

GOVERNMENT OF PAKISTAN

Water and Power Development Authority (WAPDA)

Kreditanstalt für Wiederaufbau (KfW)

**DETAILED ENGINEERING DESIGN AND
PREPARATION OF TENDER DOCUMENTS FOR THE
KEYAL KHWAR HYDROPOWER PROJECT
VOLUME VI**

RESETTLEMENT ACTION PLAN

DECEMBER 2011

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VOLUME VI

DETAILED DESIGN REPORT

REPORT ON RESETTLEMENT ACTION PLAN

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ABBREVIATIONS

GIZ/SHYDO Gesellschaft fuer International Zusammenarbeit (GIZ) /Sarhad Hydel Development Organization, Since 2011 GTZ = GIZ
HEPO Hydro Electric Planning Organization
HPO Hydro Planning Organization
KHPC Keyal Hydropower Consultants
KKH Karakorum Highway
RFST Revision of the Feasibility Study of Keyal Khwar Hydropower Project
SoP Survey of Pakistan
SWHP Surface Water Hydrology Project
WAPDA Water and Power Development Authority
CBO Community Based Organization
EIA Environmental Impact Assessment
EMP Environmental Management Plan
EPA Environmental Protection Agency
HEPO Hydro Electric Planning Organization
HPP Hydro Power Plant
IEE Initial Environmental Examination
IFC International Finance Corporation, A member of the World Bank Group
IUCN The World Conservation Union
KKC Keyal Khwar Consultant
kW Kilowatt
NA NWFP
NGO Non-Governmental Organization
NWFP North West Frontier Province
NTFP Non-Timber Forest Products
PCDP Palas Conservation and Development Project
RAP Resettlement Action Plan
Rs. Pakistani Rupees
SCO Special Communication Organization
SWHP Surface Water Hydrology Project
SHYDO Sarhad Hydel Development Organization
UNDP United Nations Development Program
WAPDA Water and Power Development Authority
WWF World Wide Fund for Nature

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UNITS OF MEASUREMENT

m metre Unit measurement of length
km kilometre Unit measurement of length
m² square metre Unit measurement of area
km² square kilometre Unit measurement of area
m³ cubic metre Unit measurement of volume
Mm³ million cubic metres Unit measurement of volume
masl metres above sea level Unit measurement of elevation
m/s metre/second Unit measurement of velocity
m/s² metre/second/second Unit measurement of acceleration
m³/s cubic metres per second Unit measurement of discharge
kg kilogramme Unit measurement of mass
t metric tonne Unit measurement of mass
kW kilowatt Unit measurement of power
MW megawatt Unit measurement of power
kWh kilowatt - hour Unit measurement of energy
GWh gigawatt - hour Unit measurement of energy
kV kilovolt Unit measurement of electrical voltage

UNITS OF CURRENCY

EUR Euro (European Union)
EUR¢ Euro cent
PKR Pakistan Rupee
US\$ United States dollar
US¢ United States cent

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1. EXECUTIVE SUMMARY

1.1. Introduction

The Resettlement Action Plan (RAP) for the Keyal Khwar Hydropower Project (HPP) is the management tool for the Project Developer (in this case WAPDA) to implement and monitor the resettlement process and the livelihood improvement and development programs for those people affected by Keyal Khwar HPP.

This RAP explains the legal framework for resettlement in Pakistan, addresses impacts on local population and their properties/assets, determines the entitlements due to the affected persons, explains required mitigation and compensation measures, and defines the land acquisition procedure and the land allocation to the locally affected people.

The RAP is based on detailed socio-economic analyses and public consultations carried out since the spring of 2006 when the first preliminarily environmental investigations began and continued till June 2011.

The RAP covers the following subjects:

- Legislation on resettlement.
- Impact on population.
- Entitlements and compensation rules and procedures.
- Land acquisition requirements.
- Areas for development of valley development centre , forest nursery, cultivated land, and commercial activities.
- Community participation and consultation framework.
- Grievances redress mechanism.
- Resettlement/compensation monitoring procedures.
- Funding estimation for, compensation, and other rehabilitation measures.
- Administrative requirements including implementation mechanism.

