

Samarkand Solar PV Project

Livelihood Restoration Plan

Masdar

Project number: 60667132

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Quality information

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Acronyms

Acronym	Definition
AC	Alternating Current
AOI	Area of Influence
ADB	Asian Development Bank
AIIB	Asian Infrastructure and Investment Bank
CCTV	Closed Circuit Television
CLO	Community Liaison Officer
DC	Direct Current
EBRD	European Bank for Reconstruction and Development
EIB	European Investment Bank
EMA	Environmental Management Authority
EPs	Equator Principles
ESIA	Environmental and Social Impact Assessment
ESDD	Environmental Social Due Diligence
ESP	Environmental and Social Policy
ESS	Environmental and Social Statement
FAO	Food and Agriculture Organisation
FGD	Focus Group Discussion
FGFO	Foreign Governmental Organisations
GBV	Gender Based Violence
GDP	Gross Domestic Product
GHG	Green House Gas
GIIP	Good International Industry Practice
GRM	Grievance Redress Mechanism
GW	Gigawatt
ha	Hectare
HSE	Health Safety and Environment
HV	High Voltage
IAM	Independent Accountability Mechanisms Network
IBA	Important Bird Area
ID	Identification Number
IFC	International Finance Corporation
IFI	International Finance Institution
ILO	International Labour Organisation
KII	Key Informant Interview
KPI	Key Performance Indicator
km	Kilometres
LAA	Land Acquisition Audit
LARP	Land Acquisition and Resettlement Plan
LARPF	Land Acquisition and Resettlement Plan Framework
LRP	Livelihood Restoration Plan
Ltd	Limited
m	Metre
mm	Millimetre
MPI	Multidimensional Poverty Index
MV	Medium Voltage
MW	Megawatt
NGO	Non-Governmental Organisation
NTS	Non-Technical Summary
OECD	Organisation for Economic Co-operation and Development
OTL	Overhead Transmission Line
PAP	Project Affected Person
PR	Performance Requirement
PS	Performance Standard
PV	Photovoltaic
RAP	Resettlement Action Plan
RCF	Republican Centralized Fund
SCA	Social Compliance Audit
SCNP	State Committee for Natural Protection
SEA	Sexual Exploitation Acts
SEP	Stakeholder Engagement Plan
SH	Sexual Harassment
SPS	Safeguard Policy Statement

SR	Safeguard Requirement
UNGP	United Nations Guiding Principles
USD	United States Dollar

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0. Executive Summary

0.1 Project Background

The Government of Uzbekistan plans to develop up to 5 gigawatts of solar power by 2030 through the development of three Solar PV projects in Samarkand, Jizzakh and Sherabad regions.

The solar PV site area is 438 ha. It will also be linked by a 4.5 km overhead transmission line (OTL) from the on-site substation to the existing substation. The generation of a minimum 220 MWac of renewable energy is expected to provide clean energy to the Samarkand region. The proposed site is in the Kattakurgan District, Samarkand region, in the Republic of Uzbekistan. There are seven communities which are located within 2km of the Solar PV area, including Suyunjon, Partaabad, Damkhodza, Erkin Nafas, Bulakchi, Upka and Melikhodja. The Project Site is approximately 20km from the city of Kattakurgan and approximately 50km from Samarkand. The OTL route connects the Project to the existing national grid substation Ishtihan. The Project site and the transmission line have been identified below:

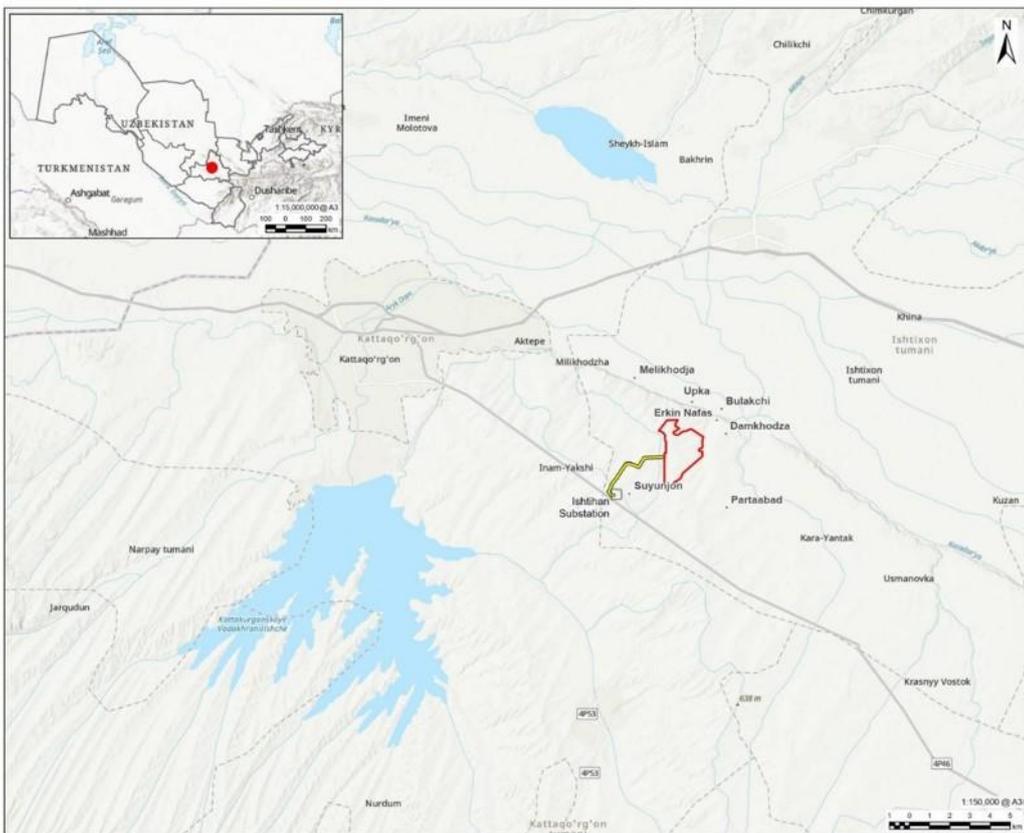


Figure 0-1. Location of the Samarkand site and nearby communities

0.1.1 Construction Programme

As of April 2023, construction of a small office and some fencing has already commenced. Construction is scheduled to begin in the beginning of May 2023 but will only start once all the required permits and licences have been received. Construction will take approximately 12 months to complete, starting to supply the grid in the first quarter of 2024.

0.2 Impacts and Land Requirements

0.2.1 Minimising Displacement

The project first took steps to minimise displacement including:

Boundary adjustments: Masdar, AECOM and its local subconsultant Green Business Innovation (GBI) worked with the local cadastral office to ensure that the boundary of the Solar PV Area did not overlap with any existing leaseholds (not including historical leaseholds that had already been terminated). The local cadastral office provided a map of leaseholds to AECOM and

Masdar that were held in the area. GBI, AECOM, Masdar and the local cadastral office then worked together to revise the project boundaries from the ones originally provided to Masdar by the Ministry of Energy to ensure no further displacement of leaseholds occurred within the solar PV area.

Transmission Route Selection: The primary route for the OTL was designed in consultation with affected leaseholders along the route of the line in order to avoid structures, high value crops or other social receptors where possible.

0.2.2 Land take

Permanent land take: The solar PV site will require 438 ha. The footprint for the OTL towers also require 0.2310ha and will be required for the lifespan of the project and thus should be considered a permanent land take. The permanent land take for each leaseholder is less than 0.001% of the total land in the leasehold (excluding historical leaseholds).

Temporary land take: The project requires temporary access to land in order to construct the OTL. This includes:

Temporary access roads 6m wide to each tower in order for heavy machinery to access each site. An additional assembly area will be required for each tower (total area of 1.33ha). An 18m wide right of way will be required for a tractor to suspend the OTL between the towers. Temporary impacts are relatively small with the largest impact being 4.20% of land taken.

Conditional sterilization zone: The area of land within 32m each side of the OTL itself is considered a “sterilization safety zone”. Farmers will be able to continue to use this land and will not be impacted by the construction however they will no longer be able to grow trees over 6 meters or build structures in this area.

0.2.3 Displacement Impacts

The project will however still cause displacement on households outlined below.

Table 0-1. Summary of displacement impacts

Type of affected households	No. of households	No. of individuals	No. of significantly impacted households >10%	No. of significantly impacted individuals >10%
Historical Farming Households with Sub-Lease Agreements in the Solar PV Area were already displaced in 2019 and are included in the LRP.	5 Households	41 People	5 Households	41 People
Farmers with Sub-Lease Agreements along the Overhead Transmission Line will be impacted by a small amount of land take for towers, and temporary impacts during construction.	4 Households	22 People	0	0
Informal land users (Professional and Community Herder) using the Solar PV Area will lose access to this area for grazing herds.	42 Households	218 People	The land is a community resource and therefore the % of land take per household cannot be calculated.	

0.3 Entitlements

All displaced people will be entitled to support by the project and the type of support. The main entitlements include:

- Compensation for all assets, crops and trees
- Compensation for lost income
- Livelihood restoration for all displaced households
- Additional safeguards and support for vulnerable households and individuals

0.4 Valuation and Compensation

0.4.1 Provision of compensation

In accordance with national and international requirements, temporary and permanent impacts on leaseholds, such as loss of crops or damage to assets will be compensated in cash at full replacement value which includes the market value of losses and any other transaction costs, interest accrued, transitional cost without any deductions for taxes, depreciation or materials which can be salvaged.

All affected people who have crops, assets or structures that are impacted by the project will be entitled to compensation, irrespective of their legal tenure in the project area.

Compensation will be issued prior to any adjustment of leases or land take by the project for construction.

Affected persons will have the opportunity to appeal the valuation amounts and this will trigger a re-valuation by another independent valuation company.

0.4.2 Valuation principles:

The following valuation principles were followed to determine compensation amounts:

- Compensation for standing crops will be at replacement value based on one year of production costs and an allowance equivalent to one-year average net income based on the average income over the previous three years.
- Compensation for fruit producing trees will be based on the average income from the past three years multiplied by the years required for the tree to reach productive maturity and the cost of planting new saplings. Trees that are immature will be compensated based on the cost for planting and growing replacement trees to the same age.
- Any unexpected damage to structures caused during construction will be based on full replacement value in accordance with the Entitlement Matrix.
- Compensation for loss of income/livelihood will be compensated based on the average monthly income for the last three years multiplied by the number of months that the interruption occurs.
- Cash compensation for permanent loss of land leased based on the average monthly income from the land over the last three years multiplied by multiplied by four years.

0.4.3 The valuation process

The valuation process was carried out by a local government approved valuation company in Uzbekistan with experience conducting valuations of this kind including for previous projects sponsored by ADB. The name of the valuation company is below:

Company Name & Address: *BAHOLASH INTEGRAL" LLC, Tashkent, Yunusabad district, Bodomzor str, 3, room 7,8,9*

The valuation process took place during the period from 15th September to 18th November 2022 and involved the following steps:

1. Each household was contacted to have a one-to-one meeting with the valuers and the district Khokimiyat at the district Khokimiyat office and given an opportunity to submit evidence to calculate the average income from the land.
2. A committee was then set up which involved the District Khokimiyat, District Cadastre, District Agricultural Department, District grid representative, Representative of valuation company
3. Each cadastral parcel as part of a leasehold was examined to calculate the following land takes and impacts
4. The value of lost income for permanent and temporary impacts was calculated using the above calculated land take and also the average income of the land recorded over the past three years.

0.4.4 Cut-off date

After the completion of the valuation surveys a project wide cut-off date was then announced through the local Khokimiyat district wide telegram channel and also on the farmers telegram channel. The final cut-off date was **18th November 2022.** Any new crops planted, or infrastructure developed in the project area after this date will not be considered for compensation.

0.5 Livelihood Restoration and other Support

In addition to receiving compensation, all affected persons will have access livelihood restoration initiatives and vulnerable households will also receive additional support. The livelihood restoration and vulnerability support initiatives are outlined below.

Table 0-2. Livelihood restoration and vulnerability support.

Initiative Name	Target Recipients
Land Enhancement Grant	Historical F=farming households who held leaseholds within the Solar PV area
Training on Veterinary Health	Herders and farming households
Entrepreneurial Training for Women on Animal Produce	Women in affected households
Training on Irrigation Technology for Crop Yield Improvement	Historical farming households and farming households along the OTL
Training on Market Knowledge, Logistics and Exporting	Historical farming households and farming households along the OTL
Business and Financial Training	Historical farming households and farming households along the OTL
Technical Advice on Land Auction System	Mahallas
Training on Overgrazing & Alternative Feed Sources	Herding Households
Feed Collection in the Solar PV Area	Herding Households
Guaranteed Employment & Pre-Employment Training	Historical leaseholder households (one member per household) Professional Herding Households (one member per household)
Preferential Employment & Pre-Employment Training	All affected households
Transitional Support for Herders	Professional Herding Households and Vulnerable Herding Households

0.6 Implementation Arrangements

0.6.1 Project Resources

In order to effectively implement the LRP, the project will appoint the following resources (see section 12 for the full list):

- A LRP implementation manager with overall responsibility of day-to-day implementation of the LRP.
- A designated Community Liaison Officer (CLO) to manage the project grievance mechanism, manage the compensation process and keep the community informed of project progress.
- Technical specialists responsible for monitoring the progress of LRP implementation in accordance with international best practice.

0.6.2 The LRP Committee

The project will also assemble a LRP Committee in order assist the implementation and monitoring of the LRP. The composition of the LRP Committee is expected to include:

- The Ministry of Energy
- Regional Agricultural Office
- Cadastral Office
- Masdar Community Liaison Office
- Representatives from the local Khokimiyat including:
 - Representative for Women
 - Representative for Youth

- Male and female representatives from local mahallas
- A male and female representative of Lease holding households under the OTL
- A male and female representative of herding households

0.6.3 Project Grievance Mechanism

At all times, Masdar will accept comments, complaints and grievances concerning the Project in both verbal and written formats. Persons responsible for addressing grievances are outlined below:

Khurshid Karamatov, Masdar Solar Community Liaison Officer (CLO)	Kkaramatov @masdar.ae	(+99893) 522-00-70
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All written and/or verbal complaint will be recorded by the Masdar CLO.

The following information should be submitted with a complaint:

- Name (anonymous complaints are accepted), address, (community name) and full contact details.
- Date, time and place where complaint was received.
- Description of complaint (including third parties such as construction contractors) and location of the issue.
- Preferred means of communication for future contact.

Any grievance will be acknowledged by the Masdar CLO within 5 working days

Most grievances should be resolved within one month of receiving the grievance, for more complex investigations, the complainant will be updated within two weeks of the grievance being received and an updated timeline of how it will be resolved will be provided.

1. Introduction

1.1 Project Background

The Government of Uzbekistan aims to develop up to 12 gigawatts (GW) of solar and wind power by 2030 through the development of privately financed and operated renewable energy projects. Scaling Solar is a World Bank Group program that assists governments to procure and develop large solar projects with private financing. The first solar photovoltaic (PV) plant, with 100 megawatt (MW) capacity, developed through Scaling Solar Program, is being constructed in Navoi region at the time of publication of this report.

World Bank Group’s Scaling Solar Uzbekistan Round 2 program aims to add over 400 MW of clean and renewable PV energy to the country’s energy mix. As part of this round, two sites — in Samarkand and Jizzakh regions have been identified for development.

This report covers the development of a 220 MWac solar PV project in Kattakurgan District, Samarkand region of Uzbekistan, referred to as “the Project”. The project site is approximately 20 km from Kattakurgan and approximately 50 km from Samarkand. The Project site area is 438 ha.

The Project will also comprise a 4.5 km overhead transmission line (OTL) from the on-site substation to the existing Ishtihan substation.

Table 1-1. Key Project characteristics

LOCATION	Kattakurgan District, Samarkand region, Republic of Uzbekistan
INSTALLED CAPACITY	220 MWac
SOLAR PV SITE AREA	438 ha
OVERHEAD GRID CONNECTION LINE	4.5 km 220 kV Steel lattice towers (23 towers)
NATIONAL GRID SUBSTATION	Ishtihan

Further details about the Project design, construction and operation are provided in Chapter 2.

1.2 Livelihood Restoration Scope and Objectives

This document considers any potential economic displacement that will be created by the Project including the Overhead Transmission Line (OTL) and any consequent temporary land restriction. The land within the proposed Solar PV Site boundary (PV Area) currently belongs to the Government land reserve but has been subject to a Land Acquisition Audit (LAA) into historical land use which may have already been cleared from the project area.

As the Project will need future international financing for its development, lenders will require the application of ADB’s Safeguard Policy Statement (SPS), including Involuntary Resettlement Safeguards. Therefore, the objectives of this LRP are to:

- Define national and international requirements for economic displacement.
- Outline procedures for the land acquisition and compensation to be carried out by State parties.
- Identify PAPs and understand the socio-economic characteristics of affected households.
- Evaluate and assess the socio-economic activities that are located within the Project Site.
- Define appropriate levels and means of compensation for losses resulting from the Project in line with National Law and ADB standards.
- Identify other assistance and measures to enable affected households to restore and improve their livelihood.
- Define roles and responsibilities of key parties in the Project.
- Propose an appropriate grievance resolution mechanism.
- Evaluate and address disclosure and consultation requirements required by the Project lenders.

2. Project Description and Land Aspects

2.1 Project Location

The proposed site is in the Kattakurgan District, Samarkand region, in the Republic of Uzbekistan. The nearest communities are Bulakchi and Damkhodzha. The Project Site is approximately 20km from the city of Kattakurgan and approximately 50km from Samarkand. The site can be accessed via a road at the south end of the facility. The project location is shown below in Figure 2-1.

The Project Site area is approximately 438ha.

The Site Coordinates are:

	<i>Geographic (WGS 84)</i>	<i>WGS 84 UTM 42N</i>
<i>Longitude</i>	66° 26' 50" E	
<i>Latitude</i>	39° 51' 46" N	

The OTL route is 4.5km, connecting the Project to the existing national grid substation Ishtihan.

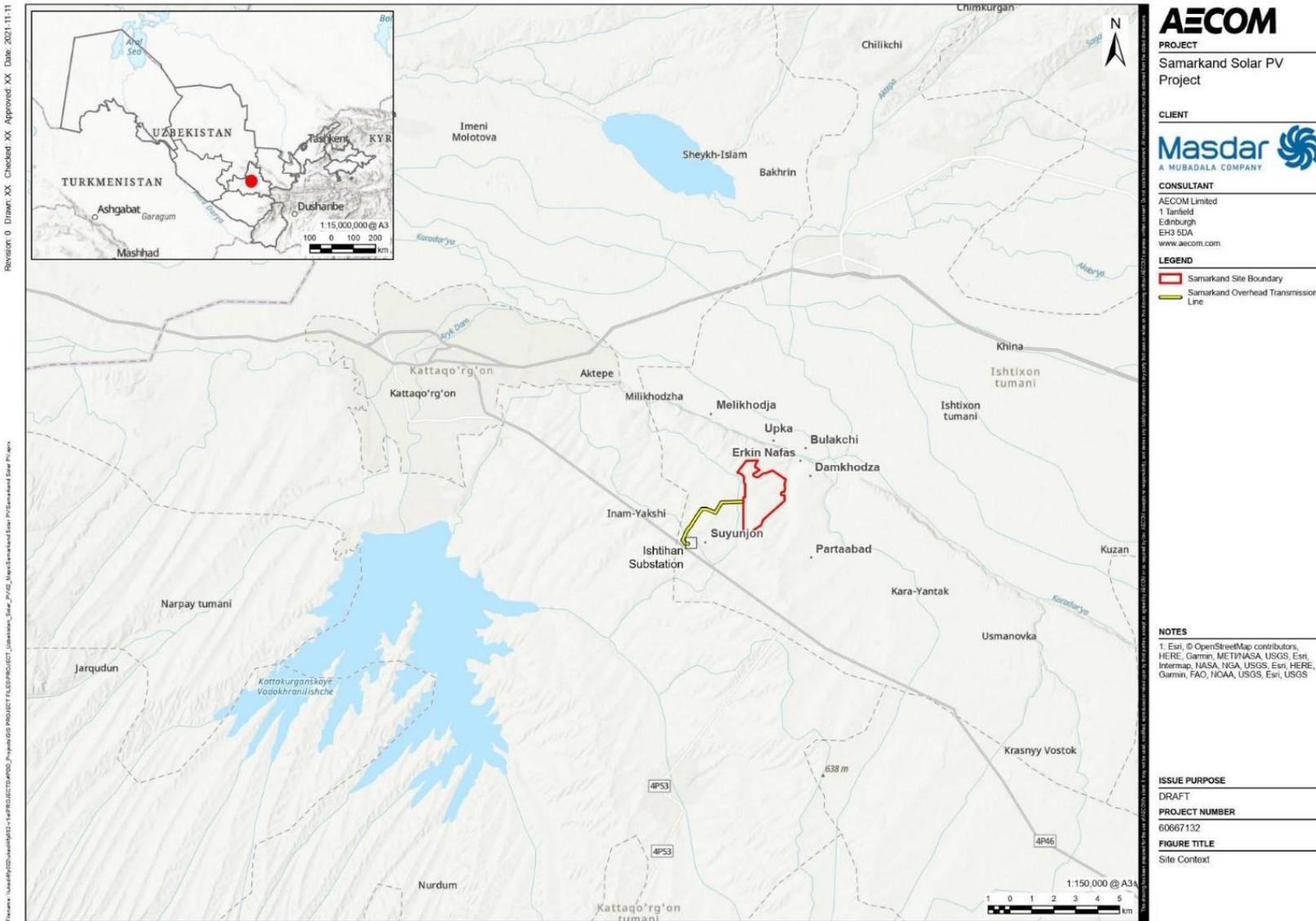


Figure 2-1. Samarkand Solar PV Project Location

2.2 Project Components

2.2.1 Solar PV Site

This is the area containing the Solar PV modules, inverters, transformers, grid connection interface and site office.

