

# Resettlement Planning Document

---

Resettlement Plan

Project Number: 44914

Date: October 2012

Pakistan: Patrind Hydropower Project

Prepared by Star Hydropower Limited

The resettlement plan 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. Your attention is directed to the "Terms of Use" section of this web site.



# **STAR HYDROPOWER LIMITED**

**147 MW PATRIND HYDRO POWER PROJECT**

## **RESETTLEMENT PLAN**



***October 2012***

HEAD OFFICE: House No. 534, Margalla road, Sector F10/2, Islamabad - Pakistan  
Tel: +92 51 2212610-1 Fax: +92 51 2212616  
E-mail: [patrind@patrind.com](mailto:patrind@patrind.com)

**A COMPANY OF KOREA WATER RESOURCES CORPORATION**

## TABLE OF CONTENTS

EXECUTIVE SUMMARY .....	1
1. BACKGROUND .....	1
2. THE PROJECT .....	1
3. PROJECT LAYOUT ALTERNATIVES.....	2
4. LEGAL FRAMEWORK.....	2
5. SOCIO - ECONOMIC PROFILE .....	2
6. SCOPE OF LAND ACQUISITION AND RESETTLEMENT .....	3
7. INSTITUTIONAL ARRANGEMENTS.....	4
8. GRIEVANCE REDRESS .....	5
9. RESETTLEMENT BUDGET AND FINANCING .....	5
10. IMPLEMENTATION SCHEDULE .....	6
CHAPTER – 1 .....	1
PROJECT DESCRIPTION .....	1
1.1 BACKGROUND .....	1
1.2 PATRIND HYDROPOWER PROJECT.....	1
CHAPTER 2.....	1
LAND ACQUISITION AND RESETTLEMENT (LAR) IMPACT ANALYSIS.....	1
2.1 GENERAL.....	1
2.2 DETAIL OF LAND ACQUISITION .....	2
2.2.1 AGGREGATE DETAIL .....	2
2.2.2 LAND REQUIRED FOR PROJECT STRUCTURES AND FACILITIES.....	3
2.3 ECONOMIC IMPLICATIONS ON OWNERS BY LAND ACQUISITION.....	5
2.4 PROJECT OVERALL POSITIVE IMPACTS .....	6
CHAPTER – 3 .....	1
LEGAL FRAMEWORK AND ENTITLEMENT .....	1
3.1 THE CONSTITUTION OF PAKISTAN .....	1
3.1.1 PROTECTION OF PROPERTY RIGHTS .....	1
3.2 LAND ACQUISITION LAWS .....	1
3.3 LAND ACQUISITION ACT (LAA) 1894 .....	1
Salient Features of the Land Acquisition Act (LAA) 1894 and its Successive Amendments .....	2
3.4 APPLICATION OF LAND ACQUISITION ACT TO THE PROJECT.....	3

3.5	LEGAL FRAMEWORK FOR RESETTLEMENT .....	3
3.5.1	LEGISLATION ON LAND OWNERSHIP AND RECORDS .....	3
3.5.2	LEGISLATION ON PUBLIC NOTIFICATION REGARDING CUT-OFF-DATE .....	3
3.5.3	LEGISLATION ABOUT LAND ACQUISITION PROCEDURE IN THE FIELD .....	4
3.5.4	LEGISLATION ON GRIEVANCE REDRESS .....	4
3.6	EXTERNAL SUPPORT AGENCIES .....	5
3.6.1	ASIAN DEVELOPMENT BANK (ADB).....	5
3.6.2	INTERNATIONAL FINANCE CORPORATION (IFC) .....	5
3.7	COMPARISON OF LAND ACQUISITION ACT 1894 AND ADB SAFEGUARD POLICY STATEMENT 2009.....	5
	ADB SAFEGUARD POLICY STATEMENT 2009 (IR) .....	6
3.8	REDUCING THE GAP BETWEEN LOCAL LAWS AND ADB POLICES.....	6
3.9	ELIGIBILITY, CUT-OFF DATE AND ENTITLEMENT .....	7
3.9.1	IDENTIFICATION OF OFFICIAL REPRESENTATIVES OF EACH AFFECTED HOUSEHOLD AND LAND PARCEL.....	11
	CHAPTER – 4.....	1
	SOCIO-ECONOMIC INFORMATION AND PROFILE .....	1
4.1	INTRODUCTION.....	1
4.2	POPULATION .....	2
4.3	SOCIO-ECONOMIC INDICATORS.....	3
4.4	AGRICULTURE AND OTHER PROFESSIONS .....	4
4.5	LIVELIHOOD ACTIVITY .....	4
4.6	INCOME LEVEL .....	6
4.7	HEALTH SERVICES .....	6
4.8	EDUCATION FACILITIES .....	7
4.9	CULTURAL SITES .....	9
4.10	WOMEN IN PROJECT AREA.....	9
4.11	MINORITY GROUPS .....	10
	CHAPTER – 5.....	1
	INFORMATION DISCLOSURE, CONSULTATION AND PARTICIPATION .....	1
5.1	INFORMATION DISCLOSURE .....	1
5.2	METHODOLOGY OF STAKEHOLDER SELECTION AND PROCESS OF CONSULTATION .....	1
5.3	COMMUNITY CONSULTATIONS.....	2

5.4	OUTCOME OF CONSULTATIONS .....	2
5.5	MEETINGS WITH OFFICERS OF THE GOVERNMENT DEPARTMENTS .....	3
5.5.1	PUBLIC HEARING IN MUZAFFARABAD - AJK.....	5
5.5.2	PUBLIC HEARING IN BARBIAN – KPK.....	5
CHAPTER – 6.....		1
SCOPE OF LAND ACQUISITION .....		1
6.1	INTRODUCTION.....	1
6.1.1	PROCEDURAL FORMALITIES UNDER LAND ACQUISITION.....	1
6.1.2	CADASTRAL SURVEY AND NEGOTIATION PROCESS .....	1
6.1.3	PROCEDURE AND STRUCTURE OF INVESTIGATION.....	1
6.2	RELATED BASELINE DATA .....	1
6.2.1	PERMANENT LAND ACQUISITION .....	1
6.2.2	TEMPORARY LAND ACQUISITION.....	2
6.3	AFFECTED HOUSES .....	2
6.4	COMMERCIAL ASSETS.....	4
6.5	AFFECTED TREES.....	5
6.6	CROP COMPENSATION.....	6
6.7	SUMMARY OF AFFECTED ASSETS.....	6
6.8	ACQUISITION OF LAND/ASSETS FOR PROJECT IMPLEMENTATION .....	6
6.8.1	LAND ACQUISITION FOR PROJECT ACCESS ROADS.....	6
CHAPTER – 7.....		1
INCOME RESTORATION STRATEGY .....		1
7.1	INTRODUCTION.....	1
7.2	INCOME RESTORATION PROGRAMMES .....	1
7.3	SPECIFIC ACTIVITIES TO BE DISCUSSED WITH THE AP/DP.....	1
7.4	RESETTLEMENT SITE SELECTION .....	ERROR! BOOKMARK NOT DEFINED.
7.5	RELOCATION OPTIONS FOR PHYSICAL RESETTLEMENT.....	ERROR! BOOKMARK NOT DEFINED.
7.6	PATRIND HYDROPOWER PROJECT.....	2
CASH COMPENSATION – THE PREFERRED OPTION .....		3
CHAPTER – 8.....		1
INSTITUTIONAL ARRANGEMENTS AND SCHEDULE, MONITORING AND EVALUATION, GRIEVANCE REDRESS MECHANISM.....		1

8.1	INTRODUCTION.....	1
8.1.1	ORGANIZATIONAL SETUP .....	1
8.1.2	ACKNOWLEDGMENT/RECEIPT OF COMPENSATION .....	2
8.1.3	TRANSPARENCY OF COMPENSATION PROCESS.....	2
8.2	MONITORING AND REPORTING .....	2
8.2.1	INTERNAL MONITORING .....	2
8.2.2	EXTERNAL MONITORING.....	3
8.2.3	REPORTING .....	3
8.3	GRIEVANCE REDRESS MECHANISM.....	3
8.4	GRIEVANCE REDRESS COMMITTEE (GRC) .....	5
8.5	FUNCTION OF THE GRC .....	5
8.6	GRIEVANCE REDRESS PROCEDURES.....	5
8.7	IMPLEMENTATION SCHEDULE .....	6
	CHAPTER – 9.....	1
	COMPENSATION, BUDGET AND FINANCING.....	1
9.1	INTRODUCTION.....	1
9.1.1	COMPENSATION PAYMENT PROCEDURE .....	1
9.2	VALUATION OF ASSETS.....	1
9.2.1	VALUATION OF LAND, HOUSES, CROPS AND TREES.....	2
	VALUE OF LAND .....	2
9.2.2	COST OF TEMPORARY LAND ACQUISITION .....	3
9.2.3	COST OF AFFECTED HOUSES.....	4
9.2.4	COST OF ECONOMIC TREES .....	6
9.2.5	COST OF COMMERCIAL ASSETS .....	6
9.3	COST OF ENVIRONMENTAL AND SOCIAL MONITORING .....	6
9.4	RESETTLEMENT AND ENVIRONMENTAL MONITORING COST .....	7



## ACRONYMS

ADB	:	Asian Development Bank
AJK	:	Azad Jammu and Kashmir
Amsl	:	above mean sea level
<b>AP's</b>	:	Affected Persons
CDM	:	Clean Development Mechanism
CEO	:	Chief Executive Officer
CERs	:	Carbon Emissions Reduction
D/S	:	Downstream
DCO	:	District Coordination Officer
DRO	:	District Revenue Officer
DPs	:	Displaced Persons
EIA	:	Environmental Impact Assessment
EMU	:	Environmental Management Unit
EPA	:	Environmental Protection Agency
EPC	:	Engineering, Procurement, Construction (Contractor)
GRC	:	Grievance Redress Committee
IFC	:	International Finance Corporation
KP	:	Khyber Pakhtunkhwa
LAA	:	Land Acquisition Act (1894)
LAC	:	Land Acquisition Collector
LVC	:	Land Evaluation Committee
MIS	:	Management Information System
NEQS	:	National Environmental Quality Standard
NGOs	:	Non Government Officials
NTDC	:	National Transmission and Dispatch Company
NWFP	:	North Western Frontier Province
O & M	:	Operation and Maintenance
P&D	:	Planning & Development
PES	:	Pakistan Engineering Services (Private Limited Lahore)
RP	:	Resettlement Plan

SC	:	Supervisory Consultants
SHPL	:	Star Hydropower Limited
SR	:	Safeguard Requirements
U/S	:	Upstream
UC	:	Union Council
UNFCCC	:	United Nations Framework Convention on Climate Change
WAPDA	:	Water & Power Development Authority
WB	:	World Bank



# EXECUTIVE SUMMARY

## 1. BACKGROUND

Patrind Hydropower Project (the Project) is sponsored by STAR Hydropower Limited (the Company). The Resettlement Plan has been prepared on behalf of the Sponsor by Pakistan Engineering Services (Pvt.) Lahore. The Project consists of a weir on Kunhar river, located on the boundary of District Abbottabad of Khyber Pakhtunkhwa and District Muzaffarabad of Azad Jammu and Kashmir (AJK). The powerhouse is located on right bank of Jhelum river in lower Chatter area of District Muzaffarabad, (AJK).

Study for Resettlement Plan was conducted by a multidisciplinary team initially during the period between June–September 2006 as the part of feasibility study. The EPC Contractor then modified design slightly which included the relocation of weir and powerhouse from their proposed sites in the feasibility study. As a result of this change additional environmental surveys were conducted in March 2010 and the Resettlement Plan has been updated accordingly.

*The Patrind resettlement plan was intended to be updated following the completion of socioeconomic survey of affected persons / displaced persons (AP/DP) once EPC design is finalized. The resettlement plan October 2012 covers all involuntary resettlement measures in AJK and in KP (for all residential structures and a commercial asset).*

## 2. THE PROJECT

Patrind is a small village on the left bank of Kunhar river, 12 ½ km downstream from Garhi Habibullah bridge. The project components will consist of a weir near Patrind village, a head pond behind the weir at conservation level of 765 m above mean sea level, Intake Structure followed by sand trap, headrace tunnel, pressure shaft, surge chamber, penstocks, powerhouse, and tailrace. Two coffer dams for the diversion tunnel will be built to keep the Kunhar river bed in dry condition during construction of the weir. A new bridge will be constructed on Jhelum river for accessibility to powerhouse site.

### **3. PROJECT LAYOUT ALTERNATIVES**

During feasibility study four alternatives for the project layout were identified and assessed. Each of the alternatives is the result of varying the location of the powerhouse keeping the location of the weir and headrace tunnel the same. The EPC Contractor while keeping the main concept of the feasibility study intact proposed a slight design modification by relocating the Weir and Powerhouse from technical and resettlement perspectives.

### **4. LEGAL FRAMEWORK**

The Report on Resettlement Plan has been prepared in accordance with the national and international requirements for resettlement. The provisions laid down in Pakistan Environmental Protection Act 1997, AJK Environmental Protection Act 2000, Land Acquisition Act 1894, Draft National Resettlement Policy 2002, NWFP Forest Ordinance 2002 and Sarhad National Conservation Strategy 1992 have been followed. Similarly requirements laid down by the International Finance Corporation and Asian Development Bank have been followed. In particular provisions of ADB Safeguard Policy Statement 2009 on resettlement and ADB Operational Manual F1 2010 have been consulted.

### **5. SOCIO - ECONOMIC PROFILE**

The 8 villages in the vicinity of the weir site and 5 villages around powerhouse site have a population of 7,397 according to 1998 census report. The household size ranges from 5 to 9 persons per household. There is a Panchayat/ Jirga system (informal village council) for conflict resolution mechanism at village level. The members of the Panchayat include Nazim of the Union Council, Numbardar (Revenue Collector) and representatives of the village households.

Business, farming and services are the major occupations of the local population followed by construction labour. Some people own shops located around villages while others work in transport business. Socio-economic indicators point to poor standard of living, poor health, and inadequate status of community water supply, sanitation and education. Women face problems due to restricted mobility, lack of decision making, limited productive employment opportunities and lack of awareness about health and hygiene.

## **6. SCOPE OF LAND ACQUISITION AND RESETTLEMENT**

### **Land Acquisition**

Permanent Land Acquisition	790.10 Kanal
Temporary Land Acquisition	82.55 Kanal
<b>Total</b>	<b>872.65 Kanal (44.07 Ha)</b>

The names/ addresses of owners/households numbering 94 whose land is to be acquired have been identified and listed in the main text of the report which also shows land classification into farm land, waste land and river bed. The compensation for privately owned land will be based on replacement value in the same area and cost principle as provided for in the Entitlement Matrix. The government land that is temporarily acquired is covered by a lease agreement for five (5) year, after which the land will revert back to the government and restored to pre-construction condition or as may be specified under the relevant lease agreement.

### **Value of Land**

The estimates of value of land are based on recent market transaction, consultation with affected persons and views of the revenue department officials.

### **Value of Houses/Crops/Trees**

Assets like built-up property are valued at full replacement cost i.e. the amount sufficient to replace lost asset plus transition cost. In applying replacement cost method, depreciation of structures/ asset has not taken into account.

### **Affected Houses**

A total of 39 houses are being affected by the project implementation, 33 on the AJK side and 6 on the KP side, displacing a total of 171 persons. The house owners have been identified.

### **Commercial Assets**

No commercial assets are affected by project implementation except one small water mill which will be subject to submergence by the head pond. The small water mill belongs to Mr. Muhammad Hussain of village Schian of Muzaffarabad District.

