

Resettlement Plan

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TAJ: Wholesale Metering and Transmission Reinforcement Project

Prepared by Fichtner for Barki Tojik of the Republic of Tajikistan and for the Asian Development Bank.

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List of Abbreviations

Abbreviations	Declaration
ADB	Asian Development Bank
AF	Affected Family
agric.	agricultural
AP	Affected Person
BT	Barki Tojik
CBO	Community Based Organization
CC	Civil Code
DMS	Detailed Measurement Survey
ESD	Barki Tojik PMU Environment and Social Department (now Monitoring Department)
GRC	Grievance Redress Committee
IOL	Inventory of losses
IR	Involuntary Resettlement
ha	hectare/s
hh	household/s
HVTL	High Voltage Transmission Line
kg	kilogram
LA	land acquisition
LARP	Land Acquisition and Resettlement Plan
LC	Land Code
MEI	Ministry of Energy and Industry
NGO	Non-Governmental Organization
p.a.	per year
p.c.	per person
p.m.	per month
PAP	Project Affected Persons
PMU	Project Management Unit of Barki Tojik
ROW	Right Of Way
RT	Republic of Tajikistan
SME	Small and Medium-Sized Enterprise/s

t	tower
TJS	Tajik Somoni (US\$100 = 500 TJS in July 2014)
TL	Transmission Line
USD	United States Dollars
ZOI	Zone of Influence

Local Terms	
Aryk	Irrigation Channel
Dekhan farm	Farm under private management organized either individually, by a family or collectively
Hakim	Chairperson of District
Hukumat	District Administration
Jamoat	Sub-District, Sub-District Administration
Kolkhoz	Soviet-era collective farm
Land committee	Responsible body of District for all land related questions
Mahalla	Village / neighbourhood
Mahalla committee	Board of mahalla organization (with all citizen in the mahalla area as members)
Oblast	Region
Rais	Chairperson (Tajik term, e.g. rais mahalla)
Rayon	District
Sotih	100 m ²
Sovkhoz	Soviet-era state owned farm

TA 8547 TAJ Wholesale Metering and Transmission System Reinforcement Проект по внедрению системы учета оптовых поставок электроэнергии и улучшению системы электропередачи

Formerly Power Sector Development - PPTA Consultants (47017-001)

1. Executive Summary

Subject	Reference
<p>The focus of this report is the construction of approximately 94.5 kilometers (km) of 220 kilovolt (kV) overhead transmission line between substation Ayni 220 kV (Ayni District) and the substations Rudaki (Penjikent District).</p>	<p>§§ 1-3, 7-8</p>
<p>To fit ADB requirements efforts have been made while elaborating this LARP to avoid/minimize as much as possible negative impacts. Non-agricultural government-owned land is used wherever possible. Where the HVTL has to traverse agricultural land, the shortest feasible crossing distance has been proposed. Built-up areas are avoided and resettlement of households can, most probably, be completely avoided.</p>	<p>§§ 11-13</p>
<p>The number of affected families depends very much on the final design of the line routing.</p> <p>If an average hh in Zerafshan uses between 0.5 and 2.0 ha of land it can be assumed that on one km of line crossing agricultural land, about 10 farms would be located or altogether not less than 230 farms and most probably not more than 350.</p> <p>Such farms could be either individual, family or collective dekhkan farms. However, compensation has to be paid to all affected families on an individual basis independent of the legal status of the farms.</p>	<p>§§ 20-24</p>
<p>Altogether, 92,100 m² land will be required for construction plus foundation of towers. Out of this, 85,200 m² are required on a seasonal basis for work-places and 6,900 m² permanently (for footing of the towers). Likewise, during the stringing of the towers, an estimated strip of 23.1 km between the 71 towers on cultivated landholdings will be used as an access road (4.0 m wide access road or 4,000 m² per km) and thus impact temporarily for one cropping season a total of 92,400 m² or 92.4 hectares. For access to the construction sites it is estimated that 28,400 m² would be required on a temporary basis (71 sites with 100 m of access wide 4 m).</p>	<p>§ 20</p>
<p>For all permanent losses land users will receive an allowance for lost land use rights based on the market value of the potential produce of the affected land x 5</p>	<p>§ 20</p>

<p>years. For temporary losses, payment will be made according to the specific losses (either annual or perennial crops).</p> <p>All damages of channels, roads, bridges, etc., resulting from the construction work, will be repaid by the construction company. The full compensation of affected assets will be a condition for the initiation of civil works. The payment will be monitored by an external auditor.</p>	
<p>Negative gender impacts of the project are most unlikely. As in other comparable projects the major concern of men is that temporary land acquisition could result in interrupting cropping and harvest, and issues related to receiving actual compensation for tower placements.</p> <p>Women did not express such concerns and supported the opinion that the project would have little if any impact on them. The final engineering design and the identification of the land use right owners will show how many women-headed households would be amongst the affected persons. Vulnerable hh will receive additional compensation and, where required, support from the project. The same is true for hh for which permanent losses of land will exceed 10% of their land being currently used.</p>	§§ 82-88
<p>Care is taken to prevent grievances. This will be done through careful land acquisition design and implementation, by ensuring full AF-participation and consultation, and by establishing extensive communication and coordination between the community, the BT/PMU and the local governments.</p> <p>Complaints are sometimes unavoidable and a grievance mechanism has been adopted for the project to allow the opportunity to appeal against any disagreeable decision, practice or activity arising from the land acquisition and compensation process.</p>	§§ 97-99
<p>Funds for the implementation of the LARP are part of the overall project budget. The budget indicated in this LARP is based on a preliminary calculation of the number and type of transmission towers to be constructed and on the estimated market price rates in 2014 of major crops grown in the areas traversed by the HVTL. The cost of LARP implementation will be finalized after the elaboration of the final engineering design by the contractor. The estimated cost of the compensation payments to the AF, including contingencies, external monitoring and management costs during LARP implementation is estimated at approx. TJS 1,501,940 (approximately US\$ 300,388) including 20% contingencies and external monitoring fees.</p> <p>These cost estimates do not include possible land acquisition for the rehabilitation of Rudaki Substation in Penjikent. If additional land is required, adjusted calculations will also have to be made.</p>	§§ 110-122

Table 1-1 Summary of impacts

Impact Category	Magnitude of Impact
Affected hh permanent losses for towers	approx. 71
Affected hh temporary losses	approx. 230 - 400
Permanent loss of land	approx. 6,900 m ²
Land area of temporarily impacted land	About 206,000 m ² (= 20.6 ha)
Trees to be cut for tower foundations	A few
Trees to be cut during tower work area and ac-	Some dozen

cess road during stringing	
Vulnerable families affected	5 - 15
Budget costs	TJS 1,501,940 (US\$ 300,388)

2. INTRODUCTION

2.1 Background and Project Description

1. The government of Tajikistan made a request of the Asian Development Bank (ADB) for financial assistance to study the feasibility of the proposed Project which consists of, among other things, the introduction of a new metering system and the construction of a 220 kV Ayni – Penjikent transmission line. This LARP, which is part of the feasibility study report, is for the construction of the approximately 94.2 km long Ayni – Penjikent transmission line (TL) located in the Zerafshan valley of Tajikistan.

2. Barqi Tojik, ADB and the Consultants have agreed on a preliminary alignment of the 50 m wide right-of-way (ROW) of the TL based on technical considerations and the need to avoid traversing human settlements and private landholdings. Consequently, the preliminary TL alignment, and the second alignment as provided in May and June 2014 upon which this LARP has been based, will require minimal land acquisition (LA) as it crosses only some agricultural areas and barren hills and causes no displacement of people from their homes and sources of livelihood. Based on the requirements of the Laws of Tajikistan and of ADB's Involuntary Resettlement Policy as amended in ADB's Safeguard Policy Statement (2009) and Operations Manual (OM) Section F1/BP (2010), BT prepared this LARP in order to assess the probable adverse social impacts of the Project. This LARP has been delivered in August 2014 and will include further updates following project approval and completion of detailed engineering design.

3. Conclusions from field visits are that the line construction as described in the LARP does not require either shifting of buildings or of households to be resettled. If no new houses are built prior to the construction of the transmission line no buildings (apart perhaps from some old and no longer used constructions near Penjikent substation) have to be demolished.

4. Indeed, the line will cross larger agriculturally used areas only in six places with a total length of 23.1 km (cf. for details our maps in attachment E):

- i. mainly between AP 39 and 42 (sheet 4),
- ii. between AP 71 and 75 (sheet 6),
- iii. between AP 76 and AP 79 (sheet 7),
- iv. between AP 80 and AP 81 (sheet 8),
- v. between AP 84 and AP 88 (sheets 9 and 10),
- vi. between AP 89 and 91, and between AP 92 and 99 (sheet 11).

A detailed picture of the existing 110 kV line corridor, challenges on this route and proposed alternatives (with photographs) is provided in attachment B. This documentation also shows the substantial problems which have led to the decision to relocate the line corridor to less inhabited areas south of the old 110kV corridor which on several places goes through villages right and left of the Zerafshan river.

5. Regarding the administrative structure the transmission line Ayni – Penjikent will concern two Rayons (districts) with 10 Jamoats (sub-districts):

- I. Ayni Rayon (starting at Ayni substation) with Jamoats of Dar-Dar, and

-
- Urmetan;
- II. Penjikent Rayon (in the western sector) with Jamoats of
 Woru,
 Tshinor,
 Rudaki,
 Loikh Sherali,
 Amondara,
 Sudhzina,
 Khalifa Hassan, and
 Serazm.

6. According to the current planning, the construction of the new Ayni – Zerafshan TL requires the construction of approx. 280 transmission towers (approx. 100 angle or corner towers and 180 suspension towers). Main adverse impacts to the local people are caused by the footing of approx. 71 of these TL towers (about 9 angle points and approx. 62 suspension towers) which will be constructed on productive lands. The remaining approx. 210 TL towers (approx. 90 angle and 120 suspension towers) will be constructed on mountain areas, empty barren hills, road ROW, and wasteland and will not cause any direct social impact. However, based on the Tajik legislation, the area taken for the TL towers on public lands may be compensated, too, based on an inter-governmental nominal price to the hukumat governments. Temporary impacts on farmlands during the construction of the TL towers have also been accounted for.

2.2 DEFINITION OF TERMS

Affected persons (APs) Also: Affected families (AFs)	Mean all the people affected by the project through land acquisition, relocation, or loss of incomes and include any person, household (sometimes referred to as project affected family), firms, or public or private institutions. APs therefore include; i) persons affected directly by the safety corridor, right-of-way, tower or pole foundations or construction work area; (ii) persons whose agricultural land or other productive assets such as trees or crops are affected; (iii) persons whose businesses are affected and who might experience loss of income due to the project impact; (iv) persons who lose work/employment as a result of project impact; and (v) people who lose access to community resources/property as a result of the project.
Compensation	Means payment in cash or kind for an asset to be acquired or affected by a project at replacement cost at current market value.
Cut-off date	Means the date after which people will NOT be considered eligible for compensation i.e. they are not included in the list of APs as defined by the census. Normally, the cut-off date is the date of the detailed measurement survey.

Detailed Measurement Survey (DMS)	Means the detailed inventory of losses that is completed after detailed design and marking of project boundaries on the ground by the contractor.
Encroachers	Mean those people who move into the project area after the cut-off date and are therefore not eligible for compensation or other rehabilitation measures provided by the project.
Entitlement	Means the range of measures comprising cash or kind compensation, relocation cost, income rehabilitation assistance, transfer assistance, income substitution, and relocation which are due to /business restoration which are due to APs, depending on the type and degree nature of their losses, to restore their social and economic base.
Inventory of Losses (IOL)	Means the pre-appraisal inventory of assets as a preliminary record of affected or lost assets.
Land acquisition	Means the process whereby a person is compelled by a public agency to relinquish all or part of the land s/he owns or possesses, to the ownership and possession of that agency, for public purposes, in return for compensation at replacement costs.
Non-titled	Means those who have no recognizable rights or claims to the land that they are occupying and includes people using private or state land without permission, permit or grant i.e. those people without legal title to land and/or structures occupied or used by them. ADB's policy explicitly states that such people cannot be denied compensation.
Poor	Means those falling below the official national poverty line.
Replacement cost	Means the method of valuing assets to replace the loss at current market value, or its nearest equivalent, and is the amount of cash or kind needed to replace an asset in its existing condition, without deduction of transaction costs or for any material salvaged.
Replacement Cost Study	This refers to the process involved in determining replacement costs of affected assets based on empirical data.
Sharecropper	Means the same as tenant cultivator or tenant farmer, and is a person who cultivates land they do not own for an agreed proportion of the crop or harvest.
Significant	Means 200 people or more will experience major impacts, which are defined as; (i) being physically

impact	displaced from housing, or (ii) losing ten per cent or more of their productive assets (income generating).
Vulnerable	Means any people who might suffer disproportionately or face the risk of being marginalized from the effects of resettlement and includes: (i) female-headed households with dependents; (ii) disabled household heads; (iii) poor households (within the meaning given previously); (iv) landless; (v) elderly households with no means of support; (vi) households without security of tenure; (vii) ethnic minorities; and (viii) marginal farmers (with landholdings of five acres or less, which is not applicable in Tajikistan's irrigated sector where land sizes are only one hectare on average).

2.3 INTRODUCTION TO LARP

Substantial parts of the Tajikistan transmission grid still suffer from disconnection from the Central Asian Power System in November 2009. Prior to the disconnection, the Penjikent region of Tajikistan, with population of 261,000 individuals (39,122 customers), was supplied from two 220 kV lines from Uzbekistan (through 2x63 MVA transformers). From Penjikent (substation Rudaki) electricity was further transmitted to Ayni region with population of 75,000 (2,100 customers). Peak demands of Penjikent and Ayni are 75 MW and 20 MW, respectively. From Penjikent to Ayni electricity was transmitted over 95 km through a 110 kV line built in 1965 and with maximum rating of 67 MVA. After 2009, these two regions became isolated from the main transmission grid of Uzbekistan. A connection to the transmission system in Tajikistan did not exist at these times and has been established with the commissioning of the substation Ayni 220 kV in the year 2012.

For that reason and in consideration of the expected growth of the power demand in the Penjikent region, the present project with its reinforcement of the transmission system, in combination with the loss reduction expected from an improvement of the new metering system, is understood to be a further step in forming an overall interconnected network within Tajikistan and to make the Tajik network more reliable. The focus of this report is the construction of approximately 95 kilometers (km) of 220 kilovolt (kV) overhead transmission line between the substation Ayni 220 kV (Ayni District) and the substation Rudaki (Penjikent District) including construction of additional bays and rerouting of existing connections in both substations.

The aim of the consultant's assignment is to undertake a technical, financial, economic, environmental and social due diligence and to prepare a feasibility study to ensure ADB financing of the Project. Part of the social due diligence is a Land Acquisition and Resettlement Plan (LARP).

To fit Asian Development Bank (ADB) requirements efforts have been made while elaborating this LARP to avoid/minimize as much as possible negative impacts. Non-agricultural government-owned land is used wherever possible. Where the HVTL has to

traverse agricultural land, the shortest feasible crossing distance has been proposed. Built-up areas are avoided and resettlement of households can, most probably, be completely avoided.

This draft LARP has been elaborated during May and August 2014. During several field trips to the reference area the most suitable line corridor has been identified and, under consideration of technical and economic aspects, harmonized. In addition, the socio-economic situation of the affected population has been studied in order to adapt the assessment of losses and compensation process to the local requirements and to identify vulnerable households amongst the affected households and/or persons to allow for additional support measures.

This LARP provides a significant modification compared with earlier LARPs: As it is impossible for the regional and local stakeholders to implement the land acquisition and compensation process based on a detailed and sometimes intrinsic socio-economic analysis and policy framework paper, a separate “Implementation Manual” has been elaborated to facilitate the training of the relevant stakeholders. This manual provides all the most essential information from the LARP regarding its basic philosophy and demonstrates the procedure of land identification, valuation of losses and the implementation of the compensation including the grievance mechanism.

2.4 Route Description

7. The final routing according to the state of planning in early August 2014 is as follows: The soon to be constructed 220 kV single circuit line from Rudaki (Penjikent) to Ayni will run south-eastwards from Rudaki substation parallel to two out-of-operation 220 kV lines to Uzbekistan up to the village of Chorvodor where all three lines will turn more to the south to run through a gap between Chorvodor and Yalokdzhar to reach the southern side of the road from Penjikent to Samarkand (Uzbekistan).

From there the line continues in open areas to the south and finally to the east. The line route passes north south of Zebon, Shurcha and Sabr, keeping a distance of approximately 8.5 km to the middle of the runway of Penjikent Airport and south of Kushtappa towards the east near to Gusar going around the agricultural area up to Navabad.. From Navabad the line runs south of Dashthikazy and crosses the access road to a Tajik-Chinese Gold Mining Company.

In this section the line should run parallel to, but south of, the existing 110 kV line from Ayni to Penjikent, continuing by crossing a valley to reach the southern border of Koshana. From Koshana the line runs further on the top of the hills to come down again south of the village of Uata.

From Uata the line crosses two ridges of hills and continues on the hills bypassing Yavan and follows a track to reach the main road Ayni – Penjikent. In this region the line follows this road for approx. 10 km where it again meets the existing 110 kV line. The new 220 kV line will be kept always south of the existing 110 kV line to avoid unnecessary crossings. The line will be kept at the southern side of the river opposite to Vishkent, crossing two hills up to Khayrabat.

From Khayrabat the route will be located again on the ridge of hills until it reaches Dardar.

The route goes around the southern edges of Zerabad up the hills to avoid unstable soil condition (landslides) through a valley and again uphill to come down to the Ayni – Pantakent road, which is just under reconstruction, and reaches after approx. 500 m the Substation Ayni.

In the last section starting from Ayni Substation the 110 kV line is located in the narrow valley areas directly beside the road and the steep slope going down to the river.

8. Rationale for the routing (cf. attachment B): There is no possibility to bundle the existing 110 kV line route with the new 220 kV line. Where the 110 kV is running north of the river this line crosses many residential areas, which should be avoided by the new line. When the 110 kV line was routed on the south side of the river a parallel routing was preferred.

At Penjikent the 110 kV line runs through the city to reach the Substation Rudaki and thereby crossing many houses, a cemetery and some park and leisure areas. This was the reason that the new line first leaves Penjikent to the west to turn later to the east, towards Ayni.

2.5 Basis for the LARP

9. This LARP is based on the results of the inventory of losses (IOL) conducted in July 2014 using the 50 m wide right-of-way (ROW) agreed upon by the IE and feasibility study consultants in earlier LARPs. The LARP will be updated with regard to the sizes of permanent and temporary losses with the conduct of detailed measurement survey of all affected assets following project approval, the completion of detailed engineering design, and the demarcation of the TL alignment on the ground.

10. To ensure that impact data are updated based on the final design and that AFs are fully compensated and/or rehabilitated before their land is taken for construction purposes, two basic project implementation conditions related to this LARP are provided as follows:

- i. LARP implementation: Conditional to the update of the draft LARP based on detailed design, updated data on AF/AP and costs, to ADB and Government approval of the updated LARP, and to the mobilization of an independent monitoring agency;
- ii. Provision of no objection to the initiation of civil works in areas with impacts: Full delivery of the compensation/rehabilitation program detailed in this LARP based on proof provided by a compliance report prepared by the external monitoring agency (EMA).

2.6 Measures to Minimize Resettlement and Land Acquisition

11. To fit ADB requirements efforts are made to avoid/minimize as much as possible negative impacts. The following measures have been adopted to minimize project impacts:

- i. Non-agricultural government-owned land is used wherever possible,
- ii. If the TL has to traverse agricultural land, the shortest feasible crossing distance is sought,
- iii. Where tower sitting allows it, suitable land is sought from a land user with a large plot to minimize the number of AFs and impact magnitude on any single AF.
- iv. Built-up areas are avoided.

2.7 Objectives of the LARP

12. The key objective of this LARP is to provide an effective, practical guideline to BT PMU and the Project Management Team to implement the land acquisition and compensation processes in a fashion fitting sound planning principles and the requirements of the current prevailing legal norms of Tajikistan and in compliance with ADB guidelines. The key tenets that will guide land acquisition (LA) for the Project are:

- i. land acquisition will be avoided or at least minimized;
- ii. compensation will ensure maintenance of pre-project living standards of APs;
- iii. APs will be fully consulted/informed on compensation options;
- iv. APs socio-cultural institutions will be supported/used;
- v. LA procedures will equally apply to women and men;
- vi. lack of formal title will not prevent compensation rights under the entitlements matrix;
- vii. A will be conceived and executed as an integral part of the Project and budgets for LA will be included in Project costs;
- viii. impact to structures will be avoided at all costs; and
- ix. all LA and compensation payments will be completed and endorsed by ADB prior to the commencement of civil works in impacted areas.

13. Based on available information of the TL alignment prior to the final identification of individual plots required, this LARP has been prepared taking into account the general findings of field visits, socio-economic survey of households with possible landholdings inside the preliminary TL alignment, and consultation and meetings with stakeholders in the project area.