A brief function of the Solar PV components is described below:

- Solar PV Modules – These convert solar radiation into electricity through the photovoltaic effect in a silent and clean process that requires no moving parts.
- Inverters - These are required to convert the DC electricity to alternating current (AC) for connection to the utility grid.
- Module Mounting Systems - These allow PV modules to be securely attached to the ground at a fixed tilt angle, or on sun-tracking frames.
- Step up transformers - The step-up transformer takes the output from the inverters to the required grid voltage.
- The grid connection interface - This is where the electricity is exported into the grid network.

To prevent unauthorised access, the perimeter of the PV power plant will be fenced with an approximate 2.5 m high welded wire fabric fence with 0.5 m coil of razor wire mounted above. Gated access to the facility will be located at the south end of the facility, as well as the project sub-station. Pole mounted internal facing closed circuit television (CCTV) cameras will be installed around the perimeter of the site. Lighting of the fence shall be sufficient for the operation of the security CCTV system. The fencing and CCTV system is described in further detail in section 2 of the ESIA. At the time of writing, the project layout has been confirmed as fixed but the design within the Solar PV Area is still ongoing. Any further changes to the boundary of the Solar PV Area or OTL which cause additional displacement related impacts will require an addendum to this LRP.

2.2.2 Overhead Transmission Line (OTL)

The OTL will carry the electricity generated to the substation where it will be fed to the national grid. Along the OTL steel lattice towers will be used.

These towers are illustrated in Figure 2-12 of the Samarkand Solar PV ESIA.

The following safety and environmental aspects were considered in the design and route of the OTL to the extent possible:

- Avoid tracing the transmission line through protected areas, other environmentally sensitive areas or through mature forest stands.
- Avoid cultural and heritage sites.
- Place transmission line towers at high points in the terrain so that conductors can be chained over valleys, thus eliminating the need to remove trees.
- Locate the OTL along the base of mountain slopes, rather than in the centre of valleys where heavy birds might contact conductors.
- Locate the transmission line to avoid passing through settlements.
- Minimize the need to build new access roads whenever possible.
- Use existing roads and access roads whenever possible.
- Ensure that minimum distances between cables and the ground, highways, roads, railway lines, buildings, communication systems, etc. are complied.
- Avoid farm and residential structures and infrastructure in consultation with leaseholders along the line.

Further information about the project components can be found in chapter 2 of the Samarkand Solar PV ESIA.

2.2.3 Land Take Requirements

The type of land impacts can be divided into three categories:

- Permanently affected areas include the Solar PV Area and the OTL footprints. These areas of land will be required by the project during construction and operation and will only become available to the community following the decommissioning of the project.
- Temporarily affected areas are required during the construction phase and include the tower assembly areas adjacent to each tower footprint and an 18m wide right of way along the OTL required for the suspension of power cables. Access to each tower will be obtained via this right of way. The sterilization Zone includes land 32m meters either side of the OTL. The land inside the sterilization zone will not be occupied by the project however users of this land will be required to abide by safety conditions, in particular structures or trees over 6m tall cannot be present in this area. All other farming activities can continue inside this zone.

2.2.4 Exclusions

Any unanticipated changes in technical design that may occur which changes the number of persons displaced or the amount of land acquired as part of involuntary resettlement should result in the addendum to this LRP. Any new displacement impacts which are identified should be assessed and the LRP should be updated in line with this assessment and any additional or revised mitigation measures should be described. The disclosure and endorsement process will need to be repeated and any new affected persons should be consulted, compensated and livelihood support measures agreed in accordance with the entitlement matrix in this document. Any revised document will need to replace the existing LRP disclosed on the developers and lenders websites.

- This LRP excludes the following: The access to the Solar PV Area will utilise the existing road network using the access road from the south and is not expected to cause any displacement. Any additional land that may be required would be temporary and acquired on a willing buyer / willing seller basis to avoid triggering further requirements under IFC PS5. If involuntary displacement is unavoidable as part of the during final design of the access road will result in the need for an update or addendum to this LRP as described above.
- The worker accommodation camp will not be located on site but rather workers will stay in existing accommodation at nearby settlements. There is sufficient accommodation available in the local area to accommodate the workforce however given the large size of the peak workforce a dedicated workers camp may be required. The availability of accommodation will be confirmed by the EPC Contractor and if necessary, a dedicated construction camp would be provided in accordance with the IFC/EBRD Guidance on Workers Accommodation. Any additional land that may be required would be temporary and acquired on a willing buyer / willing seller basis to avoid triggering further requirements under IFC PS5. It is not anticipated that there will be any additional involuntary displacement as a result of worker accommodation but if any are identified, this will trigger the need to update or addendum to this LRP as described above. If required, accommodation facilities (including potential workers accommodation camps) will comply with the principles of the IFC/EBRD Guidance on Workers Accommodation, national law.
- The substation will be located at Ishtihan and is already located within substation land (land leased to the grid operator) and does not require any additional land take.

2.3 Project Programme

At the time of writing (April 2023) construction is due to start in May 2023 but will start once all the required permits and licences have been granted by the relevant authorities. Construction of the PV power plant will take approximately 12 months to complete. A further one and a half months will be required to commission and test the installation before the PV power plant can start supplying the grid in the first quarter of 2024.

The key stages of construction, from mobilisation of workforce to commercial operation date are detailed in section 2.5 of the Samarkand Solar PV ESIA.

2.4 Minimising Resettlement

1.1.1 No Project Alternative

The first alternative considered for any new project is a no development option, which means not adding a low carbon (solar) generation capacity into the country's energy mix. Uzbekistan has vast natural gas reserves, and over 85% of electricity here is being produced from natural gas (International Energy Agency, 2020).

Presidential Decree No. PP-4477 of 4 October 2019 approved the Strategy for the Transition of the Republic of Uzbekistan to the Green Economy for the Period 2019–2030 (The President of the Republic of Uzbekistan, 2019). Priority goals of the Strategy include reducing specific GHG emissions per unit of GDP by 10% of the 2010 level and raising the share of the renewable energy sources in total electricity generation to more than 25% by 2030.

With the projected growing electricity demand, increasing the share of low-carbon energy generation, like solar, in the national energy mix is vital for carbon emissions reduction and mitigation of global climate change. Owing to its geographical location and climate, Uzbekistan has significant solar potential. In case of a no development option, the opportunity to contribute to the achievement of the Strategy goals will be missed.

1.1.2 Site Selection

The Government of the Republic of Uzbekistan identified several potential sites for the utility scale solar PV facilities throughout the country, including Samarkand region. Following site screening visits by the engineering company TYP SA and decisions by the Government of the Republic of Uzbekistan, the Solar PV Site subject to this report was carried forward and selected for further studies. Neither AECOM nor Masdar were able to obtain the site selection study that was carried out as part of IFC's Scaling Solar programme.

The Site was presented to potential bidders by the Government of Uzbekistan and as a result there was no opportunity for Masdar (the Developer) to influence site selection.

AECOM has undertaken a further review of the PV site and OHTL route to determine whether the site is considered suitable from a technical, environmental and social perspective. In identifying the suitability of the site for solar energy development, AECOM reviewed the following factors:

- Solar resource
- Environmental designations
- Residential properties
- Site access
- Grid connection

Furthermore, AECOM provided further updates on land use and biodiversity following site visit to determine if there are further issues that could affect the viability of the project.

SOLAR RESOURCE MAP

PHOTOVOLTAIC POWER POTENTIAL
UZBEKISTAN

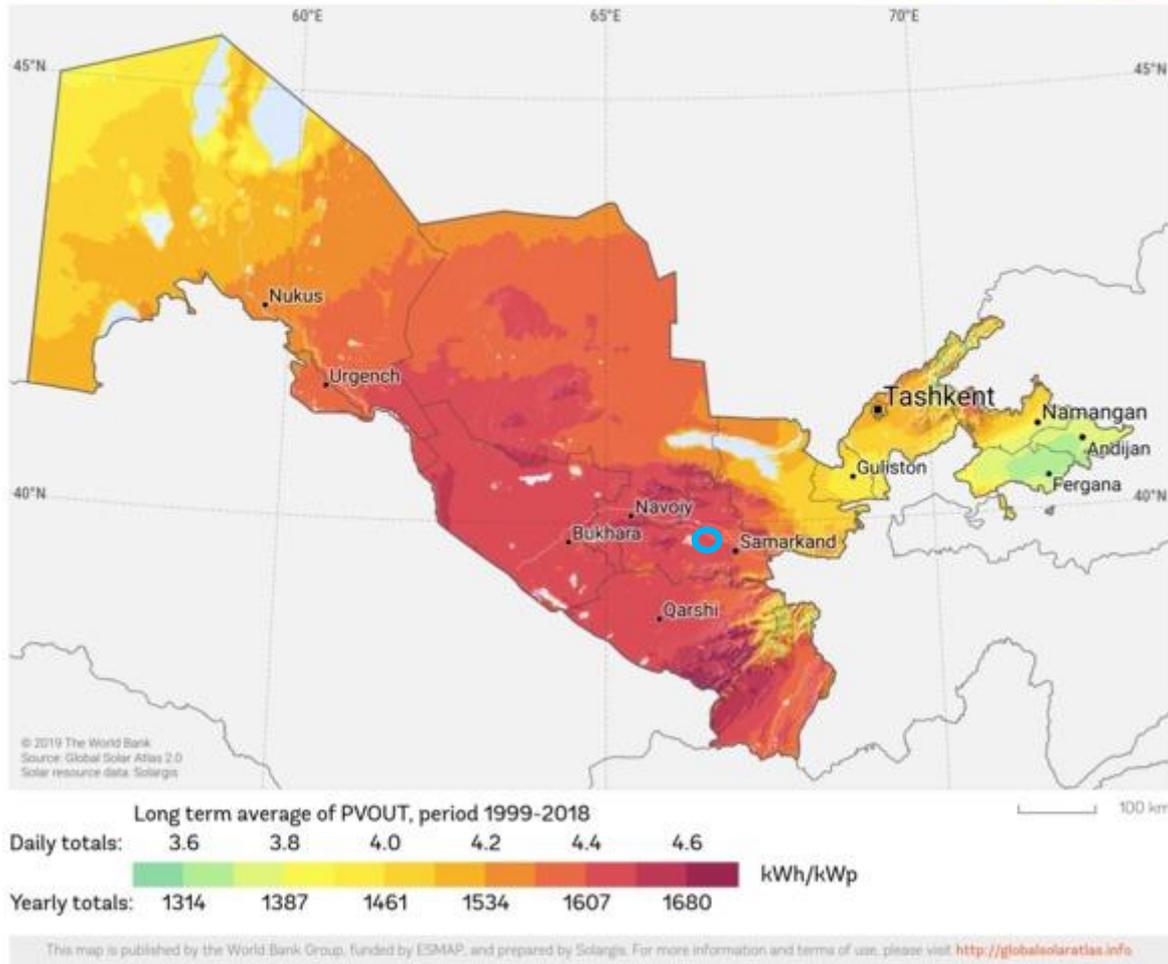


Figure 2-2. Solar resource map (site shown in blue)

Table 2-1. Summary of site selection criteria

Criteria	Overview	Likelihood of significant impact ¹
Solar resource	As can be seen on Figure 2-2 the potential project site is situated in an area of high solar resource. This would confirm that the project site is located in a suitable location in terms of likely energy yield.	No issues identified
Environmental designations	The Kattakurgan Water Reservoir is an Important Bird Area (IBA) situated in a natural depression approximately 15km to the south-west of the Project site at its closest point; it is a non-protected area. Consultation with Birdlife International and ornithological experts (IBA Programme since 2008) was undertaken and reported in TYPSA/IFC (2020); this highlighted that none of the species for which the IBA site was designated use the Project site, with the exception of the potential for Asian houbara bustard. The project site does not appear to mirror any of the qualifying features of those areas and as a result the project would not expect to impact on those sites.	Project is not expected to impact on designated sites.

¹ In this case 'significant' would refer to impacts that cannot be mitigated by standard means or would materially affect the viability of the project.

Residential properties	<p>There was one potential property identified on or close to the site but AECOM understand that this is no longer being used. As a result, no physical resettlement would be required. The closest properties appear to be approximately 150m from the red line boundary. The project activities can be scheduled to take place during less sensitive time (travel to and from schools for example). No night work is permitted.</p>	<p>Nuisance impacts expected to be minimal and mitigation can be applied.</p>
Site access	<p>Access route selection is still being undertaken for the project. Options are screened on an initial 200m buffer to minimise noise and community H&S impacts. Where no suitable buffers exist, AECOM and Masdar identify those with least impacts that are still technically viable. The access tracks are still being finalised and a preferred route will be identified that minimises the impact on the surrounding residential properties.</p>	<p>Access route will be optimised to minimise impacts.</p>
Grid connection	<p>It is noted that the key transmission and distribution infrastructure is aging because the network was developed during the Soviet era as part of the regional grid in Central Asia. Some of the transmission and distribution lines, substations, and auxiliary facilities built during the Soviet era have become obsolete and past their economic life. For this reason, the electricity losses are high, estimated at 20 percent of net generation. To address this issue, a number of improvement projects have been implemented across Uzbekistan.</p> <p>There is a need to be close to the existing or planned HV grid to minimise electrical losses in transportation on the Project's connection and then also in the wider network. The project OHTL would meet those objectives and is close to the main demand centre of Kattakurgan.</p> <p>At the bidding stage, Masdar were provided with an RFP from the GoU which included technical specifications for the grid connection. As a result, the grid connection has been designed in accordance with the off-taker's requirements. This has been contractually agreed as an OHTL with specifications as per the GOST standards. To confirm, the design of the OHTL is in compliance with the requirements of the off-taker and the locally enforced GOST standards. Masdar were restricted by the off-taker design requirements which prevented the design of underground cable. A deviation from the GOST standards would not be permissible and would make the project unviable from a legal and permitting perspective.</p> <p>It is estimated that the underground option can be 2-5 times more expensive than an overhead line due to the difficult terrains and hard ground strata, thereby resulting in a significant commercial impact that cannot be absorbed making the project economically unviable. The exact costs cannot be determined with ground investigation to determine the underlying strata and required construction techniques. It is important to note that this project has been procured at a very competitive energy tariff level that is unprecedented in Central Asia, with the main aim of providing cheap electricity to the Republic of Uzbekistan and help in further accelerating the energy transition and meetings the increasing energy requirements during this period of rapid growth and development.</p> <p>The relatively short ~4.5km connection is deemed to be positive in terms of land use. Land use impacts are discussed in more detail below. The project recognises that an OHTL introduces biodiversity</p>	<p>Most direct grid connection route has been chosen. Land use impacts would be minimised.</p>

impacts that have been mitigated or offset. Again, these have been discussed below. Given the fixed location of the PV site, the OHTL is assessed to have minimised potential impacts. The route is the shortest feasible route between the solar PV site and the substation avoiding the nearby village. Any alternative overhead route would increase the length of the transmission line and increase the potential collision risk of CH qualifying species.

In accordance with EBRD PR 6, Para 13. it is not considered that there are any economically feasible alternatives that would avoid or materially lessen the impact on PBFs and CH qualifying species.

Land Use	<p>A review of aerial mapping shows that the full site has been used for winter wheat. It is understood that no arable farming now takes place on the site. There are more intensively farmed areas visible surrounding the site area. There appears to be more natural habitat to the northwest of the site.</p> <p>The installation of towers would require a significantly lower amount of land take</p>	<p>Land does not appear to support agriculture so limited economic activity reliant on the land. No issues predicted.</p>
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Additional review of site suitability following the ESIA

Land Use (additional)	<p>Following site visits, AECOM confirm that the land is no longer used for cultivation. There was evidence of past cultivation dating back to Soviet times but the majority of recent cultivation was winter wheat. The quality of the land is poor which was the main reason why cultivation was discontinued. Five parcels of land had been cultivated within the site however all had vacated the site by the time of AECOM's site visit. The house observed from aerial maps was confirmed to be partially demolished and uninhabited. Affected people adjacent to the project site is restricted to those using the land for grazing. The land surrounding the project is intensively farmed and land use is considered typical for the region. It is clear that there is a lot of higher value agricultural lands being actively farmed which the project has avoided.</p> <p>Following site visits, AECOM confirm that the land is no longer used for cultivation. There was evidence of past cultivation dating back to Soviet times but the majority of recent cultivation was winter wheat. The quality of the land is poor which was the main reason why cultivation was discontinued. The land was cultivated as a single block. Affected people adjacent to the project site is restricted to those using the land for grazing but the PV site is generally used for access to the better grazing areas to the east. The land to the west and south of the project is intensively farmed and land use is considered typical for the region. It is clear that there is a lot of higher value agricultural lands being actively farmed which the project has avoided.</p> <p>An OHTL would result in a discreet number of tower bases that would create disturbance and some loss of agricultural land that has been covered under the LRP. An estimate of 2,750m² of land take would be required for the 22 tower bases but exact land take varies per base depending on slope and terrain. Actual land take varies between 40 and 210m² per base. An underground grid connection would result in significantly higher additional impacts on livelihoods due to the</p>	<p>Confirmed that project land is not productive and alternative land is available for grazing. OHTL route minimises impacts on farmland.</p>
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greater level of disturbance and limitations on agricultural activity during operation along the whole length of transmission line. It is estimated that approximately 270,000m² of land would be required for a 60m working corridor and would have to be compensated for, albeit a significant proportion would be for temporary disturbance.