## **Affected Trees**

A total of 624 trees will be affected by project implementation. These consist of 126 mixed fruit, 31 timber and 498 fuel wood trees. Apart from these trees the shrubs and flower plants have also been assessed which are estimated at 7,600 in Nos.

## **7. INSTITUTIONAL ARRANGEMENTS**

Star Hydropower Pvt. Ltd. (the company/the sponsor) will play a key role in implementing the resettlement components of the project. For the efficient implementation and management of resettlement activities, an Environmental Management and Monitoring Unit (EMU), headed by an environmental and social expert assisted by two ESI inspectors of the Company will be created. The EMU will be responsible for implementing resettlement activities.

The Company has developed a computerized database to maintain the data of the affected community.

### **Organizational Setup**

District Revenue Officer (DRO) of each district was designated as Land Acquisition Collector (LAC). In the capacity of LAC, the DRO deputed revenue officials to work with Company staff for performance of their functions in acquisition of land/assets required for Project implementation.

### **Compensation Payment Procedure**

The organizational setup as explained above shall be followed as the basis of procedure for payment of compensation for acquisition of land and other assets. The procedure shall consist of the following steps.

- The staff of SHPL and that of DRO to conduct field surveys to physically identify the land/ other assets to be acquired for project implementation.
- Ownership of land/ assets shall be confirmed with reference to District Revenue Department records.
- After valuation of land and other assets by LAC, the Company shall deposit the assessed value in the Government Treasury. The payment to the land/asset owners shall be made after the issuance of section 11 of the Land Acquisition Act 1894.

### **Transparency of Compensation Process**

Following measures shall be adopted to ensure transparency of the compensation process.

- Payment of compensation to be made through cross check in the name of the affecttee.
- Issuance of acknowledgment/receipts of Compensation and public availability of these Certificates.

These measures shall help to a great extent in minimising the possibility of affectees not receiving full compensation.

## **8. GRIEVANCE REDRESS**

Grievances are best redressed through project management, local civil administration, or other channels of mediation acceptable to all parties. The project management should make every effort to resolve grievances at the community level.

### **Grievance Redress Committee (GRC)**

In the case of Patrind Hydropower Project, major grievances that might require mitigation may include the following:

- AP's not enlisted
- Compensation inadequate
- Dispute about ownership
- Delay in disbursement of compensation

The GRC would be comprised of the following members.

- District Revenue Officer (LAC)
- SHPL Representative
- Affected Community Representatives, as Members

The GRC will meet at least once a month and discuss the existing problems. It shall deliver its decision within two to four weeks of registration of the case. The decision of GRC would be final.

## **9. RESETTLEMENT BUDGET AND FINANCING**

The resettlement and environmental cost of Patrind Hydropower Project is estimated as Rs. 568.03 million (US\$ 6.6 million). The cost of permanent land acquisition is the largest component at 86.6 % of the total environmental cost.

## **10. IMPLEMENTATION SCHEDULE**

Within the project cycle, the implementation schedule provides the time frame for commencement and completion of the resettlement activities which consist of community consultation, resettlement plan disclosure, inventory taking of lands/assets, payment of compensation including grievance redress, possession of land and assets for project implementation.

# **CHAPTER – 1**

## **PROJECT DESCRIPTION**

### **1.1 BACKGROUND**

In Pakistan the increasing demand for electric power is now outstripping the supply. The widening gap between supply and demand has resulted in load shedding causing serious setback to national economy particularly the industrial sector. To close this gap, different possibilities for electrical power generation are under investigation and many projects have been identified including a series of hydropower projects.

The fall in elevation from weir site at village Patrind to powerhouse site in Lower Chattar AJK offers potential for hydropower generation by means of a headrace tunnel diverting River Kunhar at flow of 153.66 cumecs. Based on this concept, a Feasibility Study on Patrind Hydropower Project has been completed by Pakistan Engineering Services (Pvt.) Ltd. on behalf of Star Hydropower in 2007. Star Hydropower Limited is owned by two Companies K-Water and Daewoo E&C of Republic of Korea.

### **1.2 PATRIND HYDROPOWER PROJECT**

The proposed weir site is accessed by Boi Road on right side of Kunhar river. It is at a distance of 12.3 km from Garhi Habibullah bridge. The centre line of Kunhar river at the project site marks the boundary between Pakistan and Azad Jammu & Kashmir. The left bank of Kunhar river thus lies in AJK which can be accessed by a 3.1 km track leaving main road between Muzaffarabad and Garhi Habibullah (Hazara Trunk Road).

The proposed powerhouse site is located on the right bank and downstream limb of Jhelum river at Lower Chattar District Muzaffarabad in AJK. The left bank of Jhelum river at the proposed site of powerhouse is accessible from Lower Chattar in Muzaffarabad district. Locations of weir and powerhouse sites are shown in Figure 1.1 and 1.2.

The construction of weir will result in a head pond. River Kunhar water will get diverted into a headrace tunnel discharging into penstocks of the powerhouse located in Lower Chattar, District Muzaffarabad AJK. After the power generation the water will be led into river Jhelum by means of a tailrace which is 75 m long open channel. A new bridge needs to be constructed to access the right bank for transportation of labour and equipment to the construction area of the



powerhouse. The layout of the project is shown in Figure 1.3.

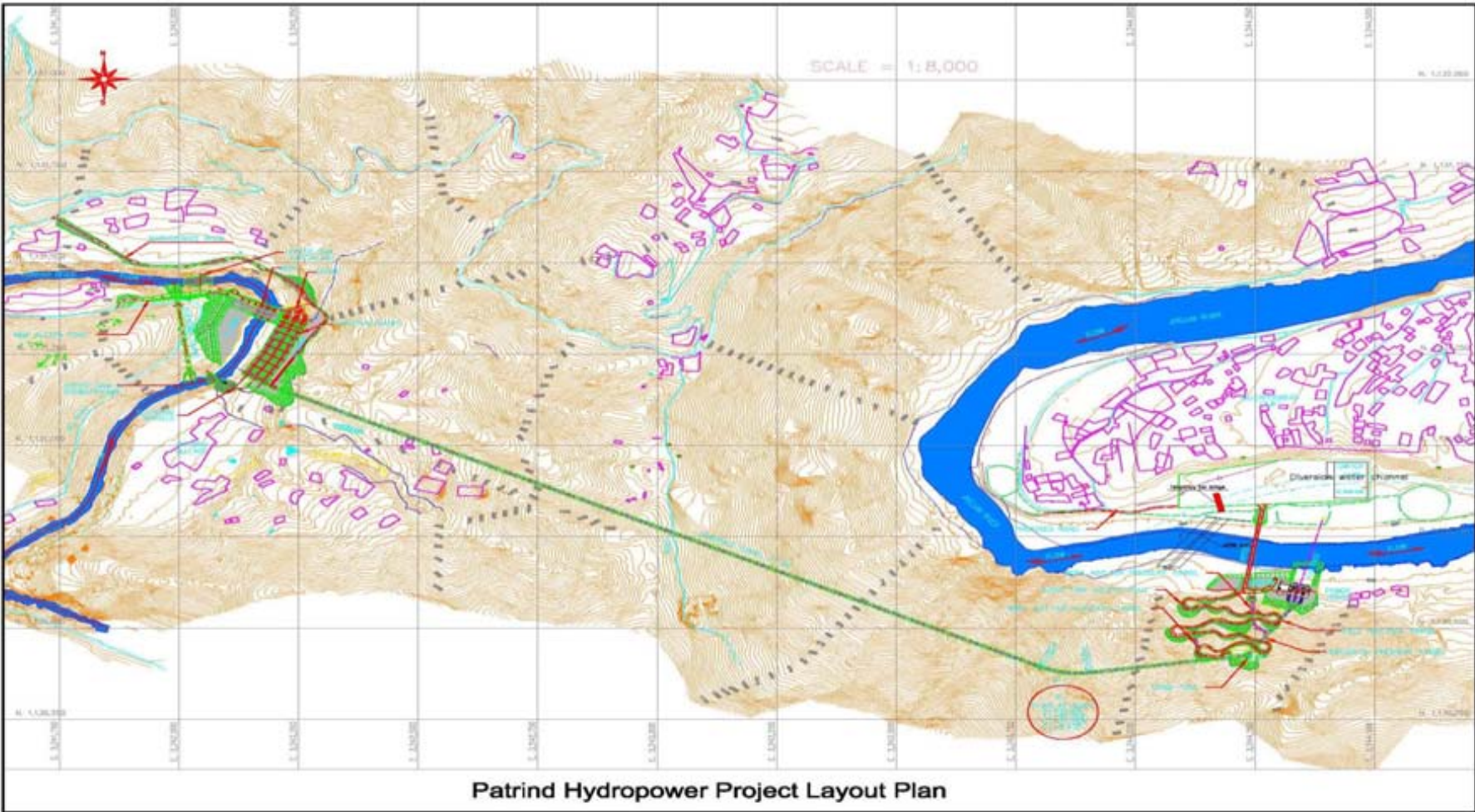
**Figure1.1: Location of Weir on Kunhar River near Patrind Village**



**Figure1.2: Location of Powerhouse on Left Bank of Jhelum River in Lower Chattar**



Figure 1.3: Patrind Hydropower Project Layout Plan



## CHAPTER 2

# LAND ACQUISITION AND RESETTLEMENT (LAR) IMPACT ANALYSIS

### 2.1 General

The analysis presented in this chapter deals with the impact of land acquisition and resettlement necessitated by the Project.

The primary social parameters gathered from the cadastral survey and individual **households/land owners' interview** are: (i) **name of household head, number of house** occupants (disaggregated into male and female), and number household members having long term and short term employment and (ii) name of land owners (as listed in the official revenue records), number of beneficial owners of land (disaggregated into male and female), and number household members having long term and short term employment. These social parameters shall be further updated on availability of additional data from the official records from other official registers that hold information in a much greater detail.

The Resettlement Plan is based on EPC basic design. Partial physical possession of the land/houses has been taken over on AJK side and the details of each affected house hold has been gathered during the cadastral survey. Annex- 12 provides the detail of the each household gathered/completed until now. The data shall continue to be updated with the availabliy of further details from the APs and relevant government deprtments till a full census of AP/DP and 100% inventory of affected assets data serving as baseline for monitoring and evaluation, a detailed measurement survey of the lost assets and a valuation of the lost assets based on principle of replacement value and cost in the same area, is completed.

The RP has been and will continue to be updated based on the findings of the census, asset inventory and socioeconomic survey. Key elements of the updated RP will be disclosed to AP/DP in local language. The updated RP based on the available information is being submitted to ADB for review prior to financial closure. Efforts have been made to minimize the number of displaced persons and property as much as possible. The initial information gathered from the cadastral survey to date is

summarized in tabular form and attached as Annex- 6 of this RP. A comprehensive description on land acquisition and resettlement is given in Chapter 6.

## 2.2 Detail of land acquisition

### 2.2.1 Aggregate detail

Land acquisition process deals with the acquisition of the land for permanent and temporary purposes. The permanent land shall become the property of the Project for the whole concession period. The temporary land is required only for the construction period and shall be returned to the owners once the project goes in to the operation phase. The project design also requires acquisition of certain number of houses for permanent purposes.

The aggregated detail of the houses and land required for permanent and temporary purposes, the inhabitants (owners and their family members) associated with such land and their income status is shown in table 2.1 below, while the analysis follows in the subsequent paragraphs.

**Table.2.1 Type of the land to be acquired and the income status of the occupants**

Sr. #	Item	Unit	Area	Type of Land			No. Of Occupants		Income Status	
				Farm Land	Waste Land	River Bed	Male	Female	Long Term	Short Term
1	Permanent Land Acquisition	Kanal	790.10	313.65	375.55	100.90	538	465	69	218
2	Temporary Land Acquisition	Kanal	82.55	0.00	27.80	54.75	0	0	0	0
3	Affected Houses	Nos.	39	-	-	-	90	77	26	48

The permanent land required for the project constitutes those areas where major structures of the project are to be constructed. The area of the permanent land is 790.10 Kanal. about 313.65 Kanal of the farm land shall be acquired on permanent basis while the major permanent acquisition of land is contributed through wasteland and river bed area. The data collected from the revenue department showing the details of the land owners, size of the land holding and type of the land is given in Annex 10.

The number of inhabitants (the owners and their family members) linked to the land



required for permanent purposes are around 538. Most of these inhabitants are employed on short term basis. The land to be acquired for various structures and its type is aggregated in the table below.

82.55 Kanal of the land is acquired for Labour camp, access road to the bridge, batching plant and workshop at Powerhouse Site (AJK) for the period of about 5 years. The temporary land consists of river bed and wasteland.

Due to the change in the powerhouse location about 27 houses will be acquired for the construction of powerhouse in Alda village and 6 houses will be submerged due to the creation of head pond on the AJK side. On KP side in the head pond area 4 houses plus 2 at the diversion tunnel will be acquired. That means total 39 houses will be acquired for the project development displacing around 171 persons.

### 2.2.2 Land required for project structures and facilities

Table 2.2 presents the detail of the land required for the major structures of the Project including the temporary facilities, while the analysis thereon follows in subsequent paragraphs.

**Table.2.2 Structure wise land requirement and its type**

Structure	No. of Occupants	Land Acquisition (Kanal)									
		Farm Land		Riverbed		Wasteland		House Land		Total	
		Kanal	Marla	Kanal	Marla	Kanal	Marla	Kanal	Marla	Kanal	Marla
Powerhouse	196	27	62	7	132	29	77	2	65	65	336
Surge Tank	0	0	0	0	0	47	15	0	0	47	15
Construction camps Powerhouse	0	0	0	54	15	25	56	0	0	79	71
Weir, Sand trap	10	1	10	0	0	48	14	0	0	49	24
Head pond AJK	601	230	344	40	57	111	398	0	14	381	813
Head pond KPK	196	34	17	39	109	96	100	7	28	176	254
<b>Total</b>	<b>1003</b>	<b>292</b>	<b>433</b>	<b>140</b>	<b>313</b>	<b>356</b>	<b>660</b>	<b>9</b>	<b>107</b>	<b>797</b>	<b>1513</b>

### Power House

The land required for the Powerhouse is about 81.8 Kanal, which includes 30.1 Kanal of farm land, 13.6 Kanal of the river bed, 32.85 Kanal of wasteland and about 5.25 Kanal of the house land. The detail of the owners of the land is given in Annex 10. The number of occupants given in the table above includes the owners of the land as well as their family members who otherwise are not the direct owners but are living with the owners. The total household heads/owners in this category are 17 with an

average of land holding below 4 Kanal.

### **Surge Tank**

The land required for the surge tank is about 47.75 Kanal which is the property of the forest department. There are no inhabitants on this land.

Labour camp, access road to the bridge, batching plant and workshop on powerhouse side.

The land required for the camps is about 82.55 Kanal out of which 54.75 Kanal is river bed and 27.8 Kanal is the wasteland. all the area under this category is the property of the government. The detail of the land and its type is given in Annex-10. The land will be acquired on temporary basis.

### **Weir site Construction area and Sandtrap**

Weir and the sand trap are the permanent structures and the land to be acquired will also be on the permanent basis. Almost all the area falls in river bed and wasteland so no utilization is there by the locals. The land required is about 50.2 Kanal of which 1.5 Kanal is the farm land and 48.7 Kanal is the wasteland. The ownership detail is given in Annex-10.

### **Access road to weir Patrind Tarcheela**

This category of the land has been deleted from the previous land requirement as the EPCC of the Project has decided to use the access road from Garhi Habibullah-Boi Road of Khyber Pakhtunkhwa side.

