH; (b) formal resettlement (performance) monitoring reports produced quarterly; (c) annual impact monitoring reporting, based on the quantitative and qualitative studies undertaken by external agents; (d) reports of site visits/assessments undertaken by the Evaluation Panel; and (e) report/s prepared as part of the Completion Audit to verify that WSH has complied with the goals, objectives and principles of the RP and the VCDP.

Apart from internal monthly monitoring reports, all monitoring reports will be submitted to the RSC, District Coordinating Committees, community committees and other project committees. The reports will also be made available at the project's information offices.

9. IMPLEMENTATION PROGRAMME

The RP sets out a phased resettlement programme prepared in response to key project development milestones. The programme provides the overall framework for the integration of resettlement activities with the construction works, but the actual attainment of construction and resettlement milestones will require ongoing complementary planning during project implementation.

9.1 Construction Schedule

Although construction of the project will span 5.5 years, a key objective is to generate power as soon as possible. According to the preliminary construction schedule, the installation of the first generator unit is set to be completed 51 to 54 months from contract commencement, with the remaining units coming into operation at two-monthly intervals thereafter. Completion of the dam embankment and the start of reservoir filling are scheduled to occur in month 44. Key project construction milestones are listed in Table 9-1.

Table 9-1: Key Project Construction Milestones

Construction Milestone	Project Month
Completion of dam site access road	3
Completion of power station bridge across Seti River and associated access road	4
Completion of pilot tunnel to power station cavern for final cavern positioning	9
Completion of diversion tunnel no. 1	19
Completion of coffer dam (EL 1,130 m)	25
Completion of power cavern excavation	28
Closure of one diversion tunnel to construct low-level outlet (dam at EL 1,200 m)	32
Completion of dam embankment to commence storage	44
First generator unit on line	50
Fifth and final generator unit on line	58

9.2 Relocation Programme

From the perspective of the resettlement programme, the following are the key construction activities:

- construction of the advanced infrastructure (i.e. roads and bridges) and access to the main construction areas, including workforce camps and borrow areas;
- construction of the coffer dam (month 20-25), inundating all land below EL 1,130 m in the event of a 1:25 year wet season flood;
- closure of one of the diversion tunnels at month 32, inundating all land below EL 1,188 in the event of a 1:200 flood; and
- completion of the dam embankment at month 44 and commencement of reservoir filling.

These milestones dictate that a large number of affected households will have to be resettled relatively early in the construction process. Prior to the completion of the coffer dam by month 26, approximately 33% of the reservoir affected households must have been relocated. An additional 311 households (bringing the total to 60%) must be resettled prior to the closure of the diversion tunnel by month 32. By month 44, the resettlement/relocation of the remaining households in the reservoir inundation area must be completed in preparation for reservoir filling. In addition to the resettlement activities, leasing or compensation agreements must be concluded during various stages of the implementation programme with non-displaced affected households.

The relocation of households will be undertaken in four stages, and villages have been assigned to different relocation stages based on the construction programme. A fifth relocation stage, running concurrently with the monitoring programme, has also been included for the potential resettlement of villages outside the reservoir displacement area for safety reasons.

Mobilisation will commence eight months prior to the start of construction and run concurrently with Stage 1. This will entail the establishment of the Resettlement and Development Division and Site Office, and a range of other key activities necessary for the successful implementation of the resettlement plan, including: (a) establishment of LCFs and appointment of local CLAs; (b) negotiation of a majority agreement on land exchange ratios and other compensation rates (to be secured before any land occupation); (c) commencement of household asset verification exercises according to resettlement stages; and (d) commencement of land purchase negotiations with landowners in Kailali District, participatory assessment of replacement land and commencement of farm planning.

Stage 1: Construction Areas and Advanced Infrastructure

Stage 1 will address the villages and households affected by the access roads, the power station site, work areas and workforce camps. This stage will involve some relocation, but the majority of the required land will be leased on a temporary basis.

An estimated 36 vulnerable households will be affected in this stage.

Stage 2: Partial Inundation (EL 1,130 m)

Stage 2 will address the villages at the power conduit intake work area, as well as all the households within the coffer dam inundation area. The coffer dam is scheduled for completion by month 26. However, Stage 2 needs to be completed well in advance of this month in order to have sufficient time for the resettlement of households in Stage 3.

An estimated 124 vulnerable households will be affected in this stage.

Stage 3: Partial Inundation (EL 1,188 m)

This stage will address households affected by inundation (below EL 1,188) as a result of the closure of one of the diversion tunnels. These households are located along the Seti River (roughly from the Seti River/Saili Gad confluence upstream to Lekham), as well as on the Chama Gad, Dhung Gad and Saili Gad.

An estimated 29 vulnerable households will be affected in this stage.

Stage 4: Full Inundation (EL 1,188 + 96 m)

Stage 4 will address the remaining households to be relocated below the FSL+96 m zone, as well as compensation arrangements for non-displaced households whose land is inundated during this stage.

An estimated 93 vulnerable households will be affected in this stage.

A broad resettlement schedule is set out in Appendix 8. To ensure sufficient start-up time for the final negotiation of entitlements and the implementation of social preparation programmes, mobilisation activities are planned to start eight months prior to the commencement of construction activities.

10. RESETTLEMENT AND REHABILITATION BUDGET

As a project-affected group, costs relating to vulnerable groups are detailed in the overall resettlement budget in the project's RP. The budget reflects:

- capital costs, comprising compensation for the loss of private assets (e.g. land, housing and structures) and for other entitlements such as the various allowances detailed in Chapter 7 of the VCDP; and
- operating costs, comprising costs for personnel employed by WSH, for support to district government departments, for committees and community liaison, for training programmes, monitoring and evaluation and for NGO involvement.

Apart from standard compensation on a household level, of particular relevance to vulnerable groups are the following:

- rehabilitation allowances for vulnerable households, and costs for NGOs contracted to assist in relocation and livelihood restoration, to be covered by operating costs;
- costs for a specialist within the R&D Division of WSH and the establishment of a Task Group on vulnerable groups, to be covered by operating costs.

The resettlement budget amounts to USD 72.3005 million and consists of 11 budget items (with a 10% contingency included in the overall project budget):^{††}

1. **Replacement of privately-owned buildings and structures.** This cost item covers all privately-owned structures of households potentially facing resettlement from the reservoir area, as well as an estimate of the building compensation required for resettlement associated with ancillary sites (permanent access roads, power station site, re-regulation weir site and construction camps/offices). The estimate for this budget item is USD 12.6324 million.
2. **Land acquisition and replacement.** This item covers the acquisition of privately-owned replacement cultivation land in the Terai, replacement land in the Project area and the payment of cash compensation to households who do not wish to take up the replacement land option. It also makes provision for the payment of Government land revenue/registration fees. The estimate for this budget item is USD 29.2951 million.
3. **Compensation for private trees.** This item covers compensation for tree losses at project sites. The estimate for this budget item is USD 4.2500 million.
4. **Leasing of temporarily occupied land.** This item covers the leasing of private land during the construction period. The estimate for this budget item is USD 0.0206 million.
5. **Community facilities and site development.** This item covers the following actions: (a) replacement of community facilities such as schools, temples, footbridges and upgrading of major tracks/trails around the reservoir; (b) infrastructure/service developments at relocation sites, including water and sanitation; (c) and the provision of improved cooking stoves. The estimate for this budget item is USD 8.3840 million.
6. **Displacement allowance.** This item is for a displacement allowance to resettled households and businesses for any incidental costs associated with their relocation. The estimate for this budget item is USD 0.8842 million.

^{††} A separate budget has been prepared for the Talkot-Mahendranagar transmission line RP.

7. **Shifting allowance.** This item covers the payment of an evacuation allowance to all displaced households. The estimate for this budget item is USD 0.2556 million.
8. **Cultivation disruption allowance.** This item covers the payment of a cultivation disruption allowance to non-displaced households who have lost land to the Project. The estimate for this budget item is USD 0.4648 million.
9. **Other allowances.** This item covers rehabilitation allowances for vulnerable households, as well as stipends for tenants and allowances for wage (e.g. agricultural) labourers whose employment is terminated as a result of land acquisition. The estimate for this budget item is USD 0.3089 million.
10. **Livelihoods and development.** This item covers the implementation of a construction employment strategy for local job seekers, a farmer's reestablishment support programme, training programmes and contracted NGOs to assist with social preparation and livelihood restoration activities. The estimate for this budget item is USD 1.4 million.
11. **Management and administration.** This item covers the management and administration of the resettlement programme. It includes the establishment of the Project's Resettlement and Development Division, including staff to work with vulnerable households and groups, support to government land revenue/acquisition officials, transit arrangements and transportation to the Terai, community participation and a monitoring and evaluation programme, including an Evaluation Panel. The estimate for this budget item is USD 14.4049 million.

Vulnerable households will be affected in all four resettlement stages as described in Chapter 9. Costs associated with the resettlement and reestablishment of affected vulnerable households will therefore be incurred from Project Year 1. NGOs will be mobilised early in the implementation period to ensure that vulnerable households are adequately prepared for the resettlement and their role in the resettlement programme.

11. CONCLUSION AND RECOMMENDATIONS

This Chapter summarises the key findings from the VCDP study, followed by a number of recommendations.

11.1 Key Findings from the Study

Major findings of the study are summarised in the following sections.

Vulnerable Communities in the Project Area: The vulnerable communities in the project area consist of Dalits and female-headed households. The vulnerable households are spread across 11 of the 21 project VDCs. Other potential vulnerable groups, namely Adivasi/ Janajati households (indigenous nationalities) or households headed by physically disabled persons, are not present in the project area.

Vulnerable Households in the Project Area: The project area has 282 vulnerable households, of which 274 are Dalit households and eight are non-Dalit female-headed households. The Dalit households include 28 female-headed households. Of the total vulnerable households, 91 are located in the reservoir displacement zone (i.e. below FSL+ 96 m), 164 above the reservoir displacement zone (i.e. above FSL+ 96 m) and 27 at project sites in the downstream area.

Demographic Features: The 274 Dalit households have a total population of 1,981, of which 1,043 are male and 939 female. The average size of these households is 7.2, which is higher than the national average (5.4) and the average for the Hill Dalits (4.7). The total population of the 36 female-headed households in the project area is 211, comprising 98 males and 113 females, and their average household size is 6.3. The dependency ratio (ratio of young and elderly population) of Dalits and female-headed households in the project area is quite high. All vulnerable households in the area practice the Hindu religion.

Gender Issues/Position of Women: Women are disproportionately downtrodden and vulnerable in the community. They have a lower social status and generally bear most of the household's responsibilities.

Education and Literacy: Among the Dalit population, 56.2% of the people above six years of age are literate. The literacy rate among males is 67.1% while that among females is 32.9%. Thus, the literacy rate of the vulnerable households is good compared to the literacy rate of the country by sex (male 65.5% and female 42.8%) and the nation-wide Dalit population. The literacy rates among the female-headed households are of a similar nature.

Livelihoods: A majority (64%) of the Dalit population over 15 years of age is engaged in agriculture. This percentage is less than that of the national average (greater than 80%). Service (11.87%) and wage labour (10.56%), either locally or outside the project area, are the other major occupations of the Dalits. Services taken up by the Dalits include working as guards in India and teaching in rural areas of Nepal. Employment of Dalits in the service and wage labour sectors is higher than that of other caste group. Seasonal labour migration to India is a common practice and an important source of livelihood for Dalit households because of their small landholding size and high dependency on the upper class people of their society.

Settlement Pattern: Dalit settlements are mostly located near settlements of the high caste groups. These settlements are normally heterogeneous in nature, with houses generally clustered around those of relatives. The Dalits are mainly concentrated in Lamikhal, Dhungad, Rayal and Dangaji VDCs, where about 72% of their population lives.

Housing Pattern: In some households, multiple families live together. Each nuclear family has its own allocated space in the house, although there is some sharing of resources. Houses are mainly constructed of stone with mud mortar, timber beams and pillars and slate tile or thatched roofs. Normally, there are no toilets in the Dalit houses, and open defecation near the village or along river banks is a common practice among the Dalit households of the area.

Use of Natural Resources: Like other local people, vulnerable households depend heavily on the natural resources in reservoir area. Bee keeping for honey production is a regular activity of many households in the reservoir area. The reservoir area is also rich in fruits such as oranges, mangoes, papaya, banana and Licchi (*Litchi chinensis*). Licchi finds major use in the production of ghee which the Dalits consume themselves. A large number of fodder trees are also available in the reservoir area. These trees are very useful for animal husbandry.

Income and Expenditure: The main sources of income of the vulnerable households are off-farm income activities (such as services, trade, wage labour, cottage industries, pension, remittances, professional services and fishing) followed by agriculture and animal husbandry. The computed average annual household income of the Dalit households is NRs. 69,313, which is lower than the average annual household income (NRs. 112,821) estimated from the EIA update survey conducted in 2006. Similarly, the annual average expenditure of the Dalit households is NRs. 64,332, which is again lower than that of households surveyed for the EIA update (NRs. 99,740). Thus, the Dalit households can make saving equivalent to NRs. 4,981 (approximately US\$ 75) per year from their annual income. The surveyed households spend about 67.1% on food items and 32.9% on non-food items.

The income, expenditure and saving patterns of the female-headed households are similar to those of the Dalits.

