

# Resettlement Plan

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Project No.: 47017-003  
September 2016

## TAJ: Wholesale Metering and Transmission Reinforcement Project

### Land Acquisition and Resettlement Plan

**Prepared by:** AF Mercados EMI for Barki Tojik for the Asian Development Bank (ADB)

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# **WHOLESALE METERING AND TRANSMISSION REINFORCEMENT PROJECT, TAJIKISTAN (ADB GRANT 0417-TAJ)**

**Lot 2: “Rehabilitation of Substation Rudaki and Extension of Substation Ayni 220 kV and  
Construction of 220 kV OHL between SS Ayni 220 kV and SS Rudaki”**

## **Land Acquisition and Resettlement Plan (LARP) 220 kV Ayni - Rudaki**

<b>Issued on:</b>	<b>ADB Grant 0417-TAJ</b>
<b>ICB No.:</b>	<b>ADB Grant 0417-TAJ</b>
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**September 2016**



## Table of Contents

Definition of Terms .....	6
1. INTRODUCTION .....	8
1.1. Background and Project Description .....	8
1.1. Introduction to the LARP .....	9
1.2. Route description .....	10
1.3. Basis for the LARP .....	11
1.4. Measures to Minimize Resettlement and Land Acquisition .....	11
1.5. Objectives of the LARP .....	11
2. SCOPE OF LAND ACQUISITION AND RESETTLEMENT .....	13
2.1. Census Survey .....	13
2.2. General Description of Types of Impacts .....	15
2.3. Impacts .....	15
2.4. Affected Families / Affected Persons Census .....	18
3. SOCIO-ECONOMIC PROFILE .....	19
3.1. Tajikistan Poverty Analysis .....	19
3.2. Socio-Economic Situation in Zerafshan .....	21
3.2.1. Living Conditions .....	21
3.2.2. Land and agriculture data .....	22
3.2.3. Cultural Heritage Review .....	23
3.3. Results from Household Survey .....	23
3.3.1. Civil Status of Household Heads .....	24
3.3.2. Physical Condition of Household Heads .....	24
3.3.3. Ethnic and Religious Affiliation of the Household Heads .....	24
3.3.4. Educational Attainment of the Household Heads .....	24
3.3.5. Household Size .....	25
3.3.6. Main Sources of Livelihood of the Households .....	25
3.3.7. Productive Land of the Households and Land Issues .....	26
3.3.8. Monthly Income of the Households .....	27
3.3.9. Health and Sanitation .....	27
3.3.10. Sources of Energy for Lighting and Cooking, Appraisal of Electricity Supply .....	29
3.3.11. Household Appliances .....	30
3.3.12. Transportation, Housing .....	30
3.3.13. Conclusion of Household Survey .....	30
4. LEGAL FRAMEWORK AND COMPENSATION POLICY .....	31
4.1. Policy and Legal Framework for Land Acquisition and Resettlement .....	31



4.3.	Tajikistan Constitution, Law and Regulation on Land Acquisition, Resettlement, and Compensation for Expropriation .....	32
4.5.	ADB SPS 2009 Safeguards Requirements .....	35
4.7.	Principles and Policies Adopted for the Project.....	40
4.8.	Compensation and Rehabilitation Framework.....	42
4.9.	Compensation and Rehabilitation Eligibility.....	42
	Compensation and Rehabilitation Entitlements .....	42
	Buildings and Structures .....	43
	Vulnerable Groups .....	44
	Temporary Impacts .....	44
5.	GENDER IMPACT AND MITIGATION MEASURES .....	47
6.	INFORMATION, CONSULTATION AND DISCLOSURE REQUIREMENTS .....	49
6.1.	Consultation.....	49
6.2.	Resettlement and relocation options for AFs losing agricultural lands.....	50
6.3.	Community Responses to the Project.....	50
6.4.	Disclosure.....	51
7.	GRIEVANCE REDRESS MECHANISM.....	52
8.	INSTITUTIONAL FRAMEWORK .....	54
8.1.	Institutional Arrangements .....	54
8.2.	Commission on Assessment of Damages and Losses.....	54
8.3.	Barqi Tojik’s Institutional Capacity Building in Resettlement .....	55
8.4.	Resettlement Database .....	55
9.	COMPENSATION BUDGET .....	56
9.1.	Key Assumptions for the Compensation Budget .....	56
9.2.	Permanently Acquired Land.....	57
9.3.	Permanent Loss of Land Use Rights Estimates .....	59
9.4.	Compensation for Crops Affected by Temporary Land Occupation.....	60
9.5.	Additional Damages.....	61
9.6.	Assistance to Affected Vulnerable Households.....	62
9.7.	Income Restoration Program .....	62
9.8.	The estimated cost of land acquisition .....	62
10.	IMPLEMENTATION SCHEDULE.....	63
11.	MONITORING AND EVALUATION.....	65



## Annexes

- A. Decree of the Government of the Republic of Tajikistan №641 from 30.12.2011
- B. Consultation
- C. Photo Documentation of Detailed Survey Process
- D. The results of Detailed Survey and Compensations
- E. Information on the Project

## List of Tables

Table 1 Population census of affected areas .....	13
Table 2 Basis assumption for land acquisition .....	14
Table 3 Basis assumption for land acquisition .....	14
Table 4 Area of Cropland to be Acquired Permanently .....	16
Table 5 Crops Affected on Permanently Acquired Land .....	16
Table 6 Number of AP .....	18
Table 7 Marital Status of hh Heads .....	24
Table 8 Age and Physical Condition of hh Heads .....	24
Table 9 Ethnic Affiliation of hh Heads by Gender .....	24
Table 10 Educational Attainment of hh Head .....	25
Table 11 Number of Persons Living in the Households .....	25
Table 12 Primary Livelihood Activities of hh Heads .....	25
Table 13 Main Source of for Drinking and Washing .....	28
Table 14 Toilet Facilities Used by the Households .....	28
Table 15 Availability of Bathroom in the Households .....	28
Table 16 Garbage Disposal Used by the Households .....	29
Table 17 Main Source of Power/Fuel for Cooking .....	29
Table 18 Household Appliances .....	30
Table 19 Ownership of Means of Transport .....	30
Table 20 Housing Conditions .....	30
Table 21 Overall Socio-economic Condition of Households .....	31
Table 22 Comparison of the Provisions under ADB SPS 2009 and National legislation .....	37
Table 23 Project specific Entitlement Matrix .....	45
Table 24 Consultation with communities .....	49
Table 25 Total loss and compensation payments .....	61
Table 26 Calculation of additional amounts .....	61
Table 27 Estimated total costs .....	62
Table 28 Implementation Schedule for the Land Acquisition and Compensation Procedure .....	63

## List of Figures

Figure 1 Project Location Map .....	12
Figure 2 The poverty reduction trend, 1999-2011 .....	19
Figure 3 Girls taking unclean 'drinking' water .....	20
Figure 4 a woman washing clothes in an .....	20
Figure 5 Intensive small scale agriculture in .....	22
Figure 6 irrigation in extremely poor condition in .....	22
Figure 7 Remains of Old Penjikent (city of Penjikent); .....	23
Figure 8 ruins of Serazm (Serazm Jamoat) .....	23



Figure 9 Rural house with garden near old 110.....27  
 Figure 10 very simple farmstead made by sun.....27  
 Figure 11 shows the awful drinking water supply .....29  
 Figure 12 shows a garbage dump to the river .....29  
 Figure 13 .....53

**List of Abbreviations**

<b>Abbreviations</b>	<b>Description</b>
ADB	Asian Development Bank
AF	Affected Family
agric.	Agricultural
AP	Affected Person
BT	Barqi Tojik
CBO	Community Based Organization
CC	Civil Code
DMS	Detailed Measurement Survey
ECD	Europe and Central Asia
ESD	Barqi 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
MEWR	Ministry of Energy and Water Resources
NGO	Non-Governmental Organization
p.y.	per year
p.p.	per person
p.m.	per month
PAP	Project Affected Persons
PMU	Project Management Unit
ROW	Right Of Way
RT	Republic of Tajikistan
SME	Small and Medium-sized Enterprise/s
t	Tower
TJS	Tajik Somoni
TL	Transmission Line
USD	United States Dollars
ZOI	Zone of Influence
<b>Local Terms</b>	
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 time collective farm
Land committee	Responsible body of District for all land related questions
Mahalla	Village / Neighborhood
Mahalla committee	Board of Mahalla Organization (with all citizens in the Mahalla area as members)
Oblast	Region
Rais	Chairperson (Tajik term, e.g. Raisi Mahalla)
Rayon	District
Sotih	100 m <sup>2</sup>
Sovkhoz	Soviet time state owned farm

### Definition of Terms

<b>Affected persons (APs) Also: Affected families (AFs)</b>	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 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.
<b>Compensation</b>	- Means payment in cash or kind for an asset to be acquired or affected by a project at replacement cost at current market value.
<b>Cut-off date</b>	- 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.
<b>Detailed Measurement Survey (DMS)</b>	Means the detailed inventory of losses that is completed after detailed design and marking of project boundaries on the ground by the contractor.
<b>Encroaches</b>	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.
<b>Entitlement</b>	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.

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.

**Sharecropper**

Means 200 people or more will experience major impacts, which are defined as; (i) being physically displaced from housing, or(ii) losing ten per cent or more of their productive assets (income generating)

**Significant impact**

**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).





## 1. INTRODUCTION

### 1.1. 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. BT, ADB and the Consultant has agreed on a preliminary alignment of the 50 m wide right-of-way (ROW) of the TL based technical considerations and the need to avoid traversing human settlements and private landholdings. Consequently, the preliminary TL alignment, prepared in September and on which is based this LARP, 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. 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 Operational Manual (OM), Section F1 / BP (2010), BT has prepared this LARP in order to assess the probable adverse social impacts of the Project. This LARP has been prepared in 2016 by Consulting company AF Mercados EMI and updated in September 2016.

3. Conclusions from field visits are that the line construction, as described in LARP, does not require neither shifting of buildings nor the households to be resettled.

4. In general, the line will cross the productive used lands in six locations with a total length of 22 km:

- i. mainly between AP 36 and A37,
- ii. between the AP 39 and A41,
- iii. between AP 42 and AP 43,
- iv. between AP 45 and AP 47,
- v. between AP 47 and AP 48,

5. A detailed picture of the existing 110 kV line corridor, the problem on this route and the proposed alternative (with photos), given in the Annex. Here also shown the significant problems that led to the decision to shift corridor line to less populated areas to the south of the old OHL corridor 110kV, which in several places crosses the villages on right and left sides of the river Zarafshan.

6. The Administrative structure of the TL Ayni-Penjikent consists of two rayons (districts) with 10 jamoat (subdistrict):

- I. Ayni District (from SS Aini) with Jamoat  
Dar Dar  
Urmetan;
- II. Panjakent District (in the western sectors) with jamoats of  
Woru,  
Rudaki,  
Loiq Sherali,  
Shing,  
Amondara,  
Khalifa Hassan,  
Sujina and Chinor.



7. In accordance with the final profile, for the construction of a new transmission line Ayni – Rudaki, require the installation of 244 transmission towers (84 angle towers and 156 suspension towers and 3 transposition tower and 1 portal). The main negative impact on the local residents are caused by the 88 foundations of these TL towers (20 angle and 68 suspension towers) which will be constructed on productive lands. The remaining 156 towers (64 angle, 88 suspension, 3 transposition towers and 1 portal) will be built in a mountain areas on the empty barren hills and land corridors, roads and wasteland, and will not cause a direct social impact. However, based on the Tajik legislation, the areas taken for the TL towers on public lands may be compensated to hukumats, too, based on an inter-governmental nominal price. Temporary impacts on farmlands during the construction of the TL towers have also been into accounted for.

### 1.1. Introduction to the LARP

8. 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 RT.

9. For that reason and in consideration of the expected growth of the power demand in the Penjikent region, the current 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 informing 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 Ayni220 kV (Ayni District) and the substation Rudaki (Penjikent District) including construction of additional bays and rerouting of existing connections in both substations.

10. 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).

11. 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 is 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.

12. The Project finalized LARP has been elaborated during July and September 2016 based on finalized design and preliminary draft LARP prepared in 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 socioeconomic 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.



13. This LARP provides a significant modification compared with earlier draft 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.

## 1.2. Route description

14. Existing transmission line is valid and taken into consideration, according to the State planning: The new single-circuit OHL 220 kV from Substation Rudaki (Penjikent) and up to SS Ayni will be built in the south-west of the SS Rudaki, parallel to two disabled 220 kV to Uzbekistan up to the village Chorvodor, where all three lines will turn more to south, through the gap between villages Chorvodor and Yalokdzhar, and to reach the southern side of the road to Samarkand (Uzbekistan).

15. From there, the line runs through open areas to the south and further turns to the west. The line route passes the north of Zebon, and further to south of village Kushtepa, towards the west of the village Gusar going around the agricultural area near the village Novobad. From here, the line runs along the southern part of the Dashtikazy village and crosses the access road of the Tajik-Chinese Gold Mining Company.