### **Head pond AJK Side**

Since the submergence will be a permanent feature of the project, the land under impoundment will be acquired permanently. The length of the head pond is about 7 Km from the weir site. Total land required is 421.65 Kanal falling in Patrind/Bella and Shoran village affecting about 60 land owners. 247.2 Kanal of the farm land, 130.9 Kanal of the wasteland followed by 42.85 Kanal of the river bed and 0.75 Kanal of the house land will be acquired. The detail of the land owners and their land holding is given in Annex-10.

### **Head pond KP Side**

On the KP side the total land to be submerged will be about 188.7 Kanal, out of which 34.85 Kanal is Farm Land, 44.45 Kanal river bed, 8.4 Kanal is house land and 101

Kanal is the wasteland. The detail of the land owners and their land holding is given in Annex-10.

## 2.3 Economic implications on owners by land acquisition

The total number of the affectees and displaced due to the house acquisition for the construction of powerhouse and submergence on AJK and KP side are estimated to be 171.

The land owners affected by the land acquisition stand around 94. However if we include the family members of such land owners, the affected number goes up to 1003.

Table 2.3 provides the details of the number of affected people and their income status.

**Table.2.3 Number of Affected/Displaced Persons segregated gender wise and status of income**

Affected House Structures	AP/DP			Number of Employed		% Employed
	Male	Female	Total	Long Term	Short Term	
Power House AJK	57	49	106	24	27	
Head pond at Weir Site AJK	17	10	31	2	7	
Head pond at Weir Site KPK	11	13	24	0	10	
Diversion Tunnel at Weir Site	5	5	10	0	4	
<b>Subtotal</b>	<b>90</b>	<b>77</b>	<b>171</b>	<b>26</b>	<b>48</b>	<b>44.31%</b>
<b>Affected Land</b>						
Power House & Access Road (ALDA Village) AJK	104	92	196	32	56	
Colony of Expatriate construction staff, Switchyard, labour camp, access road, bridge, batching plant	0	0	0	0	0	
Weir Site Construction Area & Sandtrap AJK	6	4	10	0	3	
Reservoir Impounding (AJK)	322	279	601	37	156	
Reservoir Impounding (Deedal) KP	106	90	196	0	3	
<b>Subtotal</b>	<b>538</b>	<b>465</b>	<b>1003</b>	<b>69</b>	<b>218</b>	<b>28.61%</b>
<b>TOTAL</b>	<b>628</b>	<b>542</b>	<b>1170</b>	<b>95</b>	<b>266</b>	

Because of the heredity laws in Pakistan and AJK the land is divided amongst all heirs, leading to progressive small size of land holding unless an owner adds any land to his name through purchases. In the affected area of the Project with the exception of two



individuals having 13 kanal of the land all other land holders have very small size of land to their names. Considering the rain-fed nature of the agriculture in the area – meaning low yield - and the small size, the farm land is also not the primary means of sustenance for the affected families. Consequently the local people depend on the other source of income for their livelihood such as business, jobs, services etc. Annex-6 of this RP represents the census and the status of the income of the land owners which clearly indicates that almost all the land owners have other source of income either short term or long term.

As evident from the table about 28.61% of the Affected People /Displaced People (s) are employed having long term and short term employment. This 28.6% should not be seen as remaining 71.40% unemployment as the employment figure has been derived from the total number of affected population including women, who generally do not work in employment, and the children. None of the affected person is significantly affected economically from the loss of land.

## 2.4 Project Overall Positive Impacts

Apart from generation of 147MW of electricity the project has following socio-economic impacts on the local level.

- Employment opportunities which will help mitigate local opposition if may develop
- the project will also stimulate local economy
- the project will reduce population emigration and help find work for local unskilled workers
- Local market will be benefited due to increase in demand of consumer goods
- Increased income in the project area will encourage the formation and growth of local businesses resulting in new indirect employment opportunities.

## **CHAPTER – 3**

### **LEGAL FRAMEWORK AND ENTITLEMENT**

#### **3.1 The Constitution of Pakistan**

##### **3.1.1 Protection of Property Rights**

Article 23 of the constitution of Pakistan establishes the right of every citizen to acquire, hold and dispose his/her property in any part of Pakistan. Article 24 of the constitution of Pakistan relating to the Protection of Property Rights is most important, and has direct relevance to the project Affected people. Its first two clauses are;

- i. No person shall be compulsorily deprived of his property save in accordance with law.
- ii. No property shall be compulsorily acquired or taken possession of save for a public purpose, and save by the authority of law which provides for compensation therefore and either fixes the amount of compensation or specifies the principles on and the manner in which compensation is to be determined and given.

These clauses forms the basis of the law formulated under the constitution for acquisition of property for public purposes. In AJ&K property rights are also protected under Section 4(4) of the AJ&K Interim Constitution Act of 1974, whereby property cannot be compulsorily acquired except for a public purpose and by an authority of law that provides compensation thereof.

#### **3.2 Land Acquisition Laws**

Land acquisition and compensation/resettlement of affected population is governed under Land Acquisition Act 1894.

#### **3.3 LAND ACQUISITION ACT (LAA) 1894**

The Land Acquisition Act 1894 is a "law for the acquisition of land needed for public purposes and for companies and for determining the amount of compensation to be paid on account of such acquisition". The *raison de etre* of this piece of legislation is, therefore, two-fold: firstly to fulfil the needs of government and companies for land required by them for their projects, and

secondly, to determine and pay compensation to those private persons or bodies whose land is so acquired. The exercise of the power of acquisition has been limited to public purposes. The principles laid down for the determination of compensation, as clarified by judicial pronouncements made from time to time, reflect the anxiety of the law-giver to compensate those who have been deprived of property, adequately. However, its provisions do not fully take into account the changed social, cultural, economic, political and environmental situation in Pakistan. It has been established through experience with various projects over the years that mere payment of cash compensation under the LAA is not enough to restore livelihood and affected social environment. LAA basically governs the acquisition of private properties for public purposes for development projects in Pakistan. It comprises 55 Sections pertaining to: area notifications and surveys; acquisition; compensation and apportionment of awards; dispute resolution; penalties; and exemptions, but neither this nor any other law of the land, covers resettlement and rehabilitation of persons in the manner as a mandatory process according to current perceptions and requirements of the international financing agencies.

### **Salient Features of the Land Acquisition Act (LAA) 1894 and its Successive Amendments**

#### **Key Sections Salient Features of the LAA (1894)**

**Section 4.** Publication of preliminary notification and power for conducting survey.

**Section 6.** The Government makes a more formal declaration of intent to acquire land.

**Section 7.** The Land Commissioner shall direct the Land Acquisition Collector (LAC) to take order the acquisition of the land.

**Section 8.** The LAC has then to direct the land to be marked out, measured and planned.

**Section 9.** The LAC gives notice to all APs that the Govt. intends to take possession of the land and if they have any claims for compensation that should to be made to him at an appointed time.

**Section 10.** Delegates power to the LAC to record statements of APs in the land or any part thereof as co-proprietor, sub-proprietor, mortgagee, and tenant or otherwise.

**Section 11.** Enables the Collector to make enquiry into measurements, value and claim and issue the final "award". Included is the land's marked area and valuation of compensation.

**Section 16.** When the LAC has made an award under Section 11, he will then

take possession and the land shall thereupon vest absolutely in the Government, free from all encumbrances.

**Section 18.** In case of dissatisfaction with the award APs may request the LAC to refer the case onward to the court for decision. This does not affect the taking possession of the land.

**Section 23.** The award of compensation for the owners for acquired land is determined at its market value plus 15% in view of compulsory nature of the acquisition for public purposes.

**Section 28.** Relates with determining compensation values and interest premium for land acquisition

**Section 31.** Provides that the LAC can, instead of awarding cash compensation in respect of any land, make any arrangement with a person having an interest in such land, including the grant of other lands in exchange.

### **3.4 Application of Land Acquisition Act to the Project**

The project is being developed under power policy 2002 of Government of Pakistan and is also adopted by Government of Azad Jammu & Kashmir.

AJK Council has issued Letter of Support (LOS) to the project which makes the project for the public purposes, wherein all necessary support has to be provided.

In the case of IR the company is committed to commence all the civil works only after implementation of the RP (full payment of compensation, completion of relocation measures, if any, and livelihood measures in place) which then needs to be reflected in the implementation schedule.

### **3.5 LEGAL FRAMEWORK FOR RESETTLEMENT**

#### **3.5.1 Legislation on Land Ownership and Records**

With regard to land ownership, LAA does not entirely depend upon written records of land. This implies that records, if existing, would be a statement on possession. However, most of the occupants, who claim to be the owner, do not have any written tenancy agreement. For such cases confirmation on land possession at the court level is accepted. This is common practice in AJK and KP and also accepted by the local administration, in particular, the Revenue Department and the Patwaris. They have revenue records about the ownership, including use of the particular land by a tenant and the household structure plot-wise. This practice is also endorsed by the Draft Resettlement Policy of Pakistan

#### **3.5.2 Legislation on Public Notification Regarding Cut-off-Date**

LAA requires a public notification of the 'Cut-off-Date', once the need for land

acquisition of a project has been established. Besides restricting any further development on the notified land, it authorises the government functionaries to:

- i. Enter upon and survey including taking levels of the land affected for inspection of cadastral objects and their measurement.
- ii. Dig or bore into the subsoil for assessing the soil quality.
- iii. Set out boundaries of the land proposed to be acquired.
- iv. Mark levels, boundaries and lines by placing marks and cutting trenches.
- v. Cut down crop, fence or jungle, under the conditions that a proper survey cannot be performed or completed.

LAA also requires informing the household head about the intention to survey **the land and residential properties** giving such occupier at least seven days notice in writing Under the Draft Project Implementation and Resettlement Ordinance 2001, the Director General Projects is duty-bound to issue and specify the cut-off date for alienation of property in the project area.

### **3.5.3 Legislation about Land Acquisition Procedure in the Field**

LAA prescribes the legal conditions of land inventory procedure under Section 8. Although LAA does not make mention of a particular person or a governmental body to carry out the measurement of the land, in this particular case the required Cadastral Survey is being conducted by revenue department in collaboration with SHPL.

Since field measurement of the boundaries and sizes of plots and houses and other structures is important for both parties i.e. Revenue Authorities and the owner or tenant. So the information will be collected from owners by the revenue department officials in association with SHPL.

For identification of land property entitlement of the persons, mostly heads of the families, the related cadastral elements will be investigated in the field and verified by the revenue department and SHPL. This survey also enabled determining size, quality and ownership of the land units. However, where the land has never been used for dwelling or cultivation, the compensation criterion to be applied would be as explained under Section 6 of LAA.

### **3.5.4 Legislation on Grievance Redress**

Grievance redress is prescribed both in LAA (1894) and the draft Resettlement Ordinance (2002). Accordingly, affected persons not satisfied with any aspect of

the resettlement procedure including entitlement to compensation, compensation of land, compensation of houses and land acquisition etc. will have the right to file a petition against the sponsor SHPL in the higher courts. For all grievance redress, a Grievance Redress Committee (GRC) has been established for the project. If an affected person is not satisfied with the decision of GRC, he will have the right to approach the concerned Court of Law (per Section 18 of LAA). A detail description on Grievance Redress is given in Chapter 8.

### **3.6 EXTERNAL SUPPORT AGENCIES**

#### **3.6.1 Asian Development Bank (ADB)**

ADB has adopted a set of specific safeguard requirements that borrowers/clients are required to meet in addressing environmental and social impacts and risks. The Resettlement Plan prepared for the project will comply with ADB SPS and in particular, with the Safeguard Requirement 2 on Involuntary Resettlement.

#### **3.6.2 International Finance Corporation (IFC)**

The IFC is considering an investment consisting of a senior loan to Star Hydro. Since the project requires land acquisition, Performance Standard 5 on Land Acquisition and Involuntary Resettlement was triggered and this RP is prepared to comply with the requirements. IFC's Environmental and Social Review Summary is available at <http://www.ifc.org/ifcext/spiwebsite1.nsf/0/35BE7F4D0DF827FF8525781600566E6E>

#### **3.7 Comparison of Land Acquisition Act 1894 AND ADB Safeguard Policy Statement 2009**

ADB SPS requires compensation of APs irrespective of their legal titles as well as providing special assistance to vulnerable people. On the other hand, basic approach according to the local laws is to compensate the project affected peoples (APs) according to legal provisions and entitlements only. Further, **ADB's policies take resettlement operations as a development program and emphasise on the livelihood restoration and sustainability of APs.** Against this, the local laws aim to restore the livelihood of APs at least to the level before the project intervention.

<b>Land Acquisition Act 1894</b>	<b>ADB Safeguard Policy Statement 2009 (IR)</b>
Land compensation only for titled landowners or holders of customary rights.	Lack of title should not be a bar to compensation and/or rehabilitation. Non-title-holders are to be rehabilitated.
Crop losses compensation provided only to registered landowners and lease/sharecrop tenants (Non-registered are often deprived).	Crop compensation are provided to landowners and sharecrop/lease tenants according to their shares whether they are registered or not
Tree losses are compensated on the basis of officially fixed rates by the Forest and Horticulture departments	Tree losses are compensated according to actual worth of Affected trees based on market rates.
Land valuation based on the median registered land transfer rate over the previous 3 years.	Land valuation is to be based on current replacement value.
Structures valuation based on official rates, with depreciation deducted from the structure gross value.	Valuation of built-up structures is based on current market value/cost of new construction of the structure
No provision on the income restoration for the affected households losing productive assets.	Economically displaced persons will be promptly compensated for the loss of income or livelihood sources at replacement cost.
No provision to improve/restore living standards for affected vulnerable groups, poor, ethnic minorities, the elderly and disabled.	Improve the standards of living of the displaced poor and other vulnerable groups, including women, to at least national minimum standards. All displaced are entitled to income restoration.
Section 4, 6, 9, 18 and 23 of the LAA 1894 cover these aspects	Ensure that all affected households are fully consulted and informed in a timely manner, have appropriate opportunities to participate in decisions regarding compensation and resettlement, and are provided with an avenue to have their complaints heard and resolved.

### 3.8 REDUCING THE GAP BETWEEN LOCAL LAWS AND ADB POLICES



To reconcile the inconsistencies between the LAA (1894) and ADB policy, the project will adopt an approach that will ensure compensation at replacement cost of all impacts, and the provision of other entitlements for affected households/individuals that may bear the loss of land, residential structure, crops/trees and other assets. The details of eligibility to entitlements are discussed in the proceeding sections.

The following objectives are used to develop the resettlement plan for the Project.

- Lack of formal title to land is not a bar to compensation.
- Involuntary resettlement is an integral part of project design to be dealt with from the earliest stage of project planning.
- Involuntary resettlement should be avoided or minimized wherever feasible.
- Community participation should be encouraged in the planning and implementation of resettlement program.
- Timely and appropriate compensation for lost assets as well as redress of grievances of Affected Persons should be provided.
- The compensation process should be fully transparent
- No land will be taken for the Project until compensation for lost assets at replacement cost is delivered to the affected/displaced person.
- Land acquisition provisions will equally apply to women and men and particular attention will be paid to women-headed households and vulnerable groups.

An income restoration strategy will be implemented to ensure that all affected/displaced persons are not worse off after the project.