The land allocation has been agreed for the footprint of towers only. The recently issued Presidential Decree provides for the allocation of land plots for the tower footprint only. It is not therefore possible to increase the land allocation at this stage without a complete renegotiation and would require significant time extensions which would not be able to be accommodated within the project construction schedule. AECOM confirm that this restriction was clearly made by the Ministry during negotiation of land allocation. All social aspects have assessed in accordance with tower footprints. OHTL design approvals are in the final stages with the off-taker so cannot be changed without renegotiating a new contract with GoU and the off-taker. Again, this would require significant time extensions which would not be able to be accommodated within the project construction schedule

Biodiversity	<p>Great bustard is a native non-breeding (winter visitor) to the Jizzakh and Samarkand region of Uzbekistan. In total an overwintering population of 924 Great Bustard were recorded in 2020./21 and this represents 61.6 to 92.4% of the Central Asian population. Great bustard is identified as a CH qualifying species and, as such, net gains would need to be met.</p> <p>The solar PV site and OHTL route are not considered to be suitable for this species as a staging or wintering habitat and it is therefore considered that the Project Aol is unlikely to be of significant importance for wintering Great Bustards within Uzbekistan.</p> <p>It is considered that the solar PV site does not provide suitable habitat and that other more suitable habitats are available and utilised by great bustard. Therefore, the solar PV site is not assessed to impact this species.</p> <p>However, the OHTL would increase the collision risk for this species as they travel between overwintering areas and would be mitigated on the OHTL to some extent by Firefly brand bird flight diverters. It is recognised that diverters may have limited success in reducing bustard collisions therefore offsets will be provided to further mitigate potential impact on great bustard and demonstrate a net gain.</p> <p>The OHTL travels away from the EAAA for the species and represents the most direct feasible route. As noted above, any alternative OHTL route would increase the length of the transmission line and increase the potential collision risk of CH qualifying species. Therefore, from a biodiversity perspective, having the shortest viable length of OHTL would be the preferred option to minimise collision risk.</p> <p>In accordance with ADB SR1 and EBRD PR 6, Para 16, the project's mitigation strategy will be described in a Biodiversity Action Plan...</p>	<p>No great bustards were recorded on site and it is considered that there is a low likelihood that the OHTL would cause significant impacts on this population, as the OHTL is outside the habitat directly used by bustards.</p> <p>Specific measures will be put in place to reduce potential collision impacts for Great Bustards, and to compensate for any that might occur, including offsets.</p>
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3. Legal & Policy Framework

3.1 Legal Framework

3.1.1 The Constitution of the Republic of Uzbekistan

Art. 105 of the Constitution recognises mahallas as self-governing bodies whose chairs and advisers are elected by citizens for terms of two and a half years. This is relevant because this type of organisation is an important channel for the decision-making process of local communities. Mahallas carry out general initiatives and measures, including those connected with ecology, directly in villages, regions, districts and cities. The main principles of mahalla are democracy, publicity, social justice, humanism and mutual aid. A mahalla is responsible for taking decisions regarding problems of local importance, including issues of improving and development of infrastructure, arrangement of khashars (voluntary unpaid work on Sunday) and provision of social aid to low-income families, among others.

3.1.2 Land Code

The Land Code was adopted in 1998 and regulates (i) withdrawal and provision of land plots for non-agricultural needs, (ii) compensation for losses of agricultural production, (iii) ownership and rights on land, (iv) responsibilities of various state authorities related to land management, (v) rights and obligations of land possessor, user, tenant and owner, (vi) land category types, (vii) land acquisition and compensation, (viii) resolution of land disputes and land protection, (ix) terms for the termination of rights to land plots, (x) seizure and land acquisition of land plot for state and public needs, (xi) terms of seizure of land plot in violation of land legislation.

It recognises (i) land tenants, (ii) lessees, (iii) landowners, and (iv) land users as eligible for compensation for losses and damages in case of land acquisitions.

Generally, all land in Uzbekistan is state property. However, in March 2020 the *Law on Privatization of Non-Agricultural land Plots* came into effect (see 3.1.7).

3.1.3 Labor code (21 December 1995)

Regulates labor relations of all forms of employment relations and mandatory for all employers and employees including the Uzbekistan nationals, foreign nationals stateless persons and employees of the foreign international organisations and legal entities. Among other norms, the Code has provisions about (i) protection of the interests and occupational health and safety of employees, and (ii) indemnity compensation for the loss of employment to be paid by the employers. In involuntary resettlement cases, the project proponents pay compensations. This does not guarantee compensation to informal employees and therefore does not guarantee that all APs lose jobs receive compensation.

The land acquisition as a result of this Project will not result in the loss of a job by anyone affected by the Project. Therefore, compensation as a result of job loss is not applicable and this is not something that will be considered when conducting a gap analysis between national requirements and lender standards.

3.1.4 Civil Code

The Civil Code regulates (i) property, (ii) property objects, (iii) basics of termination of property rights, (iv) right for compensation payments in case of property right loss, (v) rights on intellectual property, (vi) general rules for property acquisition, (vii) calculation of property cost and rights for compensation, and (viii) terms of rights termination.

It states that losses unless governed by another legal document may be claimed as compensation in full this includes necessary expenses to restore the rights, loss or damage to any property, lost revenues. Additionally, the aggrieved party may claim any revenue made by any other party based on the violated rights.

Furthermore, the code states that any rights to property are subject to state registration.

3.1.5 Resolution 911 “About Additional Measures to Guarantee Property Rights of Individual Persons and legal Entities and to Improve Procedures of Land Acquisition and Compensations”

This resolution from the Cabinet of Ministers defines procedures for the compensation of individuals and legal entities affected by land acquisitions for public needs and investment projects. It applies to residential land plots, houses, building and structures of individuals and legal entities. It does not apply to privatized land plots.

The general principles are as follows:

- Acquisition of a land plot for public needs shall be carried out with the landowner’s consent or in agreement with the land user, by a resolution of Councils of People’s Deputies as well as resolutions of the President and Cabinet of Ministers of Uzbekistan.
- Following such a resolution, local government offices (Khokimiyats) issue their resolution for demolition of buildings on the acquired land. These are subject to review and approval of local justice departments.
- Compensation agreements are to be prepared and signed by initiator of the acquisition and the land users. These have to be certified by a notary and any demolition can only start after the agreed compensation has been paid in full.
- Existing land allocation resolutions cannot be altered or terminated to facilitate further acquisition of land.
- Furthermore, it sets out a framework consisting of acceptable purposes for land acquisitions and their processes, including elements that are to be compensated and compensation modalities.

3.1.6 Resolution of the Cabinet of Ministers 146 “About the Measures of Improvement the Order of Provision of Land Plots for Implementation of Urban Development Activity and for Other Non-Agricultural Needs”

Mainly focused on agricultural lands, this resolution regulates (i) procedures for providing land plots for urban development and other non-agricultural uses, and (ii) procedures for compensating affected parties. The latter highlights that before any changes are made to the plot the compensation process has to be concluded. It also establishes a fund for the compensation of agricultural land losses that is based on a soil quality indicator.

3.1.7 The Law of the Republic of Uzbekistan 552 “About Privatization of Non-Agricultural Land Plots”

The law allows the privatisation of non-agricultural land specifically for citizens of Uzbekistan and resident legal entities. Previously all land was inherently owned by the state of Uzbekistan. This law represents the start of a land privatisation reform in the country and allows for the privatisation of land plots that fall outside of the following definition of agricultural land according to article 8 of the Land Code:

“Land provided for agricultural needs or designated for such purposes. It includes irrigated and rain-fed lands, croplands, lands with hayfields, permanent grassland, permanent crops and vineyards”

As the privatisation process has only started in 2020, it is understood that a substantial amount of land is still held either in lifelong inheritable possession, permanent use, temporary use, or lease and joint possession and use. These use rights can be revoked in cases of constant violation of stipulated land use.

There are six kinds of arrangement for rural land (FAO, 2022):

- Household plots, consisting of the house and a small garden.
- Tamorka, a private parcel of land usually adjacent to the house meant for subsistence. The size is regulated to be 0.35 ha of irrigated land and 0.5 ha of non-irrigated land. This is however subject to availability as the land is often taken from the land reserves of collective farms (type 3).
- Shirkats, collective farms who are structured as joint stock enterprises that occupy most of the agricultural land. These contract fields to farmers each year stipulating crop types and production levels.
- Individual farms, these are often set up on long-term leases lasting up to 50 years. These are the result of a process overseen by the agricultural authority and the local government.
- Dekhan, peasant farms which are small family-run operations from 0.35 ha to 1 ha on land of one of the Shirkats, that are the result of a process overseen by the Shirkats. These can be inherited but may only be worked by family members.
- Collective gardening land. These are limited to 0.006 ha per member for garden-vineyard companies and 0.08 ha per member for kitchen-gardening companies.

Additionally, the law covers multiple scenarios of how privatised land can be nationalised again.

It also establishes an institutional framework that is outlined in Table 3-1.

Table 3-1. Institutional framework of land privatisation in Uzbekistan

Institution	Responsibilities
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Cabinet of Ministers	<ul style="list-style-type: none"> • Development, approval, and publication of documents regarding urban planning • Establish the legal procedure to privatise vacant plots of land • Establish fee payment amounts and methodologies • Establish procedures for determining market value of the land plots
State Committee of the Republic of Uzbekistan on Land Resources, Geodesy, Cartography and State Cadastre (also referred to as Gosgomzemgeodescadastre or GKZGDK)	<ul style="list-style-type: none"> • Registration of rights to land plots • Management of land plot inventory • Definition of spatial characteristics of plots • Preparation of documentation for land plots
Fund for Urbanization Development	<ul style="list-style-type: none"> • Run e-auctions to sell the plots • Safekeep money generated by privatisation of land plots • Use funds for urbanisation processes
Local Municipalities (also referred to as Khokimiyats)	<ul style="list-style-type: none"> • Identify land plots to privatise • Identify land plots to transfer to the Fund for Urbanization Development • Take relevant decisions on plot privatisations
Agency for State Assets Management	<ul style="list-style-type: none"> • Organise e-auctions and ensure their proper execution

Source: *Kosta Legal (2019)*

3.1.8 Resolution 3857 of the Government of Uzbekistan “On Measures on Improvement Efficiency of Preparing and Implementation of Projects funded by International Financial Institutions and Foreign Governmental Financial Organizations”

This resolution regulates that any compensation due to projects funded by international donors must adhere to the rules of the international donor if such exist.

3.1.9 Law 336 of Uzbekistan on Protection of Private property and Guarantees of Ownership rights

This law regulates the right for owners of private property to receive full market value compensation should their property be acquired or damaged for state needs. Additionally, it states that for any changes to the owner’s rights to occur, the compensation process has to be concluded, including any potential appeals.

3.1.10 Resolution of the President of Uzbekistan “About the Measures for Basic Improvement of Investment Climate in the Republic of Uzbekistan”

The resolution requires the consultation with affected parties before the acquisition of land. Additionally, it reinforces the need to conclude the compensation process before the acquisition. Additionally, it covers reimbursements in case of illegal acquisition orders by government bodies. Furthermore, it lists the valid reasons for involuntary land acquisitions: State defence and public security, protected natural areas, establishment and operation of free economic zones, implementation of obligations arising from international treaties; discovery and development of mineral deposits, construction (and reconstruction) of roads and railways, airports, aerodromes, air navigation facilities and aviation centres, railway transport facilities, bridges, subways, tunnels, energy systems and power lines, communication lines, space activity facilities, trunk mains, engineering and communication networks.

3.1.11 Resolution of the Government of Uzbekistan “About Approval of the Procedure of Accumulating and Use of Funds of Centralized Stocks for Compensation of Damages to individual Persons and Legal Entities Due to Acquisition of Lands for Public Needs”

The resolution establishes the Republican Centralized Fund (RCF) responsible for the funding of the compensations necessary for land acquisitions for public and state needs.

3.1.12 The Law “On Appeals of Physical and Legal Persons”

This law regulates requirements and processes for appeals and grievances to government bodies. It also provides a time frame for reviewing resolving these: 15 days with the option to extend to one case on the basis of case complexity. Resolution of Cabinet of Ministers “About Approval of Rules of Protection of Power Supply Facilities”

The resolution regulates land issues regarding the land needs of power supply facilities, covering the physical objects but also access to them for maintenance or repair. In this capacity it also regulates compensation for any damages that arise from these. It also forbids land users to construct or plant anything that would disrupt the safe operation of the power infrastructure. There is no right to compensation for damages incurred by the process of returning the power infrastructure and surrounding land to the intended state.

3.1.13 Resolution of the Cabinet of Ministers 1047 “On the procedure for the formation and use of centralized funds for the compensation to affected individuals and legal entities due to land acquisition for the state or public needs” of 26th December 2018

This resolution defines the sources of compensation payments based on the type of projects. The allocation of funds for compensation is decided by the Supervisory Board of the Republican Centralized Fund (RCF).

3.1.14 The National Construction Standards and Rules # KMK 2.10.08-97. “Land allocation standards for construction of 0.4 – 750 kV power networks”

This document specifies width of land strips and size of land plots to be temporarily and permanently allocated for construction of 0.4 – 750 kV power supply lines, transmission towers, transformer substations and switchyards. It provides the following formula for the permanent land requirements of (i) double column transmission towers:

$F = n(F_0 + f)$ where F_0 is the land area occupied by the tower, n is the number of towers, and f represents an 1 to 1.5 m (depends on soil type) land strip around the tower. Land need for (ii) tricycle towers is calculated according to the following formula: $F = \eta * \pi * R^2$, where η is the number of columns, and R is a 1,5 m circle around the tower columns. The temporary land needs for (iii) power line installation varies from 8 m for 1.0 kV line towers and communication line towers to 32 m for double-chain 220 kV lines. The construction of switchyards and substations ranges from 50 m² to 25 ha depending upon project requirements.

3.1.15 The Law “about procedures of seizure of land for social needs with compensation” of 29 June 2022 ZRU-781

3.1.15.1 The purpose of this law is establishment of procedures of seizure of land and their parts belonging to physical persons and legal entities. This newly applied law is understood to be applied to the Project, however, this law has no impact on the outcomes of the LRP and is streamlining national governance requirements. The Law About Valuation Activities (2009 as amended to date)

This Law envisages that valuation is a licensed activity and the valuers should be licensed and independent (article 4). It envisages the events when valuation is mandatory including in case of acquisition of assets (article 11).

3.1.15.2 The Law of the Republic of Uzbekistan on Pasture Land No. 538 (21 May 2019) (currently being updated)

This law is designed with the purpose for the protection of pastures and regulations regarding field usage in Uzbekistan.

3.2 Institutional Framework

The Constitution and legislative norms and rules of the Republic of Uzbekistan determine the legislative, state and executive authority’s environmental and social responsibilities, and also the responsibilities of private developers. The Preamble of the Constitution recognises the “priority of the generally accepted norms of the international law” (UZINFOCOM, 2022). It is therefore considered that international conventions and ratifications will prevail over national legislation whenever the former are more stringent.

The supreme executive body responsible for nature protection in Uzbekistan is the State Committee for Nature Protection (SCNP), subordinated and accountable to Oliy Majlis (Parliament). It defines state policy, takes legislative acts, coordinates and manages the activity of ministries and agencies regarding E&S issues. The Cabinet of Ministers is the executive body responsible for the implementation of state nature protection policy, coordinate development and realization of state programs of socio-economic development. The Cabinet controls their execution and is responsible for registration and evaluation of nature resources. Obligations of regions regarding environmental protection are put to the Soviets of National Deputies, headed by the Leader of Administration (khokims). Regional and local government are responsible for registering and evaluating the condition of nature resources, ecologically harmful facilities and are responsible for control, nature protection and usage of nature resources.

Execution of nature protective measures, control function and responsibility regarding nature protection rests on a number of ministries and agencies. Responsibilities of these bodies include provision of stable system of state service, development and

realization of specialized programs, strategies and plans of actions and sustainable nature management. Regional departments and agencies are generally lower executive bodies of the SCNP and other responsible ministries on regional and district levels. Organizations at the regional level have the same structure as the republican level.

Public meetings (mahalla) are an independent mechanism of self-government, which carries out general initiatives and measures, directly in villages, regions, districts and cities.

3.3 Social Protection System

The country's social protection system is largely inherited from the Soviet Union and is focused on the principles of full employment, universal childcare, and guaranteed old age income security. Its main components are the social insurance, social assistance, social care services, and labour market interventions.

The individual protection schemes are reported to have good vertical implementation but is lacking in terms of horizontal integration of schemes. Additionally, there is ambiguity how utilisation of one scheme may impact the eligibility to another. Another core problem is providing adequate information and access to the various schemes. This is illustrated by statistics showing that only half of the population and more importantly one-third of the lowest income households were not taking advantage of any scheme in 2020. This is mostly the responsibility of the mahallas and district-level employment centres who are also responsible for allocating the limited resources according to need.

Figure 3-1 shows the main elements of Uzbekistans social protection system and their financing. For a detailed assessment of the social protection system of Uzbekistan please see the report published by the International Labour Organization (ILO) in collaboration with UNICEF and the World Bank (ILO, UNICEF, World Bank, 2020).

It is important that the LRP builds on and utilises the existing social protection systems. Vulnerable individuals identified as part of this project will be encouraged to seek support from the existing social protection systems as well as receiving additional support from the project.

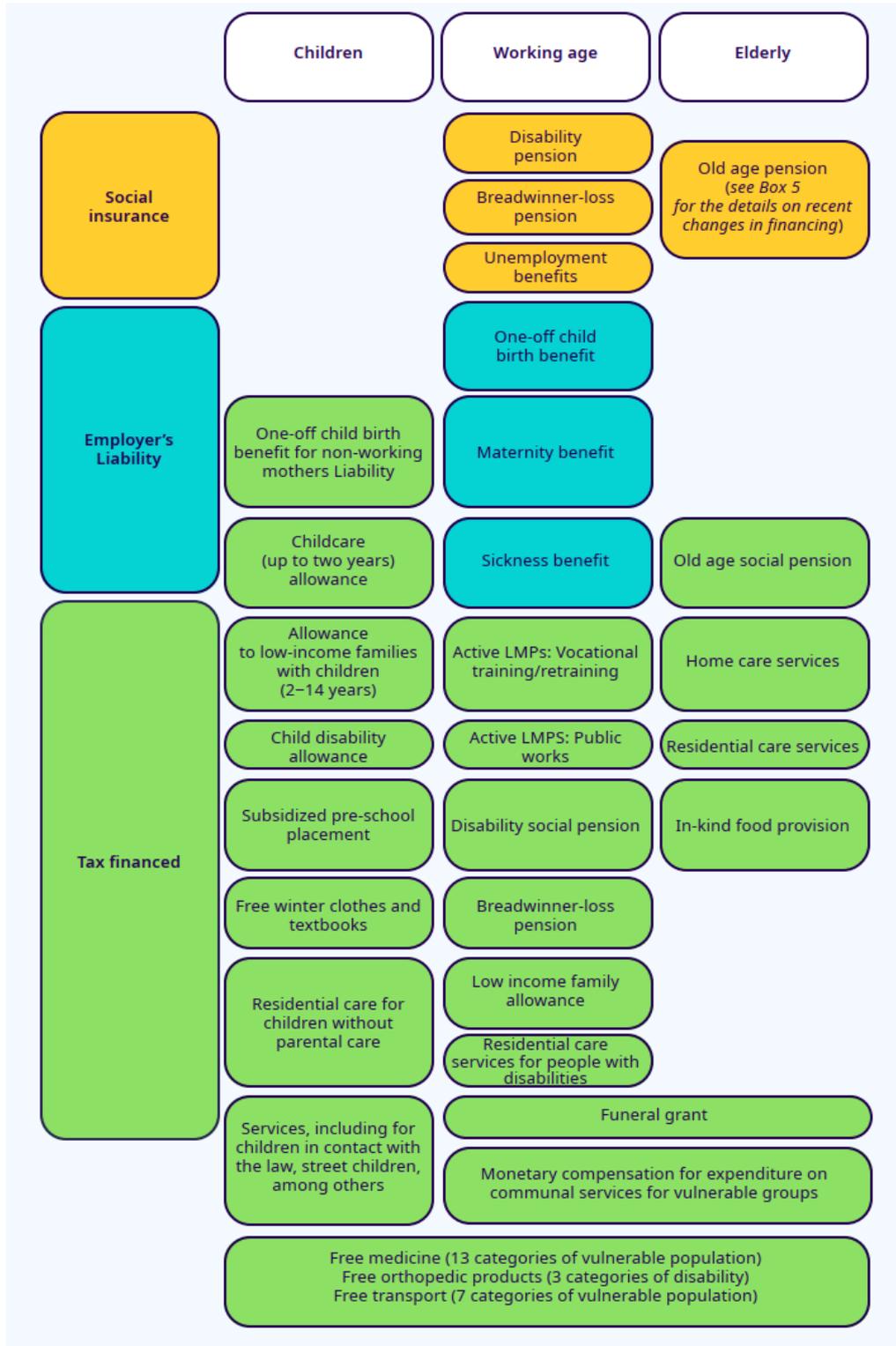


Figure 3-1. Main elements of the Social Protection System)

Source ILO, UNICEF, World Bank (2020)

3.4 International Best Practice Guidelines

International lenders who are signatories to the Equator Principles (EPs) require projects that they finance to meet environmental and social management international standards. Beyond Uzbek legal requirements, the following international guidelines, regulations and policies applicable to involuntary resettlement will be followed and applied to the Project development and implementation:

- IFC Performance Standards (IFC, 2012).
- (IFC, 2007a)
- (IFC, 2007b).
- Asian Development Bank (ADB) Safeguard Policy Statement (ADB, 2009).