16. In this section the line should run parallel to, but south of the existing line 110kV Ayni-Penjikent and further, cross the valley, going to the southern part of the village Koshana. From the village Koshana the line runs further on the top of the hills and back down again south of Vota village.

17. From Vota, the line crosses two ridges of the hills and passes through the mountains of Yavan, and follows a track to reach the main road Ayni-Penjakent. On this site, the line runs along the road about 10 km and again meets the existing OHL 110 kV. In order to avoid intersections, a new OHL will be built south of the existing one. Further, the route will pass along the southern bank of the river opposite the village Vashken and cross two mountains to the village Hayrabad. From Hayrabad, the line will again pass the crests of mountains until it reaches Dardar.

18. 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 – Penjikent 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.

19. On this site, there is no possibility of building a new 220 kV line alongside with the existing line. In addition, while the OHL 110 kV runs along the northern bank of the river, it crosses a large number of residential houses, which is unacceptable for the new line. If the line was along the southern bank of the river, parallel routing of both lines would be preferable.

20. In Penjikent, OHL 110 kV crosses the city and reaches to SS Rudaki, crossing many houses. Therefore, the new line leaves Penjikent in the western direction, and just later turns to the east in the direction of Ayni.



### 1.3. Basis for the LARP

21. 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. The LARP will be updated with regard to the sizes of permanent and temporary losses after conducting the detailed measurement survey of all affected assets after following project approval, completion of detailed engineering design, and the demarcation of the TL alignment on the ground.

22. To ensure that data of impact is updated accordingly to 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: based on detailed design, with updated data on AF/AP and costs, ADB and Government approval of the updated LARP, and on the monitoring and reporting of LARP implementation by safeguards monitoring team of PMU 'Barqi Tojik'.
- 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 safeguards monitoring team of PMU 'Barqi Tojik' in assistance of PMC.

### 1.4. Measures to Minimize Resettlement and Land Acquisition

23. 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 demand
- iii. Where tower siting allows it, suitable land is demand from a land user with a large area to minimize the number of AFs and to impact magnitude on any separate AF.
- iv. Built-up areas will be avoided.

### 1.5. Objectives of the LARP

24. 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, using the principles and requirements of the current 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. Socio-cultural institutions will support APs;
- v. LA procedures will equally apply to women and men;
- vi. Lack of official letter will not prevent compensation rights under the entitlements matrix;
- vii. Resettlement procedures will be conceived and executed as an integral part of the Project and budgets for LA will be included in Project costs
- viii. Impact on buildings and structures will be avoided ; and
- ix. LA and all compensation payments will be completed and endorsed by ADB, before commence of civil works in impacted areas.





25. According to preliminary information of the TL route, this LARP with its updates has been prepared, based on information, received during the field visits and socio-economic survey of households with possible landholdings, located within the preliminary TL route, and also during the consultations and meetings with stakeholders (interested parties) at the project area.

The LARP:

- i. identifies the number of households with landholdings within 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 1 Project Location Map





## 2. SCOPE OF LAND ACQUISITION AND RESETTLEMENT

### 2.1. Census Survey

26. The main objective of this LARP is to identify persons affected by the Project and to assist them to restore their livelihoods. The LARP complies with Republic of Tajikistan legislations and the requirements of ADB's Safeguard Policy Statement (SPS 2009).

27. The scope of the LARP includes: (i) description of the Project, (ii) profile of the APs and affected communities, (iii) impact, (iv) information disclosure and public consultations with APs, (v) grievance redress mechanism, (vi) legal framework, (vii) entitlements, assistance and benefits, (viii) resettlement budget and financing plan, (ix) institutional arrangements (x) LARP implementation schedule, and (xi) monitoring of LARP implementation.

28. The affected households (AHs)/Displaced Persons (APs) Census Survey and DMS of all affected assets was carried out from May to August 2016.

29. The survey covered 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 table below shows the population of those Jamoats, which will be affected by the new electricity line:

*Table 1 Population census of affected areas*

<b>Table 1: Population census of affected areas</b>			
<b>Rayon</b>	<b>Jamoat</b>	<b>Population</b>	<b>Households*</b>
<b>Ayni</b>	<b>Total</b>	<b>75 493</b>	<b>17 145</b>
	Dar Dar	7 492	1 634
	Urmetan	17 670	4 333
<b>Penjikent</b>	<b>Total</b>	<b>264 746</b>	<b>52 794</b>
	Woru	12 722	2 775
	Chinor	7 172	1 380
	Rudaki	19 864	3 720
	L.Sherali	19 189	3 905
	Amondara	14 474	3 100
	Sujina	13 705	2 689
	Khalifa Hasan	15 532	2 997
	Sarazm	28 822	5 723

\*Official documentation. In reality, in Zerafshan multi-generation households dominate more of such "statistical" hh under one roof.

30. During the work of the commission, consist of representatives of the Consulting company "AF Mercados EMI", PMU and relevant Jamoat Land Committee and districts it found that 309 households were identified as owning land situated within the transmission line route. In LARP, the owners of the above lands shall be deemed affected individuals or families.

31. Prior to the final design of the line it is possible to:
- (i.) to identify the final areas required for construction of towers and those land areas, which would possibly be affected by the construction work and stringing or
  - (ii.) to identification of land owners who would be affected by the placement of towers location and required land during construction works.



*Table 2 Basis assumption for land acquisition*

<b>Table 2: Basis assumption for land acquisition</b>	
Total length of HVTL:	95 km
Length of HVTL on agric. areas:	22 km
Required towers:	244
Angle towers:	84
Suspension towers:	148
Transpositional towers:	3
Portal towers	1
Angle towers on agric. land:	20
Suspension towers on agric. land:	68

32. Overall project will have permanent impact on 92 parcels of agricultural lands since, 88 towers will be installed on agricultural land (in some cases here included abandoned land, for example unused hills, channels and paths, etc., in order to avoid damage to land and crops). The total length of transmission line stretched over agricultural lands is 22 km. These lands belong to 40 Family, 254 Individual, 12 Collective and 3 State owned Dehkan Farms. Out of these 92 APs will have permanent impact on their lands and remaining 217 APs will have temporary impact only during construction period.

*Table 3 Basis assumption for land acquisition*

<b>Table 3: Information on overall affected APs lands disaggregated by type of ownership and location</b>								
Dis-t	Jamoat	No. of APs & terms of impact		Type of Ownership	Total land holding Ha	Affected land Ha		% of affected land
		Permanent	Temporary			Permanent	Temporary	
<b>Ayni</b>	Dar-dar	1	1	Family DF	1,2	0,020	0,754	1,67
	Urmetan	14	71	Individual DF 87	9,0	0,153	1,457	1,70
		2	2	Collective DF 4	113,0	0,023	0,418	0,02
	<b>Total</b>	<b>17</b>	<b>73</b>		<b>123</b>	<b>0,196</b>	<b>2,629</b>	<b>0,16</b>
<b>Penjikent</b>	Rudaki	6	9	Individual DF 15	11	0,044	0,791	0,40
		1	1	Collective DF 2	92	0,034	0,833	0,04
	Voru	7	9	Family DF 18	31	0,071	0,952	0,23
		2	2	Collective DF 2	218	0,054	0,428	0,02
	L.Sherali	16		Family DF 16	45	0,124	0,945	0,27
		7	7	Individual DF 13	11	0,056	0,832	0,51
		2	2	State farm 3	9	0,019	0,173	0,21
	Shing	1	5	Individual DF 6	4	0,011	0,159	0,28
	Amondara	1	10	Individual DF 11	5	0,012	0,225	0,24
	Sujina	5		Family DF 5	30	0,056	0,827	0,19
		5	10	Individual DF 15	14	0,048	0,839	0,35
	Kosatarosh	1	1	Collective DF 2	19	0,011	0,308	0,06
		6	20	Individual DF 26	11	0,057	0,897	0,52
	Khalifa Hasan	1	1	Collective DF 2	75	0,040	0,506	0,05
		5	20	Individual DF 25	17	0,065	1,008	0,38
Chinor	9	47	Individual DF 56	68	0,075	1,272	0,11	
<b>Total</b>	<b>75</b>	<b>144</b>		<b>660</b>	<b>0,78</b>	<b>11,00</b>	<b>0,12</b>	
<b>Overall</b>		<b>92</b>	<b>217</b>		<b>783</b>	<b>0,97</b>	<b>13,62</b>	<b>0,12</b>

33. Project LARP includes compensation for both permanent and temporary impacts. Appendix D provides more detailed data for each affected dehkan farm. Average land holding of



the farms estimated 0.88 Ha land. None of the DF will have severe impact on land as the project required very narrow strip of land as permanently for installation of towers. APs who are permanently affected will receive cash compensation for the loss of land use rights and compensation for the loss of income from crops, trees, plants, etc. on the land. Agricultural lands are used by the owners and there was no any leaseholders and or tenants identified during SES. Only State owned lands are given to APs based on lease agreement. Accordingly these APs were included in the census and they will receive compensation only for the loss of income from crops for 1 year. These APs will use remaining part of land based on their lease agreements. There is no any physical and/or economic displacement of APs.

34. In Dekhan farms, the land remains state property (which cannot be bought or sold), but farmers are granted inheritable land use rights which give complete legal freedom to landholders to manage the land as they desire. The state collects taxes and can repossess the land if it believes the land is not being managed properly. There are three types of Dekhan land: individual (the land use certificate is held by an individual), family (the certificate is jointly held) and collective (the certificate details common property shareholders).

35. A collective dekhkan consists of two or more unrelated families, producing and marketing jointly. Dekhan farm —associations, or —associative dekhkan farms, operate in a similar manner to collective dekhkans, although the families involved technically have their own dekhkans and work together cooperatively. Both family and collective dekhkans operate by appointing a head who officially holds the farm's land registration certificate and legally represents the interests of the farm (Duncan 2000; GOT 2008; ARD 2003; Robinson et al. 2009; GOT 2009a).

36. Reserve Fund land usually consists of unused land. It also includes land plots for which land use rights have been abandoned. State reserve land is at the disposal of the district administrations and is rented out or distributed for individual agricultural cultivation purposes. Article 100 of the Land Code states that State land stock is reserved for the agricultural, industrial, transport and other needs of the national economy.

## 2.2. General Description of Types of Impacts

37. Calculation of the estimated impact of towers for TL made as follows:  
It will require an area of 100-144 m<sup>2</sup> under the foundation of each angle towers and an area of 81-100 m<sup>2</sup> under foundation of each suspension towers.

38. 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.

## 2.3. Impacts

39. 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:

40. The estimated 20 angle towers on cultivated land will require the permanent acquisition of **2236,25 m<sup>2</sup>** of farmland while the estimated 68 suspension towers will require the permanent acquisition of **7394,25 m<sup>2</sup>** of farmlands. In total, permanently affected land to be acquired by the project is **9630,5 m<sup>2</sup>** or roughly **0.96** hectare.





*Table 4 Area of Cropland to be Acquired Permanently*

Area of Cropland to be Acquired Permanently			
Kind of Tower	Estimated Number of Towers on Cultivated Land	Area Required per Tower (m <sup>2</sup> )	Total Area Required (m <sup>2</sup> )
angle	20	100-144	2236,25
suspension	68	81-144	7394,25
<b>total</b>			<b>9630,5</b>

**ii. Crops, which will be affected by the construction of towers**

41. Crops grown at the tower's foundation area will be compensated by default regardless of whether or not the land user is able to collect the 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 5 Crops Affected on Permanently Acquired Land*

(Rough yield figures and preliminary cost estimates are also used for the assessment of temporary losses 1)

Crop/ Perennial	Total area affected (m <sup>2</sup> )	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	194,2	23050	1448	1,3		
Lucerne	1047,5	7260	760	1		
Sunflower	385,5	1700	64	5		
Corn	821,5	7760	667	1,6		
Wheat	4118	3630	1496	1,5		
Beans	81	500	4	8		
Pepper	100	32030	320	1,3		
Linen	110,25	800	9	10		
Grass	493,5	7840	387	1		
Nuts	81	10	10	10	2	
Apricot	423	15	212	3	14	6
Pear	25	12	24	3	2	6
Apple	162	22	374	2	17	7
Grapes	1539,5	3	1659	3	563	2
Cherry	9	12	12	3	1	9
Willow	144			52	4	2
Jigda	446			104	14	
Canker-rose	9			104	1	
Mulberry	25			104	1	2

**iii. Crops, affected by temporary land acquisition:**

42. Construction of each 20 towers would require the workplace of 18 000 m<sup>2</sup>, including area under the foundations. In general, for the construction and foundations will need about 85,200 m<sup>2</sup>. Likewise, during the conductor tensioning at the entrance to site will be used strip of 22 km, between the 88 towers in cropland will be used as an access road (4.0 m wide access roads or 4000 m<sup>2</sup> per km) and, therefore, temporarily will be used approximately 88 000 m<sup>2</sup> or 8,8ga in the cropping season. These figures for farmlands affected by crop loss due to temporary occupation during the construction and conductor tensioning, and do not include the losses of the access of machinery on construction sites.