### **3.9 Eligibility, Cut-Off Date and Entitlement**

The affected/displaced persons (AP/DP) eligible for compensation and other entitlement provisions are:

- (i) All AP/DP losing land or land based assets, i.e., crops and trees whether covered by legal title/traditional land rights or without legal status;
- (ii) Tenants and share-croppers, whether registered or not;
- (iii) AP/DP losing the use of structures and utilities, including titled and non-titled owners, registered, un-registered tenants/lease holders and encroachers/squatters; and/or
- (iv) AP/DP losing business, income, and salaries or a person or business

suffering temporary effects, such as disturbance to land, crops, business operations during construction.

Entitlement eligibility will be limited by a cut-off date which is determined and pegged on 08/03/2011 for AJK side and 21/7/2011 for KP side of the project. The cut-off date was established to avoid influx of outsiders or other entities speculating on potential compensation. The AP/DP and other project stakeholders were made aware of this date.

The following entitlements are applicable for AP/DP losing land, houses and incurring income losses. The AP/DPs are eligible for rehabilitation subsidies and for the compensation of lost land, structures and utilities, and livelihoods; as well as for special provisions for vulnerable AP/DP.

(i) Farmland, Wasteland, House land, Riverbed land (including Government Land, Forest land, if any) impacts were compensated as follows:

- a) **Permanent acquisition:** legal/legalizable owners are compensated at replacement cost in the same area plus a 15% compulsory acquisition surcharge (CAS) on AJK side and 25% CAS on KP side free of taxes and transfer costs which is a routine addition to compensation at market rates under the LAA of 1894 in Pakistan; Leaseholders of public land will receive rehabilitation in cash equivalent to the market value of the gross yield of lost land for the remaining lease years (up to a maximum of three years). Encroachers will instead be rehabilitated for land use loss through a special self-relocation allowance.
- b) **Temporary acquisition:** legal/legalizable owners, tenants or encroachers will receive cash compensation equal to the average market value of each lost harvest for the duration of the loss, and by the restoration of both, cultivable and uncultivable land, to pre-construction conditions. Contractors will be required to carry out restoration works.

(ii) Residential / Commercial Assets will be compensated at replacement value as follows:

- a) Legal/legalizable owners have been compensated for lost structure at replacement cost in the same area based on market value of the lost structure plus a 15% compulsory acquisition surcharge (CAS) on AJK side and 25% CAS on KP side which is a routine addition to

compensation at market rates under the LAA of 1894 in Pakistan. However for house acquisition, the process requires 25% deduction for the aging and related factors in the assessment of the houses which in case of Patrind Hydropower Project has not been deducted to ensure that the APs/DPs get market rates. Significant time and support with respect to the demolition of the houses and transportation of salvage material was provided to the structure owners by the Company and the EPC Contractor as a gesture of facilitation to the affected community.

**Table 3.1. Entitlement Matrix**

Asset Lost	Specification	Affected Person	Entitlements
Land – Farmland, House land, Wasteland, Riverbed, Government land, Forest Land, and common land	All land losses irrespective of impact of severity	Owner (legal/legalizable)	Cash compensation at replacement cost in the same area plus 15% compulsory acquisition surcharge (CAS) on AJK side and 25% CAS on KP side free of taxes, registration and transfer costs.  <i>Compensation to common land will be the same as private land and will be divided among persons who have stake to such land</i>
		Renter/leaseholder	Cash compensation equivalent to three months rent or value proportionate to duration of remaining lease (up to a maximum of three years).
		Encroacher	Self relocation allowance covering six months of productive income from the land
Residential / Commercial Assets	All structures that will be affected or demolished as land will be used for the project	Owner of structure, incl. encroacher	Cash compensation at full replacement cost in the same area for affected structure and other fixed assets free of salvageable materials, depreciation and transaction cost and transportation cost; or if partial loss, full cash assistance to restore remaining structure.  For house acquisition, the process requires 25% deduction for the aging and related factors in the assessment of the houses which in our case has not been deducted to ensure that the

			APs/DPs get market rates
		Renter/ leaseholder	Cash compensation equivalent to three months rent or value proportionate to duration of remaining lease.
		Owner of water mill	Estimated loss of asset of PKR 400,000 shall be paid to the owner
Economic Trees	All trees considered economical	Owner, as related to land ownership	Cash compensation based on agreed parameters such as volume and fruit bearing capacity.
Crops		Owners of land with crops	Cash compensation based on market price
Provision for vulnerable AP/DP	All vulnerable AP/DP (below poverty line or with special requirements such as disabled, old, sick, etc).		Vulnerable AP/DP will be provided transportation and assistance for relocation including helping hands for dismantling and transportation of their salvageable dwellings etc.
Income restoration provision	All affected AP/DP		Upon agreement with concerned AP/DP, training on improving skills for construction workers will be carried out. The incurred cost will be borne by SHPL.

The following methodology has been adopted for assessing the unit compensation rates:

- (i) Land has been valued at replacement cost in the same area based on current market values assessed and based on a survey of transactions.
- (ii) Houses and other structures have been valued at replacement cost in the same area, type and material of the affected item. No deductions have been made for depreciation, salvageable materials or transaction costs/taxes.
- (iii) Economic trees have been compensated at replacement cost in the same area based on the cost of wood Fruit bearing trees will be compensated based on the type and productive age of the fruits trees and market value of the produce for the remaining period of its average life.

**3.9.1 Identification of Official Representatives of each affected household and Land Parcel**

Land registry records for each parcel include the names of all beneficial owners. The compensation has received only by the authorized representative with due considerations to women and men or husband and wife, and that any grievance emanating from the distribution of this compensation has been dealt amicably or according to the law.

---

## **CHAPTER – 4**

### **SOCIO-ECONOMIC INFORMATION AND PROFILE**

#### **4.1 INTRODUCTION**

The collection of baseline data on socio-economic environment involved study of available documents, field surveys for socio-economic status of the project area in terms of land holdings, occupations and income. For this purpose participatory rural appraisal technique was used and scoping sessions were held during field survey June-September 2006 and in March-April 2010. This involved consultations and scoping sessions with primary and secondary stakeholders like owners of land, people of the area, shopkeepers, religious community leaders. Cost of land, built-up property, economic trees etc was discussed with the owners, local people, and revenue department staff. The baseline data collected in pre-designed proformas both in English and Urdu version (Annexure-3 & 4) form part of existing socio-economic conditions discussed in the following sections. Partial physical possession of the land/assets has been taken over on AJK side and a cadastral survey was conducted. On the basis of available data which shall continue to be updated on availability of further details from the relevant government departments till a full census of AP/DP and 100% inventory of affected assets, a socioeconomic survey of a representative sample of 15 percent of all AP/DP is completed. The socioeconomic information and profile is updated and all gender parameters are delivered for analysis. The census parameters include household head and members, name, sex, age, occupation, education, ethnicity, ownership of assets including key household assets, services and access to basic services access (e.g. water, sanitation, irrigation, schools, health, government), etc. While the inventory of assets per household includes the following parameters: property ownership, land holdings, status of ownership, structures, crops/trees, etc.

#### **Administrative and Social Set-up**

The project area falls in Districts of Muzaffarabad (AJK) and Abbottabad (Khyber Pakhtunkhwa). Union Council, under Local Government Ordinance 2001, is the lowest tier of local government. Depending upon population, villages or urban settlements are grouped into Union Councils (UC). The UC's are formed of public

representatives elected by popular vote. The next higher tiers of local government are Tehsil Council and District Council. The district administration is run by District Nazim elected by Union Council members. Social and physical infrastructure of a district is managed by District Nazim. District Coordination Officer (DCO) is the highest ranking administrative functionary of the government in a district.

### **Scoping Sessions**

In order to obtain data on socio-economic profile, opinions and concerns of the project area population, scoping sessions were held in villages in the vicinity of weir and powerhouse sites. In particular people were informed about the scope of lost assets due to project implementation and compensation to be paid to them by the project sponsors. Annexure 5 gives summary and number of participants of scoping sessions held in the respective villages. In addition officials of relevant departments were also contacted during field surveys.

### **Socio-economic Survey August 2011**

To further evaluate and have a proper record of the Affectees of the Project the Company has conducted a detailed socio-economic survey. The data is attached as Annex- to this document.

## **4.2 POPULATION**

The population survey of the villages in the vicinity of Weir and Powerhouse sites were conducted. The population in the project area are local people belonging to settled districts of Khyber Pakhtunkhwa/ AJK; it is neither characterised by ethnic diversity nor by any indigenous people. The project will not in any way affect them. The District Census Reports 1998 of Abbottabad and Muzaffarabad issued by Population Census Organisation Islamabad were also consulted. (It should be noted that the 1998 Census is the latest official record of population). The Population data of the villages falling on weir and powerhouse sites, as in 1998 census, is shown in table 4.1 and 4.2.

### **Population of Weir Site Villages**

There are 8 villages within 2 Km of weir site. Half of the villages fall in the Muzaffarabad district while other half in Abbottabad district as shown in Table 4.1. At annual growth rate of 2.99% and 1.82% for Tehsils of Muzaffarabad and



Abbottabad, the present (2010) population of these villages totals 11,974. Number of households has decreased to 202 due to earthquake of October 8, 2005 demolishing almost all the Katcha houses in the area.

### Population of Powerhouse Site Villages

There are five villages within 2 Km of Powerhouse site in Muzaffarabad district as given in Table 4.2. Their population according to Muzaffarabad District Census Report 1998 is 2,658. At annual growth rate of 2.99% for Muzaffarabad Tehsil, the present population of these villages totals 3,776.

### 4.3 SOCIO-ECONOMIC INDICATORS

Tables 4.1 and 4.2 also give socio-economic indicators of the population of villages within 2 Km of the weir and powerhouse site in terms of literacy ratio, availability of civic amenities like water supply and electricity.

**Table.4.1 Population and Socio-Economic Indicators of Villages - Weir Site**

Tehsil and District	Village Name	Area Acres	Kunhar River Bank	Population		Literacy Ratio 10+	No. of House-holds		Household Size		Household Facilities (1998)	
				1998	2010		1998	2010	1998	2010	Potable Water	Electricity Connection
Muzaffarabad	Patrind	1195	LHS	2159 (1081 + 1078) *	3066	48.6	336	-	6.4	-	28	335
Muzaffarabad	Tarcheela	-	LHS	-	752	-	-	-	-	-	-	-
Muzaffarabad	Raiter	114	LHS	321 (170 + 151) *	456	72.8	37	-	8.7	-	26	37
Muzaffarabad	Gotha	436	LHS	868 (425 + 443) *	1233	70.3	112	-	7.8	-	59	112
Abbottabad	Taitree	-	RHS	-	266	-	-	-	-	-	-	-
Abbottabad	Sarati	-	RHS	-	277	-	-	-	-	-	-	-
Abbottabad	Hundi	-	RHS	-	173	-	-	-	-	-	-	-
Abbottabad	Deedal Meera	463	RHS	1391 (669 + 722) *	1975	46.5	217	-	6.4	-	106	216
<b>Total</b>				<b>4,739</b>	<b>8,198</b>							

LHS: Left Hand Side, RHS: Right Hand Side, Household Size: No. of Persons/Household

\* The figures in the brackets are population of males followed by females.

**Table.4.2 Population and Socio-Economic Indicators of Villages -Powerhouse Site**

Tehsil and District	Village Name	Area Acres	Kunhar River Bank	Population		Literacy Ratio 10+	No. of House-holds		House-hold Size		Household Facilities (1998)	
				1998	2010		1998	2010	1998	2010	Potable Water	Electricity Connection
Muzaffarabad	Thori	356	LHS	753 (342 + 411)*	1070	60.7	144	-	5.2	-	2	144
Muzaffarabad	Sarar	492	RHS	704 (335 + 369)*	1000	76.2	99	-	7.1	-	26	99
Muzaffarabad	ALDA	184	RHS	278 (147 + 131)*	395	82.4	42	-	6.6	-	42	42
Muzaffarabad	Hussan-abad	188	RHS	485 (240 + 245)*	689	76.9	70	-	6.9	-	12	69
Muzaffarabad	Dhani	186	RHS	438 (227 + 211)*	622	77.7	70	-	6.3	-	37	70
<b>Total</b>				<b>2,658</b>	<b>3,776</b>							

LHS: Left Hand Side, RHS: Right Hand Side, Household Size: No. of Persons/Household

\* The figures in the brackets are population of males followed by females.

#### 4.4 AGRICULTURE AND OTHER PROFESSIONS

Agriculture in Muzaffarabad and Abbottabad districts is the dominant economic activity. Majority of the farmers have their own simple irrigation systems using water of streams and springs. Wheat, maize and rice are the major crops. Crop yields are variable and the most reliable estimates of crop yields are wheat 470 Kg/Acre, maize 452 Kg/Acre, rice 320 Kg/Acre. Other professions followed by active male population of the project area are private businesses, service in government, and skilled/ semi-skilled labour.

#### 4.5 LIVELIHOOD ACTIVITY

Livelihood activity in the project area is a little different on two sites i.e. weir and powerhouse site of the project area. There is very less agriculture activity on powerhouse site rather people are involved in business and government jobs. About 6.63% of population at powerhouse site is engaged in business and about 9.95% is in government jobs because of nearness of Muzaffarabad city. Major percentage of earning population (21.5%) is involved in the labour works (daily wages). Out of the total population of the powerhouse area about 47.5% is unemployed while 4.42% of the population is involved in agriculture. Out of the total earning population of the powerhouse area about 29% earns in the range of PKR 5,000 per month.

On the headpond and weir side of the AJK territory 34.7% of the population is unemployed and the other major population is involved in the labour works, while 9.69% have their businesses alongwith the 11.73% of them relates to agriculture. On the wier side of the AJK part 50% of the population is unemployed while other have their businesses which are 16.67% and the labour is about 33.33%.

On the KP side of the Project the major earning population has their source of income as labour which is about 50%, 18% of them have their businesses while 13.2% are involved in agriculture. This 13.2% of the population does not depend 100% on the agriculture activity because of the fact that some of them also do the labour work and small businesses alongwith the labour income. About 7.5% of the population is unemployed. Out of the total earning population of the KP side of the Project about 27.52% earns in the range of PKR 7,000 per month.

A review is given in Table 4.3 based on the cadastral survey/interviews with the locals during the field surveys conducted in 2006, 2010 and 2011.

**Table.4.3 Livelihood Sources on both sides of the Project Shown in Percentages, genderwise**  
**a. AJK Side**

Type of Occupation	Area/Location Powerhouse-AJK		Area/Location Headpond-AJK		Area/Location Weir/Sandtrap-AJK		Total N=?	
	% Male	% Female	% Male	% Female	% Male	% Female	% Male	% Female
Labor	21.55%	0.00%	20.15%	0.00%	33.33%	0.00%	75.03%	0.00%
Shop keeper/Business	6.63%	0.00%	9.69%	0.00%	16.67%	0.00%	32.99%	0.00%
Private Job	4.97%	0.00%	1.53%	0.00%	0.00%	0.00%	6.50%	0.00%
Driving	3.87%	0.00%	13.78%	0.00%	0.00%	0.00%	17.65%	0.00%
Govt. Job	9.95%	0.00%	8.42%	0.00%	0.00%	0.00%	18.37%	0.00%
Retired Govt. Employee	1.10%	0.00%	0.00%	0.00%	0.00%	0.00%	1.10%	0.00%
Farmer	4.42%	0.00%	11.73%	0.00%	0.00%	0.00%	16.15%	0.00%
Unemployed	47.51%	0.00%	34.70%	0.00%	50.00%	0.00%	132.21%	0.00%
<b>Total</b>	<b>100.00%</b>	<b>0.00%</b>	<b>100.00%</b>	<b>0.00%</b>	<b>100.00%</b>	<b>0.00%</b>	<b>100.00%</b>	<b>0.00%</b>

**b. KPK Side**

Type of Occupation	Headpond	Area/Location	Total
--------------------	----------	---------------	-------

	N=?		N=?		N=?	
	% Male	% Female	% Male	% Female	% Male	% Female
Labor	50.00%	0.00%			50.00%	0.00%
Shopkeeper	17.92%	0.00%			17.92%	0.00%
Driving	4.72%	0.00%			4.72%	0.00%
Govt. Job	3.77%	0.00%			3.77%	0.00%
Private Job	0.94%	0.00%			0.94%	0.00%
Retired Govt. Employee	1.89%	0.00%			1.89%	0.00%
Farmer	13.21%	0.00%			13.21%	0.00%
Unemployed	7.55%	0.00%			7.55%	0.00%
<b>Total</b>	<b>100.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>100.00%</b>	<b>0.00%</b>

#### 4.6 INCOME LEVEL

It has been assessed that the following income level exists in the project area.