Before starting implementation of the Project, the Resettlement Action Plan should be reviewed and confirmed by the Environmental Protection Agency (EPA) of Khyber Pakhtunkhwa Province (KPKP). This process of review and confirmation includes public consultations with the affected people culminating in a hearing in the area affected by the Project. Close cooperation with the Kohistan District, in particular with the Pattan Tehsil administration, is required.

At the time of formulation of the Revised Resettlement Action Plan 2008 (RAP 2008) the definite design of the Keyal valley development road was ready. The design of other components of the project was on Feasibility level and not definite. After the July 2010 flood a new design of Keyal valley road was required which was completed in May 2011. The alignment of the road follows largely the former existing valley road except in a few sections. The design features of other components of the project have been made definite from the point of view of resettlement and compensation in the present Detailed Design stage. The RAP (2008), therefore, has been reviewed and updated to cover all the changes in design features of Keyal Khwar HPP.

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1.2. Legislation

Both the Pakistan Resettlement Ordinance of 2001 and the World Bank Guidelines (OP 4.12 and BP 4.12) require preparation of a Resettlement Action Plan when 200 or more persons are to be resettled. About 400 persons are affected by development of the various components of the Keyal Khwar HPP.

The overriding principle incorporated in the IFC Handbook for Preparation of Resettlement Action Plans is to develop conditions for the local population, during and after project construction, that significantly improve their quality of life. In essence, the local population should be compensated for the inevitable social disturbance caused by the project by sharing the benefits from the project.

The main focus of this Resettlement Action Plan is the determination of affected population and their entitlements. Once the entitlements are confirmed, then the affected people, be they landowners, tenants or business persons, can discuss any issue with the Project Developer (WAPDA) and the Kohistan District Administration. They have the right to submit any complaints to the grievance committee for resolution and, failing that, to approach the courts.

1.3. Socio-economic Status of the Local Population

The Keyal Khwar valley is extremely under-developed. The Keyal people use the valley and its resources for subsistence dwelling, cultivation, animal husbandry, timber logging, firewood cutting, power generation and flour milling. There is no industrial or other economic sector in the valley offering employment or business opportunities to the local people.

The most important source of food supply is that derived from traditional subsistence agriculture and livestock. However, land suitable for agriculture is very limited and used only in summer for growing maize and vegetables. As a result, less than half of all food required in the valley is being produced in the valley. The remaining demand has to be purchased from outside markets. With the recent steep rises in prices of agricultural commodities, the importance of home-grown agricultural production has taken greater significance for the local population. Cash income is earned by male family members selling their unskilled labor in the construction or transport sectors outside the valley, mostly in Pattan, Dasu, Duber, Gilgit, Azad Kashmir, Abbottabad etc.

The living conditions in the valley are very basic. The traditional Kacha (mud) houses predominate, do not have glass windows and generally offer only one room used by the entire household of 8 to 10 persons. Some houses are of stone construction and of larger size accommodating larger or even several households. Generally the houses have neither piped water supply nor piped sewerage facilities. The domestic water (for human and animal consumption) is brought daily from local streams and springs by female family members. Recently (2010/2011) 7 water tanks have been built in the valley to supply piped water up to houses.

Summer agriculture plays an important role in the traditional local life. The majority of family members move with their livestock to land holdings and houses located at higher elevations (above 2,000m asl) where rain-fed summer meadows are available.

The forests in the valley and on the plateaus of the foothills are used for timber logging, grazing of domestic animals and firewood cutting. Almost all population has access to intermittent electricity supplied by small private hydro generators installed by community as well as private owners.