Poverty: To identify absolute poor families amongst the surveyed households, the concept of Basic Needs Income (BNI) was used, as defined by the Nepal Rastra Bank (Central Bank of Nepal) in the Multiple Household Budget Survey (1988). Using this approach, 43.8% of the Dalit households were found to be in the absolute poor category, a figure slightly higher than the percentage of absolute poor households in the FWDR (41%). Among the 36 female-headed households, 27.8% was in the absolute poor category

11.2 Recommendations

Apart from the considerable economic benefits from its power generation, the project will also generate direct economic benefits to the GoN and the affected districts through royalties and revenues. Other direct project benefits are likely to arise from access to the reservoir area, regional development, employment of local people and general improvement of infrastructure and services in the project-affected VDCs. Thus, this study recommends early construction of the project by implementing the following recommendations.

- The project will have significant socio-economic impacts – population displacement, resettlement, impacts on livelihoods and economic activities, inundation of community and religious facilities, and disruptions to community activities and networks of vulnerable families. The project's Resettlement Plan and Environmental Management Plan are designed to address these impacts.
- Consultation with the affected vulnerable communities is a key part of project management and a sustainable way of project development. Thus, a structured consultation programme with the

affected communities during the pre-construction and construction phase of the project is recommended.

- Socio-economic features and parameters generally change with time. Thus, information of the affected households needs to be updated. For effective compensation and resettlement planning, the existing database (prepared in 1999) of all affected households needs to be updated.
- The status of women in the area is lower than their male counterparts. Women and Dalits are therefore more vulnerable to project activities.
- Considering their vulnerability, Dalits and female-headed households should be given special attention during compensation and resettlement planning, and special livelihood restoration programmes focusing on these groups are required.

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WEST SETI HYDROELECTRIC PROJECT

VULNERABLE COMMUNITY DEVELOPMENT PLAN

APPENDICES



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Table of Contents

1.	VULNERABLE HOUSEHOLDS POTENTIALLY FACING RELOCATION.....	1
2.	LIST OF INTERVIEWED DALIT HOUSEHOLDS	4
3.	FEMALE-HEADED HOUSEHOLDS INTERVIEWED	9
4.	SOCIO-ECONOMIC DETAILS OF FEMALE-HEADED HOUSEHOLDS.....	10
5.	HOUSEHOLD SURVEY QUESTIONNAIRE (ABRIDGED VERSION)	12
6.	CHECKLIST FOR WOMEN’S GROUP DISCUSSIONS	21
7.	ENTITLEMENT MATRIX.....	24
8.	RESETTLEMENT IMPLEMENTATION SCHEDULE.....	33
9.	INDIGENOUS GROUPS (ADIVASI/JANAJATI) LISTED IN NEPAL.....	36

1. VULNERABLE HOUSEHOLDS POTENTIALLY FACING RELOCATION

#	Household Head	Height	HH ID	District	VDC	Ward	Village
1	Belmati Devi Nagari	Below FSL+10		Baitadi	Dhungad	7	Dhungad
2	Ganesh Damai	Below FSL+10	5-7G-11	Baitadi	Shivaling	9	
3	Jahanta Oar	Below FSL+10	6-6B-6	Baitadi	Shivaling	9	Bori
4	Kare Dholi	Between FSL+10 and FSL+100	5-2E-3	Baitadi	Shivaling	8	Nawaghar
5	Khinaure Damai	Below FSL+10	5-2E-2	Baitadi	Shivaling	8	Nawaghar
6	Lal Damai	Below FSL+10	5-3F-3	Baitadi	Shivaling	8	Nawaghar
7	Ram damai	Below FSL+10	5-3F-1	Baitadi	Shivaling	8	Nawaghar
8	Thirkhe BK	Between FSL+10 and FSL+100	5-2F-9a	Baitadi	Shivaling	8	Nawaghar
9	Chana Devi Saud	Below FSL+10	5-9E-12	Baitadi	Thalakanda	7	Lekam
10	Gyana Devi Saud	Below FSL+10	5-9E-17b	Baitadi	Thalakanda	7	Lekam
11	Jamuna Devi Saud	Below FSL+10	5-10D-23	Baitadi	Thalakanda	6	Lekam
12	Gorkha Bahadur Nepali	Between FSL+10 and FSL+100		Bajhang	Dangaji	2	Motipur
13	Bahadur Okhada	Below FSL+10	7-13G-53	Bajhang	Royal	3	Deura
14	Dhaule Oad (Kami)	Below FSL+10	7-13G-61	Bajhang	Royal	3	Deura
15	Dilu Kami (Oath)	Below FSL+10	7-13G-58	Bajhang	Royal	3	Deura
16	Duble Lohar	Below FSL+10	7-13G-56	Bajhang	Royal	3	Deura
17	Ghatte Damai Nepali	Below FSL+10	7-13G-51a	Bajhang	Royal	3	Deura
18	Golme Lohar	Below FSL+10	7-13G-59A	Bajhang	Royal	3	Deura
19	Gothe Lohar	Below FSL+10	7-13G-4c	Bajhang	Royal	3	Deura
20	Harka Kami	Below FSL+10	7-13G-59b	Bajhang	Royal	3	Deura
21	Jangi Kami	Below FSL+10	7-13G-57	Bajhang	Royal	3	Deura
22	Jayram Lohar	Below FSL+10	7-13G-28,48b	Bajhang	Royal	3	Deura
23	Mannu Parki	Between FSL+10 and FSL+100	8-14A-36b,45	Bajhang	Royal	3	Deura
24	Mendiria Damai	Below FSL+10	7-13G-50	Bajhang	Royal	3	Deura
25	Parbati Damai	Below FSL+10	7-13G-51b	Bajhang	Royal	3	Deura
26	Raghu Kami	Below FSL+10	7-13G-48a	Bajhang	Royal	3	Deura
27	Ujle Parki	Below FSL+10	7-13G-62	Bajhang	Royal	3	Deura
28	Bhawani Lohar	Below FSL+10	2-4F-5	Dadeldhura	Belapur	4	Chhilla
29	Jagatra Bohara	Below FSL+10	5-10H-18b, 16	Doti	Girichauka	1	Pang
30	Kari Dholi	Below FSL+10	3-9C-4	Doti	Girichauka	5	Kola
31	Pik Lohar	Between FSL+10 and FSL+100		Doti	Girichauka	5	Kola
32	Raimati Devi Bohara	Below FSL+10	5-10H-21	Doti	Girichauka	1	Babina
33	Ram Lohar	Below FSL+10	5-10H-12	Doti	Girichauka	1	Babina
34	Ajuba Bhul	Below FSL+10	2-6J-13,17,50	Doti	Lamikhal	6	Bali Talara
35	Baji Dunde	Below FSL+10	2-6J-28	Doti	Lamikhal	6	Bali
36	Bharat Dholi	Below FSL+10	2-7J-13,14	Doti	Lamikhal	6	Bhagtadi
37	Bharat Dholi	Below FSL+10	2-7J-13,14	Doti	Lamikhal	6	Bhagtadi

#	Household Head	Height	HH ID	District	VDC	Ward	Village
38	Bhim Bdr Oath	Below FSL+10	2-6J-46b	Doti	Lamikhal	6	Talara
39	Bhim Bdr. Oath	Below FSL+10	2-6J-46b	Doti	Lamikhal	6	Bali
40	Bhumi Bhul	Below FSL+10	2-6J-14b	Doti	Lamikhal	6	Talara
41	Bir Bdr Aaugi	Below FSL+10	2-6J-47	Doti	Lamikhal	7	Talara
42	Bir Man Bhul	Below FSL+10	3-9C-19a	Doti	Lamikhal	5	Gadkhet
43	biruwa Bdr Lohar	Below FSL+10	2-6J-31c	Doti	Lamikhal	7	Talara
44	Bishwo Bud	Below FSL+10	2-6J-42	Doti	Lamikhal	7	Talara
45	Dharma Sarki	Below FSL+10	2-6J-25	Doti	Lamikhal	6	Talara
46	Gando Sarki	Below FSL+10	2-6J-34	Doti	Lamikhal	7	Talara
47	Ganesh Lohar	Below FSL+10	3-9D-10	Doti	Lamikhal		
48	Goma Thapa	Between FSL+10 and FSL+100	3-9D-5b,6b	Doti	Lamikhal	1	Maneda
49	Gopal Lohar	Below FSL+10	3-9C-15	Doti	Lamikhal	1	Aathi
50	Gopal Sarki	Below FSL+10	2-6J-16c	Doti	Lamikhal	6	Bali Talara
51	Gore Lohar	Below FSL+10	2-6J-4b	Doti	Lamikhal	6	Talara
52	Huraa Lohar	Below FSL+10	2-6J-22a	Doti	Lamikhal	6	Bali Talara
53	Janaki Devi Singh	Below FSL+10	2-7K-9c	Doti	Lamikhal	5	Taligaun
54	Janga Bdr Aaugi	Below FSL+10	2-6J-48	Doti	Lamikhal	7	Talara
55	Jay Bdr Oath	Below FSL+10	2-6J-46c	Doti	Lamikhal	7	Pallo Pali
56	Jaypati Bhul	Below FSL+10	2-6J-6	Doti	Lamikhal	6	Talara
57	Jogi Bhul	Below FSL+10	2-6J-7	Doti	Lamikhal	6	Bali Talara
58	Kale Bhul	Below FSL+10	3-9C-14c	Doti	Lamikhal	5	Gadkhet
59	Kali Bhul	Below FSL+10	3-9B-5	Doti	Lamikhal	5	Adhere
60	Kamali Lohar	Below FSL+10	2-6J-22c	Doti	Lamikhal	6	Bali Talara
61	Kancha Sarki	Below FSL+10	2-6J-16b	Doti	Lamikhal	6	Talara
62	Kari Lohar	Below FSL+10	2-6J-22	Doti	Lamikhal	6	Talara
63	Kashi Bhul	Below FSL+10	2-6J-12a	Doti	Lamikhal	6	Bali Talara
64	Lal Bdr Bhul	Below FSL+10	3-9C-5,19b	Doti	Lamikhal	5	Kola (Gahkhet)
65	Lali Bhul	Below FSL+10		Doti	Lamikhal	6	Bali
66	Laxmi Devi Bhat	Below FSL+10	2-7J-16	Doti	Lamikhal	6	Bhagtadi
67	Man Bahadur Lohar	Below FSL+10	2-6J-3a	Doti	Lamikhal	6	Bali
68	Man Bahadur Sarki	Below FSL+10	2-6J-20a	Doti	Lamikhal	6	Bali
69	Man Bdr. Sarki	Below FSL+10	2-6J-20a	Doti	Lamikhal	6	Bali Talara
70	Nanna Lohar	Below FSL+10	3-9C-23,24	Doti	Lamikhal	5	Aathi
71	Nari Bhul	Below FSL+10	2-6J-11	Doti	Lamikhal	6	Bali Talara
72	Nari Bhul	Below FSL+10	2-6J-11	Doti	Lamikhal		
73	Nari Oar	Below FSL+10	2-6J-5	Doti	Lamikhal	6	Beli Talara
74	Naule Lohar	Below FSL+10	2-6J-43	Doti	Lamikhal	7	Bali
75	Padam Lohar	Below FSL+10	3-9C-15a	Doti	Lamikhal	5	Gadhikhet
76	Pashupati Oath	Below FSL+10	2-6J-40	Doti	Lamikhal	7	Bali
77	Pune Lohar	Below FSL+10	2-6J-31a	Doti	Lamikhal	6	Talara
78	Putali Sarki	Below FSL+10	2-6J-19	Doti	Lamikhal	6	Talara
79	Raghu Bhul	Below FSL+10	3-9B-2	Doti	Lamikhal	5	Adarya
80	Ragi Mahara	Below FSL+10	2-6J-24	Doti	Lamikhal	6	Bali Talara
81	Rai Singh Bhul	Between FSL+10 and FSL+100	3-9C-14a	Doti	Lamikhal	6	Gadkhet

#	Household Head	Height	HH ID	District	VDC	Ward	Village
82	Raju Bhul	Below FSL+10	2-6J-15	Doti	Lamikhal	6	Bali Talar
83	Ram Bahadur Bhul	Below FSL+10	2-6J-12b	Doti	Lamikhal	6	Bali
84	Ram Bdr Lohar	Below FSL+10	2-6J-22b	Doti	Lamikhal		Talara
85	Ram Bhul	Below FSL+10	2-6J-12b	Doti	Lamikhal	6	Bali
86	Saluwa Bhul	Below FSL+10	3-9B-4	Doti	Lamikhal		Adarya
87	Saluwa Lohar	Below FSL+10	3-9C-21	Doti	Lamikhal	5	Gadkhet
88	Shiva Tamata	Below FSL+10	2-6J-23	Doti	Lamikhal	6	Talara
89	Dule Lohar	Below FSL+10	3-9E-13,3-9E-14,	Doti	Mahadevsthan		Gautada
90	Lal Lohar	Between FSL+10 and FSL+100	3-9F-4,6	Doti	Mahadevsthan	9	Jhuda
91	Lal Sarki	Below FSL+10	3-9E-11,12	Doti	Mahadevsthan	9	Gautada

