

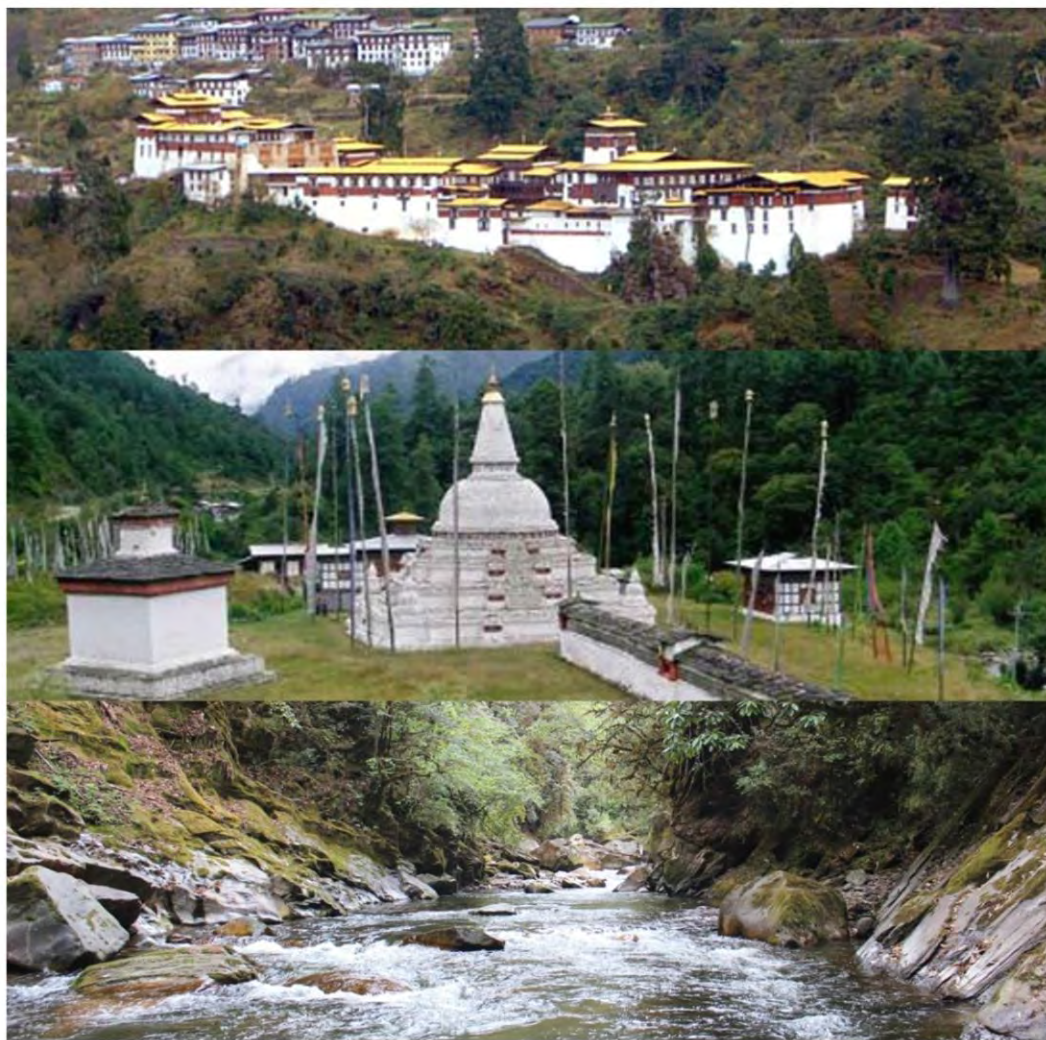
Draft Resettlement Plan

August 2014

BHU: Green Power Development Project II

Prepared by Druk Green Power Corporation Limited and Tangsibji Hydro Energy Limited for the Asian Development Bank

The environmental impact assessment report is a document of the borrower. The views expressed herein do not necessarily represent those of ADB's Board of Directors, Management, or staff, and may be preliminary in nature.



NIKACHHU HYDROPOWER PROJECT, BHUTAN (118 MW)

RESETTLEMENT PLAN (Draft) - 2014 VOLUME IV: MAIN REPORT (PART 3)

Prepared for:

**Druk Green Power Corporation Limited and
Tangsibji Hydro Energy Limited (THyE)
Thori Lam, Thimphu
Bhutan**

Prepared by:

**Bhutan Consultants & Research (BHUCORE)
Taba, Post Box: 955, Thimphu
(revised by PWC Consultants)**

Table of Contents

ABBREVIATIONS	vi
GLOSSARY	vii
EXECUTIVE SUMMARY.....	11
CHAPTER 1: INTRODUCTION & PROJECT DESCRIPTION	17
1.1. Background.....	17
1.2. Project Description	17
1.3. Project Area	18
1.4. Project Components.....	21
1.4.1. Dam	23
1.4.2. Cofferdam and Diversion Tunnel	23
1.4.3. Intake and De-silting Chamber.....	23
1.4.4. Head Race Tunnel.....	23
1.4.5. Surge Shaft	24
1.4.6. Pressure Shaft.....	24
1.4.7. Power House.....	24
1.4.8. Tail Race Tunnel	24
1.4.9. Main Access Tunnel and Adits.....	24
1.4.10. Project Ancillaries.....	24
1.4.11. Access Roads	25
1.4.12. Transmission Line and Towers.....	28
1.5. Project Benefits and Impacts.....	29
1.6. Measures to minimize impact	29
1.7. Objectives of the Resettlement Plan.....	30
CHAPTER 2: SCOPE OF LAND ACQUISITION AND RESETTLEMENT	31

2.1.	Classification of the Project	31
2.2.	Objective of the Census and Socio-Economic Survey	32
2.3.	Scope of Land Acquisition and Resettlement.....	33
2.3.1.	<i>Impact on Land</i>	33
2.3.1.	<i>Impact on Income arising from land</i>	37
2.4.	Vulnerability Status of Displaced Households	37
2.5	Scope of Land Acquisition.....	38
2.5.1.	Common Property Resources and Facilities	38
CHAPTER 3: SOCIOECONOMIC INFORMATION AND PROFILE.....		40
3.1.	Socioeconomic Characteristics	40
3.2.	Demography	40
3.3.	Economic Profile of the Displaced Population	43
3.3.1.	Occupation, Employment and Livelihoods	43
3.4.	Health and Education.....	44
3.5.	Land Ownership and Utilization.....	45
3.6.	Agricultural Production	45
3.7.	Livestock Production.....	46
3.8.	Housing and Access to Basic Services	47
3.9.	Access to Credit and Savings.....	48
3.10.	Income, Asset Ownership and Expenditure	48
3.11.	Vulnerability.....	52
3.12.	Gender and Project Impacts	55
3.13.	Poverty Aspects	55
CHAPTER 4: INFORMATION DISCLOSURE, CONSULTATION AND PARTICIPATION		57
4.1.	Consultation and Participation of Key Stakeholders	57
4.2.	Key Stakeholders.....	58

4.3.	Rationale for Participation of Stakeholders.....	60
4.4.	Participation during RP Preparation	61
4.5.	Information Disclosure and Resettlement Plan Disclosure	61
CHAPTER 5: GRIEVANCE REDRESS MECHANISM		63
CHAPTER 6: LEGAL FRAMEWORK.....		65
6.1.	Policy Framework - Review of Resettlement Policies and Legal Framework	65
6.2.	Bhutanese Legal Framework	65
6.2.1.	<i>Land Acquisition Assessment and Rehabilitation Planning.....</i>	66
6.2.2.	<i>Acquiring Agency and Public Interest.....</i>	66
6.2.3.	<i>Restrictions, Acquisition and Substitute Land</i>	66
6.2.4.	<i>Mode of Compensation.....</i>	67
6.2.5.	<i>Detailed Report.....</i>	68
6.2.6.	<i>Payment of Compensation, Release, and Registration of Acquired Land.....</i>	69
6.3.	ADB's Safeguard Policy Statement (SPS), 2009.....	71
6.4.	Comparison of ADB SPS and National Policies	72
6.5.	Involuntary Resettlement Safeguard Principles for the Project	73
6.5.1.	<i>Basic Principles</i>	73
CHAPTER 7: ENTITLEMENTS, ASSISTANCE AND BENEFITS		76
7.1.	General.....	76
7.2.	Eligibility Criteria for Entitlements	76
7.3.	Entitlement Matrix	77
7.3.1.	<i>Entitlements.....</i>	77
7.4.	Community Development Program	85
7.4.1.	<i>Skills Development Training Program.....</i>	85
7.4.2.	<i>Developing and Preparing of Waste Disposal Site.....</i>	86
7.4.3.	<i>Provision of Garbage Compacter Truck.....</i>	86

7.4.4. Provision of Agriculture and Dairy Products Sales Outlet.....	86
7.4.5. Blacktopping of Tangsibji Farm Road	86
7.4.6 Hostel for Students.....	87
CHAPTER 8: BENEFIT SHARING MEASURES	88
8.1 Project Benefit Sharing	88
8.2 Revenue Sharing Arrangements	89
8.3 Special Measures to Support Vulnerable Groups.....	89
8.4 Gender Considerations	89
8.5 Skills Training Programs	90
8.6 Employment in Project Civil Work to Supplement and Restore Incomes.....	90
CHAPTER 9: RESETTLEMENT BUDGET AND FINANCING PLAN.....	91
9.1. Itemized Entitlement Matrix as the Basis for the RP Budget.....	91
9.2. Total Cost and Consolidated RP Budget	92
CHAPTER 10: INSTITUTIONAL ARRANGEMENTS.....	93
10.1. Institutional Arrangement.....	93
10.2. Role of THyE.....	93
10.3. Dzongkhag Land Acquisition and Allotment Committee	94
10.4. Internal Monitoring Committee.....	95
CHAPTER 11: IMPLEMENTATION SCHEDULE	97
CHAPTER 12: MONITORING AND REPORTING	99
12.1. Internal monitoring.....	99
12.2. Indicators for Monitoring	100

ABBREVIATIONS

ADB	Asian Development Bank
ADB-SPS (2009)	ADB Safeguards & Policy Statements (2009)
AH	Affected Households
AP	Affected Person
BHU	Basic Health Unit
BPC	Bhutan Power Corporation Ltd
CAO	Chief Administration Officer
CGI	Corrugated Galvanized Iron
CPR	Community Property Resources
DGPCL	Druk Green Power Corporation Limited
DH	Displaced Household
DLAAC	Dzongkhag Land Acquisition and Allotment Committee
DMS	Detailed Measurement Survey
DP	Displaced Person
GDP	Gross Domestic Product
GNHC	Gross National Happiness Commission
GRC	Grievance Redressal Committee
GRF	Government Reserved Forest
IA	Involuntary Resettlement
IMC	Internal Monitoring Committee
LA	Land Acquisition
LRO	Land Record Officer
M&E	Monitoring & Evaluation
MHEP	Mangdechhu Hydro-Electric Project
MoWHS	Ministry of Work and Human Settlement
MW	Mega Watt
NHPP	Nikachhu Hydropower Project
NLCS	National Land Commission Secretariat
ORC	Outreach Clinic
PDF	Project Displaced Family
PDH	Project Displaced Household
PDP	Project Displaced Person
PHCB	Population and Housing Census of Bhutan
PAVA	Property Valuation & Assessment Agency
PM	Project Manager
RGoB	Royal Government of Bhutan
RNR	Renewable Natural Resources
R&R	Resettlement and Rehabilitation RP Resettlement Plan
SIA	Social Impact Assessment
THyE	Tangsibji Hydro Energy Ltd.

GLOSSARY

Chuzhing	Wet land
Compensation	Payment in cash or in kind for an asset or a resource that is acquired or affected by a Project at the time the asset needs to be replaced.
Cut-off date	The completion date of the census of Project-displaced persons is usually considered the cut-off date. A cut-off date is normally established by the borrower government procedures that establish the eligibility for receiving compensation and resettlement assistance by the Project displaced persons. In the absence of such procedures, the borrower/client will establish a cut-off date for eligibility.
Displaced households	Displaced households are those households that are physically displaced (relocation, loss of residential land, or loss of shelter) and/or economically displaced (loss of land, assets, access to assets, income sources, or means of livelihood) as a result of (i) involuntary acquisition of land, or (ii) involuntary restrictions on land use or on access to legally designated parks and protected areas. All members of a Project displaced household residing under one roof and operating as a single economic unit will constitute the displaced family.
Displaced persons	In the context of involuntary resettlement, displaced persons are those who are physically displaced (relocation, loss of residential land, or loss of shelter) and/or economically displaced (loss of land, assets, access to assets, income sources, or means of livelihood) as a result of (i) involuntary acquisition of land, or (ii) involuntary restrictions on land use or on access to legally designated parks and protected areas.
Dzong	Fortress (district administrative headquarter)
Dzongda	Governor (Head of District)
Dzongkhag	District (administrative unit)
DzongkhagTshogde	District Committee
Economic displacement	Loss of land, assets, access to assets, income sources, or means of livelihood as a result of (i) involuntary acquisition of land, or (ii) involuntary restrictions on land use or on access to legally designated parks and protected areas.
Encroachers	People who have trespassed into RGOB/private/community land to which they are not authorized.
Eminent domain	The right of the state using its sovereign power to acquire land for public

purposes. National law establishes which public agencies have the prerogative to exercise eminent domain.

Entitlement	Resettlement entitlements with respect to a particular eligibility category are the sum total of compensation and other forms of assistance provided to displaced persons in the respective eligibility category.
Expropriation	Process whereby a public authority, usually in return for compensation, requires a person, household, or community to relinquish rights to land that it occupies or otherwise use.
Gerab Dratshang	Monk Body
Gewog	Block (administrative unit)
Gewog Tshogde	Block Administration
Gup	Head of Gewog Administration
Host communities	Communities receiving physically displaced persons of a Project as resettlers.
Income restoration	Re-establishing productive livelihood of the displaced persons to enable income generation equal to or, if possible, better than that earned by the displaced persons before the resettlement.
Kamzhing	Dry land
Landless/Agricultural Labourer	A person who does not own agricultural land himself or jointly with any family member. Persons who work as agricultural labourers are also placed under this category.
Lhakhang	Buddhist Temple
Lhengye Zhungtshog	Cabinet
Mangduep	People inhabiting the valleys of the Mangdechhu river.
Marginal farmer	A farmer whose land holding is less than 1.0 acre
Meaningful Consultation	A process that (i) begins early in the Project preparation stage and is carried out on an ongoing basis throughout the Project cycle; (ii) provides timely disclosure of relevant and adequate information that is understandable and readily accessible to affected people; (iii) is undertaken in an atmosphere free of intimidation or coercion; (iv) is gender inclusive and responsive, and tailored to the needs of disadvantaged and vulnerable groups; and (v) enables the incorporation of all relevant views of affected people and other stakeholders into

decision making, such as Project design, mitigation measures, the sharing of development benefits and opportunities, and implementation issues.

Physical Cultural Resources	Movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. Physical cultural resources may be located in urban or rural settings and may be above or below ground or under water. Their cultural interest may be at the local, provincial, national, or international level.
Physical displacement	Relocation, loss of residential land, or loss of shelter as a result of (i) involuntary acquisition of land, or (ii) involuntary restrictions on land use or on access to legally designated parks and protected areas.
Replacement Cost	Replacement cost involves replacing an asset at a cost prevailing at the time of its acquisition. This includes fair market value, transaction costs, interest accrued, transitional and restoration costs, and any other applicable payments, if any. Depreciation of assets and structures should not be taken into account for replacement cost. Where there are no active market conditions, replacement cost is equivalent to delivered cost of all building materials, labor cost for construction, and any transaction or relocation costs.
Relocation assistance	Support provided to persons who are physically displaced by a Project. Relocation assistance may include transportation, food, shelter, and social services that are provided to the displaced persons during their relocation. It may also include cash allowances that compensate displaced persons for the inconvenience associated with resettlement and defray the expenses of a transition to a new locale, such as moving expenses and lost work days.
Security of tenure	Protection of resettled persons from forced evictions at resettlement sites. Security of tenure applies to both titled and non-titled displaced persons.
Thram	Land title
Throm	Town
Thromde	Town
Tshogpa	Village Head
Vulnerable Group	Distinct groups of people who are socially distressed or economically backward and may suffer disproportionately from rehabilitation effects. These include, but are not limited to the following: women headed households who are poor, households living below the national poverty

line (monthly income of each household member < Nu1,096.94 per month), marginal land owners, landless or very small land holding (<1 acre), agricultural labourers, and the disabled and elderly.

EXECUTIVE SUMMARY

With the mandate to manage existing power generating facilities as well as to accelerate hydropower development in the country, the DGPCL will develop the 118 MW Nikachhu Hydro Power Project (NHPP) in Trongsa Dzongkhag. The Project is located towards the East of Thimphu, on river Nikachhu with the Dam located at Lorim, about 5 km from Chendebji Chorten, and Power House at Norboudi. The key Project components comprise of: (i) Concrete Gravity Dam; (ii) Cofferdam and Diversion Tunnel; (iii) Intake and De-Silting Chamber; (iv) Head Race Tunnel (HRT); (v) Surge Shaft; (vi) Pressure Shaft; (vii) Power House Complex; (viii) Tail Race Tunnel; (ix) Main Access Tunnel and Adits; (x) Access roads; and, (xi) Power Transmission Line.

Tangsibji Hydro Energy Limited (THyE), a special purpose vehicle, a 100% subsidiary company of Druk Green Power Corporation Limited was incorporated on April 25, 2014 to implement the 118 MW Nikachhu Hydropower Project.

Objectives of the Resettlement Plan

This Resettlement Plan (RP) is part of the Detailed Project Report carried out to identify, ascertain, and address the social impacts of the Project. The objective of this Resettlement Plan (RP) is to mitigate all unavoidable negative social and resettlement impacts arising out of the Project. Further, it aims to ensure that the livelihoods of all displaced persons are improved or at least restored to pre-project levels and the standards of living of the displaced, poor and other vulnerable groups are improved.

The Resettlement Plan has been prepared based on a 100% census of the displaced persons and 100% inventory of losses and the detailed measured survey. Information has also been assimilated from group discussions with local administration, key informant interviews with village leaders and consultations carried out with displaced persons, local communities and local government officials.

Project Impacts

The Project is expected to have beneficial impacts on communities. Connection of the power project to the grid will ensure access to reliable and regular supply of electricity for the communities living around the Project area. The villages served by the present Chendebji micro hydel do not receive stable supply of power.

The Project will have several access roads to the Dam Site, Project colony site, Adits, Surge Shaft, and Power House, which will also provide access to villagers to their fields or between villages. While access will improve, the increase in population may necessitate up-gradation of school and health facilities to cater to the needs of an increased population. The area would also experience substantial local economic development opportunities leading to investments in infrastructure such as houses and buildings by locals for lease to Project personnel in addition to facilities such as market sheds and fresh produce sales outlets.

The main impacts of the Project on the displaced persons will be loss of land and restriction on land use for displaced households. However, the displaced households will be compensated by the Project for causing some restricted land use.

Measures to Minimize Impact

The overall resettlement impacts are being avoided or minimized through careful project planning during the design stages. During Project preparation, the design team made efforts to minimize impacts on people and assets. During land identification for this Project, all efforts were made to identify suitable government land free of encumbrances and impacts. Alternatively, where government land of this nature could not be identified, such private land was looked for which would limit physical and economic impacts as far as possible. These efforts led to decisions to relocate the Power House, which significantly reduced the number of households affected.

The Project component will impact the land owned by the government and villagers. However, the Project is expected to have more beneficial impacts on communities through local economic development opportunities.

Land Acquisition and Involuntary Resettlement Impacts

The NHPP is classified as Category B¹ in accordance with ADB's Safeguards Policy Statement (SPS, 2009), as there are no significant² involuntary resettlement impacts. The overall resettlement impacts are being avoided or minimized through careful project planning during the design stages.

The two main Project components which will still entail involuntary resettlement impacts are access roads and transmission tower footings. A total of 294.680³ acres of land will be acquired by the Project, of which the majority 290.503 acres comprises of government land. Only 4.177 acres of private land will be displaced and acquired as a result of this Project. The 4.177 acres of dry land is owned by 17 households (comprising of 84 displaced persons) and a common property resource (a government-owned community primary school) from Tsangkha, Tangsibji, Drangla, Refe, Yurmung and Kinga Rabten villages will be acquired by the Project. Of

¹A Project is assigned to one of the following categories depending on the significance of the probable involuntary resettlement impacts: (i) Category A – A proposed Project is classified as Category A if it is likely to have significant involuntary resettlement impacts. A resettlement plan, including a assessment of social impacts, is required. (ii) Category B – A proposed Project is classified as category B if it includes involuntary resettlement impacts that are not deemed significant. A resettlement plan, including a assessment of social impacts, is required. Category C – A proposed Project is classified as Category C if it has no involuntary resettlement impacts. No further action is required.

²The involuntary resettlement impacts of an ADB-supported Project are considered significant if 200 or more persons will experience major impacts, which are defined as (i) being physically displaced from housing, or (ii) losing 10% or more of their productive assets (income generating).

³The actual land area after the survey carried out by Dzongkhag is 294.68 acres including 43.94 acres for access roads and 59.30 acres for Construction Power Transmission Line

these, Refe, Yurmung and Kinga Rabten are displaced because of the transmission line component, while Tsangkha, Tangsibji, and Drangla villages are displaced due to the access roads to the main Project components. Further, no structures, either private (houses), commercial (shops) or community owned structures will be displaced or affected as a result of the Project.

In total, the Project will displace 17 households and 1 Common Property Resource (CPR), comprising of a total of 84 displaced persons of which 11 households and the CPR comprising of 54 displaced persons are displaced due to access roads for the project while 6 households, comprising of 30 displaced persons will lose land to the transmission line component of the Project.

Socio-Economic Profile of Displaced Households

The displaced households can generally be categorized among the affluent in their communities. This is because all the displaced households own sufficient land holdings, have good houses, rear sufficient number of cattle, have access to all basic facilities and earn incomes well above the poverty line of Nu. 1,097 per person/month. Hence, only one household can be defined as vulnerable due to poverty. In addition, there are two other displaced households that are deemed vulnerable since they are single-women headed households. Both of these households are two-member households without any male members. Also, one of these households consists of a disabled family member. Therefore, in total three displaced households are vulnerable.

Policy Framework and Entitlements

The resettlement principles adopted in this RP reflect the national laws and legislations namely (i) Land Act of Bhutan 2007; (ii) Land Compensation Rates 2009, and; (iii) Bhutan Sustainable Hydropower Development Policy 2008 and the Asian Development Bank's Safeguards Policy Statement (SPS, 2009). The RP outlines the objectives, policy principles and procedures for land acquisition, compensation and other assistance measures for displaced persons (DPs).

The Entitlement Matrix (Table 33 in the main RP) outlines the types of measures (e.g., compensation at replacement value, assistance, etc.) required to mitigate the resettlement impacts in line with RGoB and ADB policies.

The only private asset which will be affected as a result of the Project is private land. No fruit trees or standing crops will be displaced by the Project since all the displaced land is barren or fallow.

The calculation of costs for impacted land has been based on the government approved Land Compensation Rates (2009). Since no fruit trees, standing crops, and cash crops will be displaced by the Project, no compensation for the same will need to be provided. The relevant

provisions of the revised Land Act (2007) and associated rules and regulations have been extensively referred to set out all legal requirements and procedures governing land acquisition.

For the impacted land, 15 displaced households and the CPR representatives (comprising of 77 displaced persons) requested that they receive land replacement as compensation in lieu of the land they will lose to the Project. While the two remaining displaced households (comprising of 7 displaced persons) preferred cash compensation over land replacement.

Land development costs have been proposed so that displaced households have some funds to convert the undeveloped land (most probably the replacement land they receive will be undeveloped government land) to cultivable form. No fruit trees or standing crops will be affected by the Project since all the displaced land is barren or fallow land. Therefore, compensation for fruit trees and standing crops does not arise. Apart from the Community Primary School (with 20 students and 2 teachers as of July 2014), no other CPR will be affected by the Project.

A vulnerability entitlement allowance has been proposed as a direct targeted intervention to assist the vulnerable households in keeping with ADB's SPS 2009. Funds have also been proposed to meet skills development costs for displaced households, development of a waste disposal site, procurement of garbage compacter truck and construction of agriculture and dairy products sales outlet, which can also be used to display and sell woven products as part of the Community Development Program under the Project. These measures were agreed upon in consultation with the displaced households and community.

Grievance Redress Mechanism

A grievance redress mechanism provides sufficient opportunity for displaced households to articulate complaints before and during RP implementation to ensure that the THyE adequately responds to peoples' grievances, concerns and views on planning and implementation of the RP.

The Project will establish a two-tier grievance redress procedure. In the first instance, immediately after the RP is disclosed, Project displaced households have the option of submitting their grievances in written form to the Grievance Redress Committee (which will include members of the Dzongkhag Administration, the respective Gup and the THyE's Managing Director) within 15 days. Then, within the existing mechanism of the Dzongkhag Land Acquisition and Allotment Committee (DLAAC), the GRC will receive the complaints and facilitate solutions. If the displaced person (DP) is not satisfied with the decision of the GRC, he/she can appeal to appropriate authorities of Royal Government of Bhutan (RGoB) for resolution of grievances.

In order to ensure that all displaced households have avenues for redressing their grievances related to any aspect of land acquisition and resettlement, a redress process has

been established for the Project, as follows:

- (i) If any DP is aggrieved by any aspect of the land acquisition program, he/she can lodge a written grievance with the Grievance Redress Committee (GRC) within 15 days from the date of the final disclosure of the RP to the displaced persons. The committee's officials will respond within 15 days of the receipt of the grievance.
- (ii) If the person making the complaint is not satisfied with the decision that he/she receives from the GRC, or, does not receive a response within 15 days of registering the grievance, he/she can approach the senior management of DGPCL/THyE, and can appeal to higher authorities through the existing local governments such as the Gewog Tshogde and the Dzongkhag Administration.

Further, during Project implementation, a complaints register will be maintained by THyE and contractors where further community complaints and grievances can be registered.

Institutional Arrangement

The DGPCL will be the executing agency (EA) for the Project. Tangsibji Hydro Energy (THyE), a special purpose vehicle which is a 100% subsidiary company of DGPCL, incorporated on April 25, 2014 with Managing Director (MD) shall be implementing agency of the Project. The Chief Administration Officer (CAO) assisted by Environment Officer of THyE, in coordination with the Dzongkhag and Tangsibji, Drakteng, and Langthel Gewog administrations will be responsible for implementing the resettlement activities. The Managing Director will also be in charge of land acquisition, compensation and resettlement operations. The Managing Director will work in close coordination with the Dzongkhag and displaced Gewogs on the day-to-day activities of the resettlement plan and its implementation. The Managing Director will execute and monitor the progress of the work and ensure coordination between relevant departments, the GRC and displaced persons. The Managing Director will ensure that necessary staff is made available to implement resettlement activities without causing delay to civil works.

Resettlement Budget

The R&R cost estimate for this Project includes compensation for lost assets and resettlement assistance as per applicability of the policy. It also includes the contingency charges. The total estimated LA and R&R cost of the Project is **Nu. 701, 211.20**

Monitoring and reporting

THyE, through its Internal Monitoring Committee (IMC) consisting of; (i) MD, THyE; (ii) CAO, THyE and; (iii) Environment Officer, THyE will monitor and measure the progress of implementation of the resettlement plan. In addition to recording the progress in compensation payment and other resettlement activities, the IMC will prepare monitoring reports to ensure that the implementation of the resettlement plan has produced the desired

outcomes.

The IMC will prepare semi-annual monitoring reports that describe the progress of the implementation of resettlement activities and any compliance issues and corrective actions. These reports will closely follow the involuntary resettlement monitoring indicators provided in Chapter 12.

CHAPTER 1: INTRODUCTION & PROJECT DESCRIPTION

1.1. Background

1. Bhutan's overall national development philosophy is based on the achievement of Gross National happiness (GNH), which is said to be a more balanced and holistic approach to development than the conventional approach that focuses primarily on economic development as gauged exclusively by Gross Domestic Product (GDP). The four pillars of GNH are: (i) promotion and preservation of culture; (ii) balanced and equitable economic development; (iii) environment preservation, and; (iv) good governance. Hydropower development is seen to play an important role in achieving GNH.

2. Bhutan's technically feasible hydropower generation potential is estimated to be 23,760 MW³. Till date, about 6% (1,488 MW) of this potential has been harnessed. Tremendous potential still remains to be tapped. Export of hydropower is the largest revenue source for the RGoB. Hydropower development in Bhutan has negligible impact on the environment along with minimal emission of greenhouse gases (GHG), therefore it is considered to be a source of 'clean power' in Bhutan.

3. The Druk Green Power Corporation Limited (DGPCL), established in 2008, is mandated to manage existing power generating facilities and to accelerate the hydropower development in the country. The company currently operates five power plants with an installed capacity of 1,480 MW. It assumes the operation and maintenance of the power plants after construction. Upon receiving RGoB's approval to develop the 118 MW Nikachhu Hydropower Project (NHPP), DGPCL carried out the Detailed Project Report, which among others constituted the Social Impact Assessment (SIA) and the preparation of Resettlement Plan (RP).

4. A total of 10 Projects (10,000 MW capacity) have been selected jointly by RGoB and Government of India (GoI) for development by 2020 of which 6 are as bi-lateral development by the two governments, and 4 are as joint ventures between DGPCL and Indian Power Sector Utilities (PSU). Further, DGPCL will implement 4 other projects on its own and Nikachhu Hydropower Project (NHPP) is one of them.

1.2. Project Description

³ Bhutan Power System Master Plan-April 2004

5. Nikachhu Hydropower Project is located about 5 hours' drive from Thimphu towards the East, on the river Nikachhu (a tributary of Mangdechhu with the catchment north and south of the road running from Pele La to Tangsibji), between 3 km (approx.) downstream of the Chhunabchhu confluence and the Nikachhu/Mangdechhu confluence in Trongsa District, Bhutan. The environmental and social assessment was concluded in 2011 with dam locations at Lorim (27°26'55.41"N and 90°22'22.21"E) and Power House location at Tangsibji Village (27°26'29.46" N and 90°27'17.90"E). Although these seemed feasible, the cost of the Project was assessed to be substantial. Moreover, continued geological investigations identified Power House location options in more stable locations. As such, the changed locations and scope of the Project necessitated additional social and environmental assessments.

1.3. Project Area

Trongsa District

6. Trongsa (meaning new village in the local dialect) is a district located in the central region of Bhutan. It is historically important as the seat of Kings of Bhutan who administered the country from this Dzongkhag. The origin of the place is attributed to Yongzin Ngagi Wangchuk, a historical personality in Bhutan who established a meditation centre in 1543 attracting disciples, which steadily grew into a settlement. The Trongsa Dzong and the Ta Dzong (watch tower now converted to a museum) are important cultural landmarks in Bhutan. It covers an area of about 1,807 km², with elevation ranging from 800 meters to 4,800 meters above sea level with a total population of about 14,977 (estimated) in 2011 with a growth rate of 1.4%. As per the Population and Housing Census of Bhutan (PHCB) 2005, Trongsa has 2,739 households. It shares boundaries with Bumthang Dzongkhag to the northeast, Wangdue Phodrang Dzongkhag to the west and Zhemgang Dzongkhag to the south.

7. Historically, Trongsa is one of the most important Dzongkhags. It is the seat of the Trongsa Penlop and the formal investiture of the Crown Prince of Bhutan as the Trongsa Penlop is observed in Trongsa Dzong.

8. Despite formidable rugged terrain in most parts of the Dzongkhag, the black-topped East-West highway and the Trongsa-Gelephu highway passes through the Dzongkhag connecting almost all Gewogs and serving as the main economic artery. Though the East-West and Trongsa-Gelephu highway passes through the Dzongkhag, settlements are still remote due to lack of feeder roads. Remoteness and rugged terrain makes delivery of services difficult and costly. Nonetheless, every Gewog in the Dzongkhag has a BHU, RNR centre and a school to provide basic services to the local populace. Trongsa Dzongkhag consists of five Gewogs namely Drakteng, Korphu, Nubi, Langthel and Tangsibji. The Dzongkhag is further divided into two parliamentary Constituencies – Nubi-Tangsibji and Drakteng-Langthel for electoral purposes.

9. Some important data on developmental facilities is provided in Table 1 below.

Table 1: Statistics on development facilities in Trongsa and Bhutan

No.	Development facility	Quantity Trongsa	Quantity Bhutan	Source
1	Schools	24 nos.	606	Statistical Yearbook of Bhutan (2011)
2	Hospitals	1 nos.	31	Statistical Yearbook of Bhutan (2011)
3	BHUs	7 nos.	181	Statistical Yearbook of Bhutan (2011)
4	ORCs	21 nos.	518	Statistical Yearbook of Bhutan (2011)
5	RNR Centers	5 nos.	139	Statistical Yearbook of Bhutan (2011)
6	Irrigation canals	85 nos.	NA	This information is not available
7	Farm roads	94.92 km	8,366	Statistical Yearbook of Bhutan (2011)
8	Feeder roads	24.20 km		Statistical Yearbook of Bhutan (2011)
9	Telephone connections	631 nos	27,490	Annual InfoCom & Transport Statistical Bulletin
10	Internet connections	151 nos.	139,896	Annual Info Com & Transport Statistical Bulletin(2012)
11	Temples	93 nos.	NA	This information is not available

Tangsibji Gewog

10. The NHPP impacts Tangsibji Gewog the most since all the Project components and infrastructure (apart from the transmission line component) is located in this Gewog. 11 households and 1 CPR, comprising of a total of 54 displaced persons, will be displaced by the NHPP in Tangsibji Gewog. All 12 households will only lose some portion of their land to the Project.

11. Tangsibji is one of the Gewogs of Trongsa located about an hour's drive away before reaching Trongsa from Thimphu. It is inhabited by people known as Mandeps who speak Mangdehka, a dialect spoken in Tangsibji Gewog and a few villages under Drakteng Gewog such as Taktse, Yuesa and Tashidingkha. Both these terms are derived from the river Mangdechhu which flows through the area.

12. The Gewog consists of seven villages, 270 households and a population of 1,848 persons according to the 11th Five Year Plan (FYP). The population density of Tangsibji Gewog is 5.0 persons per km². It covers an area of 372 km² with Wangdue Phodrang Dzongkhag to the west, Langthel Gewog to the south and Drakteng Gewog to the east.

13. The east-west highway runs through the Gewog acting as a main artery for economic development. Most villages are remote. Four farm roads have been constructed. Paddy, wheat, chilli, potato, and cabbage are the major crops grown. Livestock is owned and reared by most households accounting for a large portion of household incomes.

14. The Gewog has 11 irrigation schemes that cover 40 km. It also has 1 RNR centre, 3 farmer's cooperatives, 1 BHU, 6 outreach clinics, 1 Higher Secondary School, 5 Community Primary Schools, and 10 Non-formal education centers.

15. There are two micro hydels in the Gewog at Chendebji and Tangsibji respectively. The micro hydel at Tangsibji village was established in 1987 with a generating capacity of 30 kW benefiting 53 households. The micro hydel at Chendebji was established in 2005 with a generating capacity of 70 kW benefiting 31 households. All villages now have electricity supply. Besides the Trongsa Dzong, the most popular and sacred monument under Trongsa Dzongkhag, Chendebji Chorten is located within this Gewog. There are 14 lhakhangs in the Gewog.

Drakteng Gewog

16. Drakteng Gewog is the second Gewog in Trongsa that is affected by the NHPP. It is impacted because 4 households comprising of 19 displaced persons will lose 10 decimal (100 decimal = 1 acre) of land each to accommodate 1 transmission tower each.

17. Drakteng Gewog is located about 25 km south-east of Trongsa Dzong. Although, in size, it is the smallest of the 5 Gewogs in Trongsa, covering just 84 km², it is the most populous consisting of 37 villages with a total population of 2,697 people and 445 households. It has a population density of 31.9 persons per km². The Gewog has 67 percent of its land under forest cover⁴.

18. Drakteng Gewog has 1 RNR Centre, 1 BHU, 3 Out Reach Clinics, 3 farmers cooperatives, 8 irrigation schemes, 1 Higher Secondary School, 1 Middle Secondary School, 3 Community Primary Schools, and 4 Non-formal education centres. The Gewog has 20 Lhakhangs⁵.

19. Paddy, maize, wheat, and vegetables are the major crops cultivated. Most households are engaged in livestock rearing, which is an important source of household income. Although all 37 of the villages are electrified, not all the households are electrified. Out of 445 households, 420 households receive electricity while 25 households do not receive electricity⁶. However, the un-electrified households will be electrified in the current 11th five year plan.