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The majority of people are illiterate. Even schools for boys are often not functioning due to a lack of accommodation for teachers. Medical care in the valley is largely non-existent. For qualified medical attention, sick people have to travel (by foot or by car) to Pattan, Dasu or even Abbottabad – an expense that very few can afford. As a result, life expectancy in the valley is very low by national standards.

Males, by tradition, dominate the local way of life. Females bear the responsibility for household and agricultural work. However, they are deprived of formal education and of any meaningful participation in the decision making processes associated with domestic and community life. Pre- and post natal medical facilities in the valley are non-existent.

1.4. Impacts on Land, Houses and Other Properties by Project Implementation

The construction of Keyal valley road will affect 85 Kanals & 19 Marla (43478 m²) of land of which 47 kanal and 15 Marla (24155 m²) are cultivated land.

As mentioned above, the new designed Keyal valley road will follow more or less the old valley road with exceptions in few sections affecting 22 houses and 231 persons residing in these houses. Besides, 10 No of shops employing about 20 Persons have to be shifted from road side to suitable places. The summary of houses and shops to be dislocated at various components of the project is shown in Table 1.1

Table 1.1 : Houses, Shops & Population Potentially Affected By Project Construction

Project Component No of house /shops

No of persons Kacha/Pacca

Remarks

Keyal Valley Road &
dam site

22 231 15 Kacha/ 7

Pacca

Including a small
hut at dam site

Valley development
centre

13 92 Kacha 13 houses are
located in three
large buildings

Contractor camp 4 25 3 houses
damaged

All Kacha

3 houses are
empty and one
occupied by

tenants since 11
years

WAPDA colony at
Sri Pattan

2 (one house
has 8 sub units)

51 Pacca One house is
under construction

Total 41 410

Wooden shops /

Godown (storage)

Bandlo Bazaar 2 4

Bairloo village 8 16 Three godowns

Total 10 20

Source: KHPC, 2011

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1.5. Impact of Project Components on Land, Houses and Other Assets

The land to be acquired for dam site, reservoir area and the access roads is 134 Kanal & 15 Marla (68,183 m²). The major portion thereof is Dhaka-Pasture lands that is 97 Kanal & 16 Marla (49,093 m²). Cultivated land is only 17 Kanals (8625 m²). A single one room hut is located at dam site that is to be acquired with its cultivated land.

The area to be acquired for Wapda colony at the village of Pattan near Sargo nullah is 112 Kanal & 14 Marla (51070 m²) of which 39 Kanal & 12 Marla (20032 m²) is cultivated land.

The land proposed for acquisition for power house and associated structures consists of 78 Kanal and 19 Marlas (39937m²)).

Two Pacca houses are affected and to be acquired at Wapda colony site. One house with eight sub units is complete and 51 persons are residing which are to be resettled. The other house is incomplete at this stage and no person is residing in the house.

The total area to be acquired for the proposed Valley Development Centre at km 3+500 of Keyal valley road is estimated to be 14105 m². The affected cultivated land at the proposed Valley Development Centre is 12068 m². For the contractors dam site camp at Keyal valley road (km 4+300) 8690 m² are temporary used, 7463 m² thereof are cultivated land.

At the Valley Development Centre 13 households in three large buildings would be affected where 92 occupants are residing. At the contractors camp 25 persons have been residing as tenants in one house since 11 years and cultivating the lands. The remaining three houses are partially or completely damaged. The owners of these houses and land live in Pattan due to enmity. The preference of these owners is to sell the houses and land to Wapda instead of renting it out. The summary of total and cultivated land is given in Table 1.2.

Table: 1.2 Total, pasture and Cultivated Land affected by Project Development

Project Components

Total Area In Kanal

PasturesIn Kanal

Cultivated In Kanal

Families No.