2. LIST OF INTERVIEWED DALIT HOUSEHOLDS

#	Name	Address				Household Number	Location
		District	VDC	Ward	Village		
1	Harka Kami	Bajhang	Rayal	3	Deura	7-13G-59b	Below FSL+10
2	Duble Lohar	Bajhang	Rayal	3	Deura	7-13G-56	Below FSL+10
3	Kirti Damai	Bajhang	Rayal	3	Deura		Above FSL+100
4	Man Bdr Sarki	Doti	Girichauka	1	Babina		Above FSL+100
5	Deusingo Sarki	Doti	Girichauka	1	Babina		Above FSL+100
6	Sakaram Nepali	Doti	Girichauka	1	Babina		Above FSL+100
7	Mahabire Nepali	Doti	Girichauka	1	Babina		Above FSL+100
8	Ram Lohar	Doti	Girichauka	1	Babina	5-10H-12	Below FSL+10
9	Kari Dholi	Doti	Girichauka	5	Kola	3-9C-4	Below FSL+10
10	Pik Lohar	Doti	Girichauka	5	Kola		Between FSL+10 and FSL+100
11	Bhim Nepali	Doti	Girichauka	6	Totipilla		Above FSL+100
12	Mina Damai	Bajhang	Rayal	4	Joowa		Above FSL+100
13	Dhan Jit Damai	Bajhang	Rayal	4	Joowa		Above FSL+100
14	Mendirā Damai	Bajhang	Rayal	3	Deura	7-13G-50	Below FSL+10
15	Golme Lohar	Bajhang	Rayal	3	Deura	7-13G-59A	Below FSL+10
16	Dilu Kami (Oath)	Bajhang	Rayal	3	Deura	7-13G-58	Below FSL+10
17	Ghatte Damai Nepali	Bajhang	Rayal	3	Deura	7-13G-51a	Below FSL+10
18	Raghu Kami	Bajhang	Rayal	3	Deura	7-13G-48a	Below FSL+10
19	Bagmati Okhada	Bajhang	Rayal	3	Deura		Above FSL+100
20	Jangi Kami	Bajhang	Rayal	3	Deura	7-13G-57	Below FSL+10
21	Bahadur Okhada	Bajhang	Rayal	3	Deura	7-13G-53	Below FSL+10
22	Parbati Damai	Bajhang	Rayal	3	Deura	7-13G-51b	Below FSL+10
23	Dhani Damai	Bajhang	Rayal	3	Deura	8	Above FSL+100
24	Ujle Parki	Bajhang	Rayal	3	Deura	7-13G-62	Below FSL+10
25	Bhim Sunar	Bajhang	Rayal	3	Deura	6-1G-67,68	Above FSL+100
26	Dhaule Oad (Kami)	Bajhang	Rayal	3	Deura	7-13G-61	Below FSL+10
27	Pamfa Devi Okhada	Bajhang	Rayal	4	Juwa		Above FSL+100
28	Rajmal Okhada	Bajhang	Rayal	4	Juwa Gaun		Above FSL+100
29	Kali Man Oad Kami	Bajhang	Rayal	4	Jun		Above FSL+100
30	Sangram Okhada	Bajhang	Rayal	4	Juwa		Above FSL+100
31	Piru Tomata	Bajhang	Dangaji	7	Jula	8-5B-3B	Above FSL+100
32	Dhaule Sunar	Bajhang	Dangaji	7	Sagnyadi	8-5B-14	Above FSL+100
33	Kali Man Khadu (Kami)	Bajhang	Dangaji	7	Juna	8-5B-1b	Above FSL+100
34	Hari Man Khadu	Bajhang	Dangaji	7	Jula	8-5B-ab	Above FSL+100
35	Gopi Kami	Bajhang	Dangaji	7	Betalla	8-6C-3	Above FSL+100
36	Ram Bdr Tomata	Bajhang	Dangaji	7	Jula	8-5B-3A	Above FSL+100
37	Kalche Kami	Bajhang	Dangaji	7	Betalla	8-6C-2	Above FSL+100
38	Nanna Lohar	Doti	Lamikhal	5	Aathi	3-9C-23,24	Below FSL+10
39	Ram Bhul	Doti	Lamikhal	6	Bali	2-6J-12b	Below FSL+10
40	Raghu Bhul	Doti	Lamikhal	5	Adarya	3-9B-2	Below FSL+10
41	Lal Bdr Bhul	Doti	Lamikhal	5	Kola (Gankhet)	3-9C-5,19b	Below FSL+10
42	Gopal Lohar	Doti	Lamikhal	1	Aathi	3-9C-15	Below FSL+10
43	Bharat Dholi	Doti	Lamikhal	6	Bhagtadi	2-7J-13,14	Below FSL+10
44	Arjune Nepali	Doti	Lamikhal		Jakhada		Above FSL+100
45	Bahadur Damai	Doti	Lamikhal	5			Above FSL+100
46	Hurua Lohar	Doti	Lamikhal	6	Bali Talara	2-6J-22a	Below FSL+10
47	Baji Bhul	Doti	Lamikhal	6	Bali Talara		Above FSL+100
48	Jay Bhul	Doti	Lamikhal	6	Bali Talara		Above FSL+100
49	Ajuba Bhul	Doti	Lamikhal	6	Bali Talara	2-6J-13,17,50	Below FSL+10
50	Kashi Bhul	Doti	Lamikhal	6	Bali Talara	2-6J-12a	Below FSL+10
51	Nari Bhul	Doti	Lamikhal	6	Bali Talara	2-6J-11	Below FSL+10
52	Jogi Bhul	Doti	Lamikhal	6	Bali Talara	2-6J-7	Below FSL+10
53	Gopal Sarki	Doti	Lamikhal	6	Bali Talara	2-6J-16c	Below FSL+10
54	Raju Bhul	Doti	Lamikhal	6	Bali Talar	2-6J-15	Below FSL+10

#	Name	Address				Household Number	Location
		District	VDC	Ward	Village		
55	Saluwa Lohar	Doti	Lamikhal	5	Gankhet	3-9C-21	Below FSL+10
56	Kale Bhul	Doti	Lamikhal	5	Gankhet	3-9C-14c	Below FSL+10
57	Bir Man Bhul	Doti	Lamikhal	5	Gankhet	3-9C-19a	Below FSL+10
58	Gore Bhul	Doti	Lamikhal	5	Gankhet		Above FSL+100
59	Yamata Devi Koli	Doti	Lamikhal	5	Gankhet		Above FSL+100
60	Dharma Lohar	Doti	Lamikhal	5	Gankhet (Aati)		Above FSL+100
61	Nari Oar	Doti	Lamikhal	6	Beli Talara	2-6J-5	Below FSL+10
62	Ganesh Lohar	Doti	Lamikhal			3-9D-10	Below FSL+10
63	Kamali Lohar	Doti	Lamikhal	6	Bali Talara	2-6J-22c	Below FSL+10
64	Laxmi Bhul	Doti	Lamikhal	5	Kola		Above FSL+100
65	Saluwa Bhul	Doti	Lamikhal		Adarya	3-9B-4	Below FSL+10
66	Ganesh Bk	Doti	Lamikhal	5	Gankhet		Above FSL+100
67	Ragi Mahara	Doti	Lamikhal	6	Bali Talara	2-6J-24	Below FSL+10
68	Man bdr. Sarki	Doti	Lamikhal	6	Bali Talara	2-6J-20a	Below FSL+10
69	Dule Lohar	Doti	Mahadev sthan		Gautada	3-9E-13, 3-9E-14,	Below FSL+10
70	Pari Sharki	Doti	Mahadev sthan		Gautada		Above FSL+100
71	Bhumi Lohar	Doti	Mahadev sthan	9	Jhuda		Above FSL+100
72	Jay Bdr Bhul	Doti	Mahadev sthan	9	Jhuda	3-10F-11	Above FSL+100
73	Lal Lohar	Doti	Mahadev sthan	9	Jhuda	3-9F-4,6	Between FSL+10 and FSL+100
74	Padam Dholi	Doti	Mahadev sthan	9	Jhuda	3-10F-6	Above FSL+100
75	Khinaure Damai	Baitadi	Shivaling	8	Nawaghar	5-2E-2	Below FSL+10
76	Jahanta Oar	Baitadi	Shivaling	9	Bori	6-6B-6	Below FSL+10
77	Kare Dholi	Baitadi	Shivaling	8	Nawaghar	5-2E-3	Between FSL+10 and FSL+100
78	Thirkhe Bk	Baitadi	Shivaling	8	Nawaghar	5-2F-9a	Between FSL+10 and FSL+100
79	Ram Damai	Baitadi	Shivaling	8	Nawaghar	5-3F-1	Below FSL+10
80	Lal Damai	Baitadi	Shivaling	8	Nawaghar	5-3F-3	Below FSL+10
81	Ganesh Damai	Baitadi	Shivaling	9		5-7G-11	Below FSL+10
82	Gopal BK	Baitadi	Shivaling	9	Sangda		Above FSL+100
83	Junkiri Damai	Doti	Lamikhal	7	Talara		Above FSL+100
84	Basu Lohar	Doti	Lamikhal	7	Talara		Above FSL+100
85	Pashupati Oath	Doti	Lamikhal	7	Bali	2-6J-40	Below FSL+10
86	Naule Lohar	Doti	Lamikhal	7	Bali	2-6J-43	Below FSL+10
87	Jay Bdr Lohar	Doti	Lamikhal	7	Talara		Above FSL+100
88	Lal Bdr Lohar	Doti	Lamikhal	7	Talara		Above FSL+100
89	Ram Bdr Lohar	Doti	Lamikhal		Talara	2-6J-22b	Below FSL+10
90	Rai Singh Bhul	Doti	Lamikhal	6	Gankhet	3-9C-14a	Between FSL+10 and FSL+100
91	Padam Bud	Doti	Lamikhal	6	Talara		Above FSL+100
92	Tika Bud	Doti	Lamikhal	6	Talara		Above FSL+100
93	Naute Damai	Doti	Lamikhal	7	Talara		Above FSL+100
94	Ramesh Bdr Oath	Doti	Lamikhal	7	Pallo Pali		Above FSL+100
95	Jay Bdr Oath	Doti	Lamikhal	7	Pallo Pali	2-6J-46c	Below FSL+10
96	Baji Sunar	Doti	Lamikhal	6	Bali		Above FSL+100
97	Lali Bhul	Doti	Lamikhal	6	Bali		Below FSL+10
98	Govinda Sunar	Doti	Lamikhal	6	Bali		Above FSL+100
99	Bhim Bdr Oath	Doti	Lamikhal	7	Pallo Palo		Above FSL+100
100	Shyam Oath	Doti	Lamikhal	6	Roti		Above FSL+100
101	Bhim bdr. Oath	Doti	Lamikhal	6	Bali	2-6J-46b	Below FSL+10
102	Bhagi Bud	Doti	Lamikhal	6	Talara		Above FSL+100
103	Gaura Bud	Doti	Lamikhal	6	Talara		Above FSL+100
104	Jay Bud	Doti	Lamikhal	6	Talara		Above FSL+100
105	Ragba Sarki	Doti	Lamikhal	7	Bali		Above FSL+100

#	Name	Address				Household Number	Location
		District	VDC	Ward	Village		
106	Dhani Sarki	Doti	Lamikhal	6	Bali		Above FSL+100
107	Krishna Bdr Damai	Doti	Lamikhal	7	Talara		Above FSL+100
108	Gando Sarki	Doti	Lamikhal	7	Talara	2-6J-34	Below FSL+10
109	Dhoj Bdr Kami	Doti	Lamikhal	7	Talara		Above FSL+100
110	Bishwo Bud	Doti	Lamikhal	7	Talara	2-6J-42	Below FSL+10
111	Ramesh Bdr Lohar	Doti	Lamikhal	7	Talara		Above FSL+100
112	Bir Bdr Aaugi	Doti	Lamikhal	7	Talara	2-6J-47	Below FSL+10
113	Janga Bdr Aaugi	Doti	Lamikhal	7	Talara	2-6J-48	Below FSL+10
114	Biruwa Bdr Lohar	Doti	Lamikhal	7	Talara	2-6J-31c	Below FSL+10
115	Dil Bdr Lohar	Doti	Lamikhal	7	Talara		Above FSL+100
116	Pune Lohar	Doti	Lamikhal	6	Talara	2-6J-31a	Below FSL+10
117	Bhim Bdr Oath	Doti	Lamikhal	6	Talara	2-6J-46b	Below FSL+10
118	Rog Bdr Oath	Bajhang	Dangaji	2	Motipur	8-6B-14	Above FSL+100
119	Gorkha Bahadur Nepali	Bajhang	Dangaji	2	Motipur		Between FSL+10 and FSL+100
120	Dabal Sarki	Bajhang	Dangaji	7			Above FSL+100
121	Laxmi Kami	Bajhang	Dangaji	7	Simtola	8-5B-8	Above FSL+100
122	Manbire Oath	Bajhang	Dangaji	2	Motipur	8-6B-15	Above FSL+100
123	Bhim Bdr Tamata	Bajhang	Dangaji	5	Morayal		Above FSL+100
124	Dhan Bdr Sunar	Bajhang	Dangaji	7	Simtola	8-5B-16	Above FSL+100
125	Gorkha Bdr Damai	Bajhang	Dangaji	5	Regam	8-5A-5	Above FSL+100
126	Hariman Sunar	Bajhang	Dangaji	7	Simtola	8-5B-5B	Above FSL+100
127	Arjun Lohar	Dadeldhura	Belapur	4	Sirod		Above FSL+100
128	Ram Singh Damai	Dadeldhura	Belapur	4	Sirod		Above FSL+100
129	Dan Bahadur Damai	Dadeldhura	Belapur	4	Sirod		Above FSL+100
130	Bir Bhan Lohar	Dadeldhura	Belapur	4	Sirod		Above FSL+100
131	Jaybhan Tomata	Dadeldhura	Belapur	4	Sirod		Above FSL+100
132	Tej Bahadur Damai	Dadeldhura	Belapur	4	Sirod		Above FSL+100
133	Bahadure Damai	Dadeldhura	Belapur	4	Sirod		Above FSL+100
134	Bhawani Lohar	Dadeldhura	Belapur	4	Chhilla	2-4F-5	Below FSL+10
135	Hira Damai	Dadeldhura	Belapur	4	Sirod		Above FSL+100
136	Thagi Lohar	Dadeldhura	Belapur	4	Sirod		Above FSL+100
137	Karna Bahadur Damai	Dadeldhura	Belapur	4	Sirod		Above FSL+100
138	Jogi Damai	Dadeldhura	Belapur	4	Sirod		Above FSL+100
139	Lalwa Lohar	Baitadi	Dhungad	7	Dhungad		Above FSL+100
140	Sopi Damai	Baitadi	Dhungad	7	Dhungad		Above FSL+100
141	Amrita Devi Lohar	Baitadi	Dhungad	7	Dhungad	2-5/6H-8	Above FSL+100
142	Chandra Bdr Lohar	Baitadi	Dhungad	7	Dhungad	2-5/6H-19	Above FSL+100
143	Belmati Damai	Baitadi	Dhungad	7	Dhungad		Above FSL+100
144	Rani Mejar	Baitadi	Dhungad	9	Lamabagar		Above FSL+100
145	Ranuwa Lohar	Baitadi	Dhungad	7	Dhungad		Above FSL+100
146	Kallu Sarki	Doti	Banlek	8	Bade Khola		Bandungresain camp
147	Dev Bahadur Sarki	Doti	Banlek	9	Badekhola		Bandungresain camp
148	Lasi Bhul	Doti	Banlek		Ghodlas		Bandungresain camp
149	Chandre Sarki	Doti	Banlek		Bade Khola		Bandungresain camp
150	Lal Bhul	Doti	Banlek	9	Ghodlas		Bandungresain camp
151	Thole Sarki	Doti	Banlek	8			Bandungresain camp
152	Bir Bahadur Bhul	Doti	Banlek	9			Bandungresain camp
153	Gaure Bhul	Doti	Banlek	9	Ghodlas		Bandungresain camp
154	Man Bahadur Sarki	Doti	Banlek	8	Badi Khola		Bandungresain camp
155	Tilak Bahadur Bhul	Doti	Banlek	9	Badekhola		Bandungresain camp
156	Baj Sarki	Doti	Banlek	8	Ghodlas		Bandungresain camp
157	Gore Bhul	Doti	Banlek	9	Ghodlas		Bandungresain camp
158	Tika Dhunde	Doti	Banlek	8	Ghodlas		Bandungresain camp
159	Ujle Auji	Doti	Banlek	9	Bade Khola		Bandungresain camp
160	Datte Bhul	Doti	Banlek	9	Ghodlas		Bandungresain camp
161	Bhoj Bahadur Koli	Doti	Banlek	8	Bade Khola		Bandungresain camp
162	Sher Bahadur Sarki	Doti	Banlek	8	Bade Khola		Bandungresain camp
163	Bhim Bahadur Nepali	Doti	Barbatta	7	Simhar		Power Station
164	Pari Damai	Doti	Barbatta	7	Simhar		Power Station
165	Jung Bahadur Nepali	Doti	Barbatta	7	Simhar		Power Station