The LARP

- i. identifies roughly the number of households with landholdings inside the preliminary TL alignment,
- ii. estimates a rough extent of losses,
- iii. identifies applicable principles and legal framework to compensate/rehabilitate the AFs,
- iv. establishes the responsibilities and mechanisms for the implementation of the compensation/rehabilitation process;
- v. provides relative schedules and costs, including estimated compensation and allowances of each AF; and monitoring responsibilities and tasks

Figure 2-1 Project Location Map



3. SCOPE OF LAND ACQUISITION AND RESETTLEMENT

3.1 Census Survey

14. The survey covers the two Rayons of Ayni and Penjikent. Ayni has total population of 75,493 individuals living in 17,145 hh (Ayni Rayon statistics 7/2014). The population of Penjikent Rayon amount to 264,746 individuals in 52,794 hh. The town of Penjikent counts only 40,239 individuals and 7,885 hh. The following table shows the population of those Jamoats which will be affected by the new electricity line

Table 3-1 Population census of affected areas

Table 1: Population census of affected areas			
Rayon	Jamoat	Population	Households*
Ayni	Total	75,493	17,145
	Dar-Dar	7,492	1,634
	Urmetan	17,670	4,333
Penjikent	Total	264,746	52,794
	Woru	12,722	2,775
	Tshinor	7,172	1,380
	Rudaki	19,864	3,720
	Loikh Sherali	19,189	3,905
	Amondara	14,474	3,100
	Sudhzina	13,705	2,689
	Khalifa Hassan	15,532	2,997
	Serazm	28,822	5,723

* Official documentation. In reality, in Zerafshan multi-generation households dominate with two or of such “statistical” hh under one roof.

15. With the aid of maps (scale of 1:100,000 and 1:25.000) which show the planned HVTL corridor, based on “Google Earth” digital maps together with the support of officials from the concerned Hukumats and Jamoats and available cadastral maps, roughly 230 households could be identified as having landholdings within the line corridor. In the LARP these households were referred to as project affected persons or families (AP/AF). August 10th, 2014, the date of completion of the census of AFs, marked the eligibility cut-off date under this draft LARP. Additional information from the Detailed Measurement Survey will be used for identifying the final AFs.

16. Prior to the final design of the line by the construction contractor it would not be possible either (i.) to identify the final plots required for construction of towers and those pieces of land which would possibly be affected by the construction work and stringing or (ii.) to know which land owners would be affected by the selection of land and the works.

Table 3-2 Basis assumption for land acquisition

Table 2: Basis Assumptions for Land Acquisition	
Total length of HVTL:	94.2 km
Length of HVTL on agric. areas:	23.1 km
Required towers:	
angle towers:	100
suspension towers:	180
Towers on agric. areas:	71
angle towers on agric. land	9
Suspension towers on agric. land:	62

17. However, if roughly 71 towers are constructed on agricultural land (in quite a few cases even here some waste areas such as unused hills, abandoned channels and lanes, etc., will be used, thus avoiding damage to land and crops), the estimated 23.1 km of the route leading over agriculturally used areas might belong to approximately 230 or more different land use right owners as most individual dekhan farms do not exceed the average size of 0.5 to 2.0 hectares. Taking into consideration sites for construction (approx. 71 sites, each 1,200 m² on average), and some access lanes to the sites (71 towers X 4 m x 100 m = 28,400 m²), another approx. 113,600 m² (11.36ha) of land would be required which could belong easily to a similar number of approx. 140 households. For stringing on 23.1 km of HVTL using a corridor of 4 m, 92,400 m² (9.24 ha) could be affected.

18. Consequently, even this updated LARP can provide only a rough picture regarding the size of all losses and the number of affected households or individuals. All figures provided in the following paragraphs should be considered only as case studies which are typical for the socio-economic situation in the project area. However, they do not relate to the finally affected people.

3.2 General Description of Types of Impacts

19. Calculations for assessing the impacts of the transmission line towers are based on the standard suspension and angle point tower designs provided by Barqi Tojik – i.e., foundation area of 200-300 m² for each angle tower (average = 250 m²), and foundation area of 65-100 m² for each suspension tower (average = 75 m²).

Under the legal norms of Tajikistan, no agricultural or other land use activity is permitted under any erected transmission line tower. Therefore, acquisition is permanent for the foundations of the towers. Towers in mountains/unused areas will require transfer of land from the local administration to Barqi Tojik.

3.3 Impacts

20. The results of the initial calculation of the extent of land acquisition and the census of AFs are provided below.

- i. Permanent land acquisition for tower construction: The estimated 9 angle towers on cultivated land will require the permanent acquisition of 2,250 m² of farmland while the estimated 62 suspension towers will require the permanent acquisition of

4,650 m² of farmlands. In all the total permanently affected land to be acquired by the project is 6,900 m² or roughly 0.7 hectare.

Table 3-3 Area of Cropland to be Acquired Permanently

Kind of Tower	Estimated Number of Towers on Cultivated Land	Area Required per Tower (m ²)	Total Area Required (m ²)
Angle tower	9	200-300	2,250
Suspension tower	62	65-100	4,650
Total			6,900

ii. Crops affected by tower construction: Crops grown at the tower's foundation area will be compensated by default regardless of whether or not the land user is able to harvest before the impact. Before the contractor identifies the final places for the towers we can only provide data regarding average yields and their values.

Table 3-4 Crops Affected on Permanently Acquired Land

(Rough yield figures and preliminary cost estimates are also used for the assessment of temporary losses¹)

Crop/Perennial	Total area affected (m ²)	Average yield (kg) per cropping per ha	Volume of crop lost (kg)*	Unit Rate (TJS) per kg (2014<)	Number of trees, seedling, or vines*	Cost of seedlings (TJS) (2014)
Potatoes	nk	30,000	nk	1.5	-	-
Onion***	nk	21,000	nk	1.0	-	-
Lucerne***	nk	9,000	nk	1.0	-	-
Cotton	nk	9,000	nk	3.08	-	-
Sunflower	nk	2,000	nk	4.0		
Carrots	nk	27,100	nk	1.0		
Wheat	nk	4,700	nk	1.5	-	-
Watermelon	nk	25,000	nk	0.7	-	-
Apricot	nk	10,500	nk	1.5 – 2.0	nk	8
Not yet productive apricot**	nk	0	nk	-	nk	8
Grape**	nk	8,000	nk	3.5 - 5.0	nk	3
Pomegranate**	nk	3,750	nk	-	nk	8
Citrus**	nk	4,000	nk	5	nk	25
Apple	nk	?	nk	?	nk	?

* One hectare of farmland comprises an average of 300 apricot trees, 400 citrus, and 625 pomegranates, and one hectare of vineyard would have an average of 1,650 grapevines.

** When computing the compensation payments for AFs for permanent losses of usage rights of lands planted with young (not yet bearing) apricot trees and those planted with apricot seedlings, in order to avoid conflicts about assessment of losses, it is assumed that they would later have an average yield of 10,500 kg per hectare and per year. The same principle has been adopted for apple, citrus and pomegranate plantations. There is no difference regarding assorted varieties.

¹ For trees there is no difference between permanent and temporary losses as all trees have to be compensated for, for the entire period between replanting and full average productivity.

*** Compensation if witnesses confirm at least three crops during the last five years, otherwise payment is made only for lucerne.

- iii. Crops affected by temporary land occupation: The construction of each of the 9 angle towers and 62 suspension towers would require a workspace of 1,200 m², inclusive of the area for the foundation (i.e., up to 300 m² for angle tower and 100 m² for the suspension tower). Altogether, 85,200 m² will be required for construction plus foundation.

Likewise, during the stringing of the towers, an estimated strip of 23.1 km between the 71 towers on cultivated landholdings will be used as an access road (4.0 m wide access road or 4,000 m² per km) and thus impact temporarily for one cropping season a total of 92,400 m² or 9.24 hectares². These figures of farmlands that are affected by crop loss due to temporary occupation during the construction and stringing of the towers do not include some losses resulting from access of the machinery to the construction sites.

For access to the construction sites it is estimated that another 28,400 m² would be required on a temporary basis (we estimate that about 50% of the construction sites or about 35 places will require an additional access road of average estimated length of 200 m and width of 4.0 m).

AFs will be compensated by default for crop losses based on the market value of crops at the time of land acquisition. This applies to crops that have already been planted at the time of construction/stringing, or to crops that the AP will not be able to plant due to the disturbance to his plot. The actual crop standing on the affected land will be determined during DMS and compensation for the same will be calculated. Predominant sources of cash for farmers in the project area are wheat, vegetables, melons, and some perennial trees and grapes.

It takes seven years before an apricot tree, an apple tree, or a citrus tree (mainly lemons) can bear fruit, and five years before the pomegranate becomes productive. One ha land (10,000 m²) can have an average of 300 fully-grown apricot trees, 400 citrus, and 625 pomegranates³.

Citrus bear fruit for some months during a year. It takes about seven years before a young citrus becomes productive. Citrus and apple trees have an average distance of 5 m between two rows of trees. In practice, there are very few citrus trees and just a few apple plantations and we are expecting just a few cases where trees have to be cut down.

Pomegranate bear fruit once a year. It takes about five years before a young tree bears fruit. For pomegranate, which have an average distance of 4 m, the same situation as for citrus and apple is assumed. As for citrus and apple there are also very

² The access road to be used during the stringing of one tower to another is four meters wide. Damage might only affect a part of the paths. However, full payment for 4 m has been prescribed even if damage is less.

³ Numbers of trees per hectare can vary from area to area so that our figures represent the average situation in Tajikistan

few pomegranate plantations in the line corridor and we are expecting only a few cases where trees have to be cut down.

Grapevines bear fruit once a year. It takes about four years before a young grapevine bears fruit. In the project area, most vines are already between eight to ten years old and they bear fruit every year. A one-ha farm can have as much as 1,650 vines (i.e., approximately 33 rows with each row having 50 vines (or approx. 41 rows with 41 vines each). In practice, two rows with 82 to 100 vines could be damaged per 100 m of line route. The field survey has shown that, as for the other perennial crops, almost no areas with grapevines will be affected, as grape vines in the project area are mainly planted next to houses and in house gardens.

Farmers which grow fodder plants like alfalfa (lucerne) are only able to plant one crop per year due to the scarcity of irrigation water.

While potatoes and cotton (its production has almost ceased in the project area) require a full agricultural season, vegetables, beans, sunflowers and melons (water and sugar/honey melons) can be grown after cereals so that the farmers would have an average of two crops per year. As it is very unlikely that the construction of one HIVL tower would require more than 90 days it is assumed that only one crop will be damaged. Only for permanent losses, 1.5 harvests are taken into consideration.

Compensation for losses will only be paid if the construction works fall in the cropping season. If the work is carried out during winter fallow the construction company will only reconstitute the land with all its infrastructure or pay its value in cash. **For the assessment of losses it is important whether the farmer has already planted/sowed or not. If the field has been planted (or sowed) full compensation will be paid.**

- iv. Other losses: Since the TL alignment is only preliminary and has not yet been demarcated on the ground, other impacts on fixed assets of the AFs might still be identified during the DMS following approval of the project, completion of the detailed engineering design, and demarcation of the TL alignment on the ground. Field visits indicated that such losses could be
- concrete poles for vineyards (almost non-existent in the area),
 - simple or barbed wires (rare),
 - simple wood or grid fences (rare),
 - irrigation channels,
 - drainage channels,
 - field paths, etc.

The final TL alignment will ensure that no structures will be affected and that no AF has to relocate as a result of the project.

- v. Severity of impact on productive assets: According to the information obtained locally the average land size per family dekhani farm (already registered or to be registered and to be furnished with certificates) is between approx. half and two hectares. The consequence is that a farmer could indeed lose up to five percent of his land if a corner tower were placed on his registered plot. This amount is far from being a percentage which constitutes a danger for the economic viability of most

farms. However, each individual case will be checked and the modes for compensation clarified prior to construction.

It is important to keep in mind that there are still some collective dekhan farms in the Zerafshan area. Here, it is important to take into account that the farm in general cannot be endangered by the permanent loss of some few hundred square meters of land. However, individual members of the farm could lose parts of their land exceeding that 10% of the total farmland, and this is considered a potential threat to a sustainable family farm economy.

3.4 Affected Families / Affected Persons Census

21. Approximately 23.1 km of the HVTL will be constructed mainly on agricultural lands. If the average hh land size in the project area per household is about one ha (between 0.5 and 2.0 ha), an estimated number of 230 hh would be affected if it comes to permanent losses for the construction of towers. It would be absolutely unrealistic to assume that individual households could have land extending over the distance of two towers (i.e. 300 m and more). At least some towers out of the approx. 71 (9 + 62) towers in total leaning over agricultural land might be constructed on public lands next to dirt paths, or irrigation or drainage channels, thus not affecting any crops. However, most probably more than the 71 hh would require compensation as the land needed for one tower and the construction site (1,200 m²) could belong to two different or even more farmers. So we assume that permanent losses could affect up to 140 households (i.e. two hh per tower and the working site).

22. In addition, the access road to be used during the stringing of one tower to another with a width of four meters would affect some more people. Taking 23.1 km, land of a minimum of 230 hh and a maximum of up to 460 hh could be affected. There is also the probability that access to the work sites (in estimated 35 cases) could affect additional cropping areas (up to an estimated 28,400 m²) which could belong to a minimum of 35 and a maximum of 140 households.

23. In total, the number of affected households would be at least 230 and most probably not more than 350 due to the fact that there could also be some overlaps: land use right owners of permanent losses for towers, construction camps, access roads and stringing corridors. However, considering the average farm size such overlaps would be limited. If a reasonable number of collective dekhan farms remain in late 2014, it is possible that negotiations would be made with less households. However, in any case compensation payment must be made to all affected families independently of the status of the farms.

Table 3-5 Number of affected households

1	Permanent losses for towers	70*
2	Additional non-permanent losses for work camps	70
3	Non-permanent losses for access to work camps	35 - 70

4	Non-permanent losses for stringing	230 – 300*
	Total	335 - 440

* People under 1 and 4 would most probably be the same

3.5 Relocation Issues

24. According to the line routing of beginning of August no houses or shops would be affected by the project. Therefore, relocation issues in the rehabilitation of the Ayni-Penjikent TL are limited to a minimum or even to zero. The ongoing final technical survey will most probably confirm the latter case.

25. It is possible that some walls, fences, irrigation channels and perhaps a few huts could be affected. Any damage will be either eliminated by the contractor (channels, trails) or compensated by the project (fences, poles for grapevines).

4. Socio-Economic Profile

4.1 Tajikistan Poverty Analysis

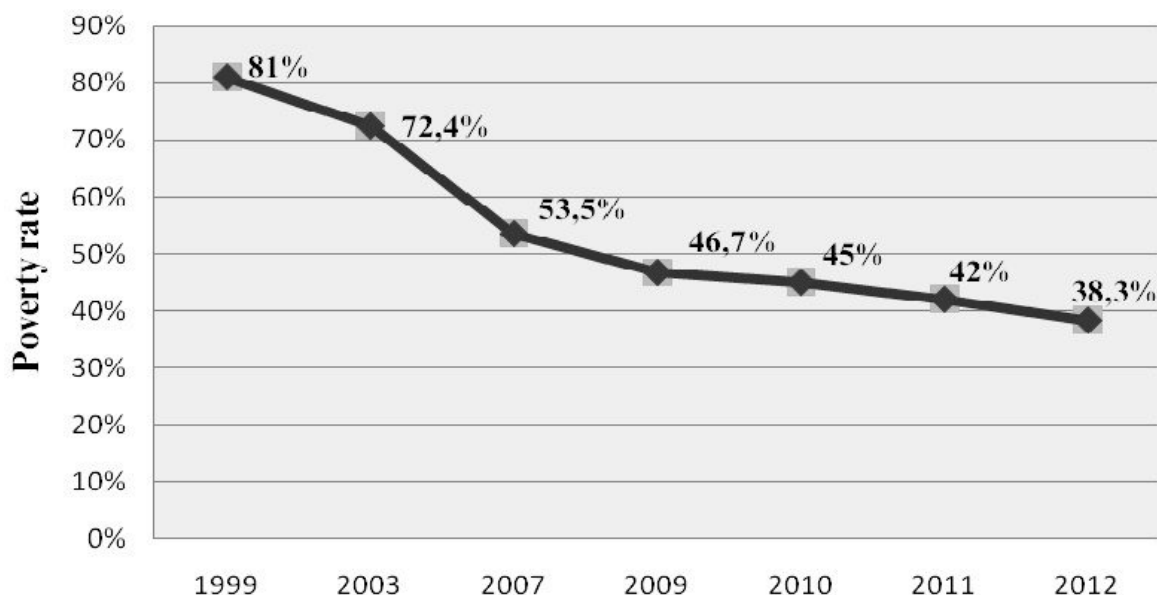
26. The Central Asian Republic of Tajikistan is by far the poorest of the former Soviet states that gained independence after the collapse of the Soviet Union in 1991. 24 years after independence, the country is still among the poorest in the world. Tajikistan is also judged to be highly vulnerable to risk, including food insecurity risks and climate change risks. By some vulnerability measures it is the most vulnerable among all 28 countries in the World Bank's Europe and Central Asia Region – ECA (World Bank 2009). The rural population, with its relatively high incidence of poverty, is particularly vulnerable.

27. With a nominal GDP of an estimated US\$ 935-950 Tajikistan ranks 189th on a list of 227 countries of the world - behind Yemen and before Mauritania and Lesotho. Considering the purchasing power parity, GDP per head would reach US\$ 2,300.

However, the adjustment index is much disputed as energy and basic food prices are almost the same as those in the industrialized countries. Because of the previously very good educational system and an excellent basic health service during Soviet times, with a Human Development Index (HDI) of 0.622, Tajikistan still ranks 125 on the UNDP List (2013).

Taking the income figures of the population, Tajikistan falls 19 ranks to place 144, which is almost the position of Kenya.

Table 4-1 The poverty reduction trend, 199-2011⁴



28. The official poverty rate for 2013 is estimated at 39.6%, following 38.3% in 2011, which is of low credibility. The proportion of extremely poor in the population, based on a national basket of goods, was quoted at 21% (2010). However, Tajik and international NGOs in 2010 still believed that the real poverty rate for that year was more than 70%, and

⁴ (Source: Living Standards Improving Strategy of Tajikistan, Dushanbe 2012)

the proportion of extremely poor significantly higher than 30%. The real figures can be found somewhere in between; a result of a growing number of remittances from migrants for work between 2010 and 2014.

29. The rural population are the most affected by poverty. However, urban pensioners, households mainly headed by women with small children, many younger families with four or more children as well as all people receiving social aid transfers from the state, are among the poor or extremely poor. Special social aid payments are extremely low, and the most relevant compensation programs, agreed upon with the international donor community in order to compensate for raised tariffs for energy, are trickling away without reaching the poor.

30. The drinking water supply in rural areas has broken down since independence and been interrupted as a result of the civil war, and at least 46% of the population are currently forced to take their water from improvised hand pumps or even streams and irrigation channels. Paradoxically, little development aid is spent in this sector. Health care—the third important sector of basic services which falls under the responsibility of the state—also suffers from neglect by the government. Neither maintenance of buildings, nor provisions of qualified staff, medical equipment or medicines are guaranteed, while salaries of doctors and health nurses are amongst the lowest in the country.

Figure 4-1 *Girls taking unclean ‘drinking’ water (taken from a stream) by a small pipe*



Figure 4-2 *a woman washing clothes in an Aryk, both Penjikent Rayon*



31. A certain amount of improvement has been achieved during recent years with regard to the electricity supply. After a catastrophic winter 2006-07, with almost no electricity available even in the large northern Tajik city of Khudjand, the commissioning of the Sangtuda I and II hydro power stations has improved the supply situation in a country with a continental climate, where most households depend on electricity for both cooking and heating. However, even in the winter of 2013-14 large rural areas of the Khatlon Province had no electricity supply during October and April. In Zerafshan, most villages between October 2013 and March 2014 were supplied only for between two and not more than eight hours per day while output voltage in the houses was very low with even less than 170 Volt.

32. As a high, mountainous country Tajikistan also suffers considerably from earthquakes, landslides (which in 1997 completely destroyed a village of 42 houses), and flood-

ing, but as in the case of replacement of social infrastructure, the Tajik government leaves funding of aid measures for affected people, and most disaster prevention activities, to the international donor community.

33. The rural population in Tajikistan is highly agrarian, with about 50% of family income deriving from agriculture. Tajikistan's agriculture basically consists of two groups of producers: small household plots – the successors of Soviet “private agriculture” – and dekhan (or “peasant”) farms – new family farming structures that began to be created under relevant legislation passed after 1992 (Lerman / Sedik 2008). The household plots manage 20% of arable land and produce 65% of gross agricultural output (GAO). Dekhan farms manage 65% of arable land and produce close to 30% of GAO. The remaining 15% of arable land is held in agricultural enterprises – the rapidly shrinking sector of corporate farms that succeeded the Soviet kolkhozes and sovkhozes and today produces less than 10% of GAO (Lerman / Wolfgramm 2012).

34. The study implemented by Lerman and Wolfgramm in 2011 shows that more than half the family income derives from agriculture (sales and consumption of own farm products). Remittances are the second most important source, contributing 23% of total income. Wages from off-farm sources contribute 12% and the remaining 10% is from pensions (5%) and non-agricultural business activities (5%). It is estimated that income from the household plot (in cash and in kind) constitutes about one-quarter of family income.