Keyal Valley Road 86 17 48 116

Dam site & 2Km access road 134 97 17 41

Wapda Colony at Sri Pattan 113 3 40 11

Powerhouse and allied structures 79 69 0 19

Valley Development Centre 28 0 24 16

Contactors Camp 17 0 15 19

132 kV D/C Transmission Line 20 0 0 4

Community

Land

Total 476 185 143 222

Source = KHPC, 2011

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From the total land to be acquired 30% of land is cultivated land, 39% pastures land and the remaining are stony/mountain land. Total number of main Khatedars (Families) is 222. The discussion with the affected population regarding their preference to resettlement has revealed that the affected persons prefer to have adequate cash compensation instead of resettlement in new houses in the valley. The reasons for this preference are marginal productivity from agriculture and livestock, lack of job opportunities and poor educational and health facilities available in the valley.

One of the severest negative impacts of the hydropower project will be the reduction of flow in the Keyal Khwar downstream of dam site – a release of 250 l/s on average is foreseen as minimum ecological flow. This release will suffice to preserve the Keyal Khwar as a watercourse, but it will not be sufficient to support the present use for power generation in the same extent as presently. Springs and snow melt will be exploited and water stored in tanks and piped to all settlements downstream of the dam for domestic and irrigation needs.

1.6. Resettlement and Compensation

1.6.1. Governing Principles for Resettlement

The population to be affected by the various structural components in the dam site area prefers voluntary relocation if adequately compensated. The compensation to the affected households is to be paid on the basis of cadastral survey by Revenue, C&W, forest and Agriculture Departments of Kohistan District, in consultations with locals and WAPDA. The general principles of resettlement and compensation are:

Adequate cash compensation for the affected houses, land and other entitlements

Fairness and transparency and consultation with the affected households

Provision of job opportunities to the local population during construction and operational stages of the project.

Provision of electricity from the newly built 11 kV transmission line.

Provision of drinking water facilities and sewerage systems to the population

Enhance the availability level of health, education, vocational training in the Keyal valley as well as lower Pattan area.

Improve the productivity of traditional agriculture and live stock to improve the self supply of food.

1.6.2. Resettlement and Compensation to Affected Households

The compensation to the affected population has to be completed well in time before the start of construction activities at various project components.

The compensation and relocation of affected Households in the area of the various project components shall be undertaken in accordance with the prevalent laws in Pakistan. The laws and procedures of resettlement/compensation have been explained in Chapter 3 of this report.

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The major components of the project area.

Component 1: Keyal Valley Road and dam access road

Component 2: WAPDA Colony at Pattan.

Component 3: Contractor's dam site camp at village Bair (Keyal Valley Road, km 3+500)

Component 4: Dam site, Reservoir area, powerhouse and switchyard areas.

Component 5: Valley development centre (Keyal Valley Road, km 4+300)

Component 6: 132 kV Transmission line from Keyal Khwar HPP switchyard to Duber HPP switchyard.

Component 7: 11 kV transmission line from Keyal Khwar HPP switchyard to Keyal Valley and further to dam site

1.6.3. Land Acquisition and Land development

All land, which is needed for the construction of the Keyal Khwar HPP has to be acquired by the Project Developer (WAPDA) prior to the start of any construction. This includes land for the Keyal valley road, for all components of the hydropower project, for the reservoir, contractor's camps, Valley Development Centre and power lines.

The land in Keyal valley is very scarce and the principle of land for land cannot be implemented. For the Keyal Khwar HPP the policy is to compensate land by cash for the land acquisition. The programs in the valley shall be implemented by project developers (WAPDA) to increase the productivity of land, livestock and fruit trees. Irrigation channels shall be lined and productivity improvement program shall also be implemented with assistance of Kohistan Agriculture Department as well donor funded NGOs.

About 1 ha of land has been identified in the Keyal Khwar valley suitable for development by WAPDA. This land shall be mainly utilized for forest nursery; relocation of shops and other small scale enterprises.

Along the banks of Indus River, on the outskirts of Pattan village, some area of wasteland will be developed using material excavated from the construction of the hydropower project structures. Part of the area shall be used for forest nursery to be developed by WAPDA.

The remaining area would be presented to the local Pattan community for subsequent commercial, residential or agricultural development.