#	Name	Address				Household Number	Location
		District	VDC	Ward	Village		
166	Karna Bahadur Nepali	Doti	Barbatta	7	Simhar		Power Station
167	Thagi Damai	Doti	Barbatta	7	Simhar		Power Station
168	Nar Bahadur Damai	Doti	Barbatta	7	Simhar		Power Station
169	Tule Nepali	Doti	Barbatta	7	Simhar		Power Station
170	Sere Bahadur Nepali	Doti	Barbatta	7	Simhar		Power Station
171	Bhumi Nepali	Doti	Barbatta	7	Simhar		Power Station
172	Kaluram Bhul	Doti	Barlek	8	Badi Khola		Bandungresain camp
173	Bahadure Bhul	Doti	Lamikhal	6	Bali	2-6J-10	Above FSL+100
174	Kancha Sarki	Doti	Lamikhal	6	Talara	2-6J-16b	Below FSL+10
175	Jaypati Bhul	Doti	Lamikhal	6	Talara	2-6J-6	Below FSL+10
176	Putali Sarki	Doti	Lamikhal	6	Talara	2-6J-19	Below FSL+10
177	Shiva Tamata	Doti	Lamikhal	6	Talara	2-6J-23	Below FSL+10
178	Bhumi Bhul	Doti	Lamikhal	6	Talara	2-6J-14b	Below FSL+10
179	Dharma Sarki	Doti	Lamikhal	6	Talara	2-6J-25	Below FSL+10
180	Kari Lohar	Doti	Lamikhal	6	Talara	2-6J-22	Below FSL+10
181	Jay Lohar	Doti	Lamikhal	6	Talara		Above FSL+100
182	Gore Lohar	Doti	Lamikhal	6	Talara	2-6J-4b	Below FSL+10
183	Bharat Dholi	Doti	Lamikhal	6	Bhagtadi	2-7J-13,14	Below FSL+10
184	Man Bahadur SARKI	Doti	Lamikhal	6	Bali	2-6J-20a	Below FSL+10
185	Man Bahadur Lohar	Doti	Lamikhal	6	Bali	2-6J-3a	Below FSL+10
186	Ram Bahadur Bhul	Doti	Lamikhal	6	Bali	2-6J-12b	Below FSL+10
187	Kari Bud	Doti	Lamikhal	6	Bali		Above FSL+100
188	Baji Dunde	Doti	Lamikhal	6	Bali	2-6J-28	Below FSL+10
189	Nari Bhul	Doti	Lamikhal			2-6J-11	Below FSL+10
190	Padam Lohar	Doti	Lamikhal	5	Gadhikhet	3-9C-15a	Below FSL+10
191	Kali Bhul	Doti	Lamikhal	5	Adhere	3-9B-5	Below FSL+10
192	Bahadur Lohar	Baitadi	Thalakada	7	Lekam		Above FSL+100
193	Kamali Devi Dholi	Baitadi	Thalakada	8	Lekam Basti		Above FSL+100
194	Lalmaji Lohar	Baitadi	Thalakada	8	Lekam Basti		Above FSL+100
195	Pare Lohar	Baitadi	Thalakada	8	Lekam Basti		Above FSL+100
196	Lale Lohar	Baitadi	Thalakada	8	Lekam Basti		Above FSL+100
197	Kale Lohar	Baitadi	Thalakada	8	Lekam Basti		Above FSL+100
198	Ganesh Sunar	Baitadi	Thalakada	7	Lekam		Above FSL+100
199	Kate Lohar	Baitadi	Dhungad	7	Dhungad		Above FSL+100
200	Mane Bk	Baitadi	Dhungad	7	Dhungad		Above FSL+100
201	Tuli Lohar	Baitadi	Dhungad	7	Dhungad	2-5/6H-50	Above FSL+100
202	Hira Lohar	Baitadi	Dhungad	7	Dhungad	2-5/6H-21	Above FSL+100
203	Sopi Chunara	Baitadi	Dhungad	7	Dhungad	2-5/6H-18a	Above FSL+100
204	Khinduri Damai	Baitadi	Dhungad	7	Dhungad		Above FSL+100
205	Laxman Damai	Baitadi	Dhungad	7	Dhungad		Above FSL+100
206	Padam Lohar	Baitadi	Dhungad	7	Dhungad		Above FSL+100
207	Nari Lohar	Baitadi	Dhungad	7	Dhungad	2-5/6H-22a	Above FSL+100
208	Devi Lohar	Baitadi	Dhungad	7	Dhungad		Above FSL+100
209	Sopi Chunara	Baitadi	Dhungad	7	Dhungad	2-5/6H-18a	Above FSL+100
210	Gore Raikal	Baitadi	Dhungad	7	Dhungad		Above FSL+100
211	Ratna Bahadur Sunar	Baitadi	Dhungad	7	Dhungad	5-6H-17	Above FSL+100
212	Gothe Bahadur Lohar	Baitadi	Dhungad	7	Dhungad		Above FSL+100
213	Jayphan Bahadur Lohar	Baitadi	Dhungad	7	Dhungad	2-5/6H-51	Above FSL+100
214	Sher Bahadur Lohar	Baitadi	Dhungad	7	Dhungad		Above FSL+100
215	Jit Bahadur Lohar	Baitadi	Dhungad	7	Dhungad		Above FSL+100
216	Lale Lohar	Baitadi	Dhungad	7	Dhungad		Above FSL+100
217	Ram Bahadur Chunara	Baitadi	Dhungad	7	Dhungad		Above FSL+100
218	Hira Chunara	Baitadi	Dhungad	6	Mainthala		Above FSL+100
219	Pudke Lohar	Baitadi	Dhungad				Above FSL+100
220	Muna Devi Lohar	Baitadi	Dhungad	6	Dhungad		Above FSL+100

#	Name	Address				Household Number	Location
		District	VDC	Ward	Village		
221	Niuti Lohar	Baitadi	Dhungad	6	Gathipith		Above FSL+100
222	Dev Bahadur Chunara	Baitadi	Dhungad	6	Mainthala		Above FSL+100
223	Jay Dev Lohar	Baitadi	Dhungad	6	Gathipidh		Above FSL+100
224	Dilwa Bahadur Lohar	Baitadi	Dhungad		Gathipith		Above FSL+100
225	Chandrabati Lohar	Baitadi	Dhungad	6	Gathipith		Above FSL+100
226	Gore Daunde	Bajhang	Dangaji	5	Thing	8-6B-7	Above FSL+100
227	Afi Tomata	Bajhang	Dangaji	7	Betalla		Above FSL+100
228	Kalidevi Kami	Bajhang	Dangaji	7	Simtala	8-5B-17	Above FSL+100
229	Lal Bire Damai	Baitadi	Dhungad	7	Dhungad		Above FSL+100
230	Puni Lohar	Baitadi	Dhungad	7	Dhungad	2-5/6H-22c	Above FSL+100
231	Hatte Lohar	Baitadi	Dhungad	7	Dhungad	2-5/6H-24	Above FSL+100
232	Jhuse Bahadur Lohar	Baitadi	Dhungad	7	Dhungad		Above FSL+100
233	Junkiri Devi Lohar	Baitadi	Dhungad	7	Dhungad	2-5/6H-7b	Above FSL+100
234	Udhav Bahadur Lohar	Baitadi	Dhungad	7	Dhungad		Above FSL+100
235	Pratap Bahadur Bk	Baitadi	Dhungad	7	Dhungad		Above FSL+100
236	Belmati Devi Nagari	Baitadi	Dhungad	7	Dhungad		Below FSL+10
237	Jasu Devi Nagari	Baitadi	Dhungad	7	Dhungad		Above FSL+100
238	Kamali Lohar	Baitadi	Dhungad	7	Dhungad	2-5/6H-11	Above FSL+100
239	Jay Bhan Lohar	Baitadi	Dhungad	7	Dhungad	2-5/6H-51	Above FSL+100
240	Khita Lohar	Baitadi	Dhungad	7	Dhungad		Above FSL+100
241	Gopal Chunara	Baitadi	Dhungad	6	Mainathal		Above FSL+100
242	Ganga Ram Chunara	Baitadi	Dhungad	6	Mainathal		Above FSL+100
243	Jalu Lohar	Baitadi	Dhungad	6	Gathipith		Above FSL+100
244	Lachi Lohar	Baitadi	Dhungad	6	Gathipith		Above FSL+100
245	Kide Lohar	Baitadi	Dhungad	6	Gathipith		Above FSL+100
246	Tek Badi	Baitadi	Dhungad	7	Dhungad	2-5/6H-54b	Above FSL+100
247	Gokul Badi	Baitadi	Dhungad	7	Dhungad	2-5/6H-47	Above FSL+100
248	Ratan Sunar	Baitadi	Dhungad	7	Dhungad	5-6H-17	Above FSL+100
249	Nari Lohar	Baitadi	Dhungad	7	Dhungad	2-5/6H-6	Above FSL+100
250	Kide Lohar	Baitadi	Dhungad	7	Dhungad	2-5/6H-22b	Above FSL+100
251	Gorkha Lohar	Bajhang	Royal	4	Jubba		Above FSL+100
252	Bharat Bdr Kami	Bajhang	Royal	4	Jubba		Above FSL+100
253	Pyaru Lohar	Bajhang	Royal	4	Jubba		Above FSL+100
254	Ganesh Damai	Bajhang	Royal	4	Jubba		Above FSL+100
255	Gothe Lohar	Bajhang	Royal	3	Deura	7-13G-4c	Below FSL+10
256	Jeetmal Okhada	Bajhang	Royal	4	Jubba		Above FSL+100
257	Ganu Okhada	Bajhang	Royal	4	Jubba		Above FSL+100
258	Thyana Okhada	Bajhang	Royal	4	Jubba		Above FSL+100
259	Jaiman Okhada	Bajhang	Royal	4	Jubba		Above FSL+100
260	Ujala Okhada	Bajhang	Royal	4	Jubba		Above FSL+100
261	Jayram Lohar	Bajhang	Royal	3	Deura	7-13G-28,48b	Below FSL+10
262	Mannu Parki	Bajhang	Royal	3	Deura	8-14A-36b,45	Between FSL+10 and FSL+100
263	Bire Sarki	Bajhang	Royal	3	Deura	8-3A-26	Above FSL+100
264	Laxmi Kimadi	Bajhang	Dangaji	3	Banada		Above FSL+100
265	Patuwa Kimadi	Bajhang	Dangaji	3	banada		Above FSL+100
266	Jashi Sunar	Bajhang	Dangaji	7	Segeyandi	8-5B-10	Above FSL+100
267	Deva Sunar	Bajhang	Dangaji	7	Sageyadi	8-5B-17	Above FSL+100
268	Pratap Sunar	Bajhang	Dangaji	7	Betalla	8-6C-1	Above FSL+100
269	Lal Sarki	Doti	Mahadev sthan	9	Gautada	3-9E-11,12	Below FSL+10
270	Bhanu Bhul	Doti	Lamikhal	5	Adarya		Above FSL+100
271	Min Bdr Nepali	Doti	Lamikhal		Jakhada		Above FSL+100
272	Ratna Bahadur Sunar	Baitadi	Dhungad	7	Dhungad	5-6H-17	Above FSL+100
273	Bhim Okhada	Bajhang	Royal	4	Juwa		Above FSL+100
274	Kote Bhul	Doti	Lamikhal	5	Kola		Above FSL+100