35. The study of Lerman and Wolfgramm also provides some insight into the role of women in the agricultural sector. For instance, more than one third of the interviewed farmers report that women do not make any decisions on the farm. This percentage of women without decision-making power is particularly high in individual dekhan farms (56%) and strikingly low in corporate (collective) farms (18%), where the proportion of female heads is relatively high. The main areas where women make decisions are land use planning (what and when to sow) and sale of farm products. In these areas again individual farms have very low levels of participation by women, while corporate farms allow much higher participation of women in decision making. Women make livestock decisions in 20% of all farms, but their share in farms that actually have livestock production is much higher (44% of livestock-producing farms). There seems to be a tangible link between women and livestock production in Tajikistan (Lerman / Wolfgramm 2012).

4.2 Socio-Economic Situation in Zerafshan

4.2.1 Living Conditions

36. The population of Zerafshan is mainly engaged in agriculture and cattle breeding and therefore vulnerable to unstable weather conditions, limited land resources and deteriorating infrastructure. This highland district's economy is the most isolated and depends on migrant remittances, potato cropping and animal husbandry. Although the area provides ample opportunities for pasture and cattle breeding, available statistics show that pasture lands are decreasing because of improper maintenance. Land scarcity is a serious constraint, and consequently off-farm employment opportunities are one of the main issues. The valley's economy depends primarily on cropping, migrant remittances, tobacco, small scale gold mining and trade. The high unemployment rate of the region resulted in an in-

crease of annual labor migration mostly to the Russian Federation and other former Soviet countries (UNDP 2014).

37. There is little information available about the living standard of the population in the Zerafshan valley. A study by “Welthungerhilfe” (former “German Agro Action”) of 2012 provides some interesting information for households in the upper valley, although findings cannot be applied unrestrictedly to the middle and lower valley villages: Of the 65 respondents, 21 reported that they have paid jobs (most common profession is teacher), seven respondents receive money from the government, either as pensioners (6 respondents) or because they are sick and unable to work (1 respondent). Next to paid employment, remittances from Russia are the most important source of income: 22 of 65 households receive remittances from a relative working in Russia.

38. All 65 households are engaged in agriculture, either for income or for their own consumption. Fruits and nuts significantly contribute to the respondents’ incomes (in the middle and lower valley these would be replaced by cereals, vegetables, and cotton) with apricots as a main source of income for 32.3% of the respondents and apples as the main source of income 21.5% of the respondents. This means that only two agricultural products are the main source of income for more than half of all respondents. Most probably this would not be very different in the villages between Ayni and Penjikent.

39. Only one respondent (out of 65) answered that his or her household is “modern”; all other 64 respondents said that their household is “traditional”. Most households regularly eat meat or fish: 12 respondents said they eat meat/fish 21-30 times per month, 24 respondents have meat/fish 11-20 times per month and 16 respondents eat meat 1-10 times per week. However, 14 answered that they never eat meat.

Almost all households, 63 out of 65 reported that they have livestock. 60 respondents own cattle. 41 households own at least one small animal. 35 households also have at least one donkey (which is not so common in lower Zerafshan areas where access to the fields is easier). Only two respondents said that they own no livestock at all.

When asked what the households spent their surplus on, most respondents (69.2%) named food and clothes, 55.4% named household items and 53.8% their children (multiple answers were possible). Only 24.6% invest their surplus in agricultural goods, two respondents also mentioned savings. One respondent also spent money on electronics/vehicles.

Figure 4-3 7 Intensive small scale agriculture in the lower Zerafshan valley near Penjikent

Figure 4-4 irrigation in extremely poor condition in Serazm.



4.2.2 Land and agriculture data

40. Land is very scarce in the Zerafshan valley, especially in its middle and upper part near Ayni. This is true for both construction land and agricultural areas. While farm sizes in Tajikistan are generally small, with no more than two or even one hectares, in the villages west of Ayni many owners do not have more than 0.2 ha for their household or one ha for an extended family of 10 or more persons. Table 2 provides an overview of the land resources used for selected crops in the eight Jamoats in the Penjikent Rayon along the line route (from east to west) between Ayni and Penjikent. While for high value products such as beans, vegetables and especially potatoes all land allocated was indeed irrigated, for wheat in Penjikent altogether only 6,851 ha instead of 8,638 ha projected could be irrigated. Lack of water also resulted in the effect that instead of a potential (and until recently used) area of 2,173 ha for fodder crops, only about 520 ha were actually used.

Table 4-2 Selected crops sown in 2014 in the eight Jamoats along the line route in Penjikent Rayon, Source: Department of Agriculture, Penjikent

Jamoat	Area with crops in ha (spring and summer crops)							
	Wheat	Beans	Maize	Potat.	Clover	Veget.	Sunfl.	Melons
Woru	320	154	25	121	39 (91)	16	54	1
Rudaki	621	303	15	175	35 (336)	27	47	1
Loik Sherali	430	43	8	128	20 (78)	54	20	10
Amondara	782	536	40	123	25 (71)	19.5	52	0
Sudhzina	566	419	95	255	35 (63)	74	97	3
Khalifa Hassan	665	972.5	42	220	52.5 (210)	110	62	5
Tshinor	129	149	13	33	10 (31)	24	97	0.5
Serazm	1094	989	52	204.4	65 (222)	100	290	10

41. The key problem of the irrigation sector in the Zerafshan valley, with its mighty river, is not the availability of water in general. Neither is it, contrary to many complaints from farmers, the power and the de facto capacity of pumps and weirs. The actual reason for lack of water for crops is the poor (and often non-existent) maintenance of all catego-

ries of channels resulting in the fact that up to 75% of the water from the main channel does not reach the fields.

4.2.3 Cultural Heritage Review

42. With Serazm and Old Penjikent two of the most famous archeological sites of all Central Asia can be found in the project area. Serazm was the first urban center (probably from the beginning of the III. millennium BC) in Central Asia. Old Penjikent was a small but flourishing town of the Sogdians in pre-Islamic times and became famous due to its well-preserved wall paintings of the 5th to 7th century AD. It was known as Panchekanth or “five villages”/“five towns”. Both sites are UNESCO classified world heritage sites. The line route south of Penjikent will keep a distance of at least 2.85 km from Old Penjikent and will not at all affect the landscape of the historical site. The same is valid for Serazm which is situated a bit more than eight km from the line. There are also no other known historical or cultural sites, graveyards, etc. on the scheduled line route.

Figure 4-5 Remains of Old Penjikent (city of Penjikent);



Figure 4-6 ruins of Serazm (Serazm Jamoat)



4.3 Results from Household Survey

43. In July 2014, for more than 100 households in the concerned villages between Ayni and Penjikent additional interviews were made in order to provide a more specific socio-economic picture of this section of the Zerafshan valley. The results of this survey provide some insight into the livelihood of the households from villages which the line route will cross or “stripe”. However, the actually affected people, i.e. the owners of the specific plots of land which, in the end, would be taken for the construction of the towers, are not yet known and thus cannot be part of the survey sample.

4.3.1 Civil Status of Household Heads

44. 90 of the 106 hh heads interviewed were males (85%) and 16 (15%) females. With the exception of two unmarried men and six divorced women and one divorced man, most

of all heads of hh live together with their husbands or wives. Three women as hh heads are widowed. Seven female household heads are married but their respective husbands are working abroad.

Table 4-3 Marital Status of hh Heads

Male hh Head				Female hh Head			
Married	Unmarried	Widower	Divorced	Married	Widow	Divorced	Total hh Head
90	2	3	1	7	3	6	106

4.3.2 Physical Condition of Household Heads

45. The average age of all heads of hh (male and female) is 50 years. Three of the male household heads are handicapped, three other male hh are 63 years or older, the mandatory retirement age for men. None of the female household heads has a physical disability and two out of 16 female heads of hh are also older than 58 years which is the retirement age for women.

Table 4-4 Age and Physical Condition of hh Heads

Male hh Head				Female hh Head			
Normal		Handicapped		Normal		Handicapped	
<63 yrs	63 yrs+	<63 yrs	63 yrs+	<58 yrs	58 yrs+	<58 yrs	58 yrs+
83	3	2	2	14	2	0	0

4.3.3 Ethnic and Religious Affiliation of the Household Heads

46. 31 of the male household heads belong to the Uzbek minority group, while the rest are Tajiks. Three female household heads are Uzbeks, 12 are Tajiks. One woman and one man belong to another ethnic group.

All hh heads are Muslims. Although there are 36 households belonging to the Uzbek ethnic group and to other ethnic minorities none of the households can be classified as a member of an Indigenous People group under the ADB Policy on Indigenous People. All Tajik or Uzbek AFs are equally integrated into the national economy and mainstream multi-ethnic culture of the country.

Table 4-5 Ethnic Affiliation of hh Heads by Gender

Male hh Head			Female hh Head		
Tajik	Uzbek	Other	Tajik	Uzbek	Other
58	31	1	12	3	1

4.3.4 Educational Attainment of the Household Heads

47. The educational level of the reference hh is very high with only three persons without any school attendance and four individuals with only primary level education. In contrast, 33 hh heads have a full secondary (31%) and even 66 (62.3%) university level diploma. Out of the women hh heads five have secondary level and eight a university diploma. From additional interviews we collected the information that quite a few individuals have agricultural engineering degrees.

Table 4-6 Educational Attainment of hh Head

Male hh Head				Female hh Head			
Second.	University	Primary	None	Second.	University	Primary	None
28	58	2	3	5	8	2	0

4.3.5 Household Size

48. The average hh has 6.3 members, the smallest two hh have only two, and the largest hh has 19 members. The average number of children in all hh is 1.8. Those hh with children have an average no. of 2.5 children.

In the Welthungerhilfe-Survey for Kuhistoni Mastshoh and Ayni districts, the average household consists of seven family members. On average each family has three children. The survey also showed that 6% of the interviewed households were composed of women without husbands. While in most cases women said that they were widows, others are alone as a consequence of male labor migration to Russia (2012).

347 persons are living in the 43 reference hhs with an average household size of approximately 8.1 persons. 56.2% of the household members are male. This does not correspond with the average figures for the concerned Rayons where in general, as a consequence of male emigration for work, the percentage of the female population outnumbers the respective percentage of the male population.

Table 4-7 Number of Persons Living in the Households

Table 11:					
Male	Female	Out of these children <16	Total	No. of hh	Average hh Size
297	312*	192*	654*	106	6.3

4.3.6 Main Sources of Livelihood of the Households

49. With the exception of 15 households all sample hh own land and earn some of their livelihood from farming (crops, fruits, and animals). However, only 31 consider farming as their first and most important source of income, while 31 other hh heads state that the major source of income for their family comes from work as a government employee. Private employment is of a lower relevance with only 11 hh belonging to this group. With 37 hh, families with a regular income from remittances of (mainly male) hh members working abroad in Russia are almost as numerous as farming families (in an agriculturally oriented environment). 14 hh depend on social aid transfers of unknown origin (either mainly for handicapped people from the state or from their family network), and the families of three hh heads depend mainly on pensions. This number is interesting as there are 13 hh heads who are pensioners. However, pensions of between less than TJS 200 and, rarely, more than TJS 400 per month come, at the most, as a secondary or even tertiary source of income for the concerned households.

Table 4-8 Primary Livelihood Activities of hh Heads*

Farming	Work in gov-ernment	Private em-ployment	Self-employed	Transfer from migrants	Pensions
38	31	11	25	37	3

4.3.7 Productive Land of the Households and Land Issues

50. Land in Zerafshan is very scarce. Mainly in the upper and middle valley areas the average size of private individual farms is limited more or less to a couple of Sotih. A “house garden” consists of between 2 and not more than 8 Sotih (an old Russian measure for land), or 200 to 800 square meters, which was the private property of the household even during Soviet times. In our sample only 15 hh do not have such lands. The virtual farm land, i.e. the areas for wheat and cash crops, is also very limited, seldom exceeding 0.5 hectare per household. In the lower Zerafshan valley, near to Penjikent, farm sizes increase, but even here most farms do not exceed two hectares. In our sample the largest farm unit used by a family is 2.5 ha, one farm has 2.3 and two more have 2.0 ha of land.

51. Another problem arises: The size of the agricultural land which the reference households are managing cannot currently be determined in a proper way. This is why many respondents could not provide serious figures. There are a couple of challenges:

- First, the former collective (state-owned) farms such as Kolkhozes and Sovkhozes have almost all been dissolved. However, the land of many farms was not distributed to individual farmers but given to a group of former farm workers in order to establish a so called “collective private farm” under the management of a former Sovkhoz manager. This type of new farm has not at all proved practical and should, by order of the president, be transferred into privately managed farms.

- Secondly, these newly established private farms are more or less “family farms” in which a family or an extended family merges the shares of all family members into one farming

unit. If asked about the size of land a hh owns, the answer might include either all the land of the legal entity “family farm”, or the interviewed person may only refer to the land he and his wife are using but not to the land of his brothers and in-laws.

- Thirdly, due to the poor irrigation facilities and their poor maintenance, the land a family owns and the land the hh can actually use can differ considerably. Everywhere in the Jamoats visited land may lose irrigation water overnight as a consequence of broken pumps, lack of fuel, unpaid electricity bills, etc. In spring, a family may prepare one hectare of land but soon may get the information that they can only irrigate half of this land. This situation also affects the agricultural statistics of the Rayons and Jamoats. Real figures can only be provided for land when people harvest their crops, so that data on average yields are much better than data regarding the land used.

52. These days the land of the last collective private farms is distributed amongst the former share holders. This raises another issue: the question of whom to address with regard to all questions related to land acquisition and compensation. In the case that a collective farm still exists when it comes to the valuation of losses and the agreement upon compensation payments, it must be ensured that only the affected person who will lose land or a part of his/her harvest will get the compensation payment, and not the manager of the farm to whom the affected pieces of land still formally belong.

53. Accordingly, Barqi Tojik’s PMU will deal with three different types of farms and counterparts in negotiations:

- (i.) the individual farmer who owns land use rights ⁵,
- (ii.) a person representing a family (extended family) with perhaps between five and up to 25, and more individual land right shares, and
- (iii.) the manager of a still collective farm who will be an important partner for negotiating the compensation process. However, this person, in contrast to the two named farm representatives, will not receive the compensation payment himself.

The money under case (iii.) has to go to the person who used the land affected by the project as part of the collectively managed farm. Only in the few cases where the share holders of a collective farm work together (i.e. where they did not get their individual piece of land on a long-term basis) should the share holders be free to decide whether the compensation payment should be distributed in equal shares amongst all members, or if the money should be paid into the account of the farm (for instance for a common investment).

⁵ It has to be pointed out that all land in Tajikistan belongs to the state and currently only land use rights have been allocated to the people. As a consequence, land can be leased to third parties but not sold and it can also not be used as collateral for credit.

Figure 4-7 rural house with garden near old 110 kV line



Figure 4-8 very simple farmstead made by sun dried bricks made of clay



4.3.8 Monthly Income of the Households

54. The average monthly income of our reference households is TJS 734 per month. Comparable surveys show that these figures do not include all types of income. Most probably, some of the respondents did not refer to their annual income from remittances transferred by their hh members working abroad. Income figures from comparable surveys, which do not make a projection of both income and expenditures data, show values which are most probably considerably underestimated. Consequently, figures from our table should also be treated with some caution. Nevertheless, the relation between low, middle, and high incomes seems realistic.

It is interesting that there is a reasonable group of “middle income” households (more than TJS 1,000 per month) also including one of the women headed hh. What is rare in rural areas is the fact that three households (male headed) can be classified as high income hh. If comparing this small sample with older surveys in Khatlon Oblast it is also obvious that the low middle income group is much larger in Zerafshan than in Khatlon.

Table 4-9 Monthly Income of the Households (in TJS)

Male hh Head						Female hh Head					
<200	201-400	401-600	601-1000	1001-2000	>2001	1<200	201-400	401-600	601-1000	1001-2000	>2001
2	13	30	25	15	3	0	2	10	1	1	0

4.3.9 Health and Sanitation

55. The public drinking water supply in the project area is poor, in the lower valley area of the Zerafshan even extremely poor. There are only a few public networks in operation. Only 20 hh out of 106 have a water pipe in their house or courtyard. Another 57 take water from public standpipes. As shown in our pictures (see above) such standpipes can be

simple flexible tubes with a low discharge. In one case we observed that three minutes were required to fill only one 5 l plastic bin.

Seven hh use a hand pump and 11 families depend on water from Aryks and another 11 from water streams (main irrigation channels included). The two latter categories do not provide any water which could be described as “drinkable”. However, also water from piped systems is far from being safe, as in most cases the water is just diverted from a stream. From the outlet it flows uncleaned through pipes in a gravity system.

Table 4-10 Main Source of for Drinking and Washing

Pipe in house/yard	Public stand-pipe	Hand pump	Aryk	Stream	Water sellers
20	57	7	11	11	0

56. All households surveyed except four have a kind of “toilet” in their homes or gardens. However, most (88 hh or 83.4%) use open non-ventilated or improved pit latrines. The four hh without a toilet facility “go somewhere” to the fields or to a small shrubbery. On the other hand the number of 13 bathrooms in houses (with more or less flowing water) is surprisingly high for rural areas in Tajikistan and an indicator for a certain (modest) prosperity in the project areas.

Table 4-11 Toilet Facilities Used by the Households

Water Sealed	Open Pit	Nothing/Field
13	88	4

57. Again, with 14 hh in our sample the number of families with bathrooms in their houses is relatively high. In addition, 59 hh own at least “banyas”, simple bath rooms with a heating facility for water in the traditional “Russian style”. This figure is also much higher than results from other surveys. Nevertheless, 32 families have no bath or shower facilities at all and use only buckets for washing. In this context it is also worth mentioning that quite a few people wash their clothes and even dishes near Aryks and with the water of these irrigation channels (see picture 10).

Has own bathroom	Traditional “banya”	None
14	59	32

58. During focus group discussions only in one case did people mention environmental problems. In contrast, there are more than just challenges regarding solid waste disposal. There are almost no existing disposal systems. It is true that 15 hh refer to an organized garbage collection system organized by the local government (Jamoat). However, this garbage collected by lorries is also dumped in most cases in a hole, a hollow or a side valley (where after heavy rains it is often washed into the main streams and finally the Zerafshan river).

57 households bury their garbage themselves (mainly just behind their house) or, together with some neighbors, use a hole in their living area. Here, plastic and paper is often burned. Only organic materials such as leftover food are often composted and used for the house gardens.

The remarkable number of 33 hh representatives admits (without seeing major problems) that they just throw their garbage into the nearest channel, an erosion gully, or directly into the river (see picture 11).

Table 4-12 Garbage Disposal Used by the Households

Collected by local government	Burned / buried by hh	Throw garbage anywhere
15	57	33

Figure 4-9 shows the awful drinking water supply situation in many villages of Zerafshan: a small pipe provides untreated water from an Aryk

Figure 4-10 shows a garbage dump to the river



Pict. 10 (left); pict. 11 (right)

4.3.10 Sources of Energy for Lighting and Cooking, Appraisal of Electricity Supply

59. All households use electricity for their lighting needs and for entertainment electronics. With regard to energy for cooking, 93 households use electricity, too. Most hh also refer to alternative sources of energy for preparing their meals, especially in winter, when there is no electricity or the voltage is low. For instance 78 hh use firewood and 71 hh bottled gas. Only three hh depend solely on firewood, eight respondents mentioned that they use only gas. Again, the number of hh using gas is very high compared with results from other surveys and confirms the prosperity of a large number of hh in the sample.

During winter in villages of Zerafshan electricity supply is extremely poor or completely absent. Blackouts are frequent and the electricity voltage is low (resulting in “red light in winter” with a voltage down to 170 or even less instead of 220). Hence, it is not astonishing that 75 of 106 respondents rated the quality of electricity supply during winter times as “poor” while 23 referred to a “fair” supply and only two to a “good” one. During summer the situation is reversed: 79 respondents spoke of a “good” supply while 19 said it was “fair” and five that it was “poor”. Again, the reason for the negative assessment of electricity supply during summer is the low voltage and fluctuations in voltage with the consequence that electrical appliances get often damaged.

Table 4-13 Main Source of Power/Fuel for Cooking

Firewood	Bottled gas	Electricity
78*	71*	47*

* People could refer to several sources of energy

4.3.11 Household Appliances

60. The survey shows a coverage of 88% of color TV sets amongst the reference households. In most cases the families also have satellite receivers with antennas. We assume that at least some of the remaining 16 hh have a black and white TV set. Consequently, a TV set cannot be used as an indicator for poverty, even in rural areas of Tajikistan. 99 hh or 93% of the sample own a cell phone. This high percentage is a development of the last two or three years when even poorer rural households used to purchase (simple) phones.

60 hh own a DVD player and/or a stereo system, 70 a refrigerator and 28 a microwave. The number of computers is steadily increasing in Tajikistan although only 20 hh refer to a computer or laptop. 12 hh own an air conditioner but most of these devices are old from Soviet times and of little efficiency. A washing machine is owned by 31 hh and an electrical stove/heater by 26 hh. The number of washing machines is limited by the poor water supply as quite a few respondents mentioned that they would purchase one if the water supply were available.