⁴ 11th Five year Plan Document

⁵ 11th Five Year Plan Document

⁶ 11th Five Year Plan Document

Langthel Gewog

20. Langthel Gewog is the third Gewog in Trongsa that is impacted by the NHPP. It impacts because 2 households comprising of 11 displaced persons will lose 10 decimal of land each to accommodate 1 transmission tower each.

21. Langthel Gewog is located about 52 km South-East of Trongsa and covers an area of 508 km². The Gewog has a population of 2,637 people living in 424 households spread across 20 villages with a population density of 5.2 persons per km². 78 % of the Gewog is under forest cover.⁷

22. Langthel Gewog has 1 RNR centre, 2 BHUs, 6 Out Reach Clinics, 23 irrigation schemes covering 91 km, 1 Lower Secondary School, 4 Community Primary Schools, and 15 Non-formal education centres. The Gewog is home to 8 Lhakhangs ⁸.

23. Paddy, maize, mandarin, and vegetables are the major crops and fruits grown in the Gewog. Livestock rearing is a key source of income with most households owning and rearing livestock.

24. 17 of the 20 villages under the Gewog are electrified and 387 of the 424 households are electrified⁹. The un-electrified households will receive electricity in the current 11th five year plan.

1.4. Project Components

25. The Project components are described in this section. The location of the Project components from the onset had the broad objective of ensuring that as far as possible the facilities would be constructed on government land so that there would be minimal impact on land and livelihoods of villagers. Figure 1 below depicts the main Project layout.

⁷ 11th Five year Plan Document

⁸ 11th Five Year Plan Document

⁹ 11th Five Year Plan Document

26. The main components of the Project are listed below:

- (i) Concrete Gravity Dam;
- (ii) Cofferdam and Diversion Tunnel;
- (iii) Intake and De-Silting Chamber;
- (iv) Head Race Tunnel (HRT),
- (v) Surge Shaft;
- (vi) Pressure Shaft;
- (vii) Power House Complex;
- (viii) Tail Race Tunnel;
- (ix) Main Access Tunnel and Adits;
- (x) Access roads; and,
- (xi) Power Transmission Line.

27. A brief description of the main Project components mentioned above is provided below:

1.4.1. Dam

28. The proposed dam is located on the Nikachhu at Lorim, about 5 km from Chendebji Chorten. The envisaged Dam height is 33 m with back flow up to 810 m and a gross reservoir volume of 0.537 MCM.

1.4.2. Cofferd Dam and Diversion Tunnel

29. During construction of the dam, the river will be diverted, using a diversion tunnel. Cofferdams (both upstream and downstream) will be required to keep the construction sites dry, to avoid hampering the construction progress and to ensure the safety of the site against flooding. For the design of the diversion tunnel, 1-in-25 year flood was considered which is calculated as 80 m³/s. The total length of the diversion tunnel is 147.92 m, with a drop of about 4 m over that distance.

1.4.3. Intake and De-silting Chamber

30. To take advantage of the good topography at the dam site, the power intake has been proposed as a “side” intake type. Side intake is the best option in sediment laden rivers. The De-Silting Chamber will allow deposition of finer sediments, so that they will not enter into the Power House and Turbines. These deposited sediments will be flushed out from the Silt Flushing Tunnel as required.

1.4.4. Head Race Tunnel

31. The completed diameter of the Head Race Tunnel (HRT) will be 4 m, over a length of

12.144 km. The maximum velocity of water flow in the tunnel will be 1.96 m/s. Construction of the HRT will require five adits and associated access roads and muck disposal areas. Four associated access roads will be taken off from the National Highway and one from the existing farm road at Tangsibji. Muck disposal from the Adits will be undertaken adjacent to the access roads. Muck disposal sites will be re-vegetated once the construction work is complete.

1.4.5. Surge Shaft

32. The diameter of the surge shaft is 10.5 m with a height of 57.2 m. The top elevation of the surge shaft is at 2,319.7 masl. The surge shaft will be located at the end of the Head Race Tunnel, near the Power House at Norbuodi.

1.4.6. Pressure Shaft

33. An underground inclined pressure shaft of 3 m diameter and 932 m long has been proposed.

1.4.7. Power House

34. Due to unfavourable topography at Norbuodi for a surface Power House, an underground Power House has been proposed, which will require a Main Access Tunnel during construction. The dimensions of the Power House cavern and Transformer Cavern is 66.67 m (length) x 19 m (width) x 41 m (height) and 61 m (length) x 14 m (width) x 27.1 m (height) respectively.

1.4.8. Tail Race Tunnel

35. A Tail Race Tunnel of 4 m diameter and 443 m long is proposed. The tail water will be discharged into the reservoir of Mangdechhu Hydro Power Project (a cascading scheme), adding power potential to that project.

1.4.9. Main Access Tunnel and Adits

36. A D-shaped Main Access Tunnel (MAT), 7 m in diameter and length of 553 m is proposed with additional adits for Power House, Pressure Shaft, and TRT (total length of 1,032 m).

1.4.10. Project Ancillaries

37. The Nikachhu Project will require ancillary structures to facilitate construction

and operation of the Project. These include the residential complex, non-residential complex, contractor facility and establishment, warehouse, workshops, muck disposal sites and explosive magazines.

1.4.11. Access Roads

38. The main Project components detailed above, by them, will not impact any private land. All the land required for these Project components fall under State Reserved Forest Land (SRFL). However, access roads to the dam site, Adit III, Surge Shaft, Power House and Transmission Lines will entail the acquisition of some private land as detailed below:

1.4.11a. Access Road to Dam and Project Colony

39. An access road of approximately 2.1 km will be required to connect the dam site and Project colony with the Thimphu-Trashigang National Highway. A take-off is proposed along the National Highway at Lorim village under Tangsibji Gewog. The access road will be on the left bank of the Nikachhu, away from the Jigme Singye Wangchuck National Park. All access roads will require forest clearing, slope stabilization, and re-vegetation along the roadside. The access road to the dam site and Project colony will displace 2 households consisting of 11 displaced household members who will lose a total of 0.587 acre of land to the Project.

1.4.11b. Access Road to Surge Shaft

40. An access road with a length of approximately 1.50 km will be required to connect to the Surge Shaft area at Norbuodi. A take-off is proposed along the National Highway at Chipchipokto, Tangsibji Gewog. The access road to the Surge Shaft will displace 1 household consisting of 5 displaced household members who will lose 0.210 acre of land to the Project.

1.4.11c. Access Roads to Power House

41. The Power House will be approximately 300 m upstream of the Mangdechhu dam. An access road of 5.7 km will be constructed for access to the Power House.

42. The access road to the power house will displace the most number of households. This access road will displace 8 households consisting of 38 displaced household members who will lose a total of 2.357 acres of private land to the Project.

1.4.11d. Access Roads to Adits

43. There will be five adits, four access roads will be taken off the existing National Highway and one from the existing farm road. The total length of access roads for the adits will be 10.368 km. The access roads to the adits will displace 1 Community Primary School which will lose 0.423 acre of land to the Project.

1.4.11e. Access Road Summary

44. Most access roads to the mentioned Project components have their off take from the National Highway and existing farm road. Table 2 below depicts that in total 16.488 km of access roads will be constructed leading to the different Project structures.

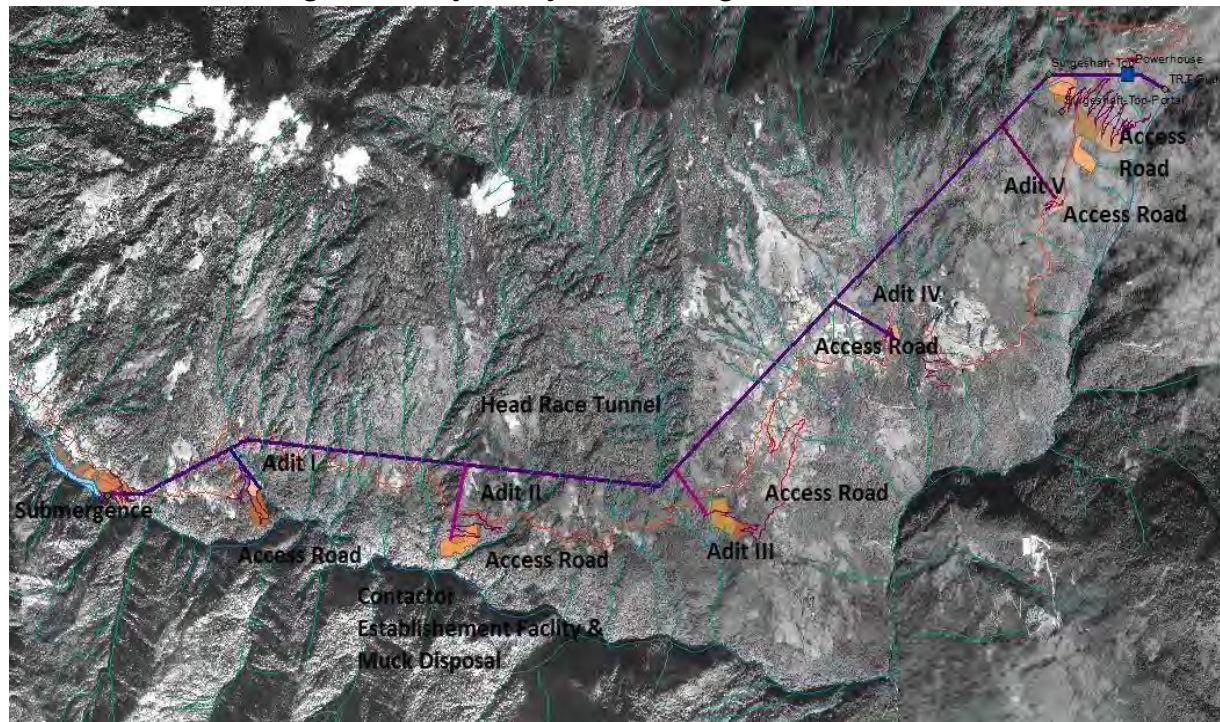
45. All required access roads are summarized in Table 2.

Table 2: Access road length and locations

Sl. No	Description	Length (Km)	Village	Locations	
				Take-off	Termination point
1	Access Road to Dam Complex from NH2	2.100	Lorim	90°22'21.644"E 27°27'5.512"N	90°22'22.172"E 27°26'55.415"N
2	Access Road to Adit-1 from NH2	2.278	Nyla	90°23'11.901"E 27°26'56.919"N	90°23'26.458"E 27°26'59.718"N
3	Access Road to Adit-2 from NH2	1.973	Zapla	90°24'52.422"E 27°26'52.865"N	90°24'48.676"E 27°26'42.483"N
4	Access Road to Adit-3 from NH2	1.943	Tangsibji	90°27'45.973"E 27°27'57.731"N	90°27'49.284"E 27°27'57.018"N
5	Access Road to Adit-4 from NH2	0.577	Tsangkha	90°27'45.88"E 27°27'57.703"N	90°27'49.317"E 27°27'56.949"N
6	Access Road to Adit-5 from NH2	0.417	Norbuodi	90°28'51.5"E 27°28'42.224"N	90°28'55.448"E 27°28'46.593"N
7	Access Road to Adit to BVC and Surge Shaft top from NH2	1.500	Norbuodi	90°29'10.644"E 27°29'25.744"N	90°28'52.053"E 27°29'29.576"N
8	Access Road to Power House Complex from NH2	5.700	Norbuodi opposite Chenjapang	90°29'8.994"E 27°29'24.413"N	90°29'34.417"E 27°29'16.793"N
TOTAL LENGTH		16.488			

Source: DGPCCL

Figure 2: Project Layout showing all access roads



Source: DGPCL

1.4.12. Transmission Line and Towers

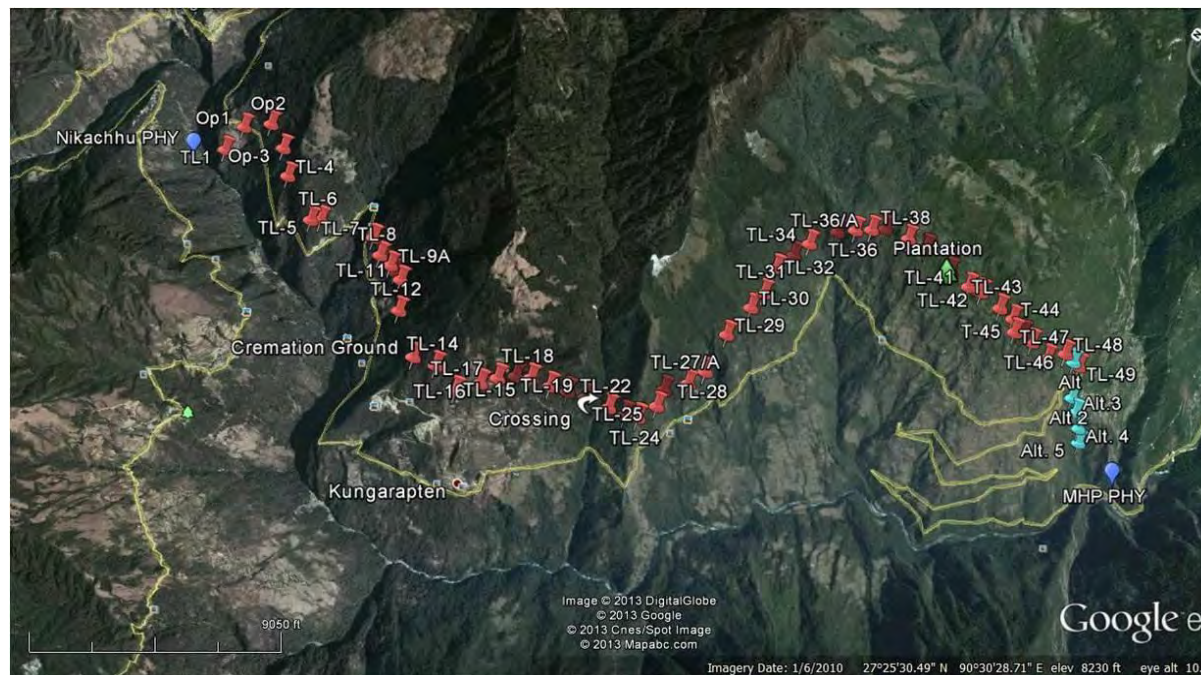
46. The power from the NHPP will be evacuated through a double circuit 132 kV transmission line to the Mangdechhu 400/132 kV, 200 MVA ICT station at Yurmo in Langthel Geog, Trongsa. Further evacuation to India will be through the Mangdechhu HEP (720 MW) transmission lines. The length of transmission line from the NHPP Power House to the Mangdechhu HPP Pothead yard is 18.6 km. Installation of this transmission line will involve clearing within the line Right-of-Way.

47. Power Transmission Line is a vital component for distribution and evacuation of electric power. In order to evacuate power from Nikachhu pot head yard to Mangdechhu pot head yard, 61 Transmission towers of 132 kV will have to be constructed.

48. The 18.6 km Transmission Line will stretch through Tangsibji, Nubi, Drakteng and Langthel Gewogs. Special care was taken when surveying the Transmission Line route to avoid settlements, private land, plantations, wet land, monuments, common property resources and public utilities.

49. Of the 61 transmission towers to be constructed, 55 fall on government land and 6 towers fall on private land. Therefore, 60 decimal of land will have to be acquired from 6 displaced households (consisting of 30 displaced household members) who will lose 10 decimal of land each towards the footings of the 132 kV transmission towers.

Figure 3: 132 kV Nikachhu Transmission Line



Source: Bhutan Power Corporation

1.5. Project Benefits and Impacts

50. The Project's benefits far outweigh the negative impacts. Connection of the power to the grid will ensure access to reliable and regular supply of electricity for the communities living around the Project area. The villages served by the present Chendebji micro hydels do not receive stable supply of power. However, BPC is in the process of connecting these villages along with the micro hydels to the grid, thereby ensuring reliable supply of electricity. The Project will have several access roads to adits, muck disposal sites, colonies and Power House, which will also provide access to villagers to their fields or between villages. While access will improve, the increase in population may necessitate up-gradation of school and health facilities to cater to the needs of an increased population. The area would also experience substantial local economic development opportunities leading to investments in infrastructure such as houses and buildings by locals for lease to Project personnel in addition to facilities such as market sheds and fresh produce sales outlets.

1.6. Measures to minimize impact

51. Resettlement effects have been minimized by avoiding the acquisition of private land and property as far as possible. The access roads have been realigned and will be altered, if found necessary, during construction. As far as possible, vacant government land has been identified for the location of Project infrastructure.

52. Efforts were made to minimize the adverse impact of the Project. Measures adopted for minimizing the adverse impact are:

(i) Site selection for constructing infrastructure and other facilities were done in such a manner which involved minimal acquisition of private land.

(ii) During design stage, extra care was taken to ensure that religious structures/ public property were avoided.

(iii) Efforts were made to avoid affecting larger settlements. As a result, no families will be physically displaced.

(iv) Stone crushing units and other noise-generating activities are located away from residential areas as far as possible to mitigate the effects of noise pollution. Similarly, the machinery and equipment that cause air pollution are located away from residential areas to alleviate air pollution caused by dust.

(v) One of the complaints of the DPs (from their experience of the under-construction Mangdechhu Hydro Power Project, which is located about 45 kms away from the NHPP site) was that of dust pollution. In order to avoid the impact of dust pollution on human health and on the productivity of crops, THyE will spray water regularly on the access roads or black-top the

access roads before they are open to Project-related traffic. This will resolve the issue of dust pollution emanating from the vehicles plying the Project access roads.

(vi) The alignment of access road to Adit IVs was changed during the course of this assessment to avoid the relocation of a homestead and to decrease the negative impacts of the Project.

53. The initial site selected for the Power House was changed due to fair rock conditions and high permeability, which would lead to time and cost overrun. In a way, this was also advantageous in terms of social impacts since the number of displaced households has drastically reduced with change of site. According to the earlier SIA, 70 households (comprising of over 300 displaced persons) were going to be displaced. The change in the site of the Power House has resulted in the displacement of only 17 households and 1 CPR (comprising of 84 displaced persons). In this manner, keeping with the objectives of the ADB SPS 2009, cautionary care principle has been applied in finalizing the sites to avert acquisition of private land as far as possible.

1.7. Objectives of the Resettlement Plan

54. This Resettlement Plan (RP) is part of the Detailed Project Report carried out for the NHPP). The objective of the RP is to mitigate all unavoidable negative social and resettlement impacts arising out of the Project. The Resettlement Plan was prepared assimilating information from a census of affected households, verification of affected land, 14 focus group discussions with local administration, key informant interviews with village leaders and consultations carried out with Displaced Persons and local government officials.

55. The RP details the approach, principles and measures adopted in minimizing the social impacts caused by the Project. This plan complies with ADB's Safeguard Policy Statement, 2009 (SPS-2009) to protect the rights of the Displaced Persons and communities. The issues /aspects identified and addressed in this RP are:

Type and extent of losses, loss of livelihood or income opportunities and collective losses such as CPR and social infrastructure;

- (i) Consultation with stakeholders and scope of people's participation in the Project;
- (ii) Existing policy framework;
- (iii) Entitlement matrix with provisions for compensation, assistance and restoration of income;
- (iv) Estimation of cost for implementation of R&R activities;
- (v) Institutional framework for the implementation of plan including monitoring and evaluation mechanism.

CHAPTER 2: SCOPE OF LAND ACQUISITION AND RESETTLEMENT

2.1. Classification of the Project

56. The NHPP is classified as Category B¹⁰ in accordance with ADB's Safeguards Policy Statement (SPS, 2009), as there are no significant¹¹ involuntary resettlement impacts. The overall resettlement impacts are being avoided or minimized through careful Project siting during the design stages. The Nikachhu Hydropower Project will not necessitate any relocation of housing and resettlement of people. 17 households and 1 CPR will be affected as a result of the Project. The 17 displaced households comprise of 84 Displaced Persons. A total of 4.177 acres of private land would be acquired for the Project.

57. Table 3 below presents the details of the households displaced by the different Project components such as access road construction and location of the Transmission Line towers.

Table 3: Component-wise details of the displaced households and assets

S. No.	Name of Project component Access Road(s) to:	No. of displaced households	No. of displaced persons	Total private Land to be acquired (acres)
1	Dam and Project colony	2	11	0.587
2	Adit III	CPR 1	NA	0.423
3	Surge Shaft	1	5	0.210
4	Power House	8	38	2.357
5	Transmission Line and Towers	6	30	0.600
	Total	17	84	4.177

Source: DGPCL

58. The NHPP is classified as having non-significant IR impacts for the following reasons:

- (i) Impacts of the Project on private land and assets is very minimal;
- (ii) In total only 17 households and 1 CPR is displaced by the Project;
- (iii) The number of Displaced Persons dwelling in the 17 displaced households comprises of 84 persons and will lose only 4.177 acres of their land.

¹⁰

A Project is assigned to one of the following categories depending on the significance of the probable involuntary resettlement impacts: (i) Category A – A proposed Project is classified as Category A if it is likely to have significant involuntary resettlement impacts. A resettlement plan, including a assessment of social impacts, is required. (ii) Category B – A proposed Project is classified as category B if it includes involuntary resettlement impacts that are not deemed significant. A resettlement plan, including a assessment of social impacts, is required. Category C – A proposed Project is classified as Category C if it has no involuntary resettlement impacts. No further action is required.

¹¹

The involuntary resettlement impacts of an ADB-supported Project are considered significant if 200 or more persons will experience major impacts, which are defined as (i) being physically displaced from housing, or (ii) losing 10% or more of their productive assets (income generating).

(iv) The 17 displaced households and 1 CPR will only lose some portion of their land to the Project and apart from land, no other assets are displaced. None of these displaced households will lose more than 10 percent of their total land holding to the Project. On an average, the 17 displaced households and 1 CPR will lose only 3.4 percent of their total land holding, with the maximum loss of land being 9.7 percent and the minimum land loss being 1.67 percent of their total holding.

(v) The Project does not impact any private fruit trees, standing crops, structures (homesteads/house or living quarters, other physical structure, commercial or industrial structure, business establishments, and rented or occupied commercial premises) religious, or cultural sites.

(vi) The Project will also not impact and/or displace any Indigenous population, groups, or people.

59. In general, the scope of impact is limited to loss of land due to transmission line and access roads to Project components. The 6 households losing land to the transmission line component of the Project will face some restriction on land use for which they will be compensated.

60. In line with ADB SPS, this Resettlement Plan is being prepared, which outlines the objectives, policy principles and procedures for land acquisition, compensation and other assistance/measures for DPs. The key components of this resettlement plan comprise of: (i) Scope of land acquisition and resettlements; (ii) Objectives, policy framework, and entitlements; (iii) Consultation, participation and grievance redress; (iv) Compensation, relocation, and income restoration; (v) Institutional framework; (vi) Resettlement budget and financing; (vii) Implementation schedule, and; (viii) Monitoring and evaluation.

2.2. Objective of the Census and Socio-Economic Survey

61. A detailed resettlement census and socioeconomic survey was conducted in the Project area. The objective of the surveys was to identify the DPs and generate an inventory of social and economic impacts on the Project DPs, the assets displaced, socio-economic profile of the Project DPs, their perceptions about the Project and rehabilitation and resettlement options. A schedule was prepared to collect detailed information on the socioeconomic status of the DPs and households as well as their ensuing losses. The survey instrument is enclosed in Annexure 1. Consultations were also undertaken with DPs, Project officials, Dzongkhag officials and other stakeholders.

62. The RP is based on a 100% census of the displaced persons and 100% inventory of losses and the detailed measured survey.

63. The first census and asset inventory of DPs was concluded in July, 2012. After conducting several consultations with DPs and local government officials, it was decided that a

'cut-off' date in order to minimize fraudulent practices and claims would be required. The cut-off date was set at 04.12.2012. The official Detailed Measurement Survey (DMS) to accurately measure displaced land individually was carried out in March-April 2014 by the Dzongkhag authorities in conjunction with the DGPCL staff and with the participation of the DPs who verified the land to be acquired from each of them.

64. Due to changes in the access roads, a fresh census and socioeconomic survey was carried out in April, 2014 to include the new DPs after the DMS was concluded and the location and amount of land to be acquired from each displaced household was finalized and confirmed.

2.3. Scope of Land Acquisition and Resettlement

65. This RP addresses direct and indirect impacts of Project construction and operation on DPs, families, households and communities. The direct and immediate impacts are those associated with Project construction, mainly land acquisition in the case of this Project. The RP makes provision for appropriate compensation and assistance to Project DPs, families and households.

66. The DPs are entitled to compensation and assistance in line with the policy framework adopted in this RP. The policy provides mitigation for loss of land, house, assets, and livelihood.

2.3.1. Impact on Land

67. In total 294.68 acres of land will be acquired by the Project. Of the 294.68 acres only 4.177 acres comprises of private land and the remaining 290.503 acres comprises of government land. Government land is all the land that is not registered in any private person or institutions' name (government or otherwise). In other words, any land that is not registered or that does not have a title deed (thram) belongs to the government. No specific government ministry or department owns land that is un-registered or does not have a thram. Government ministries and departments hold title deeds (thrams) for any institutional land belonging to them. The National Land Commission Secretariat (NLCS) is responsible, in general, for all government land in the country.

Table 4: Total land to be acquired by Project component

Sl. #	Component	Description	Area (Acre)	GRFL	Pvt. Land	Total SRFL (Acre)	Locations
1	Dam	Residential Complex	1.5	1.5	0	46.433	Nyala
		Non-Residential Complex	2.85	2.85	0		
		Reservoir Area	12.29	12.29	0		

Sl. #	Component	Description	Area (Acre)	GRFL	Pvt. Land	Total SRFL (Acre)	Locations
		Contractor Facility and Establishment	8.15	8.15	0.323		
		Batching Plant and Crushing Plant	6.93	6.93			
		Muck Disposal	10.76	10.76	0		
		Access Road	4.54	3.953	0.88		
2	Power House	Residential Complex	1.5	1.5	0	54.063	Norbuodi
		Non-Residential Complex	2.63	2.63	0		
		Contractor Facility and Establishment	16.6	16.6	2.068		
		Muck Disposal	17.55	17.55	0		
		Access Road	18.14	15.783	1.344		
3	Surge Shaft	Non-Residential Complex	0.91	0.91	0	18.01	Norbuodi Top
		Contractor Facility and Establishment	3	3	0		
		Muck Disposal	10.18	10.18	0		
		Access Road	4.13	3.92	0.237		
4	HRT and ADITs						
	ADIT - 1	Contractor Facility and Establishment	0.9	0.9	0	19.95	Alu Bari
		Muck Disposal	13.82	13.82	0		
		Access Road	5.23	5.23	0		
	ADIT - 2	Contractor Facility and Establishment	2.5	2.5	0	24.99	Zaapla
		Muck Disposal	18.04	18.04	0		
		Access Road	4.45	4.45	0		
	ADIT - 3	Contractor Facility and Establishment	6.5	6.5	0	31.787	Near Tsheringma Drupchhu
		Muck Disposal	20.55	20.55	0		
		Access Road	5.16	4.737	1.039		
	ADIT - 4	Contractor Facility and Establishment	2.5	2.5	0	12.14	Tsangkha
		Muck Disposal	8.14	8.14	0		
		Access Road	1.5	1.5	0		

Sl. #	Component	Description	Area (Acre)	GRFL	Pvt. Land	Total SRFL (Acre)	Locations
5	ADIT - 5	Contractor Facility and Establishment	2.5	2.5	1.904	18.62	Norbuodi
		Muck Disposal	15.33	15.33	2.24		
		Access Road	0.79	0.79	0		
	ADIT to Pressure Shaft	Muck Disposal	4.1	4.1	0	5.21	Norbuodi
		Access Road	1.11	1.11	0		
6	33 kV Distribution Line for Construction Power		59.3	59.3		59.3	
Total Area (Acres)			294.68			290.503	

Source: DGPCCL

Table 5: Type of Private Land to be acquired for the Project

S. No.	Type of land to be acquired	Amount of land to be acquired and replaced (in acres)
1	Wet Land	0.00
2	Dry Land	4.177
	Total	4.177

Source: Field surveys

68. All the land to be acquired is owned by people who possess land titles (Thram) issued by the concerned authority.

69. Table 6 below provides the displaced person-wise details of extent of land acquisition. The primary impact is on land. The type of land that will be impacted is dry land (which is not irrigated).

Table 6 Displaced Person-wise extent of land acquisition

Project Component	Name	Thram No	Land Type	Likely Acquisition (acres)	Total land holding (acre)	Land displaced by	% of total land displaced
Dam	Ugyen Zangmo	58	Dryland	0.107	2.000	Project Colony & Road	5.350
	Dorji	56	Dryland	0.480	4.950	Road	9.700

Project Component	Name	Thram No	Land Type	Likely Acquisition (acres)	Total land holding (acre)	Land displaced by	% of total land displaced
Adit III	Namgay Chholing CPS	527	Institutional Land (CPR)	0.423	2.819	Road	15.000
Surge Shaft	Sonam Wangchen	255	Dryland	0.210	6.000	Road	3.500
Power House	Dorji Zangmo	270	Dryland	0.183	9.500	Road	1.930
	Phub Zangmo	257	Dryland	0.241	12.401	Road	1.940
	Ugyen Tshomo	262	Dryland	0.280	5.000	Road	5.600
	Sonam Pelmo	240	Dryland	0.142	7.000	Road	2.030
	Tshewang Lhamo	272	Dryland	0.348	13.000	Road	3.600
			Dryland	0.121		Road	
	Sonam Wangchen	255	Dryland	0.132	6.000	Road	2.200
	Dorji Dema	258	Dryland	0.126	13.000	Road	3.020
			Dryland	0.267		Road	
	Tshang Tsha	269	Dryland	0.197	8.900	Road	3.950
			Dryland	0.155		Road	
	Kunzang Wangmo	181	Dryland	0.165	3.080	Road	5.360
Transmission Line	Phurpamo	284	Dryland	0.100	5.862	Transmission line	1.700
	Lemo	274	Dryland	0.100	3.000	Transmission line	3.330
	Tshering Mo	361	Dryland	0.100	3.641	Transmission line	2.750
	Tshering Dema	52	Dryland	0.100	6.000	Transmission line	1.670
	Sangay Wangdi	357	Dryland	0.100	5.600	Transmission line	1.780
	Tashi Wangmo	372	Dryland	0.100	4.130	Transmission line	2.420
Total				4.177	121.884	Average →	3.427

Source: Field survey

70. As enumerated in Table 6 above, the census survey made clear that none of the displaced households will lose more than 10 percent of their total land holding. On an average, the 17 displaced households will lose only 3.4 percent of their total land holding, with the maximum loss of land being 9.7 percent and the minimum land loss being 1.67 percent.

71. Apart from land, the Project will not impact any private fruit trees, standing

crops, structures (homesteads/house or living quarters, other physical structure, commercial or industrial structure, business establishments, and rented or occupied commercial premises) religious, or cultural sites.

2.3.1. Impact on Income arising from land

72. Due to the type of land being acquired as well as the extent of land acquisition, no significant impacts on the income of the displaced households is anticipated as a result of the acquisition. There may be minor impacts on incomes arising from land acquisition because the 6 households losing land to the transmission line towers will face some restrictions on their land use owing to the transmission tower footing on their land and the overhead transmission line that will pass through their land. Due to this, they will not be able to make optimal use of their land. To compensate them for the restriction of land use, an entitlement of 20 percent of the total cost of the impacted land will be paid at PAVA's rates as compensation for causing restricted land use. The total compensation to be paid under this entitlement amounts to Nu. 27,150.48. The 6 displaced households will receive Nu. 4,525.08 each as an additional 20 percent of the cost of their displaced land. These 6 households will lose 10 decimals of land each to the 6 transmission line towers footing.

73. All the other displaced households will lose only a small portion of their total land holding to the Project. The private land to be acquired comprises of either barren or fallow dry land with no crops or trees being grown on it.

74. The adverse impacts of the Project on the displaced households, mainly arising out of land acquisition, will be addressed through this Resettlement Plan.

2.4. Vulnerability Status of Displaced Households

75. As per the SPS 2009, the vulnerable are defined as *"individuals or groups who may experience adverse impacts from a proposed project more severely than others because of their vulnerable status"*. The SPS requires that vulnerable displaced persons be targeted with measures that ensure that a Project's adverse impacts do not fall on them disproportionately and that they share the benefits and opportunities of the development equally with others.

76. 3 of the 17 households displaced by the Project were categorized as vulnerable. Among these three, one is below the poverty line of Nu. 1,097 person/month and consists of 3 members (1 male and 2 females). One of the family members (male) is also disabled (dumb). The household is headed by a single woman named Sonam Pelmo. The second vulnerable household consists of only 2 female members one of whom is disabled (deaf) and the other is the head of the household whose name is Ugyen Tshomo. The third vulnerable household is regarded as vulnerable because it is headed by a divorced female (Phurpamo) and the household consists of only 2 female members, one of whom is 64 year old woman. In order to assist the vulnerable households, a vulnerable entitlement allowance has been

proposed in this RP.

77. Table 7 below presents the impact of each of the components in terms of Displaced Households, Displaced Persons and other impacts (trees, common property resources CPR).

Table 7: Summary Profile of the Displaced Population

Description	Units
Number of Displaced Households	17
Number of Displaced Persons	84
Number of Displaced Households with Vulnerability	3
Number of Displaced Households losing more than one Type of Asset	0
Number of displaced Household who would be Physically Displaced as a result of the Project	0
Number of Displaced Fruit Trees	0
Number of displaced CPRs	1
Total Affected Land (in acres)	4.177

Source: Census and socioeconomic survey

2.5 Scope of Land Acquisition

78. The impacted land is owned by 17 displaced households and 1 CPR (a Community Primary School). In total they will lose 4.177 acres to the Project.

2.5.1. Common Property Resources and Facilities

79. The Project will necessitate the acquisition of some land of Namgay Chholing Community Primary School (CPS), with 20 students and 2 teachers as of July 2014. A total of 0.423 acres of school land would be acquired with no impact on structures. The School was represented by the Tangsibji Tshogpa during the consultation meetings held with them to discuss the compensation and rehabilitation measures.

80. While it was noted during the site visits that a section of the Tangsibji micro-hydel canal near the fore bay was likely to be impacted by the Project during the design stage, adequate protective measures have been instituted to ensure that this canal is not impacted. Considering that the micro-hydel unit besides supplying electricity also provides water for irrigation purposes for the entire village of Tangsibji, the Project will ensure that this facility is not affected.

81. In general, the scope of Project impact is only limited to loss of land due to acquisition for construction of Project infrastructure such as access roads and transmission tower footing. All the Affected/Displaced Households will remain “on-site” and will not require to be relocated.

82. The RP has been prepared based on a 100% census of the displaced persons and 100% inventory of losses and the detailed measured survey. There were also assimilated group discussions with local administration, key informant interviews with village leaders and consultations were carried out with affected/Displaced Persons, local communities and local government officials.

CHAPTER 3: SOCIOECONOMIC INFORMATION AND PROFILE

83. This section presents the analysis of baseline socioeconomic information and characteristics of the displaced population. Apart from providing the socioeconomic background for the Project, the baseline characteristics also provides an insight on developing indicators, which will be useful for monitoring and evaluation of the RP.

84. The census of DPs and socioeconomic survey was carried out in the month of July 2012, and followed by a re-survey which was conducted in April, 2014 to include the changes in the access roads design and include the new set of displaced households. The objective of the socioeconomic/baseline study was:

- (i) To understand how the existing socioeconomic profiles may be displaced by the Project;
- (ii) To identify and assess the impacts of the Project in order to formulate plans to restore and improve the quality of life of the DPs;
- (iii) To create a baseline to monitor and evaluate the implementation of the RP.

85. The surveys also provided an opportunity to discuss the Project and its impending impacts with the DPs, on an informal and one-to-one basis. This helped in establishing the monitoring parameters and indicators, which will be used to study the Project impact on the socioeconomic condition of the people.

86. A detailed questionnaire was used to collect information on (i) demographic details of displaced families (ii) ownership of land and structure displaced (iii) their income and expenditure (iv) health conditions (v) livestock profile (vi) source of earning (vii) ownership of other assets, etc.

3.1. Socioeconomic Characteristics

87. The Social Impact Assessment (SIA) identified 17 households and 1 CPR that will be displaced by the Project. All 18 displaced representatives (including the CPR) participated in the consultations. A separate report has been prepared based on the outcome of the SIA. While the detailed results (for both displaced and non-displaced households) have been discussed in the SIA report, this section provides the survey findings related to the affected households only.