3. FEMALE-HEADED HOUSEHOLDS INTERVIEWED

#	Name	Address				Household ID	Location
		District	VDC	Ward	Village		
1	Mandari Devi Nepali (Damai)	Doti	Lamikhhal	5			Above FSL+100
2	Yamata Devi Koli	Doti	Lamikhhal	5	Gankhet		Above FSL+100
3	Dhauri Oar	Doti	Lamikhhal	6	Beli Talara	2-6J-5	Below FSL+10
4	Kamali Lohar	Doti	Lamikhhal	6	Bali Talara	2-6J-22c	Below FSL+10
5	Chandra Devi Bhul	Doti	Lamikhhal		Adarya	3-9B-4	Below FSL+10
6	Junkiri Damai	Doti	Lamikhhal	7	Talara		Above FSL+100
7	Basu Lohar	Doti	Lamikhhal	7	Talara		Above FSL+100
8	Gaura Bud	Doti	Lamikhhal	6	Talara		Above FSL+100
9	Kithi Lohar	Baitadi	Dhungad	7	Dhungad		Above FSL+100
10	Amrita Devi Lohar	Baitadi	Dhungad	7	Dhungad	2-5/6H-8	Above FSL+100
11	Belmati Damai	Baitadi	Dhungad	7	Dhungad		Above FSL+100
12	Putali Sarki	Doti	Lamikhhal	6	Talara	2-6J-19	Below FSL+10
13	Hira Devi Bhul	Doti	Lamikhhal	6	Talara	2-6J-14b	Below FSL+10
14	Kali Bhul	Doti	Lamikhhal			2-6J-11	Below FSL+10
15	Kali Bhul	Doti	Lamikhhal	5	Adhere	3-9C-14c	Below FSL+10
16	Kamali Devi Dholi	Baitadi	Thalakanda	8	Lekam Basti		Above FSL+100
17	Khinduri Damai	Baitadi	Dhungad	7	Dhungad		Above FSL+100
18	Muna Devi Lohar	Baitadi	Dhungad	6	Dhungad		Above FSL+100
19	Chandrabati Lohar	Baitadi	Dhungad	6	Gathipith		Above FSL+100
20	Kalidevi Kami	Bajhang	Dangaji	7	Simtala	8-5B-17	Above FSL+100
21	Bisna Damai	Baitadi	Dhungad	7	Dhungad		Above FSL+100
22	Puni Devi Lohar	Baitadi	Dhungad	7	Dhungad	2-5/6H-22c	Above FSL+100
23	Junkiri Devi Lohar	Baitadi	Dhungad	7	Dhungad	2-5/6H-7b	Above FSL+100
24	Belmati Devi Nagari	Baitadi	Dhungad	7	Dhungad		Below FSL+10
25	Jasu Devi Nagari	Baitadi	Dhungad	7	Dhungad		Above FSL+100
26	Kamali Lohar	Baitadi	Dhungad	7	Dhungad		Above FSL+100
27	Jalu Lohar	Baitadi	Dhungad	6	Gathipith		Above FSL+100
28	Gorkha Lohar	Bajhang	Royal	4	Jubba		Above FSL+100
29	Padma Devi Saud	Dadeldhura	Belapur	4	Kokadi	2-4B-4b	Below FSL+10
30	Raimati Devi Bohara	Doti	Girichauka	1	Babina	5-10H-21	Below FSL+10
31	Jagatra Devi Bohara	Doti	Girichauka	1	Pang	5-10H-18b, 16	Below FSL+10
32	Goma Thapa	Doti	Lamikhhal	1	Maneda	3-9D-5b,6b	Between FSL+10 and FSL+100
33	Janaki Devi Singh	Doti	Lamikhhal	5	Taligaun	2-7K-9c	Below FSL+10
34	Gyana Devi Saud	Baitadi	Thalakada	7	Lekam	5-9E-17b	Below FSL+10
35	Chana Devi Saud	Baitadi	Thalakada	7	Lekam	5-9E-12	Below FSL+10
36	Jamuna Devi Saud	Baitadi	Thalakada	6	Lekam	5-10D-23	Below FSL+10

4. SOCIO-ECONOMIC DETAILS OF FEMALE-HEADED HOUSEHOLDS

Table 1: Annual Average Income of Female Headed Households

S.N.	VDC	Number of HHs	Annual Average Income (in NRs) from Different Sources				
			Agriculture	Livestock	Off -Farm	Total	Grand Total
1	Dhungad	13	9,776.90	5,181.50	33,069.20	48,027.70	624,360.00
2	Thalakanda	4	25,295.00	16,635.00	24,375.00	66,305.00	265,220.00
3	Dangaji	1	0.00	0.00	48,500.00	48,500.00	48,500.00
4	Rayal	1	20,600.00	6,000.00	36,000.00	62,600.00	62,600.00
5	Belapur	1	28,450.00	10,800.00	35,000.00	74,250.00	74,250.00
6	Girichauka	2	25,837.50	22,050.00	56,000.00	103,887.50	207,775.00
7	Lamikhal	14	26,450.00	5,365.70	42,321.40	74,137.10	1,037,920.00
Total		36	-	-	-	-	2,320,625.00
Average			-	-	-	-	64,461.80
Percent			29	14	58	100	-

Source: Field Survey 2006.

Table 2: Off-Farm Income Sources of Female Headed Households

S.N.	VDC	Off - Farm Activities						
		Services	Daily Wages	Business	Cottage Industry	Fishing	Other	Total
1	Dhungad	20,230.80	56,53.80	961.50	2,769.20	2,300.00	1,153.80	33,069.20
2	Thalakanda	12,500.00	75,00.00	0.00	0.00	2,125.00	2,250.00	24,375.00
3	Dangaji	0.00	30,000.00	0.00	0.00	3,500.00	15,000.00	48,500.00
4	Rayal	36,000.00	0.00	0.00	0.00	0.00	0.00	36,000.00
5	Belapur	35,000.00	0.00	0.00	0.00	0.00	0.00	35,000.00
6	Girichauka	20,000.00	32,500.00	0.00	0.00	3,500.00	0.00	56,000.00
7	Lamikhal	35,357.10	1,107.10	4,285.70	0.00	1,285.70	285.70	42,321.40
Average		159,087.90	76,761.00	5,247.30	2,769.20	12,710.70	18,689.60	275,265.70
Percent		57.8	27.9	1.9	1.0	4.6	6.8	100.0

Source: Field Survey 2006.

Table 3: Average Annual Expenses of Female-Headed Households

S.N.	VDC	Annual Average Expenses (in Rs.) in Different Items								
		Food Item	(%)	Tea & Spices	(%)	Light & Fuel	(%)	Others	(%)	Total
1	Dhungad	28,728	9.64	3,185	14.83	1,779	12.82	9,692	7.76	43,385
2	Thalakanda	42,343	14.21	2,638	12.28	1,450	10.45	14,375	11.51	60,806
3	Dangaji	37,680	12.65	1,152	5.36	2,640	19.03	6,000	4.8	47,472
4	Rayal	36,300	12.18	1,000	4.66	1,800	12.97	33,000	26.41	72,100
5	Belapur	55,800	18.73	5,520	25.70	3,000	21.62	10,000	8	74,320
6	Girichauka	61,470	20.63	5,610	26.12	1,440	10.38	27,000	21.61	95,520
7	Lamikhal	35,654	11.97	2,372	11.04	1,766	12.73	24,871	19.91	64,664
Total		297,975	100	21,477	100	13,875	100	124,939	100	458,266
Percent		65	-	5	-	3	-	27	-	100

Source: Field Survey 2006.

Table 4: Food Sufficiency Status of Sampled Female-Headed Households

S.N.	VDCs	Food Sufficiency Status								
		<3 months		3 - 6 month		6-9 month		Sufficient		Total
		HH	(%)	HH	(%)	HH	(%)	HH	(%)	HH
1	Dhungad	3	75	2	40	1	20	7	31.82	13
2	Thalakanda	0	0	0	0	0	0	4	18.18	4
3	Dangaji	0	0	0	0	0	0	1	4.55	1
4	Rayal	0	0	0	0	1	20	0	0	1
5	Belapur	0	0	0	0	0	0	1	4.55	1
6	Girichauka	0	0	1	20	0	0	1	4.55	2
7	Lamikhal	1	25	2	40	3	60	8	36.36	14
Total		4	100	5	100	5	100	22	100	36
Percent		11.1		13.9		13.9		61.1		100.0

Source: Field Survey 2006.

5. HOUSEHOLD SURVEY QUESTIONNAIRE (ABRIDGED VERSION)

**QUESTIONNAIRE FOR THE PREPARATION OF VULNERABLE COMMUNITY DEVELOPMENT PLAN
 (VCDP) OF WEST SETI HYDROELECTRIC PROJECT
 WSH/SHAH CONSULT INTERNATIONAL
 Version 1 (1. 11. 2006)**

Interviewer's Name ----- Household No.:----- Date of First Interview ----- Second Interview:-----
Further work is currently being done on the proposed West Seti Hydroelectric Project. The aim of this study is to update the socio-economic information that was collected in 1997/98 as part of the environment and social study for the project. A sample of households is being interviewed for this purpose. Your participation is valuable to us. Please answer the question as accurately as possible. Your response will help us assess the socio-economic situation in the area but will otherwise remain confidential.

1 Background Information

- 1.1 District
- 1.2 VDC
- 1.3 Ward no
- 1.4 Village
- 1.5a Household head's name (as shown on EIA list)
- 1.5b Name of new household head
Reason for change in headship
- 1.5c Is the household head physically or mentally disabled?
- 1.6 Name of the respondent
- 1.7 Caste
- 1.8 Ethnicity
- 1.9 Mother tongue
- 1.10 Religion

2 Personal Information

- 2.1 How long have you been living in this village?
If a migrant, number of years in the village
- 2.2 Does the family live here all year long?
If not, how long: ____ months of the year
Where do you live for the remaining months? (District, VDC, Village)
- 2.3 Please provide the following information for each of your household members (Start from household head)

#	Name	Relation with HH Head	Sex	Marital Status	Age	Resident Status	Education	Skill/ Training	Main Occupation	Secondary Occupation	
										1	2
1											
2											

2.4 From which village is:
 Wife 1 (District, Village)
 Wife 2 (District, Village)

2.5 If your family members are getting education outside the valley (Project Areas 1 and 2), please give the following details:

Name		Education Code	Place	
Code	Full Name		District	Village/City

2.6 Do any of your family members work on a salary/wage (including self-employed) basis?
 If yes, please provide the following information:

Code from Q23	Sex		Source of Income*	Average monthly Income(In NRs)	Place of Work **	Type of Income +
	M	F				
	1	2				
	1	2				

2.7 In which area are most of your relatives and friends living?

a. Inside the valley (Area 1)	b. Outside the valley (Area 2)	c. Other
Name _____	Name _____	Name _____

2.8 Decision making in the household:

Generally who makes the decisions on the following household activities?

#	Activities	Person Code		
1	Agricultural works			
2	Education			
3	Household Shopping			
4	Child care			
5	Community development Work			
6	Income-generating Activities			
7	Health and Sanitation			
8	Give and take of money, land, etc			
9	Communities activities such as feast and festivals			

2.9 Who in the household normally undertakes the following activities?

#	Activity	Men Only	Women Only	Both Men and Women
1	Ploughing			
2	Weeding			
3	Harvesting			
4	Collection of fuel wood			
5	Collection of water			
6	Preparation of food			
7	Building/maintenance of homestead structures			
8	Other			

3 Livestock

3.1 Does the household keep livestock?

If yes, indicate the total number of animals by type:

SN	Type of animal	# Owned	Milk/Egg production (period – last 12 months?)			Animals sold (period – last 12 months?)			Total income from animal husbandry
			Amount (number of eggs or litres of milk) sold?	Price per unit (NRs)	Total amount sold (NRs)	Numbe rs sold	Price Per unit (NRs)	Total Amount Sold (NRs)	
1	Cattle								
a	Cow								
b	Cow giving milk								
c	Bull								
2	Buffalo								
a	Buffalo								
b	Buffalo giving milk								
c	Buffalo male								
3	Sheep /Goats								
4	Pigs								
5	Hens/Ducks								
6	Other (Specify)								

3.2 Where do animals graze?

Area	Location		If other areas, distance (in hours)	How many months of year
	In/ around Village	Other areas		
1. Private land				
2. Common grazing land				
3. Forest land				

3.3 Where do you collect fodder (private land, common grazing area, forest area)

4 Landholding and Agriculture

4.1 Do any members of this household own land within the project area (FSL + 100 meter)?

If yes, what is the household's total landholding?