Further detail relating to the IFC Performance Standards and Asian Development Bank Integrated Safeguards System are provided below.

3.4.1 Equator Principles and IFC Performance Standards

The Equator Principles (EP) apply to all new project financings with total capital costs of USD10 million or more across all industry sectors globally. The EPs represent a framework for project financing, which is underpinned by the revised IFC Performance Standards (PS).

The extent to which the EPs apply to a project depends on whether the country in which the project is located is “Designated” or “Non-Designated”. Projects within Non-Designated countries such as Uzbekistan are required to follow the standards and guidelines as set out in the IFC PSs and World Bank Environmental Health and Safety Guidelines.

The IFC PS of relevance to involuntary resettlement are detailed below:

- IFC PS5 – Land acquisition and involuntary resettlement.

PS5 is generally considered the global benchmark for the management of involuntary resettlement and this therefore of particular importance to this LRP. PS5 includes key principles such as: providing compensation. The majority of principles of PS5 are shared with the ADB Safeguard Policy Statement.

The key provisions of PS 5 are:

- The Project design will consider feasible options to avoid or minimize physical and/or economic displacement, while balancing environmental, social, and financial costs and benefits.
- Where such displacement cannot be avoided, the Developer will offer displaced communities and persons compensation and/or resettlement assistance to help them improve or restore their standard of living or livelihoods.
- The Developer will engage directly with affected communities and persons through a process of stakeholder engagement through the planning, implementation, monitoring, and evaluation of the resettlement process.
- The Developer will establish a grievance mechanism to receive and address specific concerns about compensation and relocation raised by displaced persons or members of host communities in a timely fashion.
- Where involuntary resettlement is unavoidable, the Developer will be required to prepare a Resettlement Action Plan (RAP) (in the case of physical displacement) and/or a Livelihoods Restoration Plan (in the case of economic displacement). The RAP/LRP must provide a comprehensive action plan for addressing resettlement impacts. It should describe the procedures and activities that will be taken to mitigate adverse project impacts, compensate for all losses, and provide development benefits to those who will be resettled or displaced because of the project. The Project Developer must be fully responsible for the resettlement process.
- In the development of the RAP and/or LRP, the Developer will be required to conduct a census to determine eligible peoples and an inventory of their assets as a basis of determining their asset holdings. Both will be linked to a suitable development moratorium.
- Where affected persons are required to be relocated, the Developer will offer feasible resettlement options, including adequate replacement housing or monetary compensation where appropriate.

- Replacement housing will be provided with security of tenure. Security of tenure does not necessarily refer to leasehold or freehold title but may also refer to traditional rights provided by traditional authorities as may be argued to provide a higher degree of security of tenure in certain circumstances.
- Economically displaced persons who face loss of assets or access to assets will be compensated for such loss at full replacement cost, and well as assistance to improve, or at least restore, their means of income-earning capacity, production levels, and standards of living. Replacement value is defined as the cost of restoring an asset, with new materials, including labour, transport, taxes, and any/all transaction costs. In applying this method of valuation, depreciation of structures and assets should not be considered. Preference should be given to land-based resettlement strategies for displaced persons whose livelihoods are land-based.
- Particular attention must be given to the needs of vulnerable persons and groups. These are defined as households with all members unable to participate in the subsistence, informal or wage economy by virtue of being landless, elderly, chronically ill, single-headed household, children, indigenous groups, ethnic minorities, disabled, orphaned, or otherwise disadvantaged. In particular, the RAP/LRP must provide additional targeted assistance (e.g. credit facilities, training, job opportunities) and opportunities to improve or at least restore their income-earning capacity, production levels and standard of living to vulnerable households whose livelihoods or income levels are adversely affected; and transitional support where necessary, based on a reasonable estimate of the time required to restore their income-earning capacity, production levels, and standards of living.
- Where feasible, ensure that economic benefits of the project accrue to the displaced people through local content mechanisms including local training, hiring, local business development and local procurement policies and procedures.
- Ensure access to communal natural resources, such as grazing land, fishing, hunting, gathering and other forms of natural resource extraction are restored in a sustainable manner.

Critical to the above requirements is the recognition of affected persons with different land tenures. Displaced persons, under the IFC Performance Standards include persons (1) who have formal legal rights to the land or assets they occupy or use; (2) who do not have formal legal rights to land or assets but have a claim to land that is recognized or recognizable under national customary law, or (3) who have no recognizable legal tenure.

PS 1 establishes the importance of assessment to identify the environmental and social impacts associated with development, effective community engagement and project information disclosure and consultation with local Project affected communities and environmental and social management measures. This LRP and the project ESIA has therefore been carried out to meet the requirements of IFC PS1 as applicable to this stage of assessment.

The remaining IFC PS set out objectives and requirements to avoid and minimize potential environmental and social adverse effects on the environment and to offset/compensate any residual effects. PS 2 to 8 have therefore been considered as part of the assessment process and discussed where relevant within the topic specific sections below. PS7 has been scoped out of the assessment due to the absence of indigenous peoples in this area.

3.4.2 ADB Requirements

Through the Safeguard Policy Statement (SPS) the ADB recognises the need for project-related land acquisitions and restrictions on land use and their potential for adverse effects on the existing communities and people. One major aspect of this are involuntary resettlement safeguards. The overarching goal of these are to avoid or minimise the negative effects of project-related changes to land ownership, access, and use. To this end the following objectives are named:

- Avoid involuntary resettlement wherever possible.
- Minimize involuntary resettlement by exploring project and design alternatives.
- Enhance, or at least restore, the livelihoods of all displaced persons in real terms relative to the pre-project levels.
- Improve the standards of living of the displaced poor and other vulnerable groups.

Importantly, the ADB recognises both physical and economical displacement as adverse effects. These may stem from either permanent or temporary, full or partial, involuntary acquisition of land or involuntary restriction on land use or access.

Resettlement is considered involuntarily when the displaced persons have no right to refuse the land acquisition. This occurs in cases of (i) lawful expropriation or temporary or permanent restrictions on land use and (ii) negotiated settlements in which the buyer can resort to expropriation or impose legal restrictions on land use if negotiations with the seller fail.

The ADB recognises the following three types of persons as eligible for compensation:

- Displaced persons with legal rights, generally defined by those holding duly registered titles to the land.
- Displaced persons with no formal or legal right to the land but whose claim is recognised under national laws. This includes states who do not issue titles but where land ownership is recognised and regulated by other means.
- Displaced persons without any formal legal rights but whose livelihood depends upon the land in question.

The core requirements are fair compensation, assistance and benefits for displaced people, compensating at full replacement cost; conducting a thorough social impact assessment; preparation of a resettlement plan; safeguarding the fairness of negotiated land acquisitions; information disclosure on the ADB website; consultation and participation with the affected people and communities; establishing a grievance redress mechanism; monitor and report safeguard compliance, in some cases by external experts or NGOs; continuous monitoring for unanticipated impacts and subsequent update to the project; special considerations for indigenous people.

3.4.3 European Bank for Reconstruction and Development Requirements

The European Bank for Reconstruction and Development (EBRD) has outlined its impact mitigation requirements in the Environmental and Social Policy (ESP) (2019) and, relevant for this LRP the accompanying Performance Requirement (PR) 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement addresses impacts on land acquisition.

Some of the key requirements detailed in PR5 are summarised below:

- An environmental and social assessment should be undertaken early on to identify if there will be economic or physical displacement due to the Project. The Project should also consider whether additional land will be required at a later stage.
- If displacement is to occur due to the Project, there should be socio-economic baseline established in order to determine the extent and significance of impacts, as well as taking into account the views of project affected persons and stakeholders, through meaningful consultations.
- If risks and impacts are likely from physical or economic displacement due to the Project, the client will engage resettlement experts in the process to develop resettlement planning documentation. This should be designed to provide measures to address impacts on anyone displaced by the Project. EBRD will determine the nature of the document through the environmental and social assessment process. Alternatives should also be considered in resettlement documentation, and the detail of the plan will be proportionate to the size and impacts of the Project.
- Avoidance of displacement where applicable (unless adverse health impacts are likely) , or minimization of displacement if this is not possible.
- Negotiated settlements to acquire land should take place, even if it has legal means to gain access without the consent of the seller. This can be achieved through providing fair and appropriate compensation to those affected by the Project.
- Special considerations should be made for vulnerable groups, especially, at the time of socio-economic baseline surveys, for a vulnerability analysis, during stakeholder consultations, when planning assistance measures, during impact assessment as well as mitigation and monitoring. Measures should be put in place for meaningful participation of women, and the Project should seek to understand differential impacts of land acquisition, land use restrictions and involuntary resettlement on men and women. Delivery and establishment of compensation shall take into account gender issues. Provisions will be made where national law does not recognise the rights of women, to ensure women can have security of tenure, where possible. During consultations, women's views shall be represented fairly and factored into planning and implementation. Women's and men's preferences for compensation and asset replacement should be documented. Furthermore, any opportunities arising from the Project should be made equal to both men and women affected by the Project.
- A census of the Project area should be carried out by the client, to determine who will be affected by the Project, and who will be entitled to compensation and assistance. An inventory of affected assets should be completed, for further valuation of such assets. A cut-off date for eligibility should also be established as part of the Project, based on legislation or the end date of the census. The cut-off date will be well documented and shared throughout the Project area regularly.
- Valuation of affected assets should be at full replacement cost and performed by qualified valuers. The details of how the replacement cost was calculated should also be documented.
- Affected persons can be classified as persons with formal right to the land or assets, persons who do not have formal rights to the land at the time of the census but have a claim to the land that is recognised under national law, or persons who have no recognisable claim to legal assets or land they use.
- Compensation for affected persons should be provided where assets or other natural resources cannot be replaced as part of the land acquisition or land use restrictions process. Compensation should be full replacement cost along with any other assistance deemed necessary. Resettlement assistance should be provided for economically displaced persons. The three

categories for compensation include: in-kind or cash for legally held property or other assets, provision of legal support for affected persons to obtain recognition of their claim to land, compensation for any structures or developments on land (e.g. crops and trees), income loss and other livelihood sources. Compensation should be provided before displacement or land access restrictions are applied.

- If livelihood of displaced persons are land based, the client shall offer land based compensation. If compensation is rejected by displaced persons, the client should work with relevant government authorities in conflict resolution to providing compensation at full replacement cost, resettlement assistance and livelihood improvement.
- Where a project contributes to loss of community facilities, these should be replaced to an equal or improved service level following the Project activities.
- There should also be an effective grievance mechanism put in place as early as possible, which is impartial, to address concerns regarding compensation, relocation or livelihood restoration.
- The client should implement a resettlement plan, which reflects the scale of risks and impacts of the Project. The plan should include up to date and reliable information regarding: the Project and potential impacts on displaced or affected groups, compensation entitlements for each category of displaced persons, appropriate mitigation for any impacts identified, legal arrangements for effectively carrying out resettlement, a budget for resettlement proportional to mitigation measures.
- Resettlement planning documents must be incorporated into an environmental and social management system. Resettlement planning documents will be submitted with the ESIA required for category A projects, and some category B projects deemed to have significant impacts by EBRD.
- Where government agencies are responsible for land acquisition and resettlement from a privately owned project, they should be involved from an early stage, play an active role in land acquisition processes as well as planning and monitoring. The client should identify gaps between government and local legislation and address these gaps in a way acceptable to EBRD and the relevant government.
- A resettlement plan should be developed for government managed private sector land acquisition projects. This should include description of entitlements of displaced persons, actions to address gaps between PR5 and those entitlements, and financial responsibilities of the government agency and/or client in the implementation of the resettlement plan.
- The client should ensure monitoring procedures are in place, specifically of the land acquisition and resettlement process, and that this will involve participation of key stakeholders. Monitoring should be commensurate to the scale of impacts of the Project. The client has responsibility for providing EBRD with monitoring reports even if third parties complete them.
- If the impacts of the Project are significant, EBRD may require periodic external compliance reviews, or an external completion audit of land acquisition and resettlement activities. These reports may be required to be disclosed by the client (even if completed by third parties) if impacts are significant.
- When physical displacement cannot be avoided, the resettlement plan should cover the requirements of PR5 at a minimum. The plan should implement areas for monitoring and evaluation during the process of displacement, and should pay special attention for needs of vulnerable groups and genders. The client should offer a choice between property of equal or higher value with security of tenure, or cash replacement cost as an alternative. Any resettlement sites should offer similar or improved living conditions and access to services. Where communities are affected, mitigation measures should be put in place.
- If the Project will affect livelihoods or income, measures should be put in place to maintain or improve income from that prior to Project implementation. Special considerations should be taken for vulnerable groups and gender aspects. Measures should be planned to include evaluation once being incorporated. Once a completion audit establishes, affected persons have received assistance they are deemed eligible for receiving, then mitigations for economic displacement can become closed out actions.
- Livelihood restoration measures should include where applicable: compensation for affected businesses, compensation for the cost of relocation of business activities, compensation for loss of net income in transitional periods and costs of machinery installation and transfer to alternative locations. For project affected persons with legal claims to land, they should be provided replacement land at equal or higher value, or compensation at equal or higher cost. For project affected persons with no legal claim to land, they should be compensated for assets from the land (e.g. crops), at full replacement cost. If community resources are affected, in-kind or cash compensation should be provided along with enhancement of existing resources to minimise impacts. Livelihood restoration measures could also include provision of assistance measures to restore or improve income earning capacity, production levels and standards of living. Measures should be designed to support transitional periods for economically displaced persons and provide appropriate benefits of the Project to local communities.

3.4.4 Asian Infrastructure and Investment Bank Requirements

The Asian Infrastructure and Investment Bank (AIIB) are an additional lender of the Project. In order to comply with international lenders requirements, the Project will be compliant with the AIIB Environmental and Social Framework. Within this framework, there is an Environmental and Social Standard 2: Land Acquisition and involuntary Resettlement. This standard will be applied to the Project, therefore Masdar are required to undertake the following actions:

- Planning – this includes determining the extent of Involuntary Resettlement through asset and land surveys, census of displaced persons, and evaluation of socioeconomic conditions (including risks, impacts and gender differentiated source of livelihoods).
- Land Acquisition and Resettlement Plan – This should be explicit regarding displaced persons' entitlements, income and LR strategy, monitoring, grievance mechanisms, schedule, budget and institutional arrangements. As part of the LRP, there should be a land survey and establishment of clear cut-off dates for eligibility. Claims of displaced persons should be followed up with processes achieving a resolution. Data should be collected disaggregated from age and gender and include information about vulnerable groups. This document will supplement findings of the ESIA relating to social impacts of the Project, however, will contain technical information regarding involuntary resettlement. If resettlement is economic, then AIIB requires an LRP to be prepared.
- Land acquisition and Resettlement Planning Framework – In circumstances where activities involving resettlement are not fully defined, then Involuntary Resettlement activities should be conducted under the Environmental and Social Policy (ESP) phased approach. The LARPF should be prepared as soon as possible.
- Proportionality- the Preparation of the LARP should be in conjunction with the degree and extent of impacts of the Project which is considered based on scope of physical and economic displacement, and vulnerability of displaced persons.
- Use of land Aggregators – Clients who use a local land aggregator (or other third party) for acquiring project land or addressing resettlement processes need prior approval from the bank. The client will still maintain responsibility for compliance with ESS2 and takes full responsibility for establishing a Grievance Redress Mechanism (GRM). The client will also be responsible for the process of land acquisition, even if a third party is to deliver compensation and pay any associated costs.
- Consultation – Consultations should take place associated with livelihood restoration and land acquisition which should be meaningful and welcoming of communities and non-government organisations where applicable. Any persons classed as displaced from land acquisition should be consulted in planning, implementation, monitoring and evaluation of the future LRP. This process should take into consideration anyone classed as vulnerable and put in place additional measures to ensure there is a means for open participation from all stakeholder groups.
- Grievance Mechanism – The grievance mechanism should be implemented to be a transparent and understandable process. Special considerations should be made for gender specific and GBV related concerns, and appropriate channels of anonymous reporting should be put in place, which allows for confidentiality. There should be a mixture of verbal reporting and written procedures
- Social Support – Social considerations should be made where impacts are likely from the restoration process, particularly in the case of vulnerable groups. This can be achieved through implementation of social preparation such as from engaging in consultations and affected populations prior to resettlement and compensation decisions in the Project.
- Livelihood Restoration – The Project should be commissioned with the aim to improve or as a minimum, restore livelihoods of project displaced persons. This should be achieved through
 - Land based resettlement strategies or cash compensation for replacement value of land
 - Replacement of assets of equal or higher value
 - Compensation at full replacement cost for assets which cannot be recovered
 - Programs designed to improve utilisation of resources in the community and enhance the availability to livelihood sources alternative to those diminished by the Project.

These measures should be made available to any project affected persons, differentiated to their individual requirements.

Transaction costs should be included in establishing compensation. Opportunities for additional services should be explored depending on the manner of the Project itself.

- Resettlement Assistance – This should be provided to those displaced by the Project, including:
 - Security of tenure for those relocated, with secure housing and access to employment, as well as any benefits from the Project

- Support and development assistance (for example, employment opportunities)
- Community services, where needed
- Special measures put in place to assist women and vulnerable groups
- Standards of Living – The Project should be designed and implemented to improve standards of living for displaced persons classed as poor or vulnerable, to as a minimum, national standards including ensuring access to social protection systems, access to land or income resources where appropriate, and adequate housing.
- Compensation and entitlements – Compensation and entitlements for involuntary resettlement should be paid before physical or economic displacement occurs due to the Project. Considerations should be made for gender issues. Provisions should be made to ensure women's right of tenure, even if national law does not recognise this, where applicable.
- Person without title or legal rights – Anyone classified in this group by the Project should be provided with resettlement assistance or compensation for lost assets, in accordance with cut-off dates. They should also be included in consultations regarding land acquisition and resettlement. Compensation should not be granted however for land settled illegally.
- Negotiated resettlement – Procedures should be generated to be transparent and fair for land acquisition. Anyone entered into negotiations for settlements should maintain or get improved income after the Project implementation.
- Disclosure – The draft livelihood restoration and land acquisition documentation should be included in the consultation process in the affected area of the Project.
- Implementation, monitoring, and supervision – Involuntary resettlement should be communicated as part of the Project, and should be considered to be an additional Project, should it be a substantial element. Supervision of the land acquisition and resettlement process should be maintained throughout implementation, and experienced experts should monitor whether objectives of the process have been met. Monitoring should also determine extent of any additional impacts of the Project,
- Third parties – The client is expected to engage with responsible organisations where the government acts as a third party, early in the land acquisition process, and support them in the process. The client should perform a gap analysis of local and government legislation and address any gaps to satisfy the AIIB policy on land acquisition. The land acquisition and resettlement documentation of the client should be designed to complement those of the third party where appropriate.

3.4.5 European Investment Bank (EIB) Requirements

The European Investment Bank (EIB) are also a principle lender of the Project. The EIB has specific requirements for a Project such as this, including a part of their Environmental and Social Standards. This includes, Standard 6 – Involuntary Resettlement. The following section summarises these requirements which Masdar will apply to the Project where applicable:

- Masdar is expected to ensure they consider feasible project alternatives, designs and/or locations with the aim to avoid and/or minimise physical and/or economic displacement.
- Masdar should limit buffer zone size or rights of way to avoid or minimise resettlement
- To be classed as displaced or a PAP, the following criteria will apply:
 - Persons with formal legal rights to land or assets under national laws
 - Persons who do not have formal legal rights to land and/or assets but who have claims to land or assets that are recognised or recognisable under national laws
 - Persons who occupy/use the land and/or assets but have no recognisable legal rights or claim to it/them
- Masdar should conduct a socioeconomic census and baseline survey to identify PAPs who will be physically or economically displaced and eligible for compensation and/or assistance
- The census should cover the total population of PAPs and include an inventory of all losses. The socioeconomic baseline survey should include the current socioeconomic profile of the PAPs, a vulnerability assessment and the need for special arrangements to be made. Data should be disaggregated by gender and other parameters relevant to the Project.
- There should also be a cut-off date for eligibility which should be well documented and distributed throughout the Project area. This cut-off will be valid for the period given in national laws or the period specified in resettlement planning documents ,or for a reasonable time period from the census or inventory date. Those who encroach on the Project area after the cut-off date are not required to be compensated by Masdar.