43. AF's will be compensated by default for crop losses according to the market value at the time of land acquisition. It concerns to both kind of crops: which is grown at the time of construction / stringing towers and also, that crop of AP, which will not grow due to the harm. The actual crop on the affected land will be determined during DMS and compensation will be calculated accordingly. Dominating sources of cash for farmers are perennial, apricot, trees and vineyards.

44. Prior to the fruitfulness of the apricot tree, apple tree or citrus tree (mainly lemons) will take seven years, for pomegranate it is about 5 years before the tree becomes productive. In one hectare (10,000 m<sup>2</sup>) can have an average of 300 fully grown apricot trees, 400 citrus and pomegranate 625.

45. Citrus trees bear fruits for several months during a year. Until the full productivity of citrus should pass up to seven years. Citrus and apple trees are planted at a distance of 5 meters from each other. In this case, there are very few citrus and apple trees in gardens, that's why just a few trees have to be cut down in the Project purposes.

46. Pomegranate bear fruit once a year. It takes about five years before a young tree bears fruit. We believe that the situation with pomegranates, which have a distance of 4 m from each other, will be the same situation as citrus and apple. On the overhead line corridor there are very few pomegranate gardens, so only a small amount is expected to be cut down.

47. Vineyards bear fruit once a year. Only four years later, young vineyards are starting to bear fruit. In the project area, the vineyards are already, eight, ten years, and every year they bear fruit. One hectare land may include more than 1,650 vines (ie, approximately 33 rows each with 50 of vines, or approximately 41 rows each with 41 vine). In practice, the two rows of 82 to 100 vines could be damaged per 100 meters from line route. The field surveys has shown that, as for other perennial crops, almost no affected regions with vineyards, as grape vines in the project area is mainly planted near houses and in house gardens.

48. Farmers who grow crops and fodder plants such as lucerne can grow only one crop due to lack of irrigation water.

49. While potato and cotton (its production has almost ceased in the project area) require a full growing season, vegetables, beans, sunflowers and melons (watermelons and melons) can be grown after cereals, so the farmers will have an average of two crops per year. As it is very unlikely that the construction of one OHL tower will require more than 90 days, it is assumed that only one crop will be damaged.

50. Compensation for the losses will be paid only if the construction works fall in the cropping season. If the implementation of work is carried out in winter period, the construction company will only reconstitute the land with all it's infrastructure or pay its value in cash.

**For the assessment of losses, it is important whether the farmer has already planted / sowed or not, and, if the answer is positive, compensation should be paid in full.**

#### iv. Other loss:

51. After approval of the project and a detailed inspection, the completion of detailed design and layout of the site. According to the field investigations, the following losses could be:

- Concrete poles for vineyards (almost none in the project area)
- Simple or barbed wires (rare)
- Simple or grid fences (rare)
- Irrigation channels,
- Drainage channels,
- Field paths, etc.



52. The final TL alignment will ensure that no buildings and structures will be affected and there will be no relocation case incurred by the project.

**v. Significant impact on the productive assets:**

53. According to information of Land Committee of Hukumat, the average area size of land per household (already recorded or to be registered and provided with a certificate) is approximately half or two hectares. Unlike the LARP initial version, it has been identified that the farmer may in fact lose up to 1% of its land, if the angle tower will be installed on its registered plot. This amount is far from being a percentage, which constitutes a danger for the economic viability of most farms.

54. It is important to keep in mind that there are still some collective dekhan farms in 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 as the 12 collective farms have more than 50 ha land each. Considering installation of towers in 100 sq. meter, which take very narrow strip of land, permanent land loss of all types of land is below 1% even when the land loss is considered based on the shareholding of a single farm member. Thus project does not significantly impact any person in the whole project area.

## 2.4. Affected Families / Affected Persons Census

55. 22 km TL will be built mainly on agricultural land and 309 households out of which 92 APs (families) will have permanent impact and 217 APs (families) will have temporary impact on their lands. The amount of loss for each individual household is very small (each tower will occupy at average 100 sq. meter of land where in future no agricultural activities is allowed. Each family consist at average of 6.3 persons, hence project has impact on 580 persons. The involuntary resettlement impacts of an ADB-supported project are considered significant if 200 or more persons will experience major impacts, which are defined as (i) being physically displaced from housing, or (ii) losing 10% or more of their productive assets. However, this project does not have significant impact on agricultural lands as productive assets of APs, which puts the project in category B on social safeguards (minor impact) accordingly.

56. A few of 88 towers (20 + 68) from a total of all established agricultural holdings will be built on public land near land passes and irrigation or drainage channels, and not consuming any crops.

57. However, a detailed work inspection showed that 92 households will be compensated as the land is necessary for installation of one tower and construction site, in 9 cases it belongs to two different farmers and in 1 to 3 farmers. Thus, the permanent loss covers 92 APs (households).

58. In addition, the access road, which will be used during the tension from one tower to another with width of four meters, will affect 217 households temporarily.

59. In total, the number of affected households reach 309 landowners areas of permanent and temporary loss of land dedicated to building towers, access roads and corridors stringing.

**Table 6 Number of AP**

		Ayni		Penjiket		Total	
		No. of Towers	No. of APs	No. of Towers	No. of APs	No. of Towers	No. of APs
1	Permanent losses for towers	15	17	73	75	88	92
2	Temporary losses for work camps		73		144		217



Total	15	90	73	219	88	309
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60. Project does not have impact on structures, buildings, shops and/or businesses. 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.

61. 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, which are included into this LARP).

### 3. SOCIO-ECONOMIC PROFILE

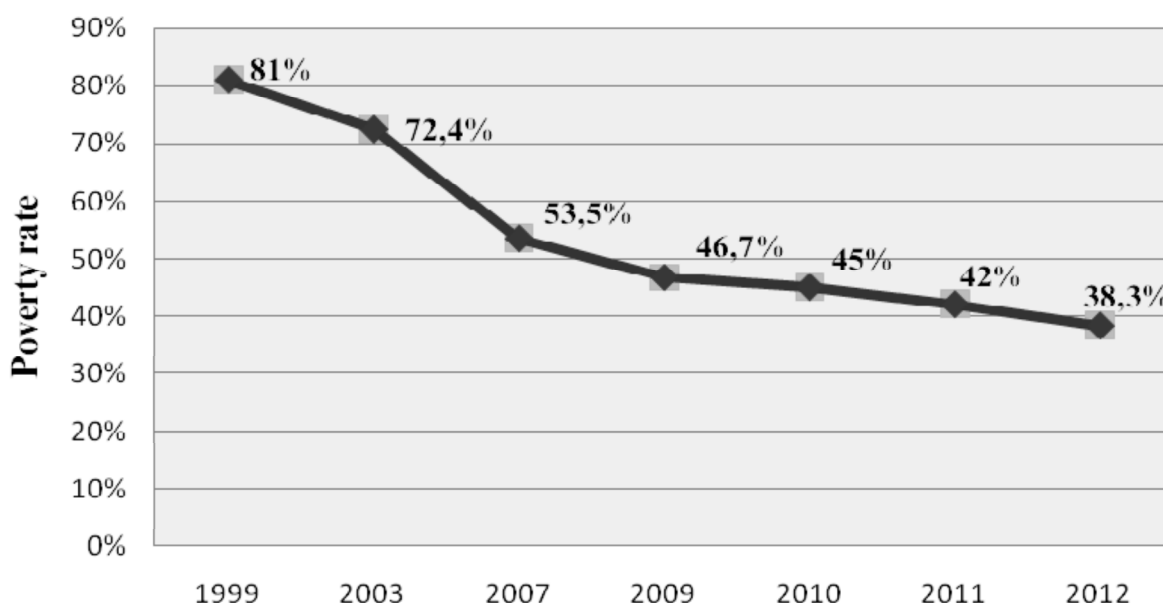
#### 3.1. Tajikistan Poverty Analysis

62. 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.

63. 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.

64. 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).

Figure 2 The poverty reduction trend, 1999-2011





61. 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 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.

62. 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.

63. 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 is 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 3 Girls taking unclean ‘drinking’ water (taken from a stream) by a small pipe*



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



64. 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.



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

66. 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 sovkhoses and today produces less than 10% of GAO (Lerman / Wolfgramm 2012).

67. 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.

68. 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).

## **3.2. Socio-Economic Situation in Zerafshan**

### **3.2.1. Living Conditions**

69. 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.

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

71. There is little information available about the living standard of the population in 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.

72. 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.

73. 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.

74. 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.



**3.2.2. Land and agriculture data**

75. 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.

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

### 3.2.3. Cultural Heritage Review

77. Serazm and Old Penjikent, which are 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 7 Remains of Old Penjikent (city of Penjikent);*



*Figure 8 ruins of Serazm (Serazm Jamoat)*



### 3.3. Results from Household Survey

78. 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. The results of this survey provide some insight into the livelihood of the households from villages, where the line route will cross. However, the actually affected people, i.e. the owners of the specific plots of land, which will be taken for the construction of the towers,





are not yet known and thus cannot be part of the survey sample. Details of conducted survey shown in the LARP.

### 3.3.1. Civil Status of Household Heads

79. 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 7 Marital Status of hh Heads*

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

### 3.3.2. Physical Condition of Household Heads

80. 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 8 Age and Physical Condition of hh Heads*

Male hh Head				Female hh Head			
Normal		Handicapped		Normal		Handicapped	
83	3	2	2	14	2	0	0

### 3.3.3. Ethnic and Religious Affiliation of the Household Heads

81. 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. 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 9 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

### 3.3.4. Educational Attainment of the Household Heads

82. 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 10 Educational Attainment of hh Head**

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

### 3.3.5. Household Size

83. 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 11 Number of Persons Living in the Households**

Male	Female	Children from it <16	Total	No HH	Average HH size
297	312	192	654	106	6

### 3.3.6. Main Sources of Livelihood of the Households

84. 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 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 12 Primary Livelihood Activities of hh Heads**

Farming	Work in government	Private employment	Self-employed	Transfer from migrants	Pensions
38	31	11	25	37	3



### 3.3.7. Productive Land of the Households and Land Issues

85. 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 Sotka (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 farmland, 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.

86. 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 farmworkers 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.

87. These days the land of the last collective private farms is distributed amongst the former shareholders. 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.

88. Accordingly, PMU from Barqi Tojik will deal with three different types of farms and counterparts in negotiations:

- (i.) the individual farmer who owns land use rights
- (ii.) a person representing a family (extended family) with perhaps between 5 and up to 25 and more individual land right shares
- (iii.) the manager of a 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.



89. 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 shareholders of a collective farm work together (i.e. where they did not get their individual piece of land on a long-term basis), the shareholders should 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).

*Figure 9 Rural house with garden near old 110 kV line*



*Figure 10 very simple farmstead made by sun dried bricks made of clay*



### 3.3.8. Monthly Income of the Households

90. 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.

91. 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.

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

### 3.3.9. Health and Sanitation

92. 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 53 simple flexible



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

93. 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 13 Main Source of for Drinking and Washing*

<i>Pipe in house/ yard</i>	<b>Public standpipe</b>	<b>Hand pump</b>	<b>Aryk</b>	<b>Stream</b>	<b>Water sellers</b>
<i>20</i>	<i>57</i>	<i>7</i>	<i>11</i>	<i>11</i>	<i>0</i>

94. 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 and an indicator for a certain (modest) prosperity in the project areas.

*Table 14 Toilet Facilities Used by the Households*

<b>Water Sealed</b>	<b>Open pit</b>	<b>Nothing /field</b>
<i>13</i>	<i>88</i>	<i>4</i>

95. 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 bathrooms 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).

*Table 15 Availability of Bathroom in the Households*

<b>Has own bathroom</b>	<b>Traditional “banya”</b>	<b>None</b>
<i>14</i>	<i>59</i>	<i>32</i>

96. 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).

97. 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 16 Garbage Disposal Used by the Households*

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

*Figure 11 shows the awful drinking water supply situation in many villages of Zerafshan: a small pipe provides untreated water from an Aryk*



*Figure 12 shows a garbage dump to the river*



### 3.3.10. Sources of Energy for Lighting and Cooking, Appraisal of Electricity Supply

98. 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.

99. 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 17 Main Source of Power/Fuel for Cooking*

Firewood	Bottled gas	Electricity
78	71	47



### 3.3.11. Household Appliances

100. 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.