3.2. Demography

88. An adult representative of each displaced household was interviewed. Of the 17 displaced household representatives interviewed, 12 were women as shown in Table 8.

Table 8: Profile of Head of the Household by sex and village

Village	Sex of respondent		
	Female	Male	Total
	No.	No.	No.
Tangsibji	0	1	1
Tsangkha	7	2	9
Drangla	0	1	1
Institutional	0	1	1
Refe	3	0	3
KingaRabten	0	1	1
Yurmo	2	0	2
Total	12	6	18

Source: Socioeconomic survey

89. The data in Table 9 below shows that of the 12 women, 9 are also head of their households (HoH). It is important to clarify here that the 'head of household' concept was explained to the respondent to mean *'the person in the household who took major decisions and was responsible for the welfare of other members of the family.'* the respondents could identify the household head based on this definition.

Table 9: Profile of the Head of Households in the displaced households

Type of respondent	If respondent is head of household											
	No				Yes				Total			
	Sex of respondent				Sex of respondent				Sex of respondent			
	Male		Female		Male		Female		Male		Female	
	No	%	No	%	No	%	No	%	No	%	No	%
Displaced	3	17.64	3	17.64	2	11.76	9	52.94	5	29.40	12	70.60

Source: Socioeconomic survey

90. **Family Type:** Data on the relationship of family members to the household head shows that besides the household heads and their spouses, children, siblings, live together with them. This is indicative of extended family structures as shown in Table 10 (a) and 10 (b). In most households, older parents often take care of the younger children and cattle while the adults work in the fields. This also means that the elders are guaranteed care from relatives in their old age indicating that family links are still strong.

Table 10(a): Profile of the Family members in displaced households.

Type of Respondent	Relation to Household Head															
	Wife husband		Son daughter		Grandchild		Niece nephew		Father Mother		Sister Brother		Son daughter- in-law		Brother sister- in-law	
	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
Displaced	14	16.7	25	29.8	2	2.4	3	3.6	7	8.3	8	9.5	6	7.1	2	2.4

Source: Socioeconomic survey

Table 10(b): Profile of the Family members in displaced households

Type of Respondent	Relation to Household Head													
	Grand father Grand mother- in-law		Father Mother- in-law		Other relative		Servant		Other		Head		Total	
	No	%	No	%	No	%	No	%	No	%	No	%	No	%
Displaced	2	2.4	3	3.6	0	0	0	0	0	0	12	14.2	84	100

Source: Socioeconomic survey

91. **Age-group of the Displaced Population:** 58% of the total population are economically active (between the ages of 16 and 60 years) and support 42% of the total dependent population (less and equal to 15 years and 61 years and above). The household size is 5, which match the national average of 5 members a household. The data also shows that about 49% of the population is male and 51% female. The median age present in the population is 34 years. Youth (aged 25 years and below) comprise of 42% of the population implying a relatively young population present in the Project area (See Table 11).

Table 11: Age-Group of the Displaced Population

Respondent type	Sex	Age in categories											
		15 years and below		16 to 25 years		26 to 35 years		36 to 60 years		61 years and above		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Displaced	Male	11	13	6	7.1	5	6	14	16.7	5	6	41	48.8
	Female	13	15.5	5	6	6	7.1	13	15.5	6	7.1	43	51.2

Source: Socioeconomic survey

92. **Marital Status:** The data shows that 44% of the displaced population is married and 43% are unmarried. Also, 13% had been married at one time but are widowed or divorced at present (See Table 12).

Table 12: Marital Status of the Displaced Population

Respondent type	Marital status of members													
	Unmarried		Widow		Widower		Divorcee		Other		Married		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Displaced	37	44	4	4.7	3	3.6	4	4.7	0	0	36	43	84	100

Source: Socioeconomic survey

3.3. Economic Profile of the Displaced Population

93. Agriculture is the dominant source of livelihood in the area with 46.4% of the displaced population engaged in agriculture.

3.3.1. Occupation, Employment and Livelihoods

94. In terms of the types of occupation people presently follow, it can be seen that 46.4% are in farming while 31% are engaged in other vocations such as business, civil service, and in the private sector. 21.4% are currently students. The data in Table 13 below shows that currently occupations are not diversified which also mirrors the low development of the market economy wherein a large part of the population works in subsistence agriculture while entrepreneurial activities and rural industrialization remain low.

Table 13: Occupation Status of Displaced Households

Respondent status	Occupational status of households													
	Civil servant		Business		Monk		Army		Student Minor		Others		Farmer	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Displaced HHs	7	8.33	0	0	1	1.20	0	0	18	21.42	19	22.62	39	46.43

Source: Socioeconomic survey

95. People are not highly skilled, with 70.2% possessing no skills. There are a few that are into carpentry and masonry while women practice weaving. Based on these findings,

skill development is one area that the Project could consider for development, especially for the economically active population who could work on the Project to supplement their income.

Table 14: Skill Status of the Displaced Households

Respondent status	Type of skills possessed											
	Carpentry		Masonry		Others		No skills		Weaving		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Displaced	8	9.5	2	2.4	9	10.7	59	70.2	6	7.2	84	100

Source: Socioeconomic survey

96. Off-farm work opportunities seem to be more available in the villages of Tangsibji Gewog than Drakteng or Langthel Gewogs owing to its proximity to the district head office as well as possibly more developmental works being implemented in this area creating job opportunities with contractors as semi-skilled or unskilled labour.

3.4. Health and Education

Health

97. Morbidity data collected during the interviews shows that only 5 displaced persons from 4 displaced households' fell sick in the last year. 3 of them suffered from cough and cold, 1 suffered from dysentery and 1 suffered from fever. None of them lost any work days because of their illness.

Education attainment

98. Table 15 data on education attainment shows that 38% of the population has not had any education. From the non-literate population, 23% are females and 15% are males. Only 27% have studied till primary school and a further 13% studied till high school. From among those that have studied, males exceed females in both primary school and high school levels but females exceeded males at the higher secondary level. Overall, the data shows a low level of educational attainment among the population.

Table 15: Educational Profile of the Displaced Population

Respondent	Sex	Educational attainment
------------	-----	------------------------

type		Primary (Class VI or less)		High school (Class VII to Class X)		Higher secondary (Class XI to Class XII)		Graduate		Monastic education		Non- formal		No education		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Displaced	Male	12	29.2	7	17.1	5	12.2	2	4.9	2	4.9	0	0	13	31.7	41	100
	Female	11	25.5	6	14	6	14	1	2.3	0	0	0	0	19	44.2	43	100

Source: Socioeconomic survey

3.5. Land Ownership and Utilization

99. The land data shows that displaced households have on an average 4.7 acres of dry land and 1.3 acres of wet land. The data indicates that the area of land utilized for farming is not optimally used. The proportion of land cultivated to the proportion of land owned in terms of dry land is 74% being cultivated and the balance left fallow. However, almost all the wetland owned is cultivated. Though leaving land fallow for some years could be good for regeneration of fertility, however, it would have consequences for food security. Insufficient household labour, hilly and steep terrain hindering effective farm mechanization and wild life predation on crops are some reasons that farmers may be leaving more land fallow over time.

3.6. Agricultural Production

100. Overall among the displaced households, paddy yield shows a median yield of 355 kg/acre whereas the median yield of maize is 325 kg/acre. The national average for paddy yields is 1,122 kg/acre while for maize it is 866 kg/acre. The data reflects the fact that both paddy and maize yields are not up to national averages.

101. Small quantities of a few types of vegetables such as potato, chilli, cabbage, greens, beans etc. are sold, although most seem to be self-consumed at the household level. Displaced households sold 3% of their paddy, 15% of their maize, 73% of their potato and 66% of their chilli. This goes on to show that local cereals like paddy and maize are consumed at the household level whereas vegetables are a source of income which farmers sell to supplement their income. Besides irrigation and credit discussed in another section, farmers also use a few other inputs. Farmers in the Project area are noted to use very low quantities of inorganic fertilizers (average of 17 kg used) and chemical pesticides (average of less than half a kg) suggesting an almost organic form of farming in practice. Other inputs such as improved seeds and seedlings are used. Mechanization is also low with very few households owning power tillers, rice hullers, threshers, winnowers and oil expellers.

102. The data shows that among those who used irrigation channels to irrigate their paddy from both displaced and non-displaced households, majority mentioned that water was not enough for irrigation mainly due to seasonal shortages. From those that mentioned limited water received for their crops, the majority claimed that water was not sufficient during transplantation owing mainly to limited water received from the source which is determined by the intensity of rainfall in any given year. Other minor reasons mentioned were seepage and ineffective maintenance regime of the canals. Reliable availability of irrigation would enhance crop production for villagers in the Project area and promote diversification into horticulture (vegetables and fruits). There seem to be opportunities for people to re-invest savings from dairy income to drip and sprinkler irrigation for vegetable production to meet the substantial demand for vegetables by both the Nikachhu and Mangdechhu hydropower Project workers.

103. One of the pressing issues confronted in farming across the country is wildlife predation on crops which has remained an unresolved problem till date. It is believed by villagers that the health of the forests as well as the extent of forest coverage in the district (which currently stands at 84%) combined with strong conservation policies and ban on poaching of wildlife has led to an increase in wild animals.

Table 16: No. and percentage of respondents' experience of wild life damage to crops by animal

Type of wild animal damaging crop	No. of households experiencing predation
Deer	3
Monkey	3
Boar	9
Rats	11
Others (porcupine)	3
Others (Sambhar deer)	1

Source: Socioeconomic survey

3.7. Livestock Production

104. In terms of livestock ownership, the data shows that people only rear cattle and poultry. Since the villages are close to the road, rearing of horses is rare. It is pertinent to note that the displaced persons group averaged a cattle holding of 3 improved-breed cows, whereas the non-displaced group had an average of at least 1 improved-breed cow. This indicates that villagers are into small-scale backyard dairy farming. People primarily maintain them for drought and farmyard manure. Animal husbandry as such forms a part of an integrated farming system. Since meat is widely available in the market, farmers purchase meat from butcher shops in Trongsa.

3.8. Housing and Access to Basic Services

105. Table 18 below shows that 50% of the households were constructed in the last decade, in the period between 1992 and 2002 and 94% of the houses built during this period have CGI roofs, stonewalls and stone and wooden floors. This seems to be the most typical type of house in the villages visited. Houses built in the earlier decade ending 1991 also were of the same type. The data shows that the non-displaced respondents being larger in number also had a few respondents that reported other types of houses as well such as wood and cement based walls and floors. On an average the villagers had 7 rooms for dwelling purposes excluding the kitchen and toilet: by Bhutanese standards these homesteads are fairly well endowed in terms of space and size of houses. The type and size of houses can be considered as an economic indicator so it can be said that the communities visited especially in Tangsibji Gewog own well built large houses are well-off.

Table 18: Type of the Housing of the Displaced Households

House type	Displaced Households					
	Year House Constructed category					
	1992 to 2012		1972 to 1991		Total	
	No	%	No	%	No	%
CGI roof, stone walls and stone/wood floors	8	44.4	9	50.0	17	94.4
CGI roof, wood walls and wood floors	1	5.6	0	0	1	5.6
CGI roof, cement walls and floors	0	0	0	0	0	0
Total	9	50.0	9	50.0	18	100

Source: Socioeconomic survey

106. In terms of access to other basic services such as safe drinking water, sanitation and electricity, data reveals that all households covered in the survey had access to electricity and sanitation facilities. It is evident that households in the Project area have access to the most basic services, which the government provides for villagers.

107. In terms of developmental facilities provided by the government at the Gewog and village level, the data shows that by far the most used government facilities provided in the Project areas are the roads; less frequented facilities are the RNR office as well as the Forest Range which also provide extension services to farmers. The data is suggestive of good usage of basic services by villagers.

108. Table 19 below summarizes the locations of the facilities accessed by the village.

The facilities present in the Gewogs are relatively close by and can be accessed within one hour of walk from the villages. The district head office is one hour's drive from Tangsibji and Drakteng Gewogs, and one and a half hours' drive from Langthel Gewog. The information shows that developmental facilities are provided and located at accessible distances from the villages. In descending order of frequency of visits per year to facilities; the most used facilities are the road (average of 98 times); Market (9 times); Community School (3 times); Primary School (3 times); Forest Range Office (2 times); RNR Centre, ORC, Hospital, Dzongkhag (once).

Table 19: Details of the development facilities accessed by the villages

Village	BHU	School	RNR Center	Gewog Off	Market	District HQ	Nearest motorable road
Tangsibji	Tashiling	Namgaych	Tashiling	Tashiling	Tashiling	Trongsa	Farm road
Tsangkha	Tashiling	oling	Tashiling	Tashiling	Tashiling	Trongsa	Highway
Drangla	Tashiling	Tashiling	Tashiling	Tashiling	Tashiling	Trongsa	Highway
Refe	KingaRabt	Chendebji	KingaRabten	KingaRabten	KingaRabten	Trongsa	Highway
KingaRabten	en	Samcholing	KingaRabten	KingaRabten	KingaRabten	Trongsa	Highway
	KingaRabt	KingaRabte	KingaRabten	Langthel	Langthel	Trongsa	Highway

Source: Socio-economic survey

3.9. Access to Credit and Savings

109. Access to economic institutions and instruments such as credit and loans are necessary for local economic development. Data collected reveals that 5 displaced households, on average availed loans of around Nu. 31,550. The data shows that the incidence of people taking loans is quite low indicating a risk-averse behaviour of villagers. Most took loans for reasons such as house renovations, purchasing improved-breed dairy cattle, and business investments while few households borrowed money to fund the education of their children. Loans were availed from the banks.

110. Farmers saved a median amount of Nu. 11,000 used mainly for education of children, consumption, conduct of religious ceremonies, medical treatment, purchase of agricultural inputs and house renovation. It is evident that most savings are spent on household expenses leaving less funds for capital investments.

3.10. Income, Asset Ownership and Expenditure

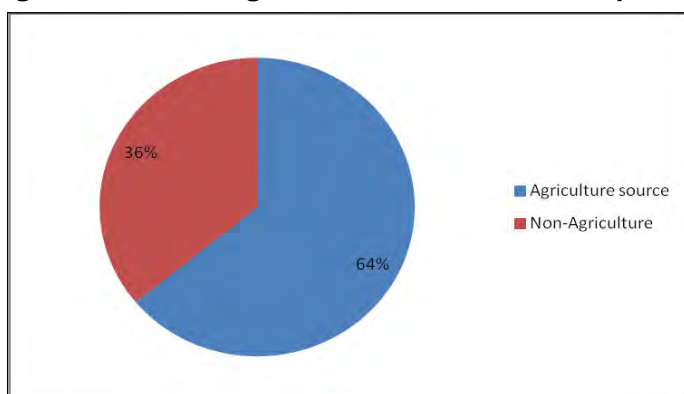
111. Table 20 below shows data on income segregated by income earned from agriculture sources (sale of agriculture and livestock produce and animals) and non-agriculture sources such as remittances, off-farm labour, business, skilled labour, pottery and weaving. The data reveals that the median income earned from agricultural sources is substantially higher and more than double that earned from non-agricultural sources. This suggests that there is scope to further enhance income from agricultural activities such as horticulture and dairy farming since a ready market will be created once there is an influx of workers for the NHPP. However, farmers also need to make investments in such enterprises and therefore the question of assets, savings and loans come into play in order to take advantage of the market created by the NHPP for their produce.

Table 20: Statistics on annual income of displaced respondents' by agriculture & non-agriculture sources

Statistics	Total agriculture income sources (Nu)	Total income non-agricultural sources (Nu)
Mean	80,700	51,560
Median	65,800	23,600
Minimum	21,000	0
Maximum	282, 000	191,000

Source: Socioeconomic survey

Figure 4: Percentage of income source of displaced persons



Source: Socioeconomic survey

112. Figure 4 shows that displaced households derive 64% of their income from agriculture sources. This shows that farmers already have a comparative advantage in activities at farm level as they are proficient with the techniques of farming, have productive assets such as land, labour and basic machines and therefore are in a favourable position to enhance

49

production with technical advice from the extension service in improved agricultural technologies.

113. Often incomes are under-reported so a household assets inventory can be useful to assess consumptive behaviour and holdings of people. The data in Table 21 below indicate that farmers in both displaced and non-displaced households not only seem to be relatively well endowed with most of the household necessities but they also have invested in luxury goods such as TVs, cars, refrigerators and archery bows indicating that farmers do hold disposable income after meeting living costs.

Table 21: Types of Assets Owned by Displaced Households.

Asset type		No	%
Asset owned - radio	Yes	14	82
	No	3	18
Asset owned - TV	Yes	12	71
	No	5	19
Asset owned - refrigerator	Yes	11	65
	No	6	35
Asset owned - bicycle	Yes	1	6
	No	16	94
Asset owned - motorbike	Yes	1	6
	No	16	94
Asset owned - car	Yes	4	24
	No	13	76
Asset owned - mobile phone	Yes	17	100
	No	0	0
Asset owned - rice cooker	Yes	17	100
	No	0	0
Asset owned - water boiler	Yes	17	100
	No	0	0

Asset type		No	%
Asset owned - bukhari	Yes	13	76
	No	4	24
Asset owned - electric iron	Yes	5	29
	No	12	71
Asset owned - electric fan	Yes	3	18
	No	14	82
Asset owned - rice mill	Yes	2	12
	No	15	88
Asset owned - sewing machine	Yes	1	6
	No	16	94
Asset owned - tractor	Yes	4	24
	No	13	76
Asset owned - machine plough	Yes	1	6
	No	16	94
Asset owned - thresher	Yes	0	0
	No	17	100
Asset owned - winnower	Yes	3	18
	No	14	82

Asset type		No	%
Asset owned - foreign bow	Yes	5	29
	No	12	71
Asset owned - alter	Yes	16	94
	No	1	6

Asset type		No	%
Asset owned - insect pump	Yes	2	12
	No	15	88
Asset owned - jewellery	Yes	4	24
	No	13	76

Source: Socioeconomic survey

114. Data in Table 22 on expenditures shows that overall farmers expenditures on consumption (food, clothing and children education) is much lower than non-consumption expenditure (health, service bills, transportation, religious ceremonies, taxes, fuels, house maintenance, labour hire, production inputs). The farmers in the displaced category seem to spend a median amount of Nu. 88,550 in total expenditure. As a percentage share of the total expenditure, displaced households spend only 28% of their income on consumption.

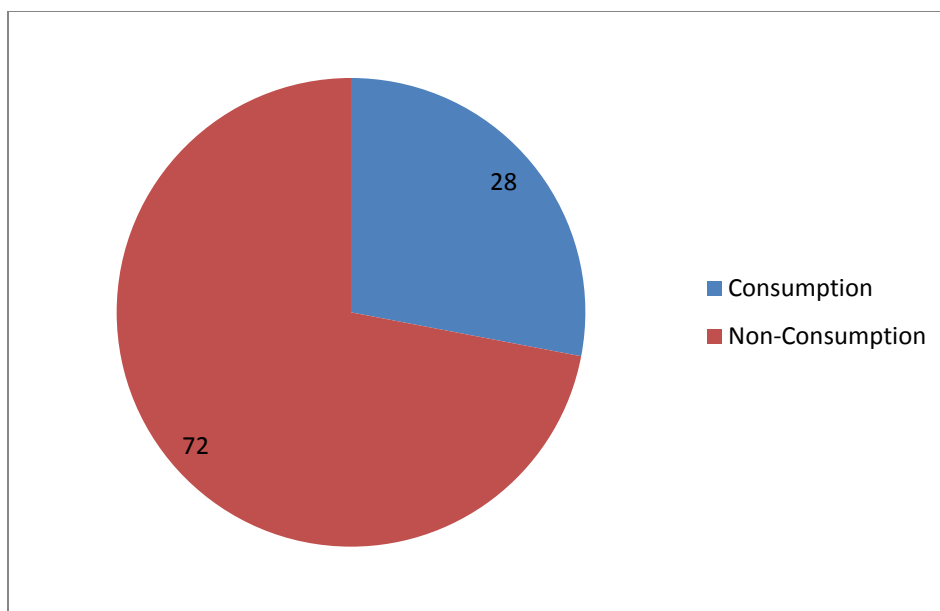
Table 22: Expenditure Pattern of Displaced Households

Statistics	Expenditure on consumption (Nu)	Total non-consumption expenditure (Nu)
Mean	34,060	84,154
Median	30,450	58,100
Minimum	12,200	29,850
Maximum	84,000	183,100

Source: Socioeconomic survey

115. The data reveals that the needs of rural households are becoming diversified and there are many expenses to meet besides fulfilling the dietary needs of the household. In such a situation there will be an increasing requirement to meet these needs through augmented income for the households.

Figure 5: Percentage share of expenditure by type



Source: Socioeconomic survey

3.11. Vulnerability

116. As per the SPS 2009, the vulnerable are defined as *“individuals or groups who may experience adverse impacts from a proposed project more severely than others because of their vulnerable status”*. The SPS requires that vulnerable displaced persons be targeted with measures that ensure that a Project’s adverse impacts do not fall on them disproportionately and that they share the benefits and opportunities of the development equally with others.

117. While women-headed households would be affected as a result of the Project, being a woman-headed household in Bhutan does not necessarily imply that the household is vulnerable. Women who head households in many cases are not widows or divorcees but enjoy this status in the homes by virtue of them not only owning the land but also participating in decisions about farming, use of family resources, and reproductive (continuity of household activities) tasks as well. It can be seen too, that from both displaced and non-displaced households’ women dominate as household heads. Therefore, from this we can conclude that in Bhutan the status of being a woman headed household, by itself is not to be construed as the women or the household being vulnerable. There are other social variables such as marital status, age, disability, landholding, economic situation in the household and productive capacity of the household (labour) which can be examined together with household status to ascertain vulnerability. Moreover, the Project does not entail any relocation due to displacement, therefore, measures to assist women-headed households by providing better housing standard after resettlement and assistance with house construction and relocation does not come into play.

118. Compensation for lost assets will be paid to whoever holds the title deed for the said asset (whether it be a man or a woman) in the household, as per Bhutanese law. In Bhutan, more often than not, assets like land and homesteads are inherited by the daughters. This shows that, far from being vulnerable, women-headed households in Bhutan depict the egalitarian nature of Bhutanese households. Therefore, in the Bhutanese context, just because a household is headed by a woman does not make it vulnerable, otherwise most households in Bhutan would be deemed as vulnerable.

119. Discussion on vulnerability is important from a social development perspective. Often development Projects can distort the socio-economy of vulnerable populations through differential impacts of development. Here, several types of vulnerabilities that could possibly be triggered by shocks such as; income poverty, land ownership, widowhood, disability, and productive capacity is briefly discussed.

120. 3 of the 17 households displaced by the Project were categorized as vulnerable. Among these three, one is below the poverty line of Nu. 1,097 person/month and consists of 3 members (1 male and 2 females). One of the family members (male) is also disabled (dumb). The household is headed by a single woman named Sonam Pelmo. The second vulnerable household consists of only 2 female members one of whom is disabled (deaf) and the other is the head of the household whose name is Ugyen Tshomo. The third vulnerable household is regarded as vulnerable because it is headed by a divorced female (Phurpamo) and the household consists of only 2 female members, one of whom is 64 year old woman. In order to assist the vulnerable households, a vulnerable entitlement allowance has been proposed in this RP.

Shocks

121. Villagers' household socio-economic status can be adversely affected by shocks triggered by events both natural and anthropogenic. The table below describes the number of respondents who experienced such shocks. Table 23 reflects that the most common shocks experienced are crop failure, death of livestock and severe illness and injury. The other shocks do not seem to be widely prevalent.

Table 23: No. & percentage of respondents' experience of shock by type

Type of shock experience		No.	% of
		Displaced households	Displaced households
Livestock death	Yes	4	24
	No	13	76
Crop failure	Yes	6	35
	No	11	65
Loss of regular	Yes	0	0

Type of shock experience		No.	% of
		Displaced households	Displaced households
employment	No	17	100
Fire, theft, loss of property	Yes	1	6
	No	16	94
Severe illness, injury	Yes	3	18
	No	14	82
Death of Hh member	Yes	1	6
	No	16	94
Victim of violence, crime	Yes	0	0
	No	17	100
Food shortages	Yes	0	0
	No	17	100

Source: Socioeconomic survey

122. In general, the data shows that households seem to possess good resilience and have coping strategies to help them tide by the adverse situations induced by the shocks. Food shortages, crime, fire, theft, and violence seem to be quite rare occurrences.

123. The data about disability shows that among the displaced persons, there were 2 that are disabled. One male is mute and one female is deaf.

Income poverty

124. The data on income poverty from the survey reveals that only one of the displaced households have incomes that categorize them as living below the poverty line (of Nu. 1,097/month per person).

Widowhood

125. Widowhood or divorce can enhance the vulnerability of women. The data shows that 4 women are widows from the displaced households, three of whom are above the age of 61 while one is 47 years old. Similarly 3 men in the displaced households are widowers and all of them above the age of 61.

Marginal Land Holdings.

As a productive asset in villages in Bhutan, the acreage of land owned and cultivated has implications not only for food security but also for income, especially if livelihoods are land-based. Data in Table 26 reveals that there are no displaced households with marginal land

holdings (of 1 acre or less). All the displaced households own more than 1 acre of land.

Table 26: No. & percentage of respondents with marginal landholdings

Type of respondent		Less than 1 acre land		Total
		No	Yes	
Displaced	No.	18	0	18
	%	100.0	0.0	100.0

Source: Socioeconomic survey

3.12. Gender and Project Impacts

126. Households headed by women share the same socioeconomic characteristics as the other impacted households. Men and women enjoy equal status in the Project area and hence women will not be worse off than men due to the Project. In fact the Project will impact women positively by; (i) improving access to markets, since it is mostly women who carry their household farming produce and go to the market to sell it; (ii) improved access, Project infrastructure, influx of population into the Project area and semi-urbanization will increase the value of land and structures in and around the Project area. Women hold bulk of the land holding in the area in their names so they will benefit from the increase in value of such assets; (iii) improved health of women and children, the EPC Contractor of the Project will have health clinics within its premises to cater to its workforce. Women will no longer have to take their children to Trongsa Hospital (about 20 km away) when they fall ill because a doctor will be available at the Project health clinics; (iv) apart from agricultural produce, women can sell their woven products to Project labourers and staff thereby enhancing their cash incomes.

127. While no special provisions have been proposed as special entitlements for women, the Project will organize skills development programs for women who weave so that they can get into commercial weaving, rather than traditional weaving, which will supplement their household incomes. Space will be provided in the community Agriculture and Dairy Products sales outlet for women to display and sell their woven products to customers. This sales outlet will be constructed by the Project for the benefit of the displaced community.

3.13. Poverty Aspects

128. In 2007 the poverty line for Bhutan was set at Nu. 1,097.00 per person per month. One of the displaced households falls below the poverty line.

129. The NHPP is expected to raise incomes in the Project area and that of the DPs. The

NHPP, during its construction stage will employ thousands of labourers that will create demand for essential goods, commodities and services thereby increasing economic activity in the Project area and developing the local economy. The local people may not have to go to the markets to sell their agricultural produce as a market will be created within the Project area by the Project workers. Upon completion of the construction, DGPCL/THyE staff and technicians who manage and operate the plant will be located in the Project area; they too will create demand for agricultural produce that can be supplied by the DPs and farmers living in the vicinity of the Project area. An additional stimulus will be provided to the local economy with the construction of the access roads to the Project sites, which will improve accessibility of the local communities to the main road and other markets.

130. The value of land within the Project area is expected to increase because of the Project and its various physical infrastructures, which will directly benefit the DPs and local communities since it is them who own private land in the vicinity of the Project area. Furthermore, 12-15 percent of royalty energy from NHPP will be used to provide subsidized electricity for rural domestic consumers, particularly for those under the lifeline tariff.

CHAPTER 4: INFORMATION DISCLOSURE, CONSULTATION AND PARTICIPATION

4.1. Consultation and Participation of Key Stakeholders

131. Meaningful consultation is a process that (i) begins early in the Project preparation stage and is carried out on an ongoing basis throughout the Project cycle; (ii) provides timely disclosure of relevant and adequate information that is understandable and readily accessible to Displaced People; (iii) is undertaken in an atmosphere free of intimidation or coercion; (iv) is gender inclusive and responsive, and tailored to the needs of disadvantaged and vulnerable groups; and (v) enables the incorporation of all relevant views of Displaced People and other stakeholders into decision making, such as Project design, mitigation measures, the sharing of development benefits and opportunities, and implementation issues.

132. Consultation with stakeholders and the wider community in the Project area has been ongoing for over 4 years since 2010, and has been undertaken by both the executing agency (EA) as well as the Social Safeguard Consultant appointed by ADB since 2012. Participation of beneficiaries and DPs has been promoted during the technical assistance (TA) provided by ADB through meetings with stakeholder agencies (listed in the stakeholder matrix below), interviews and focus group sessions with Gewog administrations, and surveys of DPs and beneficiaries in the Project area.

133. Consultations were carried out in a manner commensurate with the impacts on displaced communities. Group consultations were held with Displaced Persons, community leaders and village elders to solicit their views about the Project, their opinion with regard to resettlement impacts, compensation and other issues. Some of the views expressed by Project displaced families were related to compensation for land, land re-development costs, replacement land selection, employment in Project activities, etc. The minutes of all the consultations have been appended together as Annexure 2.

134. Consultations with displaced households were also conducted to determine their preferences for compensation, payment schemes and compensation rates and to keep them up to date on progress and other related matters. Notices based on the resettlement plan will be printed and distributed to displaced villages and households.

135. The Social Safeguard Consultants held Consultations with a number of other key stakeholders as well. A series of meetings with the Project proponent, DGPCL was held at Thimphu in their Head Office and with the Project Manager at site.

136. Displaced people were invited for consultations organized to discuss impacts and compensation issues. These consultations were also attended by local government and officials from the Gewog sector offices such as agriculture and forestry.

137. Separate consultations were also held with local government officials (Dzongkhag and

Gewog administration) individually as well as in the form of focus groups. The village Tshogpas representing one or more villages were met individually and semi-structured interviews were conducted with them.

138. Table 27 below presents the location, profile of participants, and the summary of the key issues discussed during the consultations held in the Project area.

Table 27: Summary of the Community Consultations

Location	Date	No. of Participants	Summary of issues discussed
Tashidingkha Community Primary School, Drakteng Gewog	25.11.2010	30	Consultation meeting with affected households under Drakteng Gewog as part of Social Impact Assessment for Nikachhu HPP by M/s Kyingkhor Consultancy Services.
Tshogpa's house, Tangsibji Gewog	26.11.2010	50	Consultation meeting with affected households under Tangsibji Gewog as part of Social Impact Assessment for Nikachhu HPP by M/s Kyingkhor Consultancy Services.
Trashiling, Trongsa	25.07.2012	27	NHPP, its components, impacts, benefits, and DPs perception of the Project.
Trashiling, Trongsa	10.10.2012	19	Gender issues, wants and expectations of women in the Project area from the Project.
Trashiling, Trongsa	04.12.2012	15	Permanent and temporary impacts, Land acquisition,
Raven Resort, Trongsa	12.12.2013	34	This consultation was held to disclose the NHPP DPR to relevant Dzongkhag and Gewog officials.
Tsangkha, Trongsa	27.01.2014	126	This consultation was held for community members of the displaced community. It was held to disclose the NHPP DPR to the community members.
Trashiling, Trongsa	07.04.2014	14	This consultation was held for the DPs in Tangsibji Gewog. Issues discussed were; results of the DMS; amount of private land to be acquired by the Project; compensation rates; entitlements; benefits; and perceptions and views of the DPs.
Drakteng, Trongsa	09.04.2014	8	This was held for the 6 DPs of the transmission line component of the Project. Issues discussed were: the Project and its impacts, Project components, land acquisition and replacement, compensation rates, entitlements, benefits, and perception and views of the DPs.

Source: Field consultations

139. The minutes of the consultations with displaced persons, displaced groups, women groups and displaced communities are appended along with photographs of the consultations as Annexure 2.

4.2. Key Stakeholders

140. A stakeholder analysis matrix as shown below in Table 28 maps the stakeholders, the reasons for their involvement in the Project, nature of involvement in the preparation and implementation phases of the Project, level of influence exerted by each stakeholder vis-à-vis the Project and the benefits that each stakeholder expects to achieve.

141. It is evident that DGPCL, the donor, and the GNHC have high influence on how the Project will be planned and implemented since most crucial Project related decisions would be taken by these agencies regarding the Project. The Dzongkhag and Gewog administrations at the local level are important as they would play an important role in facilitating land acquisition before the Project can commence. These local government entities will, owing to their local presence, assist the Project authorities in any matters requiring engagement with villagers.

142. The villagers living in the Project are important and need to be consulted throughout the Project cycle – right from Project preparation to implementation stage so that their inputs can inform the Project. The business community within Trongsa and beyond will be able to benefit from the many opportunities for supply of goods and services required by the Project.

Table 28: Stakeholder Analysis matrix for NHPP

Stakeholder/ beneficiary	Reason for involvement	Role/Nature of involvement		Influence	Benefits to stakeholders
		Project preparation	Project implementation		
DGPCL/THyE	Coordinate studies, arrange financing, identify & recruit construction companies, supervise implementation, operate and maintain	Proponent	Lead executing Agency Management and coordination M&E Reporting Develop policy and regulation Technical adviser Implementation	H	Contribute to fulfilling DGPCL mandate
Donor	Funds for the Project	Monitoring	Implementing agency Funds disbursements M&E	H	Contribute to development goals of the country
GNHC/RGoB	National Aid Coordination	Coordination and monitoring	Facilitate co-financing Approve fund release M&E	H	Contribute to GNH (poverty alleviation)

Stakeholder/ beneficiary	Reason for involvement	Role/Nature of involvement		Influence	Benefits to stakeholders
		Project preparation	Project implementation		
Dzongkhag Administration	Falls within administrative area of jurisdiction. Facilitation of land survey and compensations	Coordination	Coordination of issues impinging on villages and Gewog matters	M	Local presence and necessary role for early verification
Gewog Administration	Falls within administrative area of jurisdiction. Facilitation of land survey and compensations	Coordination	Coordination of issues impinging on villages and geog matters	M	Local presence and necessary role for early verification
Villagers of benefiting and impacted villagers	Project located in the area and land & properties could be affected	Provision of information and facilitation studies	Derive benefits	H	
Businesses within and outside Trongsa	Business opportunities – goods and services required by the Project.	Supplier of goods and services	Supplier of goods and services	L	

4.3. Rationale for Participation of Stakeholders

143. It is necessary to disclose information to stakeholders, consult with them and engage their participation in planning, management, monitoring and evaluation of the Project. Stakeholder participation is a means of transferring information from Project officials to local government and displaced populations to ensure the smooth implementation of the Project. It builds trust and good faith and strengthens the foundation for collaboration between displaced populations and Project authorities. The advantages of participation of stakeholders are: improved Project design and leads to fewer conflicts and delays in implementation; facilitate development of appropriate and acceptable entitlement options; reduce problem of institutional coordination and increase displaced population's commitment to effectiveness and sustainability of income restoration strategies and improve coping mechanisms.

4.4. Participation during RP Preparation

144. Several consultative meetings were held with the Displaced Persons. Since the Displaced Persons are few and scattered over a relatively small area, it was not difficult to get them to assemble together for the consultative meetings.

145. In these meetings, the broader environmental and social issues including resettlement, acquisition and compensation issues were discussed and participants concerns were raised and responded to.

146. In the meetings, issues related to Project components, land acquisition, land replacement, adequate and fair compensation, assistance to the Gewog, wildlife damage to crops, and opportunities for Displaced People were discussed.

147. The people in the Project area are aware, and generally supportive of the Project. DGPCL officials and the Social Safeguard Development consultant have conducted a series of meetings and consultations with DPs and Dzongkhag Administration officials. Local residents and DPs are fully aware of the potential Project impacts and benefits, particularly related to land acquisition, compensation and resettlement. Details of these meetings can be referred to in the minutes of the consultations contained in Annexure 2.

148. The Gewog Tshogde was also consulted at their office in Trashiling, Drakteng and Langthel. Focus groups were carried out with them to discuss development potential of the Gewog, solicit their views on the Project, anticipated positive and negative impacts of the Project, land acquisition and replacement, entitlement packages, compensation rates, and their participation in the Project. The study team also met village representatives in five locations namely Sherpuchen, Tangsibji, Tsangkha, Drakteng, and Langthel. Issues discussed were similar to those discussed with the Gewog administration. It is vital to ensure prior information dissemination and transparency in all resettlement related activities of the Project including land acquisition, land replacement, Project impacts, compensation rates, entitlement packages, relocation and rehabilitation measures.