- Masdar should offer all PAPs a choice of either compensation in kind or monetary compensation at full replacement cost.
- In case of physical displacement, in the case of alternative housing, the new residence's value should be equal or improved compared to the previous one. Masdar should ensure arrangements are made where required for PAPs to gain security of tenure. Cash compensation should reflect the valuation of all affected assets if this is offered.
- Regarding economic displacement, replacement land should be equal or higher quality and located close as possible to the original location. When community resources are affected, measures should be taken to ensure equivalent resources are made available, which should take into account cultural aspects. If this is not possible, Masdar should provide justification to EIB and provide assistance to offset loss of access to lost resources. Valuation for cash compensation for affected assets should be at full replacement cost. Anyone whose livelihoods or income is adversely affected should be provided with targeted assistance and transitional support to as a minimum restore livelihood.
- Masdar should also provide resettlement assistance to displaced PAPs, paying special attention to vulnerable individuals or groups. Replacement land or cash compensation should be provided before the actual resettlement takes place.
- When relocation sites are to be provided, Masdar should consult PAPs on the choice of sites and offer choices where possible. Relocation sites should meet the criteria specified in the EIB Standard 6 Involuntary Resettlement. The full requirement for consultation and disclosure as part of this standard are described in the SEP.
- Masdar should put in place a grievance mechanism consistent with the EIB Standard 2- Stakeholder Engagement. This process should address concerns related to entitlements, access to information, compensation or relocation which is raised by PAPs, host communities or others.
- Regarding forced evictions, this is not tolerated by the EIB. Eviction can be carried out in exceptional circumstances in full compliance with provisions of international human rights instruments and national law. EIB should be informed prior to eviction taking place, and accompanied with a documented statement that conditions specified in Standard 6 of EIB Environmental and Social Standards have been met.
- Special considerations should be made for genders and vulnerable groups during consultation, planning and implementation. Regarding indigenous peoples, avoidance and minimisation of impacts should be prioritised.
- Planning documents should be prepared for Projects relating to Involuntary Resettlement, which cover the extent and degree of impacts, physical and economic displacement and vulnerability of affected persons. This should include resettlement planning documents in compliance with Standard 6, including:
 - A resettlement framework for projects where exact design, footprint and associated impacts have not been determined, or where individual components are still to be developed. This document should be continuously updated as the Project progresses.
 - A resettlement plan should be prepared for projects leading to significant physical displacement.
 - A livelihood restoration plan (LRP) should be prepared for projects leading to economic displacement. The LRP should be developed to improve or at least restore livelihoods of PAPs.
- When third parties are responsible for preparation and implementation of resettlement, the Project should still comply with the requirements of Standard 6.
- Regarding monitoring and evaluation, Masdar should set up a monitoring system which reflects the scale of resettlement and risks involved. Monitoring reports should be submitted to the EIB, including information about grievances and redress mechanisms. Once all resettlement activities are completed, Masdar should submit an audit report to EIB, and put in place supplementary actions where necessary. Resettlement will be considered complete when the adverse impacts of resettlement have been addressed.

More details on the requirements of the Resettlement Framework as well as the Resettlement Plan and Livelihood Restoration Plan requirements can be found in the EIB Standard 6 – Involuntary Resettlement, in Annex 1a and Annex 1b.

3.5 Gap Analysis between National and International Requirements

Table 3-2. Comparison between national legislation in Uzbekistan and international requirements of the project

Topic	Lender standards associated with resettlement	Requirements under national legislation	Differences identified and actions to address differences
Scope of application	Lender standards apply to land-related transactions that include restriction on access to land or use of other resources including communal property and natural resources such as marine and aquatic resources, timber and non-timber forest products, freshwater, medicinal plants, hunting and gathering grounds and grazing and cropping areas.	<p>The legal and policy framework contains national laws and legislations related to land acquisition and compensation policy in Uzbekistan through the following:</p> <ul style="list-style-type: none"> (i) Land Code (30.04.1998); (ii) Resolution of the Cabinet of Ministers dated 16.11.2019, # 911 "On additional measures to ensure guarantees of property rights of individuals and legal entities and to improve the procedure for seizing land plots and providing compensation"; (iii) Resolution of the Cabinet of Ministers dated 25.05.2011, #146 "On measures to improve the procedure for granting land plots for urban development activities and other non-agricultural purposes"; (iv) Civil Code (29 August 1996) (v) The Law of the Republic of Uzbekistan "About Privatization of Non-Agricultural Land Plots" (vi) Resolution of the Government of Uzbekistan "On Measures of Improvement Efficiency of Preparing and Implementation of Projects funded by International Financial Institutions and Foreign Governmental Financial Organizations (vii) Law of Uzbekistan on Protection of Private Property and Guarantees of Ownership Rights (viii) Resolution of the President of the Republic of Uzbekistan dated 16.07.2018 #3857 "On measures to improve the effectiveness of training and realizing projects with participation of international financial institutions and foreign government financial organizations"; (viii) Decree of the President of the Republic of Uzbekistan dated on 01.08.2018 #5495 "On measures on cardinal improvement of investment climate in the republic of Uzbekistan". 	<p>The legal and policy framework includes provisions for land acquisition and involuntary resettlement to "land users, tenants and landowners". However, the Legal and Policy Framework excludes public land for compensation related payment.</p> <p>In the LRP, any crops and infrastructure on the land affected by the project will be compensated. The land is state owned with leaseholds for certain areas.</p> <p>The gaps between the laws of the Republic of Uzbekistan and ADB's Safeguard Policy Statement (SPS) 2009 can be reconciled through (i) Presidential Resolution No 3857 "On measures to Improve the Effectiveness of Development and Implementation of Projects With the Participation of International Finance Institutions (IFIs) and Foreign Governmental Organizations (FGFOs)" and (ii) Presidential Decree No 5495 "On Measures for Fundamental Improvements of Investment Climate in the Republic of Uzbekistan", which require preparing and implementing projects funded by International Financial Institutions (IFIs) according to their requirements as well as carrying out meaningful consultations, all gaps have diminished. The gaps between the requirements of ADB SPS (2009) and national laws have been reconciled in previous ADB-assisted projects in Uzbekistan.</p>

Topic	Lender standards associated with resettlement	Requirements under national legislation	Differences identified and actions to address differences
		<p>(x) Resolution of the Government of Uzbekistan “About Approval of the Procedure of Accumulating and Use of Funds of Centralized Stocks for Compensation of Damages to Individual Persons and Legal Entities Due to Acquisition of Lands for Public Needs</p> <p>(xi) The Law “On Appeals of Physical and Legal Persons</p> <p>(xii) Resolution of Cabinet of Ministers “About Approval of Rules of Protection of Power Supply Facilities</p> <p>(xiii) he National Construction Standards and Rules # KMK 2.10.08-97. “Land allocation standards for construction of 0.4 – 750 kV power networks”</p> <p>(Xiv) ZRU 781 - About procedures of seizure of land for social needs with compensation</p>	
Alternative project designs	Clients must consider feasible alternative project designs to avoid or minimise physical and/or economic displacement.	This is not a requirement under national legislation.	The Company have optimised the location of Project infrastructure to avoid, and where avoidance was not possible, minimise social impacts within and in the approximate surrounding location of the project area and enhance positive social impacts.
Compensation and benefits for displaced persons	Masdar must offer displaced communities and persons compensation for loss of assets at full replacement cost, and other assistance.	<p>Valuation for buildings and structures is determined by their market value, plus any applicable transaction costs. Any salvaged materials from the land will be the property of the developer, however, the land owner will be able to purchase any salvaged materials of their own accord.</p> <p>Valuation for losses of agricultural and forestry production is carried by the self-financing State Enterprises for Land Surveying and Real Estate Cadastre subordinated to ‘Goscomzemgeodescadastre’ which is a government entity responsible for the cadastre. National law also states that if any changes to owners rights occur then the compensation process must be concluded, and this includes any potential appeals.</p>	There is a potential difference in recognition of compensation between national and legislation since national legislation refers to market value, which may not be perceived to reflect full replacement cost. Masdar will provide compensation for the loss of any crops or infrastructure based on full replacement value which includes market value in addition to elements such as transaction costs, interest accrued, transitional and restoration costs and other applicable payments.
	Where livelihoods are land-based, the client will offer land-based compensation.	Article 41 (Clause 4) of the Land Code (30 of	Both Lender Standards and government regulation is matching regarding in-kind land compensation rather than just cash payment.

Topic	Lender standards associated with resettlement	Requirements under national legislation	Differences identified and actions to address differences
Timing of Compensation in relation to Resettlement	Masdar will take possession of the relevant area of land and related assets following compensation payments.	April 1998) requires offering tenants an equivalent land plot (in-kind land compensation) and compensation for lost profits and other losses.	The non-land options may be necessary when replacement land of equal quality is not available or unaffordable, or when the displaced persons make an informed decision to demand compensation in cash
	The client will provide opportunities to displaced communities and persons to derive appropriate development benefits from the Project.	Under national legislation, there is no obligation for the property developer to provide opportunities to displaced communities and persons to derive benefits from the Project.	There is no requirement to provide development benefits under National Legislation. However, it is best practice to ensure the local community benefits from the project. To enable this, Masdar will offer employment benefits in the construction and operational phase of the Solar Farm development. Masdar will also develop a Community Development Plan during the construction phase.
Community engagement	The client will engage with affected communities through stakeholder engagement. This should include information on resettlement options, alternatives, and choices.	Under national legislation there is no obligation to disclose information to the public or with PAPs.	The Legal Policy and Framework does not align with National Legislation here which does not require consultation. However, it is best practice according to Lender Standards to enable community wide benefits and voicing of concerns. Stakeholder engagement has taken place and will continue to take place before, during and after implementation of the project. This will be with a range of affected parties including farmers, herders, community members, and government representatives. Specific details of engagements can be found in Chapter 4.
	Masdar will disclose relevant information during the planning, implementation, monitoring and evaluation of compensation payments, livelihood restoration activities, and resettlement activities.	During land acquisition and implementation, information regarding legal and proposed changes to sub-leases is communicated to PAPs. According to national legislation, there is no requirement to provide information, monitor compensation or undertake alternative other livelihood restoration tasks.	National legislation differs from Lender Standards in that only during implementation is there a requirement to disclose legal information regarding land acquisition to PAPs. It is however international best practice to maintain good stakeholder engagement throughout the process. Meetings have been held and will continue to be held regularly with any stakeholders affected or potentially affected by the project. More

Topic	Lender standards associated with resettlement	Requirements under national legislation	Differences identified and actions to address differences
Grievance mechanism	Masdar will establish and implement a grievance mechanism.	<p>Grievances can be communicated at any time during the process. Any grievances can be delivered via Khokimiyats or any other state representatives for investigation and follow-up.</p> <p>At any time, the PAP (or any other party with a grievance) can approach the courts for a judicial ruling.</p> <p>The grievance process is regulated by law December 3, 2014 No. ZRU-378 about appeals of physical persons and legal entities (as amended on 10-03-2020). A complaint shall be considered within fifteen days from the date of receipt by the state authority, which is obliged to resolve the issue on the merits. When additional study and (or) verification is required, the request for additional documents is up to one month</p>	<p>details of this process can be found in Chapter 4 of this LRP.</p> <p>Both Lender Standards and National Legislation allow project affected persons to express a grievance through multiple mechanisms. Masdar has already developed a grievance mechanism which is easily accessible and readily available for community members and any other PAPs. Full details of the process can be found in Section 4.6. Masdar is committed to using any information processed regarding grievances to resolve and close any enquiries to continuously improve their social performance. Masdar will ensure project records and surveys are kept up to date and if approached will provide these documents for any individual or group looking to go through the courts to raise a grievance.</p>
Resettlement and Livelihood Restoration Planning and Implementation	The client will conduct a census to collect appropriate socio-economic baseline data to identify those classified as displaced, and to determine if the displaced person is eligible for compensation and/or livelihood restoration assistance.	National legislation does not require a census survey to be undertaken although a list of the PAPs is created during the process of obtaining a Sub-Lease Agreements. No information on the socio-economic status of PAPs is required.	<p>Socioeconomic surveys are not required under National legislation. Information on the identity of PAPs is held in Sub-Lease Agreements.</p> <p>Masdar has collated information on farmers with sub-lease agreements from inside the project area. Surveys to obtain contact information for farmer and herders has also been collected. To establish a socio-economic baseline, data has also been collected in preparation of producing the LRP – this is to verify any eligible PAPs regarding compensation and livelihood restoration assistance.</p> <p>During disclosure of the Final LRP, the identity of the farmers and herders considered to be eligible for compensation and assistance shall be checked with representatives from the relevant district.</p>
Uneconomic parcels of Land	Uneconomic parcels of land (often referred to as orphaned land) should be acquired along with the entire land parcel.	National legislation provides the opportunity for a landowner or tenant to request an alternative plot of land which could be selected if the remaining area of land is (in their view) uneconomic.	In-kind compensation is available through National legislation. According to project impacts, no uneconomic parcels of land are expected to be created base on the project.

Topic	Lender standards associated with resettlement	Requirements under national legislation	Differences identified and actions to address differences
Monitoring and Evaluation	Masdar will establish procedures to monitor and evaluate the implementation of the LRP. PAPs will be consulted during the monitoring process.	National legislation does not require monitoring after the implementation of the project.	Although it is not a requirement of national legislation, it is best practice to ensure effective monitoring and evaluation is set up. PAPs will be consulted with during future monitoring and evaluation activities. More on this is detailed in Section 11.4.1
Establishment of a cut-off date for eligibility	The client will establish a cut-off date for eligibility, after which any land-related improvements will not be eligible for compensation. Information regarding the cut-off date will be documented and communicated to PAPs during the entirety of the process.	National legislation does not specifically mention the adoption of a cut-off date. However, in practice this is represented by the completion of valuation surveys undertaken on the assets to be acquired.	The valuation surveys undertaken as part of the project according to national legislation are formulated with the same premise as a cut-off date. Using the current design of the Project, land surveys have been undertaken at each known location of Project Infrastructure (PV area and OTL) to establish existing land conditions. No physical assets were identified at any of these locations. Farmers within the Project Area have been informed of the location of Project Infrastructure, as well as the purpose of the cut-off date. The farmers were asked to sign a Farmer Acknowledgement Form.
Completion Audit	LRP implementation will be completed when any adverse resettlement impacts have been addressed according to the Performance Standard. It may be a requirement that an audit of the LRP takes place.	According to national legislation, there is no requirement for the preparation of resettlement planning documents nor for a completion audit to be carried out.	Although there is no requirement for completion audits under national legislation, Masdar will ensure a commission audit is completed to ensure that any actions set out by the LRP are achieved during the implementation process. An independent consultant will carry out the audit as commissioned by Masdar.
Categories of displaced persons	According to Lender Standards, someone is eligible to be classed as a displaced person if they have legal rights to the land or assets they occupy or use OR someone who does not have formal legal rights to land or assets but have a recognisable claim to land according to national laws.	A displaced person can be classified as someone who has the legal rights to the property they occupy or use under national legislation.	According to national legislation, anyone without formal rights to the land is not classified as a displaced person. Masdar recognises any informal settlers including farmers and herders with leases in the project area as well as those from the wider local community. All of these groups are eligible for compensation if they own assets which are affected by the project or livelihood restoration if their livelihood is impacted

Topic	Lender standards associated with resettlement	Requirements under national legislation	Differences identified and actions to address differences
Land Tenant and Sharecroppers	Anyone using land as a tenant or sharecropper is only entitled to compensation in the form of affected assets. These type of PAPs will not be given compensation for the land itself which is being taken over by the project. As part of the LRP, measures should be put in place to enable tenants and sharecroppers to continue their livelihood elsewhere.	There is no requirement under national legislation to put in place any livelihood restoration measures for sharecroppers or tenants of land affected by the project.	National legislation recognises the rights of land tenants and sharecroppers, although does not require livelihood restoration measures to be provided. All farmers, herders and farm workers active in the Project Area will be provided with compensation and/or livelihood restoration measures that they are eligible for (herders are classed as informal settlers so will only be entitled to livelihood restoration measures). There are no sharecroppers within the project area.
Economic displacement	Regarding projects which result in only economic displacement, it is the expectation that the client provides the means to be compensated and this is implemented through an LRP, as well as any other assistance measures. The manner of which any assistance or compensation measures are communicated should be both transparent and comprehensible for PAPs.	According to national legislation, there is not requirement for the preparation of resettlement planning documents.	Although it is not a requirement under national legislation, Masdar is committed to successful and just implementation of the LRP regarding any economic displacement as a consequence of the project. Farmers, herders as well as various community members using the area will be eligible for compensation and/ or livelihood restoration measures depending on their eligibility as set out in Chapter 7 of this LRP.
	Based on Lender Standards, displaced persons (those with legal rights to land they use or occupy under national law, or informal settlers with a recognisable claim to the use of land under national law) will be compensated through receipt of a property of equal or greater value or cash compensation which covers the full cost of the property/land they have lost. Any informal settlers who do not have recognised claims to land under national legislation will be compensated for assets which have improved the land such as crops and irrigation infrastructure. Compensation for any assets which have directly resulted in land improvements will be calculated and delivered to ensure this completely replaces any asset lost.	National legislation recognises displaced persons who have formal legal rights to the land or assets they occupy or use.	It is not a requirement to compensate anyone without any legal claim to land according to national legislation, however, Masdar recognises it is best practice to compensate any individuals or groups affected by the project based on the Lenders Standards in terms of classification of a displaced person. Masdar will ensure any displaced person is compensated accordingly or provided with livelihood restoration based on their eligibility as discussed in Chapter 7 of this LRP.
	Masdar will ensure that those classed as an economically displaced person whereby income or livelihood has been grossly affected by project activities will be provided with opportunities to improve, or restore, income capacity, production and standard of living after the implementation of the solar farm project.	National legislation does not require livelihood restoration measures to be carried out.	Although it is not a requirement under national legislation, Masdar will provide any economically displaced person (classified by Lender Standards) with the opportunity to generate income, production and have a standard of living which as a minimum is

Topic	Lender standards associated with resettlement	Requirements under national legislation	Differences identified and actions to address differences
	<p>Any support given by Masdar to any PAPs will be given in a transitional manner which reasonably reflects any time required to implement livelihood restoration measures to baseline levels prior to the project regarding income capacity, production levels and living standards.</p>	<p>This is not a requirement under national legislation.</p>	<p>at the level prior to implementation of the project, but can also be at an improved standard.</p> <p>Not required under national legislation. Due to the very low percentage of land lost during construction there is no need to provide transitional support to farmers and herders.</p>

4. Stakeholder Engagement

4.1 Approach Overview

The purpose of this chapter is to provide a summary of the stakeholder engagement activities that have been undertaken to date during preparation of the LRP; and will be undertaken in the future during future disclosure of the LRP. For further detail of stakeholder engagement throughout the project see the Samarkand Solar PV Stakeholder Engagement Plan.

The purpose of the stakeholder engagement as part of Livelihood Restoration Planning is to:

- Disclose the land acquisition and livelihood restoration process.
- Build and maintain stakeholder relationships.
- Gather information on the local land use in the project area, social issues and understand displacement impacts.
- Provide stakeholders the opportunity to provide feedback into livelihood restoration options.
- Manage grievances.

4.2 LRP Stakeholders and Priority

Table 4-1. stakeholder group, stakeholders and priority in stakeholder engagement.