Table 4-14 Household Appliances

TV	Phone	DVD/CD	Ref	Elect. Stove	Micro-wave	Comp	AC	Wash. Mach.	Elect. heater
93	99	60	70	82	28	20	12	31	26

4.3.12 Transportation, Housing

61. The era of motorbikes (a Soviet tradition) has passed in Zerafshan. Of 106 hh only three currently own such a bike. However, 31 hh (29%) of all hh own at least an old car but amongst the car owners there are also several people with an Opel or even an (old) four wheel drive car. Owning a car does not automatically mean that it is (often) used. We visited some houses where the car had visibly not been used during the last weeks. Only one hh owns a tractor or a truck.

Table 4-15 Ownership of Means of Transport

Motorbike	Car	Tractor/truck
3	31	1

An indicator for the living situation is the type of house which people inhabit. The majority of all hh (69 or 65%) still live in a traditional house built from clay bricks with either a roof made of the same material or more recently made of corrugated iron sheets. One third of the respondents live in a simple but modern house, which means that the house has been made of concrete bricks with a roof of corrugated iron sheets. Four respondents stated that their house was somehow luxurious.

Table 4-16 Housing Conditions

Simple earth brick house	Simple modern house	Better modern house
69	35	4

4.3.13 Conclusion of Household Survey

62. The data from the survey show that the answers to the questionnaire provide a somehow contradictory picture of the socio-economic situation of the population in the Zerafshan area. Household appliances, the number of cars, the condition of houses and even the income figures of quite a few households do not show a picture of a very poor community. On the other hand, more than half of all households are living on less than USD 120 per month. However, only 18 respondents think that they are very poor or poor (17%). This is much lower than figures provided by the official statistics for Tajikistan and especially rural areas of the country.

It is not at all strange that a large majority of all respondents (72 or 68%) classify their household as being part of the lower middle income group but there are also eight hh which rate their socio-economic situation as “upper middle income” and even five respondents who stated that they belong to the wealthier income group of households. But again: we have to remember that this picture does not necessarily describe the socio-economic conditions of those households which might be negatively affected by the project.

Table 4-17 Overall Socio-economic Condition of Households

Very Poor	Poor	Low Middle	Upper Middle	High
4	14	72	8	5
<p>Explanation of categories (approximated to World Bank criteria): <u>Very poor</u>, there is sometimes even not enough food available <u>Poor</u>, food available but only few clothing problems <u>Middle (low)</u>, enough money for food, clothing, health care, school, to buy TV <u>Middle (upper)</u>, enough money even for some luxury objects like a small car, laptop, tablet PC, computer, air conditioner <u>Good</u>, can run a middle/upper class car or own modern house, owns perhaps a tractor, etc.</p>				

5. LEGAL FRAMEWORK AND COMPENSATION POLICY

5.1 Policy and Legal Framework for Land Acquisition and Resettlement

63. The policy framework for the Project is based on the ADB Involuntary Resettlement Policy (1995) as amended in the ADB's Safeguards Policy Update (2009) and Operations Manual (OM) Section F1/BP (2010), the Constitution of the Republic of Tajikistan, and the Land Code of the Republic of Tajikistan. Where differences exist between local law and ADB practices, the policy difference will be resolved in the favor of the latter.

5.2 Tajikistan Constitution, Law and Regulation on Land Acquisition, Resettlement, and Compensation for Expropriation

64. The Constitution of the Republic of Tajikistan is the main legal document which guarantees citizens' rights. Article 13 states "Land, bowels of the earth, water, airspace, animal and vegetable kingdoms, and other natural resources are owned by the state, and the state guarantees their effective use in the interests of the people". Further, Article 12 states "The economy of Tajikistan is based on various forms of ownership. The state will guarantee freedom of economic activity, entrepreneurship, equality of rights, and the protection of all forms of ownership, including private ownership". The legal basis for state acquisition of private property for public works is outlined in Article 32 which states "[...]The property of an individual is taken away only on the basis of the law, with the consent of the owner and to meet the requirements of the state and society, and with the state paying full compensation".

65. Compensation for Land withdrawal and other impacts as a consequence of public interest projects are also regulated by other legislative acts governing land withdrawal, land allotment and impact compensation to citizens such as the Land Code RT (LC), the Civil Code RT (CC) and various normative legal acts. Based on these laws the withdrawal/allotment of lands and resettlement is based on the following applicable principles: Land users have a right to be reimbursed for losses due to withdrawal of right of land use for state and public needs (LC Articles 41 and 43).

At termination of the rights of property, property will be assessed on the basis of its market value (CC Article 265).

Land user or user of other registered rights associated with land should be notified in writing about land withdrawal by local land management authority not later than one year before the coming land withdrawal procedure (LC Article 40).

If according to International agreements, which are recognized by the Republic of Tajikistan, other rules are established than those specified in the Land Code of the Republic of Tajikistan, the rules of international agreements will be accepted (LC Article 105).

66. The LC of 1997 is the core legal document with regards to land acquisition. It has been updated a few times since then, most recently in 2004. Article 2 of the LC states that there is no "private ownership of Land", that "Land is an exclusive ownership of the

State”, but the state guarantees its effective use in the interests of its citizens. In Articles 10-14, the LC outlines that land titles are provided to the citizens on a long-term and short-term basis and that land use rights can be inherited.

67. Article 24 of the LC describes the allocation of land for non-agricultural purposes and provides that when choosing a suitable location for such purposes mainly land not suitable for agriculture should be favored. The same principle is stressed by Article 29 of the LC which discourages the use of high-yielding agricultural lands for non-agricultural use. However, Article 29 also allows for the allocation and sequestering of agricultural land for “other very important State objects”.

68. Article 31 of the LC provides that land acquisition for non-agricultural public purposes is subject to the awarding of compensation. “Terms of allocating land plots to new land users for non-agricultural needs must envisage compensation of all losses related to confiscation of land plots from former land users, as well as compensation of losses in agricultural production”. Article 19 of the LC states the rights of land users, including clauses allowing a land use rights holder the “waiving voluntarily land plot” or “indemnifying for [compensating for] losses” as mentioned in Article 41 of the LC.

This article sets out the basis for compensation: “Full reimbursement shall be provided for losses, including loss of profit, caused by:

sequestering of land for non-agricultural purposes,

restriction of land users' rights,

deterioration of land quality as the result of activities of other land users”.

In the case of this Project this could be interpreted as compensation for permanent loss of land use and crops, and complying with b) and c) above, the need to compensate for temporary use of land and disturbance of cropping patterns for construction purposes.

69. Calculation of the compensation due for land acquisition is taken into account in Articles 43 and 44, which state that “actual prices of equipment and materials as well as prices of assets and other works existing either at the moment of confiscation of a land plot and drafting of the report shall be applied. When calculating losses of agricultural production and forestry, the standard costs for bringing into cultivation virgin lands and improving them so that they reach the maximum level of production obtained on the sequestered lands shall be applied. Disputes about the amount of compensation for damages caused and losses of agricultural production and forestry shall be settled in court”.

70. The guarantee of land users’ rights is further emphasized in Article 48 which states that: “Confiscation of land plots from natural persons for state and public needs can be made after:

having assigned another equivalent land plot,

having constructed on a new place of housing, industrial and other structures equivalent in their purpose instead of plots sequestered, in the established order, by enterprises, institutions and organizations for which the land plot was assigned,

having paid full compensation for all other losses, including profit loss” (according to Articles 41 and 42 of this Code).

71. Compensation for land, which belongs to the State and is allocated and essentially leased to users by the Hukumat, is divided on a 40 to 60 percent basis between the Hukumat, which in future will no longer receive any income from taxes and leases for that portion of the land, and the land user, who suffers a reduction in his/her income-generating as-

set. The compensation received by the Hukumat should be used for the management, construction and maintenance of local infrastructure. The land user also gets compensation for lost crops based on the average of the four years previous to the adverse impact.

5.3 ADB's Policy on Involuntary Resettlement

72. With respect to land acquisition and resettlement, ADB policy requires consideration of the following principles:

Involuntary resettlement is to be avoided or, if unavoidable, minimized through all viable options;
The AF should be compensated and assisted, so that their economic and social future is generally as favourable as it would have been in the absence of the Project;
The AF should be fully informed/consulted in resettlement and compensation options;
Local socio/cultural institutions should be supported/used to the greatest extent possible;
Lack of formal legal land title should not be a bar to compensation or rehabilitation;
Compensation shall be provided to the AF at full replacement cost of the affected assets.
Compensation rates for houses and other structures, and non-physical assets will be calculated at prevailing market rates for replacements without provision for deduction of depreciation;

Particular attention should be paid to AFs headed by women and other vulnerable groups, and appropriate assistance provided to help them improve their status;
Land/other compensation/rehabilitation provisions will equally apply to women and men;
Land acquisition and resettlement will be conceived and executed as an integral part of the project and related budgets will be included in project costs;
Compensation will be fully provided prior to ground levelling and demolition.

73. As per ADB's Safeguards Policy Statement, important elements of the resettlement policy are: (i) avoid and minimize land acquisition and resettlement impacts, (ii) compensate for lost assets at replacement cost; livelihood, and income restoration, (iii) assistance for relocation, including, if required, provision of relocation sites with appropriate facilities and services, and (iv) assistance for rehabilitation to achieve at least the same level of well-being with the project as without it⁶.

This will be achieved through the following measures: (i) the TL alignment will avoid human settlements, (ii) compensation for crop losses as a result of permanent loss of land use, and (iii) compensation for access and damage to crops and cropping season as a result of construction impacts.

⁶ Rehabilitation measures include restoration of access to public facilities, infrastructure, and services; and to cultural property and common property resources. Measures to mitigate loss of access to cultural sites, public services, water resources, grazing, or forest resources include establishment of access to equivalent and culturally acceptable resources and income-earning opportunities. Such measures must be determined in consultation with affected communities, whose rights might not be formally recognized in national legislation. Where people are seriously affected by the loss of assets, incomes, and employment, compensation solely for lost assets may not be adequate to restore their economic and social base. Such people will be entitled to rehabilitation assistance measures for restoring incomes and living standards.

5.4 Policy Differences and Reconciliation

74. A comparison of the above Tajikistan Land Code and ADB policies are summarized in the table below. Any difference between the Land Code of Tajikistan and ADB policy will be resolved in favor of the latter:

Table 5-1 Comparison of ADB Policy with Tajikistan Land Code

ADB Policy Requirements	Tajikistan Land Code Provisions	Reconciliation Provisions
The APs are to be informed and consulted on resettlement and compensation options.	The LC does not provide any standards for consultation.	In this project APs are consulted on options. The LARP will be disclosed to them in an adequate way.
The AF should be compensated and assisted, so that their economic and social future would be generally as favourable as it would have been in the absence of the Project.	The LC provides for compensation for losses of land rights, buildings, crops, trees and other assets. However, it is not clear if income losses (i.e. business losses) are to be compensated, too.	This project will provide compensation for losses of land use rights and crop losses. The other losses listed in column two do not apply to the project.
Compensation is to be provided at replacement rates.	The LC mandates compensation at replacement rates through the provision of land for land. However, this is not to be the case if land is paid for in cash, as the replacement value (reproduction cost) of a plot is shared on a 40 to 60% proportion between the local government and the land user respectively.	When land for land compensation is not technically feasible (as for this project) local administrations (or the project implementing agency respectively) may pay cash compensation. This practice will be adopted for this project. 100% compensation will be provided to the AFs based on production lost for five years.
Lack of formal legal title to the land by some affected groups should not be a bar to compensation or rehabilitation.	Compensation is provided only to registered settlers/to owners of formal legal land use titles.	This issue is not relevant in the case of this project as there are no squatters affected.
Besides compensation at replacement cost for land, houses, crops, trees and businesses ADB policy provides for rehabilitation allowances for severe impacts, vulnerable APs and relocation.	The law provides for compensation for all losses but does not specify how business compensation is to be carried out. The law does not provide for the ADB required allowances either.	In the project there will be no severely affected or relocated AP or business losses. The project will provide allowances for vulnerable people in the case that such people are identified by the final line design (i.e. by the contractor).

5.5 Principles and Policies for the Project

75. Given the assessment above, some provisions in the Land Code have been waived to make it compatible with the resettlement principles of ADB's Policy on Involuntary Resettlement. For the reference of BT in preparing and subsequently updating and implementing this LARP the following project principles and policies are applicable:

-
- a. The LARP is only applicable for losses of individuals or groups of individuals. Losses of governmental land will be handled directly between BT/PMU and the concerned Districts;
 - b. Barqi Tojik will guarantee the implementation of the compensation and rehabilitation framework detailed in the next section of this chapter;
 - c. Adverse impacts on AP/AF must be avoided or minimized as much as possible;
 - d. If impacts are unavoidable, the AP's/AF's lost assets, livelihood or other resources will be fully compensated and/or people will be assisted so that they improve or are at least restored to their former economic and social conditions;
 - e. Compensation will be provided at full replacement cost free of transfer costs;
 - f. In case of need (so far not applicable) the Hukumat Land Committee will facilitate changing of land-use certifications of AFs without charging fees;
 - g. Information on the preparation/implementation of the LARP will be disclosed to the APs and people's participation will be ensured in LARP planning and implementation stages;
 - h. The updated LARP and its implementation must be approved by ADB and BT;
 - i. Before taking possession of sequestered lands and the commencement of construction, full compensation will be paid in accordance with the provision described in the updated LARP. No land will be taken until the legitimate user is compensated or rehabilitated as provided in this LARP;
 - j. Every effort will be made to minimize the time lag between notice of acquisition and payment of compensation;
 - k. Provisions will be kept in the budget for those who will not be present or available at the time of the final engineering design. All changes of land titles until the last day of the submittal of the final engineering design will be respected;
 - l. Although so far no cases could be identified, lack of formal legal land title is not a bar to compensation or rehabilitation;
 - m. Particular attention shall be made in all activities related to resettlement planning, implementation, and monitoring to ensure the involvement of women and other vulnerable groups;
 - n. Two representatives of project-affected families, one of whom should be representative of village women or vulnerable groups, will be invited to join the Commission for Valuation of Losses and Compensation;
 - o. In case of need, a local consultative group (e.g. with Mahalla leaders and Jamoat representatives) will be established to support the AFs and resolve any conflicts that may arise during the compensation process. The groups will have access to and disseminate information about a set of procedures for lodging complaints and grievance resolution;
 - p. If possible, members from the AFs will be given priority where local (unqualified or low-qualified) labor is required for the construction works. Where training is a necessary prerequisite to this work, suitable training will be provided by the contractor prior to construction works;
 - q. Compensation measures will equally apply across gender lines and vulnerable groups if any is identified;
 - r. AP consultation will continue during the updating and implementation of the LARP;
 - s. The full compensation of affected assets will be a condition for the initiation of civil works.

76. All AFs/APs will be entitled to compensation for loss of land, crops/trees, and some small rural infrastructure (channels, walls, tendrils equipment for grapes, etc.) at replacement value. No other impacts are envisaged. There will be no demolition of houses and no physical resettlement.

Payment of compensation can be made only to individuals and not to representatives of collectivities (e.g. managers of collective dekhans). In the case that farmers belonging to one collective dekhan farm do not yet have land assignments with clear GPS based boundaries documented in the land register, either (i) every member of the collective dekhan farm will receive the same share of the compensation payment divided by the number of dekhan farm members or (ii.) by decision of all share holders of the concerned farm (to be documented) compensation payments may go to the farm account allowing for investments as decided by the general assembly of all share holders.

5.6 Compensation and Rehabilitation Framework

77. Based on ADB policy requirements, prevailing Tajikistan policies, and the reconciliation mechanisms detailed above, the EA has established a compensation and rehabilitation policy framework for the project as discussed in the following paragraphs. To compare with the initial LARP of 2010, the framework below and compensation rates were adjusted during the LARP updating.

5.7 Compensation and Rehabilitation Eligibility

78. APs entitled to compensation or at least rehabilitation provisions under the Project are:

- a. All APs losing land irrespective of land right type and with or without formal land-use rights or traditional land-use rights;
- b. Tenants, whether registered or not (so far not applicable);
- c. Owners of buildings, crops, plants, or other objects attached to the land; and
- d. APs losing business, income, and salaries.

79. Compensation eligibility will not be limited by a cut-off date prior to the final engineering design by the contractor. All formal changes of land usage rights will be considered up to the presentation of this final design.

5.8 Compensation and Rehabilitation Entitlements

80. Entitlement provisions for APs losing land and income losses and rehabilitation subsidies include provisions for permanent and temporary land use losses, house and buildings losses, crops and trees losses, a relocation subsidy, and a business loss allowance based on tax declarations and/or lump sums. These entitlements are detailed below:

- a. Land permanently acquired: all land users will receive an allowance for lost land use rights based on the market value of the potential produce of the affected land x 5 years. What is meant by potential produce is the produce of the land based on the crop cultivated on it, disregarding whether the land was fallow or planted with young unproductive trees at the time of the survey. This formula is adopted in absence of active and official land markets, and it roughly reflects

land replacement compensation standards elaborated in an internet article by the Federal Reserve Bank of Kansas City in 2009 (www.kansascity-fed.org/RegionalAffairs/MainStreet/MSE_0609.pdf) or supported by anecdotal evidence known to the domestic Consultant in Tajikistan, both of which indicate that the market value of the land corresponds to the amount obtained by the formula used. If applicable, the land users will also have their lease agreement with the Hukumat updated at no cost to them to reflect the decreased land size and proportionate decrease in land fees and taxes. This compensation will be provided 100% to the AFs irrespective of the type of land right they hold.

- b. Crops: Compensation for crops based on average market value over the year before construction at market rate. Crop compensation will be paid only if a crop has actually been lost, or if a crop will be lost due to the works. Where land was fallow at the time of construction, or if it will be fallow at the time of construction, compensation for a lost crop will not be paid.
- c. Trees:
 - Wood trees are valued based on wood volume x the market value of the tree's wood;
 - Productive trees are valued differently depending on whether they bear fruits yet or not as follows:
 - Fruit-bearing trees are valued based on type of tree and income lost (net annual income x number of years needed to re-grow the tree to a productive stage) plus cost of replacement saplings;
 - Not yet productive fruit trees are valued for compensation in cash based on inputs x average age of trees.
- a. Vulnerable family allowances: All vulnerable AFs (those below poverty level or headed by a woman) will receive one additional compensation for the crops in the affected plots to be set at 25% of the ascertained value. Currently, it is estimated that less than 5% of all AFs belong to the group of vulnerable households.

5.9 Project Entitlement Matrix

81. The entitlement matrix below summarizes the compensation and entitlements due to the AFs based on the likely impacts of the Project.

Table 5-2 Entitlements Matrix

Loss Type	Entitled Persons	Entitlements	Implementation Issues
Permanent loss of land use rights	Holder of Land use Certificate from Hukumat, or the government (i.e. presidential land).	A compensation payment for losses of land right use in cash equivalent to market value of gross produce of the affected land multiplied by 5 years. If there are 1.5 or 2 cropping seasons per year this will be taken into consideration.	Project will resurvey the plot and issue a new land certificate at no cost to the AF
Crops	As above	Crops affected by the towers and by stringing or tower transport will be compensated by default at market rate.	Project will restore the land to its pre-construction condition.

Loss Type	Entitled Persons	Entitlements	Implementation Issues
Trees	Owners of affected trees	<ul style="list-style-type: none"> • Fruit-bearing trees: Compensation in cash based on one year yield x the number of years needed to re-grow the tree at productive stage. • Not yet productive fruit trees: Compensation in cash based on inputs x average age of trees. • Seedlings: Based on seedlings cost plus inputs x 1 year. • Wood trees: cash compensation based on wood volume x market value of the wood 	
Vulnerable households	Affected household	Additional cash allowance equal to market value of 25% of the gross produce of affected land.	
Permanent losses exceeding 10% of the total land per AF	Affected household	Additional cash allowance equal to market value of 25% of the gross produce of affected land x 5 years	Project will try to avoid acquiring land of small holders

6. GENDER IMPACT AND MITIGATION MEASURES

82. There are no recently made studies that could provide a detailed insight into gender issues relating to economic change during the last years. However, if we apply the results of an ADB study of 2000 on Women in Tajikistan to the current situation in the Sughd area we can see some deterioration, mainly of the economic role of women (employment and income). In addition, the enrolment rate of girls in schools has suffered considerably. However, there is evidence, too, that in the pastoral environment of the areas, boys are also prevented from attending school during the summer season. Further analysis is required but will not be part of the LARP.

83. Due to the fact that the stabilization of the central electrical power network supports women and men in a more or less equal manner the project does not favor strategic gender needs and does not support changing the gender relations between women and men. As a consequence, it is assumed that the project according to the OECD/DAC gender categories has to be classified as gender neutral.

84. The nature of the project, being construction of electrical power transmission towers, has construction nuisance/land acquisition as its only social impact, since the end product will not enhance or disrupt any community service. Both men and women were consulted, and the socio-economic survey data also include the collection of disaggregated data based on gender in the project areas in order to determine their views on project impacts.

To compare with earlier LARPs prepared for Sughd (Khairakum – Asht Line) and Khatlon Oblasts (Geran – Rumi line) during seven public meetings people expressed their full support of the project. There was only a little concern about the question of compensation. One concern was temporary land acquisition resulting in interrupting cropping and harvest, and issues related to receiving actual compensation for tower placements. In one case people had had bad experiences when the road construction work between Ayni and Penjikent started.

Women did not express any concerns and supported the opinion that the project would have little if any adverse impact on them. On the contrary, they stated that if the electricity supply were improved as a result of the project “they should use our land for the construction of a new line”.