Khet

Bari

Kharbari

Obtain the following information for each of the household's land parcels:

VDC	Ward No.	Kitta No.	Type of land *	Name of owner	Total area (Ropani)			Quality of land	Crops	Cultivated by		Project area
					R	A	P			House hold	Tenant	

4.2 Do any members of the household own land outside the project area?
 If yes, please provide the following information:

Person code	Relation with HH Head	Kitta no.	Type of land *	Area			Quality of land**	Crops	Location
				R	A	P			
									Dist.: VDC/Muni.:
									Dist.: VDC/Muni.:
									Dist.: VDC/Muni.:

4.3 Do any members of this household lease land from other persons?
 If yes, please provide the following information:

Person code	Kitta no.	Type of land*	Area (Ropani)			Quality of land	Crops	Cost of tenancy	Name of owner	Location
			R	A	P					
										Dist.: VDC:
										Dist.: VDC:
										Dist.: VDC:

4.4 Do any members of this household rent out land to other people?
 If yes please provide the following information:

Person code	Kitta no.	Type of land*	Area (Ropani)			Quality of land	Crops	Cost of tenancy	Name of tenant	Location
			R	A	P					
										Dist.: VDC:
										Dist.: VDC:
										Dist.: VDC:

4.5 Did you sell any of your land in the last 3 years?
 If yes, how much land have you sold? (area and rate)

4.6 What are the cereal crops and cash crops grown in your cultivated land last year?

Crops	Season		Area under Cultivation (Ropani)		Annual Production		Quantity Sold		Selling rate Rs/unit
	Summer	Winter	Khet	Bari	Unit	Quantity	Unit	Quantity	
Food Crops									
1. Paddy									
2. Maize									
3. Wheat									
4. Millet									
5. Pulse									
6. Buckwheat									
7. Others									
Cash Crops									
1. Potato									
2. Oilseeds									
3. sugarcane									
4. Others									
Vegetables									
1. Winter									
2. Summer									
Fruits									
1. Orange type									
2. Papaya type									
3. Other Specify									
Thatch Grass									
Straw/Hay									

4.7 Is your annual production sufficient to feed for your family for one year?
 If not, for how many months per year is it sufficient??

5 Tree Ownership

5.1.1 Do any members of this household own trees/shrubs within the project area (FSL + 100 meter)?
 If yes, please provide the information about tree, shrubs on your land (own or rented in)

Type	Name	Average		Total annual production		Sale		Rate Rs/ Unit
		Age	Number	Unit	Quantity	Unit	Quantity	
Fodder								
Other								

6 Business Cottage Industries

6.1 Do any members in the household own any business or cottage industry?
 If yes please provide the following details.

Type*	Kind	Average monthly	
		Total revenue	Cost of materials

7 Income and Expenditure

7.1 Income

Please provide the following information on your household's income over the past year:

SN	Particulars	Annual Income (NRs)	Remarks
1	Agricultural		
1.1	Food crops		Q. No. 4.6
1.2	Cash crops		Q. No. 4.6
1.3	Vegetable		Q. No. 4.6
1.4	Fruits		Q. No. 4.6
2.	Animal Husbandry		Q. No. 3.1
3.	Other Sources		
3.1	Service		Q.No. 2.6
3.2	Daily wage/pottering		Q.No. 2.6
3.3	Pension		Q.No. 2.6
3.4	Business		Q.No. 2.6
3.5	Cottage industry		Q.No. 2.6
3.6	House rent		
3.7	Income from land		
3.8	Fishing		
3.9	Remittance		
3.10	Others		
Total			

7.2 Expenses

Please provide the following information on your household's expenses over the past year:

SN	Particulars	Unit	Amount	Price NRs	Total Rupees
1	Rice				
2	Dhal				
3	Maize				
4	Vegetables				
5	Milk/curd				
6	Meat/fish				
7	Oil/Ghee				
8	Spices				
9	Salt				
10	Sugar				
11	Tea				
12	Firewood				
13	Electricity				
14	Kerosene				
15	Medicine last year				
16	Education last year				
17	Clothing last year				
18	Celebrations last year				
19	Others				
	Total				

7.3 Do you have any kind of outstanding loan?
 If yes, please provide the following information:

Type of loan	Amount in Rs.	Date of loan	Interest rate (Yearly)	Source of loan

8 Buildings

8.1 What is your occupancy status of the house you are living in (own, rental, provided free of charge by landlord/employer, provided free of charge by family/relative, squatting, other)?

8.2 Do you have own buildings in the project area?
 If no, who owns the buildings one this land?

Owners Name	Place of owner's residence		Project Area
	District	VDC	

If yes, please provide the following information

Use of building	Type of building				Total number	No of storey				No of Rooms				Year built
	1	2A	2B	3		1	2A	2B	3	1	2A	2B	3	
House														
Cattle shed														
Bee-house														
Other														

8.3 Apart from the above mentioned do you own other buildings outside the project area?
 If yes, please mention the type and location.

Use	Type	Location	
		District	VDC

9 Utilities and Public Health

9.1 Where do you collect fire wood?

Source of firewood	Area 1		Area 2	
	Distance (minutes)	Load	Distance (minutes)	Load
Government forest				
Community forest				
Private forest				
Private				

9.2 What sources of water does your household use?

Source	Purpose			Distance from House (min.)
	Drinking, Cooking	Bathing	Washing	
1. Tap water from mountains				
2. Well				
3. Pond				
4. Canal				
5. Spring water				
6. Spring collected water				
7. Ditch				
8. River				
9. Other (specify)				

9.3 Sufficiency of drinking water.

9.4 Who collects the drinking water (women, men, boh)?

9.5 Do you purify drinking water? If yes, how?

9.6 Where does your family dispose of garbage?

9.7 What toilet facility does the household have on site?

9.8 Are the health services sufficient in the VDC?

9.9 Who do you first visit for treatment of illnesses (generally) (doctor, health assistant, health post, vaidya, other)?

9.10 What are the sources of lighting in your house?

9.11 What are the sources of energy for cooking and heating?

10 River Use and Fishing

10.1.1 For what do you use the river (drinking, recreation, religious use, washing, irrigation, fishing, transportation, other)?

If fishing is one of the purposes please ask Question 10.2 to 10.4:

10.2 How long have you been fishing?

10.3 How much time do you devote to fishing?

10.4 Provide the following information on fish catching:

a) Fish collected weekly (Kg): _____

b) Consumed weekly (Kg): _____

c) Total sold weekly:

1. Fresh _____ kg Rate Rs _____

2. Dry _____ kg Rate Rs _____

11 Views on Project

11.1 Please rank the following in the order of trust:

Institutions	Rank
NGO	
Community leaders	
Teachers	
VDC	
DDC	
Central Government	
Foreigners	
Police	
Others	

11.2 What are your views on the proposed project (positive, negative, neutral, don't know/too early to say)?

11.3 Should the project proceed the principle on which WSH would want to base the resettlement of affected household is to assist them in finding suitable replacement agricultural land and to help them to re-establish themselves successfully on the new land. Would you be satisfied with this compensation proposal (yes, no)?

If no, please provide reasons.

11.4 Which of the following compensation options would be suitable to you?

- Land for land and house for house
- Land for land and cash for house
- Cash payment for all losses
- Other (specify)

11.5 If the project should proceed and you have to be resettled do you have a preferred area for resettlement? If yes, where is the area located?

Preference	Rank
Resettlement in the current district area	
Resettlement in the mountain/hill area of another district	
Resettlement to Kailali District (terai)	
Resettlement to Kanchanpur District (terai)	
Resettlement to other terai districts	
Other (specify)	

11.6 Please tell us whether you agree or disagree with the following statements about the project.

Q	Statement	A	D	DK
a	I support the project because it will lead to the development of the area.			
b	The project will have a negative effect on my standard of living.			
c	As long as fair compensation is paid for my affected assets, I will support the project.			
d	The project will provide opportunities for me to sell my crops/vegetables.			
e	The project will provide me the opportunity to start a small business.			
f	We'll be able to improve our livelihoods by earning money on construction jobs.			

6. CHECKLIST FOR WOMEN'S GROUP DISCUSSIONS

**Checklist for Focus Group Discussion with Women
 for the Update of Social Baseline Condition and VCDP Study
 of
 West Seti Hydroelectric Project**

1. Information about the location and number of participants of group discussion.

1.1 Location

District:..... VDC:

Municipality: Ward No:

Village/Tole: Date:

1.2 List of participants.

2. Discussion on educational status of women.

- Percentage of literate women in the VDC.
- Percentage of women in the VDC who have obtained a SLC or higher education.
- School attendance by girls of school-going age in the VDC; reasons for non-attendance.

3. Discussion on health facilities in the area.

- Existing health services in the VDC and area.
- Major illnesses/diseases among women in the VDC.
- Curing methods.
- Infant mortality rates; reasons.
- Vaccinations for children.
- Family planning practices.

3. Drinking water and energy.

- Drinking water sources.
- Water quality and sufficiency.
- Water collection methods and labour divisions.
- Energy sources; collection of firewood and division of labour.

5. Income generation.

S.No.	Sources of income	Percentage contribution of women
1	Agriculture and animal husbandry	
2	Service	
3	Daily wage labour	
4	Pension	
5	Business	
6	Cottage industry	
7	Social service	
8	Fishing	
9	Others	

- Women’s role in household activities.

Activities	Months	Days	Income
Agriculture			
Animal Rearing			
Fishing			
Weaving			
Selling Fruits and Vegetables			
Running Shop			
Others			

6. Development activities.

- Discuss women-focussed development activities implemented in the VDC.

S.No.	Name of Project	Implementation Organisation	Location and Status
1			
2			

- Discuss NGOs/CBOs working with for women of this area.

S.No.	Name of Organization	Major Working Areas	Number of Staff & Location
1			
2			
3			
4			

- Participation of women from the VDC in development programmes (type of project, number who participated, benefits, problems, etc.).
- Participation by women in training course (agriculture, livestock, water and sanitation, traditional birth attendants, etc.).

7. Women and decision-making.

- Discuss the system of private property (Pewa) for women in the area (land, jewellery, money, etc.). Is ‘traditional property’ giving to daughters after their marriage?
- How do women participate in decision-making on the following activities:
 - Loans;
 - Start new business/ profession;
 - Sending children to school;
 - Marriage of children;
 - Sales and purchase of land and animals.
- How are women’s views/decisions considered in the following agricultural activities?
 - Choice of seeds type;
 - Plantation time;
 - Harvesting time.

- Who manages the household's money for expenditure?
- Are women's views considered in politics and other related activities?
 - Choosing the party for voting
 - Attending any gatherings.
 - Participating in the women related gatherings
- What are the main duties of females in your family?
 - Livestock
 - Household duties
 - Wage labourer
 - Weaving
 - Agricultural works
 - Service
 - Business
 - Other

8. Discuss women's issues, concerns and recommendations about the project.

7. ENTITLEMENT MATRIX

A. HOUSEHOLD CLASSIFICATION

Affected households will be grouped into the following categories through a participatory assessment with the project's community consultation structure and the RSC:

1. Households located in project displacement areas (e.g. reservoir and power station site). These households will either (a) relocate to a project resettlement site or (b) self-relocate to an area of their choice. The former will entail relocation to project sites in the Terai (Kailali, Kanchanpur and Bardiya Districts) or to local sites established in the reservoir periphery or downstream area. Eligibility criteria for relocation to Terai sites will include (a) severity of impact on household livelihoods and (b) social considerations. Households whose livelihoods are severely affected by the loss of productive resources will be able to choose between relocation to a Terai resettlement site, a local resettlement site or self-relocation to an area of their own choice. Households who are only marginally affected (e.g. small percentage land loss) will generally be relocated locally but may qualify for the other relocation options because of social considerations.
2. Households located outside project displacement areas, consisting of households suffering permanent or temporary loss of private productive assets. The former will either remain *in situ* if their livelihoods are marginally affected, or qualify for voluntary resettlement if their livelihoods are severely affected or because of social considerations. Voluntary resettlement may entail relocation to a project resettlement site or self-relocation, depending on the household's socio-economic circumstances. Households whose private productive assets are temporarily occupied by the project will remain *in situ* and compensated for production losses according to a formal lease contract. A third group of households in this category consist of households who do not suffer any permanent loss of private assets but who may qualify for voluntary resettlement because of social considerations (e.g. vulnerable households from socially excluded caste groups whose livelihoods are based on socio-economic relationships with resettled households).

B. PRIVATE ASSETS

TYPE OF LOSS	UNIT OF ENTITLEMENT	DESCRIPTION OF ENTITLEMENTS	IMPLEMENTATION GUIDELINES
1. Land			
1.1 Permanent loss of private land (agricultural, residential, commercial)	<ul style="list-style-type: none"> • Titleholder 	1. Full replacement of all registered land, with the productivity of land (irrigated or rainfed) recognised in the amount of exchange land provided. Compensation will either be in the form of replacement land or cash, at replacement cost. 2. <i>Households relocating to project resettlement sites in the Terai:</i> <ol style="list-style-type: none"> a) In the determination of land exchange ratios, the household's total landholding, including the homestead/ residential site and other non-cultivation land, will be taken as cultivation land and classed into the appropriate land types (irrigated or rainfed). b) In addition to land exchange based on productivity, landowners will be provided with a further 20% of their landholdings as a direct project benefit. c) Since the homestead residential site will be included as cultivation land, each household will be allocated an additional 300m² (0.59 ropani) residential plot as a further project benefit. d) Each household will receive a land-based entitlement for the loss of access to Seti valley communal resources. Based on a 50-50 irrigation-rainfed productivity split, this entitlement will be 0.47ha (nearly 14 kattha or 9.237 ropani) of cultivation land. e) Landowning households whose land entitlement as determined in the above calculation is less than the subsistence land requirement in the Terai, will be allocated a 	<ol style="list-style-type: none"> a) WSH will undertake initiatives (e.g. appointment of suitably qualified NGOs to undertake social preparation programmes; consultation with district land revenue officials) to support the registering of land that is currently unregistered. b) The land and compensation entitlements of each household will be established through negotiation by District Coordinating Committees (DCCs) and coordinated by the Resettlement Steering Committee (RSC). Affected communities will be represented on both institutions. c) Cultivation land types are classed as irrigated cultivation (often termed 'paddy' on land titles) and rainfed cultivation (often termed maize), with each type divided into four classes. The recommended approach will be to simplify the eight land classes on land titles (to the benefit of affected communities) for the exchange calculations. Calculations will be based on two main types of cultivated land in the project area and Terai, namely irrigated and rainfed. d) Average paddy and wheat crop yields in the project area VDCs (obtained from District Agricultural Offices) for the 5 year period prior to the completion of the EIA were used to calculate the relative production value of "irrigated" and "rainfed" land in the Seti valley. Irrigated paddy yields are approximately 66% greater than rainfed paddy yields, while irrigated wheat yields are approximately 96% greater than rainfed wheat yields. These differences will be recognised in the land-for-land productivity exchange calculations.