##### a. AJK Side

Income Range	Powerhouse-AJK		Headpond-AJK		Weir/Sandtrap-AJK		Total	
	No. of HH	%	No. of HH	%	No. of HH	%	No. of HH	%
2,500 and below	1	1%	5	1%	0	0%	6	1.67%
2,501 – 5,000	54	29%	137	31%	1	17%	192	76.59%
5,001 – 7,500	16	8%	82	19%	2	33%	100	60.56%
7,501 – 10,000	14	7%	16	4%	0	0%	30	11.07%
10,001 – 12,500	4	2%	8	2%	0	0%	12	3.95%
12,501 – 15,000	1	1%	2	0%	0	0%	3	0.99%
15,001 – 17,500	5	3%	7	2%	0	0%	12	4.25%
17,501 – 20,000	0	0%	0	0%	0	0%	0	0.00%
> 20,000	0	0%	1	0%	0	0%	1	0.23%
Nil	94	50%	179	41%	3	50%	276	140.70%
<b>Total</b>	<b>189</b>	<b>100%</b>	<b>437</b>	<b>100%</b>	<b>6</b>	<b>100%</b>	<b>632</b>	<b>100%</b>

##### b. KPK Side

Income Range	Headpond		Area/Location		Total	
	No. of HH	%	No. of HH	%	No. of HH	%
2,500 and below	0	0.00%			0	0.00%
2,501 – 5,000	28	25.69%			28	25.69%
5,001 – 7,500	30	27.52%			30	27.52%
7,501 – 10,000	14	12.84%			14	12.84%
10,001 – 12,500	1	0.92%			1	0.92%
12,501 – 15,000	0	0.00%			0	0.00%
15,001 – 17,500	4	3.67%			4	3.67%

17,501 – 20,000	0	0.00%			0	0.00%
>20,000	17	15.60%			17	15.60%
Nil	15	13.76%			15	13.76%
<b>Total</b>	<b>109</b>	<b>100%</b>			<b>109</b>	<b>100%</b>

#### 4.7 HEALTH SERVICES

The availability of health services in terms of hospitals, clinics, dispensaries and of medicines is not satisfactory in the surveyed villages around weir and powerhouse sites. Health facilities like basic health unit (BHU) / rural health centre (RHC), medical practitioner (qualified doctor or hakeem), lady health visitor (LHV) / lady health worker (LHW), traditional birth attendant (TBA) or dai are almost non-existent except for Hakeems, Dais and very small number of government or private clinics in the villages around weir and powerhouse sites. So the people have to travel long distances in case of emergency.

#### 4.8 EDUCATION FACILITIES

The District Census Report 1998 gives 60.7% to 82.4% literacy rate in villages around Powerhouse site and 46.5% to 72.8% in the villages around weir site. The existing number of educational institutions in the villages within 2 Km of weir site and powerhouse site are shown in Table 4.4 and 4.5.

**Table.4.4 Educational Facilities in the Surveyed Villages – Weir Site**

Sr. #	Village Name	Educational Facilities							
		Primary School		Middle School		High School		Madrasa/ Masjid	
		Male	Female	Male	Female	Male	Female	Male	Female
1.	Patrind	0	1	1	-	-	-	6	1
2.	Tarcheela	1	1	-	-	-	-	1	-
3.	Raiter	1	-	1	-	-	-	1	-
4.	Gotha	1	1	1	-	-	-	1	-
5.	Taitree	1	1	1	-	-	-	1	-
6.	Sarati	-		-	-	-	-	-	-
7.	Hundi	-	-	-	-	-	-	-	-
8.	Deedal Meera	1	1	1	-	-	-	1	1
<b>Total</b>		<b>5</b>	<b>5</b>	<b>5</b>	<b>-</b>	<b>0</b>	<b>-</b>		<b>2</b>

There are five primary schools, 5 middle schools, 11 Madrassas for male and 5

primary school, and 2 Madrassas exist for female population in the surveyed villages of weir site.

Powerhouse area has one high school each for male and female population. For males there are 4 middle schools 4 primary schools, 5 Madrassas and for females 4 primary schools, 5 middle schools and 2 madrasas in the surveyed villages.

**Table.4.5 Educational Facilities in the Surveyed Villages - Powerhouse**

Site		Educational Facilities							
Sr. #	Village Name	Primary School		Middle School		High School		Madrasa/ Masjid	
		Male	Female	Male	Female	Male	Female	Male	Female
1.	Thori	1	1	1	1	1	1	1	1
2.	Sarar	1	1	1	1	-	-	1	1
3.	Alda	-	-	-	1	-	-	1	-
4.	Hassanabad	1	1	1	1	-	-	1	-
5.	Dhani	1	1	1	1	-	-	1	-
<b>Total</b>		<b>4</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>1</b>	<b>1</b>	<b>5</b>	<b>2</b>

#### 4.9 CULTURAL SITES

Mosques and graveyards exist in each village of the project area. There are no sites of archaeological and historical importance in the project area.

#### 4.10 WOMEN IN PROJECT AREA

Life in the villages is entirely male-dominated and women face many problems due to restricted mobility, lack of decision-making, poor access to social services, limited productive employment opportunities, early marriages, no family planning practices and no awareness about health and hygiene. According to the women, health is one of the biggest problems in their villages. Diseases like diarrheal, cholera, chest-infections, goiter, abdominal problems and seasonal infections (cold, cough, etc.) are very common among the villagers. The women often suffer from health problems after childbirth and there are no regular immunizations of the children.

The people have difficulty in obtaining the necessary medicines. Serious illnesses force people to go to Abbottabad/ Mansahra/ Muzaffarabad for treatment and most of them cannot afford this. Since the women lack awareness about health and hygiene, the children suffer from various health problems due to poor hygienic conditions.

According to the 1998 Census Report, sex ratio is 100.2 in Abbottabad Tehsil whereas in Muzaffarabad Tehsil the sex ratio is 107.3. However, the sex ratio in 14 villages occurring in the vicinity of the project as described in Table 4.1 & 4.2

comes out to be 96.7.

#### **4.11 MINORITY GROUPS**

There are no minority ethnic groups or any other groups which can be considered indigenous people in project area. It is pointed out that Constitution of Pakistan does not recognise any ethnic/ linguistic indigenous groups; it takes notice only of religious minorities.



---

## CHAPTER – 5

# INFORMATION DISCLOSURE, CONSULTATION AND PARTICIPATION

### 5.1 INFORMATION DISCLOSURE

This chapter explains the process of consultation with relevant stakeholders of the Patrind Hydropower Project. It documents how the consultations were done, what were the results and how SHPL plans to continue the process during construction and operation phase. The report describes the information disclosed to relevant stakeholders prior to project implementation and presents the responses from the information recipient. The report also contains the Information Disclosure Policy of SHPL that it intends to implement during construction and operation phases for keeping relevant stakeholders informed about the project and about the any or all related issues that may have a bearing on stakeholders.

### 5.2 Methodology of Stakeholder Selection and Process of Consultation

The process of identification of stakeholders started with the development of the basic project plan by the technical consultants. Using such plan and area maps, the technical consultants marked the land and water courses that would be directly or indirectly affected by the project. This included the land that would be required for the construction of various structures and that which would be submerged in the head pond; parts of river Kunhar that would form the upstream pond and downstream of the weir; and roads and infrastructure required for the construction of the project. The consultants for the EIA, using such information, conducted field tours of the area and identified the villages and areas which would be impacted by the project. The consultants with the help of local people, including their elected representative and notables, of such villages collected the relevant details necessary for EIA and also identified the land owners whose lands were directly impacted, permanently or temporarily. The consultants also used the published information from the census to develop the demography of the area. Considering the basic project plan developed by the technical consultants, the EIA consultants also identified, and consulted with, relevant governmental departments and institutions such as fishery, wildlife and forest departments.

The field team consisting of environmentalists, sociologist and ecologist undertook the process of consultation with governmental agencies, community

representatives and affected people. The field team shared the information about the project and its impacts with stakeholders and solicited their opinion and views. Field trips were conducted in June 2006, and in March and April 2010. The consultation process helped the affected persons regarding land acquisition and bringing clarity on issues that might be raised during project implementation. The process also included the preparation of an introductory and information brochure in Urdu about the Project, its location, main impacts and benefits.

### **5.3 COMMUNITY CONSULTATIONS**

Community consultation process was started at an early stage in the project cycle. This ensures that feedback from communities and other stakeholders directly or indirectly affected by the project can be used to adjust and improve **the project's design, planning, and implementation and help structure the project** to be both environmentally and socially acceptable. The consultants held meetings with primary stakeholders to assess any potential issues that could be raised due to the project activities. The survey team visited five villages in total that may be affected from the activities of the proposed project. During these consultations a simple, non-technical description of the project was given, along **with an overview of the project's likely human and environmental impacts.**

Following the project description, detailed discussions were held so that the participants could voice their concerns and opinions. These concerns and suggestions were recorded in field notes.

Questionnaire prepared and used in the field is placed as Annex -3. Urdu version of the questionnaire is included as Annex-4.

Apart from consultations with the local community, consultations with concerned public representatives and officials of the relevant line government departments were also held. The details of community consultations showing names of participants are given in the Annex-8.

### **5.4 Outcome of Consultations**

During session held for information disclosure and community consultation, the overall response from the project area population was positive. Everyone welcomed the project as being beneficial to the region. Among the major topics which came up for discussion included the following.

- **Community Concerns**

During scoping sessions it has been observed that more than 95% of participants did not express any objections to implementation of the

proposed project only a small minority expressed some apprehensions about compensation payment.

- **Land Acquisition**

Generally community apprehensions pertained to the land and houses to be acquired for the project implementation. They expected project authorities to pay them timely compensation on the basis of current market prices.

- **Employment**

The participants emphasized the need to ensure the appointment of locals in all non-technical and support services through a transparent process. They demanded that during operation stage of the project preference should be given to the locals.

- **Project Benefits**

Local community also expressed the opinion that the project should be designed in a manner that all people including the poor should be benefited from the project like availability of electricity, establishment of schools and health clinics.

- **Traffic Hazards**

The participants of the public consultations expressed concerns over the safety hazards that could result from the increase in the roadside traffic particularly during the construction phase of the project. Traffic will produce heavy noise affecting the environment of the area. Participants emphasized to evolve realistic noise management plans to curtail its impact on rural community. In order to pre-empt roadside accidents of both humans and animals, a traffic alert system like guards and traffic signs should be available before the construction starts.

- **Cooperation of the Project Sponsors**

The participants expressed that the project proponent should maintain and encourage a cooperative attitude towards the community paying due attention to their concerns arising out of project implementation.

## 5.5 Meetings with Officers of the Government Departments

Offices of the government and NGO's were visited. They were apprised of the project by sharing available information with them. These include Departments of Wildlife, Fisheries, Forest, Health and Agriculture in Muzaffarabad and Abbottabad. Representatives of NGOs like WWF and Sungi were also contacted in these cities. Published information relating to the project area was collected. This included literature on forests, fisheries, wildlife, geology, landforms, land use, climate, water resources and district census reports. Record of meetings with relevant Government Department Officers is given in Table 5.1.

**Table.5.1 Record of Meetings with Relevant Governments Officers**

<b>Date</b>	<b>Place</b>	<b>Organization/ Person Consulted Position</b>	<b>Reason for visit Topics discussed</b>
05-06-06	Abbottabad	Hazara Wildlife Division M. Hussain Khan District Forest Officer M. Abdullah Range Forest Officer	Wildlife in Project Area Wildlife protection measures Forest types / trees
05-06-06	Abbottabad	Hazara Forest Division Rustam Khan District Forest Officer	Forest types / trees Location of forests / pastures Sustainable use of forests by community
06-06-06 & 02-03-10	Muzaffarabad	P&D Building Secretariat Bashir Qureshi Director General Dr. Syed Asif Shah Secretary P&D and Environment	Legal Framework of AJK Guidelines of AJK
02-03-10 &	Muzaffarabad	Revenue Department Nisar Shah & Gulbaz Revenue Clerk	Role of District Revenue Officer in land acquisition and payment of compensation Redress procedures
03-03-10	Abbottabad	NGO- SUNGI M. Arshad, Mrs. Tahira Awan Community Facilitator	Community awareness about development projects Possible role of SUNGI in Patrind HPP
16-09-10	Muzaffarabad	M. Asad Divisional Forest Officer	Forest types / trees Location of forests / pastures Sustainable use of forests by community
16-09-10	Muzaffarabad	Syed Mufassar Gillani Subject Matter specialist, Forest	Forest types / trees Location of forests / pastures Sustainable use of forests

Date	Place	Organization/ Person Consulted Position	Reason for visit Topics discussed
			by community
16-09-10	Muzaffarabad	Mir Abdul Rehman Forster	Forest types / trees

#### 5.5.1 Public Hearing in Muzaffarabad - AJK

A public hearing was held on August 05, 2010 in Muzaffarabad, AJK under the requirement of EPA – AJK. The meeting was attended by about 150 participants including legislator of AJK Assembly, Senior Govt. Officers, Union Council Nazims, NGOs and Civil Society Members as well as project affectees. List of participants is appended as Annexure – 4. Photographs of the public hearing are placed at the end of this report.

#### 5.5.2 Public Hearing in Barbican – KPK

On Khyber Pakhtunkhwa side a public hearing was held on February 01, 2011 in Barbican, KPK under the requirement of EPA. The meeting was attended by more than 200 participants including Senior Govt. Officers, Union Council Nazims, and Civil Society Members as well as project affectees. The Photographs of the public hearing are placed at the end of this report.

## CHAPTER – 6

### SCOPE OF LAND ACQUISITION

#### 6.1 INTRODUCTION

The scope of land acquisition and resettlement was defined by conducting field surveys and by collection of primary and secondary data as well as through consultations with affected persons and communities in the villages of the project area. The surveys were conducted using pre-designed Performa / Questionnaire. The land areas to be acquired for the project are shown in figures 6.1 and 6.2. The key effects on assets and displacement are discussed in the following sections.

##### 6.1.1 PROCEDURAL FORMALITIES UNDER LAND ACQUISITION

The private land is acquired under the Land Acquisition Act (LAA) and is owned by GOAJK. GOAJK will lease this land to the Company for the concession period of the project. On the KP side the land shall be owned by SHPL directly.

Notification under Section 4 of LAA was issued by the Deputy Commissioners of the respective governments (AJK and KPK) for land acquisition. Thus, all new private construction in the affected areas was legally prohibited. This warranted that, besides the land acquisition process, resettlement of APs shall start receiving active attention.