101. hh own a DVD player and/or a stereo system, 70 refrigerators and 28 microwaves. 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 18 Household Appliances*

TV	phone	DVD/ CD	Ref.	Elect. stove	Microwave.	Comp.	AC.	Washing machine	Electr. heater
93	99	60	70	82	28	20	12	31	26

### 3.3.12. Transportation, Housing

102. 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 19 Ownership of Means of Transport*

Motorbyke	Car	Tractor/truck
3	31	1

103. 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 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 20 Housing Conditions*

Simple earth brick house	Simple modern house	Better modern house
69	35	2

### 3.3.13. Conclusion of Household Survey

104. 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 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.

105. 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 socioeconomic conditions of those households which might be negatively affected by the project.

*Table 21 Overall Socio-economic Condition of Households*

Very poor	Poor	Low Middle	Upper Middle	high
4	14	72	8	5

## 4. LEGAL FRAMEWORK AND COMPENSATION POLICY

### 4.1. Policy and Legal Framework for Land Acquisition and Resettlement

106. 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.

107. The policy framework for the Project is based on the Law of the Republic of Tajikistan and the ADB Safeguards Policy Statement of 2009. In the legislation of Tajikistan, there is no special law or policy, which regulates the issues of resettlement and/or land acquisition or expropriation of rights to land and immovable property for state or public needs. Moreover, there is no separate law that completely provides norms and mechanisms for the determination of the full and fair, market value of land. The key legislative acts regulating land management relations and the ownership rights to immovable properties in the Republic of Tajikistan are the following:

- Constitution of the Republic of Tajikistan (1994, as amended in 2003)<sup>1</sup>
- Land Code (amended in 2012)<sup>2</sup>
- Land Code (amended in 2008)<sup>3</sup>
- Civil Code (amended in 2007)<sup>4</sup>
- Regulation “about compensation of losses to the land users and losses of agricultural products” (approved by the Decree of Government of Republic of Tajikistan, 2000. № 515)<sup>5</sup>

108. The Constitution of the Republic of Tajikistan, Land Code and the Civil Code of the

<sup>1</sup> Constitution, November 6, 1994, as amended on 22 June 2003.

<sup>2</sup> Land Code of the Republic of Tajikistan as amended on 01 August 2012

<sup>3</sup> Land Code, as amended by N 498 from December 12, 1997., N 746 from May 14\_ 1999, N 15 from May 12 2001, N 23 from February 28 , 2004. From 28.07.2006 №199, from 5.01.2008 №357, from 18.06.2008 №405.

<sup>4</sup> Civil Code, as amended by August 6, 2001, N 41: May 3 2002 №5, March 1 2005, N 85; April 29, 2006 №180, May 12, 2007.№247).

<sup>5</sup> Approved by the Decree of Government of Republic of Tajikistan, December 30, 2000.№515.





Republic of Tajikistan are the fundamental laws on which the legislation is based. The framework for the Project is based on the ADB SPS 2009 requirements and applicable laws, regulations and policies. Where differences exist between local law and ADB policies and practices, the resettlement for this Project will be resolved in favor of the later.

## 4.2. Types of land ownership and land use rights allocation

109. All land is owned by the Republic of Tajikistan, which is responsible for its effective use. Several tenure options for agricultural land are defined by the Land Code. There are primary use rights and secondary use rights. Primary use rights include the following:

- Perpetual use which has no fixed term. It is granted to legal entities such as state and cooperative agricultural enterprises, public and religious organizations and charities, industrial and transportation needs, public enterprises, defense and joint ventures that include foreign entities.
- Limited or fixed-term use may be granted to legal or physical persons for either a short-term (up to 3 years) or long-term (3 to 20 years).
- Life-long inheritable tenure which may be assigned to physical persons or collectives. Physical persons must re-register the right in the case of inheritance. This right applies to land-shares used to organize a Dekhan farm, as well as household (garden) plots.

110. The only secondary use-right recognized under the Land Code is the right to lease. According to the Code, primary rights holders may lease out their plots for a term not exceeding 20 years. The land is used in accordance with the state-established land-use standards. The right to use land may be terminated for various reasons such as: termination of activities by the land user, non-use for two years and use of the land differing from the use established in the use-rights document. (Land Code Article 37)

## 4.3. Tajikistan Constitution, Law and Regulation on Land Acquisition, Resettlement, and Compensation for Expropriation

111. 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".

112. 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. 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).



#### 4.4. Provisions regulated by the Land Code

113. In August 2012 amendments to the Land Code that enable legal sales and lease transactions for land use rights were approved.<sup>6</sup> The Land Code also includes changes to the provisions related to land acquisition.<sup>7</sup>

114. The revocation/allotment of lands and resettlement envisages compensation for losses incurred by land users or those with other registered rights to the land when the land plot is revoked for state and public needs.

115. The state may revoke land plots for state and public needs from land users after:

- allocating a land plot of equal value;
- constructing housing and other buildings with the same purpose and value, in a new location for the natural persons and legal entities to whom the land plot had been allocated, in accordance with established procedures
- fully compensating for all other losses, including lost profits, in accordance with the legislation of the Republic of Tajikistan.

116. Upon the revocation of land plots for state and public needs, all losses shall be calculated according to the market price, which shall be defined by taking into consideration the location of the land plot, and compensation shall be paid to the persons/legal entity whose land has been taken away. Termination of the right to use a land plot, for state and public needs, can be carried out after allocation of an equal land plot and compensation of other expenses is provided by part one of the present article. (L.C. Article 41; In the Republic of Tajikistan Law edition dated 1 August 2012, No. 891).

117. The procedure for the compensation of losses to land users and losses arising from the removal of land from circulation is regulated by Article 43 of the Land Code edition dated 1 August 2012, No. 891:

- In the event of revocation of a land plot for state and public needs, compensation for losses to land users and others with registered rights to the land, and losses connected to the removal of land from circulation, shall be made by the natural/legal persons whose activity led to the revocation.
- In the event of withdrawal of a land plot for state and public needs, the procedure for compensation of losses to land users and others with registered rights to the land, and losses connected to the removal of land from circulation, shall be defined by the Government of the Republic of Tajikistan (In RT Law edition dated 5 January 2008, No. 357).
- Upon termination of the rights to a property, the property will be assessed based on its market value (Article 265 Civil Code).
- Land users should be notified in writing about land revocation by the local executive government body no later than one year before the pending withdrawal of the land (Article

118. 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).

119. 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

<sup>6</sup> Law 891, dated August 2012, article 19.

<sup>7</sup> Articles 37-45



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.

120. 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”. For non-agricultural purposes is provided the land, unsuitable for agricultural production or agricultural land inferior quality, with the cadastral evaluation, not exceed the average level of the district.

121. Article 31 of the LC provides that land acquisition for non-agricultural public purposes is the 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”.

122. In the case of this Project it 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.

123. 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”.

124. 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:

- a) having assigned another equivalent land plot,
- b) 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;
- c) having paid full compensation for all other losses, including “profit loss” (according to Articles 41 and 42 of this Code).

125. Compensation for land, which belongs to the State and is allocated and essentially leased to users by the Hukumat, is divided on 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 asset. 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. In Tajikistan the evaluation and compensation is regulated by Decree of the Government of Tajikistan №641 from 30.12.2011. (Annex A)



#### 4.5. ADB SPS 2009 Safeguards Requirements

126. The three important elements of ADB's involuntary resettlement policy are (i) compensation to replace lost assets, livelihood, and income; (ii) assistance for relocation, including provision of relocation sites with appropriate facilities and services; and (iii) assistance for rehabilitation to achieve at least the same level of well-being with the project as without it. For any ADB operation requiring involuntary resettlement, planning is an integral part of project design, to be dealt with from the earliest stages of the project cycle, taking into account the following 12 key policy principles for involuntary resettlement. These can be summarized as follows:

- Screen the project early on to determine past, present, and future involuntary resettlement impacts and risks. Determine the scope of resettlement planning through a survey and/or census of displaced persons, including a gender analysis, related to resettlement impacts and risks.
- Carry out meaningful consultations with affected persons, host communities, and concerned nongovernment organizations. Inform all displaced persons of their entitlements and resettlement options. Ensure their participation in planning, implementation, monitoring and evaluation of resettlement programs. Pay particular attention to the needs of vulnerable groups, especially those below the poverty line, the landless, the elderly, women and children, Indigenous Peoples, and those without legal titles to land, and ensure their participation in consultations. Establish a grievance redress mechanism to receive and resolve the affected persons' concerns. Support the social and cultural institutions of displaced persons and their host population. Where involuntary resettlement impacts and risks are highly complex and sensitive, compensation and resettlement decisions should be preceded by a social preparation phase.
- Improve, or at least restore, the livelihoods of all displaced persons through (i) land-based resettlement strategies when affected livelihoods are land based (where possible) or cash compensation at replacement value for land when the loss of land does not undermine livelihoods, (ii) prompt replacement of assets with access to assets of equal or higher value, (iii) prompt compensation at full replacement cost for assets that cannot be restored, and (iv) additional revenues and services through benefit sharing schemes where possible.
- Provide physically and economically displaced persons with needed assistance, including the following: (i) if there is relocation, secured tenure to relocation land, better housing at resettlement sites with comparable access to employment and production opportunities, integration of resettled persons economically and socially into their host communities, and extension of project benefits to host communities; (ii) transitional support and development assistance, such as land development, credit facilities, training, or employment opportunities; and (iii) civic infrastructure and community services, as required.
- Improve the standards of living of the displaced poor and other vulnerable groups, including women, to at least national minimum standards. In rural areas provide them with legal and affordable access to land and resources, and in urban areas provide them with the relevant income sources and legal and affordable access to adequate housing.



- Establish procedures in a transparent, consistent, and equitable manner if land acquisition is through negotiated settlement to ensure that those people who enter into negotiated settlements will maintain the same or better income and livelihood status.
- Ensure that displaced persons without titles to land or any recognizable legal rights to land are eligible for resettlement assistance and compensation for loss of non-land assets.
- Prepare a resettlement plan elaborating on displaced persons' entitlements, the income and livelihood restoration strategy, institutional arrangements, monitoring and reporting framework, budget, and time-bound implementation schedule.
- Disclose a draft resettlement plan, including documentation of the consultation process in a timely manner, before project appraisal, in an accessible place and form and language(s) understandable to affected persons and other stakeholders. Disclose the final resettlement plan and its updates to affected persons and other stakeholders.
- Conceive and execute involuntary resettlement as part of a development project or program. Include the full costs of resettlement in the presentation of the project's costs and benefits. For a project with significant involuntary resettlement impacts, consider implementing the involuntary resettlement component of the project as a stand-alone operation.
- Pay compensation and provide other resettlement entitlements before physical or economic displacement. Implement the resettlement plan under close supervision throughout the project implementation.
- Monitor and assess resettlement outcomes, their impacts on the standards of living of displaced persons, and whether the objectives of the resettlement plan have been achieved by taking into account the baseline conditions and the results of resettlement monitoring. Disclose monitoring reports.

127. ADB SPS 2009 distinguishes three categories of displaced persons, with variable compensation needs:

- **Legal DPs:** DPs with formal legal rights to land lost in its entirety or in part;
- **Legalizable DPs:** DPs without formal legal rights to land lost in its entirety or part but who have claims to such lands that are recognized or are recognizable under national law and;
- **Non-legal DPs:** DPs who have neither formal legal rights nor recognized/recognizable claims to land lost in its entirety or in part.

128. For categories (i) and (ii) above, borrowers are expected to provide compensation at full replacement cost for lost land, structures, land improvements and relocation assistance. For DPs in category (iii) (informal settlers), the borrower/client is expected to compensate all assets other than land (i.e. buildings, trees, cops, businesses) at full replacement cost. The risk of opportunistic encroachment on land designated for acquisition by the project is managed through the declared 25 April 2016 cut-off date.

129. Compensation for lost land may be in the form of replacement land (preferred option if feasible) or in cash. When "land for land" compensation is not feasible cash compensation can be valued based on market rates or, in the absence of land markets, through other methods (i.e.





land productivity or reproduction costs)<sup>8</sup>. Compensation is to be provided at “full replacement cost”. This includes: (i) transaction costs; (ii) interest accrued; (iii) transitional and restoration costs; and (iv) other applicable payments, if any. Compensation for all other assets is to be provided in cash at replacement cost without deductions for amortization, salvaged materials and transaction costs.

130. The following core involuntary resettlement principles were adopted for this Project:

- land acquisition, and other involuntary resettlement impacts will be avoided or minimized by exploring all viable alternatives in the Project design;
- consultations with DPs on compensation, disclosure of resettlement information to DPs, and participation of DPs in the planning and implementation of rehabilitation measures will be ensured;
- vulnerable groups will be provided with a special assistance;
- payment of compensation to affected persons including non-titled persons (e.g., informal dwellers/squatters, and encroachers) for acquired assets (except for illegally used land) at replacement rates;
- payment of compensation and resettlement assistance prior to the contractor taking physical possession of the land and prior to the commencement of any construction activities;
- provision of income restoration and rehabilitation; and
- establishment of appropriate grievance redress mechanism.