Stakeholder Group	Stakeholders	Priority
• Institutional-based Stakeholders (regional – Samarkand)	<ul style="list-style-type: none"> • Deputy Khokim of Samarkand region • Head of construction department of Samarkand region • Chief specialist of the Investments department of Samarkand region • Deputy Khokim of Kattakurgan district on investment, innovation, support of privatized enterprises, free economic and small industrial zones as well the development of tourism • Specialist of Agriculture Department, Kattakurgan district • Chief Engineer, Cadastral officials of Karmana district • Chief Inspectorate of State Committee for Nature Protection of Samarkand Region • Chief Specialist of the Centre for Ecological Expertise • Head of Investment Department of the Kattakurgan Khokimiyat • Deputy Khokim on women and family issues 	Medium
• Institutional-based Stakeholders (local)	<ul style="list-style-type: none"> • Chairman of the mahalla committee Shurak, Melikhodja of Kattakurgan district • Chairman of the mahalla committee Bagishamol mahalla of Pasdargom district 	High
• Local communities	<ul style="list-style-type: none"> • Shurak, Melikhodja, Bagishamol 	High
• Specialist from the Women's Committee	<ul style="list-style-type: none"> • Deputy head of Kattakurgan on women and family issues 	High
• Local Land Users (involved in herding activities undertaken on/through the Project site, etc.)	<ul style="list-style-type: none"> • Herders from the local communities 	High

4.2.1 Gender Inclusion

Efforts have been made to take a gender inclusive approach to stakeholder engagement and livelihood restoration where possible this includes:

- Most fieldwork has been led by female field staff and specialists
- Meeting with representatives of women and women's issues at the Khokimiyat to understand the challenges faced by women.
- Inviting spouses and women in the community to engagement meetings
- Requesting co-signatures of verification forms
- Requesting feedback on training targeted at women in the household
- Recognising women in the household as a potentially vulnerable or marginalised group.
- For historical farmers receiving a land enhancement grant, the money will be issued to both the farmer and the spouse (split 50/50).
- During the implementation phase at least one CLO must be female.

4.3 Previous Engagement

4.3.1 ESIA Scoping Phase – September 2020

TYPASA undertook an Environmental and Social Scoping Study for the current Project in September 2020 and as such have conducted some preliminary stakeholder engagement.

4.3.1.1 Methods

Stakeholders were consulted either via videoconference or face-to-face during the site visit. Stakeholders consulted via videoconference were predominantly institutional stakeholders who had reliable access to a computer and the internet and therefore could easily participate in this manner. All stakeholders attended one meeting held on 8th September 2020. Stakeholders who attended included representatives from the following institutions:

- Ministry of Energy – Head of Renewable Resources Department
- Ministry of Energy – Social Specialist
- Samarkand Region – Deputy Head of Cadastre Department
- Kattakurgan District - Deputy Khokim
- Kattakurgan District – Deputy Head of Cadastre Department
- Kattakurgan District - Head of Construction Department
- Kattakurgan District – Head of Forestry Department
- Kattakurgan District – Head of Water Resources Management Department
- Kattakurgan District – Head of Employment Department
- Kattakurgan District – Deputy Head of Department for Communications with Mahallas
- Chairman of Melikhudj Mahalla
- Chairman of Upka Mahalla
- Chairman of Bulakchi Mahalla
- Chairman of Damkhodza Mahalla
- Chairman of Partaabad Mahalla

Other stakeholders were engaged face-to-face during the scoping site visit which took place on 28th September 2020. Some of these stakeholders were community-level and therefore may not have had the resources required to participate in remote engagement methods (e.g. videoconferencing). Others were institutional stakeholders who participated in the site visit to facilitate a clear understanding of the project site and the environmental and social opportunities and constraints it presents. Stakeholders engaged with face-to-face during the site visit include:

- Deputy Khokim of Kattakurgan District on Investments
- Head of Environmental Department of Kattakurgan District
- Land Surveyor of Kattakurgan District
- Head of Land Cadastre Department of Kattakurgan District
- Deputy Head of Samarkand Region Cadastre Department
- Multiple residents of Damhodja Mahalla
- Head of historic leasehold farm 2
- Additional phone conversations with affected leasehold farm 2 (Kosimov Abdullo Olmazori Farm) and leasehold farm 4 (Shomurod Nur Sakhovat Farm) were also conducted during project scoping on 29th October 2020. The farmers confirmed that the Government has already taken action to acquire their land and to resettle them and provided details about their land and agricultural activities.

4.3.1.2 Outcomes

The outcomes of these engagement activities yielded an understanding and appreciation of local and regional environmental and social issues. Social issues identified and discussed during stakeholder consultations included:

- Some contradictory information on current land uses within and surrounding the project site came to light during the consultations:
- According to District authorities, there is no legal use of land, although some informal use for cattle grazing occurs in springtime.
- Some participants indicated that no structures had ever been present on the project site (as grazing would mostly take place 1.5-2km away).
- Whereas representatives from the Cadastre Department of Kattakurgan District indicated that while there were structures made of light construction materials on the site these had been demolished after the official allocation of land for the project, when the local population was instructed to remove all structures from the project area, in accordance with the Decree of the Cabinet of Ministers No.416.
- However, during the scoping site visit there were still structures on the site, as described in Section 6.7.6 of the ESIA
- The process for land acquisition and compensation was explained by the Kattakurgan District Cadastre Department:
- The tenure of agricultural land is based on long-term contracts between Khokimiyat and individual farmers. A specific clause in the contract regulates land acquisition for state needs.
- Based on the contract, compensation is paid unless it is proved that the land has not been used for agricultural purposes. If structures are present and legally registered, compensation is also paid. If there are crops on the land, compensation is paid for yield.
- Compensation is agreed only after the last crop cycle has been harvested. Agronomists of the District's agricultural departments determine the amount of compensation based on crops productivity, market price, future yield, etc.
- Participants were shown a recent satellite image in which a well-developed farm and some structures were clearly present inside the project site. Kattakurgan District representatives stated that where there was a formal contract between the farmer and Khokimiyat, then compensation will be paid based on the contract.
- Where there is no formal contract lender requirements entitles informal settlers to assistance and compensation of assets. However, representatives from Kattakurgan District stated that usually under national regulations, where structures are not residential and not official, compensation is not paid. There can be assistance, but through volunteers, aksakals (mahalla elderly leaders), and other unofficial assistance. This is not aligned with lender standards and thus will be addressed in this LRP.
- The consulted authorities insisted that the land is not being used in any form.
- The presence of a drainage channel crossing through the northern end of the site was also discussed:
 - Participants were shown images of the irrigation/drainage canal and authorities insisted that it was a naturally formed current and man-made irrigation infrastructure.
 - According to local farmers consulted during the site visit, the channel currently serves as a drainage canal for polluted waters from irrigation of fields upstream. Local farmers also stated that their cattle drink this water without any consequence.
 - Lastly, a burial site is visible in the north-east corner of the project site, but authorities claimed that the territory of the cemetery does not fall to the project area. The Chairman of nearby mahalla also confirmed that this is correct.

4.3.2 ESIA Phase

During the preparation of the ESIA a number of site visits were undertaken by the in-country project team which included some further stakeholder engagement activities. The site visit was conducted between 20th and 22nd September 2021. A further site visit was carried out early December 2021 by AECOM and the in-country team.

4.3.2.1 Methods

Stakeholder engagement is an important process at all ESIA stages however, it is particularly helpful to engage with relevant stakeholders during the early stages of the ESIA as their inputs can be considered in the assessment of impacts and the design of mitigation, management, and enhancement measures. A preliminary list of project stakeholders was identified prior to the site visit. Stakeholders identified include individuals, groups, and organizations that may be affected by or may influence project development, either positively or negatively. The list of project stakeholders will be continuously revised (expanded or reduced as necessary) throughout the ESIA study. The stakeholders identified and engaged with throughout the site visit are in Table 4-2.

Table 4-2. Stakeholder Groups Engaged During Site Visit

Stakeholder Group	Stakeholders
Local Government Representatives	Deputy Khokim of Samarkand Region on Investments Head of Industry development, Samarkand region Khokimiyat Deputy Khokim on Investments of Kattakurgan District Cadastr of Kattakurgan Head of department on Investments, Kattakurgan Khokimiyat Deputy Khokim on women and families, Kattakurgan Khokimiyat Ecology department of Kattakurgan District
Community Organizations	Women's Shelter, Kattakurgan District
Community Representatives	Mahalla Chairs Community leaders from Pasdargom District
Land Users	Farmers affected by OTL Herders
Historic Land Users	Historic Leasehold 1 Farmer Historic Leasehold 2 Farmer Historic Leasehold 3 Farmer Historic Leasehold 4 Farmer Historic Leasehold 5 Farmer
Community Members	Shurak and Melikhodja mahalla community members Teachers from School №57
Individual Specialists / Academics	Specialist on women's issues of Pasdargom District

At the start of each engagement session a brief overview of the Project was provided and the rationale for engaging with the specific stakeholders was explained. The format of the engagement varied depending on the number of stakeholder's present and the environment (i.e. on the project site or in a meeting room). The selected engagement methodologies included:

- Key Informant Interviews (KIIs): this methodology was used to engage one-to-one with local government representatives who are used to engaging with in this manner. This methodology was also used to engage with specific land users who would be impacted by the project in different ways.
- Focus Group Discussions (FGDs): this methodology was used to engage with specific groups of stakeholders who were likely to have similar concerns, priorities, and perceptions of the project and its likely impacts. This included community members, women, community leaders, and teachers.

The KIIs and FGDs both followed a semi-structured format with standard list of questions for each stakeholder. Stakeholders were then given the opportunity to ask questions of the ESIA Consultants. The project site map was used as visual aid where necessary.

4.3.2.2 Outcomes

Throughout the site visit a range of stakeholders were engaged with including farmers, community members, mahalla leaders and local government representatives. Notes were taken during each stakeholder meeting and key issues discussed. Further details of these consultations are provided in the Project SEP.

4.3.3 LRP Survey & Consultation Phase

4.3.3.1 Methods

A preliminary list of project stakeholders was identified prior to the site visit. Stakeholders identified include individuals and groups that will be impacted by the land acquisition process and organizations which would be part of the LRP process.

The stakeholders identified and engaged with throughout the LRP site visits are shown in Table 4-3.

Table 4-3. Stakeholders identified and engaged with in LRP site visits

Stakeholder Group	Stakeholders
Local Government Representatives	Deputy Khokim of Samarkand Region on Investments Head of Industry development, Samarkand region Khokimiyat Deputy Khokim on Investments of Kattakurgan District Cadastre of Kattakurgan Head of department on Investments, Kattakurgan Khokimiyat Deputy Khokim on women and families, Kattakurgan Khokimiya
Community Organizations	Women's Shelter, Kattakurgan District

Community Representatives	Mahalla Chairs Community leaders from Pasdargom District
Land Users	Farmers affected by OTL Herders
Historic Land Users	Historic Leasehold 1 Farmer Historic Leasehold 2 Farmer Historic Leasehold 3 Farmer Historic Leasehold 4 Farmer Historic Leasehold 5 Farmer
Community Members	Shurak and Melikhodja mahalla community members

Engagement with Stakeholders during the LRP phase can be broken down into the following tasks:

- Disclosure of the LRP process to the community: 8-9th August.
- Socio Economic Census of households with leaseholds impacted by the project: 29th August – 2nd September.
- Valuation meetings with households with assets or crops impacted by the project: 15th September – October.
- Stakeholder interviews and workshops: 20th - 21st September.
- Census and socio-economic survey of Herders using the Solar PV Area 16th – 23rd November 2022
- Livelihood restoration consultations with historical farming households 16th – 23rd November 2022
- All engagements that have occurred as part of the LRP process are detailed in Table 4-4 below.

4.3.3.2 Outcomes

It was understood that the herders are the main group of current land users from the nearby communities who will be impacted because their access to grazing areas in the Solar PV Area will be taken away because of the project.

The impacts on herders are described further in section 6.2.

The impacts on the five historical farmers/leaseholders were also understood and in particular historical leaseholders 2 and 4 it was confirmed that they were not compensated for the improvements to the land that were made prior to the project. It was discovered that historical leaseholder 2 had left the country and so was later contacted by phone in October. The process of the historic land transfer was documented as part of the Social Compliance Audit.

It was understood that the main challenges currently facing the community are:

- Drinking water access was raised as a significant challenge by all members of the community and authorities.
- The community leaders understand that community land is a scarce resource and under threat. Mahallas expressed a desire to formalise their rights over the remaining community grazing land left behind by the project.
- One output from consultation with a farmer was concern regarding the positioning of the OTL towers near a pear orchard. Following consultation, the farmer identified an alternative suitable area which was further from the trees.
- During the site visit and initial consultations with land users who will be affected by the OTL a few key points were noted.
 - For example, the leaseholder of Kattakurgan Cluster LLC land (affected between pole 9 and 16 of the OTL route) stated that they had no objection to the Project, so long as compensation for the loss of productive land is provided. Their land is mainly used for planting cotton and grazing cattle. They requested that their land specialist be informed when technical specialists visit the area as they want to be informed/consulted on each location of the towers along the route and avoid crossing the centre of the field if possible.
 - Another farmer, whose 400-ha farm is close to the village of Suyunjon, also noted that he had no objection to the Project, so long as compensation for the loss of productive land is provided. The land is used to grow cotton and wheat and to graze 100 cows and 200 sheep. The farmer also employs 40 seasonal workers. The farmer has three wells on his land and allows the community members of Suyunjon to use these wells. It was also noted that the farmer has no objection to the reconstruction of the road that passes through the area of his farm. He felt that it will be convenient road for the Project and can be jointly used by him and the project personnel. The farmer also requested to be consulted by the project technical specialist on the exact locations of the electrical towers along the route on his area, so that he can inform if there are any specific features that should be considered.

- In November 2022 Historical farming households (leaseholders) were consulted regarding their preference for livelihood restoration and their remaining land was visited to discuss the feasibility of options of how a Land Development Grant would be spent. The majority of households expressed interest in purchasing sheep with the grant.
- In November 2022 Herders surveyed expressed a preference to be given access to the project site to collect animal feed and also be given materials in order to build shelters at the household. Spouses expressed interest in all training offered but particularly training in Meat, Milk production and sewing/wool production. All herders confirmed that someone in the household was literate and that they all spoke Uzbek.

The engagements that have taken place to date as part of the LRP process are listed below in Table 4-4.

4.3.4 ADB Site visit

There were also engagements during the site visit of ADB representatives. These site visits entailed key informant interviews and focus group discussions with key stakeholder groups including district Khokimiyats, Mahallas and government departments. Consultations were guided through questionnaires from the ESDD consultant.

ADB obtained information regarding previous engagements, of which AECOM and GBI teams engaged with regional and district authorities, as well as other focal representatives over the course of the ESIA and LRP studies. There were also discussions with Mahallas with ADB regarding affected communities by AECOM and GBI social team. Full outcomes of these previous engagements can be found in the SEP. Part of the ADB site visit involved discussions with Khokimiyats and Mahallas regarding the impact on land tenure. This included discussions regarding land lease agreements and clarifying the absence of informal landowners present within the Project area. Discussions also included impact on livelihoods such as changing land-use from existing pasture land, as well as livestock rearing and the impact of the Project on this livelihood. Other socio-economic considerations were highlighted including employment benefits, opportunities for women, welfare programs, cultural heritage, indigenous peoples, and facilities for the construction workforce. Construction utilities would include accommodation as well as access routes, wastewater treatment facilities and potable water. ADB also consulted with the Ministry of Energy regarding permanent land acquisition, temporary land use restrictions and compensation funds. Furthermore, discussions specifically on E&S monitoring took place with District Khokimiyats.

4.3.5 Cut-off date Announcement

The cut-off date represents the completion date for when anyone that will be affected by the actions of the project has submitted relevant information regarding assets to the valuer. The cut-off date is a date which marks eligibility to receive compensation or resettlement assistance. Any assets declared prior to the cut-off date to be affected are eligible to be compensated but any newly acquired assets, such as crops, that are declared or generated after the cut-off date will not be eligible for any kind of compensation or resettlement assistance.

The cut-off date was first communicated to affected leaseholders during the valuation survey which started on the 15th September 2022 and was completed on the 18th November 2022. A form was signed by each leaseholder to confirm they understood the cut-off-date. A copy of this form is included in Figure 4-1 below however a translated version was provided to affected leaseholders.



Farmer survey acknowledgement form

To be signed and then scanned using a mobile phone box. Pass the signed copy to the farmer.

Location:

Time and date:

Name of surveyor:

Name of Farmer:

Farm reference Number:

please sign inside the

I have received a copy of the
Grievance Mechanism Leaflet.

I understand the **cut-off date**
which is the date after my land
has been surveyed. After the cut-
off date any additional crops or
structures that are installed on
the land surveyed, will not be
eligible for compensation.

Figure 4-1. Farmer acknowledgement form

After the completion of the surveys a project wide cut-off date was announced through the local Khokimiyat district wide telegram channel and also on the farmers telegram channel. The final cut-off date was 18th November 2022. The following wording was used to communicate the cut-off date (translated into Uzbek):

All Valuations for crops and infrastructure affected by the project are now completed as of 18th November 2022

This is the project “cut-off date” for compensation.

All crops and infrastructure which were included in the valuation study before this date will be compensated if they are impacted by the project.

Any new crops planted, or infrastructure developed in the project area after this date will not be considered for compensation.

Anyone moving into the project area to farm or develop infrastructure after this date will not be entitled for compensation or support.

4.3.6 LRP Verification

The LRP verification process occurred on the 30th of November and involved consulting all affected parties to ensure they fully understand the impacts, their entitlements and confirm their preferences for livelihood restoration options. An information pack was provided to each affected household and the following was presented/explained:

- Final site map and layout
- The types of land impacts including:
 - Permanent land take
 - Temporary land take
 - Sterilization zone (no trees above 6 meters)
 - Loss of public right of way through the site
- Land take required for each leaseholder for each of the above categories
- The purpose of Entitlement Matrix and the various categories
- How compensation is calculated
- The indicative compensation amounts will be presented where possible (to be presented on a one-to-one basis only)
- The various trainings that will be provided as part of Livelihood Restoration including:
 - A verification that the project as sought their input on the choice of training
 - Confirmation that they still have time to change their mind if they choose.
 - The importance of spouses taking part in the training.
- Affected households will receive preferential employment in the construction phase for one member.
- Explain the grievance mechanism process, including:
 - How to raise a grievance
 - The process followed
 - Other ways to make a complaint (such as via the Khokimiyat) will remain open
 - Contact details
- Describe the LRP Committee:
 - Outline its function of assisting with compensation and livelihood restoration facilitation, attending to grievances where necessary and participating in LRP monitoring
 - Gather feedback on who should be on this committee.
- Signatures of household acknowledgement from Figure 4-2 from farmers, herders and their spouses (where possible).



LRP Verification

Samarkand Solar Project

Farmer acknowledgement form

To be signed and then scanned using a mobile phone box. Pass the signed copy to the farmer.

Location:

Time and date:

Name of surveyor:

Name of Farmer:

Farm reference Number:

Please sign below to confirm the following:

- I have received a copy of the **Grievance Mechanism Leaflet** and have had the process **explained to me**.
- I understand the **cut-off date** which is the date after my land has been surveyed. After the cut-off date any additional crops or structures that are installed on the land surveyed, will not be eligible for compensation.
- I have received a copy of the **Project Information Leaflet** and I understand how my land will be impacted.
- I understand my entitlements as per the entitlement matrix and **how compensation is calculated** (*The compensation amounts will be agreed at a later date.*)
- I understand what **support will be available** to my household I and have provided my preferences at this stage (*final choices can be made at a later date.*)

Farmer Signature:

Spouse Signature:

Figure 4-2. LRP Verification Form

The engagement record for LRP verification is included in Table 4-4

4.3.7 LRP Disclosure

As per lender requirements, the LRP was disclosed to the community and affected persons along with the ESIA document. The LRP, Social Compliance Audit and ESIA and its Non-technical summary was translated into Uzbek and placed on the website of project lenders and placed in appropriate public spaces accessible to stakeholders including affected communities for 30 days. Public meetings were held to present the findings of the ESIA and LRP.