85. Only in few cases men expressed the desire to undertake project-related employment if the opportunity arose. Taking into account the socio-cultural background of Tajikistan, it is doubtful if women could be recruited as construction workers. Although during Soviet times there were quite a few female engineers in Tajikistan, construction work was never a domain of female staff, and today it would even be difficult to find a woman for such work. Consequently, the number of women to be recruited will remain low and the positive gender impact of employment limited.

Men in general were more aware of the rules of the Land Code and the Constitution. Men were also better connected to formal community networks through participation in village meetings and activities at the mosque. Therefore it is likely that without additional measures women will receive less information about the project.

86. During the socio-economic survey amongst 106 households, only very few people were identified as heads of vulnerable households. Mainly families with handicapped heads of household and divorced (and elder) women in households without a male adult hh member can be considered as vulnerable.

87. The final engineering design and the identification of the land use right owners will show how many women-headed households would be amongst the affected persons. It is recognized as important that male and female AF members are kept informed on the land acquisition and compensation policies developed in this LARP. Therefore, measures have been built into the information dissemination program to ensure that female APs and female-headed households are provided with project information, and that they will be included in discussion groups concerning compensation and grievance redress. Male and female APs are equally likely to be literate.

88. Particular strategies to ensure gender mainstreaming of project activities include:

- a. Ensuring that each household has a copy of the project information leaflet for reference of entitlements rather than relying on dissemination via village or public meetings, which are more likely to be attended by men;
- b. Additional copies of the project information leaflet being distributed to women's organisations, Hukumat and Jamoat offices and other places where women gather. This will ensure that there is a means of community-based support for informing and supporting female AF household members;
- c. The LARP providing for equal entitlements and provisions for men and women;
- d. Contractor's bid documents emphasizing equal opportunity and equal pay regardless of gender;
- e. Additional provisions for livelihood enhancement being given to female-headed household with no support from other members of the family.

7. INFORMATION, CONSULTATION AND DISCLOSURE REQUIREMENTS

7.1 Consultation

89. The initial version of the LARP has been prepared in close consultation with some of the possible AFs who have been informed about the Project and its likely impacts. Other stakeholders consulted during the preparation of the initial LARP and the updated version of the plan include Jamoat leaders in Ayni Rayon in Dar-Dar and Urmetan Jamoats, and in the Penjikent Rayon in the Jamoats of Serazm, Khalifa Hassan, Zudhzina, Loikh Serali, and Rudaki. In Penjikent there was also a very close exchange of information with the representatives of the Rayon administration (Hakim, vice-chairperson of the Rayon for energy and for land issues, members of the Land Committee, the Department of Statistics, the Department of Agriculture, etc.). Neighbors in the project zone of influence were also contacted. Consultations were carried out with individual households during the AF socio-economic survey, and with local leaders and officers at Jamoat and Hukumat levels.

90. During project implementation, consultation with AFs will be ensured through regular meetings to be organized by the project management unit (PMU) and BT field offices. These meetings will be used to tackle resettlement implementation problems and to undertake timely remedial actions. This will also serve as a forum by which the contractor may

keep AFs informed of the construction schedule, allowing for crop harvesting and steps both the contractor and the AFs can take in order to reduce impacts of construction on the environment and directly on the family (e.g. noise and dust reduction etc.).

7.2 Resettlement and relocation options for AFs losing agricultural lands

91. Consultations have been carried out with some of the possibly affected households. Compensation options have been discussed including cash compensation, land for land or a combination of approaches. The dialogue partners prefer cash compensation for withdrawal of the land use in accordance with its cultivation value. As the socio-economic survey at Jamoat level and of the interview partners themselves indicate, most AFs are viewed as “cash-poor”, thus cash compensation for crop loss is important. As in the Khatlon Oblast, and also in Zerafshan, alternatives to cash compensation are precarious as even the Land Committees do not have land and water rights for future distribution to farmers.

7.3 Community Responses to the Project

92. Due to the fact that the old 110 kV line to Penjikent is old and damage occasionally occurs, there are some direct benefits to the affected households or communities along the TL route. This is known by the people and no protest at all against the acquisition of land for towers has been expressed during the meeting. The project may also stabilize the long-term electricity fees for the population and support economic development (especially the SME sector in rural areas).

93. Given the immediate, potential impacts and benefits of the project, community response was different from the situation in Khatlon between Geran and Rumi. Those consulted generally accepted the necessity of the project. They also appreciated the efforts of the implementing agency to minimize adverse social impacts. In some cases people even declared that in order to support the project they would not ask for compensation payments “If our electricity supply was later made sustainable both in summer and winter”.

94. Relevant Hukumat and Jamoat officials have provided valuable assistance for the conducting of the line survey and the socio-economic study and thus demonstrated their interest in improving the regional power supply situation.

7.4 Disclosure

95. Barqi Tojik will prepare a project information leaflet in Tajik. This will be distributed to the possible AFs for the first time end of 2014/beginning of 2015 (after acceptance of this LARP by ADB and BT). The project information leaflet will contain the following information: (i) a brief background of the Project, specifically the civil works to be undertaken and the adverse social impacts; (ii) preliminary estimates of land acquisition; (iii) project entitlements; (iv) indicative schedule of resettlement activities; (v) grievance redress mechanism; and (vi) contact persons for any queries. Parallel to distribution of the leaflet, a summary version of the draft LARP in Tajik language will be posted in Hukumat and Jamoat offices. The draft LARP will also be uploaded on the ADB website after project appraisal.

96. The revised version of the LARP after approval by Barqi Tojik and ADB will again be disclosed to the AFs and uploaded on the ADB website. Barqi Tojik regional staff will also distribute a revised version of the project information leaflet prior to the final engineering design by the contractor. In addition, the projected Operation Manual will provide a clear idea to all local stakeholders and especially to the affected households about the process of identification and assessment of damages, and of the compensation and grievance redress mechanism.

8. GRIEVANCE REDRESS MECHANISM

97. Great care is taken to prevent grievances. This will be done through careful land acquisition design and implementation, by ensuring full AF participation and consultation, and by establishing extensive communication and coordination between the community, the BT/PMU and the local governments. This notwithstanding, complaints are sometimes unavoidable and a grievance mechanism is being adopted for the project to allow the APs the opportunity to appeal against any disagreeable decision, practice or activity arising from compensation/rehabilitation process. Efforts to make APs fully informed of their rights and of the procedures for addressing complaints will continue during the updating of the LARP and at the time of compensation.

98. Complaints and grievances will be addressed through the following steps and actions (see Fig. 2):

First Step: One joint Project Grievance Redress Committee for both concerned Hukumats will be established. It includes two members of the affected community (including AP's and non-APs), one representative of each concerned Jamoat and one representative of each of the two Hukumat Land Councils, to be chaired by one of the two Hukumat representatives (to be agreed upon internally by the two Hukumats).

Grievances must be heard and resolved within 14 days of submission of the complaint.

Second Step: If the Project Level Grievance Redress Committee is not able to resolve the grievance within a 14-day period, the complaints should be presented via the BT Rayon representative to BT PMU at a central level. The elected representatives of the AF will have the opportunity to mediate by providing their written comments and proposals to the PMU. A final decision will be made by the Director of the PMU after the assessment of the case and a careful preparation of the decision by the PMU resettlement representative.

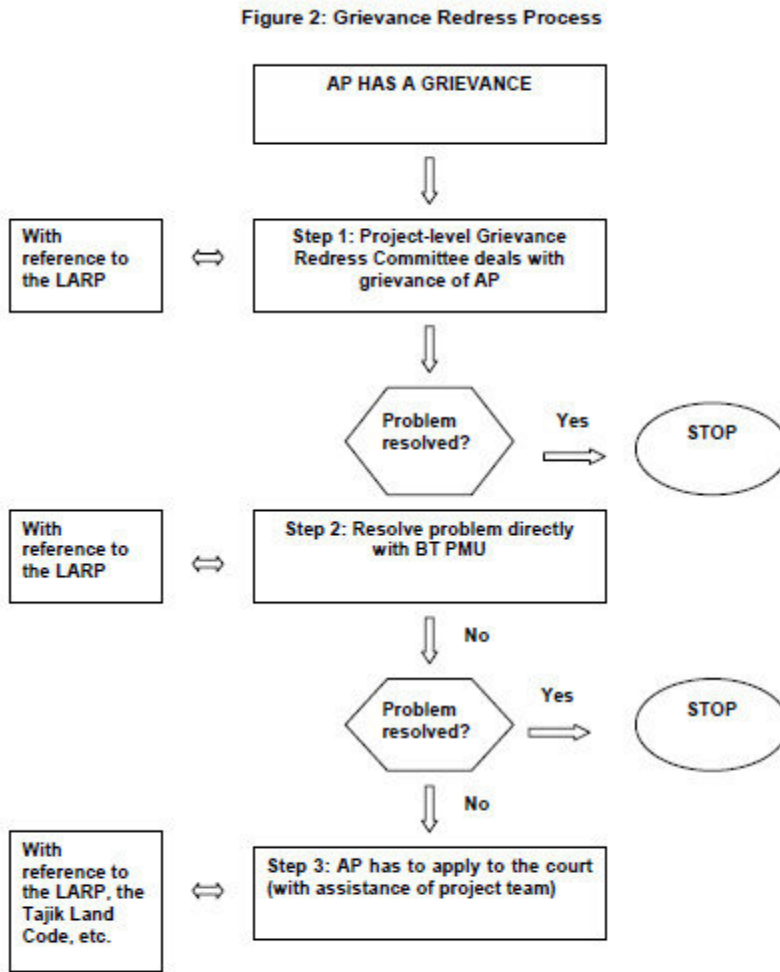
Grievances must be heard and resolved within 7 days of submission of the complaint.

Third Step: If no solution is reached within 14 days at BT PMU level, the APs can further submit their case to the appropriate court of law.

According to Tajik law, taking the case to court can be related only to the valuation of the losses and the determination of the level of compensation (payment). The question of the expropriation for the construction of a HVTL itself is not negotiable and a case in court cannot delay construction work.

99. While applying the Grievance Redress Mechanism, APs can seek support from the BT PMU resettlement representative who on his part might be assisted by the national and international consultants. The contact addresses/phone numbers will be available at the level of each concerned Jamoat.

Figure 8-1 Grievance Redress Process



9. INSTITUTIONAL FRAMEWORK

9.1 Institutional Arrangements

100. The ME will be responsible overall for further LARP updating, implementation and financing and will exercise its functions through the Project Management Unit (PMU) at BT. Within the PMU, LARP tasks are handled by the resettlement representative, BT's Monitoring Department (formerly known as the Environment and Social Department – ESD), in consultation with concerned Hukumats and Jamoats, which will plan and manage all land acquisition, compensation and rehabilitation action detailed in this LARP. To carry out activities in the field the resettlement representative of the Monitoring Department will also liaise with BT's district offices and mobilize their personnel as needed. In the implementation of the compensation/rehabilitation program at the local level, the Monitoring Department will also coordinate with the district (Hukumat) governments (mainly the Hukumat Land Management Council), which have the ultimate authority on local land acquisition matters in consultation with the State Land Committee.

101. During project implementation, the project management consultants will include in their team an international and a local resettlement specialist. They will assist the Monitoring Department in updating, based on detailed design, and implementing the LARP. Due to the large number of AFs, the project organization for resettlement requires close cooperation between the PMU, the Rayon "Commissions on Assessment of Damages and Losses" and the local District Barqi Tojik offices. The AFs will be represented in the process and two representatives will become full members of the three Rayon based Commissions for the Geran - Rumi project.

102. BT, with assistance of the contractor (who will be responsible for assessing the land plots required and identifying the land usage title owners) and the Hukumat, will finalize agreements with the AFs on the compensation amounts due to them. The Hukumat will physically deliver compensation to the AFs by its cash desk. BT will monitor the timely payment of compensation and its proper documentation and will not approve construction commencement until compensation is completed and land area is appropriately "vacated" or compensated for. An account of this process, including amounts disbursed and verification of receipt by APs, will be an integral part of the PMU's internal monitoring report.

9.2 Commission on Assessment of Damages and Losses

103. The assessment of all damages and losses will be done and valuation of compensation decided by the Commission on Assessment of Damages and Losses. According to the Decree No. 515 of 30th December 2000, the Commission consists of the following members:

- Deputy chair person of the Rayon (as chairperson of the commission),
- Chairperson of the Rayon committee of land resources and usage (incl. construction),
- Rayon architect,
- Representatives of the Department for Water Usage,
- Representatives of the District Environment Committee,

-
- Representatives of the Department for Sanitation and Fire Control,
 - Representatives of the land users where lands are taken permanently or temporarily,
 - Representatives of organizations which have a stake in land distribution and other representatives of organizations according to the local authority's decision.

104. In accordance with the ADB and BT/PMU agreements on land acquisition, there would also be the local BT representative and the responsible person for resettlement issues of BT/PMU in the Commission. Considering the large number of affected land plots and their owners, this commission cannot do all of the work. Therefore, a working commission as a sub-group of the Rayon Commission has to be established with the following members:

- one representative of the Rayon Land Commission,
- one representative of the Jamoat administration concerned,
- one representative of a Community Based Organization (CBO) from one of the Jamoats concerned (preferably from a farmer's organization) or a representative of the affected farmers themselves (could be difficult to organize),
- one representative of BT/PMU land acquisition and resettlement team.

The representative of the contractor, responsible for the identification of losses, is a member of the sub-commission without right to vote.

105. The work procedures of the sub-commission and the Rayon Commission will be explained in detail in the Operational Manual. Work details will also be part of the training of the three commissions by BT/PMU and the consultant.

9.3 Barqi Tojik's Institutional Capacity Building in Resettlement

106. BT has a Project Management Unit (PMU) to deal with the implementation of projects funded by ADB and other donors. To date, the PMU has been responsible inter alia for the Power Rehabilitation II project and various CAREC-Projects. Resettlement activities are the responsibility of the PMU, with particular assistance of the Monitoring Department which belongs to BT's PMU. Key capabilities and activities of the Department are social impact assessments, environmental impact assessments, initial social and environmental examinations, and other monitoring, auditing, and associated project studies.

107. Although some of the members of the Monitoring Department formerly received some training and the department manager participated in the implementation of an earlier LARP, theoretical and practical experience in socio-economic investigations and surveys is limited. Department and other PMU staff members have only limited experience in carrying out land acquisition and impact compensation/rehabilitation programs based on international standards. For this reason, the Project Management Consultant will carry out on-the-job capacity building training sessions for the responsible PMU staff members in preparation for LARP implementation. The on-the-job capacity building training will include:

- a. Definitions, principles and procedures of land acquisition;
- b. Public consultation and participation methods (including data collection requirements);
- c. Liaising with Hukumat and Jamoat level representatives; and
- d. Entitlements and compensation and assistance disbursement mechanisms.

108. Other local stakeholders such as the members of the Commission for Valuation of Losses and Compensation will also receive training prior to the start of their work. Training sessions will take place with the acceptance of the engineering design of the final HVTL by the contractor, i.e. one to three months before the assessment of losses and compensation requirements.

9.4 Resettlement Database

109. The PMU office in Dushanbe will computerize all information concerning land acquisition, socio-economic information of affected land and other assets structures, inventory of losses of individual APs, compensation and entitlements, payments and relocation. This database will form the basis of information for implementation, monitoring and reporting purposes and facilitate efficient resettlement management.

10. COMPENSATION BUDGET

110. Funds for the implementation of the LARP are part of the overall project budget. The budget indicated in this LARP is based on a preliminary calculation of the number and type of transmission towers to be constructed and on the estimated market price rates in 2014 of major crops grown in the two Rayons traversed by the transmission line. The cost of LARP implementation will be finalized after the elaboration of the final engineering design by the contractor.

A very preliminary assessment of the line route shows that out of 94.2 km of the HVTL approximately 29.2 km will cross agricultural lands. It is estimated that, excluding smaller areas which are no longer used, islands of barren lands, streams etc., about 23.1 km of the line will indeed cross intensively used land.

Losses will concentrate on permanent losses for towers and temporary losses for construction sites, and stringing.

10.1 Key Assumptions for the Compensation Budget

111. Compared with the eastern part of the line in Ayni Rayon the western route traverses large agricultural areas, and almost all agricultural lands are intensively used. Furthermore, most land in the Jamoats of Zerazm, Khalifa Hassan, Lokh Sherali, or Margedar (Rudaki) is irrigated and used for wheat, beans, maize, potatoes and other non-perennial crops. Fruit tree plantations are less compared with the eastern parts of the Zerafshan valley and most trees are planted within the home garden areas which are only slightly affected by the project. However, as in many other areas of Tajikistan, most recently since late 2011, many farmers have started planting fruit trees in order to implement the national agricultural policy.

Against this background the following set-up is assumed for the construction phase:

I. Land use patterns:

- 80% of the cultivable land is irrigated and used during spring until autumn, 20% remains fallow due to lack of water,
- 65% of the land in spring is used for wheat, 25% for potatoes,
- 55% of the cultivated land in autumn is used for beans and other leguminous plants,
- 12% of the land in autumn is used for sunflowers and other oil seeds, 7% for vegetables, 5% for maize,
- 5% of the land is used throughout the year for fodder plants,
- 3% of the land is planted with fruit trees and grape wines,
- 2% of the land is house gardens with mixed crops.

II. Compensation details:

- Losses of non-perennial crops will be compensated fully already after preparation of the land and planting/sowing,
- Fruit trees older than one year will be considered as fruit bearing even if they are not,

- For house-garden land, the highest value for crops will be adopted (i.e. the price has been calculated for onions, melons and carrots),
- Due to the low volume of compensation payments for permanent losses and the fact that the new towers constitute a constraint on all mechanical works in the fields, a base rate of 250 TJS is paid additionally for every tower (TJS 50 TJS in total).

III. Other conditions influencing the assessment of damages and the volume of compensation payments:

- The final design for the HVTL may result in the construction of the entire estimated 23.1 km of line on agricultural areas with all 71 towers requiring land acquisition resulting in crop damage. Some parts of the towers may also be constructed on public areas (waste land or public infrastructure areas such as unused ground, borders of channels or of drainages, etc.),
- The fact that construction work will also be done during late autumn and winter (15 November until 20 March) when crops cannot be damaged is not taken into consideration while calculating value of damages,
- Many trees in the project area have been planted only recently and at larger distances to each other than older plantations, and they are often intercropped with wheat. This could result in less damages than calculated in this chapter,
- The field survey shows that the permanent loss of house-garden land is not expected. All towers will be constructed outside of house gardens. Hence the category of house-garden land does not become a specific category for assessment of damages and compensation in this LARP,
- Greater investment in construction costs would most probably reduce compensation costs and vice versa.

Figure 10-1 old 220 kV line from Uzbekistan entering from South to the area West of Rudaki Substation in Penjikent



Figure 10-2 old 110 kV line from Ayni to Penjikent. Both examples show towers using non-used land of little value near to roads



10.2 Permanently Acquired Land

112. Fig. 3 shows that 33 plots of agricultural land will be crossed between 28 pairs of angle towers. On this land the construction of an estimated 9 corner towers and 62 suspension towers is required. Assuming that for a corner tower an average 250 m² is required and for a suspension tower 75 m², in total the acquisition of 6,900 m² of land is required.

This land belongs to private individual or family farms and perhaps to one or another collective dekhan farm. The users of these permanently acquired plots will receive a compensation payment for loss of land use rights based on the yearly potential produce of the land at market rates for five years (for seven years if apricot and citrus tree areas are required). The term “potential produce” refers to the produce of the land based on the crop cultivated on it, regardless of whether the land is fallow or planted at the time of the final survey.

113. The final losses will only be definitely clear after the agreed engineering design of the contractor prior to construction and could, by an accurate placements of the towers, be considerably lower than our estimates show. Greater investment in construction costs would most probably reduce compensation costs and vice versa.

Calculation of Losses for Compensation:

- a. Losses of crops: Compensation for cash or subsistence crops found during the survey on lands to be acquired for tower footings is determined by multiplying the estimated yield on these lands by the market value of the produce at 2014 prices (2015 ... etc. respectively according to the final year of construction) and again multiplying the result by 5. The average yields per hectare and the market price for the main products (wheat, potatoes, lucerne, vegetables, sunflowers, etc.) is shown in table 2 (chapter 2).