##### 6.1.2 Cadastral Survey and Negotiation Process

Staff of revenue department and SHPL conducted the cadastral survey at the same time the process of price negotiation for land and houses was also going on. The findings of survey till date are given as Annex- 6. Draft land lease agreement is attached as Annex-1 in the report.

##### 6.1.3 Procedure and Structure of Investigation

The survey work consisted of collection of data for land acquisition and resettlement. Contacts with concerned officials of Government departments, and undertaking consultations with affected persons and communities in the villages were undertaken. This survey was conducted using pre-designed proforma, Annexure 3. All collected data are based on the status of the EPC Contractor design of 2010. The Urdu version of the questionnaire asked from the locals during field surveys on various aspects of land acquisition and resettlement plan is given in Annexure 4.

#### 6.2 RELATED BASELINE DATA

##### 6.2.1 Permanent Land Acquisition

In total 790.10 kanal of riverbed, farmland and wasteland will be acquired permanently for constructing the Patrind Hydropower Project as shown in Table 6.1 below.

**Table.6.1. Permanent Land Acquisition by Type and Extent of Land**

Sr. No.	Project Component	Affected Land (Kanal*)				
		State owned Land/ Riverbed	Farmland	Wasteland	Houseland	Total
1	Reservoir Impounding	87.3	282.05	231.9	9.10	610.35
2	Weir Structures	0	1.5	48.7		50.2
3	Powerhouse	13.6	30.10	32.85	5.25	81.8
4	Surge Tank	-	-	47.75	-	47.75
<b>Total Permanent Land Acquisition Kanal</b>		<b>100.9</b>	<b>313.65</b>	<b>361.2</b>	<b>14.35</b>	<b>790.1</b>
<b>Total Permanent Land Acquisition Acre</b>		<b>12.6125</b>	<b>39.20625</b>	<b>45.15</b>	<b>1.79375</b>	<b>98.7625</b>
<b>Total Temporary Land Acquisition Hectare</b>		<b>5.09545</b>	<b>15.839325</b>	<b>18.2406</b>	<b>0.724675</b>	<b>39.90005</b>
<b>Total Temporary Land Acquisition m<sup>2</sup></b>		<b>51,041.17</b>	<b>158,662.68</b>	<b>182,716.27</b>	<b>7,259.08</b>	<b>399,679.20</b>

\* 1 Ha = 10,000 m<sup>2</sup> = 2.471 Acre1 Acre = 8 Kanal = 4047 m<sup>2</sup>**6.2.2 Temporary Land Acquisition**

There is need for temporary acquisition of land for the Labour camp, access road to the bridge, batching plant and workshop in the vicinity of the powerhouse site. The following Table 6.2 shows the details of the land area proposed for temporary acquisition.

**Table.6.2. Temporary Land Acquisition by Type and Extent of Land**

Sr. No.	Project Component	Affected Land (Kanal)			
		State owned/ Riverbed	Farmland	Wasteland	Total
1	Labour camp, access road to the bridge, batching plant and workshop	54.75	0	27.8	82.55
<b>Total Temporary Land Acquisition Kanal</b>		<b>54.75</b>	<b>0</b>	<b>27.8</b>	<b>82.55</b>
<b>Total Temporary Land Acquisition Acres</b>		<b>6.84375</b>	<b>0</b>	<b>3.475</b>	<b>10.31875</b>
<b>Total Temporary Land Acquisition Hectare</b>		<b>2.764875</b>	<b>0</b>	<b>1.4039</b>	<b>4.168775</b>
<b>Total Temporary Land Acquisition m<sup>2</sup></b>		<b>27,695.78</b>	<b>0.00</b>	<b>14,062.88</b>	<b>41,758.66</b>

\* 1 Ha = 10,000 m<sup>2</sup> = 2.471 Acre1 Acre = 8 Kanal = 4047 m<sup>2</sup>**6.3 AFFECTED HOUSES**

While considering project layout alternatives and selecting areas for deposition of excavated material, efforts have been made to avoid taking over of houses. However, 27 houses will be directly affected due to construction of powerhouse displacing 106 persons in village Alda and 6 houses on weir site due to submergence affecting 31 persons. In addition, 6 houses on KPK side will be directly affected displacing 24 persons. Table 5.5 give details of all these houses, names of their owner and number of occupants subject to displacement.

**Table.6.3. Houses Directly Affected by Project Implementation**

Sr. No.	Owner's Name	No. Of Houses	No. of Occupants	No. of Rooms			No. of Kitchen	No. of Bathroom
				Type B	Type C	Type D		
Power House at Alda AJK								
1		1	27	7	7	2	3	3
2		1	Same as No. 1	-	-	2	-	1
3		1	Same as No. 1	1	3	-	1	1
4		1	Same as No. 1	-	2	-	1	1
5		1	Same as No. 1	-	2	1	1	1
6		1	Same as No. 1	1	2	-	1	1
7		1	Same as No. 1	2	-	2	2	1
8		1	Same as No. 1	-	2	-	1	1
9		1	7	6	-	2	2	2
10		1	Same as No. 9	-	7	-	1	1
11		2	Same as No. 9	4	3	2	1	2
12		1	Same as No. 9	1	1	1	1	1
13		1	7	1	1	-	1	1
14		1	10	5	-	-	1	1
15		1	Same as No. 14	1	-	-	-	1
16		1	Same as No. 14	1	-	2	1	1
17		1	10	-	-	2	1	1
18		1	Same as No. 17	2	-	-	1	1
19		1	6	1	-	2	1	1
20		2	8	2	5	-	2	1
21		2	Same as No. 20	1	-	2	1	1
22		1	Same as No. 14	1	-	2	1	1
23		1	31	-	2	-	-	-
24		1	Same as No. 23	4	-	-	-	2
	Sub-Total Powerhouse (AJK)	27	106	41	37	22	25	28
Headpond at Patrind AJK								



Sr. No.	Owner's Name	No. Of Houses	No. of Occupants	No. of Rooms			No. of Kitchen	No. of Bathroom
				Type B	Type C	Type D		
25		1	4	2	1	-	1	1
26		1	5	2	2	-	1	1
27		1	3	1	2	1	1	1
28		1	7	1	2	-	1	1
29		1	6	2	1	1	1	1
30		1	6	1	1	1	1	1
<b>Sub-Total Headpond (AJK)</b>		<b>6</b>	<b>31</b>	<b>9</b>	<b>9</b>	<b>3</b>	<b>6</b>	<b>6</b>
<b>Total AJK</b>		<b>33</b>	<b>137</b>	<b>50</b>	<b>46</b>	<b>25</b>	<b>31</b>	<b>34</b>
<b>Headpond at Sarati KP</b>								
1		1	13	4	5		2	4
2		1	Same as No. 1	2	-	-	1	1
3		1	11		4		1	1
4		1	Same as No. 3	3	-	-	1	2
<b>Sub-Total Headpond Sarati (KPK)</b>		<b>4</b>	<b>24</b>	<b>9</b>	<b>9</b>	<b>0</b>	<b>5</b>	<b>8</b>
<b>Diversion Tunnel at Weir Site KPK</b>								
5		1	10	-	7	-	1	1
6		1	Same as No. 5	-	5	1	1	2
<b>Sub-Total DT (KPK)</b>		<b>2</b>	<b>10</b>	<b>0</b>	<b>12</b>	<b>1</b>	<b>2</b>	<b>3</b>
<b>Total (KPK)</b>		<b>6</b>	<b>34</b>	<b>9</b>	<b>21</b>	<b>1</b>	<b>7</b>	<b>11</b>
<b>Total (AJK+KPK)</b>		<b>39</b>	<b>171</b>	<b>59</b>	<b>67</b>	<b>26</b>	<b>38</b>	<b>45</b>

\* Room Type B – Brick Masonry: mud mortar, roof: iron girders, RCC batons and bricks

\* Room Type C – Bricks in mud mortar/ plaster, tin roof, wooden beams/planks, mud cover

\* Room Type D – No bricks, wooden beams, mud cover

#### 6.4 COMMERCIAL ASSETS

The project implementation does not involve loss of any commercial assets except for water mill located in the headpond area. It will be submerged after the creation of headpond. It belongs to [REDACTED] of [REDACTED] village of Muzaffarabad district. This is not a regular income generating asset as it is operational only for few months. The estimated compensation of [REDACTED] includes loss of opportunity or future income.

## 6.5 AFFECTED TREES

As shown in the following table 6.4, it is estimated that total number of 222 out of 624 trees will be submerged because of creation of pond behind the weir. All these trees may not be cut as many trees may withstand periodic shallow submergence. However, the compensation has been paid for all the trees. Composition of 624 trees includes 126 mixed fruit, 31 timber and 498 firewood trees. Apart from these trees the shrubs and flower plants have also been assessed which are estimated at 7,600 in Nos. The mixed fruit trees are of the types like Shahtoot, Wallnut, Apricot, Pear and Angeer. Compensation of the owners of the trees has been identified. Types of trees and their botanical names are given as under;

**Table.6.4. Types of Affected Trees**

Sr. No.	Name of Trees	
	Common Name	Botanical Name
<b>Firewood</b>		
1.	Phagwar	<i>Ficus palmate</i>
2.	Pipal	<i>Ficus religiosa</i>
3.	Kiker	<i>Acacia nilotica</i>
4.	Phulai	<i>Acacia modesta</i>
5.	Beence	-
6.	Balkald	-
7.	Kau	<i>Clea cuspidate</i>
8.	Nim	<i>Azadirachata indica</i>
9.	Daraba	<i>Cedrela serrata</i>
10.	Dhraik	<i>Melia Azadrach</i>
11.	Sherol	<i>Alnus nitida</i>
12.	Dravia	<i>Cederela serrata</i>
13.	Talhi	<i>Dilbergia sisso</i>
14.	Bhala	<i>Gymnosporia spp.</i>
<b>Timber</b>		
1.	Cheer	<i>Pinus roxburghlli</i>
2.	Tali	<i>Dilbergia sisso</i>
3.	Deodar	<i>Cedrus deodara</i>
<b>Fruit Trees</b>		
1.	Apricot	<i>Prunus armeniace</i>
2.	Pear	<i>Pyrus cummunis</i>
3.	Wallnut	<i>Juglans regia</i>
4.	Shahtoot	<i>Morus alba</i>
5.	Angeer	<i>Ficus carica</i>

## 6.6 CROP COMPENSATION

The construction may result in damage to standing crops. Compensation will be paid on the basis of market value of the crop. Depending upon the crops, an assessment of market prices of the crops was conducted in consultation with officials of revenue department and agriculture department as well as local people. An average value of Rs. 15,000 per acre (Rs.1, 875/kanal) has been assessed as compensation for crops.

## 6.7 SUMMARY OF AFFECTED ASSETS

A summary of assets to be affected due to head pond submergence, location of construction camps, storage areas, weir site, powerhouse site, maintenance road, access roads is given in Table 6.5.

**Table.6.5. Summary of Key Effects**

Sr. #	Item	Area			
		Acre	Kanal	Hectare	M <sup>2</sup>
1	Permanent Land Acquisition	98.76	790.10	39.90	399,679.20
2	Temporary Land Acquisition	10.3	82.6	4.2	41,758.66
3	Affected Houses	39			
4	Commercial Assets	1			
5	Economic Trees	624			

## 6.8 ACQUISITION OF LAND/ASSETS FOR PROJECT IMPLEMENTATION

### 6.8.1 Land Acquisition for Project Access Roads

The plan for access road is established considering relocation of weir, sand trap, powerhouse, surge tank and etc. Minimum 15.0 m radius of curve was applied to improve traffic capacity, safety and workability. The road width was extended by 7.0m and emergency parking bay will be installed. The access road to powerhouse starts in lower Chattar reaching prior to proposed bridge site near left bank of Jhelum river cover a distance of 1.7 km. This portion of 1.7 km is all metalled requiring possible widening at 2 to 3 locations. The distance beyond metalled portion before reaching the proposed bridge is 200 m and a proper road of 7m width needs to be constructed there.

**Table.6.6. Route Outline of the Proposed Access Roads**

Type	Section	Length (m)	Width (m)	Remarks
Weir	Boi Road – Weir	240	7.0	Weir Access
Weir	Construction Camp – Weir – Storage Camp	906	4.0	Maintenance Road at Weir Site
Powerhouse	Lower Chattar – Bridge	200	7.0	Powerhouse Access
	Bridge – Powerhouse	84	7.0	Powerhouse Access
Surge Tank	Powerhouse – Surge Tank	1,162	4.0	Surge Tank Access
Switchyard	Switchyard	96	7.0	Switchyard Access

For actual accessibility for transportation of equipment, material and manpower to the sites of the weir and powerhouse construction, some length of metalled road as well as one bridge across Jhelum river is required to be built.

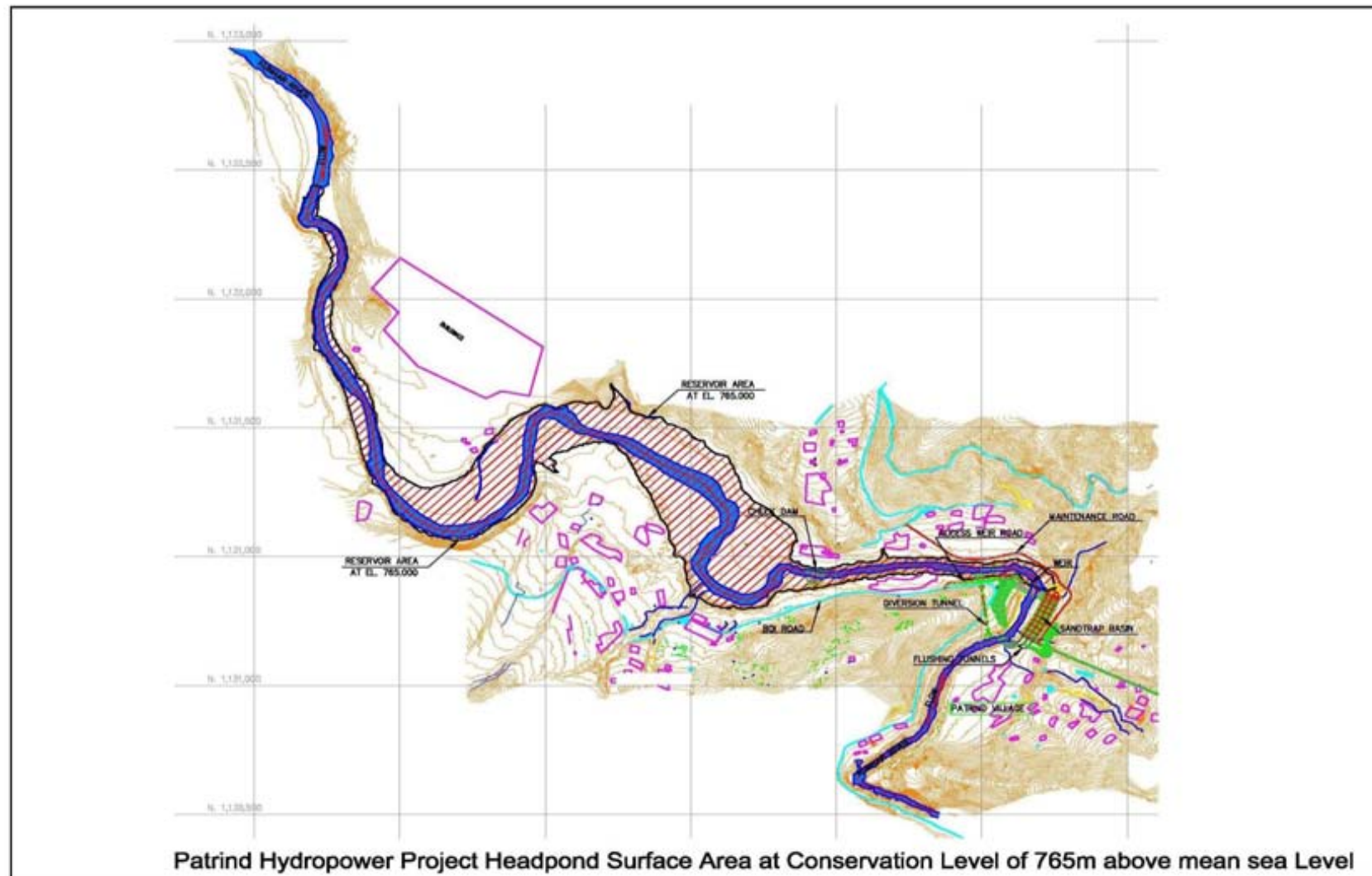
#### **Weir Site**

The right hand side of weir on Kunhar river is accessible by Boi Road for construction of weir, diversion tunnel and coffer dam. Muzaffarabad road (Hazara Trunk Road) crosses Kunhar river at Garhi Habibullah and passes by the left hand side of the weir site. A length of less than ½ km of metalled road is required to access left hand side of the weir site, proposed headrace tunnel, its intake and sand traps.