Online disclosure allowed for quick and free access to documents for all stakeholders that have internet. Documents disclosed online were disclosed at a website created for this purpose by Masdar. The following documentation were publicly disclosed:

- ESIA.
- Stakeholder Engagement Plan.
- Final ESIA/OVOS approved by the national authorities and the lenders if applicable, and conditions of approval established in the permits, if any).
- Non-technical summary of the ESIA.
- Environmental and Social Action Plan.
- Social Compliance Audit
- Draft LRP (This document)
- LRP Summary (Appendix A of this document)

Disclosure of printed documents at key locations (e.g. local government buildings). Hard copies were provided free of charge, and there are visuals accompanying the documents to aid all levels of literacy. The following documentation, as a minimum, was provided in English and the local language (Uzbek):

- ESIA.

- Non-technical summary of the final ESIA
- LRP approved by Lenders
- Social Compliance Audit
- Stakeholder Engagement Plan.
- Project Leaflets.

The purpose of disclosure was::

- Verifying asset survey and valuation outputs with affected landowners,
- informing affected landowners and herders about applicable valuation methods and compensation and resettlement assistance principles,
- Presenting individual and collective entitlements, in a lucid and transparent manner.

Any objections to the outcomes of asset inventory and subsequent valuation will warrant a follow-up, participatory asset survey and/or reiteration of contested valuation aspects. Outcomes from the disclosure relevant to the LRP are as follows:

Community meetings were well attended, and included community members, Mahallas, the Khokimiyat, a Women's representative, agricultural department, district ecology and cadastre. The ESIA disclosure presentation was presented to the meeting and hard copies of the disclosure package handed over to Khokimiyat.

The Mahalla meeting was also well attended by community members from surrounding communities, including Ishtihan. The ESIA disclosure presentation was presented to the meeting and hard copies of the disclosure package handed over to the Mahalla.

There were many questions and discussions regarding local employment

- The GBI representatives explained that Masdar and EPC will put the hiring process in place and that the contact point will be shared with the local Khokimiyat and Mahalla. The jobs will be advertised with position requirements and documents needed. The community members can also approach the CLO or EPC HR focal points for any clarification questions with regard to hiring procedures.
- Masdar and the EPC contractor explained they would implement a local employment plan.
- The GBI representative explained that the calculation for compensation amount has been completed by a valuation company and the final round of engagements with farmers along the OTL is ongoing. The bank details of all impacted farmers are being collected and compensation disbursement is planned to start in the next two weeks.
- Meeting participants asked about the construction schedule. The schedule was explained to them, however it was highlighted that this is subject to change and that this would be communicated in due course.
- The Women's representative highlighted that she could help to share the job announcements among community women. The project explained that if women have the required skills, they could be included in construction jobs, however the local employment plan would also highlight particular opportunities for women based on their current skillset.

The meeting participants asked questions about the technology being used at the solar site, if the generation will fully cover the electricity needs of the district, if the power cuts will be less frequent, especially in winter. This was addressed by presenting a summary presentation of the ESIA. It was explained that the generated electricity will be delivered to the Ishtihan substation, that is to the national grid which distributes the electricity further to the users. The capacity of the national grid will definitely increase, however the company can't be responsible for power cuts as it is the responsibility of the local grid to ensure a stable electricity supply is provided for users.

The meeting participants asked if company specialists can help with installation of PV panels for community members, or at least share the expertise. This request was noted.

Participants from other regions (Ishtihan) asked if they can also benefit from job opportunities during construction. It was explained that impacted community members have priority in the hiring process, however if the qualifications are not adequate other district/regions representatives will be hired as well.

Meeting participants declared that seasonal works in Russia start soon and many of them usually leave at this time, however if they got a place in the construction they would prefer to stay. Therefore, they requested that they be informed as soon as possible on the exact date and launch of construction jobs.

The Mahallas asked questions about the technology being used at the solar site, the surveys that were undertaken and the benefits that would be experienced by the community. This was addressed by presenting a summary presentation of the ESIA.

The meeting participants asked about the grazing land and support to be provided for communities. It was explained that transitional support and further community food banks will be arranged by the project. Support of the local Mahalla will be critical in this process to ensure equal access for all community members.

The representative of the agricultural department asked if the company can help with technological expertise on PV panel for drip irrigation technology. The request was noted and it was explained that this might be considered within livelihood restoration measures.

The printouts of the ESIA packages (including the NTS) were shared and it was explained where people could access these.

The grievance mechanism was explained further and the existing poster was highlighted.

4.3.8 Consultation on Implementation Readiness

At the same time as the LRP disclosure process, the project team engaged with key stakeholders on the LRP measures included within this document requesting specialist feedback and support in the implementation process, a confirmation of community needs and market information. The stakeholders engaged included:

- District Vet Department
- University Vet Department
- Regional Agricultural department
- Pasture committee
- Youth representative
- Mahallas of Samarkand
- District, specialist on women issues,
- District Cadaster specialist

All stakeholders supported the project and the specific livelihood restoration measures proposed. Feedback was given and the key outcomes of these meetings were an understanding of the needs, challenges and opportunities which are detailed further in section 10.2

4.3.9 Full Engagement Record

Table 4-4. Stakeholder engagements that took place in the LRP process

Stakeholders present	Stakeholder engagement methods	Location/Date	Topics discussed	Consultation disclosure materials	Means of notification
Disclosure of LRP process Community leaders Khokimiyat representative	Face to face community meeting	8 th – 9 th August	<ul style="list-style-type: none"> Presented a map of the project area and OTL Explanation of who might be affected by the land acquisition (Leaseholders, informal farmers, herders, other community members who access the site) Explanation of the types of impact including permanent land take, temporary land take and the conditions associated with the sterilization zone. Explanation of the Land Acquisition Process and key date of surveys and construction. Explained the principles of the LRP process, including: Compensation will be issued for all land and assets lost or damaged After the survey date, new crops, buildings or land sold will not be recorded or compensated Highly impacted households will receive additional livelihood support Vulnerable households will be supported The community will be consulted and participate in decision making All complaints and grievances will be recorded and addressed Upcoming surveys and engagements Contact details for the grievance mechanism 	Disclosure PowerPoint Presentation	Advertisement in Telegram Group
Socio-Economic Survey Interview with all impacted Leaseholders	One on one interviews	29 th August – 2 nd Sept Various Locations	<ul style="list-style-type: none"> Gathering demographic information Gathering socio-economic information Gathering livelihood information 	N/A	Advance notice by phone
Valuation Meeting with all impacted Leaseholders	One on one interviews	15 th September – 18 th November. Various Locations	<ul style="list-style-type: none"> Gathering information for valuation 	Grievance Mechanism Leaflet Cut-off date form	Advance notice by phone
Socio Economic Survey interview with cluster farmers	One on one interviews	8-9 th of September 2022 Various Locations	<ul style="list-style-type: none"> Gathering demographic information Gathering socio-economic information Gathering livelihood information 	N/A	Advance notice by phone
Head of Department Kattakurgan district on investment, innovation, support of privatized enterprises, free economic and small industrial zones as	Face to Face	Khokimiyat Office 20 th September 2022	<ul style="list-style-type: none"> Discussed the LRP and valuation process Discussed future engagement activities Current land use types in the project area Historic land use including the five known households and previous land use before the announcement of the project Discussed the project area to ensure land order was correct Current challenges with farming and livelihoods 	N/A	Advance notification by Telegram and Phone

Stakeholders present	Stakeholder engagement methods	Location/Date	Topics discussed	Consultation disclosure materials	Means of notification
well the development of tourism (Representative of Khokimiyat) Representative of Cadastral office Representative of the Agricultural Department			<ul style="list-style-type: none"> Processes followed for historic resettlement (as part of SCA process) Known and potential impacts on stakeholders from the project Identification of impacted people, including informal farmers and herders. Identification of vulnerable people and groups Current governance structures and community activities (Such as herding rotations) Potential options for livelihood restoration and support Farmworkers and seasonal work 		
Women representative of the Khokimiyat.	Face to Face	Khokimiyat Office 20 th September 2022	<ul style="list-style-type: none"> Employment of women Government support to vulnerable women The “Iron Notepad” Issues faced by women in farming Farmworkers and women in seasonal work 	N/A	Advance notification by phone
Historic Leaseholder 3 Representative of Khokimiyat (See photos below)	Face to Face	Khokimiyat Office 20 th September 2022	<ul style="list-style-type: none"> Gathered demographic information and current livelihood situation Understand how remaining/replacement land is used Discussed Land, crops and assets lost because of the project Discussed the historic process of land transaction Current challenges 	N/A	Advance notification by phone
Historic Leaseholder 4 Representative of Khokimiyat	Face to Face	Khokimiyat Office 20 th September 2022	<ul style="list-style-type: none"> Gathered demographic information and current livelihood situation Understand how remaining/replacement land is used Discussed Land, crops and assets lost because of the project Discussed the historic process of land transaction Current challenges 	N/A	Advance notification by phone
Historic Leaseholder 5 Representative of Khokimiyat (See photos below)	Face to Face	Khokimiyat Office 20 th September 2022	<ul style="list-style-type: none"> Gathered demographic information and current livelihood situation Understand how remaining/replacement land is used Discussed Land, crops and assets lost because of the project Discussed the historic process of land transaction Current challenges 	N/A	Advance notification by phone
Historic Leaseholder 1 (See photos below)	Face to Face	At the project site 20 th September 2022	<ul style="list-style-type: none"> Gathered demographic information and current livelihood situation Understand how remaining/replacement land is used Discussed Land, crops and assets lost because of the project Discussed the historic process of land transaction Current challenges 	N/A	Advance notification by phone

Stakeholders present	Stakeholder engagement methods	Location/Date	Topics discussed	Consultation disclosure materials	Means of notification
Community Herders from Melikhoja (See photos below)	Face to Face	At the project site 20 th September 2022	<ul style="list-style-type: none"> Current governance structures and community activities (Such as herding rotations) Gathered data on the number of herders from the community and how many families use the professional herders' services Gathered demographic and household data for the herders Discussed access to the herding areas to the north of the site and how it will change Discussed how many herders use the path through the middle of the site. Herders confirmed they mainly use access from the north and so will not be as impacted. Discussed herding practices, where they herd in summer and winter Discussed possible livelihood restoration options including vertical feed farming 	N/A	N/A
Community Herders from Erkinafas (Upka) Representative of Khokimiyat (See photos below)	Face to Face	At the project site 21st September 2022	<ul style="list-style-type: none"> Current governance structures and community activities (Such as herding rotations) Salaries of professional herders Gathered data on the number of herders from the community and how many families use the professional herders' services Gathered demographic and household data for the herders Discussed access to the herding areas to the north of the site and how it will change Discussed how many herders use the path through the middle of the site. Herders confirmed they mainly use access from the north and so will not be as impacted. Discussed herding practices, where they herd in summer and winter Discussed possible livelihood restoration options including vertical feed farming 	N/A	N/A
Professional Herders from Bulokcha Father of leaseholder 1	Face to Face	At the project site 21st September 2022	<ul style="list-style-type: none"> Current governance structures and community activities (Such as herding rotations) Salaries of professional herders Gathered data on the number of herders from the community and how many families use the professional herders' services Gathered demographic and household data for the herders Discussed access to the herding areas to the north of the site and how it will change Discussed how many herders use the path through the middle of the site. Herders confirmed they mainly use access from the north and so will not be as impacted. Discussed herding practices, where they herd in summer and winter Discussed possible livelihood restoration options including vertical feed farming 	N/A	N/A
Professional Herders from Bulokcha (Gorodog) Father of leaseholder 1	Face to Face	At the project site 21st September 2022	<ul style="list-style-type: none"> Current governance structures and community activities (Such as herding rotations) Salaries of professional herders Gathered data on the number of herders from the community and how many families use the professional herders' services Gathered demographic and household data for the herders Discussed access to the herding areas to the north of the site and how it will change Discussed how many herders use the path through the middle of the site. Herders confirmed they mainly use access from the north and so will not be as impacted. Discussed herding practices, where they herd in summer and winter 	N/A	N/A

Stakeholders present	Stakeholder engagement methods	Location/Date	Topics discussed	Consultation disclosure materials	Means of notification
			<ul style="list-style-type: none"> Discussed possible livelihood restoration options including vertical feed farming 		
Professional Herders from Partaobod Father of leaseholder 1	Face to Face	At the project site 21st September 2022	<ul style="list-style-type: none"> Current governance structures and community activities (Such as herding rotations) Salaries of professional herders Gathered data on the number of herders from the community and how many families use the professional herders' services Gathered demographic and household data for the herders Discussed access to the herding areas to the north of the site and how it will change Discussed how many herders use the path through the middle of the site. Herders confirmed they mainly use access from the north and so will not be as impacted. Discussed herding practices, where they herd in summer and winter Discussed possible livelihood restoration options including vertical feed farming 	N/A	N/A
Mahallas from Melikhoja and Shurak Community Members Representative of Khokimiyat	Face to Face	At the project site 21st September 2022	<ul style="list-style-type: none"> The LRP process Future engagement activities (Lenders visit and LRP verification) Current land use types in the project area Current challenges with farming and livelihoods 	N/A	N/A
Neighbours of Historical Leaseholder 2 Head of mahallas Katta Kurpa Representative of Khokimiyat	Face to Face	Outside residence of leaseholder 2 21st September 2022	<ul style="list-style-type: none"> Discussed the location leaseholder 2 Confirmed that most of the family moved to Russia but the sister remained Obtained the phone number of the sister of leaseholder 2 	N/A	N/A
Historical Leaseholder 2 Sister	Phone call	1 October 2022	<ul style="list-style-type: none"> Gathered demographic information and current livelihood situation Understand how remaining/replacement land is used Discussed Land, crops and assets lost because of the project Discussed the historic process of land transaction Current challenges 	N/A	N/A
Historical Leaseholder 2 Brother	Phone call	4 th October 2022	<ul style="list-style-type: none"> Gathered demographic information and current livelihood situation Understand how remaining/replacement land is used Discussed Land, crops and assets lost because of the project Discussed the historic process of land transaction 	N/A	N/A

Stakeholders present	Stakeholder engagement methods	Location/Date	Topics discussed	Consultation disclosure materials	Means of notification
			<ul style="list-style-type: none"> Current challenge Established that the family intend to move back to Uzbekistan and obtain land. 		
Community and Professional Herders	Census & Socio-Economic and Livelihood Restoration Survey	16th – 23 rd November 2022	<ul style="list-style-type: none"> Presenting a map of the project and the grievance mechanism Gathering demographic information including vulnerability. Gathering information about herding practices, income and livelihoods Gathering information about livelihood restoration preferences. All herders expressed an interest in all training courses and in particular in Milk Processing and sewing courses. 	Survey forms, Project Map, Project Grievance Mechanism	Phone, Telegram and via Mahallas
Historical leaseholder 1 (See photos below)	Livelihood Restoration Preferences Survey & One on one consultation	23 rd November 2022	<ul style="list-style-type: none"> Confirming/Updating socio-economic demographic information. Visiting the current land of the farmers. Discussing livelihood options and how they might spend a Land Improvement Grant. All households expressed an interest in using the grant to buy sheep. 	Survey forms, Project Map, Project Grievance Mechanism	Telephone call
Historical leaseholders 3 and spouse (See photos below)	Livelihood Restoration Preferences Survey & One on one consultation	23 rd November 2022			
Historical leaseholders 4 and spouses (See photos below)	Livelihood Restoration Preferences Survey & One on one consultation	23 rd November 2022			
Historical leaseholders 5 (See photos below)	Livelihood Restoration Preferences Survey & One on one consultation	23 rd November 2022			
LRP Verification					
Community Herders from Erkinafas (Upka)	Group meeting with herders	30 th November 2022	Presentation of/explanation of: <ul style="list-style-type: none"> Final site map and layout 	Information pack	Telegram 2 weeks in advance

Stakeholders present	Stakeholder engagement methods	Location/Date	Topics discussed	Consultation disclosure materials	Means of notification
Professional Herders from Partaobod	and spouses (were possible) Group meeting		<ul style="list-style-type: none"> The types of land impacts The purpose of Entitlement Matrix and the various categories Livelihood restoration packages 		(date changed 1 week in advance)
Professional Herders from Bulokcha (Gorodog)	Group meeting		<ul style="list-style-type: none"> Early works The grievance process The LRP Committee Register of all attendees (representatives from each herd) 		
Mahallas					
Historic Leaseholder 1 & Spouses	One on one with farmer and spouses	1 st December 2022	Presentation of/explanation of: <ul style="list-style-type: none"> Final site map and layout The types of land impacts 	Information pack	Telegram 2 weeks in advance (date changed 1 week in advance)
Historic Leaseholder 2 & Spouses	One on one with farmer and spouses	1 st December 2022	<ul style="list-style-type: none"> Land take required for each leaseholder for each of the above categories The purpose of Entitlement Matrix and the various categories How compensation is calculated 		(date changed 1 week in advance)
Historic Leaseholder 3 & Spouses	One on one with farmer and spouses	1 st December 2022	<ul style="list-style-type: none"> Livelihood restoration packages Early works The grievance process 		
Historic Leaseholder 4 & Spouses	One on one with farmer and spouses	1 st December 2022	<ul style="list-style-type: none"> The LRP Committee Verification survey and signature 		
Historic Leaseholder 5 & Spouses	One on one with farmer and spouses	1 st December 2022			
All farmers along the OTL & Spouses		1 st December 2022			
LRP Disclosure					
All stakeholder groups	Disclosure online Placement of paper versions of the ESIA in public places Leaflets in public places Media announcements	Documents placed on Developer and Lender Websites since 25 th December 2022	Disclose and discuss the results of the ESIA study online	Local ESIA package NTS of the ESIA online	Media announcements

Stakeholders present	Stakeholder engagement methods	Location/Date	Topics discussed	Consultation disclosure materials	Means of notification
Mahalla Offices	One-to-one meetings Phone calls Placement of paper versions of the ESIA in public places Placement of leaflets	15 th February 2023	Arrange disclosure of the local ESIA package (including the LRP) Disclose and discuss the results of the ESIA study (including the LRP)	Local ESIA/LRP package	
All stakeholder groups	Public presentation to summarise the ESIA. Placement of leaflets in public places Media announcements	15 th February 2023	Arrange disclosure of the local ESIA package (including the LRP) Disclose and discuss the results of the ESIA study (including the LRP)	Local ESIA/LRP package	E&S Consultant (with support from the Client)
All stakeholder groups, including discussion with women's only groups and specialist from the women's committee	Public hearing event Group Meeting	15 th February 2023	Arrange disclosure of the local ESIA package (including the LRP) Disclose and discuss the results of the ESIA study (including the LRP)	Local ESIA/LRP package	E&S Consultant (with support from the Client)
Affected persons identified in the LRP and other stakeholders relevant to the LRP	Public hearing event Group meeting	15 th February 2023	Disclose and discuss the LRP including: <ul style="list-style-type: none"> • verifying asset survey and valuation outputs with affected landowners, informing affected landowners and herders about applicable valuation methods and compensation and resettlement assistance principles • presenting individual and collective entitlements, in a lucid and transparent manner. Any objections to the outcomes of asset inventory and subsequent valuation will warrant a follow-up, participatory asset survey and/or reiteration of contested valuation aspects	Local ESIA/LRP package	E&S Consultant (with support from the Client)
Local vet department specialist University Vet department	One-to-one interview	15 th February 2023	Obtaining feedback on the Livelihood Restoration Measures. Discussed community challenges, needs and opportunities (See section 10.2) Discussed support for the project and Identification of partners.	Local ESIA/LRP Package E&S Consultant (with support from the Client)	
Regional agricultural department specialist	One-to-one interview	15 th February 2023			

Stakeholders present	Stakeholder engagement methods	Location/Date	Topics discussed	Consultation disclosure materials	Means of notification
Pasture committee	Group meeting	15 th February 2023			
Youth representative	One-to-one interview	15 th February 2023			
Women's representative	One-to-one interview	15 th February 2023			
Cadastral office	One-to-one interview	15 th February 2023			
Samarkand Mahallas	Group meeting	15 th February 2023			

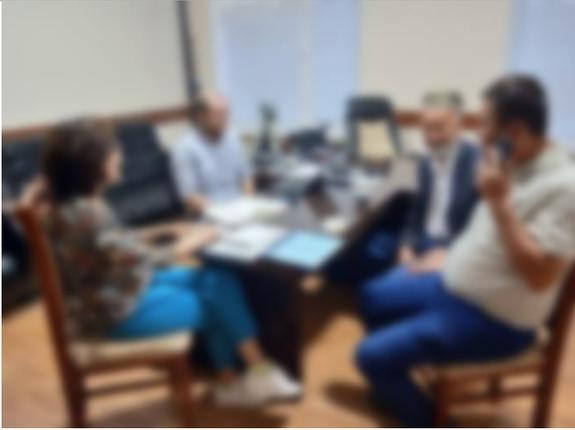


Figure 4-3. Engagement with historical leaseholder 3



Figure 4-4. Engagement with professional herders



Figure 4-5. Engagement with historical leaseholder 5



Figure 4-6. Engagement with community herder



Figure 4-7. Engagement with local mahallas



Figure 4-8. Engagement with Khokimiyat and representative of cadastral office



Figure 4-9. – Visit to historical farmer 3 replacement land



Figure 4-10. Visit to historical farmer 1 remaining land



Figure 4-11. Visit to historical farmer 4 remaining land



Figure 4-12. Visit to historical farmer 5 remaining land

4.4 Future planned engagements as part of Livelihood Planning

There are several future engagements which are planned as part of the Livelihood Restoration Planning phase. These engagements are described below:

1.1.5 LRP Implementation

The principal institutions involved in Livelihood Restoration activities include Masdar and the government's line departments of the district administration. The list below explains those responsible for LRP implementation:

- Masdar - The overall responsibility for implementation of the LRP belongs to Masdar, who will finance this aspect of the project. Masdar will employ a Community Liaison Officer who is responsible for the day-to-day engagement activities during LRP implementation, including responding to grievances, communicating activities and timelines and notifications of when land take will occur. Further information about their responsibilities is included in section 11.1.
- The local Khokimiyat will also be involved in resettlement engagement activities, as well as relevant government agencies.
- A permanent government body involved in the LRP implementation will be the Office of Land and State Cadastre which bears responsibility for updating all official government documentation and orders on existing land use
- Local mahallas for gathering community members when needed and communicating timelines and updates to community members. Local Mahallas will also have role in resolving any local disagreements or conflicts that arise during the LRP implementation.