4.5. Information Disclosure and Resettlement Plan Disclosure

149. Information dissemination refers to making available information with regard to the Resettlement Plan in the public domain. Some of the strategies that will be used to ensure that information is disseminated as widely as possible are described below:

(i) The entitlement matrix and relevant sections of the RP document will be posted on DGPCL's website and made available in whatever form is desired by any authority or person sharing an interest in the RP;

(ii) The RP document will be made available in the DGPCL Office as well as with THyE

field office for access to the general public or issued on request;

(iii) The entitlement matrix and relevant sections of the RP will be translated into Dzongkha and provided to all the DPs. Copies will also be made available to the Gewog Tshogde, and Dzongkhag Administration.

150. The draft RP will be disclosed to the DPs, public, and stakeholders in July, 2014 for review and comments on the various mechanism and entitlements suggested for the implementation of the RP. The objective of the disclosure is to make the DPs aware about their entitlements and receive comments from them so that appropriate suggestions can be incorporated in the RP.

151. The entitlement matrix and relevant sections of the RP such as Project impacts, compensation policies and entitlements, Grievance Redress Mechanism, compensation and land replacement, and the implementation schedule will be made available to all Displaced Persons.

152. Relevant components of the RP will be translated into Dzongkha in a booklet form and will be distributed to all DPs, the Dzongkhag officials, and Gups one week prior to the RP disclosure consultation so that DPs and stakeholders have sufficient time to review the RP and discuss it among themselves before the actual disclosure consultation is held. Copies of the Dzongkha booklet will be placed at the Dzongkhag office, Gewog offices, and office of the THyE. It will also be uploaded in the website of DGPCL.

153. The GRC constituting THyE Management and the Dzongkhag and Gewog Administration will be the main sources of information and inquiries if displaced households visit the District for information. They will hold all documents relating to the Project, including information on compensation packages and will advise on grievance redress procedures.

154. Finally, continuous on-site consultations shall be carried out by THyE and other construction supervision during the implementation stage to ensure that DPs receive their due entitlements and benefits.

CHAPTER 5: GRIEVANCE REDRESS MECHANISM

155. DPs will have the right to file complaints and/or grievance on any aspect of land acquisition and resettlement such as inventories, valuation, and entitlements. Any DP who has had his/her land or structure expropriated or altered and believes that they have not been compensated or assisted in compliance with their entitlements will be able to express their grievances through a Grievance Redress Mechanism that has been instituted under this RP.

156. A Grievance Redress Mechanism leads to a clear transparent process through which complaints and grievances from the DPs are addressed. The Project will establish a two-tier Grievance Redress Mechanism. In the first instance, immediately after the RP is disclosed; displaced households will have the option of submitting their grievances in written form to the Grievance Redress Committee (which will include members of the Dzongkhag Administration, the respective Gup, and THyE's Managing Director) within 15 days. Then, within the existing mechanism of the Dzongkhag Land Acquisition Committee, the GRC will receive the complaints and facilitate solutions. In case the issue is not resolved or if the DP is not satisfied with the decision of the GRC, he/she can appeal to appropriate authorities of RGoB.

157. In order to ensure that all DPs have avenues for redressing their grievances related to any aspect of land acquisition and resettlement, detailed procedures for the redress of grievances has been established for the Project, which are as follows:

(i) If any DP is aggrieved by any aspect of the land acquisition program, he/she can lodge a written grievance with the Grievance Redress Committee (GRC) within 15 days from the date of the final disclosure of the RP to the displaced persons. The committee's officials must respond within 15 days.

(ii) In case the grievance is unresolved or if the person making the complaint is not satisfied with the decision he/she receives from the GRC, or, if the aggrieved does not receive a response within 15 days of registering the grievance, he/she can approach the senior management of THyE, and can appeal to higher authorities through the existing local governments such as the Gewog Tshogde and the Dzongkhag Administration.

158. Over the Project implementation phase, complaints registers will be maintained by the THyE officials and the contractors where pending or further grievances can be registered.

159. In addition, THyE with other collaborating agencies such as the local government will introduce a Complaints Register. Such a register will be maintained by the Tshogpa (Village Head person) in the village. People can at any time write down their complaints in the Register if they are not satisfied with the implementation of the RP. This Register will be examined and monitored by the implementing agency namely the Gewog Tshogde and the THyE field office for appropriate response measures.

160. GRC will be formed under the RP in order to resolve disputes amicably

through consultations. The GRC is very important as it is expected that most cases, if not all, would be resolved by the GRC. The committee will hear complaints and facilitate solutions and the process, as a whole, will promote dispute settlement through mediation to reduce litigation.

161. All costs involved in resolving the complaints (meetings, consultations, communication and reporting/information dissemination) will be borne by the Project.

CHAPTER 6: LEGAL FRAMEWORK

6.1. Policy Framework - Review of Resettlement Policies and Legal Framework

162. The RP outlines the objectives, policy principles and procedures for land acquisition, compensation and other assistance measures for Displaced Persons. The Executing Agency will endorse the RP prior to project appraisal. The RP will be updated based on detailed design disclosed to the DPs and submitted to ADB for review and approval prior to commencement of any civil works. Compensation and other assistances will have to be paid to DPs prior to any physical or economic displacement of displaced households.

163. The resettlement principles adopted in this Plan reflect the national and local laws and regulation and the Asian Development Bank's (ADB) Safeguards Policy Statement (SPS, 2009). The specific details of these legal and policy framework are enumerated below.

6.2. Bhutanese Legal Framework

164. In this section, the country's laws and policies as it relates to land acquisition for public purposes will be discussed. Also, since the Asian Development Bank has been approached for development of the NHPP, its policies on displacement and compensation is used here for reference. This has been considered mainly because best practices in procedures for assessment and compensation of all categories of Project displaced families are not adequately reflected in the Land Act and other associated legislation of the kingdom. The RGoB is in agreement with many social impact principles and practices of ADB, many of which have been applied in the country mostly for road constructions and urban development taken up with external support. Where the RGoB's own policies and legislation do not cover important requirements, those of the ADB have been suggested in the RP.

165. The primary legal instruments for Land Acquisition and Resettlement in Bhutan are the "Land Act" (1979) amended in 1991 and further in 2007, the "Cash Crop Compensation Rates" (1996) and PAVA Rates (2009). These regulate ownership, sale and the compensation payable by the Royal Government when land or fruit trees are required to be acquired. The Land Act provides the acquisition mechanism for land and other property falling under eminent domain whenever required for a public purpose, that is, for the benefit of the country.

166. To support the implementation of the Land Act 2007, the NLC has formulated Land Rules and Regulations for the Kingdom of Bhutan 2007. The rules and regulations define in detail the institutional functions, procedural requirements and regulatory provisions for management of national land records, land ownership entitlements and land rights, land registration, land conveyance, land acquisition and compensation, land grants, allotment of government land, cadastral land, documentation and mapping, land conversion, land lease,

easement and annulment of land.

6.2.1. Land Acquisition Assessment and Rehabilitation Planning

167. Pursuant to Sections 143 and 144 of the Land Act, any Government Institution or *Gerab Dratshang* applying for acquisition shall be responsible to provide cash compensation or facilitate providing substitute land or both, subject to the approval of the Land Commission. A Property Assessment and Valuation Agency (PAVA) has been established under the Ministry of Finance to fix the value of land and any other collateral property that may be acquired. Pursuant to section 6(l) of the Land Act, Dzongkhag Acquisition and Substitute Land Allotment Committee has been established for acquisition of registered land outside Thromde/Throm and allotment of Government Reserved Forest land. Guidelines and procedures are provided for payment of compensation, release and registration of acquired land and substitute land.

6.2.2. Acquiring Agency and Public Interest

168. Pursuant to Sections 142 and 196 of the Land Act, the Government as defined in these rules shall acquire a registered land only for public interest;

169. Any Government Institution proposing acquisition shall state the public interests for which the land is to be acquired;

170. The following shall be deemed not to be in public interest:

- (i) Acquisition and substitution of land raising any doubt or suspicion of conflict of personal interest either by an individual or a group of individuals undermining the public interest.
- (ii) Acquisition of large areas of land beyond the actual requirement and proper justification.

6.2.3. Restrictions, Acquisition and Substitute Land

171. Pursuant to Section 146, 148, 157 and 158 of the Land Act 2007:

172. Land occupied by religious monuments shall not be acquired;

173. In the event a registered land in Thromde is acquired, no substitute shall be provided as compensation if the displaced Thram holder owns one or more plots of land in his name in the same Thromde other than the land acquired;

174. Land allotted as substitute shall not enclose any patch of Government land or Government Reserved Forests land inside its boundary

175. Land under acquisition shall be taken over only after registering the substitute land in

the name of the displaced landowner or cash compensation has been made to the land owner.

6.2.4. Mode of Compensation

176. The manner in which the compensations will be processed as below:

Responsible agency and valuation:

177. Pursuant to Section 143 and 144 of the Land Act, any Government Institution or *Gerab Dratshang* applying for acquisition shall be responsible to provide cash compensation or facilitate providing substitute land or both, subject to the approval of the Land Commission.

178. There shall be a Property Assessment and Valuation (PAVA) established under the Ministry of Finance to value and fix the value of land and any other collateral property that may be acquired.

179. The value of compensation for the acquired land including any landed property fixed by PAVA shall be as per 151 to 154 of the Land Act, 2007 and approval of the cash compensation for the land acquired shall be vested with the Commission as per 6(d) of the Land Act 2007.

Substitute land outside Thromde:

180. Pursuant to Section 147 of the Land Act, if registered land is acquired from rural areas the land owners shall have the discretion to opt for substitute land or cash compensation. If substitute land is provided as compensation, the location of the substitute land in rural areas shall be determined in the following order of priority:

181. Substitute shall be from the same village.

182. If the Land Acquisition Committee finds that the substitute land is not available in the same village, then substitute land shall be proposed from the same Gewog.

183. If the Land Acquisition Committee finds that substitute land is not available in the above 2 locations, then substitute land shall be proposed from the same Dzongkhag.

184. Pursuant to Section 155 of the Land Act, a substitute land for land acquired from rural areas shall not be provided from the Thromde.

Procedures for Land Acquisition and Substitution:

185. The agency intending to acquire shall submit the application to the National Land Commission Secretariat (NLCS) projecting the purpose and the extent of area of land required for proposed acquisition.

186. Upon receipt of the application the National Land Commission Secretariat shall evaluate the proposal by considering the following among other things:

187. Verify and confirm if the proposed acquisition is in the public interest as provided in the Land Act.

188. Ensure that conflicting national interest on land use if any are avoided.

189. The Secretariat shall arrive at a decision on the proposal within 2 weeks after receipts of the application:

190. If it finds the proposal feasible, the Secretariat shall instruct the Dzongkhag/Thromde Committee to conduct and prepare a detailed report.

191. If the Secretariat rejects the proposal, upon stating the grounds justifying the rejection, it shall inform the applicant accordingly.

192. The Dzongkhag Land Acquisition and Allotment Committee shall serve a notice to the landowner of the government's intention to acquire land at least 120 days prior to the acquisition of the land if the Secretariat approves that the proposed acquisition may be processed.

193. For Thromde, the Executive Secretary shall convey the intention of the Government to acquire land at least 120 days before the acquisition of land to the concerned land owner.

6.2.5. Detailed Report

194. Under the circumstances of section 155(a) of the Land Rules and Regulations 2007 the Dzongkhag/Thromde Committee shall prepare a detailed report in the format prescribed under Annexure PLA Form (1) to PLA Form (7) considering the following:

195. Specify the compensation to be provided, based on the valuation of the PAVA.

196. If compensation includes substitute land, clearance certificates under the applicable laws such as Forest and Nature Conservation Act and Environment Act.

197. If Chhuzhing is to be acquired for purpose other than Chhuzhing the compliance of Chhuzhing conversion requirements are prescribed under Section 166 of the Land Act.

198. The location of the substitute land from rural area in compliance with Section 155 of the Land Act.

199. Ensure compliance of restrictions under Section 137 of these rules.

200. Survey report shall include cadastral maps indicating clearly the total area, location and identification of the land to be acquired and substitute land.

201. If compensation includes cash compensation it is the responsibility of the particular Government Institution or Gerab Dratshang to pay cash compensation.

202. Compatibility to the structure or Local Area Plan and Development Control Regulations, on the purpose for which the land is to be used by the applicant in case of Thromde.

6.2.6. Payment of Compensation, Release, and Registration of Acquired Land

203. Upon final decision the NLC Secretariat shall:

(i) Convey to Dzongkhag/Thromde Committee and the landowner whose land is acquired the decision of the Land Commission.

(ii) Transfer the land ownership and register the acquired land in the name of the applicant within 30 days from the decision of the Land Commission.

(iii) Release the substitute land from the GRF/Government land and register substitute land in the name of the person whose land was acquired if land substitute is approved by the land Commission within 30 days from the decision of the Commission.

(iv) Cause the applicant to make the necessary cash payment if cash compensation is decided by the Land Commission within 30 days from the decision of the Commission.

(v) Ensure taking over of acquired land only after compensation is provided to the landowner in accordance with Section 158 of the Land Act.

Land Compensation Rates 2009

204. For land compensation, the revised rates 2009 are applied with effect from 1 May 2009 superseding the earlier rates. Hereafter, these rates shall be followed for land transaction, acquisition by government, payment of compensation, allotment and development fee till the Property Assessment and Valuation Agency (PAVA) comes up with new rates in future.

205. The PAVA of the Ministry of Finance has revised the land compensation rates vide notification No.FM/DNP/PAVA/2009/4729 dated 17 April 2009 as per the decision of the Lhengye Zhungtshog's 37th Session held on 15th April 2009. The Land Compensation Rates 2009 provides the rates for rural and urban land. The rules and rates shall supersede all earlier relevant rules and rates and shall come into force with effect from 01 May 2009, and prevail for duration for 3 years.

206. The compensation rates for different categories of land in different locations are given in Annexure 3. In the Project area, the displaced land falls under Trongsa Dzongkhag Class “C” – Chhuzhing (Wetland) and Class “C” Kamzhing (Dry land). Any land more than 6 km from the municipal boundary is categorized under class “C Land”. All affected land falls under this category “C”.

Compensation rates for Cash Crops/ Fruit Trees and Annual Crops

207. In accordance to section 151, Chapter 7 of the Land Act 2007, the Royal Government announced the revised compensation rates for cash crops / fruit trees / annual crops on land when acquired by the Government. This has come into force with effect from the 1st of September 2008 and prevails for duration of three years. These rates supersede the relevant rates in the Land Compensation Rates 1996 (Annexure 4).

Compensation rates for Annual Crops

208. The compensation rates for annual crops are given in Table 30.

Table 30: Compensation rates for annual crops

Crops	Rate (Nu./acre)
Paddy	12,615.84
Wheat	2,948
Chili	48,223

Source: PAVA

209. In respect of the above compensation rates, the following conditions may be noted:

210. For compensation payment, the claimant should be the legal owner of the land and/or of the property on the land. This should be ascertained with the ownership certificates of the land and/or of the property.

211. Compensation payment should be made as admissible for land categories as registered in the land Records (Thram).

212. Where land is not required to be immediately acquired and thus where there is time for the owners to harvest their annual crops, land may be acquired only after the harvest of the crops.

213. The compensation rates for cash crops (fruits) have been significantly increased from the previous rates. The owner of one year old orchard tree will be paid Nu 784 per tree under the revised rates, compared with Nu. 196 earlier. For annual crops like cereals, the Government will pay Nu 12,600 to the owner for acquiring one acre of wetland. The new

rates shall be applied for calculation of compensation for the Project displaced people.

214. The implementation procedural steps will be as follows:

215. **Initiation:** On the decision of the agency/project to acquire land, the proposal is to be submitted to the National Land Commission Secretariat for formal approval. The NLCS will convey its decision within 2 weeks. (Ref: Section 155 of the Land Rules & Regulations of the Kingdom of Bhutan (2007).

216. **Notification:** Subject to the approval of the NLCS, the Dzongkhag or Thomde Committee is to notify the landowner of the Government's intention to acquire land at least 120 days prior to the acquisition of the land. (Ref: Section 156 and 157 of the Land Rules & Regulations of the Kingdom of Bhutan 2007).

217. **Replacement:** Should the landowner opt for the substitute land, the case shall be dealt with as per the Land Act of Bhutan 2007. Should the landowner opt for monetary compensation, the Dzongkhag/Thromde Committee will determine the compensation amount as per the compensation fixed by the Government.

218. **Referencing of Municipal Boundary:** For distances from the municipal boundary, the boundary demarcated by the MoWHS shall be taken.

219. **Valuation:** The compensation of land shall also be worked out by the Committee based on the rates while the compensation for the structures shall be based on the estimates prepared by qualified engineers (Dzongkhag Engineers) vetted by the Committee.

220. **Taking Possession:** Taking possession of the land shall be as stipulated in Section 158 of the Land Act of Bhutan 2007.

221. **Effective Rate:** The compensation rate applicable shall be as per the category of land as on the date of notification of the Government's intention to acquire land shall be used.

6.3. ADB's Safeguard Policy Statement (SPS), 2009

222. The objectives of ADB's SPS (2009) with regard to involuntary resettlement are: (i) to avoid involuntary resettlement wherever possible; (ii) to minimize involuntary resettlement by exploring Project and design alternatives; (iii) to enhance, or at least restore, the livelihoods of all displaced persons in real terms relative to pre-project levels; and (iv) to improve the standards of living of the displaced poor and other vulnerable groups.

223. ADB's SPS (2009) covers physical displacement (relocation, loss of residential land, or loss of shelter) and economic displacement (loss of land, assets, access to assets, income sources, or means of livelihoods) as a result of: (i) involuntary acquisition of land, or (ii) involuntary restrictions on land use or on access to legally designated parks

and protected areas. It covers displaced persons whether such losses and involuntary restrictions are full or partial, permanent or temporary.

224. The three important elements of ADB's SPS (2009) are: (i) compensation at replacement cost for lost assets, livelihood, and income prior to displacement; (ii) assistance for relocation, including provision of relocation sites with appropriate facilities and services; and (iii) assistance for rehabilitation to achieve at least the same level of well-being with the Project as without it. The SPS gives special attention to poor and vulnerable households to ensure their improved well being as a result of Project interventions.

6.4. Comparison of ADB SPS and National Policies

225. Table 31 and 32 reflect the similarities and gaps between ADB Policy and National Policy and the measures taken to bridge the gaps.

Table 31: Key similarities between ADB SPS and National Policy

ADB SPS	National Policy
<ol style="list-style-type: none"> 1. Prompt compensation must be made at full replacement cost for assets that cannot be restored. 2. The value of replacing the expropriated property with another of the same or similar qualities. 3. The replacement land should be as close to the land acquired as possible. 4. Pay compensation and provide other resettlement entitlements before physical or economic displacement 	<ol style="list-style-type: none"> 1. Acquisition of land shall entail a fair compensation. 2. The Government shall ensure to provide the land owner with a substitute land commensurate to the value of the land acquired 3. The location of the substitute land to be allotted in rural areas shall be in the same order of preference of same village, Gewog, and Dzongkhag 4. The land under acquisition shall be taken over only after registering the substitute land in the name of the affected/displaced landowner or the cash compensation has been made to the landowner

Table 32: Key differences between ADB SPS and National Policy

ADB SPS	National Policy	Measures taken to address gaps
<p>1. Ensure that displaced persons without titles to land or any recognizable legal rights to land are eligible for resettlement assistance and compensation for loss of non-land assets.</p> <p>2. Requires that compensation be paid at full replacement cost.</p>	<p>1. Does not have any provision for non- title holders. According to the Act, only titleholders (legal owners) will receive compensation or substitute land.</p> <p>2. Registered area, registered land category, its current use, location in relation to accessibility to vehicular road, immovable property, local market value, and other elements such as scenic beauty, cultural and historical factors, where applicable.</p>	<p>1. None, since all DPs have titles to their land. No displacement will occur.</p> <p>2. None, since PAVA's compensation rates are evaluated at market rates. Moreover, Bhutanese laws do not permit the deviation from PAVA's compensation rates</p>

6.5. Involuntary Resettlement Safeguard Principles for the Project

226. Based on the above analysis of government provisions and ADB policy, the following resettlement principles are adopted for this Project:

6.5.1. Basic Principles

(i) Land acquisition and involuntary resettlement will be avoided where feasible or minimized by identifying among possible alternative Project designs and solutions that have the least adverse impacts on the population in the Project Area.

(ii) Where population displacement is unavoidable, individuals, households and communities losing assets, livelihood and other resources will be fully compensated and assisted so that they can improve or at least restore their former economic and social conditions.

(iii) Compensation support will be provided to any DP, including any person or household, who, in the context of acquisition of assets or change in land use, as of the cut-off date, on account of the execution of the Project, or any of its sub-components or part, would have his, her, or their; standard of living adversely affected; right, title or interest in all or any part of a house, land (including residential, commercial, agricultural, plantations, forest and grazing land, trees, standing crops) or any other moveable or fixed assets acquired or possessed, in full or in part, permanently or temporarily adversely affected; Income earning opportunities, business, occupation, place of work, residence, habitat or access to forest or community resources adversely affected temporarily or permanently, with or without displacement; Social

and cultural activities and relationships and other losses that may be identified during the process of resettlement planning.

(iv) Where significantly large or entire land holdings are displaced by the Project, the general mechanism for compensation for displaced agriculture, residential or commercial land shall be through provision of "land for land" arrangements of equivalent size and productivity and at a location acceptable to the DP, unless the DP prefers cash compensation.

(v) If a house or other structure is only partially affected by the Project and the remaining structure is rendered unviable for continued use, the DP shall be entitled to surrender the entire structure and to compensation for the entire structure at full replacement cost without depreciation or deductions for salvaged material. In case the remaining house or other structure is viable for continued use, DPs shall be entitled to assistance in cash or material for restoration of the remaining structure in addition to the compensation at replacement cost for the displaced portion.

(vi) DPs whose land or assets are temporarily taken by the works under the Project shall be fully compensated for their net loss of income, damaged assets, crops and trees, as the case may be. The Project authorities shall also ensure that the land and structures are returned in its pre-Project state.

(vii) Displaced populations that stand to lose only part of their physical assets will not be left with a proportion that will be inadequate to sustain their current standard and convenience of living; displaced populations that stand to lose more than 20 percent of their land holding to the Project, and if it causes them to be "worse off" after the Project than before it, can have the option of surrendering their entire land to the Project and opt for replacement land of the same size and quality.

(viii) Displaced populations will be systematically informed and consulted about the Project, the rights and options available to them and proposed mitigating measures, and to the extent possible be involved in the decisions that are made concerning their land acquisition, land replacement, and cash compensation for losses incurred due to the Project.

(ix) For vulnerable persons and households, the resettlement plan will include measures to provide extra assistance so that they can improve their incomes in comparison with pre- Project levels. For such vulnerable households, the RP will propose and implement targeted measures so that adverse impacts do not fall disproportionately on them.

(x) The consultative process will include not only those displaced, but also representatives of the local governments of the areas in which the Project is located, and civil society organizations such as non-government organizations, if any.

(xi) Adequate budget support by the THyE will be fully committed and made available to

cover the compensation and resettlement within the agreed implementation period.

(xii) Replacement lands shall preferably be within the immediate vicinity of the displaced lands and of comparable productive standards and potential, failing which, sites should be identified that minimizes the social disruption of those displaced; such lands should have access to services and facilities similar to those available in the lands acquired.

(xiii) Organization and administrative arrangements essential for the effective implementation of the RP will be identified and in place prior to the commencement of the process; this will include provision of adequate human resources for supervision, liaison and monitoring of land acquisition, land replacement, land rehabilitation, and compensation activities.

(xiv) Appropriate reporting, monitoring and evaluation mechanisms will be identified and set in place as part of the Resettlement Plan.

(xv) The award of civil works contracts will be given “no objection” after the evaluation of the Resettlement Plan implementation by the Internal Monitoring Committee has been cleared by ADB noting that the Government has satisfactorily completed the disbursement of replacement land and associated compensations in accordance with the principles set out above.

(xvi) Any acquisition of, or restriction on access to resources owned or managed by the displaced community as a common property shall be mitigated by arrangements ensuring access to improved or at least equivalent resources on a continuing basis. Attention shall also be paid to ensure that directly affected DPs get due share of such benefits, corresponding to their personal losses, if any, that accrue to the community on a collective basis

(xvii) All DPs severely affected by the Project due to the loss of productive assets (agricultural or commercial land), means of livelihood, incomes, employment or businesses, and access to community resources will be entitled to rehabilitation measures including, agricultural extension assistance, over and above their entitlements for compensation and other allowances, enabling them to attain, at a minimum, pre-project livelihood levels on a sustainable basis.

CHAPTER 7: ENTITLEMENTS, ASSISTANCE AND BENEFITS

7.1. General

227. The primary objective of the resettlement plan is to provide the framework for compensation for lost assets and resettlement of DPs. The resettlement plan identifies (i) the extent of losses; (ii) the policy and legal framework for compensation and resettlement; (iii) institutional framework for participation and implementation; and (iv) responsibilities for monitoring the implementation measures.

7.2. Eligibility Criteria for Entitlements

228. General eligibility is defined as: "All people residing, cultivating or making a living within the area to be acquired for the Project as of the formally recognized cut-off date (04.12.2012). The cut-off date was fixed in order to avoid land speculation and to minimize fraudulent practices and claims and should be considered as Displaced Persons for the purposes of entitlements to compensation, resettlement and rehabilitation assistance in accordance with the provisions of this RP. In line with this definition, DPs for the purpose of this resettlement plan include the following persons who have been identified during the census survey:

- (i) Persons or households whose agricultural, residential, or commercial land is in part or in total displaced (temporarily or permanently) by the Project;
- (ii) Persons or households whose houses and other structures are in part or in total displaced (temporarily or permanently) by the Project;
- (iii) Persons or households whose businesses or source of income (i.e. employment) are displaced (temporarily or permanently) by the Project;
- (iv) Persons or households whose crops and fruit trees are displaced by the Project, and;
- (v) Persons or households whose other assets are in part or fully displaced (temporarily or permanently) by the Project.

229. The following groups of people are entitled to compensation and assistance under the Project:

- (i) Project Displaced Persons;
- (ii) Project Displaced Households, and;
- (iii) Vulnerable Groups.

The definition of these groups is provided in the glossary.

230. The CPR (Community Primary School) displaced by the Project will lose 0.423 acre of land to the Project. The Community Primary School has opted for, and will receive, land replacement as compensation. The replacement land will be in the name of the institution that the land was acquired from. For adverse impacts on other community facilities, property resources and facilities (i.e. places of worship, school), if any, no financial compensation will be paid directly to individual persons or groups. THyE will rebuild the affected facilities, if any, or provide alternatives in consultation with user communities.

7.3. Entitlement Matrix

231. In accordance with the R&R measures suggested for the Project, all displaced households and persons will be entitled to a combination of compensation packages and resettlement assistance depending on the nature of ownership rights on lost assets and scope of the impacts.

232. An Entitlement Matrix has been developed, which recognizes and lists various types of losses resulting out of the Project and provides the basic tools and guidelines for preparation of compensation and resettlement packages as shown in Table 33.

The section below discusses the entitlements for different types of losses.

7.3.1. Entitlements

Entitlements for each type of DP are based on the types and levels of losses. The Entitlement Matrix for the Project is as shown in Table 33.

7.3.1a. Temporary Loss of Agricultural, Residential or Commercial Land and Compensation for Damages during the Construction Period

- (i) Extreme care shall be taken by contractors to avoid damaging property. Where damages do occur, the contractor will be required to pay compensation immediately to the displaced families, groups, communities or government agencies. Damaged property will be restored immediately to its former condition
- (ii) For loss of use of land for a period less than one year (e.g. during construction):
 - No compensation for land if returned to original user and in original or better condition. Restoration of agricultural land to its previous or better quality by providing measures to improve land quality.
 - Cash compensation for loss of crops and trees at rates fixed by PAVA and compensation for loss of net income from subsequent crops that cannot be planted for the duration of the temporary use arrangements, and;

- If the disruption is more than one year, DPs have an option to (a) continue the temporary use arrangements or (b) sell displaced land to the Project at full replacement cost.

7.3.1.b *Permanent Loss of Agricultural, Residential and Commercial Land*

A. Agricultural land

1. Compensation will be through the provision of “land-for-land” as close as possible to the land affected and of equal productive capacity of the land acquired, and to the satisfaction of the DPs, unless they have voiced their preference for cash compensation;
2. Cash compensation for loss of crops and fruit trees as per the provisions and rates that are be set out by PAVA, which are expected to be in line with local market rates, and;
3. Farmers who lose 20 percent or more of their total agricultural landholding will be regarded as severely affected, and will be entitled to transition subsistence allowance and rehabilitation assistance such as agricultural extension assistance to increase productivity on remaining land.

B. Residential and Commercial Land¹²

1. Compensation will be through the provision of “land-for-land” of equivalent size and satisfaction of the DPs, unless they prefer cash compensation;
2. If the residential land and/or structure is partially affected by the Project and the remaining residential land is not sufficient to rebuild the structure lost, then at the request of the DPs, the entire residential land and structure will be acquired at replacement cost without depreciation;
3. When the only vacant land available in a village is not suitable for residential or commercial construction, the Project will provide earthmoving equipment to create viable homestead plots;
4. Compensation for commercial land will be through the provision of alternative business or commercial site of equal size and accessibility to customers and to the satisfaction of the DPs.

¹² None of the displaced households will lose residential and commercial land to the Project. However, during construction stage if any such land is affected, the above mentioned entitlements will be followed to compensate for the loss.

C. Houses and Structures¹³

233. All houses and other structures including simple sheds, regardless of construction standard, must be rebuilt. Owners of structures will receive compensation in cash or kind at replacement cost for the structure.

D. Crops and Trees¹⁴

234. The compensation for crops and trees will be as follows:

1. Cash compensation for loss of crops and trees at rates fixed by PAVA rates.
2. Compensation for crops will be based on the anticipated harvest while compensation for fruit trees will be based on the type, age and productivity of the fruit tree. A lump sum amount will be paid for young non-bearing fruit trees to cover the cost of maintenance and inputs, while compensation for standing crops will be paid at the rates fixed by PAVA regardless of the maturity of the crop.

E. Common Property Resources

235. The Project would necessitate acquisition of some portion of land of Namgay Chholing Community Primary School (CPS). A total of 0.423 acres of school land would be acquired with no impact on structures. The School was represented by the Tangsibji Tshogpa during the consultation meetings held with them to discuss the compensation and rehabilitation measures. The School has opted for land replacement for the land to be acquired by the Project.

F. Restricted Land Use

236. The transmission line component of the Project will require the acquisition of 0.6 acre of land: 6 Displaced Households will lose 0.1 acre of land each to accommodate 6 transmission line towers that fall on private land. Although these displaced households will receive land replacement for the land they will lose to the Project, the impact on them will be more than just loss of land.

¹³None of the displaced households will lose or incur impact on structures as a result of the Project. However, during construction stage if any such structures are affected, the above mentioned entitlements will be followed to compensate the loss.

¹⁴None of the displaced households will incur impact on crops and trees as a result of the Project. However, during construction stage if any crops and trees are affected, the above mentioned entitlements will be followed to compensate for such loss.

The construction of transmission line towers on their land will mean that they will face restricted land use on their remaining land caused by the Transmission Line Towers on their land and the transmission line that will pass over their land. Due to this, the displaced households will not be able to make optimum utilization of their remaining land. They will also be restricted from constructing dwellings under the overhead transmission lines due to health and safety reasons.

237. To compensate them for the restriction of land use, an entitlement of 20 percent of the total cost of the impacted land will be paid (at PAVA's rates) as compensation (over and above what they receive as compensation) for causing restricted land use. The total compensation to be paid under this entitlement amounts to Nu. 27,150.48. The 6 displaced households will receive a one-time compensation of Nu. 4,525.08 each.

G. Temporary Loss of Business

238. The owner of businesses or shops affected (if any) will be entitled to cash compensation for loss of business during the period of dismantling, moving, rebuilding, and re-establishing their business at the new location. For informal businesses, cash compensation equivalent to the daily wage rate for the transition period will be made.

H. Transition Allowances

239. Transition allowances will not be required since no households will need to be relocated and no structures are affected by the Project.

I. Special Assistance to vulnerable households

240. The RP provides for special and targeted measures for vulnerable groups. A total of 3 households were identified as vulnerable among the 17 displaced households. These 3 vulnerable households will be provided with a one-time vulnerability entitlement allowance equaling 3 months national wage rate of Nu. 125 per day totaling to Nu. 11,250 each. This entitlement is provided so that the vulnerable households can better cope with land acquisition and its associated resettlement effects, which may otherwise fall disproportionately on these vulnerable households.

J. Free Electricity

241. As per Sustainable Hydropower Development Policy, 2008, the RGoB shall provide free electricity of 10,000 kWh per annum for every acre of land (or prorated thereof) acquired for the Project in addition to land compensation from the Royalty energy after the Project comes into commercial operation till the end of the initial Concession Agreement. The land owner may either avail free electricity or cash in lieu thereof at export rates from the Project. This entitlement will continue beyond the concession period.

K. Employment by the Project

242. One member from each displaced family adversely and significantly affected will be provided employment by the Project during the construction period of the Project. The employment offered will depend on the qualification and skills level of the member.

243. The Entitlement Matrix below enumerates the various types of losses and corresponding compensation and assistance for it.

Table 33: Entitlement Matrix

Type of Loss	Application	Definition of PDFs	Entitlement	Responsibility	Remarks
1. Agricultural land by titled owners (private property)	Land on the area of impact	Titleholder	Land-for-land compensation or cash compensation Free electricity entitlement as per Sustainable Hydropower Development Policy 2008. Employment for 1 member of each displaced household adversely and significantly affected depending on his/her qualification and skills level Vulnerability Entitlement allowance for households deemed as vulnerable as per SPS Guidelines.	THyE, Dzongkhag Administration	If a portion from the total land holding of the individual is acquired by the Project, the following options will be given: <ul style="list-style-type: none"> The DP keeps the remaining land and the compensation and assistance is paid to the DP for the land to be acquired. If DP is from a vulnerable category, compensation for the entire land is by means of land-for-land preferred by the DP, provided that land of equal or better productivity is available. In case the owner is endangered of becoming landless, the displaced owner will be compensated the cost of land as per the land compensation rates as well as substitute land free of cost. The DP can select their own replacement land from government land within their own Gewog. The displaced households losing land to the Project will be provided free electricity of 10,000 kWh per annum for every acre of land (or prorated thereof) acquired for the Project. A member from each displaced family adversely and significantly affected will be provided employment by the Project during the construction period. The employment offered will depend on the qualification and skills level of the member. Households deemed vulnerable will be provided with a vulnerability entitlement allowance of 3 months' wages (Nu. 11,250)
2. Agricultural land by titled owners (private property)	Land on the area of impact	Titleholder	Compensation	THyE and Dzongkhag Administration	Since the land allocated as replacement land will be marginal land (forested), this will have to be developed to the standard of the land people have lost. Therefore, an entitlement of Nu. 100,000 will be provided to develop 1 acre (or prorated thereof) of undeveloped replacement land into wet land. Similarly, Nu. 75,000 will be provided to develop 1 acre (or prorated thereof) of undeveloped replacement land into wet land.

Type of Loss	Application	Definition of PDFs	Entitlement	Responsibility	Remarks
3.Homestead	Land on area of impact	Titleholder	Compensation	Dzongkhag Administration and THyE	Cash compensation as per Land Compensation Rates approved by the PAVA and any revision thereof.
4.Residential and commercial structures	Structure within the area of impact	Owners	Compensation	Dzongkhag Administration and THyE	Cash compensation to be paid by the THyE. THyE will help in shifting and in rebuilding the structures of the owner.
5.Tenant-residential	Displaced impact	Tenant	Compensation	Dzongkhag Administration and THyE	The amount deposited/advance paid to the landlord or the remaining amount at the time of acquisition (to be deducted from the payment to the landlord) is to be based on Tenancy Act of RGoB 2004. The tenant has the right to salvage material from the demolished structure. THyE will assist in shifting and in rebuilding the structures of the tenant.
6.Tenant commercial	Displaced	Tenant	Compensation	Dzongkhag Administration and THyE	The amount of deposited/advance paid to the landlord or the remaining amount at the time of acquisition (to be deducted from the payment to the landlord) is to be based on Tenancy Act of RGoB 2004. The tenant has the right to salvage material from the demolished structure. THyE will assist in shifting and in rebuilding the structures of the tenant.
7.Income from business or land through wages and other employment	Households displaced by component impact	individual	Lump sum	THyE	Person directly displaced by the Project will be given priority by THyE for re-employment during the implementation of the Project. One time economic rehabilitation grant (in the form of 1 year median income) for those losing livelihoods per household.
8.Annual/seasonal crops	Households displaced by component impact	Households	Notice to harvest standing crops	THyE and Dzongkhag Administration	Compensation for lost crops will be paid as per the PAVA rate. The difference between the compensation rate and the market price for the lost crop will be covered by providing free seeds and seedlings.