TYPE OF LOSS	UNIT OF ENTITLEMENT	DESCRIPTION OF ENTITLEMENTS	IMPLEMENTATION GUIDELINES
		<p>subsistence landholding (amounting to 1.54 ha based on a 50-50 irrigation-rainfed productivity split).</p> <p>3. <i>Households relocating to local project resettlement sites or within existing local community:</i></p> <ul style="list-style-type: none"> a) Full replacement of the entire landholding or the portion of land acquired, as applicable, including the homestead site, with the productivity of land recognised in the amount of replacement land or compensation provided. b) An additional 20% of the entire landholding or the acquired portion, as applicable, as a direct project benefit. c) Since the homestead residential site is included as cultivation land, each household will be allocated a 300m² (0.59 ropani) residential plot as an additional project benefit. <p>4. <i>Households self-relocating to areas of own choice:</i></p> <ul style="list-style-type: none"> a) Full replacement of the acquired landholding, with the productivity of land recognised in the compensation provided. b) An additional 20% of the acquired landholding as a direct project benefit. c) Compensation will be in the form of cash only. <p>5. <i>Households losing land but not requiring relocation:</i></p> <ul style="list-style-type: none"> a) Full replacement of the portion of land acquired, with the productivity of land recognised in the amount of replacement land or compensation provided. b) An additional 20% of the acquired portion as a direct project benefit. c) Payment of a cultivation disruption allowance as detailed in Section D. 	<p>e) Since it will not always be possible to exchange a household's irrigated or rainfed land for a similar type of land in the Terai, land exchange ratios have also been calculated for irrigated-to-rainfed and rainfed-to-irrigated land exchanges. The recommended land exchange ratios are as follows:</p> <ul style="list-style-type: none"> • Irrigated land exchange: 1 ha Seti valley = 1 ha Terai • Rainfed land exchange: 1 ha Seti valley = 0.85 ha Terai • Irrigated-to-rainfed land exchange: 1 ha Seti valley = 1.35 ha Terai • Rainfed-to-irrigated land exchange: 1 ha Seti valley = 0.55 ha Terai <p>f) Unaffected land parcels that have been compensated for (e.g. those of households relocating to the Terai) will become the property of WSH for reallocation, wherever possible, to households who lose land but are not required to relocate.</p> <p>g) All transfer costs and taxes will be the responsibility of the project.</p> <p>h) Rates will be adjusted for inflation, using the consumer price index.</p>

TYPE OF LOSS	UNIT OF ENTITLEMENT	DESCRIPTION OF ENTITLEMENTS	IMPLEMENTATION GUIDELINES
1.2 Temporary occupation of private land	<ul style="list-style-type: none"> • Titleholder 	<ol style="list-style-type: none"> 1. Compensation for production losses for the duration of temporary occupation. 2. Compensation for any other disturbances and damages caused to the land and property. 	<ol style="list-style-type: none"> a) A temporary occupation lease will be signed with the affected landowner, specifying: <ul style="list-style-type: none"> • period of occupancy; • formula for the calculation of production losses (the market value of crops normally produced on the land) and annual inflation adjustments; • frequency of compensation payment; and • land protection and rehabilitation measures.
1.3 Loss of rented/tenancy land	<ul style="list-style-type: none"> • Tenant 	<ol style="list-style-type: none"> 1. A registered tenant will receive 50 % of the cash compensation for the acquired area cultivated by him/her, while the titleholder will receive the remaining 50 % of the compensation payable. 	<ol style="list-style-type: none"> a) Officially, only registered tenants (with a record of tenancy at the Land Revenue Office) are entitled to this compensation. However, the approach on the project will be to also make compensation available to a tenant who presents a document where the landlord agrees that the tenant is cultivating a particular parcel of land. The VDC Chairperson and/or DCC will be requested to certify such documents for the Project. b) Where a tenant and landowner have a sharecropping arrangement, the compensation payable will be apportioned according to the arrangement. c) If required, the tenant will be assisted through the consultation structure with the identification of other potential agricultural production opportunities in the area.

TYPE OF LOSS	UNIT OF ENTITLEMENT	DESCRIPTION OF ENTITLEMENTS	IMPLEMENTATION GUIDELINES
2. Houses & Structures			
2.1 Loss of own house	<ul style="list-style-type: none"> • Titleholder • Tenant (own accommodation) 	<ol style="list-style-type: none"> 1. All houses affected by the project will be valued at full replacement cost. Households can choose between the provision of replacement housing or cash compensation. Displaced households who choose not to resettle to any of the project resettlement sites will be offered the cash option only. 2. Households relocated to project sites in the Terai will be provided with a tube well for domestic water supply and a pit latrine. Where required, households relocated to local relocation sites will be assisted with the establishment of new water supplies. They will also be included in the sanitation programme described in Section C3. 3. Relocated households will additionally be assisted with the construction and installation of improved cooking stoves (ICS). 4. Where nuclear households who occupy a single homestead request relocation to separate residential plots, the housing credit for each nuclear household will be based on the current allotment of rooms to each nuclear household. Only nuclear households who were recorded as such in the socio-economic census survey will qualify for separate residential plots at the resettlement sites. 5. Reusable materials from affected buildings and structures may be salvaged with no deduction from the compensation entitlement. 	<ol style="list-style-type: none"> a) Compensation rates will be established by the DCCs. Rates will be adjusted annually for inflation, using the consumer price index. b) Households who opt for replacement housing will have a choice in house design, and may also “trade in” some of the floor area to which they are entitled for additional house fittings. The project will promote the involvement of household members in the construction of their replacement housing. c) Improved cooking stoves will be built on site, using local materials and skills. A qualified NGO will be contracted to train local women as ICS builders and technicians, and provide periodic support to, and monitoring of, the ICS programme. d) Displaced households will receive a housing displacement allowance as described in Section D. e) All transfer costs and taxes will be the responsibility of the project.
2.2 Loss of rented accommodation	<ul style="list-style-type: none"> • Tenant/Lessee 	<ol style="list-style-type: none"> 1. Payment of a rental stipend as defined in Section D. 	<ol style="list-style-type: none"> a) Compensation for the structure is payable to the owner.

TYPE OF LOSS	UNIT OF ENTITLEMENT	DESCRIPTION OF ENTITLEMENTS	IMPLEMENTATION GUIDELINES
2.3 Loss of commercial establishment	<ul style="list-style-type: none"> • Titleholder • Tenant 	<ol style="list-style-type: none"> 1. All commercial enterprises affected by the project will be valued at full replacement cost. Owners can choose between the provision of replacement housing or cash compensation. Owners who choose not to resettle to any of the project resettlement sites will be offered the cash option only. 2. Reusable materials may be salvaged with no deduction from the compensation entitlement. 	<ol style="list-style-type: none"> a) Owners of displaced commercial establishments will receive a business displacement allowance as described in Section D.
2.4 Loss of other privately-owned structures	<ul style="list-style-type: none"> • Titleholder • Tenant (own building) 	<ol style="list-style-type: none"> 1. Other privately-owned buildings and structures such as water mills will be valued at replacement cost and compensated in cash. 2. Reusable materials may be salvaged with no deduction from the compensation entitlement. 	<ol style="list-style-type: none"> a) Other structures include: sheds, walls, fences, water mills, etc. b) Loss of structures other than houses and commercial establishments does not entail payment of a displacement allowance.
3. Other Private Resources			
3.1 Loss of non perennial crops	<ul style="list-style-type: none"> • Person farming the land, whether owner cultivator or tenant/lessee. 	<ol style="list-style-type: none"> 1. Construction activities will be timed to avoid damage to or destruction of standing crops as far as possible. 2. Advance notice will be given to harvest crops that are ready for harvesting. 3. Compensation for damaged/lost standing crops will be paid based on cultivated area, agreed yield and market price. 	<ol style="list-style-type: none"> a) Crop market values will be determined by the DCCs. b) Where a tenant/lessee and landowner have a sharecropping arrangement, the compensation payable will be apportioned according to the arrangement.
3.2 Loss of privately-owned trees and perennial crops	<ul style="list-style-type: none"> • Titleholder; other evidence of ownership 	<ol style="list-style-type: none"> 1. Construction activities will be timed to avoid damage to or destruction of perennial crops as far as possible. 2. Advance notice will be given to harvest perennial crops that are ready for harvesting. Crops that cannot be harvested will be compensated for, based on type of crop, agreed yield and market price. 3. Compensation for future production losses, based on five years annual net production for fruit/ fodder trees and three years annual net production 	<ol style="list-style-type: none"> a) Crop market values and production losses will be determined by the DCCs. b) The project will liaise with the Departments of Agriculture and Forestry or suitably qualified NGOs for the provision of assistance to affected owners and communities with the reestablishment of new trees and other perennial crops.

TYPE OF LOSS	UNIT OF ENTITLEMENT	DESCRIPTION OF ENTITLEMENTS	IMPLEMENTATION GUIDELINES
		<p>for timber/fuelwood trees and other perennial crops.</p> <p>4. The owner will retain the rights to all other resources from privately-owned perennial crops trees (fruit, timber, fire wood).</p>	

C. COMMUNITY ASSETS/RESOURCES

TYPE OF LOSS	UNIT OF ENTITLEMENT	DESCRIPTION OF ENTITLEMENTS	IMPLEMENTATION GUIDELINES
1. Buildings and structures	<ul style="list-style-type: none"> Local community, owner, relevant authority 	<p>1. Restoration of affected community buildings and structures to at least previous condition, or replacement in areas identified in consultation with affected communities and relevant authorities.</p>	<p>a) Community buildings and structures include: schools, temples, health posts, trails/foot paths, bridges and cremation sites.</p>
2. Forest resources	<ul style="list-style-type: none"> Households relocated to project sites in the Terai 	<p>1. Each household relocated to project sites in the Terai will receive a land-based entitlement for the loss of access to Seti valley communal resources as described in Section B1.</p> <p>2. To achieve greater community ownership of forests, and thereby assist in achieving their protection, the promotion of Community Forests will be undertaken as a project initiative. The project will assist in the creation of Community Forests in the project region of influence and provide extension support to forest user groups in order to achieve greater protection of forests prior to and during the operation of the project.</p>	<p>a) While households who relocate locally will lose some natural resources through inundation, they will also benefit from a greatly reduced population base reliant upon local natural resources in the post-construction period. For them and other households only marginally affected by the reservoir, as well as for households who elect to self-relocate to areas of their own choice, the communal resource factor is accordingly not included in the land exchange calculations.</p>
3. Reduced water flow downstream of dam wall	<ul style="list-style-type: none"> Riparian villages between dam wall and re-regulation weir 	<p>1. Potable water will be supplied year-round in all riparian villages in the riparian area between the dam and the re-regulation weir. Water will either be supplied by improving individual village schemes, constructing new village facilities or by installing a piped reticulation system from the reservoir.</p> <p>2. A sanitation programme will be established in all riparian area villages to improve sanitary</p>	

TYPE OF LOSS	UNIT OF ENTITLEMENT	DESCRIPTION OF ENTITLEMENTS	IMPLEMENTATION GUIDELINES
		conditions and public health, and thereby improve the quality of catchment runoff harvested for village water supply.	