*Table 22 Comparison of the Provisions under ADB SPS 2009 and National legislation*

Items	ADB SPS (2009)and ADB practice for application	Tajikistan	Reconciliation
<b>1. Eligibility</b>	DPs with legal rights receive compensation for land and non-land assets	DPs with legal/registered land use rights are eligible for compensation \ rehabilitation.	Same in principle and application.
	DPs with legalizable rights are entitled to compensation for land and non-land assets.	DPs with legalizable rights receive compensation for the land and non-land assets.	Same in principle and application
	DPs with no legal rights receive compensation for the assets/improvements	Informal land users (without right to use land) are not entitled to any compensation (for land or non-land assets)	Different in principle but same in application for non-land assets.
<b>2. Livelihood rehabilitation standards</b>	ADB Policy requires improvement in the standards for AP livelihood	No such a provision exists in the national law	Different in policy but Government accepts ADB SPS 2009 requirements and endorses them in the entitlement matrix on a project by project basis.

<sup>8</sup> Based on the SPS (Appendix 2, para. 10) in absence of well-established land markets land compensation will be provided based on a thorough study of the land transaction, use, cultivation and productivity patterns in project areas. One method accepted by ADB in such a situations would be to provide land compensation based on land productivity or land reproduction costs.”



Items	ADB SPS (2009) and ADB practice for application	Tajikistan	Reconciliation
3. Compensation	<p><b>A. Loss of land.</b> Replacement land as the preferred option of the compensation. If land is not available, cash compensation at full market cost.</p>	<p><b>A. Permanent loss of land.</b> Replacement land but also cash compensation.</p>	<p><b>A.</b> Same in principle. Application mechanisms temporarily reconciled for ADB projects.</p>
	<p><b>B. Loss of structures.</b> Cash compensation for lost structures at full replacement cost irrespective of the legal status of land and free of depreciation, transaction costs and other deductions.</p>	<p><b>B. Loss of structures.</b> Cash compensation for lost structures at market cost with depreciation or value of salvaged materials sometimes included in the calculation.</p>	<p><b>B.</b> Same in principle and not in application. Application is reconciled in previous projects but not yet mainstreamed by a Decree for ADB projects.</p>
	<p><b>C. Loss of the business.</b> Actual losses reimbursement plus business restart costs. Application based on tax declaration/similar documents for business stoppage period. Without tax declaration /similar documents, based on maximum non-taxable salary.</p>	<p><b>C. Business Losses.</b> Compensation in cash at market value for legal businesses but the methodology is not specified. Non-registered businesses are not entitled to compensation.</p>	<p><b>C.</b> Different in principle (non-legal businesses and in application (all businesses). Already reconciled for previous projects but mainstreamed reconciliation not formalized through a Decree for ADB projects.</p>
	<p><b>D. Loss of trees.</b> Irrespective of legal land occupancy status compensation at market cost based for application on tree type/ wood volume for wood trees and based on income lost (x tree type x market value of 1 year income x years to grow the tree to a full production.</p>	<p><b>D. Loss of trees.</b> In general private trees are not compensated although the wood cut is left to the DPs.</p>	<p><b>D.</b> Different in principle and in application. Already reconciled in previous projects for the fruit-bearing trees only.</p>
	<p><b>E. Loss of crops.</b> Cash compensation at market price for the gross crop value of an expected harvest.</p>	<p><b>E. Loss of crops.</b> Cash compensation at market price for all incurred land preparation activities and expected gross crop value.</p>	<p><b>E.</b> Same in principles and application.</p>
	<p><b>F. Loss of jobs.</b> Indemnity of lost income so as to ensure DP rehabilitation. Specific arrangements to be agreed with borrowers for permanent impacts.</p>	<p><b>F. Loss of jobs.</b> Severance pay provided by employer.</p>	<p><b>F.</b> Different in principle and application already adjusted for previous ADB projects.</p>
4. Procedural mechanisms	<p><b>A. Prior notification.</b> Timely notice on land acquisition needed.</p>	<p><b>A. Prior notification.</b> Written notification prior to withdrawal (acquisition) of land.</p>	<p><b>A.</b> Same.</p>



Items	ADB SPS (2009) and ADB practice for application	Tajikistan	Reconciliation
	<p><b>B. Information disclosure.</b> LAR documents should be disclosed in a timely manner and in a language accessible to local population.</p>	<p><b>B. Information disclosure</b> LAR decisions to be published in national media in Russian and Tajik within 5 days from approval.</p>	<p><b>B.</b> Same in principle, different in application to ensure full LARP disclosure. Already reconciled for ADB projects.</p>
	<p><b>C. Public consultation.</b> Meaningful public consultations are to be held with the DPs. DPs should be informed about their entitlements and options, as well as resettlement alternatives.</p>	<p><b>C. Public consultation.</b> There are no requirements to inform directly the DPs about their entitlements and resettlement options as such.</p>	<p><b>C.</b> Different in principle and application. Already reconciled for ADB projects.</p>
	<p><b>D. GRM</b> should be established for each project s, and information on GRM should be communicated to DPs.</p>	<p><b>D. GRM.</b> No project specific GRMs exists. Disagreements are resolved by through Hukumats' grievance mechanism or appeal to court.</p>	<p><b>D.</b> Different in principle and application. Reconciled for ADB projects.</p>
<p><b>5. Prior acquisition</b></p>	<p><b>A. Property</b> can be acquired only after full compensation is paid to the DPs</p>	<p><b>A. Property</b> can be acquired only after full compensation is paid to the DPs</p>	<p><b>A.</b> Same in principle and application.</p>
<p><b>6. Resettlement planning, assessment and valuation of project impacts</b></p>	<p><b>A. LARP Preparation:</b> includes compensation entitlements, income/livelihood restoration strategy, monitoring plan, budget and implementation schedule, based on sound impact/valuation surveys as detailed below.</p> <p>i. Detailed measurement survey (DMS). Measures quantitatively impacts for each affected property.</p> <p>ii. DP Census (including review of legal status). Identifies all DPs and establishes a list of legitimate beneficiaries.</p> <p>iii. Socio-economic survey. Includes information on DP's disaggregated by age, sex, family size, education, occupation, income source.</p>	<p><b>A. LARP Preparation:</b> No requirements to prepare LARP or pursue measures to restore the livelihoods of DPs to the pre-project level. A series of activities similar to those mandated by the SPS are however required as follows:</p> <p>DMS. Measures all impacts in quantitative terms.</p> <p>ii. DP Census: DP Identification. Identifies all DPs by residence or locality and establishes a list of legitimate beneficiaries based on land title and house ownership status.</p> <p>iii. Socio-economic survey. No comparable requirements exist</p> <p>iv. Valuation survey.</p> <p>a) Land: Mechanisms for land</p>	<p><b>A.</b> Different in principle and application. Already reconciled for ADB projects through technical instructions.</p> <p>i. Same in principle and application. Valuation mechanisms need to be updated.</p> <p>ii. Same in principle and application</p> <p>iii. Different in principle and application but already reconciled for ADB projects.</p> <p>iv. Different</p>





Items	ADB SPS (2009) and ADB practice for application	Tajikistan	Reconciliation
	<p>iv. Valuation survey</p> <p>a) Land: If land market exist based on a survey of recent land transactions. In absence of land market info, based on land productivity and income.</p> <p>b) Buildings replacement cost of materials, labor and transport and special features of the building/structure without discounting for depreciation, salvaged materials and transaction costs.</p> <p>c) Trees/crops. Based on the set methodology.</p> <p>v. M&amp;E: M&amp;E depends on the project category, external for Category A and internal for Category B projects.</p>	<p>valuation to be defined.</p> <p>b) Buildings/structures: Market value of materials, labor and transport and special building features but discounted for depreciation, salvage materials, and transaction costs.</p> <p>c) Trees/crops. Based on the set methodology.</p> <p>v. M&amp;E: No M&amp;E requirements in national legislation</p>	<p>a) Application and valuation method to be developed and mainstreamed.</p> <p>b) Different in application. Application already reconciled for previous ADB projects.</p> <p>c) Same in principle, but different in application. Already reconciled for previous ADB projects.</p> <p>v. M&amp;E: Different in policy but reconciled once LARP is endorsed for ADB projects.</p>
<p><b>7. Special assistance to vulnerable severely affected and relocating DPs</b></p>	<p><b>A. Vulnerable DPs</b> should be identified and special assistance should be provided to them so as to help their restoration or improvement of pre-project level of livelihoods</p> <p><b>B. Resettlement assistance.</b> DPs to be resettled receive relocation assistance covering transport and transitional period livelihood costs.</p>	<p><b>A. Vulnerable DPs:</b> No special consideration is required for vulnerable DPs; no distinction is made between DPs when deciding on the compensation or rehabilitation package</p> <p><b>B. Resettlement assistance</b> No special consideration is required for resettled DPs. However the package depends on Government's decision regarding transitional period allowance.</p>	<p><b>A.</b> Different in principle and application. For ADB projects reconciled by endorsing the entitlement matrix and the LARP.</p> <p><b>B.</b> Different in principle and application. For ADB projects reconciled by endorsing the entitlement matrix and the LARP.</p>

**4.6. Principles and Policies Adopted for the Project**

131. 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 (if a portion of land will be provided for compensation of losses of land, so far not applicable) the Hukumat Land Committee will facilitate providing new 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) labour 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.

132. All AFs/APs will be entitled to compensation for loss of land, crops/ trees, and some small rural infrastructure (channels, fencings, tendril demountable concrete posts on grapes fields, etc.) at replacement value. No other impacts are envisaged.

133. The transmission line is designed to pass outside of the residential areas and villages, hence there will be no impact on buildings, structures, businesses and no physical resettlement.



134. 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 shareholders 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 shareholders.

#### 4.7. Compensation and Rehabilitation Framework

135. 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.

#### 4.8. Compensation and Rehabilitation Eligibility

136. All DPs in the Project are entitled to compensation and resettlement assistance to help the restoration of their livelihoods to pre-Project levels. The combination of compensation measures and resettlement assistance offered to them depends on the nature of the lost assets and the magnitude of the Project's impact as well as the social and economic vulnerability of the affected persons. All APs are eligible for compensation and rehabilitation assistance, irrespective of their land ownership status. The compensation packages must reflect replacement costs for all losses (such as land, crops, trees, structures, businesses, incomes, etc.)

- 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.

137. 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.

### Compensation and Rehabilitation Entitlements

138. 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:

139. 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 in 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.kansascityfed.org/RegionalAffairs/MainStreet/MSE\\_0609.pdf](http://www.kansascityfed.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.

140. The following types of land impacts are recognized under the Republic of Tajikistan's laws;

- **Agricultural land:** Households with agricultural land use right will be rehabilitated through the provision of compensation and equal to following:
  - a) **Permanent land holders (individual and cooperative):** Cash allowance for loss of land use rights equal to the average net income from crops in the past 5 years for the project district, obtained from the Statistical Department, or provision of an alternative land plot of equal value / productivity to the revoked plot. If the residual portion of the affected plot is too small to use, the whole plot is compensated or exchanged;
  - b) **Leaseholders:** Cash allowance for the lost income equivalent to 1 year of average crop productivity. The owner of the land use right will be compensated for the loss of the right and the loss of income equivalent to the loss of the lease amount for the remaining lease period.
  - c) **Agricultural tenants:** These tenants will receive their share of harvest at market rates (if the impact is temporary) plus 1-year additional average crop productivity compensation (if the land is lost permanently).
- **Residential / Commercial Land:** Households with affected residential / commercial land use rights, will be rehabilitated through the provision of the following compensations:
  - a) **Permanent land holders:** Cash allowance for the loss of land use rights equal to the current land lease rate/land tax at the time of expropriation, multiplied by 25, the provision of an alternative land plot of equal value/productivity (similar conditions and facilities) to the affected plot. If the residual portion of the plot to be revoked is too small to use, the whole plot is compensated for or exchanged;
  - b) **Leaseholders:** Cash payment for loss of income for a minimum of three months and up to 12 months, or continuation of rental agreement on an alternative land plot. The owner of the land use right will be compensated for loss of income equivalent to the loss of the lease amount for the remaining lease period.

### Buildings and Structures

141. All APs, whether titled owners or illegal-non-titled owners of buildings and structures, will be compensated in cash at replacement cost (including the cost of materials, labor and transport of materials) free of deductions for depreciation, salvageable materials and transaction costs, irrespective of the registration status of the affected assets. The cost of lost water, wastewater, electricity and gas utilities will be included in the compensation. In addition, the compensation will include the cost of registration/legalization of the new building/structure. Renters of buildings/structures will receive an allowance for the loss of income (based on a tax declaration) caused by the loss of the rented building/structure for no less than 3 months, or continuation of their rental agreement at an alternative building/structure. If the tax declaration is not available, the compensation will be calculated as per the sum stated in the valid rental



agreement.

### Crops and Trees

- a. 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.
- b. Trees compensation:
  - 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.