Type of Loss	Application	Definition of PDFs	Entitlement	Responsibility	Remarks
9. Perennial cash crop	Households displaced by component impact	Households	Compensation following Govt procedures.	THyE and Dzongkhag Administration	Compensation for fruit trees and cash crops will be based on PAVAs compensation rate and the existing procedure which supports the compensation in cash for lost of income from the cash crops.
10. Encroachers	Households displaced component impact	Households	No compensation for land assistance to vulnerable households	THyE and Dzongkhag Administration	One time economic rehabilitation grant in the form of 3 months wages) for vulnerable encroachers (e.g. household below poverty line) will be assisted.
11. Structures by squatters and informal settlers	Households displaced by component impact	Households	No compensation for land; compensation for structure at replacement cost and other assistance	THyE and Dzongkhag Administration	The squatter has the right to salvage material from the demolished structure. THyE will assist in shifting and in rebuilding the structures for the squatters. One time economic rehabilitation grant (in the form of 3 months wages) for vulnerable groups per households.
12. Primary source of income	Households displaced impact	Households	Assistance for income restoration	THyE and Dzongkhag Administration	One time economic rehabilitation grant (in the form of 3 months wages) for vulnerable group per household. Preference for employment in the Project especially for women and the poor.
13. Community infrastructure and amenities	Community	Community	Replacement	THyE and Dzongkhag Administration	Cultural properties will be conserved by special measures such as relocation, replacement in consultation with the community. Compensatory afforestation will replace loss of trees.
14. Restriction of land use due to transmission towers	Land on area impact	Households	An additional 20 percent of the total cost of the acquired land at PAVA's rates.	THyE and Dzongkhag Administration	One time entitlement to compensate for restriction on land use induced by the transmission towers and transmission lines.
15. Other impacts not identified	Households displaced	Individual/ Households/Community	Additional assistance	THyE and Dzongkhag Administration	Unforeseen impacts will be documented and mitigated based on the principles agreed upon in this policy framework.

244. The details of the land identified for replacement/compensation cannot be provided at the moment because the DPs have been asked to identify their own replacement land in order to avoid grievances on the replacement land later. The DPs are still in the process of identifying their replacement land themselves with the help of relevant Dzongkhag officials and their Gup. The identification of replacement land will be reported through an update in the RP by THyE.

7.4. Community Development Program

245. In order to support the development priorities of the communities living in and around the Project area, a Community Development Program have been formulated after detailed consultations and discussions with community members including women's groups. The following activities will be undertaken as part of the Community Development Program. However, the Community Development Program activities will not fall under the R&R budget so a different budget for Community Development Program is proposed at the end of this section.

7.4.1. Skills Development Training Program

246. Skills development training programs for displaced household members and the community have been included in the RP. Two different training programs will be organized. One is exclusively for females and the other is for both males and females.

247. During the consultations conducted with women groups, women requested for skills training on commercial weaves (Khaling-style weaves which is more popular with customers than traditional weaves). This will help supplement and increase their cash incomes. A two-month skills training program on commercial weaving will be imparted to women in and around the Project area. The trainers will be sourced from the Khaling Weaving Centre in Trashigang.

248. A second skills development training program will be provided by the Project. This training program will be based on the human resource (HR) requirement plan of the Project contractors and for the Project implementation and operation and maintenance phases submitted to the Ministry of Labour and Human Resources which shall facilitate timely development of skills in collaboration with the Project. Displaced household members and local community members will be given first preference for this skills development training program based on their educational qualification so that they are in a position to get employment for various jobs in the Project. This training program will include both males and females and will be identified and finalized by THyE after receiving the HR requirement plan of the Project contractors and THyE.

249. The proposed budget for the two training programs is Nu. 500,000.00.

7.4.2. Developing and Preparing of Waste Disposal Site

250. The Project will prepare a waste disposal site for the communities of Tsangkha, Tangsibji, and Trashiling. At present, there is no waste disposal sites and villagers throw their garbage in any convenient location for them which impacts the health and sanitation of the community.

251. The proposed budget for developing a proper waste disposal site is Nu. 500,000.00

7.4.3. Provision of Garbage Compacter Truck

252. In addition to the waste disposal site, the Project will provide a garbage compacter truck to pick up the garbage and waste from the three villages and dump them at the waste disposal site. A garbage compacter truck will be required to compact and transport the garbage so as to ensure that the garbage does not fly off on the highway. This could occur if the garbage is transported in an open truck.

253. The proposed budget for a garbage compacter truck is Nu. 2,400,000.00

7.4.4. Provision of Agriculture and Dairy Products Sales Outlet

254. In order to enhance the sale and incomes of the displaced communities, the Project will provide an Agriculture & Dairy Product Sales Outlet with refrigerators and freezers for the displaced communities where they can display and sell their farming produce along with the woven products of the women in the communities. This sales outlet is expected to benefit the displaced communities by augmenting the sales of their products.

255. The proposed budget to construct an Agriculture and Dairy Products sales outlet is Nu. 1,000,000.00.

7.4.5. Blacktopping of Tangsibji Farm Road

256. To improve all-year access for the displaced community of Tangsibji, the Project will blacktop the 2.5 km farm road in Tangsibji village. Over 70 households in the displaced community will benefit directly from the blacktopping of the farm road. Currently the farm road is in poor condition and further deteriorates every year during monsoon season making it difficult for small vehicles to ply on it during the rainy season. As a result, the road augmentation by blacktopping it will greatly help the local villagers.

257. The proposed budget for blacktopping the 2.5 km of Tangsibji farm road is Nu. 10,000,000.00.

7.4.6 Hostel for Students

In order to promote accessibility to students of Nyala and Dangla villages who have to currently walk four hours to and fro from school, the Project will construct a semi-permanent hostel to accommodate these students.

The proposed budget for the hostel is estimated at Nu. 2,000,000.00

258. Table 34 below provides a summary of the budget required to implement the Community development Program.

Table 34: Budget for Community Development Program

No.	Category	Unit	Qty	Costs (Nu)
1	Skills Development Training program	No	2	500,000.00
2	Developing and preparing a waste disposal site	No	1	500,000.00
3	Procurement of garbage compacter truck	No	1	2,400,000.00
4	Construction of Agriculture & Dairy products sales outlet	No	3	1,000,000.00
5	Blacktopping of 2.5 km Tangsibji farm road	LS	-	10,000,000.00
6	Construction of semi-permanent house for Chendebji Community Primary School (to be used as hostel for students of Nyala & Dangla villages)	No	2	2,000,000.00
Sub-total (in Nu.)				16,400,000.00
7	Contingencies (10% of total of above) - in Nu.			1,640,000.00
Overall Total (in Nu.)				18,040,000.00

259. All entitlement and policies in the RP are in confirmation with local laws and ADB SPS 2009.

CHAPTER 8: BENEFIT SHARING MEASURES

260. None of the 17 displaced households will incur significant impact on their land plots. Also, most of the displaced land comprises of dry land. Apart from land, no commercial enterprises, business establishments or shops will be affected as a result of the Project. As a result, a separate income restoration and rehabilitation strategy is not being formulated for this Project. The income restoration strategy has been integrated in this RP to ensure that the income earning potential of DPs is in no manner adversely affected by the Project.

261. Nonetheless, in order to ensure that the main livelihoods of the displaced households are not adversely affected, they will be compensated. The following benefits will accrue to the DPs and local communities which will help to not only restore but increase their income levels.

8.1 Project Benefit Sharing

262. In order to ensure sharing of the benefits of the Project with local communities and households, the following measures are being planned:

- (i) Construction of access roads to the Project sites to improve accessibility of the local communities to the main road and other markets.
- (ii) The Project will have health clinics for its construction employees which can also be used by local people to avail health care.
- (iii) The Project is expected to generate numerous skilled and un-skilled jobs during the construction and operational phase. The local people can share this benefit by being employed by the Project.
- (iv) The population influx in the Project area, mainly due to labourers working on the various Project components, will create a market for agricultural and dairy products. The local people will not have to travel far to sell their produce. Local people can start small shops and restaurants to cater to the population influx into the Project area.
- (v) The Project is expected to lead to increased income that will benefit the local communities. This is expected to come about myriad income earning opportunities that the Project will provide, such as;
 - Employment opportunities with local contractors
 - Renting of living quarters and office space to Project contractors and their employees
 - Leasing of vehicles and equipment to the Project contractors
 - Leasing of private land to Project contractors
- (vi) The value of land in and around the Project area is expected to increase significantly due to the Project and its physical infrastructure. This will increase the value of assets, particularly

land and structures, of the local communities and DPs.

(vii) After its commercial operations, THyE may also consider other activities that will benefit the communities living in and around the Project area as a form of Corporate Social Responsibility.

8.2 Revenue Sharing Arrangements

263. One of the primary benefits of the Project is revenue generation through export of electricity.

264. The Project will share its revenue in the following ways:

(i) 12 – 15 percent of royalty revenue generated from the export of power from NHPP will be used to provide free electricity (of 100 units per month) to rural households by RGoB.

(ii) As per Sustainable Hydropower Development Policy, 2008, the RGoB shall provide free electricity of 10,000 kWh per annum for every acre of land (or prorated thereof) acquired for the Project in addition to land compensation, to the Displaced Households, from the Royalty energy after the Project comes into commercial operation till the end of the Initial Concession Agreement. The land owner may either avail free electricity or cash in lieu thereof at export rates from the Project. This entitlement will continue beyond the concession period.

8.3 Special Measures to Support Vulnerable Groups

The RP provides for special and targeted measures for vulnerable groups. This study has identified 3 vulnerable households among the 17 displaced households. The reasons assigned for determining them as vulnerable households has been explained in earlier sections of this RP. The 3 vulnerable households will be provided with a one-time vulnerability entitlement allowance equaling 3 months national wage rate of Nu. 125 per day totaling to Nu. 11,250 each. This entitlement is provided so that the vulnerable households can better cope with land acquisition and its associated resettlement effects which may otherwise fall disproportionately on these vulnerable households.

8.4 Gender Considerations

Consultations were carried out with women's groups in the Project area. The minutes of the consultation with women's groups is appended along with photographs. In order to enhance cash incomes of women in the Project area, Agriculture and Dairy Products sales outlets will be constructed by the Project. The woven products can also be displayed and sold at the Sales outlets since it will be ideally located near the main highway and will display various woven products of all the women in the community.

Women could also receive employment during the Project construction phase. Contractors will be requested to pay equal wages irrespective of gender.

8.5 Skills Training Programs

265. Skills development training programs for displaced household members and the community have been included in the RP. Two different training programs will be organized. One is exclusively for females and the other is for both males and females.

266. During the consultations conducted by Safeguard Consultant with women groups, women requested for skills training on commercial weaves (Khaling-style weaves which is more popular with customers than traditional weaves). This will help supplement and increase their cash incomes. A two-month skills training program on commercial weaving will be imparted to women in and around the Project area. The trainers will be sourced from the Khaling Weaving Centre in Trashigang.

267. A second skills development training program will be provided by the Project. This training program will be based on the human resource (HR) requirement plan of the Project contractors and for the Project implementation and operation and maintenance phases submitted to the Ministry of Labour and Human resources which shall facilitate timely development of skills in collaboration with the Project. Displaced household members and local community members will be given first preference for this skills development training program based on their educational qualification so that they are in a position to get employment for various jobs in the Project. This training program will include both males and females and will be identified and finalized by THyE after receiving the HR requirement plan of the Project contractors and the NHPP.

8.6 Employment in Project Civil Work to Supplement and Restore Incomes

268. Project construction activities will require many unskilled labourer for land clearance, earthworks, and infrastructure construction. The contractors will be encouraged to employ DPs, including displaced women, during the recruitment of local labourers. The contractors will be encouraged not to discriminate against the employment of women in the construction labour force. Employment in the Project construction will be an added source of income in the income restoration process of the displaced households. Based on qualification levels, one member from each displaced household adversely and severely affected will be provided employment with the THyE during the construction phase.

CHAPTER 9: RESETTLEMENT BUDGET AND FINANCING PLAN

269. The entire cost for the implementation of the RP will be funded by the THyE.

9.1. Itemized Entitlement Matrix as the Basis for the RP Budget

270. **Compensation for Land:** The compensation amount for the acquisition of land will be calculated using the Property Assessment & Valuation Agency (PAVA) Rates.¹⁵ 15 of the 17 DPs have opted for land-for-land compensation, while two DPs (Ugyen Tshomo who will be losing 0.280 acres and Tshewang Lham who will be losing 0.469 acres, both from Tshangka village in Tangsibji Gewog) preferred cash-for-land compensation. It is noted that in total 4.177 acres of dry land will be acquired of which 3.428 acres will be replaced with land and 0.749 acres will be provided with cash compensation. However, in view of the fact that those losing land may be allotted undeveloped land, they would be disadvantaged as the land allotted will not match the land lost. Therefore, in view of this, it is proposed that land development costs of Nu. 75,000/acre for dry land and Nu. 100,000/acre for wetland acquired is considered for all those losing land to enable them to develop their replacement land and make it cultivable.

271. Two (Tshewang Lham and Ugyen Tshomo both of Tsangkha village) of the 17 displaced households have requested for cash compensation in place of land replacement for the land that they will lose to the Project. The Project will acquire 0.469 acres of land from Tshewang Lham and 0.28 acres from Ugyen Tshomo. In total, the Project will have to pay cash compensation for 0.749 acres of dry land which amounts to Nu. 169,464.24.

272. **Compensation for land development:** The Project will have to pay land development costs for 3.428 acres of dry land to 15 displaced households and the displaced CPR that preferred land replacement for the land they will lose to the Project. The total cost for developing 3.428 acres (@ Nu. 75,000 per acre) of undeveloped land into cultivable dry land is Nu. 257,100.00.

273. **Compensation for fruit-bearing trees:** Compensation for fruit-bearing trees has also been worked out using PAVAs Compensation Rates 2009 for Cash Crops/Fruit Trees/Annual Crops. The method follows that the number of trees displaced by type of fruit is collected. The age of the trees is also ascertained. Based on the tree type, age, and the rate for the type of fruit tree, the total is calculated. None of the displaced households will lose any fruit trees to the Project. However, during construction stage if any fruit trees are displaced, the above mentioned procedure will have to be followed to evaluate the compensation for the affected fruit tree(s).

¹⁵Land Compensation Rates – 2009 (Rural and Urban land compensation rates including building/structures depreciation guide when acquired by the Government), Property Assessment & Valuation Agency, Ministry of Finance, 2009

274. **Compensation for causing restricted land use:** Households losing land to the transmission line towers will face some restrictions on their land use owing to the transmission tower footing on their land and the overhead transmission line that will pass through their land. Due to this, they will not be able to make optimal use of their land whether for agricultural or dwelling purposes. To compensate them for the restriction of land use, an entitlement of 20 percent of the total cost of the impacted land will be paid (at PAVA's rates) as compensation for causing restricted land use. The total compensation to be paid under this entitlement amounts to Nu. 27,150.48. The 6 displaced households will receive Nu. 4,525.08 each as an additional 20 percent of the cost of their displaced land.

275. **Vulnerability Assistance:** Although the Land Act does not provide special considerations and assistance to displaced households that are vulnerable, ADB's SPS 2009 states that for vulnerable persons and households, the resettlement plan include measures to provide extra assistance so that they can improve their incomes in comparison with pre-project levels. For such vulnerable households, the RP will propose and implement targeted measures mentioned earlier so that adverse impacts do not fall disproportionately on them.

276. Therefore, a vulnerability entitlement allowance of 3 months wages equaling to Nu. 11,250 per vulnerable household will be provided. The total amount to be provided under this entitlement is Nu. 33,750.00.

277. **Contingency:** In addition to the above, a contingency provision of 10 percent of the total cost has also been included in the RP budget.

9.2. Total Cost and Consolidated RP Budget

278. The total budget for the RP implementation for the THyE is Nu. **701,211.20** The details are shown in table 35 below:

Table 35: Resettlement budget and financing

No.	Category	Unit	Total Units	Cost (Nu)
1	Cash compensation for land to be acquired (2 households)	Acre	0.749	169,464.24
2	Compensation for land development for those losing land	Acre	3.428	257,100.00
3	Compensation for causing restricted land use for 6 HHs	1	6	27,150.48
4	Vulnerability entitlement for 3 vulnerable households	1	3	33,750.00
5	Cost involved in resolving grievances			50,000.00
6	Cost of RP implementation			100,000.00
Sub-total (in Nu.)				637,464.72
7	Contingencies (10% of total of above)			63,746.48
Overall Total (in Nu.)				701,211.20
Overall Total (in US \$) 1 US\$ = 60 Nu.				11,686.85

CHAPTER 10: INSTITUTIONAL ARRANGEMENTS

10.1. Institutional Arrangement

279. DGPCL will be the executing agency (EA) for the Project. A Special Purpose Vehicle, Tangsibji Hydro Energy (THyE), fully owned by DGPCL has been incorporated on April 25, 2014 with Managing Director to execute the Project. The Chief Administration Officer (CAO) assisted by Environment officer, in coordination with the Dzongkhag (District Administration) and the Tangsibji, Drakteng, and Langthel Gewog administrations will be responsible for implementing the resettlement and rehabilitation activities. The Managing Director will also be in charge of land acquisition and resettlement operations. The Managing Director will work in close coordination with the Dzongkhag and Gewogs on the day-to-day activities of the resettlement plan and its implementation. The Managing Director will execute and monitor the progress of the RP and ensure coordination between relevant departments, the Grievance Redress Committee and Displaced Persons. The Managing Director will ensure that necessary staff is made available to implement resettlement activities without causing delay to civil works.

280. Local institutions such as Dzongkhag Administration (Dasho Dzongdag, LRO, and Gup) will support the DPs through compensation to be provided by DGPCL/THyE, and identify the substitute land and facilitate mitigation of negative social impacts.

10.2. Role of THyE

281. The Managing Director, THyE will be responsible for the overall coordination of all relevant departments and agencies involved in resettlement activities and supervision/monitoring of the Resettlement Plan implementation. A resettlement cell will be established under THyE to oversee land acquisition, land replacement, and cash compensation activities. Chief Administrative Officer (CAO) of THyE will be responsible to assist in the day-to-day activities related to resettlement implementation. The CAO will be responsible for organizing the displaced villages to carry out the designated activities of the resettlement plan. The MD will monitor, directly and/or through the CAO and Dzongkhag Land Acquisition Committee, the progress of land acquisition and resettlement management along the Project area.

282. The main responsibilities of CAO are as follows:

(i) Ensure that the resettlement plan process, policies and principles are disclosed to the displaced community (i.e. during resettlement plan preparation and periodically during resettlement implementation) in order to maintain participation and transparency;

(ii) Ensure that compensation unit rates prescribed by PAVA are followed. If the compensation rates of some agricultural products are not listed by PAVA, the CAO will establish those rates at current local market value in full consultation with, and agreement of DPs;

(iii) Periodically supervise resettlement plan progress and activities;

- (iv) Coordinate and work with the Dzongkhag Land Acquisition Committee and concerned government authorities;
- (v) Conduct consultations with DPs;
- (vi) Establish database for DPs and be responsible for internal monitoring, reporting and action in response to the findings of the internal monitoring;
- (vii) Provide assistance to DPs during compensation and land replacement activities;
- (viii) Prepare reports regularly on progress and outstanding issues;
- (ix) Work closely with the DPs, concerned local administrative authorities and local-based organizations.

283. Consultation with DGPCL has indicated that capacity in resettlement planning and implementation has been developed as a result of implementing the RP in Dagachhu Hydropower Project. Nonetheless, an introductory workshop on R&R Policy Framework for the Project team could be held prior to the start of resettlement activities. The workshop would cover the following aspects:

- (i) Main elements of the policy and technical guidelines; (ii) ADB's Policy on Involuntary Resettlement (SPS 2009);
- (iii) The broad principles of resettlement planning and the concepts of entitlements for losses, and the entitlement matrix;
- (iv) The basis of resettlement planning and the process for preparation of resettlement plans and community development plans.
- (v) The links between, and main roles and tasks of, DGPCL, THyE, Dzongkhag Administration and the GRC.

284. The DGPCL/THyE and other field officers will coordinate with the concerned government departments at various levels to facilitate smooth implementation of the RP.

10.3. Dzongkhag Land Acquisition and Allotment Committee

285. The Dzongkhag Land Acquisition and Allotment Committee (DLAAC) is pivotal in the implementation of the Resettlement Plan. The DLAAC will carry out consultation among the affected households and communities regarding resettlement, prepare the final inventory, valuation of assets, and assist in identification and allocate replacement land. The actual acquisition, land transfer, and compensation will be carried out under the supervision of the DLAAC at the Dzongkhag level. Gups of the concerned Gewogs may also be involved in the negotiations with individuals and families.

286. The types of tasks handled at this level will include:

- (i) Coordination with DGPCL/THyE when required, in resettlement-related activities;

- (ii) Certifying the list of DPs and signing compensation documents;
- (iii) Assist in Identifying replacement land;
- (iv) Facilitating/compensating for preparation of paddy and dry land, and
- (v) Monitoring and ensuring registration of replacement title deeds (thram) of the DPs.

10.4. Internal Monitoring Committee

287. An Internal Monitoring Committee comprising of the following members will be constituted to monitor the progress of resettlement activities.

- (i) MD, THyE, Chairperson
- (ii) CAO, THyE
- (iii) Environment Officer, THyE

288. The committee will monitor the progress of the resettlement activities and will ensure timely implementation of RP in compliance with the deadlines provided in the RP.

289. The responsibility of the committee will be as follows:

- (i) Meet once in four months or any interval as necessary.
- (ii) Clarify information desired by DPs and evaluate damaged assets, review compensation, land acquisition and resettlement based on this RP;
- (iii) Monitor that allocated funds for Project implementation are used in a timely manner and for the intended purposes as requested and approved in this RP;
- (iv) Monitor whether RP is implemented in accordance with the RP design and planning or not;
- (v) Monitor if procedures on participation and disbursement of compensation to DPs are implemented in accordance with RP or not;
- (vi) Archive all complaints and settlement options and ensure that grievance redress is solved within the stipulated period;
- (vii) Evaluate if the objective of improving living standards of DPs to pre-RP levels have been achieved;
- (viii) Collect quality evaluation information on socio-economic impacts during Project implementation on DPs;
- (ix) Monitor the all round progress on implementation of the RP and provide-guidance to those involved in the compensation, land acquisition, and land replacement activities.
- (x) Ensure, witness, and verify the delivery of entitlements and compensation based on field visits and physical verification of receipts and thrams (title deeds);

- (xi) Undertake consultations with DPs;

(xii) Maintain close interaction with DPs and Project authorities;

(xiii) Suggest adjustments in RP implementation depending on certain cases in order to achieve objectives, and;

(xiv) Submit semi-annual progress reports to DGPCL, THyE, Dzongkhag, and ADB on the progress of implementation of the RP.

CHAPTER 11: IMPLEMENTATION SCHEDULE

290. During Project implementation, the resettlement activities like taking over private land by THyE and cutting of trees etc, will be co-ordinated with the likely timing of civil works. The required co-ordination has contractual implications and will be considered in procurement and bidding schedules, award of contracts, and release of cleared areas of impact sections to Project contractors. The Project will provide adequate notification of 1 month time to Displaced Persons so that they are able to move or give up their assets without undue hardship before commencement of civil works and after receiving the compensation.

291. As mentioned, it is the responsibility of the THyE to ensure that the RP is successfully implemented. The time taken for the implementation of the RP will be up to 1 year. The THyE will co-ordinate these efforts to ensure that RP implementation and phasing is appropriately sequenced with designs and civil works.

292. The action plan to rehabilitate DPs, if required, must be completed before the start of civil works. Procedures will be developed by the THyE to carry out resettlement of DPs located within areas of influence, before the civil work starts on any section of the road. DPs will be given at least one month's notice to vacate their property before civil works starts. The detailed contract package civil works schedule needs to be dovetailed with the resettlement implementation schedule.

293. Table 37 below presents the RP implementation plan.

Table 37: RP Implementation Plan by activity and time period

ACTIVITY	Implementation Schedule Distributed Over Quarters																			
	2013				2014				2015				2016				2017			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1.0 Resettlement Planning																				
1.1 Approval of RP by DGPC																				
1.2 Cadastral re-survey by NLC and LRO																				
1.3 Disclosure of RP Summary																				
2.0 Land Acquisition & Resettlement																				
2.1 Issue public notification for start of RP																				
2.2 Disburse compensation payments for land, structures, trees and income																				
3.0 Monitoring & Evaluation																				
3.1 Internal monitoring																				

CHAPTER 12: MONITORING AND REPORTING

12.1. Internal monitoring

295. THyE, through its Internal Monitoring Committee (IMC), will monitor and measure the progress of implementation of the Resettlement Plan. The extent of monitoring activities will be commensurate with the Project's risks and impacts. In addition to recording the progress in compensation payment and other resettlement activities, the IMC will prepare monitoring reports to ensure that the implementation of the Resettlement Plan has produced the desired outcomes.

296. While this Project does not have any significant involuntary resettlement impacts, THyE will engage external expert or qualified NGOs to verify THyE's monitoring information.

297. THyE through its IMC will carry out internal monitoring of the RP on a monthly basis.

298. RP implementation monitoring will be the responsibility of the IMC which will prepare quarterly progress reports. The reports will compare the progress of the RP implementation to targets set in the implementation schedule of the RP. The list of performance indicators to monitor RP implementation and the achievement of objectives is provided in Tables 39, 40, and 41 below. The baseline socio-economic survey conducted in April 2014 will provide the benchmarks for comparison and to assess the progress and success of RP implementation. The monitoring process will also include: communication with and assessment of reactions from DPs; information on entitlements, options, alternative developments; valuation of properties; usage of the Grievance Redress Mechanism and disbursement of compensation amounts and other entitlements and assistance.

299. Implementation process of RP will be regularly monitored and checked by the IMC. The main responsibilities of the committee will be as follows:

- (i) Meet once in four months or any interval as necessary.
- (ii) Clarify information desired by DPs and evaluate damaged assets, review compensation, land acquisition and resettlement based on this RP;
- (iii) Monitor that allocated funds for Project implementation are used in a timely manner and for the intended purposes as requested and approved in this RP;
- (iv) Monitor whether RP is implemented in accordance with the RP design and planning or not;
- (v) Monitor if procedures on participation and disbursement of compensation to DPs are implemented in accordance with RP or not;
- (vi) Archive all complaints and settlement options and ensure that grievance redress is solved within the stipulated period;

(vii) Evaluate if the objective of improving living standards of DPs to pre-RP levels have been achieved;

(viii) Collect quality evaluation information on socio-economic impacts during Project implementation on DPs;

(ix) Monitor the all round progress on implementation of the RP and provide-guidance to those involved in the compensation, land acquisition, and land replacement activities.

(x) Ensure, witness, and verify the delivery of entitlements and compensation based on field visits and physical verification of receipts and thrams (title deeds);

(xi) Undertake consultations with DPs;

(xii) Maintain close interaction with DPs and Project authorities;

(xiii) Suggest adjustments in RP implementation depending on certain cases in order to achieve objectives, and;

(xiv) Submit semiannual progress reports to THyE, Dzongkhagans ADB on the progress of implementation of the RP.

12.2. Indicators for Monitoring

300. Indicators to measure the progress in RP implementation and in general some key anticipated (positive and negative) social impacts of the Project are proposed below (Table 38, 39, 40). The indicators have been formulated at impact, output and activity (performance levels). The frequency of collection of data on the indicators and the agency responsible for the collection has also been suggested.

Table 38: Impact indicators

No.	Indicator	Frequency of collection	Agency Responsible
1.	No. of DHs experiencing restored level of incomes and livelihoods	End of Project	IMC, DGPCL THyE
2.	No. DHs operating economic enterprises	End of Project	IMC, DGPCL THyE

Table 39: Output indicators

No.	Indicator	Frequency of collection	Agency Responsible
1.	Monthly income level of DHs restored to pre-Project levels	Mid-term and end of RAP	IMC, DGPCL THyE

No.	Indicator	Frequency of collection	Agency Responsible
2.	No. of vulnerable persons (poor, women-headed households and widows, elderly and physically challenged) expressing satisfaction with RP measures taken.	Mid-term and end of RAP	IMC, DGPCL THyE
3.	No. of DPs utilizing compensation for productive investments	Mid-term and end of RAP	IMC, DGPCL THyE
4	No. of DPs employed by the Project	Mid-term and end of RAP	IMC, DGPCL THyE

Table 40: Performance indicators

No.	Indicator	Frequency of collection	Agency Responsible
1.	Number of DHs losing land been compensated	Quarterly	IMC, DGPCL THyE
2.	Number of DHs losing trees been compensated	Quarterly	IMC, DGPCL THyE
4.	Number of vulnerable DHs compensated	Quarterly	IMC, DGPCL THyE

ANNEXURE I
SURVEY QUESTIONNAIRE

SOCIAL IMPACT ASSESSMENT OF THE NIKKACHU HPP (EXTENDED AREA)
Socioeconomic Household Survey (affected and non affected hhs)

SOCIO-ECONOMY

A. General Information

1. Name of the surveyor: _____ 2. Name of Data entry clerk: _____

3. Name of Respondent: _____ 4. If Respondent Head of Hh: 1. Yes 2. No

5. Sex of Respondent: 1. Male 2. Female

B. Household information

1. House No.	
2. Thram No.	
3. Village:	
4. Gewog:	

C. Household Roster *(List only those resident continuously for last 6 months)*

Name of HH members	Relation to HH Head [see codes]	Sex [1] Male [2] Female	Age [Yrs]	Marital status 1. Married 2. Unmarried 3. Widow 4. Widower 5. Divorcee 6. Other	Occupation 1=Farmer 2=Civil servant 3= Business 4=Monk 5=Army 6=Student 7= Others.....	Education level 0=No education 1=Primary 2=Class X 3=High school (CI XII) 4=Graduate 5=Masters 6=Monastic education 7=Non formal	Skills 1. Weaving 2. Carpentry 3. Masonry 4. Others	Disability 1. Yes 2. No

Codes: Relation to Household Head:

- [1] self
- [2] spouse of head
- [3] married child
- [4] spouse of married child
- [5] unmarried child
- [6] grandchild
- [7] father/mother
- [8] father-in-law/mother-in-law
- [9] brother/sister
- [10] brother-in-law/sister-in-law
- [11] nephew/niece
- [12] uncle/aunt
- [13] grand father/grand mother
- [14] servants/employees
- [15] others.

D. Land ownership and land use

1. Land Type	2. Registered area (acres)	3. Owner cultivated (acres)	4. Leased out to others for farming (acres)	5. Leased in to others for farming (acres)	6. Fallow (acres)
1. Dry land					
2. Wet land					
3. Orchard land					
4. Kitchen Garden					
5. Others					

E. Area grown by crop and production (food crops)

1. Crops	2. Cultivated Area (acre)	3. Production (kg)	4. Quantity consumed (kg)	5. Quantity sold (kg)
Rice				
Maize				
Wheat				
Barley				
Buck wheat				
Millet				
Legumes				
Mustard				
Orange				
Potato				
Cardamom				
Chilli				
Cabbage				
Radish				
Cauliflower				
Beans				
Greens - Sag				
Others				

F. Livestock ownership

1. Type of livestock owned	1. Improved (No.)	3. Local (No.)
Cattle		
Lactating cows		
Horses/Mules		
Sheep		
Goat		
Pigs		
Poultry		

G. Wild life predation on crops

Type of Wild life	Yes	No
Deer		
Monkey		
Wild Boar		
Rats		
Others		

H. Wild life predation on Livestock

Type of Wild life	Yes	No
Leopard		
Tiger		
Wolves		
Wild dogs		
Others		

I. Experience of Shock

Type of shock experienced	Yes	No
Livestock death		
Crop failure		
Loss of regular employment		
Fire, theft, loss of property		
Severe illness or injury		
Death of HH member		
Victim of violence/crime		
Food shortages		
Others		

J. Livestock produce consumed and sold

1. Type of livestock product consumed/sold	2. Consumed (No.)	3. Sold (No.)
Cattle (No.)		
Lactating cows (No.)		
Horses/Mules (No.)		
Pigs (No.)		
Poultry (No.)		
Goat (No.)		
Sheep (No.)		
Butter (kg.)		
Cheese (balls)		
Milk (litres)		
Eggs (No.)		

K. Inputs use by the household

1. Inputs type	2. Quantity Used	3. Unit	4. Sources of input	5. Cost of input/ unit
Fertilizers		Kg		
Improved seeds		Kg		
Improved seedlings		No.		
Pesticides		Liters		
Farm tools/equipment		No.		

L. Improved farm Equipment

1. Type used	2. Quantity	3. Purchased from	4. Price paid (Nu.)
Power tiller			
Rice huller			
Pedal thresher			
Power thresher			
Harvester			
Oil expeller			
Other machines (Specify)			

M. Access to irrigation

1. Is there an irrigation channel for wetland? 1. Yes 2. No
2. Do you get enough water to grow rice? 1. Yes 2. No
3. If not, what problems faced with the channel?
 1. Channel damaged in summer
 2. Water not enough during transplantation
 3. Channel not well maintained
 4. Water seepage in canal
 5. Others

N. Access to social services (travel time by households to different service centres)

RNR Services

1. Service Centre	2. Nearest Location	3. Numbers of visits made by Hh in a month
RNR Centre		
Forest Range Office		
Out Reach Clinic		
BHU		
Hospital		
Primary School		
High School		
Shop		
Market		
Postal/Telecom service		
District Head Office		
Nearest motorable Road		

O. Major illness

1. Type of illness (last one year)	2. No. family members affected	3. Sex of affected person M/F	4. Age	5. No. of work days lost per person/year
1.				
2.				
3				
4				

P. Risks:

1. Access to emergency services	1. Good 2. Poor 3. Very poor
2. Health of children (nutritional status)	1. Good 2. Poor 3. Very poor

3. Health status of women	1. Good 2. Poor 3. Very poor
---------------------------	------------------------------

Q. Credit

1. Amount of loan (Nu.)	
2. Reason availed	1. House renovation 2. Buy cattle 3. Buy land 4. Consumption 5. Religious ceremony 6. Education 7. Treatment 8. Buy agri. inputs 9. Business investments 10. Others
3. Interest rate paid (%)	
4. Source of loan	1. Bank 2. Relatives 3. Friends 4. Village money lender 5. Others

R. What are the employment opportunities besides farming?

1. Are there any off-farm work opportunities?	1. Yes 2. No
2. If yes, what are the types of off-farm works:	1. Work with contractors 2. Skilled wage work in village 3. Unskilled wage work in village 4. Others
3. What is the existing wage rate for off farm works ?	Nu _____ per day

S. Income earned in last one year (answer against applicable items only)

What are your main sources of income (fill in the relevant ones only)

No.	1. Sources	2. Annual cash income (Nu.)
1.	Sale agricultural products	
2.	Sale of livestock products	
3.	Sale of animals	
4.	Business/trading	
5.	Weaving	
6.	Carpentry/masonry jobs	
7.	Casual labour	
8.	House construction works	

9.	Transporting goods (manually)	
10.	Hiring out mules/horses	
11.	Cash remittances received (contribution from employed relatives)	
12.	Others (Specify)	

T. Asset ownership

No.	Asset owned	1. Yes 2. No	No.	Asset owned	1. Yes 2. No
1			12		
2			13		
3			14		
4			15		
5			16		
6			17		
7			18		
8			19		
9			20		
10			21		
11			22		

U. What are your main expenditures? (Fill in the relevant ones only)

No.	1. Type of expenditure	2. Annual Expenditure (Nu.)
1.	Children schooling expenses	
2.	Purchase of rice	
3.	Purchase of other essential food items	
4.	Purchase of agricultural inputs	
5.	Purchase of livestock inputs	
6.	Hire of labour	
7.	Purchase of clothes for the family	
8.	Expenses on health	
9.	Expenses on fuel for cooking, lighting	

10.	Cost of repair and maintenance of house	
11.	Electricity and other bills	
12.	Rimdo	
13.	Contributions	
14.	Transportation expenses (vehicular and manual)	
14.	Others (Rural Taxes): <i>land, house, life insurance etc</i>	

V. Basic facilities

1. Type of House (structure)	1. CGI sheet roof, cement walls and floors 2. CGI sheet, stone walls and stone/wood floors 3. CGI sheet roof, wood walls and wood floors 4. CGI sheet roof, thatch walls and floors 5. Wooden roof, stone walls and stone/wood floors 6. Wooden roof, wood walls and wood floors 7. Others
2. Year constructed
3. No. of rooms	
4. Electricity	1. Yes 2. No
5. Whether rented out	1. Yes 2. No
6. Provision of drinking water	1. Yes 2. No
7. Provision of sanitation	1. Yes 2. No

IMPACTS (RESETTLEMENT ACTION PLAN)

1. Expected Benefits from the HPP

(Please can you tell us the benefits you would expect from the HPP? [Enumerators/Investigators: MORE THAN ONE ANSWER ALLOWED])

Types of benefits	Response
1. Access to electricity supply	1. Yes 2. No
2. Market for agricultural produce	1. Yes 2. No
3. Improved access to health services	1. Yes 2. No
4. Improved access to education services	1. Yes 2. No
5. Easy access to shop and markets	1. Yes 2. No
6. Employment opportunities	1. Yes 2. No

7. Access to business opportunities	1. Yes 2. No
8. No benefits from the Project	1. Yes 2. No

2. How do you plan to take advantage of these opportunities?

3. Negative impacts of the project. - What negative impacts do you think the project will bring?

4. How do you plan to limit your risks on these?

5. Loss of assets due to hydropower infrastructure

Because of the project construction works, will you lose assets/property? 1. Yes 2. No

If NO, CLOSE THE INTERVIEW. If YES –GO OVER THE FOLLOWING QUESTIONS

6. Loss of land

1. Type of land lost	Thram number	2. Total area owned (acres)	3. Total area lost (acres/decimals)
Wet Land			
Dry land			
Orchard land			
Others (specify)			

7. Loss of Structure (Note: the area of structure is to be measured with tape)

1. Type of other property	Unit	Thram Number	2. Total affected area (sqft) – length	3. Total affected area (sqft) – breadth	4. Materials structure made of
House/other infrastructure	Area in sq ft.				
Cowsheds	Area in sq ft.				
Fence	length in meters				
Boundary wall	length in meters				
Others (specify)					

8. Loss of fruit trees

1. Type of fruit trees lost (No.)	Thram Number	2. Age of trees (No. of years from planting)	3. Total trees owned (No.)	4. Total trees lost (No.)
Apple				
Apricot				
Areca nut				
Avocado				
Banana				
Cardamom				
Guava				
Jackfruit				
Lemon				
Lime				
Litchi				
Mango				
Olive				
Orange				
Papaya				
Peach				
Pear				
Plum				
Pomegranate				
Pomelo				
Tree Tomato				
Bamboo				
Walnut				
Others...				

9. Loss of Annual Crops (if will be in field at time of take-over)

1. Type of crops lost	Thram Number	2. Total area of crop lost (decimals/acres)
Paddy		
Maize		
Wheat		
Potato		
Others (specify)		

10. Loss of common property resources

1. Type of common property lost	2. Area/numbers	3. Impact of the loss
Forest access (private/community forest)		
Grazing access		
Irrigation facilities (length in m)		

Community meeting place		
Religious centres/buildings		
Others (specify)		

11. Compensation

1. Type of compensation preferred for affected land and other properties?

1a. Affected property	1.b Type of compensation
Land	1. Land replacement 2.Cash 3.Both 4. Other
Structures	1. Cash 2.Cash and materials 3. Other
Fruit trees	1. Cash 2.Cash and seedlings 3. Other
Crops	1. Cash 2.Cash and grain 3.Grain 4. Other
Common Property	1. Cash 2. Re-built structure in another location 3. Other
Livelihoods	1. Cash 2.Land 3.Materials 4. Other

Annexure II

Minutes of meetings held with Project Affected People

Minutes of the second consultation meeting held with the project affected people of Drakteng Geog on 25th November, 2010, for the Social Impact Assessment of 210 MW Nikachhu Hydropower Project.

As per the requirement of the Terms of Reference of the Social Impact Assessment Study, the second consultation meeting with the project affected people of Drakteng Geog was held at Tashidhingkha Community Primary School. About more than 30 households were present and it was chaired by the Land Record Officer of Trongsa, M/s Kyingkhon Consultant and representatives from DGPC Environmental Unit. During the meeting, the following important issues were discussed;

1. The Land Record Officer expressed his concern that out of 16 acres of the affected land, 11 acres are Chhuzhing (wet land/paddy) and as per the National Land Commission's policy, acquisition of chhuzhing has to go under very stringent rules, be it to acquire on lease. So the LRO suggested DGPC to look for possible alternatives which would have minimum acquisition of chhuzhing. To this, DGPC agreed to discuss the matter with the designers and the engineers to look for alternatives.
2. The LRO informed DGPC that his office shall not be in a position to extend any help regarding the survey works in the project area until His Majesty the King visit the Dzongkhag and grant the people with land kidhu. This is because; the people's land holding shall get changed after the kidhu grant.
3. DGPC made the people aware of the project plan, locations of the infrastructures and the possible impacts. People said they would welcome the project and extend their support provided the project is planned with minimum possible adverse impact on the locality. DGPC clarified assuring that the project is being planned with keeping the focus on the anticipated impacts to the locality and further DGPC is working to minimize the impacts. However, there shall be some unavoidable impacts such as land acquisition for the infrastructures where there are no alternatives to it and the people would require to be prepared to accept compensation in cash or land replacement. People agreed on this but expressed that the compensation rate is quite low and also they said that it's difficult to locate the land replacement in the area.
4. People shared their views regarding the road alignment that it would be a boon for their livelihood since the land in the lower part of the village is being left fallow because of the distance and the wild animal, and after the construction of the road they would be able to utilize those land for cultivation. However, they also have the concern that the construction of the road may damage their irrigation channels, water sources and the

environment. DGPC agreed to take care of this issue and such damages would be the responsibility of DGPC.

5. People expressed their concern that the current road alignment affects land of Dratshang Lhentshog and it may require the approval from Zhungdratshang. DGPC agreed to look for possible realignment to avoid that land.
6. The LRO explained that the lands acquired below 10 decimal are not eligible for land compensation as per The Land Act of Bhutan 2007 and it has to be compensated in cash. Also, people were made aware that the compensation of land affected by the road shall be done only after the construction of the road which would give the exact amount of land affected which include the spillover and the slides.
7. People inquired about the compensation regarding the damaged crops and the fruit trees. DGPC clarified stating that compensation shall be given as per the PAVA rate if there is any damage done to the crops and fruit trees. However, the LRO further made it clear to the people that they may not be eligible for such compensation if they cultivate on the land after it is acquired by the project and also if they cultivate on the government owned land.
8. In general, people agreed that they are positive about the project and hope that project might bring economic benefits to their locality.

The following officials were present for the meeting;

1. Mr. K.B Basnet, M/s Kyingkhor Consultancy
2. Mr. Sangay Phuntsho, Land Record Officer, Trongsa Dzongkhag
3. Mr. Tshering Phuntsho, Asst. Manager, DGPC
4. Mr. Tandin Tshering, Asst. Manager, DPC
5. Ms. Deki Om, Asst. Manager, DGPC
6. Ms. Sonam Peldon, Asst. Manager, DGPC
7. *Manjun, Dakty Gey.*

[Signature]

Minutes of the second consultation meeting held with the project affected people of Tangsibji Geog on 26th November, 2010, for the Social Impact Assessment of 210 MW Nikachhu Hydropower Project.

As per the requirement of the Terms of Reference of the Social Impact Assessment Study, the second consultation meeting with the project affected people of Tangsibli Geog was held at Tangsibji village at Village Tshogpa's house. About more than 50 households were present and it was chaired by the Land Record Officer of Trongsa, M/s Kyingkhon Consultant and representatives from DGPC Environmental Unit. During the meeting, the following important issues were discussed;

1. People said that they have no objection for the project including the loss of land but would prefer land replacement over cash compensation for the affected lands.
2. People inquired whether they would be compensated if the structures like houses are affected by the project infrastructures. DGPC clarified saying that compensation shall be provided as per the PAVA rules where the Dzongkhag Engineer shall evaluate the cost of the structure and levy the rate.
3. DGPC made it clear that there shall be no submergence of private land like that of Punatsangchhu Hydroelectric Project.
4. People raised their opinion that it would benefit the Geog if DGPC could help upgrade the Lower Secondary School in their Geog to High School rather than establishing a new school. The same was said about the BHU.
5. People also would like to urge the project to maintain their existing farm road.
6. They expect the project to provide them with free electricity and help them improve their livelihood by providing free agricultural seeds.
7. DGPC explained about the project plan and the anticipated impacts and the mitigation plans. People were assured that DGPC would look towards planning for a minimum adverse impact like that was explained at Drakteng.
8. People were also made aware that the road alignment and the infrastructure locations may change due to geological reasons and during the implementation time.

The following officials were present at the meeting;

1. Mr. K.B Basnet, M/s Kyingkhor Consultancy
2. Mr. Sangay Phuntsho, Land Record Officer, Trongsa Dzongkhag
3. Gup, Tangsibji Geog
4. Mr. Tshering Phuntsho, Asst. Manager, DGPC
5. Mr. Tandin Tshering, Asst. Manager, DPC
6. Ms. Deki Om, Asst. Manager, DGPC
7. Ms. Sonam Peldon, Asst. Manager, DGPC



MINUTES OF THE CONSULTATIONS WITH THE PROJECT AFFECTED HOUSEHOLDS

Venue: Gewog Tshogde Hall, Tangsibji

Date of Consultation: 25 July, 2012

Participants: Affected households of Serpochen, Tangsibji, Tsangkha villages, Geog Tshogde Officials, DGPC officials, Facilitators from BHUCORE-Gonefel Consulting Team (See name list attached for details)

Karma Jimba, Consultant welcomed all participants (affected participants) to the meeting and emphasized the importance of cooperation to achieve good results. He then introduced all persons who came to the meeting from outside the community such as Consultants, DGPC and ADB. He introduced the purpose of the meeting, which is to discuss jointly participants' perception about the Project and concerns with regard to land affected by the Project. The participants were made oriented through reference to the maps, locations of Project components such as Dam, access roads, adits, muck disposal sites, staff colonies, quarries, temporary camps, and power house using the map where all Project components were marked on it. They were asked if they understood the entire Project footprint. Questions raised regarding the components were clarified.

With regard to impact on land by Project components, Mr. Karma Jimba, explained that although the type of land impacted and the owner of the land had been identified, the exact acreage of land affected is yet to be determined. The participants who expressed their concerns are described below:-

- The Mr. Sar Wangchuk Tshogpa of Tangsibji mentioned that damage to the mini hydel's canal will affect irrigation supply to all the wet land owned by Tangsibji farmers.
- He also mentioned that as far as possible minimizing impact on land should be attempted.

Wildlife conflict

The villagers informed the meeting that the main animals which damage crops are boar and sambar deer which damage crops. They also explained that the degree of damage was similar to other geogs in the Dzongkhag and that the wild animals damage almost 40 – 50 % of the crops. They attributed the cause of wild life damage to the increase in forest areas and good health of the forest, which led to increase in wild life population. They also mentioned that they are carrying out protective fencing. They were informed of wild life predation on livestock and the compensation scheme of the government. Participants informed of a few owners of cattle killed by wolves and owners who reported the incidents to forestry officials. Participants requested Nikachhu Project to help to ease wildlife damages.

Perception of the Project and Compensation

The participants were asked their perceptions about the Project. Mr. Tshering Tashi, Geog

Administrator Officer (GAO) mentioned that 2 years ago the Project was already being discussed and that impact on the land were assessed but issues about land loss, compensation in cash or land replacement had not been discussed. So this meeting is very timely.

Mr. Pelzang, an affected person mentioned that though impact on the land of a few households is inevitable, the benefit to participants exceeded negative impacts. He explained that most affected participants would lose about 5 % of land but they have kept in mind that figures on the amount of land lost may change. They also informed that they are aware of people affected by Mangdechhu Project not receiving land replacement or cash compensation. The lesson learned was that it is important to sort out all compensation in advance to avert future problems. On the question raised about availability of land for compensation within the geog it was informed that there is adequate land available for replacement within the geog. Mr. Tsewang Norbu another affected person informed that most affected prefer land replacement over any other compensation. It was raised that affected people should be personally asked their preference either for land replacement, cash or any other compensation and it was not right for one person to decide on this for others.

Mr. Karma Jimba explained of other ancillary benefits such as free electricity for 10 years as in Punatsangchhu Project would have to be explored. The GAO mentioned that it is often the case that more land has been taken by the Project during construction than originally assessed. This He said is very problematic for villagers. This was increasingly noticed in the Mangdechhu Project. He suggested that all land replacement and cash compensation replacement is to be done before implementation of the Project and to clarify all players' responsibilities.

Another affected person Mr. Tashi Phuntsho emphasized the need for the Project to consider employment for school dropout of Project influenced Households (HH) to which the Karma Jimba mentioned that the household situation of potential employees among the local youth has to be examined to ascertain needs of the household.

Another affected person Mr. Tenzin Duba mentioned that the scheme applied for the Punatsangchu hydro power Project should be replicated for Nikachhu wherein affected participants receive free electricity for 10 years. He also mentioned that this meeting has been useful as all participants were explained and understood the procedure for compensation.

An affected person Mr. Tenzin Duba asked what would happen if during construction land of owners other than those affected would be impacted. To this the Mr. Karma Jimba replied that that this is not likely to happen although there would be some changes to the land of affected persons identified already during the planning phase of the Project.

Mr. Tenzin Wangchuk another affected person mentioned that the access road would affect land in strips above and below the road. So land affected by the road may be small and therefore not eligible for land replacement or compensation. He also enquired about the impact on houses. Mr. Karma Jimba explained that if more land is affected and only the house is saved it may be more viable for participants to relocate to places where they would have both land and homesteads. Therefore, the option would be to value the house for acquisition and resettle the person in the replaced land. He also mentioned that the team will look at practices followed in other power Projects in Bhutan with regard to free electricity for consumption sale by the affected person.

Another affected person Mr. Norbu Wangdi informed that the Drangla people could get 1 to 2

acres along the road (Sherphuchen) and shifted therefore for income generation opportunity through sale at the road site (not clear please rephrase). He went on to request that they are given land replacement in the colony area for establishing small businesses to enhance their livelihoods.

Another affected person Mr. Tenzin Duba also mentioned that there is scope for up-gradation of school for which hostel facilities are required which the Project may consider supporting.

On the enquiry about the cultural properties by Mr. Karma Jimba the participants informed about the Tsheringma Drupchu, Babji Dzong (hillock in the shape of dzong) and rock above Tsheringma Drupchu. They also mentioned that the Zalam chu which receives water draining from the Tseringma Drupchu is important and precious as it provide drinking water to 75% households under Tangsibji. However, none of the Project components would be affecting any of these. Furthermore they explained that area is just called Babji Dzong which has no connection to historical Dzong.

Mr. Sar Wangchuk, Tshogpa of Tangsibji mentioned that if there is an opportunity of expanding the road

alignment and muck disposal site to government land; this should be done to lessen the impacts on land. He also emphasized to register replaced land before construction.

Mr. Pasang Dorji, Nyala Tshogpa indicated that the community forest at Nyalateng may be affected by the Project. It was clarified that since the community forest is located above the road it will be not be impacted since the access road to the muck disposal site and colonies will have it's off take from the highway but will be aligned below the road towards the planned components.

Conclusion

The Consultant, Mr. Karma Jimba mentioned that the Consultants and the Project would as far as possible take into consideration issues that were discussed in the meeting to ensure that there are less problems with land acquisition.

Since they were no other issues raise the GAO thanked all for their participation in the discussions and for exchanging their views. He mentioned that the meeting has been very useful and informative.

The meeting ended with the signing of the attendance and invitation by Mr. Karma Jimba to all for lunch.



Figure 1 Consultations with affected persons of the NHPP



Figure 2 Consultations with affected persons of the NHPP



Figure 3 Consultations with affected persons of NHPP

LIST OF PARTICIPANTS

1. Mr. Tshering Tashi, Gewog Administration Officer, Tangsibji Gewog
2. Mr. Sar Wangchuk, Tshogpa, Tangsibji village
3. Mrs. Kinga Lhamo, Tshogpa, Tsangkha village
4. Mr. Passang Dorji, Tshogpa, Nyela village
5. Mr. Gembo Dorji, Mangmi
6. Mrs. Dechen Pelden, RNR, Agri,
7. Mr. Pema Namgay, Gewog Clerk
8. Mr. Tobgyel, Gewog Forestry officer
9. Mr. Tshewang Norbu, affected person
10. Mrs. Dechen Pelden, affected person
11. Mr. Norbu Wangdi, affected person
12. Mr. Jamchu, affected person
13. Mr. Tashi Phuntsho, affected person
14. Mr. Tenzing Wangchuk, affected person
15. Mrs. Sithar Zangmo, affected person
16. Mrs. Nidup Lham, affected person
17. Mr. Pelzang, affected person
18. Mr. Tenzing Duba, affected person
19. Mrs. Ugyen Zam, affected person
20. Mr. Gembo, affected person
21. Mr. Tandin Tshering, Asst Manager, Environment/CDM, DGPC
22. Dr. Aqueel Khan, International Consultant
23. Mr. karma Jimba, Team leader, BHUCORE
24. Mr. Saroj K Nepal, SIA consultant, GONEFEL
25. Mr. Tenzin Namgyel, Supervisor BHUCORE
26. Mrs. Deki Yonten, Consultant, PWC
27. Mr. Kunzang Yonten, Consultant, PWC

MINUTES OF THE CONSULTATIONS WITH THE PROJECT AFFECTED WOMEN OF THE 118 MW NIKACHHU HYDROPOWER PROJECT (NHPP)

Venue: Hall in DGPCL Guesthouse, Trashiling, Trongsa

Date of Consultation: 10 October 2012

Participants: List attached

Mr. Kunzang Yonten, consultant, welcomed the participants to the meeting and provided a background on the NHPP that would be located in their Gewog. He then introduced the purpose of the meeting, which was to share information, solicit views and perspectives, and hold detailed consultations and discussions with women groups regarding the location of the Project infrastructures, the amount of private land that would need to be acquired by the Project, entitlements and benefits that the affected persons would receive. He added that an important objective of the consultation was to discuss the NHPP in the context of women and how it would impact women and to identify mitigation measures, development opportunities and programs for women to help them overcome any negative impacts induced by the Project.

The Project, he said, is required to identify key issues and determine whether there are any particularly vulnerable groups in the affected population: these may include indigenous peoples, landless laborers and households headed by women. In such cases, he said, the people who may be adversely affected by the development intervention should be consulted; compensated for their losses; and assisted to rebuild their homes and communities, reestablish their enterprises, and develop their potentials as productive members of society at a level generally at least equivalent to that which was likely to have prevailed in the absence of the development intervention.

He said that special efforts are being taken by the Project to ensure that women groups are properly consulted and adequately compensated by the activities proposed in the resettlement plan. In order to ensure an adequate understanding and identify the different groups of interest, this consultation, just for women was being undertaken.

He explained that gender describes the sexually defined roles of men and women in a social and cultural context and that gender mainstreaming means identifying and integrating the different circumstances and interests of women and men in every Project, both in advance of and at regular intervals during its implementation.

The consultant said that although the status of women in Bhutan has always been high and differs considerably from the situation in neighboring countries, the Project is still required to ensure that the impact of involuntary resettlement does not fall disproportionately on women.

He informed the participants that although the Project would benefit women in general, there may be some aspects of the Project that may impact women. He encouraged the participants to share their views on how the Project would affect women, their needs and demands from the

Project, any specific issues that the women wished to raise regarding the Project, and what the Project could do to assist women so that they are better off after the Project than they were before it. He urged the participants to speak freely and frankly and then opened the floor for the participants.

No specific gender issues

Mrs. Kinga Lhamo, the Tshogpa of Tsangkha village said that they are all aware of the NHPP as they had attended the NHPP consultations earlier as well. She said that she does not see any specific women's issue with the Project and that the Project would benefit, and impact women, the same way it would impact men. She felt that the Project would not impact women adversely and that there were no specific gender concerns where the Project is concerned. She added that the Project would bring several benefits to women through; (i) improved access due to the Project access roads; (ii) increase income-earning opportunities; (iii) increase in employment opportunities; (iv) increase in business opportunities, and ; (v) ready market for agricultural produce so women do not have to travel far to sell their produce.

Health issues

Mrs. Needup Lham, raised the issue of maternity health and check up for women in Tangsibji and Tsangkha villages. She said that access to proper health services for pregnant women was poor in their area. Tangsibji has an Out-reach Clinic (ORC) but it is not equipped to conduct proper check-up for pregnant women as there is no papsmear or ultrasound machine at the ORC. She said that women from their village have to travel all the way to Trongsa hospital which is 27 km away to get checked up. She added that even after they reached Trongsa hospital they had to wait for hours to see the doctor because the hospital is crowded as it also caters to the increased population induced by the Mangdechhu Hydropower Project (MHPP). She complained that to travel to Trongsa hospital they had to take taxis which was expensive as they charged Nu. 300.00 for a one-way trip. She inquired whether it would be possible for the Project to provide an ambulance for their two villages. She asked whether the Project could help expand the ORC, provide some furniture, an ambulance, a papsmear and an ultrasound machine.

The consultant responded by saying that expanding the physical structure of the government-run ORC and providing furniture and ultrasound machine was the mandate of the Ministry of Health and that it might not be right for the Project to step into the Health Ministry's mandate. He however said that he would bring this need to the notice of the Project authorities and that maybe the Project could discuss this issue with the Ministry of Health. He told the participants that he had no authority to make any final decisions but he could make recommendations and suggestions to the DGPC and if DGPC agreed he would reflect it in the resettlement plan.

Agricultural and Dairy Products Sales Out-let for the community

Mrs. Pema Wangmo, from Tangsibji village said that their village has a milk processing committee with 22 households in the committee. The committee collects milk from the 22

households every day and processes the milk into butter and cheese which is sold to derive cash income for the committee members. However, the committee faced problems when selling the dairy products because the committee does not have a proper sales outlet and the dairy products had to be sold in the open on the side of the national highway to travelers. She said that the provision of a sales outlet for her community would benefit them. During summer their committee produces excess dairy products but due to lack of refrigeration facilities their dairy products would go bad in a few days. She asked if the Project could also provide refrigerators and freezers so that they can store their dairy products for longer periods without it going bad. She said that it was mostly women who sold the dairy products by the side of the road and that they had to brave the cold, heat, rain, wind, outdoors in order to sell their produce. She said that it was common for mothers to take their small children along with them when they sell their produce and that staying outdoors during inclement weather was not ideal for children's health. She said that a sales outlet would greatly benefit the two villages of Tangsibji and Tsangkha as almost all the households in the two villages own and raise cattle.

The consultant told the participants that he had noticed many villagers selling agricultural and dairy products in the open beside the national highway. He said that the Project may be able to provide a sales outlet for their community and that he would raise the issue with DGPCL which is the final decision-maker. He added that in order ensure that the facility is optimally utilized, apart from only dairy products the sales outlet could also display and sell other agricultural and local produce such as weaves. The consultant assured the participants that he would recommend providing a sales outlet for the community to the Project and DGPC.

Greenhouses for production of vegetables all year round

Mrs. Pedey, from Tsangkha village said that there would be a great opportunity for the community to increase their incomes by supplying vegetables to the Project laborers and employees. In order to consistently supply local vegetables all-year round greenhouses would be required. She asked the consultant about the possibility of the Project providing the community with greenhouses in to enhance local vegetable production.

The consultant informed the participants that the Ministry of Agriculture (MOA) is supplying greenhouses to villagers all over the country in order to achieve the government's objective of making the country self-sufficient where vegetables is concerned. He added that the MOA would be distributing greenhouses in Trongsa as well and that their community would receive greenhouses from the MOA. The Project providing greenhouses would mean duplicating what MOA is doing. He told the participants that if the number of greenhouses provided by the MOA was not sufficient then the Project could assist with providing additional greenhouses through MOA. He asked the participants to wait for the MOA's greenhouses and see if the number of greenhouses MOA provides is sufficient or not. He said that if MOA provided sufficient greenhouses there was no need for the Project to provide the same.

Solar electric fencing to ward off wildlife predation on crops

Mrs. Lhamo from Tangsibji village said that many villagers left their land fallow because they cannot keep the wild animals such as wild boar, monkey, deer etc from consuming, trampling, and destroying the crops they cultivate. She explained that during harvest season family members had to stay up all night in makeshift structures in the middle of their fields and drive off wild animals that normally come out only at night to consume their crops. She said that it was very tiring staying up all night till dawn in their fields every night. Staying up to guard their crops at night not only took its toll on their productivity the next day but also affected children's studies as children also stayed up all night guarding the crops. She said that about 40 percent of their cultivated crops are lost to wildlife annually. She added that land holding pattern in their villages was such that households own patches of agricultural land in different locations. Very seldom does a household own all their land in one location so it was difficult for villagers to set up guard posts and man their fields at night in all the different areas where their agricultural land is located and so a lot of agricultural land was being left fallow. She said that the provision of electric fences around their fields would deter the wildlife from entering their fields and consuming their crops. She said that their income from agriculture would increase significantly if electric fences were provided as firstly they would not lose 40 percent of their harvest to wildlife, and secondly villagers would cultivate on 100 percent of the land they owned rather than leaving their land fallow due to wildlife predation on their crops. She asked if the Project would be able to provide electric fences for her community.

The consultant informed the participants that the government was piloting electric fences in some of the southern Dzongkhags where wild marauding elephants destroyed entire cultivated fields and even took human lives every year. He explained that electric fencing had technicalities involved and that if not properly setup and used it could pose risks to humans and domestic animals. He asked the participants to wait for the results of the pilot electric fences that the government was trying out. If the pilot electric fences prove successful and is financially viable then the Project could look into it.

Skills Development Program (Training on commercial weaving for women in the community)

Mrs. Kunzang from Tsangkha village said that many women in her village weave and make small amounts of cash income through weaving cloth. She said that the women only weave traditional designs like mathra and sethra since they do not know how to weave other designs. She said that demand for mathra, sethra, pangtse etc was very limited since Bumthang Dzongkhag (which is located only 65 km away from Trongsa) specializes in traditional weaves and most travelers bought traditional weaves from Bumthang. So women in Trongsa faced a difficult time when selling their traditional weaves. Moreover, demand for traditional weaves was declining as modern designs such as those produced by Khaling Weaving Centre was gaining popularity and its demand was increasing nationally. She opined that if women in her community were provided a one or two-month training course on commercial weaving (like Khaling weaves) they would easily be able to weave modern and

commercial designs which would boost the sale of their weaves and cash incomes.

The consultant answered by saying that skills acquired through skills development training programs could provide avenues for generating income for life and that it was a better means of enhancing income on a sustainable basis rather than depending on a one-time Project hand out. He said that this was a good idea for women to enhance their incomes as there would be demand for cloth weaves from the population influx into the Project area as well. He said that he would recommend this program to the Project authorities and DGPC.

Computer training program for class X and class XII dropouts in their community

Mrs. Phub Zangmo from Tsangkha village said that in order for the Project to provide employment for one member from each Project affected family the family member to be employed will need some basic computer knowledge. She felt that class X and class XII dropouts in the village could enhance their employability by learning basic computer skills. She said that the country was facing youth unemployment and rural-urban migration problems. She said that most of the youth from villages were flocking to urban centers although their prospects of securing employment were very low. Once youth are exposed to the glitter of urban life they do not return to their villages. If village youth are provided with basic computer courses they need not go to urban centers in search of jobs, they could be employed by the Project she said.

The consultant responded by saying that at the moment the Project contractors or the Project itself did not know how much of what skills was required. He said that it is important to know the human resource requirements of the Project contractors and the Project itself. Once the HR requirements are known then specific job-oriented training could be provided to class X and XII dropouts which would be more in line with the jobs they will have to perform. Just possessing basic computer skills would not guarantee employment with the Project, he said. He asked the participants to wait for the Projects HR requirements and according to those requirements specific training programs could be organized. Having the right skills required by the Project will increase the chances of getting employed by the Project he said.

Up gradation of the Community School to Primary School

Mrs. Pema Wangmo from Tangsibji villages said that her village Community School has students till class IV but from next year it is going to be downgraded till class II only. She said that instead of expanding the school the government was going to shrink it. She said that it was problematic transferring children from one school to another. She felt that the government was decreasing the level of classes due to budgetary problems and asked if the Project could assist with the school expansion and upgrade the school to a Primary School (till class VI) which would benefit the entire community.

The consultant said that the Project could not interfere with the Ministry of Education's (MOE) policies nor could it step on their mandate. The Project, he said, has no authority whatsoever to upgrade schools, which is the sole prerogative of the MOE. Especially since

upgrading schools requires a whole set of qualified teachers, support staff, and budgetary support which only the MOE could plan and provide, which they do as per their planned programs and requirements. He said in no uncertain terms that the Project will not be able to upgrade the Community School to a Primary School.

Conclusion

Since there were no other issues raised, even after the consultant encouraged and urged the participants to voice any issue or concern they had, the consultant thanked all the participants for taking part in the consultation.

Mrs. Kinga Lhamo, the Tshogpa of Tsangkha thanked the consultant for taking time to come and inform and consult with them about the various aspects of the Project. She expressed thanks to the government and DGPC for locating the Project in their area. She said that the Project would not just benefit her community, Gewog, or Dzongkhag, but that the Project would benefit the entire country and that they were happy and proud to be part of this nationally important Project and would extend their full cooperation and support to the Project.



Figure 4 Consultation with women's group in Trashiling at DGPC's guest house



Figure 5 Consultation with women's group at Tsangkha in the Tshogpa's residence



Figure 6 Group photograph of the women who participated in the consultations in Tsanhgka

LIST OF PARTICIPANTS

1. Mrs. Kinga Lhamo, Tshogpa, Tsangkha
2. Mrs. Needup Lham
3. Mrs. Pedey
4. Mrs. Pema Wangmo
5. Mrs. Phub Zangmo
6. Mrs. Kunzang Wangmo
7. Mrs. Ugyen Zangmo
8. Mrs. Sonam Choden
9. Mrs. Sonam Pelmo
10. Miss. Dechen Zangmo
11. Mrs. Tshering Wangmo
12. Mrs. Sangay Dema
13. Mrs. Phurba Lhamo
14. Mrs. Lhadon
15. Mrs. Pem Zangmo
16. Miss. Karma Dechen
17. Mrs. Choki
18. Mrs. Dema Lham
19. Mr. Kunzang Yonten, consultant

MINUTES OF THE CONSULTATIONS HELD WITH THE PROJECT AFFECTED PERSONS WHO WILL BE LOSING LAND TO THE NIKACHHU HYDROPOWER PROJECT.

Venue: Tangsibi Gewog Office, Trongsa. Date: 04.12.2012

Time: 9:00 a.m. Participants: List attached

Mr. Jigme Namgyel, Gup (headman of a block of villages) of Tangsibi Gewog, welcomed the affected persons and the domestic consultant Mr. Kunzang Yonten to the meeting. He said that he was thankful and happy that the Nikachhu Hydropower Project (NHPP) was being located in Tangsibi Gewog and that the Project would bring about a lot of development activities and opportunities that people in Tangsibi would be able to benefit from. He informed the affected persons that whenever a Project of this magnitude and size is being implemented it was inevitable that some private land would need to be acquired by the Project to develop its infrastructure and facilities. He also said that the NHPP would not only benefit the people in Tangsibi Gewog but it would benefit the entire nation and was a step towards realizing the Kingdom's national goal of attaining economic self-reliance. He told the affected persons that although they would lose some portion of their land to the Project they should not look at their land being acquired in a negative light as this would be their contribution to the Kingdom's economic development and moreover, the affected persons would receive timely compensation and land replacement. He urged the affected persons to support and cooperate with the Project authorities in order for the Project to take off smoothly and without any delays. He then invited Mr. Kunzang Yonten to take over the consultative meeting.

Mr. Kunzang Yonten, welcomed the participants to the meeting and provided a background on the NHPP that would be located in their Gewog. He then introduced the purpose of the meeting, which was to share information, solicit views and perspectives, and hold detailed consultations and discussions with the affected persons regarding the location of the Project infrastructures, the amount of private land that would need to be acquired by the Project, entitlements and benefits that the affected persons would receive, and most importantly, obtain the consensus, support, cooperation, and voluntary agreement from the affected persons stating that they have no objection whatsoever, to their land being acquired by the Project. This, Mr. Yonten stated was important since a "no objection certificate" (in the form of a signed agreement) from the affected persons was a prerequisite for the NHPP to obtain environmental and forestry clearances in order to proceed with the Project.

Mr. Yonten explained to the affected persons that surveys conducted under the Project revealed that a total of 17.26 acres of private land will have to be acquired by the Project. Of the 17.26 acres, 13.66 acres comprised of dry land and 3.60 acres of wet land. A total of 12 households would lose some portion of their land to the Project. He said that as far as possible the Project authorities and the study team avoided private lands from being acquired and that the team even went to the extent of realigning some of the access roads in order to avoid private property and land from being affected.

He reassured the affected persons that they would receive replacement land prior to any infrastructure works commencing on their private lands. He said that this was not only an ADB or DGPCL requisite but that this procedure is prescribed in the 2007 Land Act of the Kingdom of Bhutan and therefore, the affected persons should not be worried about receiving their

replacement land in a timely manner. Mr. Yonten informed the participants that he had held detailed discussions at the Dzongkhag headquarters with Dasho Dzongdag, the Land Records officer, Dzongkhag Agriculture Officer, Dzongkhag Forestry Officer, and the Dzongkhag Environment Officer and had appraised them of the Project and its impacts. He reported that discussions held with the Land Records Officer revealed that there was sufficient vacant government land within Tangsibi Gewog to provide replacement land to the affected persons from within the same Gewog itself since the number of affected households was only 12 and the amount of land to be acquired and replaced was only 17.26 acres. The consultant also informed the participants that he had requested the Dasho Dzongdag, the Land records officer, Dzongkhag Agriculture Officer, Dzongkhag Forestry Officer, and the Dzongkhag Environment Officer to permit the affected persons to select their own replacement land (provided the replacement land was of the same size and quality as that of the acquired land in terms of fertility, productivity, and land type) from within the same Gewog. This, he explained would reduce grievances from the affected persons regarding the replacement land since it would not be the government identifying and selecting the replacement land but the affected persons themselves selecting their own replacement land. He informed the affected persons that the Dzongkhag authorities were agreeable to this request as the Dzongkhag authorities also wanted the Project to be implemented smoothly without any complaints from the affected persons later which could possibly lead to delays in the Project being implemented.

Mr. Yonten explained to the participants that if they had any grievances concerning their replacement land, compensations, entitlements and benefits, a grievance redress mechanism would be instituted under the resettlement plan. He said that the timely redress of such grievances is vital to the satisfactory implementation of the resettlement plan and completion of the Project on schedule. He added that grievances should ideally be redressed through Project management, Gewog and Dzongkhag administration, or other channels of mediation acceptable to all parties. The Project management would make every effort to resolve grievances at the community level before the unresolved grievance is forwarded to the next level of the grievance redress mechanism.

Mr. Yonten advised the affected persons not to conduct any land transactions on the identified affected land that would be acquired by the Project. This might lead to complications later and may result in further population influx into the Project area. In order to deter people with the express purpose of qualifying for resettlement and compensation assistance, he said that a cut-off date for eligibility for compensation and assistance needed to be established, after which land transactions within the Project area, particularly transactions of affected lands, would not be permitted. Mr. Yonten explained that this was an ADB procedure to prevent fraudulent claims

from those arriving after the cut-off-date. He provided examples of fraudulent claims occurring in other countries where affected persons were enticed to sell their affected lands to individuals with vested interests. These people later try to negotiate for higher compensation rates, additional entitlements and benefits, or demanded for higher quality land replacement from the Project authorities (to be later sold at a much higher price) by using influential or political connections. Such practices often led to delays in Project implementation. It was agreed by all that the cut-off-date be set at 04.12.2012.

Mr. Yonten then opened the floor for interactive discussions and invited the participants to provide any comments, suggestions, recommendations, perspectives, doubts, or questions that they may have. The following questions, discussions and comments were observed and noted:

If the acquired land is cultivable land and the replacement land is forested land is there any compensation to develop the forested land into cultivable land?

Mr. Tenzin Duba, an affected person, said that he had heard that In the Punatsangchhu Hydropower Project, affected persons were deprived (through land acquisition) of their cultivable land and provided with replacement land in forested areas, steep sloping areas, or rocky areas which were unsuitable for crop cultivation. This caused a lot of hardship to the affected persons, many of who became much worse off than they were before their land was acquired by the Project. He added that even after years had lapsed there were some affected persons in Punatsangchhu who were yet to receive any compensation or land replacement. He feared that the same fate may await the affected persons in Tangsibi Gewog and queried whether the Project would provide any assistance in developing forested replacement land into cultivable land if the land acquired was cultivable.

To this, Mr. Yonten explained that since the amount of private land to be acquired and replaced was less than 17.5 acres and suitable vacant government land was available within the same Gewog he did not feel that forested or un-cultivable rocky land would be provided as replacement land since the affected persons would be permitted to select their own replacement land. He added that in the case of Punatsangchhu, affected persons were not afforded the opportunity to select their own replacement land, and moreover, there was insufficient vacant government land in the Punatsangchhu area that could be provided as replacement land which led to numerous grievances and complaints from the affected persons there. He assured the affected persons that they would not experience the difficulties and problems encountered by the affected persons of the Punatsangchhu Hydropower Project. In the highly unlikely event that there is a dearth of suitable replacement land and hence affected persons had no option but to select un-cultivable land, the Project authorities could look into providing cash compensation to develop the land. The same could be applied if an affected person loses wet land to the Project and there is no wet land available for replacement land and the affected person is thus compelled to take dry land in lieu of the wet land acquired. Mr. Yonten said that such a situation with the NHPP is highly unlikely since there is sufficient suitable vacant government land available in their own Gewog from which the affected persons could select their replacement land.

The affected persons said that they would be satisfied if such a compensation mechanism was put in place. The consultant explained that he had no authority to make any concrete decisions on behalf of the DGPCL, particularly since it involves cash compensation that the DGPCL would have to make and budget for. He however, assured the affected persons that he would raise this extremely pertinent issue with DGPCL and was confident that DGPCL would acknowledge

this very real concern and would look favourably at providing cash compensation if such needs actually arose.

What would happen to the crops cultivated on the affected land?

Ngedup Lham, another affected person asked what would happen to the standing crops and fruit trees on the affected land or private forest? Mr. Yonten answered by saying that cash compensations would be paid as per PAVA's (Property Assessment and Valuation Agency) rates for standing crops and fruit trees (including private forest/trees if permissible) to the affected persons.

If it is temporary acquisition of land till the Project construction period is over, who will be responsible for maintaining the land and if the land is to be leased to private contractors what will be the benefits (land lease rates) to the affected person?

Pelzang, an affected person enquired about the category of affected land that falls under temporary acquisition to be used during the construction phase and returned after the completion of the construction phase and if there was any compensation for temporary acquisition. He also asked if they would receive their land back in the same condition that it was when it was taken over.

Mr. Yonten explained that hydropower Projects frequently require temporary use of private lands for access, material storage, temporary offices, work sites, or other purposes. Because temporary loss of land can adversely affect incomes or standard of living, the Project authority will ensure that involuntary temporary acquisition is minimized and that the Project (or private contractors executing the Project) pays compensation (or lease payment) for any involuntary temporary acquisition of land. He told the participants that in the case of lease of private land to contractors during the Project construction phase, the onus of preparing an appropriate lease agreement lay with the affected person and the private contractor. He said that DGPCL cannot fix a lease rate since it does not have the authority to do so and that the lease rate would depend on negotiation and mutual agreement between the affected person and the executing private contractor. If the land is acquired temporarily for use by the Project (not private contractors), compensation equivalent to the net average income that would have been obtained from the land during the period of temporary acquisition will be paid to the affected person by the Project. Irrespective of who uses the land temporarily (Project or private contractors), the entity using the land temporarily will have to ensure that the land is restored to its original productive use or pay cash compensation for the cost of restoration of the land to the same condition it was in prior to it being temporarily acquired.

Mr. Jigme Namgyel, Gup of Tangsibi Gewog, added that, in order to avoid problems between the private contractors and affected persons regarding lease of land, both parties (the private contractor and the affected household leasing the land) should inform and involve the Gewog officials instead of the affected households dealing directly with private contractors. This would prevent the affected household from being exploited by private contractors and would help the affected households to get higher lease rates while the involvement of the Gewog office would also guarantee that lease payments are paid on time and as per the contract agreement drawn up. The Gup cited examples that had occurred in the Mangdechhu Hydropower Project where affected households dealt directly with private contractors without involving the Gewog office.

This later led to numerous complaints by the affected households as some private contractors refused to pay the amount agreed upon, or did not make the payments on time, or contractors and Project officials has used more land than was agreed upon. The Gup said that when the affected persons come to them for help to resolve such cases the Gewog Office is unable to do anything since they were never involved. If the Gewog Officials were involved right from the beginning such problems could have been easily avoided or resolved.

Employment of affected household members with the Project when the Project is operational.

Tshewang Norbu, an affected person, said that he had heard that in the Punatsangchhu and Mangdechhu Hydropower Projects employment opportunities were provided by the Project to members of affected households and that similar employment opportunities should be made available to the affected persons of NHPP as well, this would uplift their economic status. Mr. Yonten replied saying that NHPP would provide employment opportunities to one member from each affected household as was being done by the Punatsangchhu and Mangdechhu Hydropower Projects. However, the category of employment provided to the affected households by the Project would be directly proportional to the qualification and experience of the family member to be employed.

Free units of electricity to affected households depending on the amount of land acquired by the Project from them.

Deynen Duba, an affected person, said that Punatsangchhu and Mangdechhu Hydropower Project authorities had agreed to provide, as part of the compensation package to affected households, free units of electricity annually to the affected households. He requested for similar benefits to be made available to the affected households of NHPP. Mr. Jigme Namgyel, Gup of Tangsibi Gewog, seconded the need for this compensation.

To this, Mr. Yonten stated that in the new Sustainable Hydropower Development Policy, the government would provide free electricity of 10,000 kWh per annum for every acre of land (or prorated thereof) acquired for the Project. The land owner may either avail free electricity or cash in lieu thereof at exports rates from the Project. The same would be provided to the affected households of NHPP.

Signing of the agreement between the affected persons and NHPP representative

The affected persons “willingly, without coercion or force, agreed to their land being acquired by the NHPP”. He then read the agreement word for word and explained every sentence contained in the agreement so that the affected persons fully understood the contents of the agreement. He explained that the agreement was not only a NOC from the affected persons but that it also stood as a guarantee from the Project authority that the replacement land will be identified (by the affected persons themselves) and delivered to the affected persons prior to the commencement of any infrastructure/construction works on the affected land.

All the affected persons willingly signed on the agreement on their own behalf while Mr. Kunzang Yonten signed on behalf of the DGPCL. The agreement was countersigned by the Gup and Gewog Administration Officer of Tangsibi Gewog Office as witnesses.

Conclusion

Mr. Kunzang Yonten, assured the affected persons that he would raise the issue (with DGPCL) of cash compensation to be paid to affected persons if the land they lose to the Project is cultivable and if the replacement land is not.

As there were no other issue raised, the Gup thanked all the affected persons for taking time out of their busy schedule to attend and participate in this very important consultative meeting. He also thanked the consultant for providing a detailed background on the Project and its impacts and for clarifying all doubts and queries that the affected persons had. He mentioned that the meeting had been extremely informative, useful, and successful for all the participants. He concluded by saying that he was confident that the affected persons would extend their full support and cooperation to ensure that the Project is implemented smoothly and efficiently.



Figure 7 Consultations with the affected households of NHPP at the Tangsibji Gewog Office, Trashiling, Trongsa



Figure 8 Consultations with the affected households of the NHPP in Tangsibji Gewog Office, Trashiling, Trongsa

LIST OF PARTICIPANTS

1. Mr. Jigme Namgyel, Gup, Tangsibi Gewog, Trongsa
2. Mr. Tshering Tashi, Gewog Administration Officer, Tangsibi Gewog, Trongsa
3. Deynen Duba, Affected Person, Sherpuchen, Tangsibi Gewog, Trongsa
4. Ngedup Lham, Agffected Person, Sherpuchen, Tangsibi Gewog, Trongsa
5. Pelzang, Affected Person, Sherpuchen, Tangsibi Gewog, Trongsa
6. Tenzin Duba, Affected Person, Sherpuchen, Tangsibi Gewog, Trongsa
7. Tenzin Wangchuk, Affected Person, Sherpuchen, Tangsibi Gewog, Trongsa
8. Late Dorji represented by Tenzin Duba, Affected Person, Sherpuchen, Tangsibi Gewog, Trongsa
9. Tshewang Norbu, Affected Person, Tsangkha, Tangsibi Gewog, Trongsa
10. Gyembo, Affected Person, Tsangkha, Tangsibi Gewog, Trongsa
11. Wangdi, Affected person, Tsangkha, Tangsibi Gewog, Trongsa
12. Jamchu, Affected Person, Tsangkha, Tangsibi Gewog, Trongsa
13. Peday, Affected Person, Tsangkha, Tangsibi Gewog, Trongsa
14. Pema Wangmo, Affected Person Tangsibji, Tangsigi Gewog, Trongsa
15. Kunzang Yonten, Domestic Consultant for DGPCL

MINUTES OF THE CONSULTATIONS WITH REPRESENTATIVES OF THE DISPLACED HOUSEHOLDS

118MW Nikachhu Hydropower Project (NHPP) Venue: Tangsibji Gewog Office,

Trashiling, Trongsa **Date:** April 7, 2014

Time: 9:30 a.m.

The list of participants is attached to this minutes.

Mr. Kunzang Yonten, Consultant, welcomed all the participants to the consultative meeting. After the welcome address he took the attendance of the participants to ensure that every displaced household was represented at the meeting. Each representative of the displaced households was asked to introduce him/herself.

The consultant asked the participants how many of them had participated in the community consultations that was organized and conducted by DGPCL on 27.01.2014 at Tsangkha Lower Secondary School's auditorium in Trongsa. All the participants said that they had attended the consultation.

The consultant told the participants that since all of them had attended the consultation in January, 2014, where DGPCL made a detailed presentation on Nikachhu Hydropower Project's (NHPP) various components and infrastructure to be constructed, its environmental and social impacts, benefits of the Project, mitigation measures to address adverse impacts, entitlements, compensation, and community development programs, in the interest of time there was no need to go through it all over again. He asked the participants if they their memories needed refreshing to which the participants said that they remembered the presentation and that there was no need to go over it again.

Detailed measurement Survey of private land to be acquired by the Project

The consultant informed the participants that the detailed measurement survey (DMS) of all land (including private land) to be acquired by the Project had been completed four days ago. The participants said that they had been aware of the DMS and that many of them had participated in the DMS. However, some participants requested the consultant to share the private displaced land details with them so that they could compare it with the information they had received. The consultant then read out each displaced land owners name along with the amount of land the owner would lose to the Project. He informed the participants that this was the final list of

displaced land owners and that the amount of private land to be acquired by the Project has been finalized.

Ms. Kuenzang Wangmo, a displaced person, inquired what would happen if during construction of the access roads some additional private land (more than what has been measured during the DMS) is affected. She said that she was concerned because a steep bend along one of the access roads bordered her land and that during construction there was the danger of a portion of the steep bend collapsing on her land. To this the consultant said that the contractors will be asked to take extreme care to ensure that no private property/land is damaged during construction. Where damages do occur, the contractor will be required to pay compensation immediately to displaced families, groups, communities or government agencies. Damaged property will be restored immediately to its former condition.

The consultant added that the DMS provided information on the lands to be acquired by the Project but it did not mean that during the later stages of the Project if some additional private land is required it can be acquired without paying any compensation. He said that, if, by chance extra private land is required, the land owner will be informed in advance and the same entitlements, benefits, and compensation will be made to the land owner, as is being done just now. The participants agreed that if land acquisition is done properly, as is being done just now, then they do not see any problem. The consultant assured them that the same procedure will be followed if additional land is required by the Project at a later date.

Ms. Phub Zangmo, a displaced person, said that although she had attended 2 consultations on the Project earlier she would like to confirm from the consultant on their entitlements, benefits, and compensation for their land lost once again.

The consultant answered by stating the entitlements, benefits and compensation as follows:

(i) The land acquired by the Project will be replaced and the title deed for the replacement land would be provided to the displaced households before any Project work on the acquired land can commence. The consultant reminded the participants that the government had permitted the displaced persons to identify replacement land of their choice (as long as the replacement land is of the same size and land type as was acquired) from vacant government land around the Project area. The consultant urged the displaced people to select and identify their replacement land at the earliest and inform their Gup and the Land Records Officer so that delays can be avoided in them receiving their replacement land title deeds.

(ii) Most probably, the replacement land will not be developed land ready for cultivation. So the Project will pay land development costs for converting the replacement land into cultivable form. To meet this expenditure the displaced persons will be paid Nu. 75, 000 for every acre (or prorated thereof) of dry land they lose to the Project. In the case of wet land the entitlement for land development cost will be Nu. 100,000 per acre (or prorated thereof).

(iii) The displaced households losing land to the Project will be provided free electricity of 10,000 kWh per annum for every acre of land (or prorated thereof) acquired for the Project. The displaced household may either avail free electricity or cash in lieu thereof at export rates from the Project. This entitlement will continue beyond the concession period.

(iv) One member from each displaced family will be provided employment by the Project during the construction period of the Project. The employment offered will depend on the qualification and skills level of the member.

Apart from these household-level entitlements and compensations, the consultant said that the community would receive benefits from the Community Development Program for the affected community. Activities and programs that will be proposed are:

1. a waste disposal site for the communities of Tsangkha, Trashiling, and Tangsibji villages.
2. a garbage compacter truck to pick up the garbage and waste from the three villages and dump them at the waste disposal site.
3. an Agriculture & Dairy Product Sales outlet with refrigerators and freezers for the displaced community where they can display and sell their farming produce along with the woven products of the women in the communities.
4. skills training development programs will be conducted for the DPs and local community members under the Project.

The consultant asked the participants from Tangsibji if the power supply from the micro hydel was reliable. Ms. Kuenzang responded that the power received is normally stable but when the villagers use all their electrical appliances the power shuts down. She said that her village was eagerly waiting for reliable electricity when villagers can use their electrical appliances without having to worry about power outages, which often left meals half-cooked in the rice and curry cookers.

Two of the displaced persons, Ms. Ugyen Tshomo and Ms. Tshewang Lham voiced their preference for cash compensation over replacement land for the land they will lose to the Project while all the other displaced persons voiced their preference for land replacement.

The two ladies that preferred cash compensation requested that the cash compensation be paid at 2014 rates and not the existing PAVA's 2009 compensation rates. To this the consultant affirmed that the cash compensation will be paid at 2014 rates and that he was waiting for PAVA to revise the compensation rates. He informed the meeting that he had discussions with PAVA and that PAVA would be releasing the revised compensation rates at the end of April 2014. He assured the participants that cash compensation would be paid at 2014 PAVA rates.

Ms. Ugyen Zangmo inquired if the replacement land would be close to their land acquired by the Project. The consultant responded by saying that it was up to the displaced persons to look for their own replacement land as the Dzongkhag and the Project had given them the choice of selecting their own replacement land from among the vacant land belonging to the government.

Ms. Rinzin Wangmo, although she is not a displaced person, she attended the consultation because her land lies adjacent to one of the access roads. She was concerned that the access road may affect her land holding. The consultant responded to her by saying that only the lands confirmed during the DMS will be acquired and utilized by the Project. The Project would ensure that, apart from the land already surveyed, additional land is not impacted whatsoever. Therefore, Ms. Rinzin Wangmo should not worry about her land holding being impacted by the access roads. The consultant added that, the Project would guarantee that if any damage was caused to her land during construction she would be compensated in full by the Project contractor responsible.

The consultant asked the participants if they had any other doubts, queries, or clarifications they wished to seek. The participants said that they did not have any further doubts or queries.

Mr. Sithar Wangchuck, who was the Acting Gup in the absence of the Gup, delivered the vote of thanks. He thanked the consultant for taking time to come and consult with the displaced persons. He said that on behalf of the community he would like to thank DGPCL and ADB for taking up the NHPP in their Gewog of Tangsibji. He said that the Gewog in particular and the country in general would benefit tremendously from the Project. He said that the people were aware of the impacts and benefits of the Project and that the people were happy to participate and contribute in this nation-building initiative. He also said that the displaced persons were now fully aware of their entitlements, benefits, and compensation packages and thanked DGPCL and ADB for their generosity and assistance in helping uplift their community and Gewog.

The consultant then paid the displaced persons Nu. 200.00 each for taking the day off to travel and participate in the consultations.

The consultation concluded at 1:30 p.m.



Figure 9 Consultations with displaced households in Tangsibji Gewog Office, Trashiling, Trongsa



Figure 10 Consultations with displaced households in Tangsibji Gewog Office, Trashiling, Trongsa



Figure 11 Consultations with displaced households in Tangsibji Gewog Office in Trashiling, Trongsa

LIST OF PARTICIPANTS

1. Mr. Sithar Wangchuk, Acting Gup, Tangsibji Gewog, Trongsa
2. Mrs. Ugyen Zangmo, displaced person
3. Mr. Dorji, displaced person
4. Sonam Wangchen, displaced person
5. Mrs. Dorji Zangmo, displaced person
6. Mrs. Phub Zangmo, displaced person
7. Mrs. Ugyen Tshomo, displaced person
8. Mrs. Sonam Pelmo, displaced person
9. Mrs. Tshering Lhamo, displaced person
10. Mrs. Dorji Dema, displaced person
11. Mr. Tsang Tsang Dorji displaced person
12. Mrs. Kunzang Wangmo displaced person
13. Mr. Sithar, representative of Namgay Chholing Community Primary School
14. Mr. Kunzang Yonten, consultant

MINUTES OF THE CONSULTATIONS WITH REPRESENTATIVES OF THE DISPLACED HOUSEHOLDS

Transmission Line Component of the 118MW Nikachhu Hydropower Project (NHPP)

Venue: Drakteng Gewog Office, Trongsa

Date: April 9, 2014

Time: 10:00 a.m.

The list of participants is attached to these minutes

The consultant, Mr. Kunzang Yonten, welcomed the participants to the consultation. He informed the participants that although the main Nikachhu Hydropower Project (NHPP) components would be located about 45 kms away in Tangsibji Gewog, the transmission line component of the Nikachhu Hydropower Project would extend from Tangsibji Gewog through Drakteng Gewog and on to Langthel Gewog where the Mangdechhu Hydropower Project's (MHPP) port head yard is located. He explained to the participants that the power from NHPP will have to be evacuated from NHPP's port head yard to Mangdechhu Hydropower Project's port head yard from where it would join MHPP's transmission line for the power to be evacuated and exported to India.

He informed the participants that Bhutan Power Corporation (BPC) had conducted the survey of the transmission line route and had identified the location of the 61 transmission line towers in December 2013. He explained that the length of NHPP's transmission line would be 18.6 kms long and would require 61 transmission towers to support the transmission lines. He said that every effort was made by the BPC survey team to avoid impacting private land and hence because of the efforts, out of the 61 transmission towers, only 6 transmission towers will fall on private land while 55 transmission towers will fall on government land. He added that even with the best efforts it was almost impossible to avoid every private land along the transmission line route.

The consultant explained that each transmission line tower would require a footprint of 10 decimals of land (1 acre = 100 decimals) and so 10 decimals of land will have to be acquired by the Project from 6 different private land owners. In total the Project would need to acquire 60 decimals (0.6 acre) of land from the 6 private land owners in total.

He then explained to the participants about the NHPP. The cost of the Project, its funding mechanism, the amount of power it would generate, the amount of revenue it would bring, benefits, its impacts, mitigation measures to address any negative impacts of the Project, and the changes it would bring.

Ms. Tshering Dema, a displaced person, asked the consultant to explain what the compensation and benefits were for the people who lose land to the Project. The consultant answered by stating the entitlements, benefits and compensation as follows:

(i) The land acquired by the Project will be replaced and the title deed for the replacement land would be provided to the displaced households before any Project work on the acquired land can commence. The consultant reminded the participants that the government had permitted the displaced persons to identify replacement land of their choice (as long as the replacement land is of the same size and land type as was acquired) from vacant government land around the Project area. The consultant urged the displaced people to select and identify their replacement land at the earliest and inform their Gup and the Land Records Officer so that delays can be avoided in them receiving their replacement land title deeds.

(ii) Most probably, the replacement land will not be developed land ready for cultivation. So the Project will pay land development costs for converting the replacement land into cultivable form. To meet this expenditure the displaced persons will be paid Nu. 75, 000 for every acre (or prorated thereof) of dry land they lose to the Project. In the case of wet land the entitlement for land development cost will be Nu. 100,000 per acre (or prorated thereof).

(iii) The displaced households losing land to the Project will be provided free electricity of 10,000 kWh per annum for every acre of land (or prorated thereof) acquired for the Project. The displaced household may either avail free electricity or cash in lieu thereof at export rates from the Project. This entitlement will continue beyond the concession period.

(iv) One member from each displaced family will be provided employment by the Project during the construction period of the Project. The employment offered will depend on the qualification and skills level of the member.

Ms. Phurpamo, a displaced person, stated that she had also lost land to MHPP and that she had a bad experience with them. She said that initially, the MHPP had acquired 10 decimal of her land for which she was compensated but during the construction phase the Project took 6 decimals of additional land from her (totaling to 16 decimals of land) and that it took over a year for her to receive that compensation. She said that she hoped the same would not occur under the NHPP. The consultant responded by saying that there was a big difference between MHPP and NHPP. He informed the participants that the MHPP was financed by the Government of India (GOI) while bulk of NHPP would be financed by ADB. He explained that since NHPP would be financed, in large part, by the ADB, the NHPP would be following ADB guidelines. He

explained that ADB safeguard policies were very stringent with their fundamental objectives for involuntary resettlement being; to avoid involuntary resettlement wherever possible; to minimize involuntary resettlement by exploring Project and design alternatives; to enhance, or at least restore, the livelihoods of all displaced persons in real terms relative to pre-Project levels; and to improve the standards of living of the displaced poor and other vulnerable groups.

He added that if ADB requirements and guidelines were not followed the financing of the Project by ADB might not materialize, therefore, NHPP follow ADB's guidelines without compromising national laws and regulations.

Ms. Yeshey Choden, a nun, who is a displaced person, requested that the transmission tower to be located in her land be relocated elsewhere. The consultant responded saying that BPC had already completed their transmission line survey route and finalized the location of the transmission line towers and that any change at this point of time would necessitate other changes which might not be viable or feasible. He explained that the transmission line route was planned in such a way that the least amount of private land would need to be acquired. If Ms. Yeshey Choden's land was to be relieved of the planned transmission tower, it would have to be relocated in someone else's private land after re-aligning the transmission line which would neither be fair for the other land owner nor would it be ideal for the route alignment. Moreover, the next land owner might ask for the transmission tower to be relocated elsewhere again. Therefore, it would not be possible to relocate the transmission tower that falls on Ms. Yeshey Choden's land to another location, the consultant said.

The consultant reminded the participants that he was here in the capacity of a social safeguard consultant for the Project to carryout consultations with the displaced people and that he had no authority whatsoever to make any decisions on the technical aspects of the Project such as location of transmission towers or any other Project infrastructure. He explained that his primary responsibility, apart from ensuring that the displaced persons are not worse off after the Project than they were before it, was to assess the social impacts of the Project and recommend mitigation measures to address the negative social impacts of the Project.

Mr. Rinzin, the brother of a displaced person who was representing his sister, said that he knows about government policies since he was the ex-Gup of Drakteng Gewog. He asked why the displaced persons were not invited to participate in BPC's transmission line route survey. He opined that during such surveys BPC should invite displaced persons so that the displaced persons can participate during the identification of the location of the transmission line towers stage itself which is more like the actual decision-making stage for the location of Project infrastructure. He added that if the displaced persons were involved right from the route survey stage the Project would face less resistance and more support from displaced persons since the displaced persons would clearly understand why the transmission tower was being located in their private land. He also said that if the consultant could not take any technical decisions the Project/DGPCL should, along with the consultant, send a suitable representative from their office who is authorized to make necessary decisions in the field

during such important consultations with displaced people.

The consultant answered by saying that before BPC initiates such transmission line surveys it is not aware of who will be impacted by the results of the survey. Therefore, it would not be possible for BPC to invite displaced persons to participate in the transmission line surveys for the simple reason that prior to the survey BPC will not know who will be impacted or whose private land will need to be acquired. It is the survey results that determine the displaced persons and not vice-versa. However, the consultant conceded that BPC should have carried out a consultative meeting with the private owners of the impacted land immediately after the survey results had identified the location of the towers and the private land to be acquired for the construction of the towers. He assured the participants that he would recommend to BPC to consult with the private land owners immediately after they complete their transmission line route surveys in future. This, he agreed, would definitely assist the Project to get the local communities and displaced persons on the Projects side since they would feel that they were involved in some aspects of the Project's decision-making process.

Ms. Karma Lhatsho, asked what would happen if due to a landslide the erected tower falls on private land and damages some of it or if it affected some structures. To this the consultant responded by saying that any damage caused in the event of a transmission tower toppling or falling due to a landslide will be compensated for by BPC since the towers will be the property of BPC.

Mr. Rinzin said that after the consultant had explained to the participants the need for the Project; the impacts and benefits of the Project, mitigation measures to address any adverse impacts caused due to the Project, entitlements, benefits and compensations the Project would provide to the displaced persons, and above all the consultant's assurance that the NHPP being an ADB-financed Project all entitlements, benefits and compensations would be paid prior to the commencement of any Project construction works, the displaced persons now understood most aspects of the Project particularly on land acquisition and compensation issues that concerned them the most. He added that the displaced persons were happy to receive such reassurances.

The consultant asked the participants if they had any further queries or clarifications they wanted. The displaced persons said that they did not have any other queries.

Mr. Rinzin, delivered the vote of thanks on behalf of the participants since the Gup, Tshogpa, and Gewog Administration Officer were not present during the consultative meeting since they had to attend a meeting in Trongsa Dzong. Mr. Rinzin thanked the consultant for taking the time to come to their Gewog to consult with the displaced persons and for being patient and for clarifying all doubts and queries the participants had, and for even answering some irrelevant and stupid questions put up by ignorant villagers. He said that all the participants now understood the importance of the Project; the Projects objectives and policies when it comes to involuntary resettlement; its impacts and mitigation measures, and; entitlements, benefits and compensation packages. He said that the participants were happy to be involved in the Project

and did not mind surrendering their private land for the Project provided replacement land was delivered before any Project work commences on their private land, and that the participants were happy with the compensation packages that will be provided by the Project. He opined that the entire Dzongkhag would be better off after the Project than it was before. He also thanked DGPCL and ADB for taking up this important national Project and locating it in Trongsa Dzongkhag.

The consultant then paid the displaced persons Nu. 200.00 each for taking the day off to travel and participate in the consultations. He also paid Traveling Allowance and Per Diem to displaced persons who would lose some land to the transmission line who had come from other Dzongkhags to attend the consultation.

The consultation concluded at 1:00 p.m.



Figure 12 Consultations with displaced persons in Drakteng Gewog Office, Trongsa. (Transmission line component)



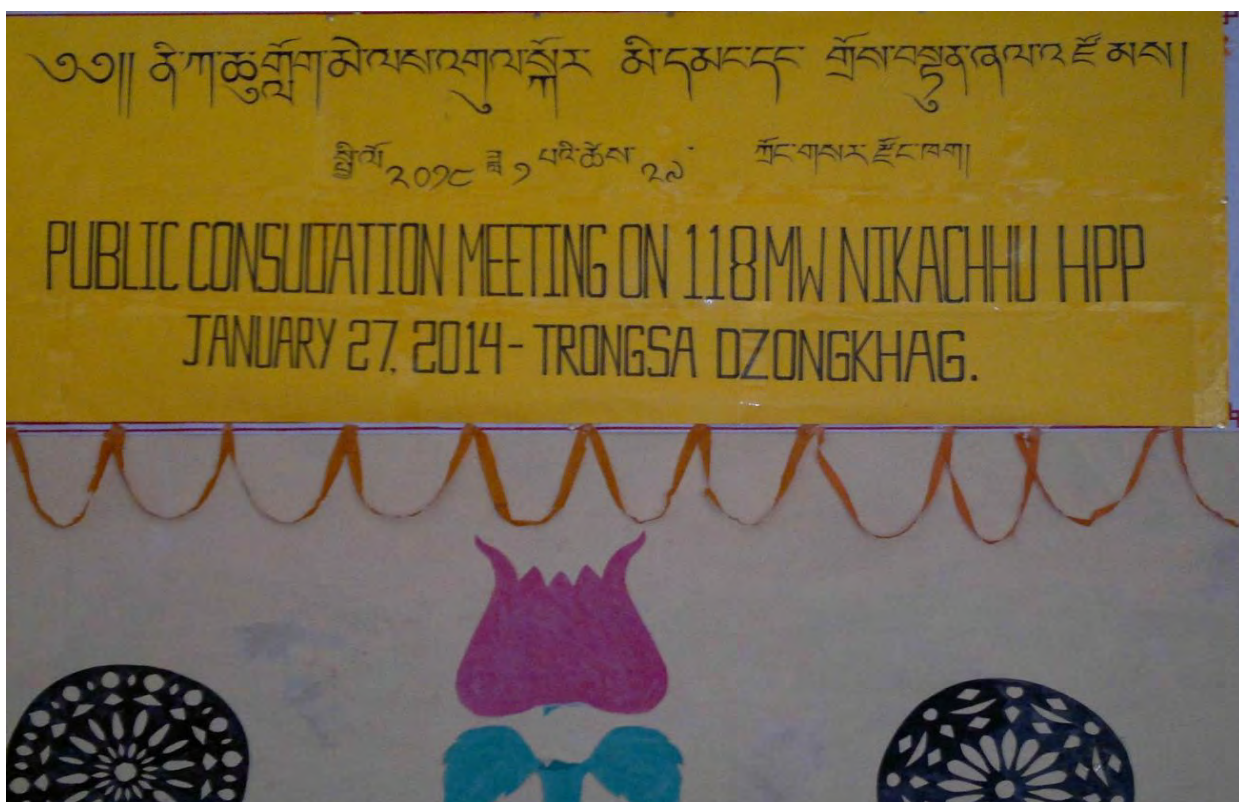
Figure 13 Consultations with displaced persons in Drakteng Gewog Office, Trongsa. (Transmission line component)

LIST OF PARTICIPANTS

1. Ms. Yeshi Choden, displaced person
2. Ms. Phurpamo, displaced person
3. Ms. Tshering Dema, displaced person
4. Mr. Rinzin, brother and representative of Mrs. Tashi Wangmo, displaced person
5. Mrs. Karma Lhatsho, sister and representative of Mr. Sangay Wangdi, displaced person
6. Ms. Lemo, displaced person
7. Ms. Wangmo, Gewog Officer
8. Mr. Kunzang Yonten, consultant

**PHOTOGRAPHS OF CONSULTATIONS HELD WITH THE COMMUNITY OF TANGSIBJI
ON 27.01.2014**







Annexure III

PAVA Land Compensation Rates - 2009



འབྲུག་རྒྱལ་ཁབ་

ROYAL GOVERNMENT OF BHUTAN
MINISTRY OF FINANCE
TASHICHHO DZONG



No. FM/DNP/PAVA/2009/4729

17th April 2009

NOTIFICATION

Subject: **Compensation Rates for Land and for Structures on the Land – Revision
Thereof**

The Royal Government hereby announces the revised compensation rates for land and for structures on the land, both in rural and in urban areas, when acquired by the Government. The rates are as given in the Annexure attached herewith. Land Compensation Rates (LCR) – 2009.

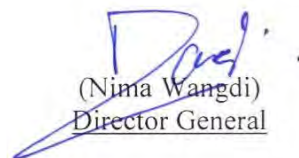
In applying the rates for rural land compensation, some additional factors are required to be considered. These are outlined at page 5.

Compensation system for the structures, if any, on the land to be acquired, is also revised herewith. Such compensations shall be on a replacement cost basis and not on depreciated cost as in the past. LCR – 2009. (Page No. 12)

Further implementation procedure and guidelines are also outlined at Page No. 13.

These rules and rates shall supersede all the earlier relevant rules and rates. These shall come into force with effect from the 1st of May 2009, and prevail for a duration of three years.

This is as per Section 151, Chapter 7 of the Land Act 2007, and as per the decision of the Lhengye Zhungtshog's –37th Session held on 15th April 2009.


(Nima Wangdi)
Director General

Attached Sheet

Copy to:

1. All agencies of the Royal Government.
2. The Secretary, Cabinet Secretariat, Tashichhoe Dzong.

ROYAL GOVERNMENT OF BHUTAN
MINISTRY OF FINANCE

Department of National Properties
Property Assessment & Valuation Agency

ROYAL GOVERNMENT OF BHUTAN MINISTRY OF FINANCE



LAND COMPENSATION RATES - 2009 (Rural and Urban land compensation rates including building/structures depreciation guide when acquired by the Government)

DEPARTMENT OF NATIONAL PROPERTIES
PROPERTY ASSESSMENT AND VALUATION AGENCY

ROYAL GOVERNMENT OF BHUTAN
MINISTRY OF FINANCE

Department of National Properties
Property Assessment & Valuation Agency

CONTENTS

Sl. No.	P A R T I C U L A R S	Page No.
1.	A – Rural Land Compensation Rates 2009	
	a) Kamzhing (Dry Land)	1
	b) Chhuzhing (Wet land)	2
	c) Ngultho Dumra (Cash Crop Land)	3
	d) Class A1(Land close to Throm)	4
2.	Factors determining Rural Land Compensation	5
3.	B – Urban Land Compensation Rates 2009	
	a) Thimphu Throm	6
	b) Phuntsholing Throm	7
	c) Gelephu Throm	8
	d) Samtse Throm	9
	e) Damphu Throm	10
	f) Dzongkhag Throm	11
	g) Specific Throm	12
4.	Compensation rate for building	12
5.	Implementation Procedure	13

ROYAL GOVERNMENT OF BHUTAN
MINISTRY OF FINANCE

Department of National Properties
Property Assessment & Valuation Agency

A - Rural Land Compensation Rates 2009

(a) or Rural Kamzhing Land

Amount Nu./decimal

<u>Sl. No.</u>	<u>Dzongkhag</u>	<u>Class A</u>	<u>Class B</u>	<u>Class C</u>
1	Bumthang	6,312.85	4,418.99	2,845.21
2	Chhukha	5,158.86	3,611.20	2,299.20
3	Dagana	4,815.13	3,370.59	2,167.74
4	Gasa	2,973.69	2,081.58	1,694.56
5	Ha	4,423.88	3,096.72	2,666.43
6	Lhuentse	5,314.44	3,720.11	2,671.61
7	Mongar	5,644.95	3,951.47	2,658.39
8	Paro	8,314.11	5,819.88	3,839.84
9	Pema Gatshel	5,646.32	3,952.42	2,287.77
10	Punakha	7,400.49	5,180.34	3,171.99
11	Samdrup Jongkhar	5,057.60	3,540.32	2,182.94
12	Samtse	6,085.76	4,260.03	2,112.80
13	Sarpang	5,318.84	3,723.19	2,043.97
14	Thimphu	17,412.53	12,188.77	3,955.82
15	Tsirang	5,630.16	3,941.11	2,142.94
16	Tashi Yangtse	5,545.12	3,881.58	2,637.52
17	Tashigang	6,034.64	4,224.25	2,679.37
18	Tongsa	5,433.20	3,803.24	2,262.54
19	Wangdue Phodang	6,595.22	4,616.66	3,373.06
20	Zhemgang	4,648.65	3,254.06	2,056.12

Class A Land: Less than or equal to 2 KM from the municipal boundary.

Class B Land: More than 2 KM and less than or equal to 6 KMs from the municipal boundary.

Class C Land: More than 6 KMs from the municipal boundary.

Distance is horizontal distance in kilometers and the municipal boundary is as demarcated by the MWHS.

ROYAL GOVERNMENT OF BHUTAN
MINISTRY OF FINANCE

Department of National Properties
Property Assessment & Valuation Agency

A - Rural Land Compensation Rates 2009

(b) For Rural Chhuzhing Land

Amount Nu/decimal

Sl. No.	<u>Dzongkhag</u>	<u>Class A</u>	<u>Class B</u>	<u>Class C</u>
1	Bumthang	6,356.90	4,449.83	3,336.72
2	Chhukha	5,375.50	3,762.85	2,608.69
3	Dagana	4,930.35	3,451.24	2,653.75
4	Gasa	2,996.13	2,097.29	1,939.67
5	Ha	4,107.67	2,875.37	2,750.41
6	Lhuentse	5,329.00	3,730.30	3,013.83
7	Mongar	5,705.11	3,993.58	3,172.90
8	Paro	8,883.76	6,218.63	4,563.88
9	Pema Gatshel	5,653.07	3,957.15	2,725.99
10	Punakha	7,470.82	5,229.57	4,129.60
11	Samdrup Jongkhar	5,225.63	3,657.94	2,530.13
12	Samtse	6,416.12	4,491.29	2,799.03
13	Sarpang	5,524.86	3,867.40	2,895.43
14	Thimphu	14,921.29	10,444.91	4,682.64
15	Tsirang	5,727.11	4,008.98	2,710.02
16	Tashi Yangtse	5,462.82	3,823.97	3,034.23
17	Tashigang	6,059.28	4,241.49	3,036.00
18	Tongsa	5,894.86	4,126.40	2,707.77
19	Wangdue Phodang	6,969.31	4,878.51	4,078.89
20	Zhemgang	4,687.94	3,281.56	2,669.39

Class A Land: Less than or equal to 2 KM from the municipal boundary.

Class B Land: More than 2 KM and less than or equal to 6 KMs from the municipal boundary.

Class C Land: More than 6 KMs from the municipal boundary.

Distance is horizontal distance in kilometers and the municipal boundary is as demarcated by the MWHS

ROYAL GOVERNMENT OF BHUTAN
MINISTRY OF FINANCE

Department of National Properties
Property Assessment & Valuation Agency

A - Rural Land Compensation Rates 2009

(c) For Rural Cash Crop Land

Amount Nu/decimal

Sl. No.	<u>Dzongkhag</u>	<u>Class A</u>	<u>Class B</u>	<u>Class C</u>
1	Bumthang	6,318.28	4,422.80	2,852.98
2	Chhukha	5,310.22	3,717.15	2,515.43
3	Dagana	5,131.17	3,591.82	2,619.22
4	Gasa	3,274.31	2,292.02	2,124.02
5	Ha	4,414.49	3,090.14	2,653.01
6	Lhuentse	5,383.59	3,768.52	2,770.40
7	Mongar	5,711.10	3,997.77	2,752.89
8	Paro	8,458.33	5,920.83	4,045.86
9	Pema Gatshel	5,902.15	4,131.50	2,653.25
10	Punakha	7,497.19	5,248.04	3,310.13
11	Samdrup Jongkhar	5,265.84	3,686.09	2,480.43
12	Samtse	6,477.00	4,533.90	2,671.72
13	Sarpang	5,855.13	4,098.59	2,810.09
14	Thimphu	17,563.86	12,294.70	4,172.02
15	Tsirang	5,982.23	4,187.56	2,645.89
16	Tashi Yangtse	5,735.35	4,014.74	2,909.27
17	Tashigang	6,236.04	4,365.23	2,967.08
18	Tongsa	5,691.64	3,984.15	2,631.74
19	Wangdue Phodang	6,603.00	4,622.10	3,384.17
20	Zhemgang	4,991.04	3,493.73	2,545.25

Class A Land: Less than or equal to 2 KM from the municipal boundary.

Class B Land: More than 2 KM and less than or equal to 6 KMs from the municipal boundary.

Class C Land: More than 6 KMs from the municipal boundary.

Distance is horizontal distance in kilometers and the municipal boundary is as demarcated by the MWHS

ROYAL GOVERNMENT OF BHUTAN
MINISTRY OF FINANCE

Department of National Properties
Property Assessment & Valuation Agency

A - Rural Land Compensation Rates 2009

(d) For Rural Land Close to Throms as Listed Below (Class A1)

Sl. No.	Class A1 Rural Land	Rate (Nu./decimal)
1	Rural Land \leq 1 KM from Phuntsholing Throm boundary	28,395.02
2	Rural Land \leq 1 KM from Thimphu Throm boundary	31,415.47
3	Rural Land \leq 1 KM from Gelephu Throm boundary	11,559.95

Distance from the respective Throm is to be taken as the horizontal distance from the nearest Throm boundary as demarcated by the MWHS.

ROYAL GOVERNMENT OF BHUTAN
MINISTRY OF FINANCE

Department of National Properties
Property Assessment & Valuation Agency

**Factors to be Taken into Account when Determining Compensation Rates for
all Categories of Rural Land
[i.e., A(a), A(b), A(c) & A(d)]**

The following factors shall be taken into account when calculating the rural land compensation rate for all Classes of Land:

1. Distance from the High way / Feeder Road;
2. Water availability on land;
3. Topography of land.

1. Distance from the Highway / Feeder road:

- The compensation rate shall increase by 10% if the location of the land under assessment is within half an hour (normal route) by normal walking distance from the nearest highway / feeder road.
- The compensation rate shall increase by 5% if the location of the land under assessment is more than half an hour (normal route) but less than or equal to one hour normal walking distance from the nearest high way / feeder road.
- If the land under assessment is more than 1 hour normal walking distance, there shall be no percentage increase in Compensation rate.

2. Water availability on the land:

- The compensation rate shall reduce by 5% if there is no water at the land under assessment at the time of assessment.

3. Topography of the land:

- The compensation rate shall remain same if the topography is less than or equal to 30°.
- The compensation rate shall decrease by 10% if the topography of the land under assessment is more than 30° but less than or equal to 60°.
- The compensation rate shall decrease by 30% if the topography of the land under assessment is more than 60°.

ROYAL GOVERNMENT OF BHUTAN
MINISTRY OF FINANCE

Department of National Properties
Property Assessment & Valuation Agency

B - Urban Land Compensation Rates 2009

(a) *For Thimphu Throm*

Sl. No.	Land Use As Per Thimphu Structural Plan (TSP) 2002-2027		Land Value (Nu/sq. ft)	Land Value (Nu/decimal)
1	URBAN CORE (UC)	Sub-Precinct 1 A	1383.8	602,783.28
2		Sub-Precinct 1	1,349.21	587,715.88
3		Sub-Precinct 2	1,233.89	537,482.48
4		Sub-Precinct 2A	1,233.89	537,482.48
5		Sub-Precinct 2B	1,176.23	512,365.79
6		Sub-Precinct 3	1,176.23	512,365.79
7		Sub-Precinct 4	1,176.23	512,365.79
8		Sub-Precinct 4A	1,176.23	512,365.79
9	URBAN HUB	UH	250.42	109,082.95
10	NEIGHBORHOOD NODE	NN	250.42	109,082.95
11	URBAN VILLAGE PRECINCT	UV - 1	258.43	112,572.11
12		UV2-MD	230.38	100,353.53
13		UV2-I	230.38	100,353.53
14		UV2-II	230.38	100,353.53
15		UV2-LD	198.33	86,392.55
16		UV - 3	180.3	78,538.68
17	INSTITUTIONAL PRECINCT	I	226.38	98,611.13
18	ENVIRONMENTAL PRECINCT	E - 1	180.3	78,538.68
19		E- 2	180.3	78,538.68
20		E - 3	180.3	78,538.68
21		E - 4	182.3	79,409.88
22	HERITAGE PRECINCT	H	194.32	84,645.79
23	DZONG	D	180.3	78,538.68
24	ROYAL PRECINCT	R	180.3	78,538.68
25	DEFENCE PRECINCT	M	206.34	89,881.70
26	TRADITIONAL VILLAGE	TV	250.42	109,082.95
27	GREEN SPACES	G1 AND G2	194.32	84,645.79

Notes:

1. For details on uses allowed under each land-use category, please refer to TSP 2002-2027.
2. For details on development control, please refer to TDCR 2004.

ROYAL GOVERNMENT OF BHUTAN
MINISTRY OF FINANCE

Department of National Properties
Property Assessment & Valuation Agency

B - Urban Land Compensation Rates 2009

(b) *For Phuntsholing Throm*

Sl. No.	Land Use As Per Phuntsholing Urban Development Plan (PUDP) 2002-2017		Land Value (Nu/sq. ft)	Land Value (Nu/decimal)
1	Residential (R)	Zone I	325.93	141,975.11
2		Zone III	325.93	141,975.11
3		Zone IV	325.93	141,975.11
4		Zone V	325.93	141,975.11
5		Zone VI	325.93	141,975.11
6		Zone VII	325.93	141,975.11
7		Zone VIII	325.93	141,975.11
8		Zone IX	325.93	141,975.11
9	Mixed Use (M)	Zone III, IV, VIII & IX	353.09	153,806.00
10	Commercial (C)	Zone II	908.42	395,707.75
11		Zone VI	913.18	397,781.21
12		Zone VII	908.42	395,707.75
13	Public & Semipublic (P)	Zone III	353.09	153,806.00
14		Zone IV	380.25	165,636.90
15		Zone V	353.09	153,806.00
16		Zone VII	353.09	153,806.00
17	Warehousing & Light Industries (I)	Zone I	353.09	153,806.00
18		Zone VI	353.09	153,806.00
19	Recreational (G)	Zone I, II, III &	325.93	141,975.11
20	Utilities & Special Reservation (U)		325.93	141,975.11
21	No Development Zone (N)		325.93	141,975.11

Notes:

- For details on uses allowed under each land-use category, please refer to Phuntsholing Urban Development Plan 2002-2017.
- For details on zoning, please refer to PUDP 2002-2017

ROYAL GOVERNMENT OF BHUTAN
MINISTRY OF FINANCE

Department of National Properties
Property Assessment & Valuation Agency

B - Urban Land Compensation Rates 2009

(c) *For Gelephu Throm*

Sl. No.	Land Use As Per Gelephu Structure Plan (GSP) 2005		Land Value (Nu/sq. ft)	Land Value (Nu/decimal)
1	URBAN VILLAGE PRECINCT	UV - 1	74.16	32,304.10
2		UV - 2	71.21	31,019.08
3		UV - 3	64.87	28,257.37
4		UV - 4	65.31	28,449.04
5	URBAN CORE PRECINCT	UC - 1	211.31	92,046.64
6		UC - 2	44.23	19,266.59
7	INSTITUTIONAL PRECINCT	I - 1	70.33	30,635.75
8		I - 2	44.23	19,266.59
9	ENVIRONMENTAL PRECINCT	E - 1	44.23	19,266.59
10		E - 2	45.70	19,906.92
11		E - 3	54.99	23,953.64
12		E - 4	47.18	20,551.61
13		E - 5	56.47	24,598.33
14		E - 6	56.47	24,598.33
15		E - 7	54.55	23,761.98
16		E - 8	56.47	24,598.33
17	HERITAGE PRECINCT	H	56.47	24,598.33
18	SPECIAL ECONOMIC PRECINCT	SE - 1	70.33	30,635.75
19		SE - 2	58.53	25,495.67
20		SE - 3	62.36	27,164.02
21		SE - 4	76.22	33,201.43
22	ROYAL PRECINCT	R	65.31	28,449.04
23	DEFENCE PRECINCT	D	65.31	28,449.04

Notes:

1. For details on land use category, please refer to GSP 2005.

ROYAL GOVERNMENT OF BHUTAN
MINISTRY OF FINANCE

Department of National Properties
Property Assessment & Valuation Agency

B - Urban Land Compensation Rates 2009

(d) *For Samtse Throm*

Sl. No.	Land Use As Per Samtse Strcutre Plan (SSP) 2004		Land Value (Nu/sq. ft)	Land Value (Nu/decimal)
1	URBAN VILLAGE PRECINCT	UV - 1	109.57	47,728.69
2		UV - 2	105.19	45,820.76
3		UV - 3	94.23	41,046.59
4		UV - 4	83.82	36,511.99
5	URBAN CORE PRECINCT	UC - 1	201.61	87,821.32
6	INSTITUTIONAL PRECINCT	I - 1	60.26	26,249.26
7		I - 2	103.54	45,102.02
8	ENVIRONMENTAL PRECINCT	E - 1	54.78	23,862.17
9		E - 2	59.35	25,852.86
10		E - 3	73.59	32,055.80
11		E - 4	63.91	27,839.20
12		E - 5	82.72	36,032.83
13		E - 6	78.16	34,046.50
14		E - 7	76.70	33,410.52
15		E - 8	79.07	34,442.89
16	HERITAGE PRECINCT	H	79.07	34,442.89
17	SPECIAL ECONOMIC PRECINCT	SE - 1	90.76	39,535.06
18		SE - 2	80.72	35,161.63
19		SE - 3	85.46	37,226.38
20		SE - 4	103.54	45,102.02
21	DEFENCE PRECINCT	D	85.46	37,226.38

Notes:

1. For details on land-use category, please refer to SSP 2004.

ROYAL GOVERNMENT OF BHUTAN
MINISTRY OF FINANCE

Department of National Properties
Property Assessment & Valuation Agency

B - Urban Land Compensation Rates 2009

(e) *For Damphu Throm*

Sl. No.	Land Use As Per Damphu Structure Plan (DSP) 2004		Land Value (Nu/sq. ft)	Land Value (Nu/decimal)
1	URBAN VILLAGE PRECINCT	UV - 1	54.54	23,757.62
2		UV - 2	52.27	22,768.81
3		UV - 3	47.00	20,473.20
4		UV - 4	41.63	18,134.03
5	URBAN HUB PRECINCT	UC - 1	114.07	49,688.89
6	INSTITUTIONAL PRECINCT	I - 1	41.84	18,225.50
7		I - 2	48.51	21,130.96
8		I - 3	39.27	17,106.01
9	ENVIRONMENTAL PRECINCT	E - 1	27.27	11,878.81
10		E - 2	29.54	12,867.62
11		E - 3	36.63	15,956.03
12		E - 4	33.63	14,649.23
13		E - 5	41.18	17,938.01
14		E - 6	38.91	16,949.20
15		E - 7	38.18	16,631.21
16	HERITAGE PRECINCT	H	39.36	17,145.22
17	SERVICES PRECINCT	SP - 1	27.27	11,878.81
18		SP - 2	27.27	11,878.81
19	ROYAL PRECINCT	R	44.81	19,519.24

Notes:

1. For details on land-use category, please refer to DSP 2004.

ROYAL GOVERNMENT OF BHUTAN
MINISTRY OF FINANCE

Department of National Properties
Property Assessment & Valuation Agency

B - Urban Land Compensation Rates 2009

(f) For rest of the Dzongkhag Throm

Sl. No.	Dzongkhags	Commercial		Residential	
		Land Value (Nu. Per sft)	Land Value (Nu. Per decimal	Land Value (Nu. Per sft)	Land Value (Nu. Per decimal
1	Bumthang	48.25	21,017.70	26.11	11,373.52
2	Chhukha	47.74	20,795.54	23.25	10,127.70
3	Dagana	37.60	16,378.56	18.63	8,115.23
4	Gasa	35.18	15,324.41	14.80	6,446.88
5	Ha	38.08	16,587.65	15.98	6,960.89
6	Lhuentse	39.53	17,219.27	21.05	9,169.38
7	Mongar	94.85	41,316.66	24.85	10,824.66
8	Paro (Tshongdue)	198.95	86,662.62	69.84	30,422.30
9	Pema Gatshel	43.40	18,905.04	22.60	9,844.56
10	Punakha (Khuruthang)	69.77	30,391.81	36.59	15,938.60
11	Samdrup Jongkhar	165.18	71,952.41	62.78	27,346.97
12	Sarpang	46.69	20,338.16	26.79	11,669.72
13	Tashi Yangtse	42.44	18,486.86	21.99	9,578.84
14	Tashigang	154.75	67,409.10	49.01	21,348.76
15	Tongsa	51.10	22,259.16	26.92	11,726.35
16	Wangdi Phodrang	53.53	23,317.67	27.70	12,066.12
17	Zhemgang	37.80	16,465.68	19.50	8,494.20

ROYAL GOVERNMENT OF BHUTAN
MINISTRY OF FINANCE

Department of National Properties
Property Assessment & Valuation Agency

B - Urban Land Compensation Rates 2009

(g) *For Specific Throms Listed Below*

			Commercial		Residential	
Sl. No.	Name of Dzongkhag	Throm	Land Value (Nu. Per sft.)	Land Value (Nu. Per decimal)	Land Value (Nu. Per sft.)	Land Value (Nu. Per decimal)
1	Chhukha	Tsimasham	21.89	9,535.28	20.48	8,921.09
		Gedu				
		Tsimalakha				
2	Lhuentse	Autsho	20.25	8,820.90	19.80	8,624.88
3	Paro	Bondey	65.89	28,701.68	44.39	19,336.28
4	Pema Gatshel	Nganglam	22.50	9,801.00	22.43	9,770.51
5	S/Jongkhar	Deothang	36.17	15,755.65	32.58	14,191.85
6	Samtse	Gomtu	37.04	16,134.62	33.04	14,392.22
7	Tashi Yangtse	Duksum	21.45	9,343.62	21.00	9,147.60
8	Tashigang	Kanglung	46.46	20,237.98	43.21	18,822.28
		Rangjung				
		Wamrong				
9	Zhemgang	Panbang	19.05	8,298.18	18.30	7,971.48

Compensation Rate for Buildings/Structures on the Land

The compensation for building/structures shall be based on its current construction cost, that is the cost of constructing a similar structure at the current prices. This should amount to the replacement cost with no depreciations being applied, as done earlier.

ROYAL GOVERNMENT OF BHUTAN
MINISTRY OF FINANCE

Department of National Properties
Property Assessment & Valuation Agency

Implementation Procedure

The implementation procedural steps will be as follows:

1. **Initiation:** On the decision of the agency/project to acquire land, the proposal is to be submitted to the National Land Commission Secretariat (NLCS) for formal approval. The NLCS will convey its decision within 2 weeks. (Ref: Section 155 of the Land Rules & Regulations of the Kingdom of Bhutan 2007).
2. **Notification:** Subject to the approval of the NLCS, the Dzongkhag or Thomdey Committee is to notify the landowner of the Government's intention to acquire land at least 120 days prior to the acquisition of the land. (Ref: Section 156 and 157 of the Land Rules & Regulations of the Kingdom of Bhutan 2007).
3. **Replacement:** Should the landowner opt for a substitute land, the case shall be dealt with as per the Land Act of Bhutan 2007. Should the landowner opt for monetary compensation, the Dzongkhag / Thomdey Committee will determine the compensation amount as per the compensation rates fixed by the Government.
4. **Referencing of Municipal Boundary:** For distances from the municipal boundary, the boundary demarcated by the MWHS shall be taken.
5. **Valuation:** The compensation for land shall also be worked out by the Committee based on the rates while the compensation for the structures shall be based on the estimates prepared by qualified engineers (Dzongkhag Engineers) vetted by the Committee.
6. **Taking Possession:** Taking possession of the land shall be as stipulated in Section 158 of the Land Act of Bhutan 2007.
7. **Effective Rate:** The compensation rate applicable shall be as per the category of land as on the date of notification of the Government's intention to acquire land shall be used.

Annexure IV

Cash Crop Compensation Rates



དངུལ་ཅེས་ལྷན་ཁག།

ROYAL GOVERNMENT OF BHUTAN
MINISTRY OF FINANCE
TASHICHHO DZONG



No. MoF/DNP/AR-53/2008/561

3rd September 2008

NOTIFICATION

Subject: Compensation Rates 2008 for Cash Crops/ Fruit Trees / Annual Crops

The Royal Government hereby announces the revised compensation rates for cash crops / fruit trees / annual crops on land when acquired by the Government. The rates are as in the Attached Sheet.

This shall come into force with effect from the 1st of September 2008 and prevail for a duration of three years.

These rates supersede the relevant rates in the Land Compensation Rates 1996.

This is as per Section 151, Chapter 7 of the Land Act 2007, and as per the decision of the Lhangye Zhungtshog's 15th session held on 26th August 2008.

(Wangdi Norbu)
Finance Minister

Attached Sheet

Copy to:

1. All agencies of the Royal Government;
2. The Cabinet Secretary, Cabinet Secretariat, Tashichho Dzong.

ROYAL GOVERNMENT OF BHUTAN
MINISTRY OF FINANCE

Department of National Properties

Compensation Rates 2008 for Cash Crops / Fruit Trees / Annual Crops

I. Compensation rate for Cash Crops / Fruit Trees

Compensation Rate - 2008								
Compensation rate for fruit trees / cash crops								
SN.	Crop	YRT*	0	1	2	3	4	5
1	Apple	5	484.00	784.00	1,384.00	1,684.00	1,984.00	4,105.00
2	Apricot	5	496.00	852.00	1,208.00	1,564.00	1,920.00	2,845.00
3	Areca nut	5	172.00	324.00	436.00	644.00	964.00	1,405.00
4	Avocado	5	424.00	744.00	1,064.00	1,344.00	1,704.00	2,280.00
5	Banana	2	114.00	174.00	174.00	174.00	174.00	174.00
6	Cardamom	5	29.60	33.60	37.60	41.60	45.60	77.00
7	Guava	5	372.00	576.00	780.00	984.00	1,188.00	1,490.00
8	Jackfruit	5	648.00	1,096.00	1,544.00	1,992.00	2,440.00	3,610.00
9	Lemon	5	356.00	756.00	1,156.00	1,356.00	1,456.00	1,820.00
10	Lime	5	292.00	452.00	612.00	772.00	812.00	1,065.00
11	Litchi	5	620.00	1,068.00	1,516.00	1,964.00	2,412.00	3,325.00
12	Mango	5	484.00	1,024.00	1,564.00	2,104.00	2,644.00	3,980.00
13	Olive	5	456.00	936.00	1,416.00	1,896.00	2,376.00	3,570.00
14	Orange	5	520.00	932.00	1,344.00	1,756.00	2,168.00	2,945.00
15	Papaya	4	180.00	225.00	270.00	285.00	380.00	380.00
16	Peach	4	372.00	651.00	930.00	1,119.00	1,664.00	1,692.00
17	Pear	5	392.00	712.00	1,032.00	1,352.00	1,672.00	2,490.00
18	Plum	5	420.00	776.00	1,132.00	1,488.00	1,844.00	2,750.00
19	Pomegranate	5	288.00	536.00	784.00	1,032.00	1,160.00	1,560.00
20	Pomelo	5	377.00	459.40	918.80	1,378.20	1,837.60	2,297.00
21	Tree Tomato	4	108.50	217.00	325.50	434.00	434.00	434.00
22	Bamboo	5	11.00	11.00	11.00	11.00	44.00	89.00
23	Walnut	5	708.00	1,112.00	1,516.00	1,920.00	2,324.00	3,410.00

*YRT is the time (years) taken by a new seed / sapling to bear fruit or gain maturity

ROYAL GOVERNMENT OF BHUTAN
MINISTRY OF FINANCE

Department of National Properties

II. Compensation rate for Annual Crops

Crops	Rate (Nu. / acre)
Paddy	12,615.84
Wheat	2,948.00
Chilli	48,223.00

Note:

In respect of the above compensation rates (i.e. I & II), the following conditions may be noted.

- 1. For compensation payment, the claimant should be the legal owner of the land and/or of the property on the land. This should be ascertained with the ownership certificates of the land and/or of the property.*
- 2. Compensation payment should be made as admissible for land categories as registered in the Land Records (Tham).*
- 3. Where land is not required to be acquired immediately and thus where there is time for the owners to harvest their annual crops, land may be acquired only after the harvest of the crops.*





དངུལ་ཅིས་ལྷན་ཁག །
ROYAL GOVERNMENT OF BHUTAN
MINISTRY OF FINANCE
TASHICHO DZONG



ཡིག་ཁང་: ཡེ་ཡེ་ཡེ་ཡེ་ / རི་ཡེ་ཡེ་ / ཡེ་ཡེ་ཡེ་ - 43/2004/467

རྒྱུ་གསལ་ 3/6/2004


མི་མང་ཁྱབ་བསྐྱུགས།

གནད་དོན: དངུལ་ཐོག/ཤིང་ཐོག/ལོ་ཐོག་གི་ རྒྱ་འབྲས་གོང་ཚད་ 2004 ཚན་མའི་སྐོར།

ད་རེས་ འབྲུག་གཞུང་གིས་ གཞུང་མཐོའི་དོན་ལུ་ས་ཆ་ལེན་པའི་སྐབས་སུ་ ས་ཆ་ནང་ལུ་ཡོད་པའི་ དངུལ་ཐོག/ཤིང་ཐོག/ལོ་ཐོག་
 རྒྱ་འབྲས་བསྐྱར་བཟོའི་གོང་ཚད་ཚུ་ ཟུར་སྒྲགས་ལྟར་དུ་ཁྱབ་བསྐྱུགས་སྒྲེལ་ཤ་ཡིན།

བསྐྱར་བཟོའི་གོང་ཚད་འདི་ སྤྱི་ལོ་ 2004 ཟླ་ 6 པའི་ཚེས་ 7 ལས་འགོ་བཟུང་སྟེ་ ཏུས་ལྷན་ལོ་ངོ་གསུམ་གྱི་རིང་ལུ་
 ཆ་གནས་ཡོད། གོང་ཚད་འདི་གིས་ ས་ཆ་འེ་རྒྱ་འབྲས་གོང་ཚད་ 7666 ཚན་མའི་འབྲེལ་ཡོད་གནད་དོན་ཚུ་ཆ་མེད་གཏང་མ་ཡིན།

བསྐྱར་བཟོ་འབད་བའི་ས་ཆ་འེ་རྒྱ་འབྲས་གོང་ཚད་འདི་ ས་ཡི་བཅའ་ཁྲིམས་ 2002 ཚན་མ་ ལེ་བུ་ 2 པའི་དོན་ཚན་ 747 པ་
 དང་ སྤྱི་ལོ་ 2004 ཟླ་ 4 པའི་ཚེས་ 26 ལུ་འཛོགས་མི་ ལྷན་ཁྲུས་གཞུང་ཚོགས་ཐེངས་ 74 པའི་གྲོས་ཚད་དང་འབྲེལ་ཏེ་
 ཁྱབ་བསྐྱུགས་འབད་ཤ་ཡིན།


 (དབང་འདུན་ཞོང་བུ།)
དངུལ་ཅིས་སློན་ཡོ།

- འབྲ: 1. འབྲུག་གཞུང་གི་ལས་སྡེ་གར་ལཱ།
 2. བཀྲིས་ཚོས་རྫོང་ ལྷན་ཁྲུས་གཞུང་ཚོགས་རྩེ་ཆེན་ལཱ།

དངུལ་ཐོག/ཤིང་ཐོག/ལོ་ཐོག་གི་ ལྷན་འཇུག་གོང་ཚད་ ༢༠༠༥ ཚན་མ།

༡. དངུལ་ཐོག/ཤིང་ཐོག་གི་ ལྷན་འཇུག་གོང་ཚད།

ལྷན་འཇུག་གོང་ཚད་ ༢༠༠༥ ཚན་མ།								
༡. དངུལ་ཐོག/ཤིང་ཐོག་གི་ ལྷན་འཇུག་གོང་ཚད།								
	ཐོག་གི་དབྱེ་བ།	འབྲས་བུ་ཀླུ་མོ་ཚད།	༠	༡	༢	༣	༤	༥
༡	ཞི་ཕུལ་	ཡ	༠༥༠,༠༠	༧༥༠,༠༠	༡,༣༥༠,༠༠	༡,༦༥༠,༠༠	༡,༩༥༠,༠༠	༢,༡༠༥,༠༠
༢	ཞི་ཕེང་ཀླི་	ཡ	༢༩༠,༠༠	༤༥༢,༠༠	༡,༢༠༤,༠༠	༡,༥༠༠,༠༠	༡,༩༢༠,༠༠	༢,༤༠༥,༠༠
༣	རྫོག་མ་	ཡ	༡༢༢,༠༠	༣༢༠,༠༠	༤༣༠,༠༠	༤༠༠,༠༠	༩༠༠,༠༠	༡,༠༠༥,༠༠
༤	གུ་ལི་	ཡ	༢༢༠,༠༠	༢༠༠,༠༠	༡,༠༠༠,༠༠	༡,༣༠༠,༠༠	༡,༢༠༠,༠༠	༢,༢༤༠,༠༠
༥	རང་ལག་	འ	༡༡༠,༠༠	༡༢༠,༠༠	༡༢༠,༠༠	༡༢༠,༠༠	༡༢༠,༠༠	༡༢༠,༠༠
༦	མ་ལུ་ན་ཅི་	ཡ	༢༩,༠༠	༣༣,༠༠	༣༢,༠༠	༢༡,༠༠	༢༥,༠༠	༢༢,༠༠
༧	སྤུལ་པ་མེ་ལུ་	ཡ	༣༢༢,༠༠	༥༢༠,༠༠	༧༥༠,༠༠	༩༥༠,༠༠	༡,༡༤༤,༠༠	༡,༢༩༠,༠༠
༨	སྤུལ་ཅི་	ཡ	༠༢༤,༠༠	༡,༠༩༠,༠༠	༡,༥༠༠,༠༠	༡,༩༩༢,༠༠	༢,༠༢༠,༠༠	༣,༠༡༠,༠༠
༩	ལེ་མོ་ན་	ཡ	༣༥༠,༠༠	༢༥༠,༠༠	༡,༡༥༠,༠༠	༡,༣༥༠,༠༠	༡,༤༥༠,༠༠	༡,༤༢༠,༠༠
༡༠	ལེ་མེ་	ཡ	༢༩༢,༠༠	༢༥༢,༠༠	༤༡༢,༠༠	༧༢༢,༠༠	༤༡༢,༠༠	༡,༠༠༥,༠༠
༡༡	ལེ་ཅི་	ཡ	༠༢༠,༠༠	༡,༠༠༤,༠༠	༡,༥༡༠,༠༠	༡,༩༠༠,༠༠	༢,༠༡༢,༠༠	༣,༣༢༥,༠༠
༡༢	ལམ་རྒྱ་ལེ་	ཡ	༢༤༠,༠༠	༡,༠༢༠,༠༠	༡,༥༠༠,༠༠	༢,༡༠༠,༠༠	༢,༠༢༠,༠༠	༣,༩༤༠,༠༠
༡༣	ལོ་ལི་བ་	ཡ	༢༥༠,༠༠	༩༣༠,༠༠	༡,༠༡༠,༠༠	༡,༤༩༠,༠༠	༢,༣༢༠,༠༠	༣,༥༢༠,༠༠
༡༤	ཚལ་ལུ་	ཡ	༥༢༠,༠༠	༩༣༢,༠༠	༡,༣༠༠,༠༠	༡,༢༥༠,༠༠	༢,༡༠༤,༠༠	༢,༩༠༥,༠༠
༡༥	མོ་དུ་ཕུལ་	༢	༡༤༠,༠༠	༢༢༥,༠༠	༢༢༠,༠༠	༢༤༥,༠༠	༣༤༠,༠༠	༣༤༠,༠༠
༡༦	ལམ་	༢	༣༢༢,༠༠	༤༥༡,༠༠	༩༣༠,༠༠	༡,༡༡༩,༠༠	༡,༠༠༠,༠༠	༡,༠༩༢,༠༠
༡༧	སྤྱི་(ཤེས་རྒྱ་)	ཡ	༣༩༢,༠༠	༢༡༢,༠༠	༡,༠༣༢,༠༠	༡,༣༤༢,༠༠	༡,༠༦༢,༠༠	༢,༠༩༠,༠༠
༡༨	སྤྱི་	ཡ	༢༢༠,༠༠	༢༢༠,༠༠	༡,༡༣༢,༠༠	༡,༢༤༤,༠༠	༡,༤༠༠,༠༠	༢,༢༥༠,༠༠
༡༩	ལེ་ལུ་	ཡ	༢༤༤,༠༠	༥༣༠,༠༠	༧༤༠,༠༠	༡,༠༣༢,༠༠	༡,༡༠༠,༠༠	༡,༥༠༠,༠༠
༢༠	མོ་མེ་ལོ་	ཡ	༣༢༢,༠༠	༢༥༩,༠༠	༩༡༤,༠༠	༡,༣༢༤,༠༠	༡,༤༣༢,༠༠	༢,༣༩༢,༠༠
༢༡	ཤིང་སྤུལ་བུ་	༢	༡༠༤,༥༠	༢༡༢,༠༠	༣༢༥,༥༠	༢༣༠,༠༠	༢༣༠,༠༠	༢༣༠,༠༠
༢༢	ཕག་ཤིང་	ཡ	༡༡,༠༠	༡༡,༠༠	༡༡,༠༠	༡༡,༠༠	༢༢,༠༠	༤༩,༠༠
༢༣	སྤྱི་ལོ་	ཡ	༢༠༤,༠༠	༡,༡༡༢,༠༠	༡,༥༡༠,༠༠	༡,༩༢༠,༠༠	༢,༣༢༠,༠༠	༣,༠༡༠,༠༠



2. ལོ་ཐོག་གི་ རྒྱ་འཕུས་གོང་ཚད།

ལོ་ཐོག་གི་དཔྱད་གཞི།	ཨ་ཀར་རེ་ལུ་ རྒྱ་འཕུས་དངུལ་གྲུ་
འབྲུ	12,674,40
དཀར་	2,004,00
ཨ་མ་	05,223,00

5ན་གསུམ།

གོང་ལུ་བཀོད་མི་ རྒྱ་འཕུས་གོང་ཚད་ཚུ་གི་ཐད་ལུ་ ག་ཤམ་འཁོད་གནས་ཚུ་ག་ཚུ་གྲུ་གཞི་བརྟེན་དགོ།

1. རྒྱ་འཕུས་སྤྱོད་ནི་འདོན་ལུ་ ཐོབ་བཟོད་བཀོད་མི་མི་རེ་མ་དེ་ ས་ཆ་དང་ ཡང་ན་ ས་ཆ་ཐོག་གི་རྒྱ་དངོས་ཀྱི་
ཁྲིམས་མཐུན་གྱི་ཚོ་བདག་ཡིན་དགོས་དེ་ དེ་ཡང་ ས་ཆ་དང་ ཡང་ན་ རྒྱ་དངོས་བདག་དབང་གི་རོ་སྤྱོད་ལག་ཁྱེར་
ལས་ གཏན་འཁེལ་འབད་དགོ།

2. རྒྱ་འཕུས་དེ་ ས་ཁྲམ་ནང་བཀོད་པའི་ ས་ཆ་འདི་དབྱེ་བའི་ཐོབ་ལམ་དང་འབྲེལ་ཏེ་སྤྱོད་དགོ།

3. ག་ལ་སྤྱོད་ ག་ཁྲམ་འཁོད་དོན་ལས་ས་ཆ་ལེན་ནི་ལུ་ འཕུལ་ཐོག་གི་དགོས་མཁོ་མེད་པ་ཅིན་ ས་ཆ་དེ་ཡང་
ས་འཛིན་བདག་གིས་ ལོ་ཐོག་བསྟར་ཚར་བའི་ཤུལ་ལུ་ལེན་དགོ།



ANNEXURE V

A. Displaced Persons and Inventory of their Losses

No.	Name	Land (in acres)
1	Ugyen Zangmo	0.107
2	Dorji	0.480
3	Namgay Chholing CPS	0.423
4	Sonam Wanachen	0.342
5	Dorji Zangmo	0.183
6	Phub Zangmo	0.241
7	Ugyen Tshomo	0.280
8	Sonam Pelmo	0.142
9	Tshewang Lhamo	0.469
10	Dorji Dema	0.393
11	Tshang Tshang Dorji	0.352
12	Kunzang Wangmo	0.165
13	Phurpamo	0.100
14	Lemo	0.100
15	Tshering Mo	0.100
16	Tshering Dema	0.100
17	Sangay Wangdi	0.100
18	Tashi Wangmo	0.100
		4.177

B. Individual Displaced Household Total Annual Income and Expenditure for the last one year

No.	Displaced Household	Total Annual Income (Nu)	Total Annual Expenditure (Nu)
1	Sonam Pelmo	21,000	42,050
2	Phurpamo	48,850	47,055
3	Tshering Mo	62,780	60,810
4	Dorji	73,660	71,455
5	Tsang Tsang Dorji	76,300	74,684
6	Ugyen Tshomo	81,230	80,722
7	Phub Zangmo	83,650	81,508
8	Lemo	87,300	84,724
9	Kunzang Wangmo	89,400	88,550
10	Tshewang Lhamo	136,550	131,380
11	Sangay Wangdi	150,080	144,550
12	Dorji Dema	152,350	147,900
13	Dorji Zangmo	153,050	150,700
14	Sonam Wangchen	156,050	155,550
15	Tashi Wangmo	183,070	181,100
16	Ugyen Zangmo	220,100	199,800
17	Tshering Dema	473,000	267,100
		2,248,420	2,009,638