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**BOTAŞ**  
**PETROLEUM PIPELINE CORPORATION**

# **Land Acquisition Plan**

## **Tuz Gölü Underground Gas Storage Project**

February 2013

# TUZ GOLU UNDERGROUND GAS STORAGE PROJECT LAND ACQUISITION PLAN

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# TUZ GOLU UNDERGROUND GAS STORAGE PROJECT LAND ACQUISITION PLAN

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## 1 INTRODUCTION

### 1.1 BACKGROUND

The Land Acquisition Plan (LAP, also known as a Resettlement Plan) RP369 v1 June 2005 described the framework and procedures that the Project will follow for the acquisition and compensation of land and assets, both permanent and temporary, for the Tuz Gölü Underground Natural Gas Storage Project.

For the preparation of RP369 v1 June 2005, consultations have started in 2001 and were held on several dates starting from 2002, 25 July 2002 in Sultanhani, 14 January 2003 in Aksaray. The 2005 LAP was disclosed in BOTAS web page and the Bank's info shop in June 2005.

Prior to any site activities, additional Consultations were held in 28 July 2006 and 13 September 2006 in Aksaray; and 29 November 2007 and 18 October 2012 in Sultanhani.

The RP369 v1 June 2005 is already cover all the components of project such as water supply and brine pipelines and facilities trying to minimize the land acquisition associated with it. In that document, BOTAS planned to acquire only the small areas needed for each of the 12 wells. Later however, during the implementation of the project, for the security of the wells, it has been decided to acquire all the areas in the vicinity of wells. This revision in approach has lead to increase in areas where the 12 wells would be located.

Therefore, the revision to RP369 v1 June 2005 is introduced and this revised LAP is prepared which supersedes the existing one.

This Revised Plan v 2 February 2013 is prepared to reflect the changes mainly in the followings:

- (i) to reflect the changes in the land acquisition based on detailed engineering work carried out: In existing RP369 v1, each well area is considered individually. During the detailed engineering work, due to security, future extension and utilization of the remaining areas of lands to be acquired, it was preferred to cover all areas within the vicinity of affected lands. Therefore, the land acquisition to be implemented shall be done in accordance with Section 6.
- (ii) to include the land acquisition for the energy transmission line: The existing RP369 v1 does not cover the energy transmission line for the pumps stations of water supply line and facilities. Therefore, the land acquisition in Long Term Easement is to be implemented to those areas details are given in Section 5. The areas to be acquired are mainly, government own land. Limited number of affected land owner is foreseen.
- (iii) to include the land acquisition for the access roads: The existing RP369 v1 does not cover the access roads to pumps stations of water supply line and facilities. Therefore, the lands, where necessary, to be acquired are reflected in the areas already indicated in Item 4. Since, the most case, the existing roads being in use are to be utilized, no major area is expected to be acquired.

# TUZ GOLU UNDERGROUND GAS STORAGE PROJECT LAND ACQUISITION PLAN

Before acquiring further lands in the well area and for the electricity transmission lines, BOTAS will survey each land owner to determine the degree of impact on each land owner of the land acquisition and whether they can be considered vulnerable or severely affected by the acquisition and if this will require any additional assistance to ensure that land acquisition does not leave them worse off (see entitlement matrix pages 29-30). BOTAS will document the surveys, and provide the World Bank with a summary of information on the land owners to be affected, and determine if any additional assistance will be necessary (as described in the entitlement matrix) in each case before acquiring the land. A list of the survey questions can be found in Appendix 3.

## **1.2 LAND ACQUISITION PLAN (LAP) OBJECTIVES**

The LAP describes the framework and procedures that the Project will follow for the acquisition and compensation of land and assets for the Project.

The Project primarily involves economic, rather than physical, displacement, because people are losing land but not any homes. No people will have to move involuntarily, no homes or structures will move. It involves the acquisition of permanent and temporary land for project uses and thus has the potential affect people's livelihoods. So far, based on land acquired already, no one's livelihood was affected severely, as there have been no complaints in this regard. People have multiple sources of income, and use farming as supplemental income, in the area generally. Farming in recent years is in decline in the area because the agricultural activities around the facilities are rather insufficient due to the infertility of the land. Therefore the crop income is insufficient for most of the landowners. The farmers can only receive one crop in one season and the land has to be fallow in next season.

The construction of the natural gas, water and brine pipelines, the pumping stations and gas storage areas including 12 wells all require acquisition of about 749 hectares (ha) of land in the Project, either temporarily (382 ha) or permanently (367 ha). Total amount of land, already being acquired and to be acquired is 44% of public and 56% private, affecting 4061 number of households.

Out of this total 749 hectares, total 277 hectares (235 ha temporarily and 42 ha permanently), were already acquired in the years of 2006 and 2007 affecting 3413 number of households. The remaining portion will be acquired over the next few months and it is expected to be affecting 648 numbers of households more.

In order to avoid physical dislocation and to minimise economic dislocation for affected populations, the Project has adopted several measures, including:

- Minimising Project land use, reclaiming land after construction, and reinstating the land, with minimum restrictions following construction, for use by the original land owners and users;
- Designing the routing to avoid any physical resettlement and to minimise expropriation both permanently and temporarily; no physical relocation or resettlement of households will result from project interventions;
- Determining compensation values based on extensive data collection and net income evaluation methodology;

The objective of the LAP is to outline these measures, provide details and show that the Project follows the Turkish legal framework and OP 4.12.

# TUZ GOLU UNDERGROUND GAS STORAGE PROJECT LAND ACQUISITION PLAN

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## 2 PURPOSE OF THE PROJECT

The energy industry, including gas companies, must warrant secure energy supplies to residential, commercial and industrial customers.

Gaseous fuels must often be transported hundreds or even thousands of miles before they reach the markets served by energy suppliers. To optimise the economics of such projects, transportation systems are usually operated at high load factors, while demand load factors vary with energy needs in different seasons, on different days of the week and at different times of the day. Energy suppliers therefore need tools for peak shaving and handling disruptions in supplies.

Energy must therefore be stored sometimes for short and sometimes for long periods of time. A storage requirement in the gas industry is a typical example. Residential, commercial and industrial gas users take gas in accordance with their patterns of demand, while gas suppliers receive gas at an almost uniform rate. Underground storage facilities, into which gas is injected during off peak periods, helps utilities to provide a reliable service satisfying customer demand. These facilities are sited close to centres of demand or at the end of a major transmission line as geological conditions allow.

Requirements for the storage of gas are increasing day by day. Experience and research and development work have demonstrated that underground storage is superior to aboveground storage. Underground storage facilities are highly reliable installations, which have almost no impact on the environment and are usually less costly than above ground plants.

Studies are in progress for storing natural gas in underground in order to regulate, the seasonal, daily and hourly fluctuations in consumption, to meet the increased winter demand, with the excess amount of gas emerging from the reduced demand for heating in summer as a result of seasonal temperature differences and to meet the natural gas supply deficit in the future. The underground storage of natural gas is regarded as an important issue in Turkey. In connection with fast-rising gas consumption, underground storage is needed to effectively balance peak demand with approximately constant gas supplies provided by long-distance pipelines. The pipeline route is depicted in Figure 2.1.

### 2.1 ABBREVIATIONS

BOTAŞ	: BOTAŞ-Petroleum Pipeline Transportation Corporation
LAP	: Land Acquisition Plan
AKB	: Department of Land Survey and Expropriation
EPC	: Engineering, Procurement and Construction
AGI	: Above Ground Installation
DE	: Detailed Engineering
CR	: Community Relations
EIA	: Environmental Impact Assessment

# TUZ GOLU UNDERGROUND GAS STORAGE PROJECT LAND ACQUISITION PLAN

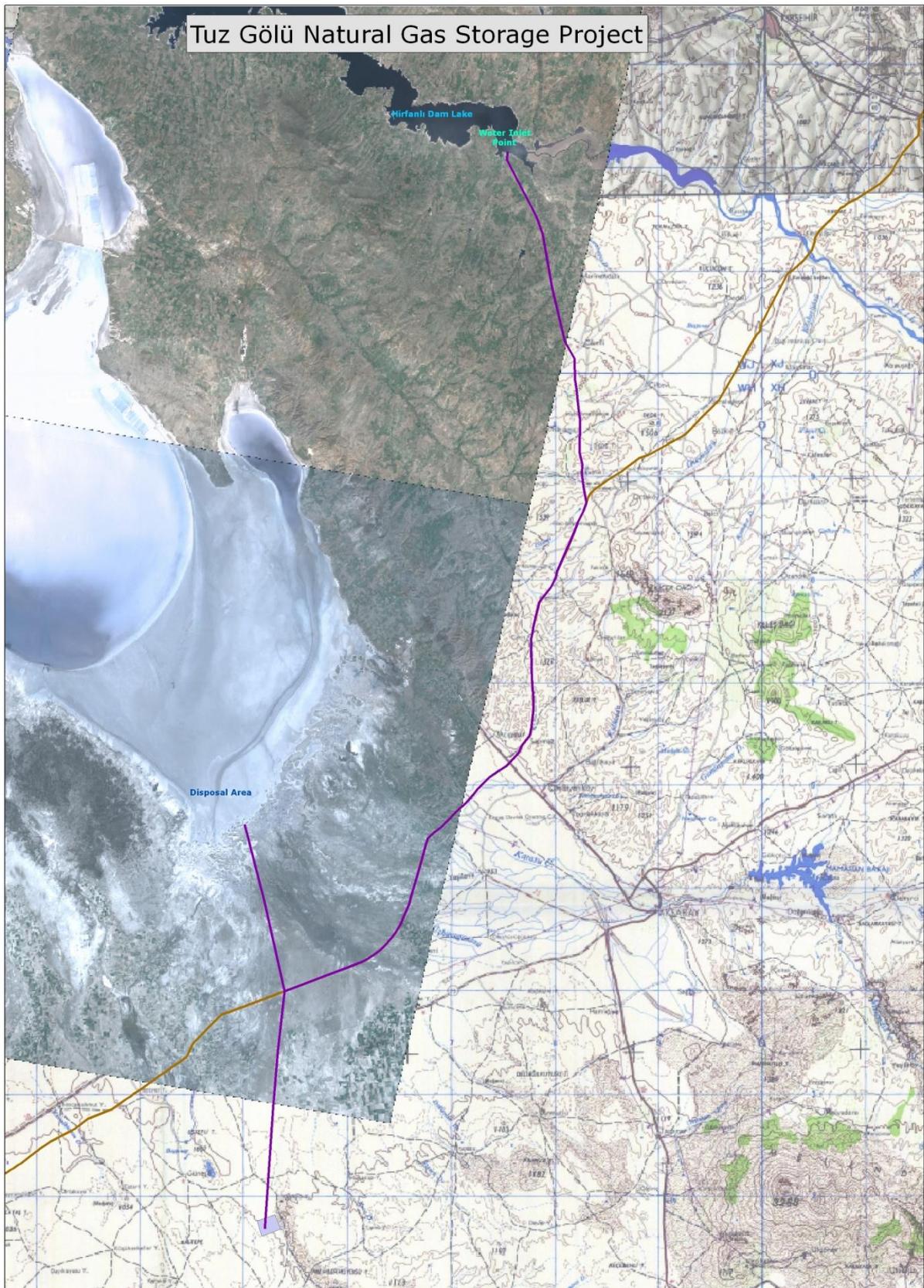


Figure 2.1 Satellite Image Combined Topographical Map

# **TUZ GOLU UNDERGROUND GAS STORAGE PROJECT LAND ACQUISITION PLAN**

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## **3 SUMMARY OF THE PROJECT**

For the purpose of gas storage, an Engineering Study in Tuz Golu Basin has carried out. Tuz Golu Basin is one of the most suitable places for storing natural gas in salt domes.