Figure 10-3 33 plots of agricultural land crossed between AP 28 and AP 99

Position	From AP	Position	to AP	Position	Distance on ag	% used	Real Distance	towers on land		
1	99	39.495.864	67.586.564	94	39.481.694	67.550.444	3500,00	0,8	2800,00	1 corner + 9 suspension
2	94			north of 93	39.477.177	67.547.009	600,00	0,5	300,00	1 suspension
3	91	39.464.440	67.596.125	90	39.453.085	67.627.788	3000,00	0,8	2400,00	9 suspension
4	90			west of 89	39.453.112	67.640.006	1050,00	0,7	735,00	3 suspension
5a	89	39.456.282	67.655.661	between to 88	39.456.820	67.657.569	170,00	1,0	170,00	
5b	89	39.165.606	67.690.517	between to 88	39.467.084	67.695.832	490,00	1,0	490,00	1 suspension
6a	88			87			900,00	0,6	540,00	2 suspension
6b	88			87			200,00	0,6	120,00	
6c	88			87			450,00	0,6	270,00	1 suspension
7	87			86			280,00	0,5	140,00	
8a	86			85			250,00	0,5	125,00	
8b	86			85			1470,00	0,5	735,00	3 suspension 1 corner
9	85			84			1200,00	0,5	600,00	4 suspension
10	82			81			340,00	0,7	238,00	
11	81			80			940,00	1,0	940,00	1 suspension 1 corner
12	79			78			1130,00	0,7	791,00	2 suspension
13	78			77			1230,00	1,0	1230,00	3 suspension 1 corner
14	77			76			3320,00	0,9	3528,00	10 suspension
15	75			74			400,00	0,9	360,00	1 suspension
16	74			73			580,00	1,0	580,00	1 suspension 1 corner
17	73			72			1720,00	0,9	1548,00	5 suspension
18	72			71			310,00	0,5	455,00	
19	68			67			100,00	1,0	100,00	
20	59			58						
21	53			52			1030,00	0,9	927,00	2 suspension 1 corner
22	44			43			350,00	0,9	315,00	1 corner
23a	43			42			260,00	0,9	234,00	
23b	43			42			100,00	1,0	100,00	1 corner
24	42			41			470,00	0,8	376,00	
25	41			40			330,00	1,0	330,00	
26	40			39			360,00	0,6	216,00	1 corner
27	37			36			770,00	1,0	770,00	2 suspension
28	28			22			675,00	1,0	675,00	2 suspension
0	Rudaki Sub									
							29175,00		23138,00	

- b. **Losses of apricot, pomegranate, apple and citrus trees:** Compensation for fully-grown apricot trees and citrus is calculated by multiplying the market value of the produce from each tree during the previous year by 7 years. This is the time a newly planted apricot, apple or citrus seedling would take before it can bear fruit. Table 4 in chapter 2.3 provides a detailed overview for annual yields, market prices and costs of seedlings for the year 2014. Figures have to be updated according to the start of civil works.

On the other hand, compensation for trees which are not yet bearing fruit could be calculated by multiplying the cost of production (i.e. input and labor) on the land for one year by 3.5 years (the average age of the trees) for apricots and citrus, or 2.5 years for pomegranate plus cost of seedlings. The assessment of age of trees and actual damages has proven to be complicated in many other cases of land acquisition so that for this LARP all trees which are older one year will be considered as productive in order to avoid disputes. However, as long as they do not bear fruit only the tree and its cost of cultivation will be compensated, not its fruit.

Compensation for apricot, pomegranate, citrus, apple, etc. trees which are less than one year of age is calculated by adding the cost of production (i.e., input and labor) on the land for one year and the cost of seedlings.

A one-hectare plot of land has an average of approximately 250 apple, 300 apricot, 625 pomegranate, and 400 citrus trees, while the costs of one seedling are TJS 5.0 for apricots and pomegranates, 15 for apples, and TJS 25 for citrus (indeed, there are almost no lemon tree plantations in the project area, only some individual trees).

Apricot trees bear fruit once a year, and the average yield of a one hectare of land with apricots is about 10,500 kg with a market price of TJS 1.5 to 2.0 per kg.

For citrus/lemon the harvesting period is longer than for apricots (about six months) but yields are lower with 4,000 kg and an estimated market price of TJS 5.0.

For pomegranate that bear fruit, once-a-year yields are also 3,750 kg per hectare and a market price of TJS 10.0 per kg.

For apple trees further enquires have to be made due to very different costs of seedlings and market price for fruit.

In order to avoid disputes during assessment of losses, this LARP considers all apricot, citrus, apple, and pomegranate trees of more than three years of age as fruit bearing.

- c. **Losses of grapevines:** On one hectare of land approximately 1,650 grapevines can be planted, and the cost of one grape seedling is TJS 3.0. Grapevines bear fruit once a year, and the average yield of a plot of one hectare of land is about 8,000 kg with a market price of TJS 3.5 to 5.0 per kg.

114. For all types of trees which, after replanting require five to seven years to reach full productivity (according to the local information provided by the Agricultural Departments of the Rayons), input and labor costs have been added to the value of losses according to the following estimates:

- input costs such as fertilizer and plant protection chemicals (both of which are not available everywhere and used only at very low intensity) TJS 275,
- labor costs per year and hectare for irrigation and trimming TJS 660,
- labor costs for maintenance of field channels TJS 110.

Total annual costs per hectare of fruit trees are TJS 1,045 or TJS 7,315 for the average period of seven years until regaining full tree productivity.

10.3 Permanent Loss of Land Use Rights Estimates

115. Farmers' losses in Zerafshan will mainly be permanent losses for construction of towers and temporary losses for construction sites, access to work sites, and stringing. If we take an average value of TJS 4.5 per one square meter cropped (based on potatoes with a yield of 30 t/ha and TJS 1.5 per kg)⁷, compensation payment for all the three areas of intervention would result in the same unit price: For the permanent land acquisition 6,900 m² will be required (75 m² for suspension towers and 250 m² for corner towers) multiplied by 7.5 years (for 1.5 cropping seasons per land unit) and TJS 4.5 per square meter (i.e. TJS 33.75 for 7.5 years per m²) will result in compensation payment requirements of TJS 232,875 (US\$ 46,575).

⁷ In 2012, the average yields for potatoes in Penjikent Rayon were 23.8 t/ha, in 2013 27.6 t/ha. In Ayni yields were 26.2 t/ha and 26.7 t/ha respectively. On-farm market price for potatoes in 2012 was TJS 1.4 and TJS 1.37 in 2013. In 2014 early potatoes in mid-July 2014 (during Islamic month of Ramadhan with usually inflated prices for food) were sold by farmers for TJS 2.5 or even more. To be on the safe side (i.) the average yields per ha for 2014/2015 were calculated with 30 t/ha and (ii.) market price of TJS 1.5 /g.

The entire rehabilitation allowance for the AFs for losses will be up to TJS 250,375 as in addition to TJS 232,875 for crop losses the base rate per tower of TJS 250 also has to be paid (TJS 17,500).

The estimates also take into account that felled fruit trees are also considered as permanent losses due to the fact that they have to be re-planted with the first harvest to start only 3-4 years for grapes, five years for pomegranate, and seven years for citrus, apple and apricots.

Table 10-1 Cost Estimates for Crops per Hectare

Products	Yields/kg	Price/kg	Annual gross income/hectare/TJS
Alfalfa/Lucerne	9,000	1.0	9,000
Onion	21,000	1.0	21,000
Potatoes	30,000	1.5	45,000
Cotton	2,100	3.08	6,468
Wheat	4,700	1.5	7,050
Carrot	27,100	1.0	27,100
Melon	25,000	0.7	17,500
Apricot	10,500	1.5 – 2.0	15,750 – 21,000*
Citrus	4,000	5.0	20,000*
Grape	8,000	3.0	24,000*
Pomegranate	3,750	10.0	37,500
Apple	?	?	?

* Average value of yields from fruit trees per hectare is estimated at TJS 20,000. Grapes are not recorded separately due to their small share amongst all fruits. For the estimates of non-temporary losses it has been taken into account that the annual gross income has to be multiplied by the years until full productivity of trees after replanting which will be seven years in the model adopted (however, detailed assessment of losses during the final design of the HVTL will be based on the individual period for each type of tree).

10.4 Compensation for Crops Affected by Temporary Land Occupation

116. For the establishment of work sites and civil works per tower 1,200 m² would be required. For 71 towers in total, an area of 85,200 m² (= 8.52 ha) has to be provided by farmers on a temporary basis. For temporary land acquisition for these construction sites of 85,200 m² for one season (TJS 4.5 / m²) compensation payments would result in the amount of TJS 383,400 (US\$ 76,680).

117. Stringing would also take place on 23.1 km of agricultural land. A corridor of 4 m width would result in potential damage to another 92,400 m². For damages during stringing on these 92,400 m² for one damaged crop, the amount of up to TJS 415,800 (US\$ 83,160) would be required. Much less damage would occur if civil works could be carried out between October and early March before ploughing and sowing. Only to be on the safe side it is assumed that all the 92,400 m² will be affected. In reality, parts of the stringing work will be done on existing dirt paths and on land between fields without crops (mainly near to Asht). Consequently, our estimates are high in order to be on the safe side.

For access to work sites, an average of 100 m per site has been calculated. Being 4 m wide, such access roads for 71 towers could affect another 28,400 m² of agriculturally used land. For damage on these 28,400 m² about TJS 127,800 (US\$ 25,560) could be required.

10.5 Additional Damages

118. Regarding houses and other buildings, the scheduled line route will avoid all demolition and resettlement, and walls, fences, irrigation channels, access roads, etc. will be damaged only to a very small extent.

So far it is very difficult to provide actual figures for potential losses. The survey of June and July 2014 in Zerafshan did not identify any areas with an accumulation of trees of commercial value (timber trees) affected by the project. However, as the final line design has not yet been elaborated, currently it cannot be confirmed that no trees would be damaged. At least several dozen mulberry trees and poplars would most probably be cut down. For the protection of the line, some higher trees might also be cut, whether required during construction work or not.

To be on the safe side, it is estimated that in up to 75 cases miscellaneous non-fruit trees could be damaged/cut, too. The value (mainly firewood) of one tree is estimated at not more than TJS 400 on average (in most cases most probably less, in single cases considerably more) resulting in maximum damage of TJS 30,000.

To some extent concrete columns for grapevines with galvanized steel wire D 4 mm, and to a very little extent metal enclosure / wood fences, would be damaged. These damages would be part of the BT compensation package, so they are included in the additional costs, as shown in table 26 which add up to TJS 49,450 (US\$ 9,890).

Table 10-2 Estimated Additional Costs

Item	Quantity	Unit Cost/TJS	Total Costs
Concrete columns for vine	50 pc.	35	1,750
Galvanized steel wire D 4 mm	2,000 m	0.85	1,700
Metal enclosure	50 m	150	7,500
Wood fence	100 m	85	8,500
Trees	75	400	30,000
Total			49,450

119. Damages with regard to lanes/streets, and larger irrigation and drainage channels, etc., will not be part of the compensation payments to the AFs as repair of such small pieces of infrastructure will be done by the construction company itself. For smaller channels, walls, fences, etc., the Operation Manual will provide a list with current market purchase prices.

Land which does not comprise an individual or collective dekhan farm usage right title will not be compensated under the LARP.

10.6 Assistance to Affected Vulnerable Households

120. The socio-economic survey of households with farmlands in the wider area of the preliminary line route, according to the self-classification of the concerned households, identified four very poor families and 14 families which can be classified as poor. If we take the income figures, much more households should be viewed as poor: all hh with a monthly income of less than TSJ 750 per month in a household with five people. There are also three heads of households which are handicapped, and as mentioned before, 16 hh are managed by women. There are also 10 heads of hh – both men and women – which are 63 years and older.

Just from the self-classification we can assume that 17% of the hh are income poor and certainly vulnerable. Taking the given income figures, more than 50% of all hh would fall under the category income poor and, accordingly, vulnerable. However, information provided by local authorities show a very different picture. Only between three and five percent of all hh are classified as falling under the national category of families which may get social aid payments. If it comes to actual payments of social aid and/or compensations payments for energy, this figure would even be much lower. This has been proved during the assessment of losses and valuation of compensation for the two line project of Sughd (Khairakum – Asht) and Khatlon (Geran - Rumi) with only two to three percent of vulnerable hh.

Consistent with the entitlement matrix that mandates the granting of an additional allowance to vulnerable AFs equivalent to an additional 25% of the market value of gross produce on the affected land, the vulnerable households will get additional cash assistance of only a few thousand TJS. This money will be paid from the contingencies and does not require a separate budget.

10.7 Income Restoration Program

121. No specific income restoration program is provided because there are no AFs that would be severely affected by the loss of their productive assets and income sources. If approximately 250 m² for an angle tower is taken as the maximum permanent land requirement, with an average land use right title of half a hectare by the affected households, losses would amount only to about less than five percent of the total land holding. If then one or two special cases arise, the affected households will receive an additional 25% of compensation. This amount will also be taken from contingencies and will not be separately budgeted.

10.8 Estimated Costs of Land Acquisition

122. Table 27 shows the total financial (preliminary) requirements for the compensation of losses, taking into account external audit costs and contingencies. The total compensation budget will be TJS 1,501,940 (US\$ 300,388). However, no administrative costs are taken into account and all payments of Barqi Tojik to the State for land acquisition land transfers of ownership rights are also excluded.

Table 10-3 Total Cost Estimates (preliminary)

Position	Size of impact	TJS	USD
Permanent land acquisition	6,900 m ²	232,875	46,575
Base rate per tower (TJS 250)	71 towers	17,750	3,550
Temporary land acquisition for work sites	85,200 m ²	383,400	76,680
Damage caused by stringing	92,400 m ²	415,800	83,160
Damage from access to work sites	28,400 m ²	127,800	25,560
Additional costs	various	49,450	9,890
Subtotal		1,227,075	245,415
External audit 2%		24,542	4,908
Subtotal		1,251,617	250,323
Contingencies 20%		250,323	50,065
Total		1,501,940	300,388

11. IMPLEMENTATION SCHEDULE

123. Barqi Tojik will not allow construction activities in specific sites of the alignment to begin until land acquisition and payment of compensation and cash assistance have been satisfactorily completed, and the site is free from encumbrances.

Table 20 shows the implementation schedule in its relative time order. The absolute dates will be inserted if the deadline for the start of the engineering design can definitively be provided

Table 11-1 Implementation Schedule for the Land Acquisition and Compensation Procedure

Date and Period of Time	Activities	Results
Day of start of final line design Estimated 90 days	<ul style="list-style-type: none"> - Contractor starts final identification of HVTL with definite location of towers - Contractor distributes information leaflets to all possibly affected households - Detailed assessment of areas required on a permanent base and of temporary losses of crops - Identification of all affected land owners or land use right holders by contractor (with support of Jamoat and collective farm representatives) - Agreement upon identified land sizes by representatives of affected households and contractor and affirmation of usage rights by AFs 	<ul style="list-style-type: none"> - Several hundred leaflets distributed to the population along the planned HVTL - All forms (attachment 1 part 1 of Implementation Manual) are signed by representative of AFs and of contractor and sent to the project Commission for Valuation of Losses and Compensation
Day of acceptance of final HVTL design of contractor by PMU Estimated 60 days	<ul style="list-style-type: none"> - Commission for Valuation of Losses and Compensation starts working in both concerned Rayons - Land sizes required are to be confirmed and valuation of compensation payments arranged 	All forms (attachment 1 part 2 of the Implementation Manual) are signed by representative of AFs and of commission and sent within 5 days to Barqi Tojik PMU via the Rayon Hukumat
Day of getting the documents from Hukumats Estimated 30 days	<ul style="list-style-type: none"> - Barqi Tojik (PMU) and working group (Monitor, PMU resettlement specialist, ADB representative) check all documents - PMU assigns payment - Affected households are informed and come to BT cash desk in order to collect their compensation money. - All affected households confirm with their signature that payment has been made according to the agreements. 	<p>The payment orders by PMU are delivered to concerned BT staff and money is transferred to affected households.</p> <p>All payments are confirmed by records.</p>

Not more than 20 days after money transfer to affected households Estimated 10 days	- External Monitor checks payment to the affected households by Jamoat level meetings	No complaints have been raised and no irregularities reported
Subsequently	- Monitor prepares short report with the recommendation to start the construction work	Report handed to PMU
Subsequently	- PMU sends Monitor report to ADB - ADB clears completed compensation process	Report handed to ADB BT obtains clearance
Subsequently	- Start of civil works	

12. MONITORING AND EVALUATION

124. The implementation of the LARP will be monitored regularly to help ensure that it is implemented as planned and that mitigation measures designed to address the Project's adverse social impacts are adequate and effective.

12.1 Internal Monitoring

125. Internal Monitoring will be conducted by the PMU. Internal Monitoring and Evaluation (M&E) reporting will cover the following:

- a. Compliance with land acquisition and resettlement compensation policies;
- b. Adequacy of the organizational mechanism for implementing the LARP;
- c. Fair and judicious handling of complaints and grievances;
- d. Compensation payments to AFs made as mandated by the LARP; and
- e. Success in restoring the AF's incomes to pre-project levels.

126. Internal monitoring will be carried out on a monthly basis and will be reported to ADB on a quarterly basis until the end of the compensation and rehabilitation process. The PMU will be responsible for determining if any follow-up actions are necessary and ensuring these actions are undertaken.

Prior to the delivery of compensation payments to the AFs, the PMU will announce the compensation dates, including a detailed compensation schedule community by community. No construction in the affected areas will commence until the payment of compensation has been fully completed.

12.2 External Monitoring

127. Barqi Tojik will hire an external monitoring agency (EMA) to carry out external monitoring and post-implementation evaluation of land acquisition and resettlement. Barqi Tojik will prepare the terms of reference (TORs) for the EMA (cf. attachment C as an example of TORs for the EMA). The TORs for the EMA and the selection of the monitor will require the prior consent of ADB. It is recommended that the monitor be sourced locally (i.e., within Tajikistan). The EMA will provide Barqi Tojik and ADB with the following reports:

- a. Baseline and Inception Report: to be submitted to Barqi Tojik and ADB within one month following EMA's mobilization.
- b. Payment completion report (one for each Hukumat) – to be submitted to Barqi Tojik and ADB after delivery of compensation payments has been completed in each Hukumat. The payment completion report should particularly focus on:
 - A description of monitoring and evaluation activities;
 - A report on implementation of all aspects of the LARP;
 - Citing deviations, if any, from the provisions and principles of the resettlement policy specified in the LARP;
 - Identification of problems, issues and recommended solutions; and,
 - Description of findings in relation to whether the project activities have been completed as planned and budgeted, and recommendations, timetable and budget for addressing outstanding problems.

-
- c. Post-resettlement implementation evaluation study one year following completion of resettlement in the Kairakhum-Asht transmission line.

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Attachments

Attachment A:

Regional Power Transmission Project: Land Acquisition and Resettlement Plan

Summary of the *Implementation Manual* for Barqi Tojik (BT), Republic of Tajikistan

1. Objectives

A Land Acquisition and Resettlement Plan (LARP) with all its details according to the management rules of the Asian Development Bank and Barqi Tojik as an implementing agency is of little value for the local stakeholders in the project area. Although the final LARP will be put on the internet, a more practical paper is required in order to allow for a broader dissemination of information and guidelines for both the affected population and the locally involved representatives of the public administration. Therefore, an implementation manual has been prepared prior to the assessment and compensation of losses.

This manual provides the most essential information from the LARP regarding its basic philosophy and demonstrates the procedure of land identification, valuation of losses and the implementation of the compensation including the grievance mechanism.

2. Content:

§ 1 Philosophy of Project

In this chapter the “philosophy” of the project is explained that no work can start prior to a satisfactory assessment and compensation of all losses. The chapter also refers to the grievance mechanism and the principle of participation of representatives of the local population in decision making and monitoring.

§ 2 Principles for Land Acquisition and Compensation

Here, the process of land acquisition is explained in detail so that the stakeholders can understand that the valuation of all losses will be made in a very transparent way and that all permanent (land) and non-permanent losses (harvest) will be compensated prior to construction.

§ 3 Obligations of Contractor

This chapter explains clearly the role of the contractor during the final design of the high-voltage transmission line, during the assessment of losses and during the process of valuation of the losses.

§ 4 Commission for Valuation of Losses and Compensation

In chapter 4 the composition of the commission is explained, as well as the fact that representatives of the affected people can join the team. It is also explained which criteria are to be adopted by the commission and which values are given to the different categories of losses.

§ 5 Modalities and Periods of Payment

Here, the way is described in which after the assessment of losses and the valuation of the compensation payment will be made so that the principles of accountability can be observed as far as possible.

§ 6 Grievance Redress Mechanism

Chapter 6 describes the grievance redress mechanism on its various levels and explains what affected people can do in order to take advantage of the mechanism.

§ 7 Implementation Schedule for Land Acquisition

A table summarizes the various steps and the time intervals in which the various measures have to be adopted and/or implemented.

There are some **attachments** with formats that allow for an easy adjustment of the different steps during the assessment of losses and the valuation

Attachment 1: Forms

Attachment 2: Price Lists

Attachment 3: Information Leaflet for Affected Households

Attachment B:

Model Terms of Reference for an External Monitor

1. Introduction

An External Monitor or External Monitoring Agency (EMA) shall be appointed to monitor the Land acquisition and Resettlement compensation process, and to verify that compensation, resettlement and rehabilitation have been implemented in accordance with the agreed Land Acquisition and Resettlement Plan.

2. Scope of Works

The EMA appointed shall undertake the following tasks to independently externally monitor the implementation of the Project Land Acquisition and Resettlement Plan and associated mitigation measures:

A. Baseline

Provide internal monitoring report to be verified by:

- (i) Random review of DMS forms for correct inventory of assets and entitlements. This review is to cover 20% of all the DMS forms;
- (ii) Random review of entitlement and compensation documents (20%) to ensure that the assessment of compensation is based on the agreed entitlement matrix and that all entitlements have been accurately applied.
- (iii) Random review of status of affected households within the LAR impact areas.

B. Evaluation of Delivery

The delivery of entitlements will be monitored as follows:

- (i) Field check, site visits coordinated with the resettlement activities that are taking place.
- (ii) Evaluation of the quality and timeliness of delivering entitlements.