### Vulnerable Groups

142. Tajikistan's legislation does not make a distinction between vulnerable and other categories of DPs when deciding on compensation for affected assets. In addition, there is no special consideration given under Tajikistan's laws and regulations to vulnerable DPs (the poor, women-headed households or families with many children) during the LAR process. There are no national standards to assess poverty. The Law "On minimal consumption basket", which would allow for food-based poverty assessment is still pending endorsement. During the socioeconomic study in the Project area, the local authorities reported that the Government provision to the poor amounts to 33 TJS per quarter given to households living below the poverty line<sup>9</sup>; single women headed households with dependent children; single women-headed households with dependent children, large households with five or more children below 18 years, and households with a disabled member. 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. Able-bodied members of vulnerable households will be given priority in project-related jobs.

### Temporary Impacts

143. In case of temporary land acquisition, compensation shall be based on local commercial rental rates for the duration of use. The land shall be restored by the construction contractor(s) to its original status at the end of the rental period.

144. Any unanticipated impact that occurred during the construction of the road (such as additional land and other assets acquisition, unavoidable stoppage of business during the construction) will be compensated as per the entitlement matrix. Assets affected due to the road works will be compensated by the contractor as per the Contractor's third party insurance provisions. (Annex 6-1)

<sup>9</sup> The poverty line is taken as TJS 448 per month, based on the poverty line published by World Bank for Tajikistan in October 2015 of \$ 57 per month, and an exchange rate of TJS 7,8696 per USD.





145. The following Project-specific Entitlement Matrix details the entitlements agreed for this Project:

*Table 23 Project specific Entitlement Matrix*

No	Asset	Displaced Person	Compensation Entitlements
<b>Permanent Loss</b>			
1	Agricultural land (all losses irrespective of severity)	Individual land-use rights holders	Cash allowance for loss of land use rights equal to net income in the last 5 years generated from the affected land area at market rate at the time of taking; or Provision of alternative land plot of equal value / productivity to plot lost. If the remaining portion of the plot to be taken is too small to use, the whole plot is compensated or exchanged.
		Collective land-use rights holders	Cash allowance for loss of land use rights equal to net income for the last 5-years generated from the affected land area at market rate at a time of revocation; or Provision of alternative land plot of equal value / productivity to plot lost. If the remaining part of the plot to be taken is too small to use, the whole plot is compensated or exchanged.
		Renters and leaseholders	Rental allowance in accordance with the conditions of the rent agreement, but not less than the cost of rent for 3 months; or Continuation of rental agreement on alternative land plot or cash allowance for the lost income equivalent to 1 year of average crop productivity.
		Informal (if any) <sup>10</sup>	Provision of opportunity to lease a plot on state land. Relocation allowances.
2	Residential and commercial land	Owners	Cash allowance for loss of land use rights in cash equal to current annual land lease rates at the time of acquisition multiplied by 25; or Provision of alternative land plot of equal value / productivity (similar conditions and facilities) to plot lost. If the residual portion of the plot to be taken is too small to use, the whole plot is compensated or exchanged.
		Renters	Rental allowance in accordance with the conditions of the rent agreement, but no less than the cost of rent for 3 months, or Continuation of the rental agreement an alternative land plot.
		Informal (if any)	Provision of opportunity to lease a plot on state land. Relocation allowance if applicable.
3	Buildings and structures	Owners of structures including “ <b>informal</b> ” and <b>encroaching</b>	Cash compensation at replacement rate for affected structure / other fixed assets (without deduction of depreciation, taxes, costs for salvageable materials and other transaction costs). All buildings and structures will be compensated in their entirety; or According to the owner’s choice, if feasible, a building for building / structure for structure exchange.
		Renters	Rental allowance in accordance with the conditions of the rent agreement, but not less than cost of rent for 3 months; or Continuation of the rental agreement for an alternative building/structure.
4	Crops	All DPs, including “informal” and	Crops affected by the towers and by stringing or tower transport will be compensated by default at market rate.

<sup>10</sup> Landless DPs without any rights-to-use land living on income from the illegally used land plot. The DPs owning land adjacent to the illegally used parcel will be compensated for losses from the illegally used part as per the entitlement matrix.



No	Asset	Displaced Person	Compensation Entitlements
		encroaching	
5	Trees	All DPs, including “informal” and encroaching	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Not yet productive fruit trees: Compensation in cash based on inputs x average age of trees.</li> <li>• Seedlings: Based on seedlings cost plus inputs x 1 year.</li> <li>• Wood trees: cash compensation based on wood volume x market value of the wood</li> </ul>
6.	Business and employment (temporary and permanent)	All DPs (including workers of affected businesses	<p>Owners of shops / commercial establishments: In case of permanent loss, compensation equal to 1 year net income (lost profits) plus cost of lost certificates / licenses / patents. The income is based on the official tax declaration, or (if tax declaration is unavailable) it is accepted as the official monthly average wage<sup>11</sup> multiplied by 12. In case of the temporary loss of a business, compensation equal to the net income for the period of disruption (&lt;1 year). The income is based on the tax declaration, (or it is calculated based on the monthly average wage multiplied by the number of months since the operation was disrupted (less than 12 months)).</p> <p>Workers indemnity for lost wages equal to 3 months' income.</p>
7.	Relocation	Physically displaced households	<p>Transportation allowance (cost of labor and vehicle rent to transport materials of the house/business structures to a new location. Communal and site preparation cost for the alternative land plot (including connection to power grid, water supply system, installation of latrine etc). Severity /livelihood rehabilitation allowance in the form of cash compensation equal to the official monthly average wage for 3 months.</p>
8.	Public / common assets		<p>Rehabilitation / substitution in kind or in cash at replacement cost of affected items and rehabilitation of their functions. Alternative service supplied, if cut off temporarily.</p>
9.	Vulnerable households	DPs receiving government assistance for poor, single women-headed HH below poverty line, elderly households with no means for living, households with disabled head or other HH members.	<p>One additional compensation for the crops in the affected plots to be set at 25% of the ascertained value.; Enrolment in Government social assistance, if not yet enrolled; Priority in project-related employment for members of vulnerable households (if at legal working age).</p>
<b>Severity of Impact</b>			
10.		Permanent losses exceeding 10% of the total land per AF	Additional cash allowance equal to market value of 25% of the gross produce of affected land x 5 years
<b>Temporary Loss</b>			
11.	Temporary impacts	All relevant DPs	For other unforeseen and temporary impacts other than stated above, ADB SPS (2009) general principles and objectives will be used as the minimum benchmarks and appropriate impact mitigation measures will be sought to meet them.

<sup>11</sup> Official average monthly wage for April 2016 is **931.90** TJS/month and reported within macroeconomic indicators by the Agency on Statistics under President of the Republic of Tajikistan. Available via: <http://stat.tj/en/macroeconomic-indicators/> and <http://www.tradingeconomics.com/tajikistan/wages>



No	Asset	Displaced Person	Compensation Entitlements
			The payment for rented land during the construction, will be based on the market price under negotiated agreement. After discontinuation of land use, the land must be restored to the original status, or as per the agreement with the land rights holder <sup>12</sup> .
<b>Unanticipated impacts</b>			
12.	Other unanticipated assets loss or impact on livelihood	All DPs residing in the project corridor before the cut-off-date.	Compensated as per the Project specific entitlement matrix.

## 5. GENDER IMPACT AND MITIGATION MEASURES

146. 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. Nevertheless, 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.

147. 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.

148. 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.

149. To compare with earlier LARPs prepared for Sughd (Kairakkum – 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.

150. 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”.

<sup>12</sup> In the case that the Contractor and Land-use rights holder both agree in writing to leave the land area in a state precisely described in the agreement.



151. Only in a 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.

152. 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.

153. 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.

154. 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 organizations, 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 emphasising 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.



## 6. INFORMATION, CONSULTATION AND DISCLOSURE REQUIREMENTS

### 6.1. Consultation

155. 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 Penjikent Rayon in the Jamoats of Serazm, Khalifa Hassan, Zudhzina, Loikh Sherali, 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.). Neighbours in the project zone of influence were also contacted. Consultations were carried out with individual households during the AF socioeconomic survey, and with local leaders and officers at Jamoat and Hukumat levels.

156. 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.).

*Table 24 Consultation with communities*

No	Date	Location (Jamoat/Rayon)	No of participants		
			Males	Females	Total
1	12.07.2016	Panjakent	18	8	26
2	19.07.2016	Ayni	11	6	17
<b>Total</b>			<b>29</b>	<b>14</b>	<b>43</b>

157. A number of formal and informal consultations with APs additionally affected by the project and other major stakeholders were conducted during assessment and the preparation of the LARP. Representatives of the local government at jamoat level, specialist from the agriculture department in Panjakent and Ayni districts, safeguards' team of PMU Barqi Tojik were consulting DPs on a daily basis during the assessment and preparation of final LARP. A brief summary of the major consultations with affected people is given below.

Consultation meetings participants and major stakeholders:

1. All DPs additionally affected by the Project
2. Local Government LAR relevant departments representatives
3. Grievance Redress Committee's representatives in Panjakent and Ayni districts
4. Safeguards team of the PMU Barqi Tojik
5. Other community members, APs representatives and local authorities

Agenda of the consultation meetings:

1. Discussion and considerations of reasons and scale of additional impact of LAR on APs;





2. Analysis and discussion on the adopted entitlements and valuation methodologies adopted for the LAR of the project;
3. Disclosure of the valuation results of the assessment carried out by the agriculture department specialists from Panjakent and Ayni district, for each type of land and income from crops, loss of fruit trees and land use rights of the APs followed by receiving comments and consent of APs.
4. Other issues and questions raised by the participants.

158. Consultation meetings started with general information about the project and explanation of the reasons for land acquirement following impact on some of the households' agriculture lands and orchards along the transmission line. The temporary impact on additional required land during construction works was also discussed with APs and mentioned that APs will receive adequate compensation for the temporary impact as reflected in the entitlement matrix of this LARP.

159. Although majority of APs were present during assessment, measurements and registration of affected land and crops, once again all type of losses that were registered, were assessed with each individual owner during the consultations. Farther methods of identification of costs for each type of losses have been communicated to APs and samples cases were explained on way of lands, crops and trees valuation methods applied.

160. It was explained that in case of occurrence of any other extra damage and impact on land and crops created by machinery work that were not compensated, APs can submit their grievance to the GRC committee representative in jamoat and seek compensation for the damages. In addition, it was explained that contractor may have temporary impact on land of some community members during the construction work. In this cases project has to ensure registration of such cases and compensation should be provided to the owner before acquiring the land.

## **6.2. Resettlement and relocation options for AFs losing agricultural lands**

161. 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 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.

## **6.3. Community Responses to the Project**

162. 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 longterm electricity fees for the population and support economic development (especially the SME sector in rural areas).

163. 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”.

164. 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.

## 6.4. Disclosure

### 6.4.1. Information Disclosure

165. During the SES and consultations with communities, in addition to the information about the Project, LAR processes, bidding process and expected time for the beginning of the works, the participants received the Project Brochure, Project-specific entitlements, GRM procedure and information about the cut-off date. The PIMU, with assistance of the Consultants’ Resettlement Specialist, will update the Project Brochure if it becomes necessary. The Brochure has been delivered to all APs.

166. The information about the project and Cut-off Date was published in the local newspaper, aired on radio and forwarded to each rayon and jamoat authority. During the SES and DMS, all DPs confirmed that they were informed about the cut-off-date.

167. During the LARP implementation, the following information disclosures are planned:

- uploading of the draft LARP in English on the ADB website
- distribution of copies of the LARP in the Russian language in the local authorities' offices
- posting of the approved draft LARP in the Russian language on the PMU ‘Barqi Tojik’ website
- in case of changes in project design, which may result in changes of resettlement impacts, measurement of additional impact, valuation and updating of the LARP will be undertaken. The updated LARP will be disclosed to the displaced persons, and submitted to ‘Barqi Tojik and ADB for approval prior to the commencement of construction in the section(s) where the design has been changed. The updated and approved LARP will be uploaded on the ADB and ‘Barqi Tojik; website.
- corrective action plans will also apply to design variations effected or any omission detected once the construction has commenced.

168. Barqi Tojik has prepared and distributed to affected communities a project information leaflet in Tajik. This has been distributed to the possible AFs for the first time end of 2014 and the updated version was given during SES in July to September 2016.. The project information leaflet contains 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 posted in Hukumat and Jamoat offices. The draft LARP will also be uploaded on the ADB website after project appraisal.



169. 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.

## 7. GRIEVANCE REDRESS MECHANISM

170. 163. 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.

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

First Step: One Project Grievance Redress Committee for each of 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 will go to the local authorities of Grievance Redress Committee and must be heard and resolved within 14 days of submission of the complaint.