According to the geological possibility of underground storage in Turkey, a geological screening leads the Tuz Golu Basin at the top where large leached salt caverns could be accommodated. It is a favourable location for a peak shaving storage (not far from Ankara) and close to the 40" Kayseri-Konya-Seydisehir Gas Pipeline, (19 km) and also, the existence of pure rock salt is proved at a suitable depth.

In order to assess the technical feasibility of the Tuz Golu salt structure, BOTAs followed a step-by-step procedure. Each step was based on the knowledge gained from the preceding step. The evaluation consisted of a review of existing data, 3-D seismic, drilling of two exploration wells, laboratory tests on salt cores, hydrological study for brine disposal, seismicity study and environmental impact assessment study.

# TUZ GOLU UNDERGROUND GAS STORAGE PROJECT LAND ACQUISITION PLAN

## 3.1 SPECIFICATIONS

Location	South of Tuz Golu, Sultanhani-Aksaray
Storage Type	Salt formation (Dome type)
Number of Drilled Wells	2 (UGS-1 and UGS-2)
Number of wells to be drilled	12
Entrance depth to salt	UGS-1: 583 m, UGS-2: 635 m
Salt dome depth	> 750 m.
Dimensions of the Body	Height: 15 km, Width: 2,5 km
Salt area suitable for storage	App. 30 km <sup>2</sup>
Fresh water supply (for leaching process)	Groundwater resources (5+1 wells) and/or via pipeline from Hirfanli Dam-160 km from Project area
Total fresh water demand	1.120 m <sup>3</sup> hour (Totally: 60 million m <sup>3</sup> )
Brine discharge location	via 39 km pipeline to Tuz Golu
Distance to Kayseri-Konya Natural Gas Pipeline (In operation)	19 km.
Volume of one cavern	500.000 m <sup>3</sup>
Working gas volume (for 12 caverns)	960 MMCM
Cushion gas volume (for 12 caverns)	518 MMCM
Total gas volume (working+cushion)	1.478 BCM
Maximum (Total) Withdrawal Rate (10 caverns)	40 MMCM/day
Maximum Injection Rate (10 caverns)	30 MMCM/day
Maximum cavern pressure	App. 220 bar
Minimum cavern pressure	80 bars
Wells+Leaching construction period	17 months

The salt body of the Tuz Golu area has an average width of 2-2.5 km. and length of 15 km. resulting in a salt-bearing area of about 30 km<sup>2</sup>. This huge area is sufficient enough in size to construct more than ten caverns. The average salt thickness was mapped to about 1500 m. with two maximums, reaching more than 2000 m.

# TUZ GOLU UNDERGROUND GAS STORAGE PROJECT LAND ACQUISITION PLAN

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## 3.1.1 Freshwater Supply

Fresh water will be used to leach caverns within the salt domes,. The freshwater demand of the project will be covered from Hirfanli Dam Lake.

The groundwater utilisation rate allowed by the Turkish General Directorate of State Hydraulic Works (DSI) is  $5 \times 10^6$  m<sup>3</sup>/year. In this regard, the total water supply requirement of the project will be as follows:

Considering the leaching water demand of one cavern is 280 m<sup>3</sup>/h, the fresh water allowed for the project by SHW (State Hydraulic Works) is 560 m<sup>3</sup>/h, which is only sufficient for leaching of two caverns simultaneously. On the other hand, to speed up the project to meet increasing storage demand within years, the leaching operations are considered to be performed in groups of 4, instead of 2. In such case, the fresh water demand of project will increase up to 1120m<sup>3</sup>/h. Due to the environmental risks associated with supply of this amount of water from groundwater resources, it is proposed to supply water from Hirfanli Dam reservoir located approximate 160 km north of project area.

## 3.1.2 Brine Disposal

Brine originated due to the leaching process (560 m<sup>3</sup>/h) will be collected in a pond with a capacity of approximately 1200 m<sup>3</sup> located in the leaching unit. It will be transmitted to Tuz Golu through 39 km. long pipeline. The flow will be gravitational since topography is suitable for this purpose.

*In order to create a homogeneous dispersion in the lake, brine will be discharged into Tuz Golu using diffusers fixed at the end of the brine discharge transmission pipeline. The length of the diffuser structure will be approximately 18 m. with six diffuser outlets located crosswise.*

## 3.1.3 Main Units of Surface Facilities of Salt Cavern Storage

The area (400m. x 800 m.) for the surface leaching and gas facilities is planned. The area is sufficient for the leaching plant and gas plant at the same location. The facility will be connected to the existing 40" Kayseri-Konya-Seydisehir Gas Pipeline with a 19 km. branch line.

The leaching plant will be designed for parallel leaching of the first two caverns step by step up to the final extension stage. The leaching plant has to be provided with fresh water, electrical energy and nitrogen.

The gas plant will be built up in a modular arrangement of the main equipment according to the numbers of caverns in operation. The as plant has to be connected to the Turkish gas pipeline network and provided with electrical energy and fresh water.

# TUZ GOLU UNDERGROUND GAS STORAGE PROJECT LAND ACQUISITION PLAN

## 3.2 LAND ACQUISITION

All project components including the construction of the natural gas, water and brine pipelines, the pumping stations and gas storage areas 12 wells require acquisition of about 749 hectares (ha) of land in the Project, either temporarily (389 ha) or permanently (360 ha). Total amount of land, already being acquired and to be acquired is 26% of public and 74% private, affecting 3797 number of households.

Out of this total 749 hectares, total 277 hectares (235 ha temporarily and 42 ha permanently), were already acquired in the years of 2007 and 2008 affecting 3413 number of households which was done under former LAP RP369 v1 June 2005. Upon completion of this document, the remaining portion will be acquired over the next few months and it is expected to be affecting 648 numbers of households more.

The lands already acquired are mainly long term easements and on the public/state lands, there is no users because of security restrictions in the vicinity of Hirfanli Dam and because the lands are distant from any settlements. BOTAS is monitoring sites by visiting regularly.

### Section 1 – Hirfanli Dam – Natural Gas Pipeline

Total length of the fresh water pipeline: 35.90 km and the easement is 18m wide. Total 462 parcels are affected. Total amount of land acquired in 2008 given below, is 26% of public and 74% private affecting 1351 number of households.

The land acquisition for fresh water pipeline along with this section is initially completed on 11.06.2008 Permanent Acquisition for pump station areas are permanently acquired in 2012 and construction is started on 11.06.2012 and currently is being carried out.

Facility	~Kp <sup>1</sup>	Area (HA)	Expropriation Type
Pipeline (Fresh Water)	-	(60 ha)	Long Term Easement
Pump Station (PS 1)	0+000	1,17 ha	Permanent Acquisition
Pump Station (PS 2)	10+840	0,85 ha	Permanent Acquisition
Water Storage Tank (ST 1)			
Pump Station (PS 3)	21+695	0,53 ha	Permanent Acquisition
Water Storage Tank (ST 2)			
Water Storage Tank (ST 3)	31+020	4,55 ha	Permanent Acquisition

<sup>1</sup> Kp stands for kilometer point. Starting from Intake Structure (Pump station 1) in Hirfanlı Dam Xyz+abc is a general format at which first three indicate kilometer and second three are meters.

# TUZ GOLU UNDERGROUND GAS STORAGE PROJECT LAND ACQUISITION PLAN

## Section 2 – Natural Gas Pipeline (Parallel Section)

Total length of the fresh water pipeline: 60.07 km Total length of the fresh water pipeline: Total 418 parcels are affected. Total amount of land acquired in 2007 given below, is 11% of public and 89% private, affecting 1932 number of households.

The land acquisition for fresh water pipeline along with this section is initially completed on 03.10.2007, Permanent Acquisition for pump station areas are permanently acquired in 2012 and construction is started on 11.06.2012 and currently is being carried out.

Facility	Kp	Area (HA)	Expropriation Type
Pipeline (Fresh Water)	-	15 m (87 ha)	Long Term Easement
Water Storage Tank (STY 4)	49+385	0,61 ha	Permanent Acquisition

## Section 3 – Natural Gas Pipeline – Storage Area

Total length of the fresh water and natural gas pipeline: 23.2 km,

Length of the brine line: 23.2 km, three pipelines will be buried in one corridor. Total 105 parcels are affected. Total amount of land acquired in 2007 given below, is 43% of public and 57% private affecting 127 number of households.

The land acquisition for fresh water, brine and gas pipeline along with this section is completed on 03.10.2007 and construction is started on 11.06.2012 and currently is being carried out.

Facility	Kp	Area (HA)	Expropriation Type
Pipeline (Fresh Water)	-	28 m (64 ha)	Long Term Easement
Pipeline (Brine Line)	-	28 m	Long Term Easement
Pipeline (Natural Gas)	-	28 m	Long Term Easement
Water Storage Tank (ST 5)	119+685	0,38 ha 0,79 ha	Permanent Acquisition Long Term Easement

## Section 4 – Storage Area – Disposal Area

Length of the brine line: 16.72 km. and the easement is 16m wide. Total 7 parcels are affected. Total amount of land acquired in 2007 given below, is 100% of public and there is no user of the public lands.

The land acquisition for brine pipeline along with this section is completed on 03.10.2007 and construction is started on 11.06.2012 and currently is being carried out.

Facility	Kp	Area (HA)	Expropriation Type
Pipeline (Brine Line )	-	(24 ha)	Long Term Easement
Pig Station	5+085	2,25 ha	Permanent Acquisition

# TUZ GOLU UNDERGROUND GAS STORAGE PROJECT LAND ACQUISITION PLAN

## Section 5 – Energy Transmission Lines – Pump Stations / Storage Tanks 3 & 4

Length of the energy transmission line to the PS1, PS2 and PS3 is about 53 km. (35,9 km of this section is parallel to Section 1) Length of the energy transmission line to the ST3 is 1400 m and ST4 is 1700 m.

Length of the energy transmission line to the Facility area is about 40 km.

The topographical maps are available, after the accurate route of Energy Transmission Line is determined by Contractor; the Contractor has prepared the expropriation files and submitted to the Employer. Upon completion of expropriation files, the land acquisition will take place. Total 148 Ha (147 Ha temporarily, 1 Ha permanently) will be acquired.

It is envisaged total 746 parcels will be affected. Total amount of land to be acquired in February 2013 given below, is 70% of public and 30% private and expected to be affecting 587 numbers of households.

Facility	Kp	Width / Area (HA)	Expropriation Type
Pole Locations		0,69 ha	Permanent Acquisition
Energy Transmission Line to PS1,PS2 and PS3		80,56 ha	Long Term Easement
Water storage tank (ST3)	31+020	2,20 ha	Long Term Easement
Water storage tank (ST4)	49+385	1,19 ha	Long Term Easement
Energy Transmission Line to Facility		63 ha	Long Term Easement

## Section 6 – Surface Facilities Area

**Permanent Expropriation of Surface Facility:** The area which is approximated 320.000 m<sup>2</sup> (400 m \* 800 m = 32 ha) but based on detailed engineering it was calculated as the figure given in following table.

For the surface facility, about 32 hectares in 3 different parcels were expropriated from 3 private land owners or group of owners (1 parcel had 1 owner, another had 2 owners, and a third had 9) for the surface facility area. (0% state land, 100% private land). The land acquisition of this section is completed on 11.09.2012 and construction is started on 11.10.2012 and currently is being carried out.

Facility	Kp	Area (HA)	Expropriation Type
Surface Facilities	-	31,7 ha	Permanent Acquisition

# TUZ GOLU UNDERGROUND GAS STORAGE PROJECT LAND ACQUISITION PLAN

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## Section 7 –Well Locations Area

**Permanent Expropriation of Wells Area:** is modified to cover all areas within the vicinity of affected lands which is approximately 3.242.878, 51 m<sup>2</sup> for the purpose of BOTAS security , future extension and utilization of the remaining area of lands to be acquired as explained above.

101 parcels (50 no.s are public and 51 no.s are for private, affecting 61 householders) are to be effected, 59% of public and 41% private.

For the wells area, total 324 HA area (133 HA is public and 191HA is private) is planned to be acquired. Detailed information is given Attachment 1.

The land acquisition in UGS-8 drilling area is not completed yet. For the wellhead area, 0.1 hectare acquisition has been made and remaining part of land is rented from the owner and payment is done covering for crops and rent from August 2012 to November 2012 until the completion of acquisition proceedings. 11.11.2012 and drilling is started on 27.12.2012 and currently being carried out. The land acquisition of remaining area will take place upon completion of approval proceedings.

Once it is approved, the disclosed in-country for 30 days or more and in the Bank's Infoshop and affected people will be paid in full before BOTAS takes possession of the land

Facility	Kp	Area (HA)	Expropriation Type
Well Locations, UGS1 to UGS12 and Field piping*		324 ha	Permanent Acquisition

# TUZ GOLU UNDERGROUND GAS STORAGE PROJECT LAND ACQUISITION PLAN

Initially Foreseen Land Acquisition Implementation

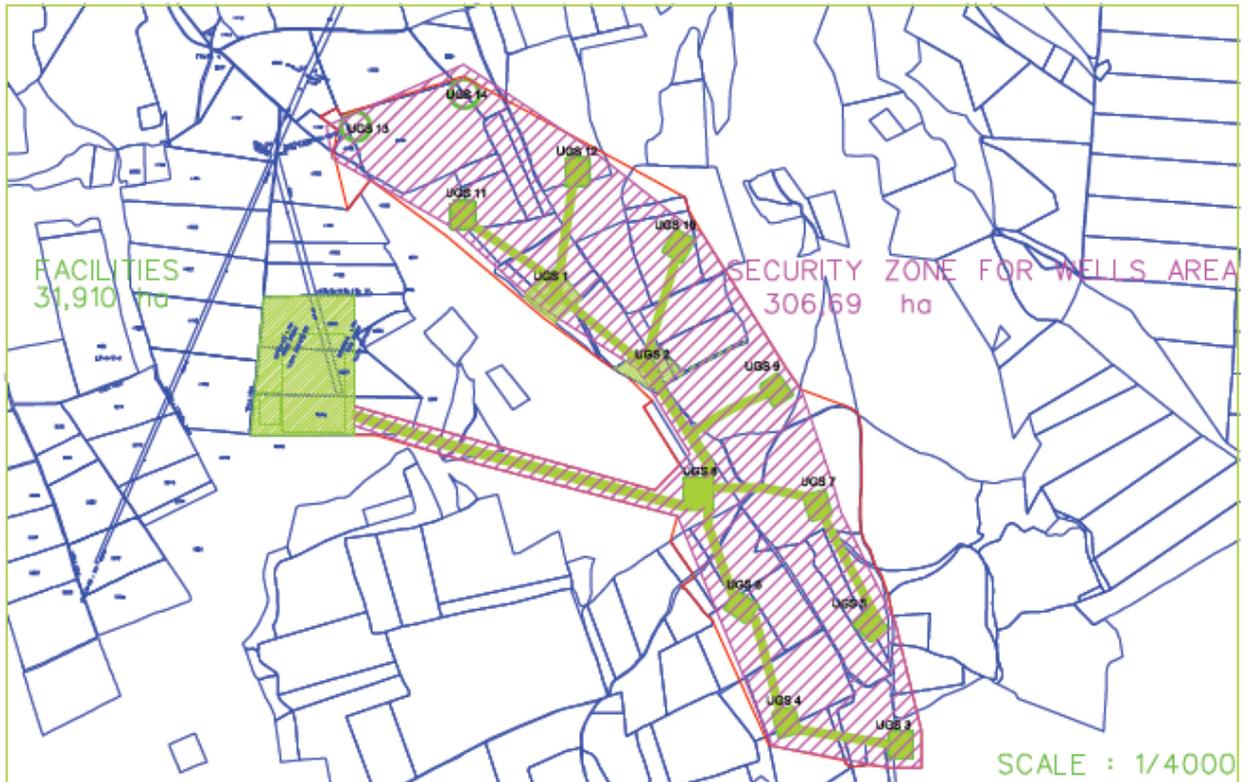
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# TUZ GOLU UNDERGROUND GAS STORAGE PROJECT LAND ACQUISITION PLAN

## Modified Land Acquisition Implementation

Scale:1/4000



# TUZ GOLU UNDERGROUND GAS STORAGE PROJECT LAND ACQUISITION PLAN

## 4 AFFECTED REGIONS AND POPULATION

The plots which are subject to land acquisition for the freshwater supply line from Hirfanlı Dam to Storage Area and Brine Line from storage area to Tuz Golu and Pump Station and water tank areas are within the territorial jurisdiction of approximately 20 villages. All of the villages are in the boundary of Aksaray province. Population information about Aksaray Province according to 2012 statistics has been shown in table 4.1 below.

Province	Number of Rural Villages in Province	Rural Population (2000 census data)	Number of Urban Areas in Province	Urban Population (2000 census data)	Districts	Number of Villages Through Which The Pipeline Will Pass
Aksaray	146	228,060	6	377.505	Evren	1
					Sarıyahşi	2
					Ağaçören	8
					Ortaköy	6
					Merkez	10

Source: BOTAŞ and State Institute of Statistics 2010

**Table 4.1 Population of Affected Communities by the Tuz Golu Project**

Detailed ownership status for all project is given below table

Land Types according to ownership

Parcel Type	Area (HA)	Percentage (%)
Private Lands	420.9	56.2
Non-private land	328.1	43.8
<b>Total</b>	<b>749</b>	<b>100.0</b>

Up to now, total 277 hectares (ha) temporarily (235 ha) or permanently (42 ha), were already acquired in the years of 2007 and 2008 affecting 3413 number of households which was done under former LAP RP369 v1 June 2005.

The remaining portion 472 Ha (101 parcels, 62% of public and 38% private) will be acquired over the next few months and it is expected to be affecting 648 numbers of households more.

Both privately and publicly owned lands are affected by the Project. About 847 more parcels will be permanently and temporarily expropriated and purchased. The project will affect lands only; no physical relocation or resettlement of households will take place as the result of project interventions.

Affected and to be affected lands and persons and its impact of the Tuz Golu in detail is given in Appendix 2.

# TUZ GOLU UNDERGROUND GAS STORAGE PROJECT LAND ACQUISITION PLAN

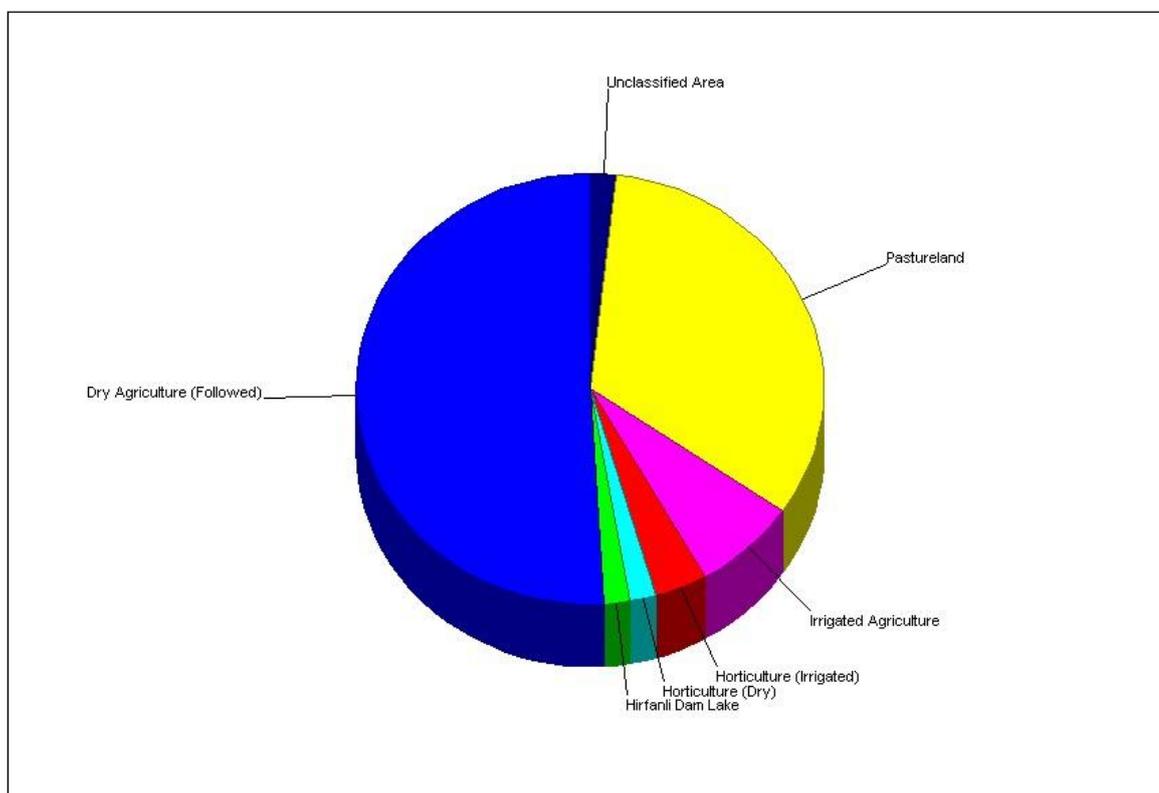
## 4.1 AGRICULTURAL ACTIVITIES

The affected plots are used primarily for cultivation (Figure 4.2). Dry agriculture is practiced on the majority of the affected land parcels. The following statistics have been generated, according to 1:100,000 scale land usage maps. Most landowners use all their land, including the portion affected, for direct income generation.

The agricultural activities around the underground storage facilities are rather insufficient due to the infertility of the land. The farmers can only receive one crop in one season and the land has to be fallow in next season. In this respect the land to be used for the Above Ground Installations in the storage areas is physically inappropriate.

Usage Type	Length of Land Usage (Km)	Percentage of Land Usage
Dry Agriculture (Fallow land)	65.39	48.32%
Pastureland	51.88	38.34%
Irrigated Agriculture	14.29	10.56%
Horticulture (Dry)	0.84	0.62%
Horticulture (Irrigated)	0.64	0.47%
Hirfanli Dam Lake	0.56	0.41%
Unclassified Area	1.73	1.28%
<b>Total</b>	<b>135.33</b>	<b>100.00%</b>

**Table 4.2 Land Usage Table**



**Figure 4.2 Land Usage**

# TUZ GOLU

## UNDERGROUND GAS STORAGE PROJECT

### LAND ACQUISITION PLAN

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## 5 LEGAL FRAMEWORK

The following section outlines the principal policy and legislative framework that pertains to land acquisition and resettlement issues in Turkey. The analysis presented in this section demonstrates that the local legislative framework provides adequate compensation to affected private and public parties in a fair and transparent manner. The Turkish Law compensates the public generally for the expropriation of public lands while World Bank policies provide a process for compensating the specific private parties who actually use the public lands.

In respect of Turkish legislation BOTAŞ is responsible for the implementation of all land acquisition and resettlement activities of the Project.

### 5.1 THE EXPROPRIATION LAW

The Expropriation Law (No. 2942) as amended in 2001 regulates:

- The proceedings to be carried out for the expropriation of immovable objects under the ownership of real persons and legal entities subject to private law, by the State and public legal entities;
- Calculation of the cost of expropriation;
- Registration of the immovable property and the right of easement thereto, in the name of the administration;
- Return of the unused portion of the immovable property;
- Transfer of the immovable properties between the administrations;
- Matters regarding reciprocal rights and liabilities and the settlement procedures and methods of the disputes arising there from, in cases so required in the public interest.

No revision has been made to the law since the original LAP.

The main elements of the legislation concern:

**Finalisation of the expropriation process:** One of the most important changes in the expropriation law concerns the time limits imposed upon various key actors' decisions or actions. The courts have to reach a final decision within a month which is required by law. Various other agencies are expected to provide documentation to the expropriation agency within relatively short periods of time. However, the limited capacity of the local instrumentalities has made it difficult for other state agencies to implement the law. For instance, the local courts have been unable to process sufficiently cases as specified by the law when they receive a large number of cases all at once.

**Expropriation process:** The law states that the BOTAŞ will *“develop or have others develop a scaled plan demonstrating the borders, surface area and type of the immovable properties or resources to be expropriated or on which right of easement be established through expropriation, and shall define and document the owners of the immovable property being expropriated, possessors of such properties in case there exist no registered title deed and their addresses with the help of records kept at the title deed offices, tax offices and the registries or by means of an external investigation to be conducted. The related tax office shall present the tax statement and values of the immovable properties and the resources or the value appraised in lieu of statement in cases where there does not exist any tax statement utmost within one month upon the request of the administration.”*

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In the event that there is no registration or cadastral records at the title deed and land registration office, BOTAŞ will apply to the highest local government administration and request *“the selection of four experts, two principal and two substitute members, at the place where expropriation is to be carried out. The civil administrator will ensure within eight days as from such request of the administrator that the experts are selected, oaths are given before the court of justice of the peace and names are notified to the administrator to carry out the expropriation.”*

**Timing of compensation:** The law states, *“As for the lands expropriated, the portion of amounts belonging to the individuals cultivating land by themselves and carrying out minor agricultural activities shall at all times be paid in advance.* The value of land includes income loss for land temporarily acquired for which an easement is then granted, which would be the case for much of the land associated with a pipeline. Easements can be obtained for up to 99 years.

**Expropriation during a period of challenge:** BOTAŞ can seek court permission to allow expropriation if land ownership is challenged, provided payment for the land is held by a trustee (a bank) and continues to earn interest at a commercial rate. This may happen in cases where owners, including heirs, challenge their ownership shares among themselves.

**Legal framework for land valuation:** Land valuation will be established by BOTAŞ following a pattern of identification of areas, establishment of productive uses and prices, and consultation with a broad and specific list of agencies. In the event of dispute between landowners and BOTAŞ regarding valuation, a court will appoint another valuation commission from agreed lists of experts. The court costs of disputing valuation are borne entirely by BOTAŞ and not by the landowner or user.

In case the parties fail to reach an agreement on the appropriate compensation for the taking at the hearing held before the court, the judge shall set a date of estimation at the latest within ten days and a day of hearing for thirty days thereafter and shall make an on-site estimation<sup>2</sup> for determining the value of the immovable property with the help of experts mentioned under article 15 (of the Law) and before all related parties.<sup>3</sup>

## 5.2 URGENT/IMMEDIATE EXPROPRIATION

The Expropriation Law (Article 27) states that, subject to a Council of Ministers Decree for national defence or in case of emergency, any immovable property may be expropriated by the administration undertaking expropriation for public interest. Such a Council of Ministers Decree has already been obtained by BOTAŞ with respect to the Project. To apply the emergency clause of the law and to urgently acquire land through this mechanism, the value of the immovable property and asset (crop values are determined and paid prior to land entry) in

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<sup>2</sup> The expert group takes into account: (i) the type and quality of the property or resource; (ii) the surface area; (iii) all the qualities and properties that can affect the value of the property and the values of every quality and property; (iv) tax statements, if any; (v) an estimate made by official authorities on the date of expropriation; (vi) net revenue of the land, immovable property or resource according to the locations and conditions valid on the date of expropriation and the determination of its value based on its original condition; (vii) the sales value of similar land sold before the date of expropriation; (viii) official unit prices, construction cost estimates and depreciation of buildings on the date of expropriation; and (ix) other objective measurements that influence the determination of the valuation.

<sup>3</sup>The legislation also provides for the case in which the group of experts cannot reach a consensus on the valuation.

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question must be appraised by the valuation commission (established within the expropriation agency consist of relevant discipline experts) according to the article 11 of the Expropriation Law within seven days. The expropriation shall be made after the appraised value of the immovable is fully deposited by the administration in the name of the owner.

Article 27 of the law allows the expropriation body to enter the field earlier as compared to the timing of entry under the standard expropriation procedures, but the article does not limit the claims of the owner on valuation of land and fixed assets. The valuation process is done by the court or court nominated experts within one week<sup>4</sup>. This article will only be used when other avenues have failed.

## 5.3 WORLD BANK POLICIES

Involuntary resettlement may cause severe long-term hardship, impoverishment, and environmental damage unless appropriate measures are carefully planned and carried out. For these reasons, the overall objectives of the Bank's policy on involuntary resettlement are the following:

- (a) Involuntary resettlement should be avoided where feasible, or minimized, exploring all viable alternative project designs.
- (b) Where it is not feasible to avoid resettlement, resettlement activities should be conceived and executed as sustainable development programs, providing sufficient investment resources to enable the persons displaced by the project to share in project benefits. Displaced persons should be meaningfully consulted and should have opportunities to participate in planning and implementing resettlement programs.
- (c) Displaced persons should be assisted in their efforts to improve their livelihoods and standards of living or at least to restore them, in real terms, to pre-displacement levels or to levels prevailing prior to the beginning of project implementation, whichever is higher.

Required measures:

To address the impacts covered under involuntary settlements of this policy, the borrower (BOTAŞ) prepares a resettlement plan or a resettlement policy framework that covers the following:

- (a) The resettlement plan or resettlement policy framework includes measures to ensure that the displaced persons are
  - (i) informed about their options and rights pertaining to resettlement;
  - (ii) consulted on, offered choices among, and provided with technically and economically feasible resettlement alternatives; and
  - (iii) provided prompt and effective compensation at full replacement cost for losses of assets attributable directly to the project.

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<sup>4</sup> While the Expropriation Law imposes deadlines for court decisions, there may be difficulties in practice. Many local courts have limited capacities in dealing with a large number of cases all at once.

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(b) If the impacts include physical relocation, the resettlement plan or resettlement policy framework includes measures to ensure that the displaced persons are

(i) provided assistance (such as moving allowances) during relocation; and

(ii) provided with residential housing, or housing sites, or, as required, agricultural sites for which a combination of productive potential, locational advantages, and other factors is at least equivalent to the advantages of the old site, compensation for their losses at full replacement cost and assistance in improving their former living standards, income earning capacity and production levels or at least restoring them.

OP (WB operational policy) 4.12 requires that no land shall be acquired before compensation is paid in full to the affected people.

Moreover, OP 4.12 requires the Project to create and implement a resettlement plan, the preparation of which involves the involuntary resettles and hosts in planning. In this regard, OP 4.12 requires the Project to systematically inform and consult resettles about their options and rights during the preparation of the resettlement plan. systematic consultation means that it was not just done in 2005 but periodically, including when your implementation plan for the LAP changed (from 2007) till now. Was this done? Where is the documentation?

“Replacement cost” is the method of valuing assets endorsed by OP 4.12, which sets out the following criteria for valuation: [this LAPs discussion of compensation does not discuss these issues- below]

- Paying special attention to the adequacy of the legal arrangements concerning land title, registration, and site occupation;
- Publicising among people to be displaced the laws and regulations on valuation and compensation;
- Establishing criteria for determining the resettlement eligibility of affected households; and
- The grievance procedures available for dispute over land acquisition.

OP 4.12 also recognizes that some types of loss, such as access to public services, customers and suppliers, grazing or forest areas, cannot easily be compensated for in monetary terms and, therefore, requires the Project to attempt to make or establish access to equivalent and culturally acceptable resources and earning opportunities.

While OP 4.12 covers all affected people, it calls on the Project to pay particular attention to the needs of the poorest groups to be resettled and specifically states that the absence of legal title to land should not bar compensation to the population adversely affected by the Project, indigenous groups, ethnic minorities and pastoralists who may have usufruct or customary rights to the land or resources taken for the project. Additionally, OP 4.12 provides that the LAP must include land allocation or culturally acceptable alternative income-earning strategies to protect the livelihood of vulnerable groups, such as indigenous people, the landless, and semi-landless and households headed by females who, though displace, may not be protected through national land compensation legislation.

The borrower under a WB funding agreement, in this case BOTAŞ, is responsible for preparing the LAP, which presents among other things, a statement of objectives and policies and detailed provision for the planning and implementation of resettlement, [meeting the goals of OP 4.12. The scope and level of detail of the LAP varies with the magnitude and complexity of the land acquisition and compensation issues. BOTAŞ has the responsibility to ensure that Project

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implementation plan is fully consistent with the LAP and also to provide for adequate monitoring and evaluation of the activities set out in the LAP. The WB regularly supervises LAP implementation to determine compliance with OP 4.12.

## **THE GAPS BETWEEN TURKISH LAW AND WB POLICY**

### **5.4.1 Compensation Eligibility**

While Turkish Law compensates only registered lands, World Bank policy covers all affected people, that is to say people who have land title and other users. As suggestion, BOTAS can determine all affected people and provide precautions particular to project. Botas will document all users and owners and consider appropriate mitigation according to OP 4.12.

### **5.4.2 Land & Structure Assessment**

While Turkish Law gives market price to agricultural lands and considers the deterioration for buildings, WB policy requires replacement cost. "Replacement cost" is the method of valuation of assets that helps determine the amount sufficient to replace lost assets and cover transaction costs. In applying this method of valuation, depreciation of structures and assets should not be taken into account. Where domestic law does not meet the standard of compensation at full replacement cost, compensation under domestic law is supplemented by additional measures necessary to meet the replacement cost standard. The suggestions for existing problems can be additional payment, mechanisms particular to project, resettlement fund, non-financial precautions sufficient to cover market value and any other transactional costs. BOTAS is committed to provide replacement cost which will involve showing how the price offered to project affected people for their land is equal to or exceeds the market value plus the land registration fee (4% of market price of the land) and any other transaction costs associated with finding replacement land.

### **5.4.3 Additional Assistance and Support**

While Turkish Law provides moving fund, WB policy requires additional assistance during transfer, for instance giving land, preparing land, credit possibilities, and education and job facilities. Displacement fund can be recommended. BOTAS in this project specifically will provide additional assistance to those who are severely affected and / or vulnerable in accordance with the Entitlement Matrix given Clause 6.2.2

### **5.4.4 Grievance Redress Mechanism**

While WB policy requires establishing suitable and accessible mechanisms and documenting complains, there is not any provision about Grievance Redress Mechanism in Turkish Law. Official and unofficial mechanisms can be created and complains and can be documented. To close this gap, a grievance mechanism process has been described in this document.

### **5.4.5 Rapid Expropriation**

Rapid Expropriation procedure involving first taking possession and then making payment later is not an in accordance with WB policy. Therefore this article would only be used when other avenues have failed but nevertheless since as there has been no implementation in this regard, BOTAŞ commits that all required compensation and assistance be provided to affected people before the Beneficiary of Expropriation takes possession of the land in question.

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## 6 PROJECT IMPACTS AND MITIGATION MEASURES

Chapter Six outlines the project's impacts and the mitigation measures for both permanent and temporary expropriations on various categories and uses of land and resources. Since no homes will be destroyed, the key impacts of the Project on peoples' lives can be categorized as follows:

- Loss of land for agricultural cultivation;
- Loss of grazing and pasture land;
- Reduced livelihoods or productivity losses.

### 6.1 COMPENSATION FOR LAND LOSS

#### 6.1.1. Appraisal for Expropriation

*Appraisal can be defined as a branch of science that teaches principles and criteria regarding properties, incomes and rights, to be followed on the basis of scientific methods.*

*The measures used for appraisal are called appraisal criteria. Appraisal criteria vary according to the type, purpose and marketing status of the property subject to appraisal.*

*There are 2 criteria used for appraisal:*

- Market price criterion,
- Income capitalization criterion,

Both of criteria's are jointly used for appraisal during expropriation and partial expropriation proceedings. The appraisal expert will use a direct comparison method and take account of the latest purchasing/sales prices of plots similar to that subject to appraisal.

#### **Factors affecting the value of a plot include:**

- location,
- shape,
- physical structure of the soil,
- road frontage;
- width of the road by the plot,
- Restraining provisions of the city plan.

A Price survey is done at this time by keeping in mind all the criteria listed above. A site visit is conducted by a committee and according to the law, determines the prices. Agriculture Engineers, Civil Engineers and Property Experts who shall be assigned every year form the committee

Appraisal experts should evaluate the average price per square metre – to be calculated on the basis of purchasing/sales prices of similar plots- by taking account of all the positive and negative features affecting the value of the plot subject to appraisal. In addition to the land market price, Committee takes in the account the crop on the land and compensates crop loss without seed expense.

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The LAP states that the payments will be in compliance with Turkish laws and the Bank policy.

After the market value is determined, additional fees for buying land will be considered and included before reaching the final cost.

Going forward, each land owner will be surveyed and assessed for severity of impact and vulnerability, similar to the land owners from UGS 8 and UGS 6. If land owner states that he/she will be vulnerable / not be able to maintain income after land acquisition, additional measures will be taken to help them restore their income. This could include finding replacement land if they are farmers and claim to need help to get comparable land or other measures to help restore lost income.

A key factor determining land prices in small towns and city centers is their proximity to the city centre or a road. Land or land parcels close to the city center or a road are more expensive than the others. In metropolitan areas, the value of a plot will be influenced by its location and, in particular its visibility and exposure to traffic. A plot situated at an intersection or featuring a broader angle of vision will be more valuable. Shape is also important, on the basis that well-shaped plots are more convenient for construction and soil characteristics will influence costs associated with preparing the land for foundations. Soil characteristics will also determine the need for the construction of an entrance floor and basement.

#### 6.1.1 Income Capitalization Criterion:

According to this criterion, the value of a property is calculated as the accumulation of the capitalization of net income or the total of average future incomes from that property up until the time of appraisal. Income capitalization criterion is often used for appraisal of agricultural lands. The most significant issue in conjunction with this criterion is the accurate determination of **the yield of the land** (net income) subject to appraisal and of the **capitalization interest rate**.

**Net income (yield)**; is generally defined as the financial returns gained from the use of production items having a natural characteristic over a defined period of time. In other words, it is the revenue from a certain amount of money invested in works or rented lands over a defined period of time.

During the calculation of net income from agricultural lands, production value is determined on the basis of the yield of cultivated crops per hectare and unit price of the crop. Net income is calculated by deducting total expenses necessary for the production of that crop from the resulting production value.

According to the existing rotational cultivation system applied in the land subject to appraisal; gross production value is calculated by multiplying crop output with the prices prevalent in the relevant year; net income is calculated by subtracting expenses associated with the product (annual operating expenses + 10% unknown expenses + 3% administration share + agricultural capital interest provision) from gross production value; annual net income is calculated by dividing the total net income by number of crops in the rotational cultivation system and the bare land value is calculated by capitalizing the net income (dividing by capitalization interest rate).

Since expropriation proceedings are realized over each parcel, land yield is calculated instead of farm yield. In relation to annual plants, land expropriation value is calculated over annual yield, and over total periodical yield gained throughout their economic lives for perennial plants.

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The formula used for capitalizing the net income from annual plants is  
$$S_o = s / f.$$

The formula used for capitalizing perennial periodical fixed income is  
$$P_o = p / q^n - 1$$

The right to use unit capital invested in the land is called **capitalization interest rate**.

In order to determine the actual land yield; data on crop output, unit prices and costs should be collected from the producers in the region and Official Institutions. This way, after the land prices and yields close to actual values are determined, average capitalization interest rate will be calculated by dividing land yields by land sales prices (the same number of yields and land sales prices). Since land value and capitalization interest rate are in inverse proportion, land value will increase as capitalization interest rate decreases, provided that yield is stable. According to the Decision of Court of Appeals 18th Civil Panel, of July 01, 1993 No: 1993/262-531, capitalization interest rate ranges from **3%** to **15%** nationwide.

**Land capitalization interest rate** is significantly lower than the interest rates of Industrial and Commercial investments due to the fact that land is more reliable in yielding long-lasting revenue.

In order to determine a healthy, reliable and accurate capitalization interest rate, sales prices and yields of many lands should be known.

The calculated capitalization interest rate is the average interest rate and the appraiser will decide on increases or decreases by taking account of the positive and negative effects on capitalization interest rate of the land. Positive aspects of the land will decrease the capitalization interest rate while negative aspects will increase the same.

Factors positively affecting capitalization interest rate and therefore decreasing the interest rate are as follows:

- Proximity to a city or town,
- Proximity to access roads (land, railway, airway),
- Favourable health conditions,
- Favourable transportation conditions,
- Buildings (if any) in good condition,
- Undivided land,
- Geometrically Well –shaped land Property safety,
- Ease of purchasing and selling,
- Safety of landowner,
- Land registered before the cadastral office,
- High population densities,
- Easily changeable rotational cultivation system,
- Favourable irrigation conditions if it is an irrigated land,
- Small surface area.

To ensure accurate calculations , appraisers should firstly visit the expropriation area and in taking account of its current status of use, determine all the factors (soil structure, status of use,

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topography, climate, proximity to settlements and roads, favorable transportation conditions, location, current pattern of rotating plants in the region and whether or not irrigated and dry agricultural activities are carried out) that may affect the value of the relevant immovable property in accordance with Article 11 of the Expropriation Law.

For long term easement, the plot price determination for compensation is 35% of value of the market price if the land were sold. This represents the top allowable price according to Turkish law and seems reasonable given the fact that applicable restrictions will not affect the dry land cultivation going on in these areas. There is no change in ownership and restrictions are removed when the use of the area ends.

Up to now and in land to be acquired, no cases exist for these restrictions because all farming cultivating activities are dry agriculture. Land owners are mainly planting wheat, barley and corn etc.. Therefore, there is no implementation of planting trees with deep and strong root and no cases where the easement restrictions are expected to interfere with the preferred land use.

For fresh and brine water lines, there will be some restrictions in order to protect of lines. These restrictions will also be marked up to relevant title deeds which are subject to expropriation.

Land owners and users will continue cultivating activities on their lands but they will be restricted to do following activities.

- Any activity which could cause or lead to damage to the pipeline.
- Construction of buildings or assets over the ROW
- Planting trees with deep and strong roots
- Construction of new deep irrigation or drainage ditches
- Boreholes, for any reason whatsoever
- Any alteration to the ground profile
- Any material alteration to the zone affecting support of the surrounding soil to the pipeline.
- Any decrease in the cover on the pipeline however caused (including agricultural activity)
- Any placement of substances, including general rubbish, wastes or detritus

## **Decision of Public Interest for the Parcels to Be Acquired**

The decision of Public Interest has been taken by the Ministry of Energy for the Tuz Gölü Natural Gas Storage Project. The decision allows the application of the Expropriation Law.

Once all steps have been completed for identification and location of affected plots, assets and owners, the key land valuation steps can begin in the case of private land with undisputed ownership, with four steps:

- **Establishment of the valuation commission.** Established within BOTAŞ, the valuation commission (together with several local agencies) gathers information to determine the value of each plot of affected land. After the decision for expropriation is taken, the Administrations carrying out the expropriation shall assign one or more than one **value appraisal commissions**, comprising of at least three individuals, under its own body for the purpose of determining the estimated cost of the immovable property, on the basis of article 11 of this Law and by taking reports from experts, institutions and organisations specialised in this field and if necessary by using the information to be taken from the Chambers of Industry and Trade and the local real estate agencies.

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- **Letter of Notification.** Landowners will receive a notification letter informing them of the decision to expropriate their lands. The letter specifies the date when a Negotiations Commission will visit the village of the affected landowner to disclose the principles of the valuation and to seek agreement with the landowner.
  - **Official Reply Period.** As described by law, the landowner has a 15-day period during which he or she may contact the expropriation agency (the local BOTAŞ branch office) to express his or her opinion, rejection or willingness to negotiate in view of the communicated expropriation decision. To facilitate discussions, the relevant BOTAŞ officers will visit each affected village after sending the letter of notification.
  - **Establishment of the Negotiations Commission.** Established by BOTAŞ, the Negotiations Commission begins discussions with landowners based on the range of land values established by the Valuation Commission. The “negotiation” process does not consist of bargaining. Indeed, as mentioned in Chapter 2, the negotiation commission has no room for bargaining. Rather, this commission explains the basis of valuation to affected communities and each of the affected titled deed owners. It provides detailed information obtained from each source specified under the Law and shows how valuation decisions have been reached.

## 6.1.2 Mutual Agreement

In the event of agreement between the Negotiations Commission and the landowner, the land price is paid to the owner’s private bank account, and the deed is obtained by the BOTAŞ and registered in the name of BOTAŞ. Mutual agreement cases are illustrated in the Figure 10.1 below.

## 6.1.3 Non-Agreement

In this event, BOTAŞ applies to the court for land appraisal and registration of the land in the name of BOTAŞ with rights of use. Public announcement of the process is made through the media and the court summons the landowner. Hearing date is set within a 30-day period. If the landowner and BOTAŞ do not agree before the court on the land price, the court assigns independent experts to appraise the land within 10 days. The court then sets a new hearing date within 30 days and submits the results of the appraisal to BOTAŞ and to the landowner. In the event of non-agreement on this court-supervised appraisal, the court can appoint other appraisers within a 15-day period. The court, following the second appraisal, will establish a final expropriation value. The following steps will then be taken:

- Determined prices will be deposited in a national bank account in the name of the land owner;
- A bank receipt for the deposit will be submitted to the court; and
- Upon completion of all court documentation, court decision on transfer or right to the expropriation agency including establishing certain rights to the title is given. This completes the registration in the name of BOTAŞ with rights of use. The landowner still has the right to appeal the valuation decided in the court, but not the expropriation of the land (Figure 10.2).

## 6.2 COMPENSATION FOR CROP LOSS

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On the lands to be acquired, if the crops identified in, it is recorded first indicating its type and status and then production value of crops and the crop loss is determined by a committee composed by BOTAŞ, headman of village (muhtar) and experts from Official agricultural Institutions. Payment for compensation is done in accordance with this assessment and valuation record.

During construction, landowners and/or land users will lose use of the affected land, temporarily and then continue to use it to plant annual crops (which are not restricted) once the pipe is buried.

## Mitigation

Owners/users will be compensated based on the market value of the crops on permanently and long term easement acquired land. They will also be compensated for the use restrictions imposed upon their land. For the duration of construction, payments will be made for these lands based on their discounted net income. Subsequently, these lands will be reinstated and returned to their original owners for use by them, subject to certain restrictions.

Entitlement Matrix is given below to Summarize Compensation Paid for Different Kinds of Loss.

Impact Categories	Entitlement
Loss of entire land holdings (as confirmed by PAP survey)	<ul style="list-style-type: none"> <li>• offer of replacement agricultural land of equivalent productive value in the area and vicinity of the land being expropriated, together with all transfer/administrative taxes or</li> <li>• monetary compensation based on the assessed fair value including taxes and fees and top-up supplement to the compensation;</li> <li>• if necessary to restore PAP to same situation as before the land acquisition, additional measures will be taken for those that are considered to be either more vulnerable than the rest of the PAPs OR more severely affected by virtue of earning their main income from land on the basis of PAP census carried out prior to final land acquisition for each PAP.</li> <li>• If PAPs are severely affected or deemed to be particularly vulnerable, assistance will be provided to help restore their livelihoods. Mitigation measures will be taken which may include: additional subsistence allowance (equal to minimum wage for agricultural labourers) until adequate replacement land is found or assistance in finding replacement land of equal value.</li> </ul>

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Impact Categories	Entitlement
<p>Partial loss of land (exceeding 20% of all productive land holdings of any given pap) or when land taken represents more than 10% of overall income sources (for those who are not earning most of their income from farming).</p>	<ul style="list-style-type: none"> <li>• offer of replacement agricultural land of equivalent productive value in the area and vicinity of the land being expropriated, together with all transfer/administrative taxes or</li> <li>• monetary compensation based on the assessed fair value including taxes and fees;</li> <li>• if necessary to restore PAP to same situation as before the land acquisition, additional measures will be considered for those that are considered to be either more vulnerable than the rest of the PAPs OR more severely affected by virtue of loss of 20% or more of productive land holdings for those who earn their main income from land or more than 10% for those who have other main sources of income (off farm) on the basis of PAP census carried out prior to final land acquisition for each PAP.</li> <li>• Assistance will be provided to help restore their livelihoods..Mitigations will be provided and the following measures will be considered: additional subsistence allowance (equal to minimum wage for agricultural laborers) until adequate replacement land is found or assistance in finding replacement land of equal value.</li> </ul>
<p>Unviable redundant parcels of land</p>	<p>If a remaining parcel of land after expropriation is not economically viable it will be acquired and compensated, if the project affected person desires so.</p>
<p>Crops</p>	<p>The value of the crop, including the value of time needed to reproduce such a crop, and the replacement cost for any investment made (input, labour etc.) will be considered for all requiring crop compensation.</p>
<p>Long Term Easements</p>	<p>Thirty five <b>percent</b> of the market price of the land will be paid as a lump sum. The land will be returned to the owner at the end of the use period of the facility (the productive life of the gas storage facility until it is decommissioned) . Certain restrictions apply to this land. These are listed in section 6.1 (p 27). The land should be returned to the project-affected person, in the same condition as it was taken. During the PAP census, it will be determined if any of the restrictions actually apply to this PAPs and affect their income streams</p>
<p>Lessees of Public or State owned properties</p>	<p>Provision of the use of other corresponding Public or State owned equivalent property with the rights of a lessee for an equivalent period of time</p>
<p>Legal renters, employees, or workers on the land or in a business</p>	<p>(i) advance notice of 3 months for tenants;  (ii) 3 months rental allowance for legal tenants as transitional allowance;  (iii) In case of workers, 3 months wages will be offered as transitional allowances.</p>

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## 7 PUBLIC CONSULTATION AND DISCLOSURE

A key step in World Bank policies on resettlement, land acquisition and compensation is a framework for public consultation, participation, and the establishment of a process to redress the grievances of affected people. Consultation with the affected population and with officials of local government, civil society and other representatives of the affected population is essential for gaining a comprehensive understanding of the types and degrees of adverse effects.

After finalization of the LAP, it will be posted on World Bank and BOTAS websites. It will also be posted at the local muhtar's office for a month.

### 7.1 CONSULTATION AND PARTICIPATION ACTIVITIES

Stakeholder identification and consultations were initiated early in the process of EIA and directly affected land owners will be completed during land acquisition activities. National NGOs will be informed and their feedback will be sought on various occasions by March 2013.

Prior to any site activities, consultations were held in 28 July 2006 and 13 September 2006 in Aksaray; and 29 November 2007, 18 October 2012 and 26 January 2013 in Sultanhanı.

Of the local level meetings in 18.10.2012, those of the mayor and sub-governors (kaymakam) and the village consultations focused on land issues.

Some of the issues raised by the sub-governors, village legal entity (muhtar) and the project affected people include the following:

- Land expropriation and compensation (private, pasture lands, crops and assets etc)
- Damage to infrastructure (roads, irrigation channels, etc)
- Reinstatement (this was raised especially by the Muhtars of the villages which are on the gas line route)
- Impacts on livelihoods (i.e. animal husbandry; access to grazing lands)

This LAP is designed to prevent repetition of the concerns listed above issues.

The LAP was distributed to governors, sub-governors and Village legal entity (Muhtars), who were requested to review the document and transfer questions and comments to BOTAS. The officials were also requested to make the document available in a place accessible to the public at each location. BOTAS received no comments during this disclosure process.

Socio-economic information is being and will be collected from each land owner before their land is acquired.

### 7.2 VILLAGE LEVEL CONSULTATIONS

The objective of village level consultation is to share information about the Project, to solicit the views and attitudes of villagers towards the pipeline and storage area construction, and to identify the key issues of concern to them.

Community level meetings will be held in village settlements along the pipeline route, the storage area and construction camps at the beginning of the land acquisition process. The main issues related to land acquisition and construction process will be explained to villagers at the meetings as listed below:

## TUZ GOLU UNDERGROUND GAS STORAGE PROJECT LAND ACQUISITION PLAN

- Land acquisition process;
- Sufficient information about the process and how it would work;
- Payments of compensation;
- Loss of communal pasture land;
- Appropriate compensation and timely payment;
- Degradation of roads and irrigation channels during construction;
- Reinstatement of infrastructure such as roads to pre-construction levels;

### Grievance Redress Mechanism

#### Processes in place for submission, review and addressing of complaints

Levels of Grievance redress order	PAP submits his/her complaint to:	Form of submission	Steps of grievance management	Time for review of the complaint
Level 1	(Gazi Mahallesi - Muhtar) Ozcan Ozdemir 543 812 6594	Oral	1) Muhtar refers grievance to BOTAS. 2) Case is considered and grievance addressed within 1 week. Records are kept in the General Directorate. PAPs are contacted via phone, mail or official letter. .	5 days
Level 2	Suleyman Lala () Ilayda Yanarates (Legal Consultant) Botas General Directorate 0312 297 22 99 ADDRESS. ugs@botas.gov.tr	By phone, mail, e-mail and person	1) Immediate advisory and legal counseling. 2) If not resolved immediately, case is considered and grievance addressed within 1 week. Records are kept in the General Directorate. PAPs are contacted via phone, mail or official letter. .	5 days
Level 3	Aksaray Asliye Hukuk Mahkemesi (Local Land Court)	In writing	Procedures work according to applicable law, depending on the type of case.	Duration dependant on case substance

# TUZ GOLU UNDERGROUND GAS STORAGE PROJECT LAND ACQUISITION PLAN

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## **8 MONITORING AND EVALUATION**

### **8.1 OBJECTIVES**

The purpose of resettlement monitoring will be to verify that:

- Actions and commitments described in the LAP are implemented fully and on time
- Eligible affected people receive their full compensation entitlements within agreed timeframes
- Complaints and grievances lodged by project affected people are followed up and that where necessary, appropriate corrective actions are implemented
- If necessary, changes in LAP procedure are made to improve delivery of entitlements to project affected people

For the Tuz Golu Underground Gas Storage Project, primary monitoring responsibility will rest BOTAŞ. BOTAŞ Surveying and Land Acquisition Department will monitor and report all land acquisition activities in the framework of LAP.

### **8.2 REPORTING**

LAP monitoring report will be prepared once the land acquisition proceeding has been completed. A brief report (plus supporting documentation) summarizing progress against the LAP; outline of any issues and agreed related actions; summary schedule of grievance status; minutes of any stakeholder or affected people consultations or meetings will be submitted at the end of March.

Monitoring report shall be prepared by an independent monitor in March and finalized in April for the whole area acquired.

# TUZ GOLU UNDERGROUND GAS STORAGE PROJECT LAND ACQUISITION PLAN

## 9 BUDGET

Chapter 9 details the LAP costs and the budget for its implementation. The budget includes costs to date for LAP development and future cost projections for LAP implementation. The activities with the highest cost implications are the compensation awards for land expropriation and damage to, or loss of, assets and crops.

### 9.1 COST FOR LAP IMPLEMENTATION

The costs for implementation of the LAP will include:

- Compensation that will be awarded to project affected private landowners and land users;
- Compensation that will be awarded to the Treasury and other public authorities for state owned lands;
- Transportation costs for negotiation teams;
- Costs for Court proceedings and expenses;
- Expenses for producing and distributing the letters of notification;
- Costs for making public announcements, in particular to absentee landowners;
- Costs for registering title deeds for expropriated lands;
- Costs for consultations

The total budget for LAP implementation is calculated to be about \$ 1,722,600 based on the already occurred cost covering the funds to be spent for the well area. The budget includes the following cost items:

Item	Cost (US\$)	Source of Funds	Channel of Disbursement
Land Acquisition ( <i>Permanent Lands</i> )	320.000	BOTAŞ	BOTAŞ
Land Acquisition ( <i>Long term easements</i> )	446.000	BOTAŞ	BOTAŞ
Land Acquisition ( <i>State Lands</i> )	50.000	BOTAŞ	BOTAŞ
Land Acquisition ( <i>Legal Expenses</i> )	100.000	BOTAŞ	BOTAŞ
Compensation to landowners for agricultural land and crop production for land users	400.000	BOTAŞ	BOTAŞ
Administrative Expenses ( <i>Staff, Office, Transport</i> )	200.000	BOTAŞ	BOTAŞ
Monitoring	50.000	BOTAŞ	National NGO or Universities
<b>Sub-total all Items</b>	<b>1.566.000</b>		
<b>Contingency</b>	<b>156.600</b>	10%	
<b>Total</b>	<b>1.722.600</b>		

(Up to now no structure and trees are foreseen)

**Figure 9.1 Budgets for LAP Preparation and Land Acquisition Implementation**

# TUZ GOLU UNDERGROUND GAS STORAGE PROJECT LAND ACQUISITION PLAN

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## **10 IMPLEMENTATION SCHEDULE**

### **10.1 INTRODUCTION**

The LAP implementation schedule spans the period from mid-2005 to mid-2007 except for well areas, culminating the construction activities. The well areas are expected to be completed in 2013. The LAP implementation schedule defines the duration and timing of the key milestones and tasks for the following activities:

- Preparation of the LAP;
- Consultation and disclosure of the LAP;
- Asset and land acquisition and compensation parallel to project construction;
- Re-instatement of land following the construction of each section of the project;
- Commencement of Project operations.

### **10.2 PREPARATION OF THE LAP**

Development of the LAP for the Project began in March 2005. The revised LAP will be submitted to World Bank by the end of the January 2013. After completion of the LAP for the Project, LAP will be submitted to the World Bank.

### **10.3 CONSULTATION AND DISCLOSURE**

This process, summarised in Chapter 5, has resulted in participatory site selection that will avoid or minimise adverse project impacts on people's livelihoods. With the assistance of rounds of feedback solicited from communities, the route of the pipeline corridor has been selected.

A broader range of LAP issues have received greater coverage in the Project's disclosure efforts. Also, a broad range of stakeholders including state authorities, governors and vice-governors and villagers along the pipeline route have been contacted.

### **10.4 LAND ACQUISITION AND CONSTRUCTION**

Land acquisition for pipeline construction itself begun in end of 2007. Payments for land and assets were made after relevant agreements were reached and legal proceedings for title deed registrations have been concluded. Payments for crops were made prior to accessing the land.

Land for the Project will be acquired and handed over in distinct phases corresponding to the requirements of the construction schedule and actual progress made. It is anticipated that the remaining land acquisition activities will be concluded by 2013.

For wells area of first batch of 3 wells: drilling of UGS-8 is already started. UGS-7 it is planned to start mid February and UGS-5 is in April.

# **TUZ GOLU UNDERGROUND GAS STORAGE PROJECT LAND ACQUISITION PLAN**

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For wells area of second batch of 3 wells: drilling of UGS-6 is in June 2013. UGS-1 is in July and UGS-2 is in August 2013. For the preparation work of each well area 1 month is needed in advance.

Second group of 6 wells will start in September 2013.

Construction for the electricity transmission lines is planned to be completed in April 2013 and after the well area is acquired.

Some socio-economic data of each land owners are already collected and the questionnaire included in the annex 3 which is already partially done for UGS 8 and UGS 6 and shall be completed for others wells and the transmission lines in March.

Socio-economic information is being and will be collected from each land owner before their land is acquired and the appropriate compensation and any other assistance provided before the land is acquired.

## **10.5 MONITORING AND EVALUATION**

Monitoring and evaluation will be carried out throughout the land acquisition process and the construction phase.

In addition, two aspects of monitoring and evaluation will continue during the operational phase of the Project. These include the grievance procedures and third party monitoring of the impacts of the Project on livelihoods.

## **10.6 LAND ACQUISITION STEPS**

Land must be acquired and made available for the Project before construction can begin. No construction can take place unless the valuation is completed, certified attempts are made to negotiate the transfer of ownership or usage rights from the private owners, and full payment is made to the accounts of owners.

Key steps that are necessary before the land acquisition can begin with notification to the landowner of the intended expropriation are explained following paragraphs. These key steps are carried out during and after sitting, route selection and route narrowing.

### **Identification of the Cadastral Parcels (Plots) Through Which the Pipeline Passes**

# **TUZ GOLU UNDERGROUND GAS STORAGE PROJECT LAND ACQUISITION PLAN**

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This includes obtaining cadastral (land registration) records and transferring them to a digital platform, coordinating the conversion for graphical and local cadastral sheets, and marking up the pipeline corridors on cadastral maps.

## **Identification of Landowners and Title Deed Records**

This includes obtaining title deed records from relevant Title Deed offices in order to determine land owners to be subject to land acquisition studies.

## **Approval of the Land Acquisition Plan by the Appropriate Cadastral Office**

This is a formal step in informing the local stakeholders of the definite intent of the Project to proceed with expropriation as specifically planned and mapped.

## **Preparation and Verification of Land Acquisition Files for Individual Villages**

At this stage, BOTAŞ is ready to proceed with negotiations and expropriation, subject to a later stage during which valuation is carried out in consultation with a large number of local relevant stakeholders.

Land acquisition files contain:

- Approval Cover page
- Decision of Public Interest
- Technical Report and Summary
- Ground Check Points-SOME Coordinates Summary Chart and Curve Calculations
- Approved Title Deed
- Assets List
- Address List
- Immovable Property List
- Coordinates of Parcel Corners and Intersection Points
- Ownership Area Calculations
- Additional Damage and Loss Area Calculations
- Measurement Sketches
- Registration Notifications
- Expropriation Plan.

## **10.7 PROJECT AFFECTED PEOPLE OF THE WELL AREA AND TRANSMISSION LINES**

Before acquiring further lands in the well area and for the electricity transmission lines, BOTAS

# **TUZ GOLU UNDERGROUND GAS STORAGE PROJECT LAND ACQUISITION PLAN**

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will survey each land owner to determine the degree of impact on each land owner of the land acquisition and whether they can be considered vulnerable or severely affected by the acquisition and if this will require any additional assistance to ensure that land acquisition does not leave them worse off (see entitlement matrix pages 29-30). BOTAS will document the surveys, and provide the World Bank with a summary of information on the land owners to be affected, and determine if any additional assistance will be necessary (as described in the entitlement matrix) in each case before acquiring the land. A list of the survey questions can be found in Appendix 3.

## **Summary of Interviews of PAPs for Well Area 1 and 2**

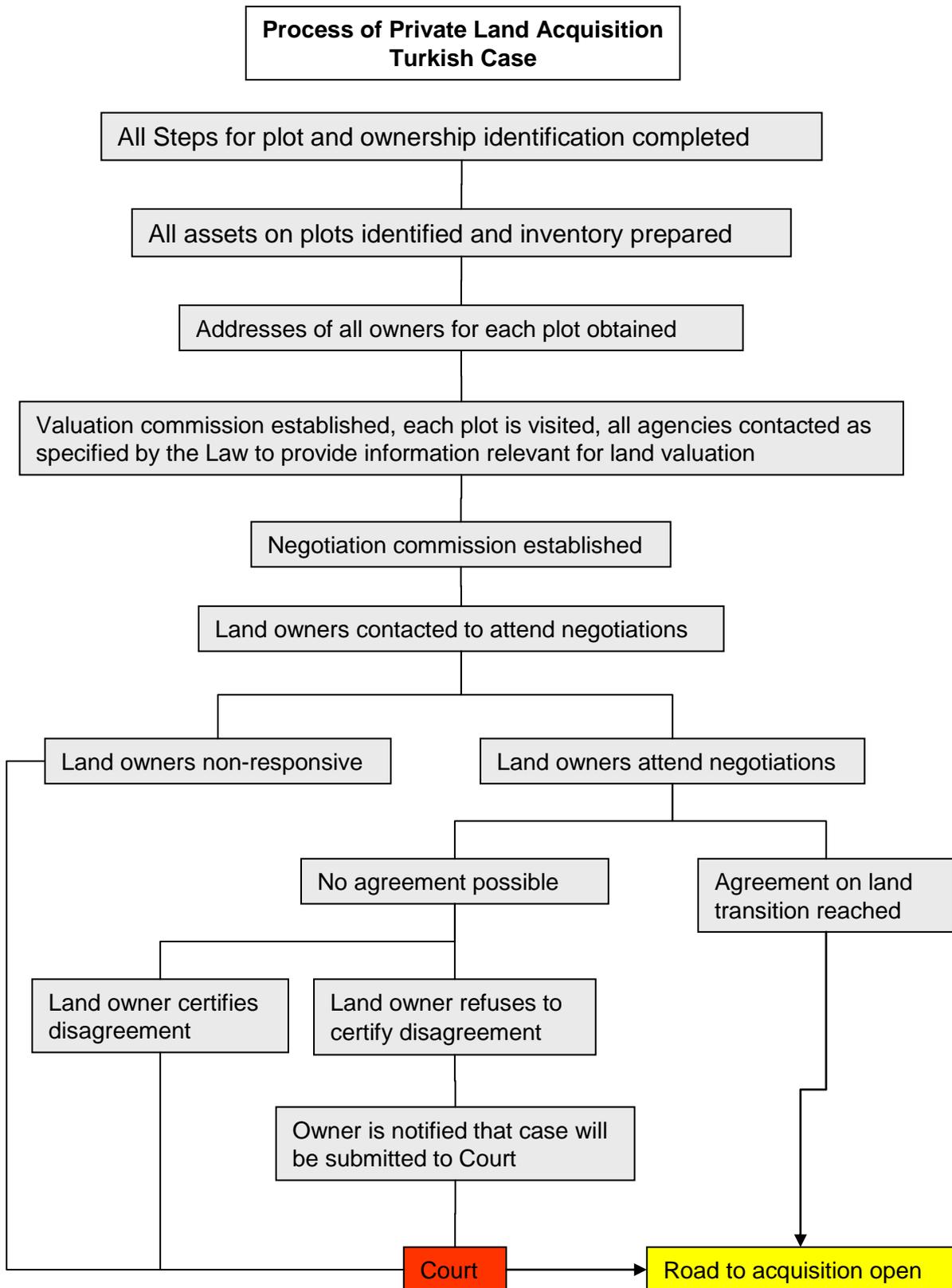
The first surveys have already begun and were conducted on January 26th. The surveys will continue over the coming weeks of February 2013 and in March 2013 latest.

The land owner of UGS 8 stated that his main source of income is raising livestock and farming on the land to be acquired, and that his livelihood will be impacted negatively due to the land acquisition because he will not be able to buy comparable land with the amount of compensation provided. BOTAS will follow up with this survey to acquire further information.

The areas to be acquired for UGS 7 are entirely, government own land and no affected people.

One (out of 10) owners from UGS 6 stated that his main source of income was not this land, and that his livelihood will not be impacted negatively by the land acquisition. BOTAS will survey the remaining owners shortly.

# TUZ GOLU UNDERGROUND GAS STORAGE PROJECT LAND ACQUISITION PLAN



**Figure 10.1: Private Land Acquisition: Mutual Agreement Cases**



**TUZ GOLU  
UNDERGROUND GAS STORAGE PROJECT  
LAND ACQUISITION PLAN**

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Appendix 1 List of Project Affected People in the Tuz Golu Well Area

# TUZ GOLU UNDERGROUND GAS STORAGE PROJECT LAND ACQUISITION PLAN

AKSARAY - SULTANHANI WELL AREAS						
PARCEL NO	LAND OWNER	AREA (m2)	PRICE (TL)	ACQUIRED AREA	PERCENTAGE	LAND USE
5358	AHMET OZUSLU MEHMET NASUH OZUSLU MUSTAFA IBRAHIM OZUSLU	100,200.00	151,201.80	100,200.00	100%	DRY AGGRICULTURE (FALLOWED)
5366	ALI KORUK	93,200.00	138,774.80	93,200.00	100%	DRY AGGRICULTURE (FALLOWED)
5368	RASIM KARA	10,000.00	15,090.00	10,000.00	100%	DRY AGGRICULTURE (FALLOWED)
7453	FATIMA KARA	8,206.11	11,414.70	8,206.11	100%	DRY AGGRICULTURE (FALLOWED)
7455	AHMET OZUSLU MEHMET NASUH OZUSLU MUSTAFA IBRAHIM OZUSLU	4,936.65	7,449.40	4,936.65	100%	DRY AGGRICULTURE (FALLOWED)
4785	HAYDAR ACAR	96,400.00	13,822.31	9,282.95	10%	DRY AGGRICULTURE (FALLOWED)
4786	SEREF DEMIR	130,600.00	18,031.90	9,886.19	8%	WHEAT
4787	ZEKI CAR	20,000.00	4,938.74	3,550.50	18%	DRY AGGRICULTURE (FALLOWED)
4788	SULEYMAN DOLEK	20,000.00	33,522.87	17,841.71	90%	CLOVER
4789	MERYEM TAS	183,800.00	42,879.27	22,774.98	12%	DRY AGGRICULTURE (FALLOWED)
4790	RIFAT SARIKAYA	57,600.00	93,196.80	57,600.00	100%	BARLEYCORN
4791	RIFAT SARIKAYA HARUN SARIKAYA	20,000.00	32,360.00	20,000.00	100%	BARLEYCORN
4792	MURAT AGIR	20,000.00	32,360.00	20,000.00	100%	BARLEYCORN
4793	HALIL KONUKCU	46,000.00	63,986.00	46,000.00	100%	DRY AGGRICULTURE (FALLOWED)
4794	RIFAT SARIKAYA	92,000.00	65,787.56	39,182.01	43%	BARLEYCORN
5247	CUMA DOLEK KEZIBAN KOYUNCU	46,000.00	647.01	434.53	1%	DRY AGGRICULTURE (FALLOWED)
5248	MUMTAZ KARA	151,200.00	115,999.04	45,182.20	30%	BARLEYCORN
5249	RASIM KARA	20,200.00	24,290.83	14,759.16	73%	BARLEYCORN
5250	ABDULLAH KARA	20,000.00	27,820.00	20,000.00	100%	DRY AGGRICULTURE (FALLOWED)
5251	ISMAIL AGIR	20,000.00	29,780.00	20,000.00	100%	DRY AGGRICULTURE (FALLOWED)
5269	ISMAIL AGIR	151,000.00	1,876.96	682.53	0.40%	CLOVER
5277	ALI DOLEK	20,000.00	1,100.01	738.76	4%	DRY AGGRICULTURE (FALLOWED)
5284	AHMET OZUSLU	99,000.00	25,355.77	12,441.98	13%	BARLEYCORN
5289	HACI ATAR	148,400.00	40,387.36	23,627.00	16%	DRY AGGRICULTURE (FALLOWED)
5293	MUSTAFA IBRAHIM OZUSLU MEHMET NASUH OZUSLU	110,200.00	209,171.90	86,367.41	78%	DRY AGGRICULTURE (FALLOWED)
5294	MEMIS OZUSLU	20,000.00	30,180.00	20,000.00	100%	DRY AGGRICULTURE (FALLOWED)
5296	SULEYMAN CAR	119,000.00	53,702.01	35,283.77	30%	DRY AGGRICULTURE (FALLOWED)
5297	SULEYMAN CAR	26,000.00	38,714.00	26,000.00	100%	DRY AGGRICULTURE (FALLOWED)
5298	AHMET OZUSLU	20,000.00	29,780.00	20,000.00	100%	DRY AGGRICULTURE (FALLOWED)
5335	AHMET OZUSLU	20,000.00	30,180.00	20,000.00	100%	DRY AGGRICULTURE (FALLOWED)
5336	HASAN DARILMAZ	74,000.00	110,186.00	74,000.00	100%	DRY AGGRICULTURE (FALLOWED)
5337	HASAN DARILMAZ	75,000.00	111,675.00	75,000.00	100%	DRY AGGRICULTURE (FALLOWED)
5338	HATICE AKALIN	117,000.00	122,607.40	80,145.11	68%	DRY AGGRICULTURE (FALLOWED)
5339	HATICE AKALIN	32,000.00	3,880.16	1,835.47	6%	DRY AGGRICULTURE (FALLOWED)
5342	YUSUF AKALIN	22,000.00	1,870.74	1,344.89	6%	DRY AGGRICULTURE (FALLOWED)
5344	AHMET OZUSLU MEHMET NASUH OZUSLU MUSTAFA IBRAHIM OZUSLU	92,000.00	23,564.98	14,460.09	16%	DRY AGGRICULTURE (FALLOWED)
5345	YUSUF AKALIN	114,000.00	84,141.45	57,673.94	51%	DRY AGGRICULTURE (FALLOWED)
5346	HAMZA AGIR	149,000.00	241,082.00	149,000.00	100%	BARLEYCORN
5347	YUSUF AKALIN	13,000.00	18,083.00	13,000.00	100%	DRY AGGRICULTURE (FALLOWED)
5352	SAADET KARA HAMZA OZUSLU	7,011.46	11,344.54	7,011.46	100%	BARLEYCORN
5237	SULEYMAN OZTURK	7,000.00	1,171.72	651.92	9%	DRY AGGRICULTURE (FALLOWED)
5238	MEHMET KARA	17,000.00	137.58	98.91	0.60%	DRY AGGRICULTURE (FALLOWED)
5240	MEHMET KARA	20,000.00	1,746.38		6%	DRY AGGRICULTURE (FALLOWED)
4768	HAYDAR ACAR	60,000.00	3,188.88	1,040.04	2%	DRY AGGRICULTURE (FALLOWED)
4784	HAYDAR ACAR	54,000.00	3,978.51	1,694.69	3%	DRY AGGRICULTURE (FALLOWED)
4769	ISA GUNAY	100,000.00	4,841.69	1,510.95	2%	DRY AGGRICULTURE (FALLOWED)
5259	DONDU AGIR	27,600.00	526.48	353.53	1%	DRY AGGRICULTURE (FALLOWED)
7697	SADIK AGIR	55,065.84	38,783.73	25,361.59	46%	DRY AGGRICULTURE (FALLOWED)
5254	SAADET KARA	10,000.00	780.10	482.14	5%	BARLEYCORN
7473	ENVER KARA	12,307.98	18,572.74	12,307.98	100%	DRY AGGRICULTURE (FALLOWED)
5244	IBRAHIM KARA	20,000.00	1,105.89	683.49	3%	BARLEYCORN
<b>51</b>	<b>61</b>	<b>2.971.928.04</b>	<b>2.187.070.01</b>	<b>1.325.834.64</b>		

# **TUZ GOLU UNDERGROUND GAS STORAGE PROJECT LAND ACQUISITION PLAN**

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**Private Area 133 Ha**

**Public Area 191 Ha**

**Total Area 234 Ha for Wells only**

Between September to December in 2012 and January 2013, several site surveys have been conducted to public areas to determine the existing conditions and usages of those areas and any possible impact on possible users. It is found out that there are no users on the public land because of their existing surface conditions such as sloping and muddy surface and its inaccessibility for farming.

# TUZ GOLU UNDERGROUND GAS STORAGE PROJECT LAND ACQUISITION PLAN

Appendix 2 Summary Table of Land Acquisition

SUMMARY TABLE									
SECTION	PARCEL NO's			AREA (HA)				No.of LAND OWNERS	
	TOTAL	Private	Public	Temporary	Permanent				
<b>Section 1</b>	462	340	122	235	10			1351	
<b>Section 2</b>	418	373	45						1932
<b>Section 3</b>	105	45	60						127
<b>Section 4</b>	7		7						0
<b>Surface Facility</b>	3	3	0			32		3	
<b>Sub Total (1)</b>	<b>995</b>	<b>761</b>	<b>234</b>	<b>235</b>	<b>42</b>			<b>3413</b>	
				<b>Private</b>	<b>Public</b>	<b>Private</b>	<b>Public</b>		
<b>Well Area</b>	101	51	50			133	191	61	
<b>Energy Transmision</b>	746	224	522	44	103	0.3	0.7	587	
<b>Sub Total (2)</b>	<b>847</b>	<b>275</b>	<b>572</b>	<b>147</b>		<b>325</b>		<b>648</b>	
<b>TOTAL (3)</b>	<b>1842</b>	<b>1036</b>	<b>806</b>	<b>382</b>		<b>367</b>		<b>4061</b>	
				<b>749</b>					
<b>1 Already acquired</b>	Total 277 Ha has acquired previously. Among them 169 Ha is private and 108 Ha is public								
<b>2 to be acquired</b>									
<b>3 Grand total covering all project</b>									

# TUZ GOLU UNDERGROUND GAS STORAGE PROJECT LAND ACQUISITION PLAN

Appendix 3

## Social Survey Questionnaire for UGS 8

(to be completed before any land is acquired)

Date: Jan 26, 2013	Time: 14.00	Location/form of meeting: Phone
Name of owner / owners interviewed: Ahmet Ozuslu		
Are there other owners? Do they live in the area? If not, how far away are they? There two other owners (brothers), who live and farm in the area.		
Hectares of land acquired for the well area: 11.6 ha		
Parcel Number:5293		
Hectares of land remaining in the well area: None		

1. How are you using the land (rent, farm, nothing etc.)?

Land owner farms on this land and also uses adjacent / close-by land he owns for grazing of livestock.

2. Was any of your land acquired for this project before?

Yes, 15 years ago, about 1 hectare.

3. How will this land acquisition affect you?

Land owner says this acquisition will affect him negatively, as he will lose farming income from this plot. He says that he will not be able to buy comparable land with the compensation provided because: There was a well on his plot and land owner states he conducted irrigated agriculture. The price determination assessed the land as dry agriculture land. Land owner therefore thinks the land was undervalued, and that comparable land he can buy will not be irrigated, but dry farming land. In addition, land for grazing livestock is close by to farming land to be acquired, and land owner thinks that even if he buys other land, the distance between the lands will affect his livelihood.

4. What do you intend to do with the compensation?

Buy farming land.

5. Do you plan to buy more land and continue farming?
  - a. If yes: Do you think it will be easy to find a comparable land with this compensation in a reasonable time so as not to affect your income? Will you be able to plant crops on time?

As described above, land owner does not think that he can buy comparable land.

6. What is your main source of income? Was the income gained from this land a major source of your income or supplementary? What other sources of income do you have (job, remittance, other land, livestock etc.)? If other land, how many other plots do you own?

Main source of income is farming and livestock (180 – 200 sheep). The farming income from this land was a main source of income

If you have any questions or concerns, do you know who to contact? Can you easily reach them? Do you have any questions now?

Yes, land owner knows who to contact and can easily reach them. He is also aware that he can contest the price in court and withdraw the compensation from the Bank without affecting the court determination.

7. If person says that their income is impacted or negatively affected, ask further questions on why this is the case. Please explain.

In addition to stating that he will not be able to buy comparable land, land owner also stated that land for grazing livestock is close by to farming land to be acquired, and land owner thinks that even if he buys other land, the distance between the lands will affect his livelihood.

# TUZ GOLU UNDERGROUND GAS STORAGE PROJECT LAND ACQUISITION PLAN

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Please inform each person interviewed: When the LAP was first disclosed, where it will be disclosed now and what it contains (items covered in the table of contents). If the individual requests a copy of the LAP, please ensure he gets one when it is disclosed.

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8. Please note on this form if the person wishes a copy of the LAP.

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## Social Survey Questionnaire for UGS 6

(to be completed before any land is acquired)

Date: Jan 26, 2013                      Time: 14.00                      Location/form of meeting: Phone

Name of owner / owners interviewed: Cuma SOLAK

Are there other owners? Do they live in the area? If not, how far away are they? There are 10 owners, they do not live on the land. They live in different cities.

Hectares of land acquired for the well area: 6 ha

Parcel Number: 5335

Hectares of land remaining in the well area: None

9. How are you using the land (rent, farm, nothing etc.)?

All the owners have agreed to rent the land and share the proceedings.

10. Was any of your land acquired for this project before?

No.

11. How will this land acquisition affect you?

The land owner will not be affected, since the rental income was a very small amount anyway.

12. What do you intend to do with the compensation?

Does not know at the moment, can put in a bank.

13. Do you plan to buy more land and continue farming?

- a. If yes: Do you think it will be easy to find a comparable land with this compensation in a reasonable time so as not to affect your income? Will you be able to plant crops on time?

No, the land owner is not currently farming. He lives in a nearby city.

14. What is your main source of income? Was the income gained from this land a major source of your income or supplementary? What other sources of income do you have (job, remittance, other land, livestock etc.)? If other land, how many other plots do you own?

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Land owner lives in a nearby city and has a job that is the main source of his income.

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15. If you have any questions or concerns, do you know who to contact? Can you easily reach them?  
Do you have any questions now?

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Yes, land owner knows he can reach BOTAS. He says that all information is available online.

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16. If person says that their income is impacted or negatively affected, ask further questions on why this is the case. Please explain.

# TUZ GOLU UNDERGROUND GAS STORAGE PROJECT LAND ACQUISITION PLAN

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Please inform each person interviewed: When the LAP was first disclosed, where it will be disclosed now and what it contains (items covered in the table of contents). If the individual requests a copy of the LAP, please ensure he gets one when it is disclosed.

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17. Please note on this form if the person wishes a copy of the LAP.

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## **Social Survey Questionnaire - SAMPLE**

Date:	Time:	Location/form of meeting:
Name of owner / owners interviewed:		
Are there other owners? Do they live in the area? If not, how far away are they?		
Hectares of land acquired for the well area:		
Parcel Number:		
Hectares of land remaining in the well area:		

18. How are you using the land (rent, farm, nothing etc.)?

19. Was any of your land acquired for this project before?

20. How will this land acquisition affect you?

21. What do you intend to do with the compensation?

22. Do you plan to buy more land and continue farming?

a. If yes: Do you think it will be easy to find a comparable land with this compensation in a reasonable time so as not to affect your income? Will you be able to plant crops on time?

23. What is your main source of income? Was the income gained from this land a major source of your income or supplementary? What other sources of income do you have (job, remittance, other land, livestock etc.)? If other land, how many other plots do you own?

24. If you have any questions or concerns, do you know who to contact? Can you easily reach them? Do you have any questions now?

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25. If person says that their income is impacted or negatively affected, ask further questions on why this is the case. Please explain.

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Please inform each person interviewed: When the LAP was first disclosed, where it will be disclosed now and what it contains (items covered in the table of contents). If the individual requests a copy of the LAP, please ensure he gets one when it is disclosed.

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**Please note on this form if the person wishes a copy of the LAP.**