C. Evaluation of Consultation and Grievance Procedures

Consultation and grievance procedures will be monitored to:

- (i) Assess whether grievance procedures are adequately implemented,
- (ii) Identify, quantify and qualify the types of conflicts and grievances (if any) reported and resolved.
- (iii) Provide assistance when required to APs to address grievances, as required, and act as observers on the grievance procedure.

This monitoring will be done by public meetings with affected persons (one meeting per Rayon). During these meetings APs can present their complaints and statements.

D. Declaration of Successful Implementation and Follow-up Actions

The EMA will provide a report to:

- confirm all compensation has been paid;
- make recommendations for follow-up actions; and
- identify lessons learned.

3. Implementation schedule

The EMA will be hired by the BT PMU in time for LARP implementation. The EMA will conduct formal M&E activities as soon as compensation payments are completed.

4. Reporting

The following reports will be required for submission from the EMA:

(i) Monitoring Report (affected Hukumats/Jamoats) – to be formally submitted by the EMA directly after compensation has been distributed in each of the affected areas. The Monitoring Report should particularly focus on:

- description of field activities by EMA;
- report on implementation of all aspects of the LARP, especially the full payment of compensation costs to affected households;
- deviations, if any, from the provisions and principles of the compensation policy specified in the LATP;
- identification of problems, issues and recommended solutions; and
- description of findings in relation to whether the project activities have been completed as planned and budgeted, and recommendations, timetable and budget for addressing outstanding problems.

(ii) Formal Verification Report to verify successful LARP implementation, to be issued within one week after compensation and to verify that LARP procedures for all affected areas are completed prior to construction.

Attachment C:

Government Decree 515 on Procedures for Compensation of Damages to Land Users and the Loss of Agricultural Production of 30th December 2000

Defines:

the procedure for compensation of losses to agricultural land users and for agricultural production losses related to withdrawal of land plots for state and public needs. Compensation is made at the stage of preliminary approval of the project for which land acquisition is necessary; location is confirmed at the moment of transfer of rights to the new land user.

The compensation process is summarized as follows:

- Losses should be fully compensated in cases of withdrawal of land for state needs that result in the termination of land use rights, at the expense of the natural and legal persons to whom the new land use right is given. The following should be considered while defining the amount of losses:

- cost of registration of land use rights adjusted for inflation;
- cost of immovable property located at the land plot, including fruit trees, berries, protective and other perennial plantings;
- cost of unfinished works (tilling, application of fertilizers, planting and other works);
- cost of unharvested agricultural crops; and
- other losses to land users, associated with early termination of his/her obligation under contracts or agreements.

- Upon withdrawal of agricultural land, losses to the land users are defined based on the relevant documents provided by the land user. The size of the loss in case of withdrawal or temporary occupation is defined as follows:

- valuation of houses and other structures located on the land plot, or outside of the land plot, is conducted at book value adjusted for depreciation in cases when further use is impossible,
- valuation of productive trees as well as protective and other plantings is conducted at their book value;
- non-productive fruit trees and berries are valued based on actual expenses incurred by land users;
- cost of soil preparation, planting and handling and other types of work – according to the set prices/tariffs;
- cost of purchasing seedlings, according to the prices of the nurseries or on the market price;
- cost of mineral fertilizers based on current sales prices;
- production of organic fertilizers on-farm is based on the actual costs;

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- cost of incomplete production (tilling, application of fertilizers, planting, handling and other types of work) is defined based on the actual expenses for the finished works, based on the tariffs for individual work types, as well as cost of planted seeds, applied organic and mineral fertilizers and other costs, but not used in relation to the withdrawal or temporary occupation of the land plot;
 - costs of seeds and fertilizers are reimbursed based on the actual expenses for their production or at the market price;
- Legal and natural persons to whom the land plots are given shall pay the cost, or relocate at their own expense, the buildings and structures, or reconstruct new similar buildings, structures and other objects, subject to agreement with the land user. The relevance of the relocation and rehabilitation of buildings and structures to a new location, construction of new buildings and other objects in exchange for demolished ones is defined by the commission that is established according to the Regulation.
- Expenses related to the compensation of losses to the land users shall be provided for in the construction/design estimates of the projects for the land that is to be withdrawn or temporarily occupied, or budgeted for in the operating profit of the entity/person to whom the land plots will be given. Land plots under agricultural crops are usually transferred to the new land user after the harvest. In exceptional cases, when land acquisition is done before harvesting, the cost of the potential yield is reimbursed. The yield is defined as the average value for the most recent 5 years of planting the crop on the farm as well as the actual selling price in the area. Potential fodder crop yield is translated into the fodder unit. In this case the cost of unfinished production is not reimbursed.
- Losses for termination of using water sources (wells, ponds, bore holes etc.) are reimbursed based on the actual expenses or based on the cost of construction works for new water sources equal to the water output. Other damages to land users related to withdrawal or temporary occupation of land plots are defined based on the actual expenses.
- When demolishing structures in private ownership associated with the withdrawal of land for state and public needs in cities and other settlements, the owners should be compensated for the buildings and structures (houses, barns, cellars, wells etc.) or they are given apartments. Other citizens permanently residing at least one year in a building to be demolished are given alternative dwelling space.
- Companies, institutions and other organizations regardless of ownership status, to whom the land is given, should compensate the cost of land acquisition at their own expense. The same applies for collective farms and orchards.
- For the procedure to identify damages to land users and losses of agricultural production associated with withdrawal of land rights or temporary occupation, a valuation commission is established, as follows:
- Deputy chairman of the district or city – Head of the commission;
 - Chairman of the district land committee;
 - District (city) architect;
 - Representatives of the water authority;

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- Representatives of the district environment protection committee;
 - Representatives of sanitary and fire inspection authorities;
 - Representatives of land users, whose land plot is to be withdrawn or temporarily occupied;
 - Representative of the enterprise, organization or institution interested in land acquisition as well as representatives of other authorities at the discretion of the local Hukumat.

The Commission's work results in a statement indicating the size of losses of agricultural production to be compensated. The document shall be reviewed and approved by the local Hukumat.

Disputes between the parties over the degree of the loss may be appealed in court.

**Regional Power Transmission Project:
Land Acquisition and Resettlement Plan**

LARP Implementation Manual



**Barki Tajik (BT)
Republic of Tajikistan**

Dushanbe, September 2014

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Abbreviations and Local Terms:

ADB	Asian Development Bank
AF	affected family/families
AP	affected person/s
AH	affected household/s
BT	Barki Tajik
CBO	Community Based Organization
CVLC	Commission for Valuation of Losses and Compensation
DMS	Detailed Measurement Survey
EMA	External Monitoring Agency
<i>Hukumat</i>	administration of Rayon
HVTL	High Voltage Transmission Line
IOL	inventory of losses
<i>Jamoat</i>	Local government, rural administrative unit
kV	Kilovolt
LA	land acquisition
LARP	Land Acquisition and Resettlement Plan
ME	Ministry of Energy
NGO	Non Governmental Organization
<i>Oblast</i>	Region
PMU	Project Management Unit (of Barki Tajik)
<i>Rayon</i>	District
sqm	square meter

Foreword

This Implementation manual is an add-on for and a specification of the Land Acquisition and Resettlement Plan (LARP) for the Ayni - Penjikent 220 kV Transmission Line Project.

The Manual is based of an earlier paper for the 220 kV transmission line (TL) from Kairakhum to Asht and aims at providing condensed information for the regional and local stakeholders on the philosophy of the project and the principles for permanent and temporary land acquisition and all compensation for losses during and after the construction of the transmission line.

The Manual summarizes the obligations of all stakeholders within the land acquisition and compensation process and it describes the main steps regarding

- (i.) the identification of permanent and temporary land requirements,
- (ii.) the assessment of the temporary and permanent losses,
- (iii.) the valuation of all types of losses, and
- (iv.) the procedure by which the affected household will get their compensation payments.

In the attachment there are forms which will be used for these four steps of the identification of losses and compensation process.

All stakeholders are kindly requested to work though this manual before initiating the valuation of losses and compensation process.

§ 1 Philosophy of Project

This LARP is based on the results of the inventory of losses (IOL) conducted in June and July 2014 using the 50 m wide right-of-way (ROW) of the preliminary alignment of the Ayini - Penjikent TL agreed upon by the IE and feasibility study consultants.

The key objective of this LARP is to provide an effective, practical guideline for BT PMU and the Project Management Team to implement the land acquisition and compensation processes according to a purpose-made sound planning principle and the requirements of the current prevailing legal norms of Tajikistan and in compliance with ADB guidelines.

To ensure that impact data are updated based on the final design and that AF are fully compensated and/or rehabilitated before their land is taken for construction purposes, ***two basic project implementation conditions*** related to this LARP are provided as follows:

1. LARP implementation:

Conditional to the update of the draft LARP based on detailed design, updated data on AF/AP and costs, to ADB and Government approval of the updated LARP, and to the mobilization of an independent monitoring agency;

2. Provision of no objection to the initiation of civil works in areas with impacts:

Full delivery of the compensation/rehabilitation program detailed in this LARP based on proof provided by a compliance report prepared by the external monitoring agency (EMA).

No civil works can start before full compensation payments according to the procedure as being described in this manual.

3. Great care is taken to prevent grievances.

This will be done through careful land acquisition design and implementation, by ensuring full AF participation and consultation, and by establishing extensive communication and coordination between the community, the PMU and the local governments.

§ 2 Principles for Land Acquisition and Compensation

2.1 The basic compensation/rehabilitation principles set in the Land Acquisition and Resettlement Plan (LARP) as established by Barki Tajik (PMU) according to ADB safeguards are:

- (i) Land acquisition (LA) will be avoided or at least minimized wherever possible:
 - a strategy to avoid land acquisition (i.e. of agriculturally used land and land with houses or other buildings) is to use, for the construction of towers, either
 - barren lands,
 - dead spaces on hills, or
 - untilled state owned land along channels and roads,
 - etc.
 - if land acquisition cannot be avoided an adapted strategy is to use the land with the lowest value, i.e.
 - pastures instead of rain fed land,
 - rain fed land instead of irrigated crop land,
 - irrigated crop land instead of orchards,
 - etc.
- (ii) No constructions will be demolished and households resettled wherever possible:
 - *possible* in this context means that detours by constructing additional corner towers and/or suspension towers can be made in order to avoid damages of houses and other economically valuable or culturally important properties.
 - If settlements or other buildings are completely blocking up the scheduled line corridor, the renouncement of demolishing any property might not be possible. In such cases, the contractors will strive for the lowest possible damage. For example, a final line corridor will be selected where
 - stables, adjoining buildings, storages buildings, etc. can be demolished instead of houses,
 - walls and fences instead of constructions of higher value can be dismantled.
- (iii) Compensation will ensure the maintenance of the affected people's (AP) pre-project living standards:
 - The *pre-project living standard* is related to all material and immaterial properties, and all sources of income which might be temporarily or permanently lost, etc. The latter may include:
 - a shop which could have no access for a limited period of time,
 - a workshop which may stop running for a few days during civil works,

- a person from the affected household which might be impeded to work for some days during demolishing and reconstruction of his stable or other buildings, etc.
- In cases, related to all material properties the claim for full compensation does not depend on formal ownership titles (cf. vii.).



Picture 1: An old and abandoned former Sovkhoz building might be used instead of inhabited houses.

Picture 2: Instead of the private houses in the background the field with just some single trees (to be cut down) should be used for the high voltage transmission line (HVTL).

- (iv) AP will be fully informed/consulted on compensation options:
 - Priority is given by the LARP for compensation in cash. This is related to land and all constructions and other properties.
 - In some specific situations it might be possible that compensation could also be provided in kind, e.g. land for land, but this is only possible where land which does not belong to private people or a former Kolkhoz exists.
- (v) AP's socio-cultural institutions will be supported/used:
 - In order to facilitate negotiations, local Aksakal, representatives of the Mahalla committees or board members of NGO may support the land acquisition and compensation process.
 - Both parts, the affected hh and the project staff may apply to these institutions for assistance.
- (vi) LA provisions will equally apply to women and men:
 - According to the Tajik law women and men are equal. The project will insist that all women affected and all men affected will receive equal compensation for all losses.
 - It will not be accepted that other people than the affected women themselves get the compensation payment.

- Immaterial losses and all losses with regard to income generating activities will be equally compensated even if they are based on informal businesses such as on women's handicrafts as a secondary occupation.
- (vii) Lack of formal title will not be a bar to compensation/rehabilitation:
- If one household does not have a formal land title but can prove that the household members use a certain area of land since years the land will be compensated if for example a tower will be constructed on the land or damages from stringing occur.
 - Attestation could be made by neighbours, the Mahalla committee, aksakal or other credible witnesses.
- (viii) Particular attention will be given to women-headed households and vulnerable groups:
- All households with women at their head can apply for support regarding the entire land valuation and compensation process. A representative of the project will provide any assistance with regard to applications, all negotiations, using the grievance redress mechanism, etc.
 - The same is adaptable for vulnerable households (e.g. households without any people able to work, households with only elder people, households with only handicapped adults, etc.).



Picture 3: Such elder collective farm buildings should be no restraint for the line construction. However, claims of ownership or usage have to be checked out.

Picture 4: Cemeteries as religious sites and cultural heritage should be avoided while selecting the locations for HVTL towers.

- (ix) LA will be conceived/executed as integral part of the project and LA budgets will be part of project costs.
1. All concerned parties included BT and PMU know that the LARP is an integrated part of the loan contract and that all provisions of the LARP have to be implemented according to the requirements.

2. The costs for resettlement/all compensations will be part of the project budget. BT and PMU are aware that budgets for compensation should be available at short notice after the identification process of damages and losses.

Table 1: Eligibility / Entitlement Provisions			
Loss Type	Entitled Persons	Entitlements	Implementation Issues
I. Permanent loss of land use rights	Holder of all kind of land use certificates <u>and</u> users according to common law	Compensation payment in cash for loss of land use rights equivalent to market value of gross produce of the affected land multiplied by 5 years	Value of losses according to price list of attachment 2.
II. Loss of crops	As above	Crops affected by the towers and by stringing or tower transport will be compensated in cash at market rate	Value of losses according to price list of attachment 2. Project will restore the land to its pre-construction condition.
III. Loss of trees	Owners of affected trees	Fruit bearing trees: compensation in cash based on 1 year yield x the number of years needed to re-grow the tree at productive stage. Not yet productive fruit trees: compensation in cash based on inputs x year x average age of trees. Seedlings: based on seedling cost plus inputs x 1 year. Wood trees: cash compensation based on wood volume x market value of the wood.	Value of losses according to price list of attachment 2.
IV. Vulnerable households	Affected household	Additional cash allowance for transport costs, etc., lumped sum of 10% of the values under I-III	

(x) Compensation will be fully provided prior to land occupation:

- This means that the contractor is not allowed to start construction works prior to the payment of all agreed compensation titles.
- This implies that all grievances are to be settled prior to the beginning of civil works.
- Only cases pending at court with regard to the level of compensation payment will not have an effect on the start of constructions works. In such cases, however, the compensation payment as determined by the Commission for Valuation of Losses has to be paid before start of construction work.

2.2 Barki Tajik will guarantee the implementation of the compensation and rehabilitation framework as established by the Land Acquisition and Resettlement Plan (LARP).

2.3 The LARP also sets the eligibility/entitlement provisions for the project's impacts as detailed in table 1; cf. at the head.



Picture 5: The existing stable on the right side in the back of the courtyard is of low value. The house in the middle of the picture is already abandoned. Compensation in this case is much lower than construction of additional towers to bypass this farmstead.

Picture 6: Close row of houses in the case of a TL in Khatlon has led to the suggestion to built two additional angle towers and move the line corridor some hundred meter eastwards.

§ 3 Obligations of All Concerned Parties

3.1. Ministry of Energy:

The *Ministry of Energy* (ME) will have overall responsibility for LARP preparation, updating, implementation and financing and will exercise its functions via the *Project Management Unit* (PMU) at Barki Tajik.

The EA will report to ADB monthly.

3.2 Project Management Unit:

At the PMU, LARP implementation tasks will be handled by BT-PMU *Monitoring Department* and the resettlement team.

This team will collaborate with BT district offices and with the *District governments (Hukumat)* and the *local administration Jamoat* in the implementation of the LARP at the local level.

To carry out activities in the field the Monitoring Department will liaise with *BT's district offices* and mobilize their personnel as needed.

The PMU will internally monitor and report to the EA on LARP implementation.

3.3 Contractor:

After the final line survey by his agents, the *contractor* for the HVTL will identify all affected families and estimate the permanent and temporary land requirements. He will forward the information to the *Hukumats* and the *Commission for Valuation of Losses and Compensation* (CVLC).

The contractor is obliged to carry out the land acquisition prior to construction and in full accordance with the LARP. In particular, the contractor will

- identify the owner/land use right holders of the land for all
 - o temporary losses from construction work, i.e.
 - damages of crops and agricultural infrastructure such as
 - irrigation/drainage channels,
 - field paths,
 - fences,
 - walls,
 - etc.;
 - including all damages on areas required for the access to the
 - construction sites,
 - site camps,
 - storage sites of construction material; and

- all areas used for stringing¹),
 - permanent losses; i.e.
 - the land required for the high voltage line towers of
 - approx. 50 sqm for foundation areas of suspension towers; and
 - 100 sqm for angle towers,
 - all properties in the stringing corridor which must be demolished in order to allow for construction work, and
 - all buildings which have to be shifted due to the requirement of having a 50 m corridor (RAW);
- notify the coordinates of the land, the full name of the owner and the size of the land for all areas of the same owner required on a permanent and/or temporary basis and send the document (see form 1 part 1 under attachment 1) with signature of the land owner / land use right holder to the Commission for Valuation of Losses and Compensation.

For this task, the contractor will get the support of the local administration (*Jamoats*) and the *Hukumat* land department (see below).

- Support the Commission for Valuation of Losses and Compensation during the valuation mission in the field (i.e. show the sites, provide information on civil works, etc.).

3.4 Hukumat of Rayons:

Hukumat will support the contractor during the identification process of affected land owners. For example, the representative of the *Hukumat* land department will identify

- individual land owners or owners of individual land usage right titles (where the land titles have already been assigned to individuals or members of family farms) or
- collectives of land owners or collectives owners of land usage right titles (adaptable where former state farm land has not yet been distributed or been distributed to groups of individuals not belonging to one family).

In such cases the legal representatives of the collective farms have to be identified, too.

The *Hukumat* will provide, in case of disagreement, assistance to BT and PMU for finalizing agreements with the affected families (AF) on the compensation amounts due to them based on the agreements with the Commission for Valuation of Losses and Compensation.

For payment of compensation adjudged by the Commission, two alternatives have been deliberated:

- The *Hukumat* will physically deliver compensation payments to the AF, and
- BT will pay directly to the AF.

¹ The ROW for stringing is four meters on average, this means 4,000 sqm per kilometer.

According to BT and ADB, the second solution is favoured as easier, faster and more transparent.

BT PMU-Evaluation Unit will monitor the timely payment of compensation and its proper documentation and will not approve construction commencement until compensation is completed and land area and crop damages are appropriately compensated for. An account of this process, including amounts disbursed and verification of receipt by AFs will be integral part of the PMU's monitoring report.

3.6 Jamoats:

Jamoats are official stakeholders of the Project. *Jamoat* agents will support the contractor during his identification work of the affected land owners or holders of land usage titles.

One representative of the *Jamoat* (preferably its vice-chairperson) will join the CVLC.

3.6 Community Based Organizations:

If deemed necessary during LARP implementation, these institutions may be joined in the execution of the needed activities by *Community Based Organisations* (CBOs) and/or Non Governmental organizations (NGOs). Such support could be relevant if

- If unexpected resettlement would yet be necessary,
- If vulnerable households would require additional support.

3.6 Project Management Consultant

During project implementation, the *project management consultants* will include in their team an international and a local resettlement specialist. The project consultants will assist in updating and implementing the LARP, including the delivery of compensation/rehabilitation provisions. They will provide training to PMU staff regarding the LARP implementation. In particular, the consultants will:

- update the LARP with regard to most current figures (especially prices for agricultural products and all other materials which could be affected by the construction work),
- contact and inform all relevant stakeholders about the project and the respective processes,
- provide training with regard to the philosophy of the LARP and its principles,
- support the establishment of the Commission (CVLC),
- provide training and, in case of need, advice at any time of the process,
- advise BT with regard to the various necessary steps,
- etc.

3.7 External Monitoring Agency:

Due to the small number of AF, the project organization for resettlement has been limited to the PMU, the District Barki Tajik offices, the AP themselves, with the *hukumat* officers performing their land planning duties and acting as advisor and advocate for AFs as required.

However, Barki Tajik will hire an *external monitoring agency* (EMA) to carry out the obligatory external monitoring and, in case of need, post-implementation evaluation of resettlement activities.

The EMA will be hired by the BT PMU in time for LARP implementation. The EMA will conduct formal M&E activities until compensation payments are completed.