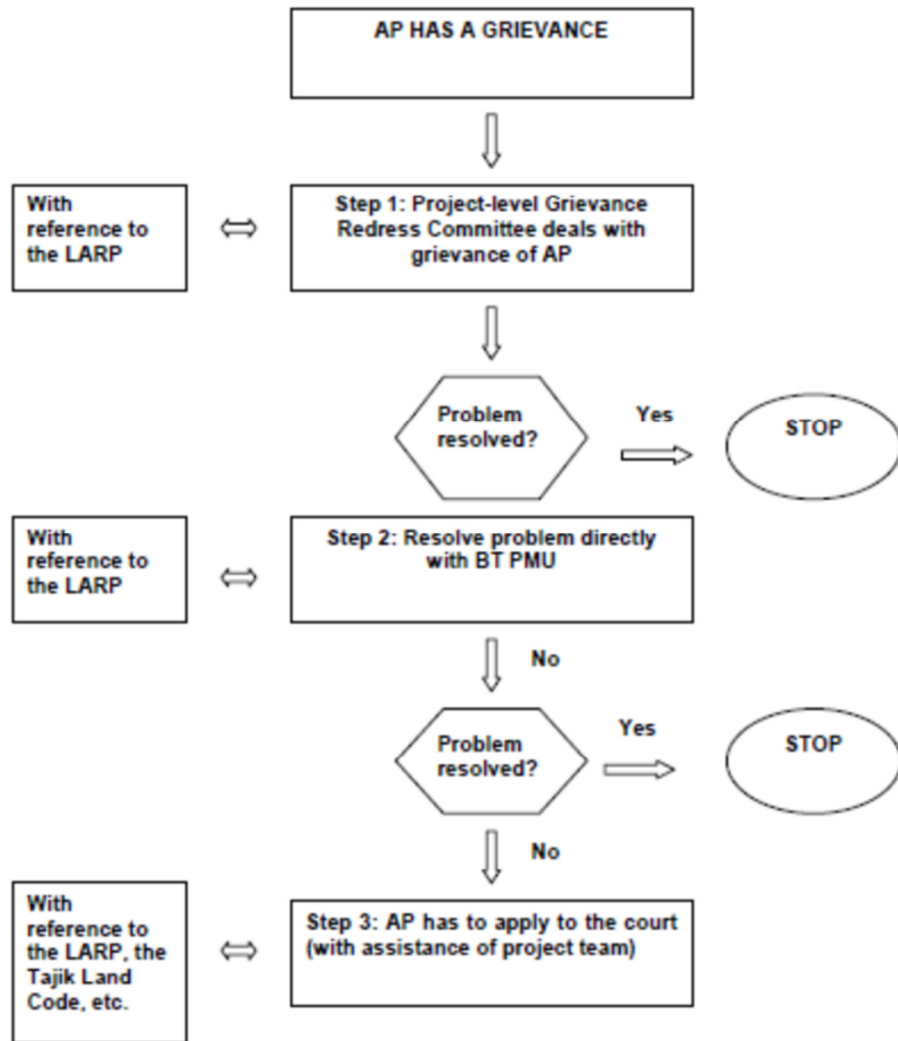
Second Step: If the Project Level Grievance Redress Committee is not able to resolve the grievance within a 14-day period, the complaints should be presented via the BT Rayon representative to BT PMU at a central level. The elected representatives of the AF will have the opportunity to mediate by providing 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.

172. 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 13





## 8. INSTITUTIONAL FRAMEWORK

### 8.1. Institutional Arrangements

173. 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. Close cooperation is required with the State Committee on Land, which has the ultimate authority in the decision making process on land transfers in Tajikistan. 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.

174. 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 Ayni - Rudaki project.

175. 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. Barqi Tojik 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.

### 8.2. Commission on Assessment of Damages and Losses

176. 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. 641 of 30th December 2011, 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.

177. 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.

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

179. 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.

### **8.3. Barqi Tojik's Institutional Capacity Building in Resettlement**

180. 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.

181. 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. Compensation and assistance disbursement mechanisms.

182. 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.

### **8.4. Resettlement Database**

183. 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.



## 9. COMPENSATION BUDGET

184. 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 2015 of major crops grown in the two Rayons traversed by the transmission line. During the assessment of losses, rates are adapted to market levels in 2016, compensation calculations are made to determine the Commissions and compensation when appropriate Hukumats rayons. Table of calculation impact method is given in Appendix D.

185. The cost of LARP implementation will be finalized after elaboration of the final engineering design by the contractor, when the total number of Substations and their losses will be determined. The cost of LARP implementation was completed after elaboration of the final technical design by the contractor, when it was revealed the total number of Substations and their losses. Very detailed summary of benefits and compensation of losses can be expected for each affected farms project area, which is shown in the tables of Annex E.

The data in the table are the result of DMS, which was implemented from July to September 2016 and DMS was under the responsibility of the contractor. The procedure was carried out as follows:

- Firstly, the precise coordinates of all planned towers, construction sites, access roads and necessary places for tensioning identified with the support of regional hukumats;
- Secondly, the identified owners of the rights to use the land, again with the support of the concerned Hukumat Administration;
- Meetings between the affected owners of the rights to use land and PMU were held where they discussed the procedures and statistical data regarding the use of previous and current land use conditions;
- The data was submitted to the Commission on the estimated losses and compensation (CADL), which were completed in accordance with the AP permanent and non-expected losses, respectively, the results are shown in Tables Appendix E;
- At any stage before, DMS and AP had full access to the mechanism, as provided for in Chapter 7 of this LARP.

186. The whole process was very long, but not really difficult, although in many cases it was difficult to contact the owners of land, which were absent for a longer period. Only with the support of representatives of Jamoat and Hukumat it could be found all members of the affected households and the above procedure was carried out. Another problem is that at the time of DMS the status of some lands were not well understood. In such cases, solutions have been decided in conjunction with the district Hukumats (eg, in one case, when the certificate of land on the design, but the document has not yet been edited and recorded). However, these small issues have no effect on performance, as all land and property based on the same price terms.

### 9.1. Key Assumptions for the Compensation Budget

187. This line crosses vast areas of agricultural land, and almost all agricultural land is used intensively. Furthermore, most of the affected land in three districts: Penjikent and Ayni, watered and used for planting wheat and other annual crops. On the route section planted a number of fruit trees, most trees planted in home gardens, which are only marginally affected within the project. However, as in many other areas of Tajikistan, recently, since the end of 2011, many of Dehkan farmers began planting fruit trees in order to implement the national agricultural policy. Vine grapes is characterized mainly in Penjikent district, and about 20 sites will be affected by the construction of power transmission line.



188. Against this background the following set-up is assumed for the construction phase (18 months from the end of 2016 and during the year 2017):

- I. Land use patterns:
  - less than 20% of the cultivated land is used for cotton,
  - more than 25% of the land is used for wheat, barley and maize,
  - 15% of the cultivated land used for vegetables, oil seeds, melons, rice, etc.
  - 5-10% of the land is used throughout the year for fodder plants,
  - 15% of the land planted with fruit trees and wine grapes,
  - less than 2% of the land up home gardens with mixed cultures
  
- 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. TJS 40, 200/ ha the price has been calculated for onions),
  - Due to the low volume of compensation payments for irrevocable losses and the fact that the new towers constitute a constraint on all mechanical works in the fields, a base rate of 250 TJS will be paid additionally for every tower (TJS 20 500 in total).
  - Due to the fact, that irrigation water is scarce in some areas and not all farms are regularly serviced, provided if the irrigation water was available for at least two seasons in the last five years, the payment of full compensation will be given for permanent losses.
  
- III. Other conditions influencing the assessment of damages and the volume of compensation payments:
  - Up to the final construction work, it is likely to obtain data of the needed construction of approximately 17.8 km of lines for agricultural land (88 towers), it certainly damage crops. 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.), it does not change the fact that currently 88 towers will be compensated.
  - 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. This was confirmed by the DMS;
  - The volume of investments, which increases the cost of construction work (ie, the use of additional angle towers) is likely to reduce the volume and to the payment of the costs of refunds and vice versa. This was done at least three cases where additional towers could prevent intersection farmhouses.

## 9.2. Permanently Acquired Land

189. In the framework of the project will be irrevocably alienated 9630,5m<sup>2</sup> lands for 20 angle and 68 suspension towers, which will be erected on the cultivated lands of private households, farms or collective farms. 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.

190. Consideration shall also be adopted by the situation related to the fact that part of the land cannot be used during the evaluation period, due to the lack of irrigation water. Representatives of the Jamoat, or neighbors should confirm that the land has been used for the past five years, and that the potential for future resumption of irrigation there. All those farmers who can prove that they are currently unused land received water during the harvesting season, at least twice during the five years, they will be fully compensated for the losses of the last direction.

191. 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 foundations is determined by multiplying the estimated yield on these lands by the market value of the produce at 2015 – 2016 prices and again multiplying the result by 5. The average yields per hectare and the market price for the main products (cotton, wheat, potatoes, lucerne, vegetables, sunflowers, etc.) is shown in Table 2 (Chapter 2).
- 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. A plenty of time for newly planted apricot, apple or citrus seedling would take before it can bear fruit. For the pomegranate, the market value multiplied by 5 years (Table 2.4 shows a detailed analysis of data on the average harvest, the market prices and the price of seedlings).

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 at this LARP all trees older than one year will be considered as productive in order to avoid disputes. 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 300 apricot, 625 pomegranate, and 400 citrus trees, while the costs of one seedling are TJS 3.5 for apricots and pomegranates, 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.

***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 1.5. 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 2.5 per kg.

192. 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.**

#### Total Losses

193. The length of the corridor (and the necessary access for tensioning) through the agricultural area is only:

Penjikent	13 728 m
Ayni	4 080 m
<b>Total</b>	<b>17 808 m</b>

The area required for pulling the temporary damage is as follows:

Penjikent	54 912 m <sup>2</sup>
Ayni	16 320m <sup>2</sup>
<b>Total</b>	<b>71 232 m<sup>2</sup></b>

The area required on a temporary basis (access and work stations) is:

Penjikent	54 633 m <sup>2</sup>
Ayni	10 367 m <sup>2</sup>
<b>Total</b>	<b>65 000 m<sup>2</sup></b>

The area required on a permanent basis for the supports of:

Penjikent	7 868.75 m <sup>2</sup>
Ayni	1 761.75 m <sup>2</sup>
<b>Total</b>	<b>9 630.5m<sup>2</sup></b>

### 9.3. Permanent Loss of Land Use Rights Estimates

194. The amount of SS payments to cover the permanent loss of rights to land used in the construction of overhead lines around TJS 81,901 (TJS 59,901 of the 9.63 hectares of crops and TJS 22,000 as base payments). If the forecast estimates also take into account that cut down the fruit trees are regarded as irrecoverable losses due to the fact that they have to be replanted to get a first harvest in 3-4 years for vines, five years for the garnet and seven years for citrus and apricot trees.





Quite a small number of towers can be moved out of areas under crops in marginal lands, to lead to significantly lower numbers, as shown below:

- Penjikent, for 73 towers must be paid 54 741 TJS.
- Ayni, for 15 towers need to pay 7581 TJS.
- Total 62 322 to 88 towers or the average for each tower is 708.20 TJS.

195. Average compensation for tower costs are 708.20 TJS, which is 29% less than expected. The small difference is also the result of moving the towers of a very productive area in Panjakent and Ayni, who has more bad soil and less water for irrigation. Again, unexpected expenses will cover extra costs in the case, when the tower is the cause of a higher damage than was calculated.

#### 9.4. Compensation for Crops Affected by Temporary Land Occupation

196. As shown in Chapter 2.3, net of land withdrawn from circulation on an ongoing basis to angle and suspension towers (i.e 9 630.5 m<sup>2</sup>) given in the standard scope of 850 m<sup>2</sup> on tower will be needed an additional piece of 65 000 m<sup>2</sup> farm land, that will be affected only temporarily in one season harvest mounting angle 20 and 68 suspension towers (if the construction will be completed in one season).

197. Also, at the time of wire tension, for the corridor of four meters on the route approx. 17,808 m (= 17.8 km) to access to the 88 towers construction site, will need to use an additional 71,232 m<sup>2</sup> strip of cultivated land. This zone will be calculated on the reality of the hanging wires will be produced on existing routes and the earth between fields without crops or planted with crops (mostly near channels and large access roads). Consequently, our estimates, for greater fidelity, is increased.

198. Agricultural crops (cotton, corn and onions), trees (apricot, pomegranate, citrus, almond), and some vines grown in the temporarily an enabled the ground to be damaged or cut as in the case of trees, during construction of towers and stringing wires.