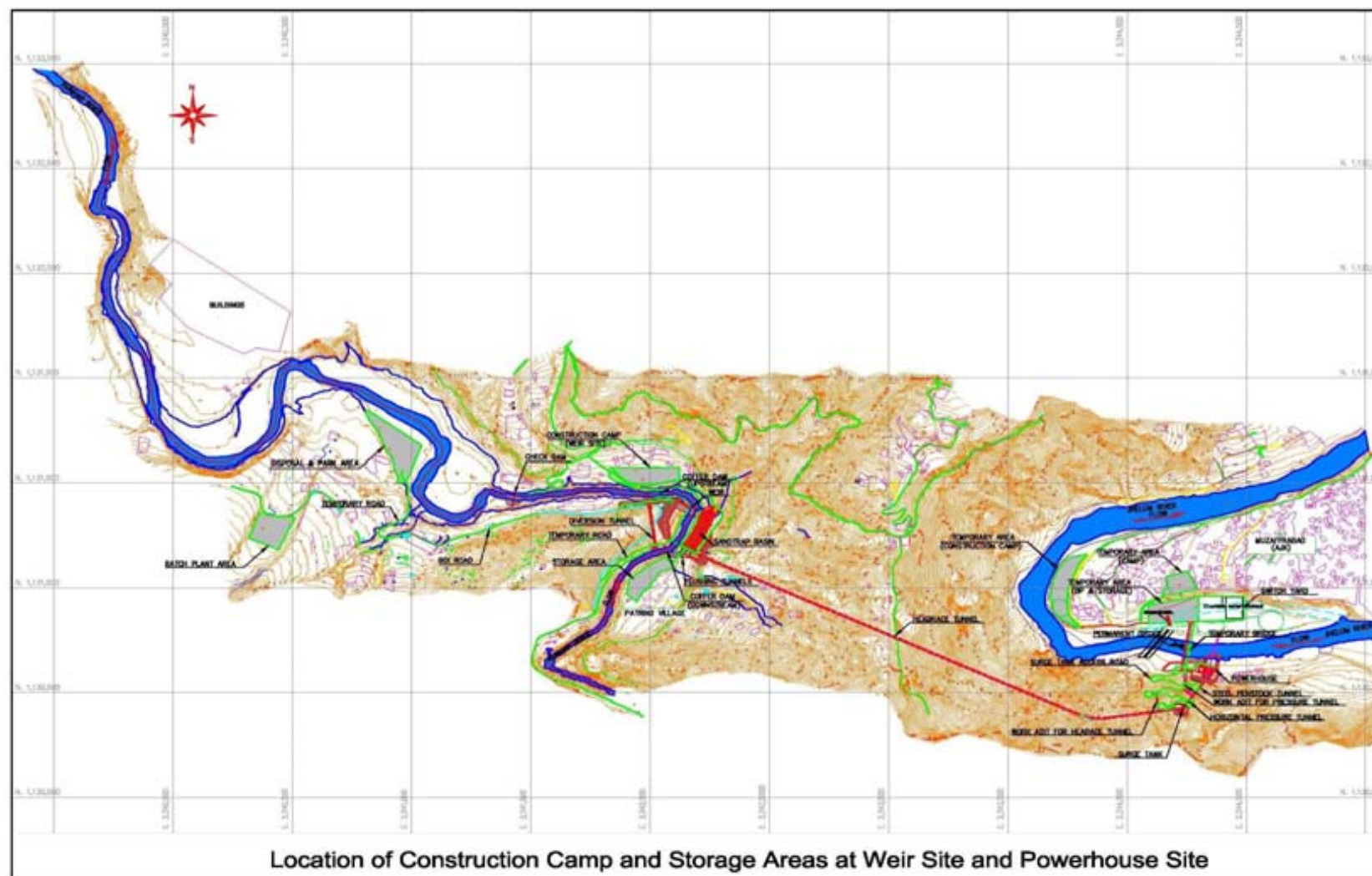
#### **Powerhouse Site**

The location of the proposed powerhouse is on the right hand side of Jhelum River about 9 km upstream of the confluence of Kunhar with Jhelum river in Muzaffarabad district. This location requires construction of both a permanent bridge and a length of metalled road.

**Figure 6.1**



**Figure 6.2**



---

## **CHAPTER – 7**

### **INCOME RESTORATION STRATEGY**

#### **7.1 INTRODUCTION**

Income restoration is an important component of resettlement where affected persons have lost their productive base, businesses, jobs or other income sources regardless of whether they have also lost their houses. Experience has shown that displaced families with good access to sufficient productive resources were able to retreat, and sometimes improve, lost productive systems and livelihoods. Successful income restoration is achieved primarily when projects allow resettled persons to share in the immediate benefits created by the very project that caused displacement by favouring the affected persons to exploit commercial opportunities around the newly created infrastructure.

#### **7.2 INCOME RESTORATION PROGRAMMES**

Resettlement programmes aiming to prevent impoverishment, restore incomes and build viable communities are normally of two main types. First, land-based resettlement programmes provide resettlers with enough land to regain and build farms and small rural businesses. Second, non-land-based strategies include activities such as occupational training, employment, small business and enterprise development for job creation. The common problems in developing income restoration programmes include lack of institutional and technical capacity to plan and implement micro-projects for income restoration and neglecting of vulnerable groups in income restoration programmes. Therefore, it is important to involve vulnerable groups, particularly women, and other community based organisations in income restoration planning and implementation.

#### **7.3 SPECIFIC ACTIVITIES DISCUSSED WITH THE AP/DP**

Based on the detailed survey, a detailed income restoration program, if required, will be prepared in consultation with the affected people. The program will indicate the number of targeted persons for income restoration activities and the types of activities proposed including institutions who will be conducting training and livelihood development activities. The budget for the implementation of these programs will be discussed in detailed with the AP/DP and shall be shouldered by SHPL.

<b>Programs</b>	<b>Schedule/season</b>	<b>Where to be implemented</b>	<b>Target AP/DP (e.g. women)</b>
Training on improving skills for construction worker	TBA	In all affected areas	Men of working age
Ecotourism	TBA	In impounding area	Men and women
Raising fingerlings	TBA	In impounding area	Women

#### 7.4 PATRIND HYDROPOWER PROJECT

The issues and guidelines for income restoration planning and implementation are based on IFC strategy. In the case of Patrind Hydropower Project the extent of population displacement and loss of land, particularly farmland, are not significant. Land-for-land strategy, according to IFC practice, has remained a difficult policy to implement. The strategy for income restoration of affected persons, at best, is based on training programmes in terms of small businesses, computer skills, health care technology and education. Operation and maintenance of the project has the potential to create job opportunities for local people. During construction the EPC Contractor and during operation the Project Sponsor will prefer to award such opportunities to the locals in terms of unskilled labour or semi-skilled labour after training, which preferably would be awarded to those affected by the project. During the preliminary construction works of the Project the implementation of the income restoration has been started by employing the local residents of the area in the construction activities by the EPC Contractor and giving them appropriate trainings for their respective jobs. The detail of the local employment till date is given in the table below.

<b>Sr. No.</b>	<b>Employment Agency</b>	<b>Area</b>		<b>Extra</b>	<b>Total</b>
		<b>AJK</b>	<b>KPK</b>		
1	EPC Contractor	22	14	21	57
2	Sub-contractors	65	21	14	100
	Total	87	35	35	157



**CASH COMPENSATION – THE PREFERRED OPTION**

The project implementation directly affects people in terms of loss of land and loss of houses. During field surveys, persons/ communities affected by Patrind Hydropower Project were individually as well as collectively interviewed to ascertain their opinion for resettlement and relocation. All owners of land and of houses directly affected by the project showed their interest in receiving cash compensation. None of them opted to receive land for land compensation or land for construction of new houses. As a result no resettlement sites have been identified or investigated. It is to be noted that the main source of livelihood of the affectees opting for cash compensation work in urban areas and are not dependent upon the meagre income (if any) from the lost land/ houses.

The land is being acquired through LAA 1984 and for house acquisition, the process requires 25% deduction for the aging and related factors in the assessment of the houses which in case of Patrind Hydropower Project has not been deducted to ensure that the APs/DPs get market rates. Another important factor to be highlighted is that in the LAA 1984 the land to be acquired should be categorized as per its condition and yield but in case of Patrind Hydropower Project that has not been taken in to account and the rates for the top category have been assessed to ensure that the APs/DPs should get the replacement cost for the acquired land. Furthermore, alongwith all these positive steps the Company has also agreed with the government authorities to give an allowance of PKR 500,000 to all those APs whose houses are being acquired on both the sides of the Project which is a major step towards the uplift of the Project APs.

---

## **CHAPTER – 8**

# **INSTITUTIONAL ARRANGEMENTS AND SCHEDULE, MONITORING AND EVALUATION, GRIEVANCE REDRESS MECHANISM**

### **8.1 INTRODUCTION**

The resettlement of people affected by Patrind Hydropower Project is the responsibility of the Sponsor, which will, therefore, play a key role in implementing the resettlement components of the project. For the efficient implementation and management of resettlement activities, an Environmental Management Unit (EMU), comprising environmental and social expert, representative of SHPL and that of EPC will be created. EMU will be responsible for implementing resettlement activities as follows:

- Ensure proper, timely and transparent payment of compensation to Affected Persons.
- Ensure EPC contractor(s) compliance requirements of safeguards for construction safety, occupational health, traffic management, dust suppression, solid waste disposal, wastewater disposal, air pollution, noise and vibration, biodiversity, occupational safety, transportation, storage of flammable and explosive materials.
- Ensure construction sites are screened to avoid dispersion of dust/ pollutants in the surrounding atmosphere.
- Avoid or control cutting of trees by EPC Contractor(s) in the project area.
- Liaise with neighbouring communities for their concerns about disturbance/ disruption due to construction activities.
- Ensure proper disposal of construction spoil.

#### **8.1.1 Organizational Setup**

Keeping in view the resettlement related baseline data and scope of resettlement activities, the EMU will have adequate staff. The record of land and of land ownership is maintained in the District Revenue Departments in Abbottabad and Muzaffarabad. To initiate and proceed with land acquisition, District Revenue Officer (DRO) of each district was designated as Land Acquisition Collector (LAC). In the capacity of LAC, the DRO deputed adequate number of revenue officials to work with EMU staff for performance of functions in acquisition of land/ assets required for Patrind Hydropower Project implementation.

Under Land Acquisition Act 1894 (LAA) only persons officially registered with land revenue department as owners or those who possess formal lease agreement are considered eligible for compensation.

### **8.1.2 Acknowledgment/receipt of Compensation**

The District revenue office prepared an acknowledgment/receipt of Compensation for the landowners (sample attached as Annex-13). Following particulars were noted on the receipt.

- Sr. No. as per the award issued
- Type of acquisition (land, house or trees)
- Name, Father's Name, CNIC No. of owner of land or other asset (entitled)
- Physical details of land/ asset including name of village.
- Value of land/ asset to be acquired and compensation due
- Cheque No. issued with date
- Signature/thumb impression of the receiptant
- Witness Name, CNIC No. of the witness and his/her signature duly signed by the revenue official
- Signature/thumb impression of the witness

Copy of acknowledgment of Compensation was provided to LAC and the Company to ensure both transparency and subsequent cross checking of actual payments.

### **8.1.3 Transparency of Compensation Process**

Following measures were adopted to ensure transparency of the compensation process.

- Public availability of acknowledgment/receipts.
- Payment of compensation directly to the Affectees through cross cheque in presence of the revenue officials and the witness.

These measures greatly helped in minimising the possibility of affectees not receiving full compensation.

## **8.2 MONITORING AND REPORTING**

### **8.2.1 Internal Monitoring**

EMU is a regular monitoring body which will keep record of all the grievance and maintenance rather improvement of environmental conditions of the area and uplift of socio-economic conditions of the APs in particular and residents of and

around the project area in general. EPA is an external body which will keep a check on such parameters. The EPC contractor has already submitted a plan for the uplift of the area which is included in EMP (A separate stand alone document). A detailed monitoring plan is included in EMP And the reporting procedure is also indicated. As desired by the ADB a six monthly monitoring report will be provided during the implementation of RP and two years thereafter.

The monitoring will be done as much as practicable to ensure that members of the affected households, including if any, women, children, elderly, handicapped, have adequate replacement housing.

### **8.2.2 External Monitoring**

In addition to the internal and government agency monitoring, an external expert to verify the monitoring information relevant to the implementation of this RP will be retained by SHPL. The external expert will (i) verify the internal monitoring undertaken by the Company; (ii) conduct site visits and review resettlement implementation semi-annually; (iii) review records of compensation payments and verify provision of entitlements to affected people and meet with relevant district and provincial authorities involved in land acquisition; (iv) advise on safeguard compliance issue that arise in connection with the Project; (v) in the event of non-compliance, report to ADB any non-compliance identified and recommend corrective actions to be incorporated in the corrective action plan to be prepared by the Company. Monitoring by the external expert will commence upon financial closure.

### **8.2.3 Reporting**

As required by the ADB SPS for projects with significant impacts, a six monthly monitoring report will be provided during the implementation of RP and two years thereafter. Monitoring reports will be made publicly available. All the monitoring reports will be posted in ADB website. Upon completion of resettlement plan implementation, a completion report will be submitted. The completion report will be validated by the external monitor to confirm whether resettlement plan objectives have been met.

## **8.3 GRIEVANCE REDRESS MECHANISM**

Regardless of its scale, involuntary resettlement inevitably gives rise to grievances among the affected population over issues ranging from entitlements,

rates of compensation and eligibility criteria. Timely redress of such grievances is vital to the satisfactory implementation of resettlement and to the completion of the project on schedule. The Project therefore must ensure that affected persons have access to grievance redress procedures and that such procedures are in place to allow them to lodge a complaint or a claim.

APs 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 AP who has had his/her land or structure 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 redressal mechanism that has been instituted under this RP.

All complaints and resolutions will be properly documented by the concerned Grievance Redressal Committee (GRC) and be available for review for monitoring purposes. As part of the post-evaluation and monitoring, the grievances will be reviewed by the Independent Monitoring Consultant, and decision regarding grievances shall be consistent with approved policies and entitlements.

A GRC will be formed under the RP in order to resolve disputes amicably through consultants. 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 facilities solutions and the process, as a whole will promote dispute settlement through mediation to reduce litigation.

Grievances are best redressed through project management, local civil administration, or other channels of mediation acceptable to all parties. Such channels of mediation may involve customary and traditional institutions of dispute resolution. The project company shall make every effort to resolve grievances at the community level. Recourse to the legal system should be avoided except as a last resort.

The spirit explained in the above paragraphs will be maintained as far as possible through the following mechanism

#### **8.4 GRIEVANCE REDRESS COMMITTEE (GRC)**

In the case of Patrind Hydropower Project, major grievances that might require mitigation include the following:

- AP's not enlisted
- Compensation inadequate
- Dispute about ownership
- Delay in disbursement of compensation

To meet the requirements a Grievance Redress Committee (GRC) will be **constituted to resolve such issues and provide AP's a public forum to address and resolve such issues adequately**. The GRC may be comprised of the following members.

- District Revenue Officer, as the Chairman:
- Union Council Nazim, as Principal Member
- SHPL Representative
- Affected Community Representatives, as Members

It shall deliver its decision within two to four weeks of registration of the case.

#### **8.5 FUNCTION OF THE GRC**

The GRC will meet whenever grievances have been forwarded to them. The decision of the GRC will not be binding and APs can take recourse to EPAs if he/she so desires.

The functions of GRC are as under:

1. Record the grievances of APs, categorize and prioritize them and provide solution to their grievances arising out of land and property acquisition and eligibility for compensation;
2. The GRC may undertake site visit and ask for relevant information in order to perform its functions;
3. Fix a time frame for resolving the grievance preferably in of 14 days;
4. Inform aggrieved parties directly about the status/development of their case;
5. Inform in writing of their decision to the aggrieved party.

#### **8.6 GRIEVANCE REDRESS PROCEDURES**

This grievance redress procedure along with specific time frame and mechanism for resolutions of complaints will be adopted. This procedure states that any AP who has a complaint or is not satisfied with the compensation provided can complain in writing to the GRC. The GRC will deal with the grievance and

complaint received from the APs and take necessary actions to solve the issue.

The AP's and local stakeholders were briefed on the function and responsibilities of the grievance redress committees and the grievance redress procedures. The AP's appreciated and welcomed the establishment of the committees and voiced their support towards this initiative. They felt that such a mechanism would ensure that land replacement and compensation packages would be fair.

## **8.7 IMPLEMENTATION SCHEDULE**

Within the project cycle, the implementation schedule provides the time frame for commencement and completion of the resettlement activities. Table 8.1 shows the Implementation Schedule for Resettlement Plan of Patrind Hydropower Project.

**Table 8.1: Implementation Schedule/Responsibilities for Resettlement Plan of Patrind Hydropower Project**

Sr. No.	Resettlement Plan Activity	Responsibility		Year 0	Year 1				Year 2				Year 3				Year 4			
		Primary	Secondary	Pre-Project	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1	Community Consultations	SHPL	EMU																	
2	RP Disclosure - Brochure in Urdu	SHPL	EMU																	
3	Site Demarcation of Affected Lands	DRO	EMU																	
4	Land Acquisition Process	LAC	EMU																	
5	Notification under LAA Section 4	LAC	DRO																	
6	Inventory - taking of Lands/ Assets	DRO,SHPL	EMU																	
7	Compensation Assessment (Revised)	LVC,DRO	EMU																	
8	Payment of Compensation	SHPL,DRO	EMU																	
9	Grievance Redress	GRC	EPA																	
11	Possession of Land/ Assets for Project Works	SHPL,LAC	EMU																	
12	Start of Preliminary Works	Contractor																		
13	Contractor Receives Approval for Main Contract	SHPL	Contractor																	
14	Construction Works	Contractor	EMU																	

AP : Affected Person  
 LAC : Land Acquisition Collector  
 EMU : Environmental Management Unit  
 RP: Resettlement Plan  
 DRO: District Revenue Officer

NOTE: The major elements of the updated Resettlement Plan will be disclosed to affected people in a form and language they can understand and submitted to ADB for review prior to taking over of Land/Assets. The updated RP will be disclosed on ADB website.



---

## **CHAPTER – 9**

### **COMPENSATION, BUDGET AND FINANCING**

#### **9.1 INTRODUCTION**

This Chapter deals with resettlement compensation, budget and financing plan of Patrind Hydropower Project. The Company has to defray the actual costs incurred in carrying out land acquisition activities and to provide funds in a timely manner.

##### **9.1.1 Compensation Payment Procedure**

The organizational setup as explained above was followed as the basis of procedure for payment of compensation for acquisition of land and other assets. The compensation payment procedure consists of the following steps.

- Company has developed a computerized database to deal with resettlement related data and activities.
- The staff of Company and LAC conducted field surveys to physically identify the land/ other assets to be acquired for project implementation.
- Ownership of land/ assets was confirmed with reference to District Revenue Department records as well as by using all other available means.
- After valuation of land and other assets has been completed by Land Collector, payment of compensation was made to the Affected Persons out of the Government Treasury where the Company already deposited the assessed cost of the land/houses/tress.

#### **9.2 VALUATION OF ASSETS**

The assets which are lost due to implementation of development projects include land, houses/ built-up property, crops and trees.

In case of Patrind Hydropower Project, most significant impact is the loss of land due to reservoir impounding claiming the largest proportion. Valuation of land for compensation began with determining market value of land. In determining market value of land, following criteria has been used.

- The price paid within a reasonable time in bonafide transactions of lands in the neighborhood and possessing similar advantages like location, type of usage, and level of productivity.
- By capitalizing the net annual income from the land.

LAC, who has the authority to fix the market value, determined the realistic market value of land and considered the following aspects.

- One year averages of land sales in the concerned area for the year immediately prior to the data of commencement of land acquisition.
- Location of land i.e. proximity to settlements, roads, etc
- Type of land usage i.e. residential, agricultural, (irrigated, rain-fed) orchards, or other

Any AP if dissatisfied with the compensation award has the right of appeal before the court of law or the established grievance redress mechanism established for the implementation of this RP.

### **9.2.1 Valuation of Land, Houses, Crops and Trees**

Assets like built-up property have been valued at full replacement cost i.e. the amount sufficient to replace lost asset plus transition cost. In applying replacement cost method, depreciation of structures/ asset has not be taken into account.

In case farmers are not permitted to harvest crops on land already acquired, due to exigency of construction schedule, cash compensation based on market value of crop will be made.

#### **Value of Land**

Market assessment in the project area as well as consultation with district revenue department officials were undertaken to arrive at prices of land. The land values given by the revenue department officials were slightly lower than market prices. The market prices were assessed on the basis of recent market transactions and consultation with the affected persons and other community members; in most cases transactions are verbal and not documented. The price of the land per kanal on powerhouse area has been assessed at PKR 800,000 and on weir side PKR 500,000 by the revenue department of both the sides of the Project which is a generous assessment considering the quality of the land and other recent assessments in the surrounding area. Another important factor to be highlighted is that in the LAA 1984 the land to be acquired should be categorized as per its condition and yield but in case of Patrind Hydropower Project that has not been taken in to account and the rates for the top category have been assessed to ensure that the APs/DPs should get the replacement cost for the acquired land.

**Table.9.1. Land Prices in the Project Area**

Sr. No.	Type of Land	Powerhouse Site		Weir Site	
		Rate / Acre* (Rs.)	Rate / Acre** (US\$)	Rate / Acre* (Rs.)	Rate / Acre** (US\$)
1	Farmland	7,360,000	85,581	4,600,000	53,488
2	Wasteland	7,360,000	85,581	4,600,000	53,488
3	State owned/ Riverbed Land	7,360,000	85,581	4,600,000	53,488

\* Rate/ acre of land costs include 15% CAS for involuntary resettlement.

\*\* Exchange rate 1 US\$ = Rs. 86

**Table.9.2. Permanent Land Acquisition**

Sr. No.	Area	Type of Land	Affected Area Kanal	Rate per Kanal	Estimated Cost	Total	CAS	Total with CAS
1	Power House & Access Road (ALDA Village) AJK	River Bed	13.60	800,000	10,880,000	65,440,000	9,816,000	75,256,000
		Farmland	30.10	800,000	24,080,000			
		Wasteland	38.10	800,000	30,480,000			
2	Weir Site & Sandtrap AJK	River Bed	0.00	500,000	0	25,100,000	3,765,000	28,865,000
		Farmland	1.50	500,000	750,000			
		Wasteland	48.70	500,000	24,350,000			
3	Reservoir Impounding (AJK)	River Bed	42.85	500,000	21,425,000	210,825,000	31,623,750	242,448,750
		Farmland	247.20	500,000	123,600,000			
		Wasteland	131.60	500,000	65,800,000			
4	Reservoir Impounding (Deedal) KP	River Bed	44.45	500,000	22,225,000	94,350,000	23,587,500	117,937,500
		Farmland	34.85	500,000	17,425,000			
		Wasteland	109.40	500,000	54,700,000			
5	Surge Tank, Access road to Surge Tank	River Bed	0.00	500,000	0	23,875,000	3,581,250	27,456,250
		Farmland	0.00	500,000	0			
		Wasteland	48	500,000	23,875,000			
	Total		790.10			419,590,000	72,373,500	491,963,500

### 9.2.2 Cost of Temporary Land Acquisition

The temporary land has been acquired on lease for 5 years.

**Table.9.3. Cost of Temporary Land Acquisition**

Sr. No.	Area	Type of Land	Affected Area Kanal	Rate per Kanal	Estimated Cost	Total
1	Labour camp, access road to the bridge, batching plant and workshop at powerhouse site	River Bed	54.75	2,300	1,511,100	<b>11,391,900</b>
		Farmland	0.00	0	0	
		Wasteland	27.80	2,300	767,280	
	<b>Total</b>		<b>82.55</b>			<b>11,391,900</b>

### 9.2.3 Cost of Affected Houses

As a result of project implementation, a total of 39 houses will be affected. The compensation shall be given to the recognized representative of the household/owners on prevailing market prices. The detail is given in Table 9.4.

**Table.9.4. Cost of Affected Houses**

Sr. No.	Owner's Name	No. Of Houses	No. of Occupants	Type of Construction	Cost PKR	CAS 15%	Total Cost PKR
<b>Power House Alda (AJK)</b>							
1		1	27	R.C.C			
2		1	Same as No. 1	R.C.C			
3		1	Same as No. 1	Shed			
4		1	Same as No. 1	Shed			
5		1	Same as No. 1	Shelter			
6		1	Same as No. 1	Cattle Shed			
7		1	Same as No. 1	Mud House			
8		1	Same as No. 1	R.C.C			
9		1	7	R.C.C			
10		1	Same as No. 9	R.C.C			
11		2	Same as No. 9	R.C.C Cattle Shed			
12		1	Same as No. 9	Cattle Shed			
13		1	7	Shed			
14		1	10	R.C.C			
15		1	Same as No. 14	Shed			
16		1	Same as No. 14	Mud House			

Sr. No.	Owner's Name	No. Of Houses	No. of Occupants	Type of Construction	Cost PKR	CAS 15%	Total Cost PKR
17		1	10	Mud House			
18		1	Same as No. 17	Cattle Shed			
19		1	6	Shed			
20		2	8	Shed			
21		2	Same as No. 20	R.C.C			
22		1	Same as No. 14	Cattle Shed			
23		1	31	Shelter			
24		1	Same as No. 23	Shelter			
	<b>Sub-Total (AJK)</b>	<b>27</b>	<b>106</b>				

**Head pond at Patrind (AJK)**

25		1	4	C.G Sheet			
26		1	5	R.C.C			
27		1	3	C.G Sheet			
28		1	7	C.G Sheet R.C.C			
29		1	6	C.G Sheet Mud			
30		1	6	C.G Sheet			
	<b>Sub-Total Patrind (AJK)</b>	<b>6</b>	<b>31</b>				
	<b>Total AJK</b>	<b>33</b>	<b>137</b>				

Sr. No.	Owner's Name	No. Of Houses	No. of Occupants	Type of Construction	Cost PKR	CAS 25%	Total Cost PKR
---------	--------------	---------------	------------------	----------------------	----------	---------	----------------

**Head pond at Sarati (KPK)**

1		1	13	R.C.C C.G Sheet			
2		1	Same as No. 1	R.C.C			

Sr. No.	Owner's Name	No. Of Houses	No. of Occupants	Type of Construction	Cost PKR	CAS 15%	Total Cost PKR
3		1	11	C.G Sheets			
4		1	Same as No. 3	R.C.C			
	<b>Sub-Total-HP Sarati (KPK)</b>	<b>4</b>	<b>24</b>				
<b>Diversion Tunnel at Sarati (KPK)</b>							
5		1	10	R.C.C Mud			
6		1	Same as No. 5	R.C.C Mud			
	<b>Sub-Total-DT Sarati (KPK)</b>	<b>2</b>	<b>10</b>				
	<b>Total KPK</b>	<b>6</b>	<b>34</b>				
	<b>Grand Total (AJK+KPK)</b>	<b>39</b>	<b>171</b>				

#### 9.2.4 Cost of Economic Trees

The ownership of the economic trees has been determined by the agriculture Department during the detailed inventory of assets to be affected. Accordingly the total cost of trees to be cut due to project implementation is estimated at Rs. 3,524,211 for compensation.

#### 9.2.5 Cost of Commercial Assets

Except for one small water mill subject to submergence by headpond, no commercial assets will be affected by project implementation. The compensation payment at [REDACTED] for the water mill including its land area has been agreed with the water mill owner, [REDACTED] of village [REDACTED]. This is not a regular income generating asset as it is operational only for few months. The estimated compensation of [REDACTED] includes loss of opportunity or future income.

### 9.3 COST OF ENVIRONMENTAL AND SOCIAL MONITORING

For regular monitoring of events like cash compensation for land, houses, commercial assets and trees and redressal of grievances, an independent monitoring unit has been created. The unit will keep an eye on the transactions and complaints. They will keep record of all such events and help to resolve the compliance through EPC contractor and SHPL. The contractor will employ environmental supervisors; they will keep liaison with the environmental

monitoring unit. The cost for running the unit during the construction period has been calculated and given in Table 9.5.

**Table.9.5. Cost of Environmental and Social Monitoring**

Sr. No.	Title	Duration	Cost (Pak. Rs.)
1.	Environmental and Social Training	Requirement basis	500,000 (lump sum)
2.	Tree Plantation	Lump sum	500,000
3.	Contingencies	3 %	50,000
<b>Total</b>			<b>1,050,000</b>

#### 9.4 RESETTLEMENT AND ENVIRONMENTAL MONITORING COST

Table below summarises resettlement cost of Patrind Hydropower Project.

**Table.9.6. Resettlement and Environmental Monitoring Cost**

Sr. No.	Item	Quantity	Unit	Unit Cost Rs/Unit	Estimated Cost (Rs.)
1	Permanent Land Acquisition	98.76	Acres	Variable	
2	Temporary Land Acquisition	10.31875	Acres	Variable	
3	Affected Houses	39	Nos.	Variable	
4	Commercial Assets	1	No.		
5	Economic Trees		Nos.	Variable	
6	Environmental & Social Monitoring	-	-	-	
7	Displacement Allowance	39	Per House	500,000	
<b>Total</b>					

The total of Resettlement and Environmental Cost adds up to .  
At conversion factor of 1 US\$ = Rs. 86, the cost is . The cost of permanent land acquisition is the largest component of the resettlement cost at 86.95 % of the total.

The budget for the implementation of this RP will be borne by SHPL and a

contingency amount is also earmarked to satisfy any verified claimed in the future.