1.6.4. Land Acquisition and Cadastral Survey

Acquisition of land has already been started and is at advanced stage for cash compensation to the affected population. Section 4 has already been issued for affected houses and land related to Keyal valley road, reservoir and dam site area, Wapda colony at Pattan, Power house and associated structures. Cadastral survey of the affected land and houses has been completed same as the survey of economic trees and fruit trees. The award on cash compensation for land is to be announced by the Revenue Department. For the other project related structural components, the legal procedures are in progress for land acquisition and compensation.

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1.6.5. Land Acquisition Procedures

The details of land acquisition laws and procedures is fully explained in Chapter 3 of this report. The main process is cadastral survey for Keyal Khwar HPP as revenue records for the valley as well as for Kohistan district do not exist.

A cadastral survey is carried out to establish the locations and boundaries of assets and properties that will have to be acquired prior to constructing the project components. In cases of dispute, the Jirga should confirm ownership.

Grievances against the cadastral survey must be resolved before acquisition takes place. The prices for land acquisition are based upon the market rates published annually by the Land Revenue Collector of Kohistan District and the latest awards for similar projects in Kohistan and neighboring districts.

WAPDA will have to acquire and compensate all required lands from the owners, who are generally local individuals but may also, be local communities.

1.6.6. Allocation of Land and Houses

According to the inquiries in the area of the Keyal Khwar HPP the affected population has preference to receive cash compensation instead of in kind compensation. The preference is based on low productivity of lands and livestock, lack of jobs, basic health and education facilities in the valley. The effected population want to resettle at place of their choice.

1.6.7. Relocation of People due to Keyal Valley Road Re-alignment

The project developer (WAPDA) will relocate the shops at Bairloo and Bandlo Bazar to maintain and enhance job opportunities in trade for locals.

1.6.8. Relocation of People due to Keyal Khwar HPP Works

The affected population at all components of Keyal Khwar HPP prefers to receive cash compensation

1.7. Livelihood Restoration and Development

In order to reward the local communities for carrying the economic and social burden associated with project construction and operation, a number of livelihood development and improvement measures will be implemented. The following development aspects to improve the quality of life of the population are planned:

Supply of electricity to residents of Keyal valley through 11 kV power line.

Pipe based water supply from treatment plant at Keyal Khwar dam site.

Provision of medical consultations to population at WAPDA dispensary at proposed Valley Development Centre and WAPDA dispensary at WAPDA colony at Pattan.

Supply of excess water from proposed water supply scheme for WAPDA colony Pattan, to part of surrounding population of Pattan.

To provide educational facilities to girls of Keyal valley and Pattan at girls high school at WAPDA Colony.

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To provide medical support to females of the valley through a midwifery system and equipments.

To enhance social and educational support to females of the valley.

Provision of training in construction and crafts, for male residents of Keyal valley.

Support to economic activities such as workshops, carpentry and saw milling.

Assistance in construction of lined irrigation channels to irrigate land in Keyal valley.

To make arrangements for training of farmers in agriculture disciplines, livestock and fruit production techniques.

1.8. Public Consultations

Public consultations have to be continued in the affected villages before and during construction. The local administration of the Kohistan District, the Pattan Tehsil and the Keyal and Pattan Union Councils have to be involved in land acquisition and livelihood restoration program.

1.9. Resettlement, Administration and Monitoring

WAPDA will have to establish a Resettlement Unit in the project area, located in Pattan, for administration of the entire resettlement and livelihood development program for land acquisition as well as livelihood restoration program. An independent Resettlement Advisory Board will be set up to monitor the process. This Board will include representatives of the local population and will work in close co-operation with EPA of Khyber Pakhtunkhwa Province.

1.10. Resettlement Costs

Based upon the present level of project definition, the expenditures for resettlement including livelihood development and improvement in the Keyal Khwar valley have been estimated to be PKR: 238,163,000 .(€uro 2,270,265.4 rate of 30. June 2010).