D. REHABILITATION ASSISTANCE AND COUNSELLING

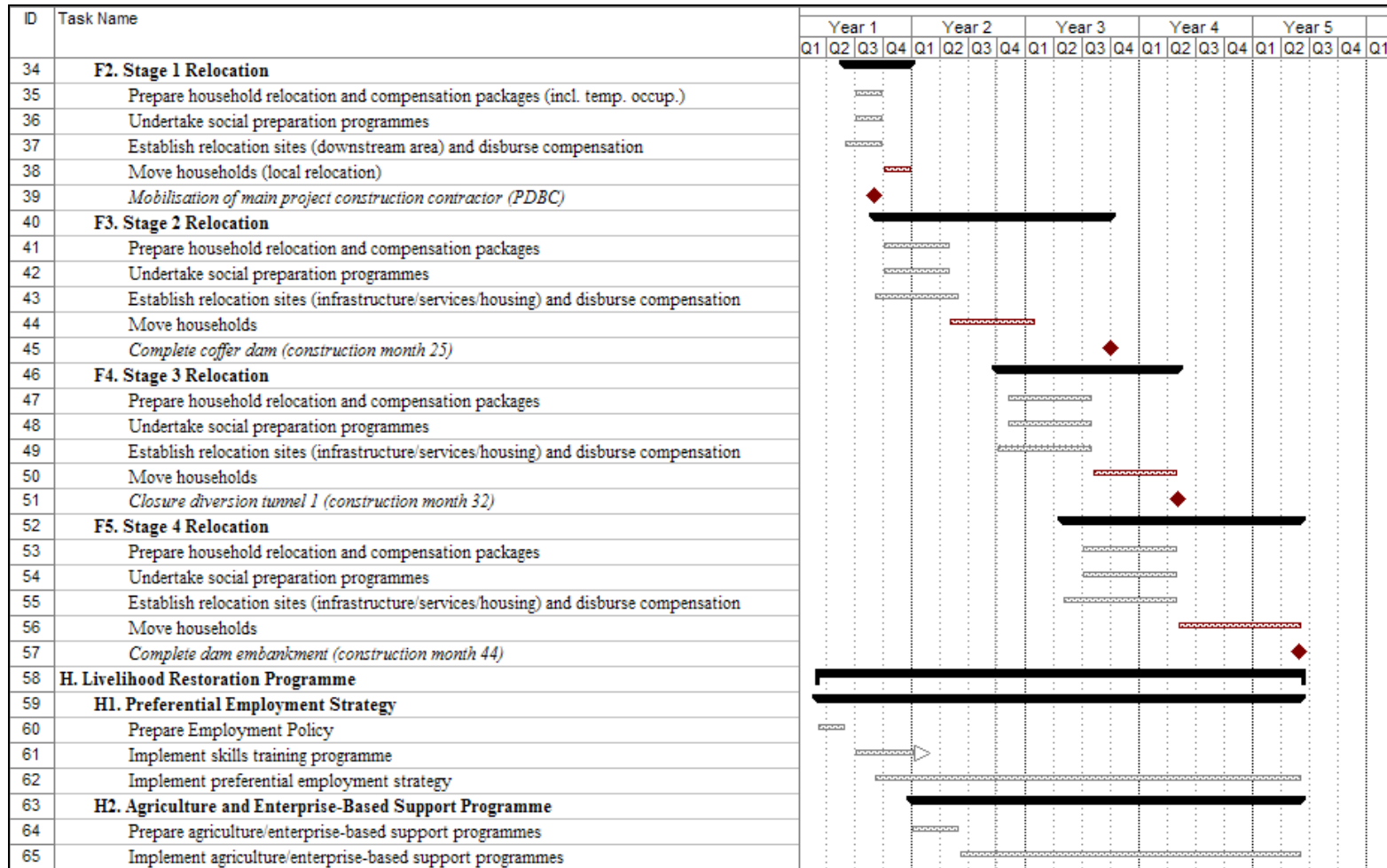
ITEM	UNIT OF ENTITLEMENT	DESCRIPTION	IMPLEMENTATION GUIDELINES
1. Shifting allowance	<ul style="list-style-type: none"> Displaced households 	1. Allowance for the removal of personal, household and business belongings from project areas.	a) All allowances will be finalised by the RSC. The following amounts have been used for budget purposes: <ul style="list-style-type: none"> shifting allowance: USD 100 (local relocation), USD 200 (Terai relocation); household displacement allowance: USD 318 (local relocation), USD 635 (Terai relocation); business displacement allowance: USD 318 (local relocation), USD 635 (Terai relocation); vulnerable household allowance: USD 500; cultivation disruption allowance: USD 635; rental stipend: USD 80; grant for labour loss: USD 150. b) Allowances will be paid at the time of serving the notice to vacate.
2. Household displacement allowance	<ul style="list-style-type: none"> Displaced households 	1. Allowance for incidental costs associated with the resettlement.	
3. Business displacement allowance	<ul style="list-style-type: none"> Displaced businesses 	1. Allowance for incidental costs associated with the resettlement.	
4. Vulnerable household rehabilitation allowance	<ul style="list-style-type: none"> Vulnerable households affected by project 	1. Allowance to assist with the rehabilitation of vulnerable households affected by the project.	
5. Cultivation disruption allowance	<ul style="list-style-type: none"> Non-displaced households suffering permanent cultivation land losses 	1. Allowance, in addition to compensation for land loss, to assist with rehabilitation of agricultural activities.	
6. Rental stipend	<ul style="list-style-type: none"> Tenant in rented accommodation acquired by project 	1. Rental stipend.	
7. Grant for loss of labour	<ul style="list-style-type: none"> Persons of working age whose employment in farm/non-farm enterprises at project sites is terminated due to project activities 	1. Payment of a loss of employment allowance.	
8. Other livelihood support measures	<ul style="list-style-type: none"> Members (15 years and older) from affected 	1. Social preparation programmes. 2. Training and counselling on alternative subsistence and livelihood opportunities. 3. Training programmes to enhance employment on construction works.	a) The Project will implement a preferential employment strategy to enhance construction employment for project-affected persons.

ITEM	UNIT OF ENTITLEMENT	DESCRIPTION	IMPLEMENTATION GUIDELINES
		4. Preferential employment on construction works to the extent possible. 5. Assistance to gain access to national poverty alleviation and credit programmes.	
9. Community development initiatives	<ul style="list-style-type: none"> • Downstream riparian villages and directly affected villages in reservoir periphery 	1. The following potential initiatives, as well as other practical initiatives that may be suggested by local communities, will be investigated: <ul style="list-style-type: none"> a) support for the provision of improved community services, such as education and health care; b) awarding scholarships to students from low-income families; c) training programmes for income generating activities that could service the project (e.g. vegetable growing, sewing, catering and machinery repair); d) support for small enterprise schemes, in particular, small business management training and/or micro-credit lending. 	a) Before this programme is designed in detail, additional community consultation and social and technical research will be undertaken to ensure that it satisfies the needs of affected communities.
10. General counselling	<ul style="list-style-type: none"> • Project area households 	1. General counselling on project impacts; construction schedules and acquisition dates; compensation and grievance resolution mechanisms; and construction employment procedures.	b) This will be achieved through the distribution of information sheets and a structured consultation process with LCFs and local officials. c) The Project will cooperate with relevant Government ministries and departments in support of improved resource utilisation and community development.

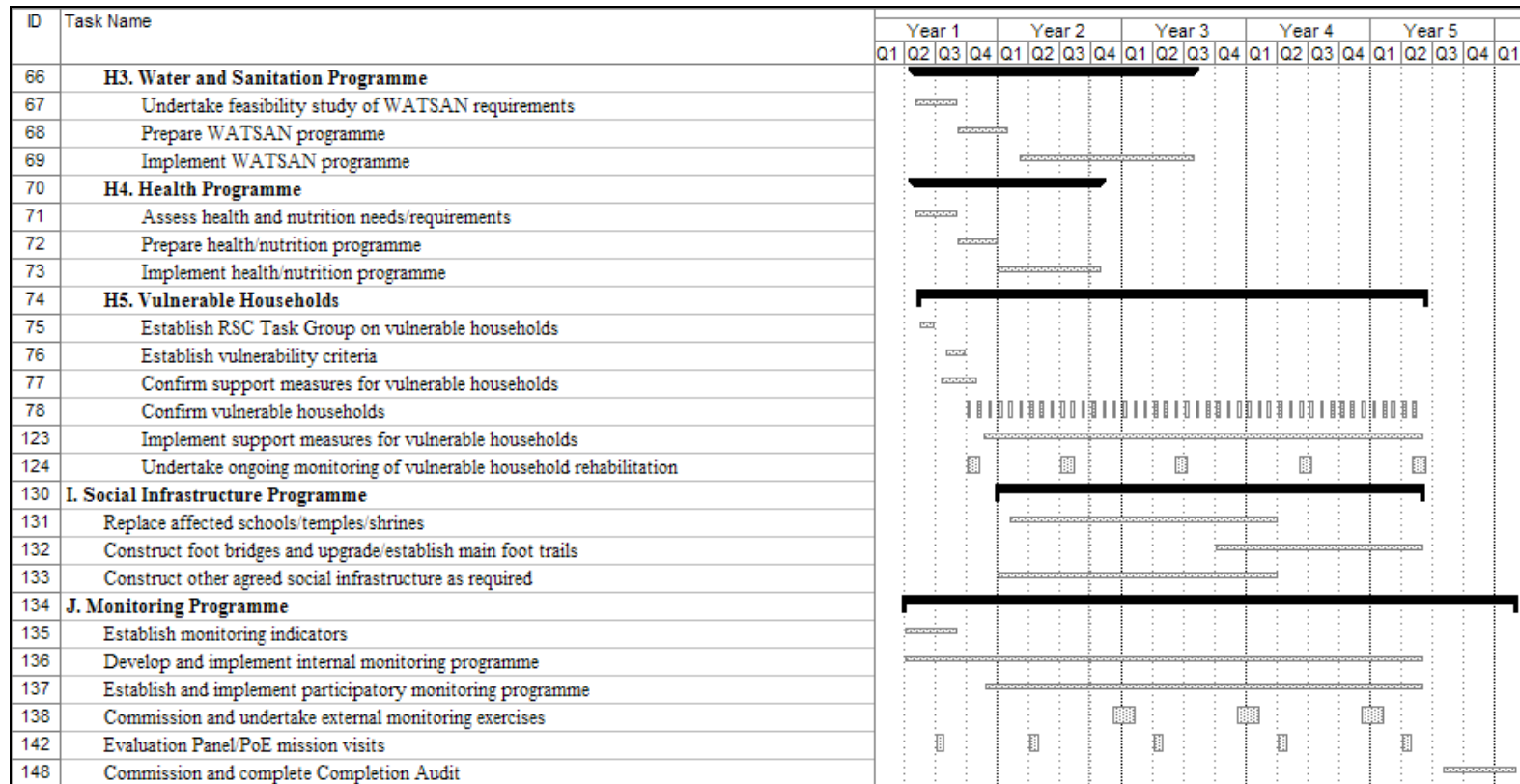
8. RESETTLEMENT IMPLEMENTATION SCHEDULE

ID	Task Name	Year 1				Year 2				Year 3				Year 4				Year 5			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	A. Mobilisation	[Gantt bar]																			
2	Appoint R&D staff	[Gantt bar]																			
3	Develop resettlement implementation procedures	[Gantt bar]																			
4	Appoint Site Office staff (RA, TL & Terai sites)	[Gantt bar]																			
5	Develop site office procedures	[Gantt bar]																			
6	B. Consultation and Liaison Programme	[Gantt bar]																			
7	Agree/establish engagement protocols	[Gantt bar]																			
8	Establish community consultation structure	[Gantt bar]																			
9	Establish Resettlement Steering Committee (RSC)	[Gantt bar]																			
10	Establish District Coordinating Committees and RSC Task Groups	[Gantt bar]																			
11	Appoint Community Liaison Assistants/field staff	[Gantt bar]																			
12	Establish grievance redress mechanisms and procedures	[Gantt bar]																			
13	C. Baseline Data	[Gantt bar]																			
14	Confirm exact land requirements at downstream/ancillary project sites	[Gantt bar]																			
15	Undertake census at downstream/ancillary project sites	[Gantt bar]																			
16	Update household census in reservoir area (stage-wise)	[Gantt bar]																			
17	Update population data in downstream riparian villages	[Gantt bar]																			
18	D Asset Verification	[Gantt bar]																			
19	Undertake asset verification Stage 1 households (downstream project areas)	[Gantt bar]																			
20	Undertake asset verification remaining households (stage-wise)	[Gantt bar]																			
21	E. Compensation Determination	[Gantt bar]																			
22	Negotiate/finalise overall compensation modalities/principles (RSC)	[Gantt bar]																			
23	Establish Compensation Determination Committee/s (CDCs), where req'd	[Gantt bar]																			
24	Confirm compensation rates and entitlements	[Gantt bar]																			
25	Confirm affected households (stage-wise) and their entitlements	[Gantt bar]																			
26	Confirm household relocation and compensation preferences (stage-wise)	[Gantt bar]																			
27	F. Relocation Programme	[Gantt bar]																			
28	F1. Relocation Sites	[Gantt bar]																			
29	Develop procedures to purchase replacement land	[Gantt bar]																			
30	Undertake feasibility studies of preferred sites	[Gantt bar]																			
31	Finalise preferred relocation sites	[Gantt bar]																			
32	Purchase replacement land (stage-wise)	[Gantt bar]																			
33	Undertake layout and design of relocation sites (stage-wise)	[Gantt bar]																			

Implementation Schedule (1)



Implementation Schedule (2)



Implementation Schedule (3)

9. INDIGENOUS GROUPS (ADIVASI/JANAJATI) LISTED IN NEPAL

S.N.	Mountain Janjati	Hill Janajati	Terai Janajati
1	Baragaunle	Banakaria	Bote
2	Bhotia	Baramo	Kumal
3	Byanshi	Bhujel	Raji
4	Chairrotan	Chepang	Danuwar
5	Chimtan	Chantyal	Majhi
6	Larke	Dura	Raute
7	Lhomi	Fri	Darai
8	Lhopa	Gurung	Dhanuk
9	Manange	Hayu	Rajbanshi
10	Marphali	Hyolmo	Dhimal
11	Mugali	Surel	Gangain
12	Siya	Jirel	Jhangad
13	Sherpa	Kussbadia/ Pattharkatta	Kisan
14	Sayangtan	Kusunda	Mache
15	Tangeba	Lepcha	Satar/Santhal
16	Thakali	Limbu	Tagpuria
17	Thintan	Magar	Tharu
18	Walung	Newar	
19		Pahari	
20		Rai	
21		Sunuwar	
22		Tamang	
23		Thami	
24		Yakha	
Total	18	24	17