***A total area of 88, 000 m<sup>2</sup> (including the areas of fruit trees) may be affected on an ongoing (9 630.5 m<sup>2</sup>) or temporary (71,232 m<sup>2</sup>).***

When calculating the direct loss and long-term losses for farmers, the following figures are the most realistic:

- Penjikent, farmers have a short-term damage to 72 831 TJS, and long-term damage to 79 239 TJS
- Ayni, short-term damage to 17 129 TJS, and the long-term damage to 12 165 TJS

**All short-term damage is 89 960 TJS, and long-term damage is 91 404 TJS, the result of which is 181 364 TJS.**



*Table 25 Total loss and compensation payments*

Table 9.1: Total loss and compensation payments							
District	Temporary losses, m <sup>2</sup>		Persistent losses, m <sup>2</sup>	Compensation for the towers /TJS 250	Subtotal compensation in TJS	25% for vulnerable households	Total compensation in TJS
	Access (section)	Work areas					
Penjikent	54 912	54 633	7868,75	18 250	151 865	205	152 070
Ayni	16 320	10 367	1761,75	3 750	28 460	834	29 294
<b>Total</b>	<b>71 232</b>	<b>65 000</b>	<b>9 630,5</b>	<b>22 000</b>	<b>180 325</b>	<b>1039</b>	<b>181 364</b>
Total/ha	7.12	6,5	0.96				
Total affected area	13,62 ha						

## 9.5. Additional Damages

199. In a small degree, will be damaged the concrete columns for the vines with galvanized steel wire with a diameter of 4 mm, and a very small amount of metal cases /wooden fences.

200. On the planned corridor of line is not revealed the trees that have commercial value (drill trees), which may be affected by the project. However, DMS showed that at least about 1 mulberry trees and some groups of apples (17 trees), likely to be cut. In addition, two nut trees will be compensated. To protect the lines, some of the tallest trees, partially / fully can also be cut down during construction work.

201. To be on the safe side, it was initially calculated, that according to estimates of approx. 50 cases can be damaged / cut various non-fruit trees. Cost of (mostly wood) one tree was estimated at an average of not more than 104 TJS (most likely less considerably in individual cases more).

202. Together with concrete columns for vines, wooden fences, galvanized steel wires, etc., the total estimate of the additional costs amount to approx. TJS 4906. However, this amount is already

*Table 26 Calculation of additional amounts*

Expenditure clause	Quantity	Cost per piece in TJS	Total cost
Concrete columns for vines in pieces	72	55	3960
Galvanized steel wire with a diameter of 4 mm, kg	73,14	7	512
Grid Fences, m	62	7	434



Total			4906
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203. 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.

### 9.6. Assistance to Affected Vulnerable Households

204. The socio-economic survey of households with farmlands in the wider area of the preliminary line route, identified seven male households aged 70 and above and one head of a female in the same age group. One of them - disabled. Two of the four specific female HH shown that they have a very low income. Three out of eight men over 70 years, also indicated a low income.

205. Accordingly, at the beginning of the LARP development revealed, that less than 10% of households are low-income, and, of course, vulnerable; in this case it is six or 7.5%. In accordance with the matrix of payments for reimbursement, which requires the provision of additional benefits to AF in the amount of 25% of the market value of the gross domestic product on the affected plot of land, vulnerable households (according to our estimates no more than 7% of all AP) will receive additional financial assistance in the amount of TJS 1039.

206. To prove that the number of actually affected households even less. In Panjakent 1 AP in Ayni district transferred 23 APs belonging to this group a total additional compensation for Penjikent amounted to 205 TJS and for Ayni district TJS 834, all additional payments credited 1039 TJS.

### 9.7. Income Restoration Program

207. 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. Based on the fact, that the 144 m<sup>2</sup> is taken as the maximum requirement permanently in the land plot for the construction of the angle towers, middle-right of land per hectare loss in the affected households will amount to below 1 percent of the total landowning. DMS proved that the largest loss among 309 AP target only 1 landowner, whose land loss is about 2.25% of the total land holding..

### 9.8. The estimated cost of land acquisition

208. The total budget of compensation, with unforeseen expenses amount to approx. TJS 217,637 (approx. US \$ 27 647 (1 \$ = 7.8720)). The table below provides a breakdown of this amount.

*Table 27 Estimated total costs*

Item	Amount (TJS)
Compensation for AP permanent loss of land for towers foundation	180 325



Item	Amount (TJS)
Compensation for damaged crops during construction of towers and stringing wires	
Compensation for other injuries	
Help for AP	1 039
Subtotal	181 364
Extraordinary expenses (20%)	36 273
<b>TOTAL AMOUNT</b>	<b>217 637</b>

## 10. IMPLEMENTATION SCHEDULE

209. 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 28 Implementation Schedule for the Land Acquisition and Compensation Procedure*

Dates and period of time	Activities	results
Day of start of final line design Estimated 30 days	<ul style="list-style-type: none"> <li>- Contractor starts final identification of HVTL with definite location of towers</li> <li>- Contractor distributes information leaflets to all possibly affected households</li> <li>- Detailed assessment of areas required on a permanent base and of temporary losses of crops</li> <li>- Identification of all affected land owners or land use right holders by contractor (with support of Jamoat and collective farm representatives)</li> <li>- Agreement upon identified land sizes by representatives of affected households and contractor and affirmation of usage rights by AFs</li> </ul>	<ul style="list-style-type: none"> <li>- Several hundred leaflets distributed to the population along the planned HVTL</li> <li>- 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</li> </ul>
Day of acceptance of final HVTL design of contractor by PMU /ADB Estimated 60 days	<ul style="list-style-type: none"> <li>- Commission for Valuation of Losses and Compensation starts working in both concerned Rayons</li> <li>- Land sizes required are to be confirmed and valuation of compensation payments arranged</li> </ul>	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



<b>Table 10.1: Implementation Schedule for the Land Acquisition and Compensation Procedure</b>		
<b>Dates and period of time</b>	<b>Activities</b>	<b>results</b>
Date of acceptance of reconsidered LARP by PMU /ADB Estimated 14 days	<ul style="list-style-type: none"> <li>- LARP sent to ADB</li> <li>- LARP tested and accepted</li> </ul>	
Presentation Day of revised LARP by Hukumats Approximately 7 days	<ul style="list-style-type: none"> <li>- Translation into Russian</li> <li>- LARP sent to all three Hukumat</li> </ul>	
The date of receipt of the documents from Hukumats Approximately 15 days	<ul style="list-style-type: none"> <li>- Barki Tojik (PMU) and Working Group (PMU Resettlement Specialist, ADB representative) inspect all documents</li> <li>- PMU appoints term benefits</li> <li>- Affected households are informed and asked the cashier of BT to receive monetary compensation.</li> <li>- All affected households, confirm with the signature that the payment was made in accordance with the agreements.</li> </ul>	PMU delivers money orders corresponding to employees of BT and money are transferred to the affected households. All payments are documented.
No more than 10 days after the transfer of funds to affected households Approximately 10 days	PMU checks payments made to affected households	Not registered any complaints and violations
Subsequently	- Monitor prepares short report with the recommendation to start the construction work	Report handed to PMU
Subsequently	<ul style="list-style-type: none"> <li>- PMU sends Monitor report to ADB</li> <li>- ADB clears completed compensation process</li> </ul>	Report handed to ADB BT obtains clearance
Subsequently	- Start of civil works	





## 11. MONITORING AND EVALUATION

210. 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.

### 11.1. Monitoring and Reporting Requirements

211. While effective institutional arrangements can facilitate implementation, effective monitoring ensures that the course and pace of implementation continues as originally planned. The implementation of this LARP will be subjected to internal monitoring as the Project will not trigger a significant amount of involuntary resettlement. The ADB SPS 2009 considers involuntary resettlement impacts significant if 200 or more persons will be physically displaced from their home or lose 10% or more of their productive or income-generating assets. Internal monitoring will be conducted by the PIURR, assisted by the resettlement specialist of the Construction Supervision Consultant. Monitoring is vital for ensuring that the LARP is effectively implemented, unforeseen impacts related to land acquisition and resettlement activities are identified and appropriate measures to address the same can be taken in a timely manner.

212. ADB SPS 2009 requires monitoring and measuring the progress of implementation of the land acquisition and resettlement plan. It also requires the preparation of a semiannual monitoring report that describes the progress of the implementation of resettlement activities and any compliance issues and corrective actions. In accordance with ADB SPS 2009, both the borrower/client and ADB have their own monitoring responsibilities. Borrowers/clients are required to implement safeguard measures and relevant safeguard plans, as provided in the legal agreements, and to submit periodic monitoring reports on their implementation performance. ADB requires borrowers/clients to:

- establish and maintain procedures to monitor the progress of implementation of safeguard plans,
- verify the compliance with safeguard measures and their progress toward intended outcomes,
- document and disclose monitoring results and identify necessary corrective and preventive actions in the periodic monitoring reports,
- follow up on these actions to ensure progress toward the desired outcomes,
- retain qualified and experienced external experts or qualified NGOs to verify monitoring information for projects with significant impacts and risks,
- use independent advisory panels to monitor project implementation for highly complex and sensitive projects, and
- submit periodic monitoring reports on safeguard measures as agreed with ADB.

213. The extent of ADB's monitoring and supervision activities will correspond to the project's risks and impacts. Monitoring and supervising of social and environmental safeguards is integrated into the project performance management system. ADB will monitor the project on an ongoing basis until a project completion report is issued. ADB will carry out the following monitoring actions to supervise project implementation:

- periodic site visits for projects with adverse environmental or social impacts;
- supervision missions with detailed review by ADB's safeguard specialists/officers or consultants for projects with significant adverse social or environmental impacts;
- review the periodic monitoring reports submitted by borrowers/clients to ensure that adverse impacts and risks are mitigated as planned and as agreed with ADB;



- work with borrowers/clients to rectify, to the extent possible, any failures to comply with their safeguard commitments, as covenanted in the legal agreements, and exercise remedies to reestablish compliance as appropriate; and
- prepare a project completion report that assesses whether the objective and desired outcomes of the safeguard plans have been achieved, taking into account the baseline conditions and the results of monitoring.

214. In accordance with the requirements under the Safeguard Policy Statement, ADB shall post on its website the draft, final and updated LARP and the resettlement monitoring reports, upon receipt by ADB.

## 11.2. Internal Monitoring

215. The key objective of the internal monitoring is to monitor the process of LARP implementation such as the compensation process, grievance mechanism and effectiveness of LARP implementation procedure. Internal monitoring will be performed routinely by the PPM 'Barqi Tojik' Safeguards Monitoring and Evaluation team. The results will be communicated to ADB through the quarterly Project implementation reports. Indicators for the internal monitoring will be those related to the LARP implementation processes, and immediate outputs and results which allow for the assessment of the progress and results of LARP implementation and the adjustment of the work program, if necessary.

216. The PMU will monitor performance (physical progress of the LARP implementation against milestones set in the LARP), impact (whether the objectives to restore the living standards of the affected population have been properly considered and executed), and LARP compliance, indicating whether the compensation program has been carried out in accordance with the provisions of Tajikistan's laws and ADB policies, and to the satisfaction of the DPs.

217. Internal Monitoring 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.

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

219. The Construction Supervision Consultant shall have a resettlement specialist on board who will assist the PMU in the internal monitoring of the LARP implementation processes. The CSC resettlement specialist will:

- supervise the community consultations and disclosure of project information;
- ensure the replacement cost principles of the ADB SPS (2009) are employed in the valuation of affected assets and compensation is disbursed in accordance with the endorsed LARP;
- ensure relocation/reconstruction of affected structures/businesses are completed and set compensation paid before civil works commencement;



- monitor the LARP implementation process and provide data and support to PIURR during preparation of quarterly monitoring reports on LARP implementation and monitoring activities;
- inform the PMU on issues and challenges during the LARP implementation and monitoring; and provide recommendations and suggestions for a solution;
- supervise the implementation of the mitigation measures and temporary land acquisition, advise PMU on LAR issues and grievance redress, inform PMU on any non-compliance cases, and suggest appropriate remedies.

220. Specific performance monitoring indicators will be:

- meaningful public consultations held
- SES/census surveys and assets inventories studies completed
- compensation payments disbursed
- replacement lots allocated (if applicable)
- housing and infrastructure construction completed
- relocation of people completed
- income restoration and development activities initiated
- monitoring and evaluation reports submitted.

221. Impact monitoring will encompass verification of the following indicators:

- whether all physical inputs committed in the LARP have been delivered and all services provided;
- whether the mitigation actions prescribed in the LARP have provided the desired effects;
- the socioeconomic status of the affected population and host population measured against the baseline conditions before the displacement.

222. Impact monitoring will be supplemented by the assessment of the DPs satisfaction with the resettlement initiatives and the adequacy of measures applied for restoration of DPs' livelihoods. This will be done through direct consultations with the affected population and face-to-face meetings with the DPs.

223. The completion of the LARP implementation will result in the preparation of a Compliance Report, which will indicate whether the compensation program has been carried out in accordance with the provisions of Tajikistan's laws and ADB policies, and to the satisfaction of the DPs. The Compliance Report will be submitted to EA and ADB. Approval of the Compliance Report by ADB is a condition for the commencement of the civil works. The Compliance Report will be based on the following monitoring indicators: