

# Draft Resettlement Plan

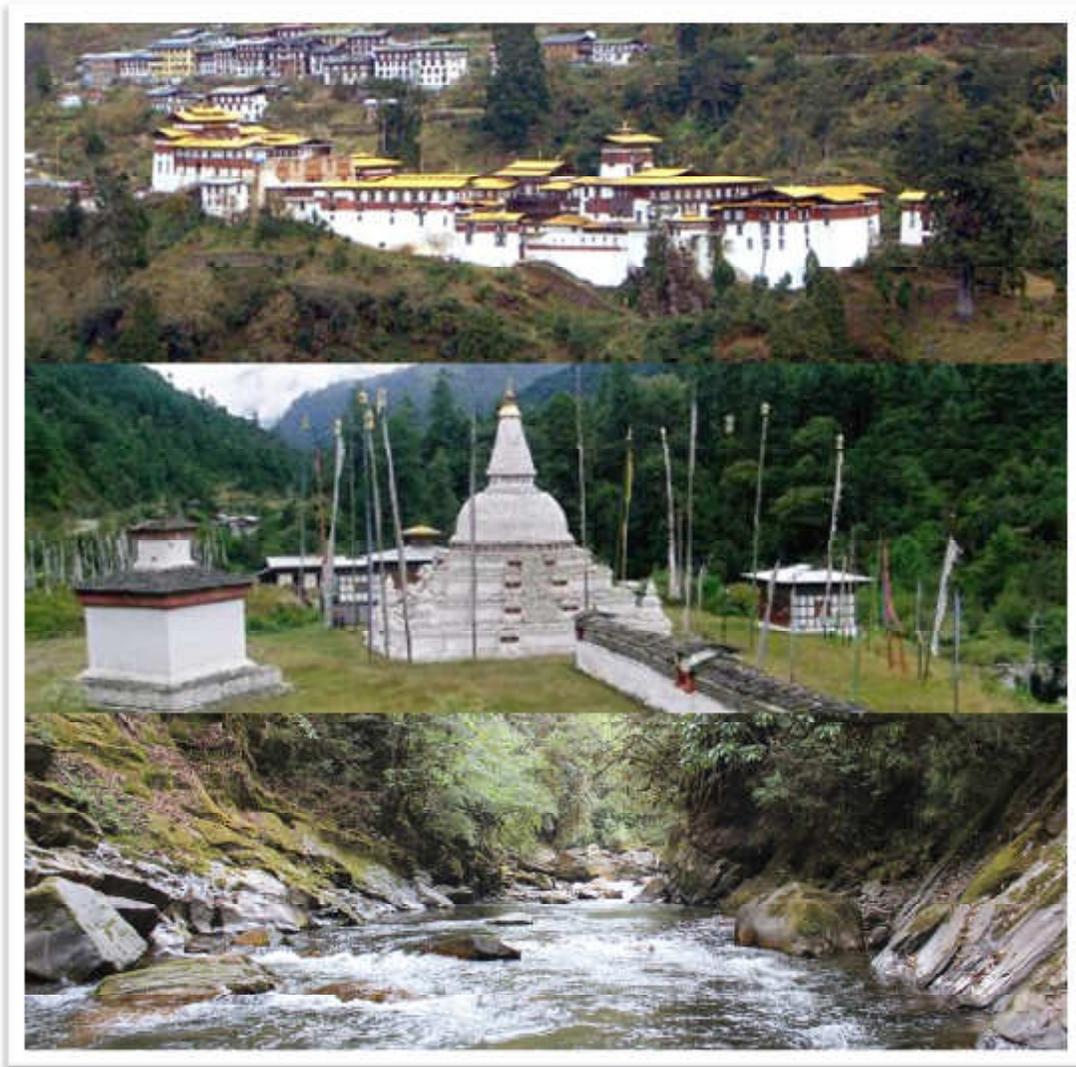
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November 2014

## BHU: Second Green Power Development Project

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)**

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

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## 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

<b>Chuzhing</b>	Wet land
<b>Compensation</b>	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.
<b>Cut-off date</b>	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.
<b>Displaced households</b>	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.
<b>Displaced persons</b>	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.
<b>Dzong</b>	Fortress (district administrative headquarter)
<b>Dzongda</b>	Governor (Head of District)
<b>Dzongkhag</b>	District (administrative unit)
<b>DzongkhagTshogde</b>	District Committee
<b>Economic displacement</b>	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.
<b>Encroachers</b>	People who have trespassed into RGOB/private/community land to which they are not authorized.
<b>Eminent domain</b>	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.

<b>Entitlement</b>	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.
<b>Expropriation</b>	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.
<b>Gerab Dratshang</b>	Monk Body
<b>Gewog</b>	Block (administrative unit)
<b>Gewog Tshogde</b>	Block Administration
<b>Gup</b>	Head of Gewog Administration
<b>Host communities</b>	Communities receiving physically displaced persons of a Project as resettlers.
<b>Income restoration</b>	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.
<b>Kamzhing</b>	Dry land
<b>Landless/Agricultural Labourer</b>	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.
<b>Lhakhang</b>	Buddhist Temple
<b>Lhengye Zhungtshog</b>	Cabinet
<b>Mangduep</b>	People inhabiting the valleys of the Mangdechhu river.
<b>Marginal farmer</b>	A farmer whose land holding is less than 1.0 acre
<b>Meaningful Consultation</b>	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.

<b>Physical Cultural Resources</b>	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.
<b>Physical displacement</b>	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.
<b>Replacement Cost</b>	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.
<b>Relocation assistance</b>	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.
<b>Security of tenure</b>	Protection of resettled persons from forced evictions at resettlement sites. Security of tenure applies to both titled and non-titled displaced persons.
<b>Thram</b>	Land title
<b>Throm</b>	Town
<b>Thromde</b>	Town
<b>Tshogpa</b>	Village Head
<b>Vulnerable Group</b>	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 B<sup>1</sup> in accordance with ADB's Safeguards Policy Statement (SPS, 2009), as there are no significant<sup>2</sup> 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 294.680<sup>3</sup> 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

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<sup>1</sup>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.

<sup>2</sup>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).

<sup>3</sup>The 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 MW<sup>3</sup>. 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**

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<sup>3</sup> 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 km<sup>2</sup>, 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 11<sup>th</sup> Five Year Plan (FYP). The population density of Tangsibji Gewog is 5.0 persons per km<sup>2</sup>. It covers an area of 372 km<sup>2</sup> 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 km<sup>2</sup>, 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 km<sup>2</sup>. The Gewog has 67 percent of its land under forest cover<sup>4</sup>.

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 Lhakhangs<sup>5</sup>.

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 electricity<sup>6</sup>. However, the un-electrified households will be electrified in the current 11<sup>th</sup> five year plan.

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<sup>4</sup> 1<sup>st</sup> Five year Plan Document

<sup>5</sup> 1<sup>st</sup> Five Year Plan Document

<sup>6</sup> 1<sup>st</sup> 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 km<sup>2</sup>. 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 km<sup>2</sup>. 78 % of the Gewog is under forest cover.<sup>7</sup>

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 <sup>8</sup>.

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 electrified<sup>9</sup>. The un-electrified households will receive electricity in the current 11<sup>th</sup> 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.

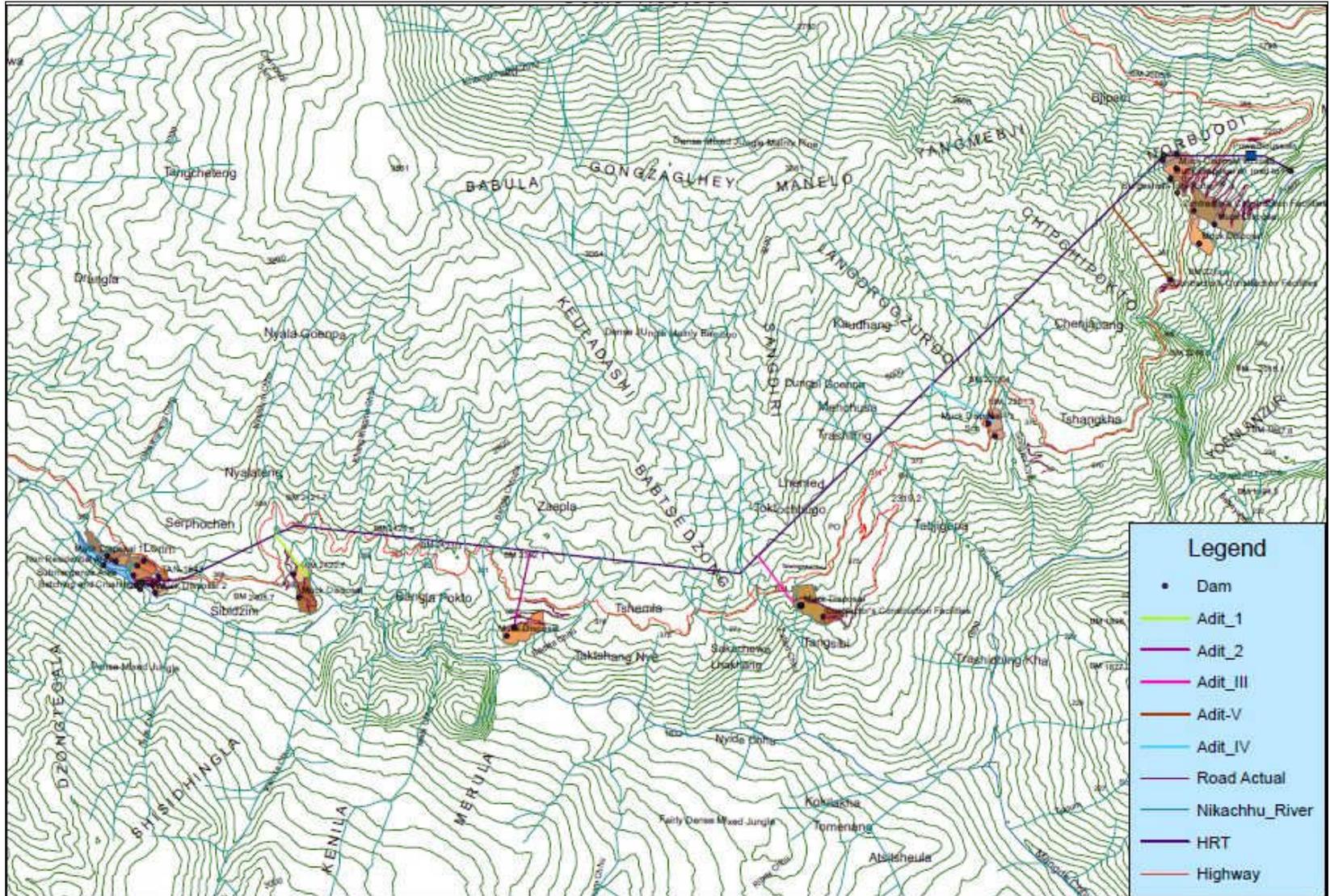
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<sup>7</sup> 11<sup>th</sup> Five year Plan Document

<sup>8</sup> 11<sup>th</sup> Five Year Plan Document

<sup>9</sup> 11<sup>th</sup> Five Year Plan Documen

Figure1: Main Project Layout



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. Cofferdam 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 m<sup>3</sup>/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.

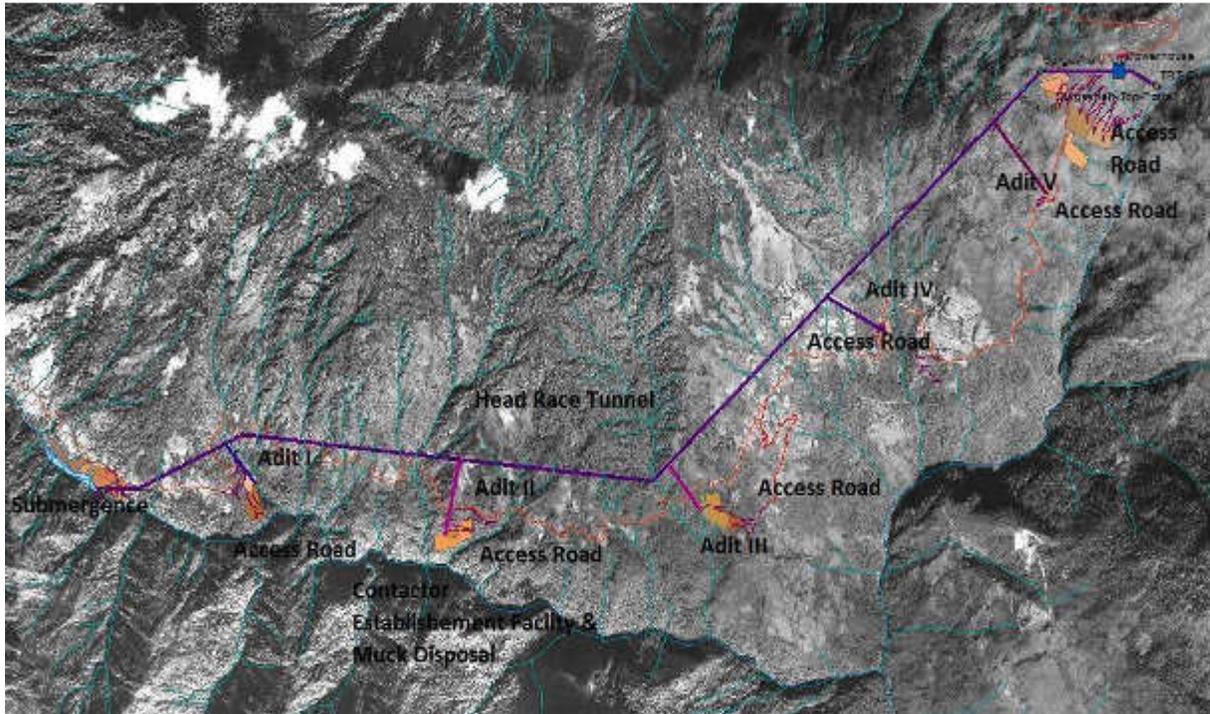
45. All required access roads are summarized in Table 2.

**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
<b>TOTAL LENGTH</b>		<b>16.488</b>			

Source: DGPCL

**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 B<sup>10</sup> in accordance with ADB's Safeguards Policy Statement (SPS, 2009), as there are no significant<sup>11</sup> 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
	<b>Total</b>	<b>17</b>	<b>84</b>	<b>4.177</b>

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.

<sup>10</sup>

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.

<sup>11</sup>

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
	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		
5	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	
<b>Total Area (Acres)</b>			<b>294.68</b>			<b>290.503</b>	

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
	<b>Total</b>	<b>4.177</b>

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
<b>Total</b>				<b>4.177</b>	<b>121.884</b>	<b>Average →</b>	<b>3.427</b>

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
<b>Total Affected Land (in acres)</b>	<b>4.177</b>

*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
<b>Total</b>	<b>12</b>	<b>6</b>	<b>18</b>

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	%
<b>Displaced</b>	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- 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

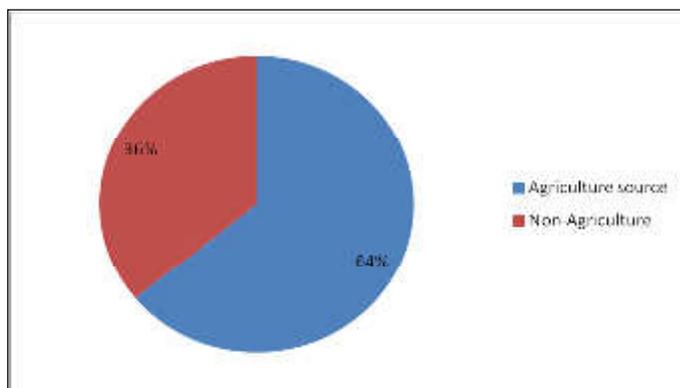
111. Table 20 below shows data on income segregated by income earned from agriculture sources (sale of agriculture and livestock produce and animals) and non-agriculture sources such as remittances, off-farm labour, business, skilled labour, pottery and weaving. The data reveals that the median income 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

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.

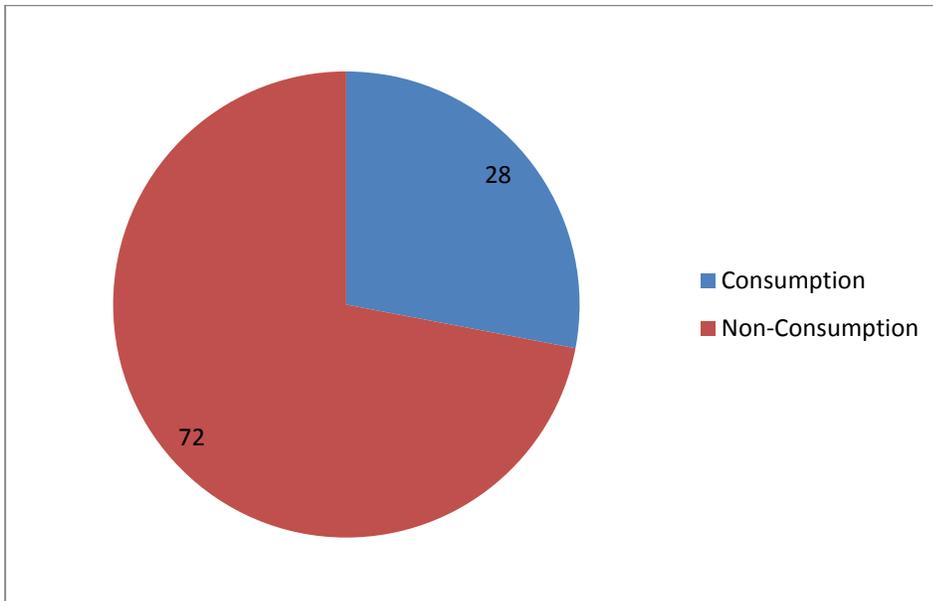
**Table 22: Expenditure Pattern of Displaced Households**

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, DGPCCL 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 of 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 15<sup>th</sup> 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 1<sup>st</sup> 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**

<b>Crops</b>	<b>Rate (Nu./acre)</b>
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"> <li>1. Prompt compensation must be made at full replacement cost for assets that cannot be restored.</li> <li>2. The value of replacing the expropriated property with another of the same or similar qualities.</li> <li>3. The replacement land should be as close to the land acquired as possible.</li> <li>4. Pay compensation and provide other resettlement entitlements before physical or economic displacement</li> </ol>	<ol style="list-style-type: none"> <li>1. Acquisition of land shall entail a fair compensation.</li> <li>2. The Government shall ensure to provide the land owner with a substitute land commensurate to the value of the land acquired</li> <li>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</li> <li>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</li> </ol>

**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 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 Land<sup>12</sup>**

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.

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<sup>12</sup>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 Structures<sup>13</sup>**

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 Trees<sup>14</sup>**

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.

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<sup>13</sup>None 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.

<sup>14</sup>None 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	Titleholders	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	<p>If a portion from the total land holding of the individual is acquired by the Project, the following options will be given:</p> <ul style="list-style-type: none"> <li>The DP keeps the remaining land and the compensation and assistance is paid to the DP for the land to be acquired.</li> <li>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.</li> <li>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.</li> <li>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.</li> <li>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.</li> <li>Households deemed vulnerable will be provided with a vulnerability entitlement allowance of 3 months' wages (Nu. 11,250)</li> </ul>
2. Agricultural land by titled owners (private property)	Land on the area of impact	Titleholders	Compensation	THyE and Dzongkhag Administration	<p>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</p>

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 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
<b>Sub-total (in Nu.)</b>				<b>16,400,000.00</b>
7	Contingencies (10% of total of above) - <i>in Nu.</i>			<b>1,640,000.00</b>
<b>Overall Total (in Nu.)</b>				<b>18,040,000.00</b>

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.<sup>15</sup> 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).

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<sup>15</sup>Land 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
<b>Sub-total (in Nu.)</b>				<b>637,464.72</b>
7	Contingencies (10% of total of above)			<b>63,746.48</b>
<b>Overall Total (in Nu.)</b>				<b>701,211.20</b>
<b>Overall Total (in US \$) 1 US\$ = 60 Nu.</b>				<b>11,686.85</b>

## **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
<b>1.0 Resettlement Planning</b>																				
1.1 Approval of RP by DGPC																				
1.2 Cadastral re-survey by NLC and LRO																				
1.2 Disclosure of RP																				
1.3 Distribution of RP Summary																				
<b>2.0 Land Acquisition &amp; Resettlement</b>																				
2.1 Issue public notification for start of RP																				
2.2 Disburse compensation payments for land, structures, trees and income																				
<b>3.0 Monitoring &amp; Evaluation</b>																				
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