Monitoring in this context means:

- random review of detailed measurement forms (DMS) for correct inventory of assets and entitlements. This review is to cover 10% of all the DMS forms;
- random review of entitlement and compensation documents to ensure that the assessment of compensation is based on the agreed entitlement matrix and that all entitlements have been accurately applied.
- random review of status of affected households within the LAR impact areas.
- evaluation of Delivery. The delivery of entitlements will be monitored as follows:
 - field check, site visits coordinated with the resettlement activities that are taking place,
 - assessment of the quality and timeliness of delivering entitlements;
- evaluation of consultation and grievance procedures. Consultation and grievance procedures will be monitored to:
 - assess whether grievance procedures are adequately implemented,
 - identify, quantify and qualify the types of conflicts and grievances (if any) reported and resolved;

The EMA will also provide assistance when required to APs to address grievances, as required, and act as observers on the grievance procedure.

Eventually, the EMA will be charged with the declaration of successful implementation and follow-up actions. The EMA will provide a report to:

- confirm all compensation has been paid;
- make recommendations for follow-up actions; and
- identify lessons learned.

Post-implementation **evaluation** of resettlement activities means that if, against all expectations, households will be physically resettled and the EMA will follow-up the resettlement. After completion of all resettlement activities, the EMA will assess, whether or not, the APs have fully been compensated and all possible grievances settled.

§ 4 Commission for Valuation of Losses and Compensation (CVLC)

4.1 One commission will be established for each of the two project areas, i.e. one for Sughd and one for Khatlon.

4.2 The Commission is responsible for

- assessment of the area required for permanent and for temporary usage,
- assessment of the value of the land and the crops including all trees according to the list under the LARP (cf. also attachment to this Manual),
- preparation of the compensation document to be send to BT PMU.

4.3 The commission consists of the following seven persons:

- a) one vice chairperson of the Rayon administration (*Hukumat*),
- b) the representative of the Rayon land office or the Rayon architect,
- c) one representative of each Jamoat administration concerned
 - all *Jamoat* representatives are participating in the commission only in their affected area,
- d) one representative of a Community Based Organization (CBO) from one of the *Jamoats* concerned (preferably from a farmer's organization),
- e) one regional representative of BT or a staff member of from the PMU M+E unit (resettlement officer),
- f) two representatives of project-affected families, one of whom should be representative of village women or vulnerable groups, will be invited to join the Commission for Valuation of Losses and Compensation.

The Jamoat repressentatives under c) will come from the following ***Jamoats***:

Ayni Rayon:

- (i.): Dar-Dar (Zerabad),
- (ii.): Urmitan.

Penjikent Rayon:

- (i.): Woru,
- (ii.): Rudaki,
- (iii.): Loikh Sherali,
- (iv.): Amondara,
- (v.): Sudhzina,
- (vi.): Khalifa Hassan,
- (vii.): Tshinor, and

(viii.): Serazm.

4.4 The commission works on a voluntary basis. Transport costs will be paid by PMU through the Rayon representatives or the M+E departments' resettlement officer. For the work the members of the commission will receive a per diem of 15 TSJ per day. On request, there will be a compensation for phone calls, etc.

All expenditure has to be approved in advance by the PMU.

4.5 Handling of the valuation process:

- Step a) The commission will visit the affected areas together with the representative of the contractor after the final line design and the predefinition of the towers and the stringing corridors,
- Step b) Together with the (previously invited) land owner or land usage right owner/s or the owners of any other property, the exact dimension of the losses will be determined and form 1 completed,
- Step c) After agreement upon the dimension of the losses and the valuation the entire document (form 1 part 1 and 2 of attachment I) has to be send to BT PMU in Dushanbe.

§ 5 Modalities and Periods of Payment

5.1 Principles:

- a) Payment has fully to be accomplished prior to construction. No construction work can be initiated before full payment of agreed amount of compensation.
- b) Full payment can be testified by the affected land owner / his spouse or the representative of the land / property owner as documented in Form 1.

5.2 Procedures:

- a) Form 1 will be send to BT PMU and crosschecked.
 - b) BT PMU will arrange the disposability of cash money for the compensation payments prior to the dates of the payoffs.
 - c) After acknowledgement of the exact payment amount, BT PMU representatives or the regional BT representatives will pay the compensation money to the affected persons mentioned under 5.1b.
- If available, the payment can also be made by transfer to the bank accounts of the APs.
- d) After all compensation payments have been made, the external monitor will check the payments and send a confirmation letter to BT PMU.
 - e) After reception of the confirmation letter, BT PMU will inform the contractor to start civil works.

According to Tajik law, taking the case to court can be related only to the valuation of the losses and the determination of the level of compensation (payment). The question of the expropriation for the construction of a HVTL itself is not negotiable and a case in court cannot delay construction work.

- f) For case where the valuation results and the compensation proposals are pending at the court, BT PMU will reserve a certain amount of money to be able to pay for possible surcharges.

§ 6 Grievance Redress Mechanism

6.1 Great care is taken by the project management to prevent grievances. This will be done through careful land acquisition design and implementation, by ensuring full AF participation and consultation, and by establishing extensive communication and coordination between the community, the PMU and the local governments.

This notwithstanding, complaints are sometimes unavoidable and a grievance mechanism is being adopted for the project to allow the APs the opportunity to appeal against any disagreeable decision, practice or activity arising from compensation/rehabilitation process.

Efforts to make APs fully informed of their rights and of the procedures for addressing complaints will continue during the updating of the LARP and at the time of valuation of losses and the assessment of compensation requirements.

6.2 The grievance mechanism has been established by the Land Acquisition and Resettlement Plan (LARP).

Complaints and grievances will be addressed through the following steps and actions (see Figure next page):

First Step: One joint Project Grievance Redress Committee for both concerned *Hukumats* will be established. It includes two members of the affected community (including AP's and non-APs), one representative of each concerned *Jamoat* (just for cases on the territory of the *Jamoat itself*) and one representative of each of the two *Hukumat* Land Councils, to be chaired by one of the two *Hukumat* representatives (to be agreed upon internally by the two *Hukumats*). Altogether, the committee will include five persons with changing participation of the *Jamoats*.

Complaints can either be declaimed directly by the concerned APs (e.g. in the *Jamoat* office in presence of the member of the committee) from the *Jamoat* or send by letter to the committee.

Grievances must be heard and resolved by the Project Grievance Redress Committee within 14 days of submission of the complaint.

Second Step: If the Project Level Grievance Redress Committee is not able to resolve the grievance within a 14-day period, the complaints should be presented via the BT Rayon representative to BT PMU at a central level.

The elected representatives of the APs will have the opportunity to mediate by providing their written comments and proposals to the PMU. A final decision will be made by the Director of the PMU after the assessment of the case and a careful preparation of the decision by the PMU resettlement representative.

Grievances must be heard and resolved by the Director of the PMU within 7 days of submission of the complaint.

Third Step: If no solution is reached within 7 days at BT PMU level, the APs can further submit their case to the appropriate court of law.

However, as mentioned in § 5, according to Tajik law, taking the case to court can be related only to the valuation of the losses and the determination of the level of compensation

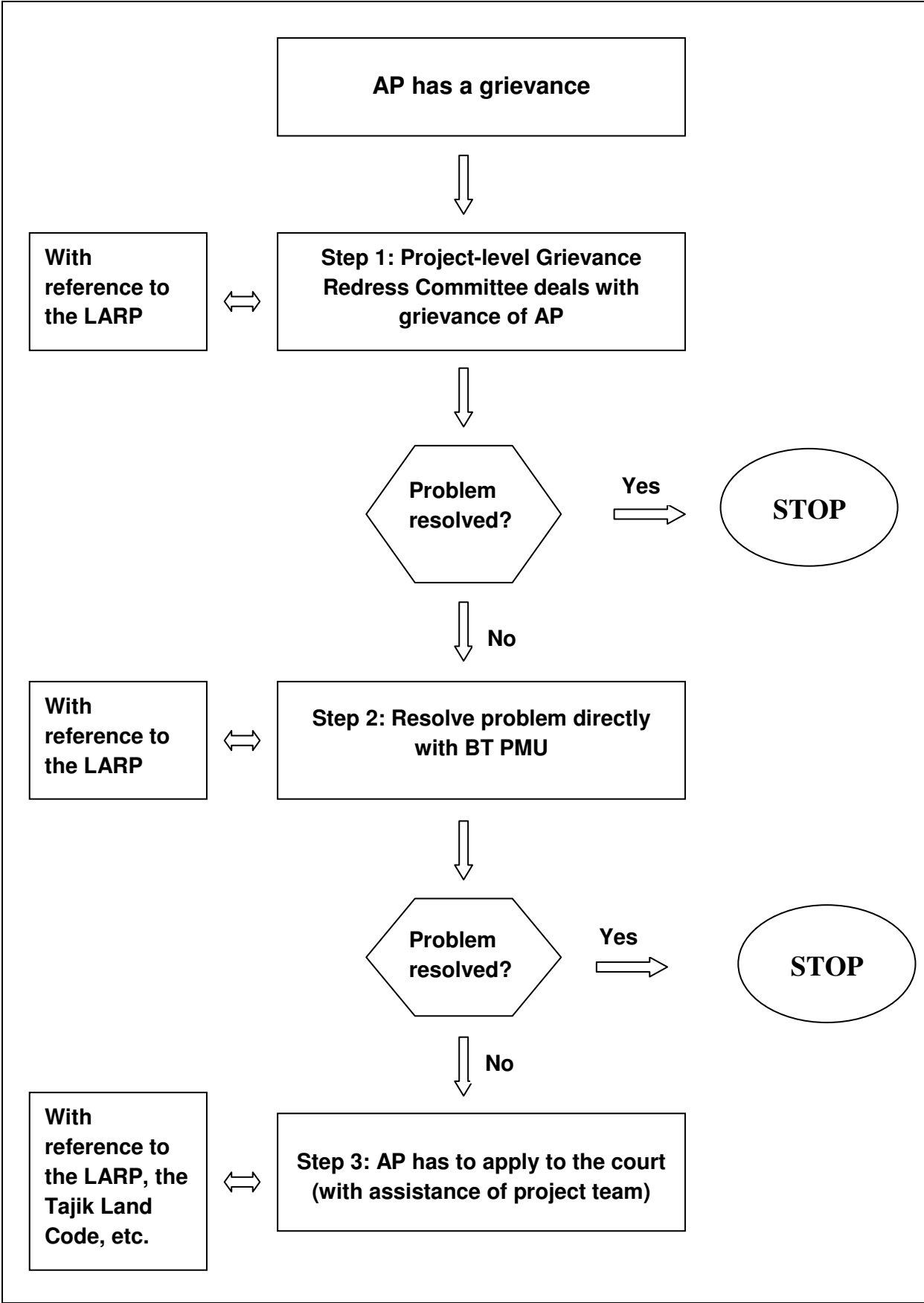
(payment). As a result of the court decision, the valuation of the damages may raise. However, the expropriation of land or the fact that the line construction will cause damages on land and buildings is irreversible.

6.3 While applying the Grievance Redress Mechanism, APs can seek support from the BT PMU resettlement representative who on his part might be assisted by the national and international consultants.

The contact addresses/phone numbers will be available at the level of each concerned *Jamoat*.

In addition, information leaflets on how the entire process will be managed (with all contact addresses) will be distributed by the contractor during his final line survey and the valuation of losses procedure.

Figure 1: Grievance Redress Process



§ 7 Implementation Schedule for Land Acquisition

The following implementation schedule has been agreed upon by ADB, Barki Tojik (PMU) and concerned Rayon administrations (*Hukumats*) and is binding for all concerned parties:

Date and Period of Time	Activities	Results
Contractor starts final Identification of HVTL with definite location of towers Estimated 90 days	<ul style="list-style-type: none"> - Identification of all affected land owners or land use right holders by contractor. - Detailed assessment of permanent areas required and of temporary losses on land as agreed upon by affected household and contractor. 	All forms (attachment 1) part 1 are signed by representative of affected family and of contractor and send to the commission as pointed out in §4.
Concurrently	<ul style="list-style-type: none"> - Contractor distributes information leaflet to all possibly affected households 	Some hundred of leaflets distributed to the population along the planned HVTL.
Day of acceptance of final HVTL design of contractor by PMU Estimated 60 days	<ul style="list-style-type: none"> - Commissions as pointed out in §4 start work in all concerned Rayons - Land sizes required are to be confirmed and valuation of compensation payments arranged. 	All forms (attachment 1) part 2 are signed by representative of affected family and of commission and send within 5 days to Barki Tajik PMU via the Rayon Hukumat.
Day of getting the documents from <i>Hukumats</i> Estimated 30 days	<ul style="list-style-type: none"> -Barki Tajik (PMU) and working group (Monitor, PMU resettlement specialist, ADB representative) check all documents - PMU assigns payment either directly from fund-in-trust or via Ministry of Finance. 	The payment orders by PMU are delivered to concerned institution and money is transferred to BT regional cash desk or handed over to PMU agents for payment in the Rayons.
5 days after money transfer from PMU/Ministry of Finance to field agents or BT regional cash desks Estimated 15 days	<ul style="list-style-type: none"> - Affected households are informed and come to BT cash desk in order to draw their compensation money or - people are paid directly by agents of BT PMU, or - payment is made by transfer from BT to the APs bank account. 	All affected households confirmed with their signature that payment has been made according to the agreements.
20 days after money transfer to Hukumat cash desk Estimated 10 days	<ul style="list-style-type: none"> - External Monitor checks payment to the affected households by Jamoat level meetings. 	No complaints have been raised and no irregularities reported.
After that	<ul style="list-style-type: none"> - Monitor prepares short report with the recommendation to start the construction work. 	Report handed to PMU.
After that	<ul style="list-style-type: none"> - PMU sends Monitor report to ADB. 	Report handed to ADB.
After that	<ul style="list-style-type: none"> - Start of construction works. 	

The grievance redress mechanism is adapted parallel to this implementation schedule.

Attachment 1: Forms

Form 1: Land Acquisition and Compensation

Part 1: Identification of losses

Rayon:.....Jamoat.....
Village.....

Personal data

Name of land owner/right holder:.....
Address of land owner / phone number:.....
.....
Other person authorized representing the household:.....
Status to land owner/right holder:.....
Bank account (if available):.....

Compilation of losses:

a) Permanent losses of land for towers:

Coordinates:.....Size:.....m²
Coordinates:.....Size:.....m²
Coordinates:.....Size:.....m²

b) Temporary losses of crops:

Coordinates:.....Total Size:.....m²
Out of it type of crops:/.....m² Type:...../.....m²
Out of it type of crops:/.....m² Type...../.....m²
Out of it type of crops:/.....m² Type...../.....m²
Out of it type of crops:/.....m² Type...../.....m²

c) Permanent losses of crops:

Coordinates:.....
Type of trees/vines, etc.:.....Number:....
Type of trees/vines, etc.:.....Number:....
Type of other (e.g. timber) trees:.....Number:....

Type of other (e.g. timber) trees:.....Number:...

d) Losses of agricultural infrastructure

Channels (diameter in m):m Length in meters:.....

Channels (diameter in m):m Length in meters:.....

Fence (in m):.....Type²:.....

Fence (in m):.....Type:.....

Other (.....) quantity:.....

Other (.....) quantity:.....

e) Losses of buildings:

Description of building a)

.....

Description of building b)

.....

Description of building a)

.....

Confirmed that personnel data, sizes of land identified and crops to be damaged are correct:

Date:...../...../2012

.....

Signature of land owner/right holder

.....

Signature of representative of contractor

To be send immediately to Oblast level Commission of Valuation of Losses and Compensation

² Simple wires = A, barbed wires = B, simple wood fence = C, grid fence = D

Part 2: Valuation and compensation

It is confirmed that the following compensation has to be paid to the affected land owner/right holder named under Part 1:

a) Permanent land for towers:

Size:.....m² Value in TJS:.....

b) Temporary losses of crops (according to list of attachment 2):

Size:.....m² of crops:..... Value in TJS:

Size:.....m² of crops:..... Value in TJS:

Size:.....m² of crops:..... Value in TJS:

Size:.....m² of crops:..... Value in TJS:

c) Permanent losses of crops:

Number..... of trees/vines:..... Value in TJS:.....

Number:..... of trees/vines:..... Value in TJS:.....

Number..... of other trees..... Value in TJS:.....

Number..... of other trees..... Value in TJS:.....

d) Losses of agricultural infrastructure

Channels (diameter in m):m Length in meters:..... Value:.....TJS

Channels (diameter in m):m Length in meters:..... Value:.....TJS

Fence Type:..... Length in m:..... Value:.....TJS

Fence Type:..... Length in m:..... Value:.....TJS

Other (.....) quantity/length:..... Value:.....TJS

Other (.....) quantity/length:..... Value:.....TJS

e) Losses of buildings

Type:..... Value:.....TJS

Type:..... Value:.....TJS

Type:..... Value:.....TJS

Total amount stated for a) in TJS:
Total amount stated for b) in TJS:
Total amount stated for c) in TJS:
Total amount stated for d) in TJS:

Total amount for compensation TJS:

Confirmed that sizes of land, crops / assets to be damaged and values given for compensation and amount of compensation are correct:

.....
Signature of land owner/right holder Signatures of chairperson and one second member of commission

...../...../2014 made at:

To be send immediately to Barki Tojik PMU

Part 3: Payment Process

A: Payment Command

Barki Tojik, represented by the Project Management Unit, releases the amount of
TJS:.....(in words:.....)
to the household affected by the project
of Mr/Ms.

Name of land owner/right holder:.....

Address of land owner / phone number:.....

.....

Other person authorized representing the household:.....

Status to land owner/right holder:.....

Bank account (if available):.....

.....

Date

.....

Signature of BT PMU representative

.....

Date

.....

Signature of BT cashier

B: Payment Certification

Receipt as used by BT or other Tajik state own companies.

C: Clearance for Construction

After BT confirms that all payments to the APs have been made, the **External Monitor** will check all payments. He/she will also record the number of cases which are still pending at the court and refer in his report to the disputed amounts (i.e. the difference between the claims of the petitioners and the decision made by the Commission for Valuation of Losses and Compensation (CVLC).

After the evaluation of payments, the monitor will confirm by letter to BT PMU that

- all scheduled payments have been made and that the recipients confirm that the amount paid corresponds to the agreed compensation as stated by form 1 part 1 and part 2,
- if cases are still pending at the court that also the petitioners have received the amount of money as granted by the CVLC,
- that all grievances have been brought to an agreement between both concerned parties, the APs and BT or the CVLC respectively.

Attachment 2: Price Lists

List of value of crops, trees, tree products and agricultural infrastructure for compensation (to be compiled not prior than three month before payments; in case that there are no updated market prices use prices of last cropping season plus 10%)

1. Crops (value of losses during one production season):

Cotton/kg:TJS
Rice/kg:TJS
Onions/kg:TJS
Rice/kg:TJS
Potatoes/kg:TJS
Lentils/kg:TJS
Peas/kg:TJS
Carrots/kg:TJS
Luzerne/kg:TJS
Other...../kg:TJS
Other...../kg:TJS
Other...../kg:TJS
Other...../kg:TJS

2. Tree products (value of losses during one production season)::

Apricots / kg:TJS
Apples / kg:TJS
Plums / kg:TJS
Pears / kg:TJS
Lemon / kg:TJS
Pomegranats / kg:TJS
Grapes / kg:TJS
Other / kg:TJS
Other / kg:TJS

3. Trees:

Apricot tree: Seedling:.....TJS

1-2 years	3-4 years	5-6 years	7-8 years	9+- years
TJS	TJS	TJS	TJS	TJS

Appel tree: Seedling:.....TJS

1-2 years	3-4 years	5-6 years	7-8 years	9+ years
TJS	TJS	TJS	TJS	TJS

Plum tree: Seedling:.....TJS

1-2 years	3-4 years	5-6 years	7-8 years	9+ years
TJS	TJS	TJS	TJS	TJS

Pear tree: Seedling:.....TJS

1-2 years	3-4 years	5-6 years	7-8 years	9+ years
TJS	TJS	TJS	TJS	TJS

Pomegranat tree: Seedling:.....TJS

1-2 years	3-4 years	5-6 years	7+years
TJS	TJS	TJS	TJS

Lemon tree: Seedling:.....TJS

1-2 years	3-4 years	5-6 years	7-8 years	9+ years
TJS	TJS	TJS	TJS	TJS

Vine: Seedling:.....TJS

1 year	2 years	3 years	4 years	4+ years
TJS	TJS	TJS	TJS	TJS

4. Agricultural Infrastructure

- A Simple wires 1 m: 0.85 TJS
- B Simple wood fence 1 m: 85 TJS
- C Grid fence 1 m: 150 TJS
- D Concrete columns for vine 35 TJS
- E Earth made field channels: up to diameter of 50 cm, 1 m: 20 TJS
- F Earth made field channel: up to diameter of 100 cm, 1 m: 50 TJS
- G Drainage channels: up to diameter of 100 cm, 1 m: 50 TJS
- H Drainage channels: up to diameter of 200 cm, 1 m: 150 TJS
- I Concret channels and all drainage channels with a diameter of more than 200 cm have to be rebuilt by the construction company

5. Buildings and adjoining buildings (stables, walls, etc.)

- A Earth walls simple 1 m:TJS
- B Earth walls decorated with finish against rain 1 m:TJS

- C Stable made by earth on average by sqm:TJS
- D Stable made by bricks or concrete on average by sqm:TJS
- E Earth brick made house simple type by sqm:TJS
- E Earth brick made house elaborated type by sqm:TJS
- F Brick or concrete made house simple type by sqm:TJS
- G Brick or concrete made house elaborated type by sqm:TJS