Special resettlement assistance will be required for vulnerable people because they are less able to cope with economic displacement compared with others. A full vulnerability analysis is provided in chapter 9 which highlights any groups that will be impacted or potentially impacted by land acquisition.

The key engagement activities are outlined in Table 4-5 below.

Table 4-5. Regular engagement activities required during LRP Implementation

Engagement activity	Stakeholder	Milestone/Frequency
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Engagement with affected households to confirm receipt of compensation and transfer of land.	Affected households	After payment of compensation
Ongoing regular engagement with the community about the construction schedule and before each phases commences	All local communities	Before each construction phase commences
Engagement with affected households to enrol them in livelihood restoration activities and local employment. Notify households of dates of training.	Affected households	Before each livelihood restoration initiative commences
Ongoing regular engagement with the LRP committee and the community at large regarding the status of the livelihood engagement activities.	The LRP committee and affected households	Ongoing – Monthly
Engagement with community members before the termination of any transitional support	Affected households who benefit from transitional support	At least a month before terminating of transitional support
Engagement with the community towards the end of the construction phase.	All communities in labour sending areas	At least a month before the end of the construction phase
Raising awareness of the grievance mechanism	All community	Ongoing (A reminder of the mechanism should be included in all scheduled engagements)
Ongoing regular recording, addressing and monitoring of the grievance mechanism	All Grievant	Ongoing

1.1.6 Vulnerable and Marginalised people

Special resettlement assistance will be required for vulnerable people because they are less able to cope with economic displacement compared with others. A list of vulnerable people that could, potentially, be directly affected by the through land access restrictions and land use change, is listed below:

- Young families (where the parents are under 30) or orphans who have lost both parents
- Families with disabled parents or children
- A widow
- A single parent family
- A single retired person
- An elderly person (over 65 years old)
- Women in the family
- Anyone farming or investing in the land without a legal title
- People in poor health
- People who are discriminated against
- Households under the poverty line
- Households in financial difficulty
- Households with a member who is addicted to drugs or alcohol

A full vulnerability analysis is provided which highlights any groups that could be impacted or potentially impacted in chapter 9. Analysis of the socio-economic survey was used to assess if vulnerable people are present in the households of affected community members.

4.5 Grievance Mechanism

4.5.1 Overview

AECOM, on behalf of Masdar, has developed a grievance mechanism for the Project in accordance with IFC’s Performance Standards (2012) & Guidance Notes, as well as The Equator Principles (2020) and ADB Safeguard Policy Statement (2009). which present various principles and good practice measures on grievance mechanisms. These include:

- Establish a procedure for receiving, recording or documenting and addressing complains that is easily accessible, culturally appropriate, and understandable to affected communities.
- Inform the affected communities about the mechanism during the company/community engagement process.
- Consider when and how to seek solutions to complaints in a collaborative manner with the involvement of the affected community.
- Address concerns promptly, using an understandable and transparent process that is readily accessible to all segments of the affected communities—and at no cost and without retribution.
- Ensure full participation of both genders and vulnerable groups.
- Take into consideration customary and traditional methods of dispute resolution when designing the system.
- Assign consistent, experienced, and qualified personnel within the company with responsibility for receiving and responding to grievances.
- Establish a redress mechanism so those who feel their grievances have not been adequately addressed have recourse to an external body for reconsideration of their case.
- Document grievances received, and responses provided and report back to the community periodically.
- Provide periodic reports on issues that the grievance mechanism has identified as of concern to those communities.

The objective of Masdar grievance procedure is to ensure that all comments and complaints from people directly affected by the Project, including local communities, farmers and their families are processed and considered in an appropriate way. Principles The United Nations Guiding Principles (UNGPs) on Business and Human Rights lists several “effectiveness criteria” for the successful implementation of a Grievance Mechanism. The UNGP states that it should always be:

- Legitimate: it must have a clear transparent and sufficiently independent governance structure to ensure that no party to a grievance process can interfere with the fair conduct of that process
- Accessible: it must be publicised to stakeholders who may wish to access it and provide adequate assistance for aggrieved parties who may face barriers to access, including language, literacy, awareness, finance, distance, or fear of reprisal
- Predictable: it must provide a clear and known procedure, with time frames for each stage; clarity on the types of process and outcome it can (and cannot) offer, and means of monitoring the implementation of any outcome
- Equitable: it must ensure that aggrieved stakeholders have reasonable access to sources of information, advice, and expertise necessary to engage in a grievance process on fair and equitable terms
- Rights-compatible: it must ensure that its outcomes and remedies accord with internationally recognised human rights standards
- Transparent: it must provide sufficient transparency of process and outcome to meet the public interest concerns at stake and should presume transparency wherever possible

4.5.2 Responsibilities

The grievance mechanism implementation team shall be comprised of the Company E&S Manager, and the appointed CLO (community liaison officer). Clear lines of responsibility and accountability will be established within the implementation team.

Entity	Responsibilities for managing grievances
Company E&S Manager	<ul style="list-style-type: none"> • Ensure that the CLO has the necessary resources and personnel required to meet the commitments of the Grievance Mechanism (GM). Support the resolution of grievances by conducting investigation of serious grievances and proposing appropriate resolutions to those grievances. • Ensure that grievances raised are used to improve the Project’s environmental and social performance in the future, so that similar grievances to not re-occur over time.

	<ul style="list-style-type: none"> Monitor the effectiveness of the grievance process and make alterations to improve its effectiveness where required.
Company Community Liaison Officer (CLO)	<ul style="list-style-type: none"> Raise awareness of the GM and distribute copies of the GM leaflet and forms. Receive and log grievances Provide practical assistance to people seeking to raise a grievance, so that they are able to complete a Grievance Form. Send information to the Company E&S Manager, copies of completed Grievance Forms so that the Grievance Register can be updated. Support the investigation and resolution of grievances in close coordination with other concerned parties, including the person/group raising the concern.
EPC Contractor Representatives	<ul style="list-style-type: none"> To direct any grievances made by a person or group in contact with a member of the EPC Contractor's workforce, to the Company CLO for formal recording, investigation and resolution. To provide their full support during the process of the Company investigating and resolving any grievances that occur.
LRP Committee	<ul style="list-style-type: none"> Where necessary the LRP Committee (which included representatives from local authorities listed in section 11.2) may be consulted to resolve grievances which require external input. All grievances which are appealed by the grievant will be reported to the LRP Committee and the Committee will oversee the resolution of the appeal process.

The grievance mechanism implementation team shall be comprised of the HSE Managers from Masdar, and the appointed CLO (community liaison officer). Clear lines of responsibility and accountability will be established within the implementation team. It is important that all members of the team are adequately trained in stakeholder engagement. It is important that the CLO be a local person, who is fluent in both English, Russian and Uzbek and familiar with the local customs. Any person or organisation may send comments and/or complaints in person or via post, email, or facsimile using the contact information provided in Table 4-6.

Table 4-6. Responsible Persons and Contact Details

Pre-Construction Phase	Construction Phase
Masdar	Masdar
Khurshid Karamatov, Community Liaison Officer e-mail: kkaramatov@masdar.ae	To be confirmed
Community Liaison Officer (CLO)	Community Liaison Officer (CLO)
Saida Yusupova, Community Liaison Manager e-mail: Saidayusupova@gmail.com Contact phone number: (+99893) 522-00-70 (+99890) 319-77-21	To be confirmed

In addition to the above contact details, a mailbox will be provided at the site entrance to allow local people to raise grievances in a more informal way. Grievance boxes will also be placed in each surrounding project community. All information about grievance procedures, grievance forms, and responses will be available in Russian and in Uzbek. Access to the mechanism will be free of cost. All written and/or verbal complaint will be recorded by the Masdar CLO. Handling grievances encompasses a step-by-step process as well as assigned responsibilities for their proper completion. Masdar will follow the process' steps illustrated in section 4-10 below:

Handling grievances encompasses a step-by-step process as well as assigned responsibilities for their proper completion.

Masdar will follow the process' steps discussed in the sections below.

The lenders to the project also have in place their own Independent Accountability Mechanisms Network (IAMs). This provides an avenue for complainants to still voice any concerns regarding the Project if the Grievance Mechanism put in place by Masdar is not functional.

4.5.3 Publicizing Grievance Management Procedures

The grievance contact details were previously communicated to the community during the disclosure meetings and all meetings thereafter. A leaflet was handed to all farmers along the OTL which contained a summary of the grievance mechanism during the valuation meetings. This was followed up with a poster that was provided to the Khokimiyat and Mahallas. The grievance mechanism was also communicated during meetings held with community members in November.

The grievance mechanisms will be publicized in the following ways in the future:

- Posters (project site, local Council, and residential clusters within a 5 km buffer from the site) will be maintained at Mahallas offices and relevant community buildings (e.g outside the school)
- All future consultation meetings will remind the community of the grievance mechanism and contact details.
- Letters will be provided to the local and provincial authorities, and Online (website)

4.5.4 Implementing the grievance mechanism

A flow chart below in Figure 4 -13 illustrates the process for submitting, receiving and addressing grievances.

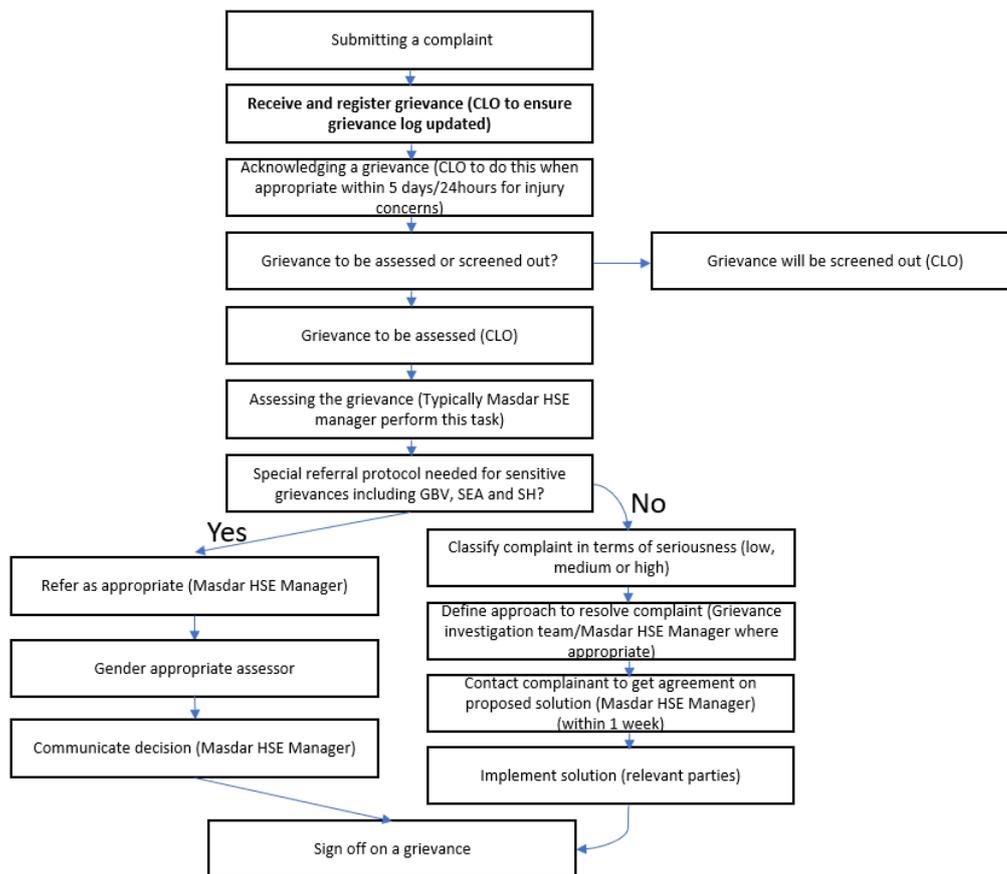


Figure 4-13. Grievance process flow chart

4.5.5 Submitting a Complaint

- The grievance mechanism will allow for complaints to be filed in several ways:
- By telephone
- By email
- By direct message (text or telegram)
- Online: By email and/or through an online form
- At the project gate
- During meetings with the CLO

4.5.6 Receiving and Acknowledging Complaints and Grievances

All incoming grievances will be acknowledged as soon as possible, no later than 5 working days from receipt. A formal confirmation—with a complaint number, or other identifier, and a timeline for response— assures the complainant that the organization is responding properly, and it gives the project a record of the allegation. As a good practice, complaints received in person will be acknowledged on the spot. The CLO will be the Masdar employee who will initially receive the complaint.

If a more complex investigation is required, the complainant will receive an update within two weeks of the grievance being received, explaining the actions required to resolve the complaint, and the likely timeframe.

Masdar will explain in the first letter of acknowledgment, which claims are clearly outside the scope of the mechanism and what alternative mechanisms communities can use to address these potential issues.

To ensure that all grievances are adequately investigated and closed out, a grievance log will be kept, documenting all the actions taken to address each grievance. An extensive investigation may be required when grievances are complex and cannot be resolved quickly. Masdar will take full responsibility for investigating the details of grievances coming through its grievance mechanism, following the principle of “no cost”. The E&S Manager will be responsible for the investigation of serious grievances but will delegate to the project CLO when appropriate. All grievances will be kept confidential within the E&S team as far as possible and only shared only shared with other employees where it is necessary for the resolution of the grievance. In some cases where third parties must be involved, such as contractors or the LRP committee the grievant will be notified, and permission obtained before the information is shared.

There will also be a special protocol for Gender Based Violence (GBV), Sexual Exploitation Acts (SEA) and Sexual Harassment (SH). This will include a safe, confidential and accessible grievance mechanism which is utilisable by the local community. An anonymous line will also be established for reporting which is gender sensitive. Once grievances are received, a review committee, where women, vulnerable groups and all genders are represented appropriately, will investigate grievances. The committee will also work with local community organisation to coordinate grievance redress measures.

All grievances received will be captured in grievance forms which will then be forwarded to the Masdar HSE Manager. The grievance will be registered in a grievance tracker in order to track and monitor actions taken against the grievance. Each complaint will be assigned an individual number to ensure that it is appropriately tracked and closed out.

It is important that the process is easily accessible and not intimidating to stakeholders.

4.5.7 Screening and assessing the Grievance

During the assessment, the team will gather information about the case, key issues and concerns, and help determine how the complaint might be resolved. Masdar will:

- Determine who will conduct the assessment. Typically, the Masdar HSE Manager will perform this task or directs it to an appropriate staff or department for assessment (production, procurement, environment, community relations, human resources).
- Select a company member (typically the CLO) to engage directly with the complainants to gain a first-hand understanding of the nature of the complaint.
- Clarify the parties, issues, views, and options involved:
 - Identify the parties involved.
 - Clarify issues and concerns raised by the complaint.
 - Gather views of other stakeholders, including those in the company.
 - Determine initial options that parties have considered and explore various approaches for settlement.
- Classify the complaint in terms of its seriousness (minor, significant or major). Seriousness includes the potential to impact both the company and the community.

4.5.8 Define Grievance Resolution Approach and Responses

The grievance investigation team will provide a proposal to resolve the complaint, which will have the backing of the Senior Management. The E&S Manager will then ask the CLO to contact the complainant to get an agreement on the proposed solution.

Solutions may include extending support or livelihood restoration to additional persons, replacing lost or damaged property, providing monetary compensation, re-valuing affected leaseholds or property, revising the community's engagement strategy, and renegotiating existing commitments or policies.

If all parties accept the proposed solution, the agreed actions will be implemented in the established timeframe. In the case that complainant does not accept the proposed resolution, Masdar should re-assess the situation and make sure that all alternatives within the grievance mechanism are explored. If agreeing on a solution acceptable to all parties is not possible within the grievance mechanism, the complaint will be referred to external mechanisms.

When formulating a response Masdar will ensure that:

- The response should consider the complainants' views about the process for settlement as well as provide a specific remedy. The response may suggest an approach on how to settle the issues, or it may offer a preliminary settlement.
- If necessary, the CLO presents and discuss the response to the complainant or will hold a meeting with the complaint coordinator, relevant company manager, and the complainant. If a direct meeting is not possible, consider meeting with a neutral third party serving as facilitator to agree next steps.
- If the case is complex and a resolution time frame cannot be met, provide an interim response—an oral or written communication—that informs the person of the delay, explains the reasons, and offers a revised date for next steps.

All comments and complaints will be responded either verbally or in writing, in accordance with preferred method of communication specified by the complainant in the Comments and Complaints Form. Comments will not be considered as complaints and may not, therefore, be responded to unless the commenter requests a response.

Close-up monitoring of a complaint will be undertaken, if possible, by collecting proof that the necessary actions have taken place. For example:

- If the issue was resolved with the satisfaction of the complainants, get a confirmation and file it along with the case documentation.
- Take photos or collect other documentary evidence to create a comprehensive record of the grievance and how these were resolved.

4.5.9 Request feedback

Masdar will seek sign-off from the complainant(s) that the grievance has been resolved and request any feedback they have. This will be achieved via a Grievance Resolution document.

All grievances are to be signed off at an appropriate level of seniority of staff. The staff member who signs off the complaint should have sufficient knowledge about the topic to provide assurance.

Once sign-off has occurred, this will be recorded in the grievance form.

Any grievances not signed-off as resolved will be investigated further.

4.5.10 Appeals and other recourse

If the complainant is not happy with the outcome of the grievance process, they may lodge an appeal which will automatically trigger another investigation by the E&S manager and will involve the LRP Committee, Khokimiyat and Mahalas except in cases where it would not be appropriate to involve external parties due to confidentiality. If the company GM is unable to resolve the grievance even after an appeal, the complainant may utilise other external channels such as:

- Raising an official complaint with the Khokimiyat
- Contacting the lenders directly through their independent accountability mechanisms
- Seeking legal resource

4.5.11 Monitoring and reporting of grievance mechanism

Masdar will report internally at least once a month on grievances received (both open and closed), and how they were resolved.. Suggested monitoring and evaluation activities are outlined below:

- Monitor the grievance log in terms of response times to address complaints lodged as well as the recurrence of complaints over time.
- Gauging level of stakeholder satisfaction as a secondary aspect to other stakeholder engagement meetings.
- Monitor media coverage of Masdar.
- Keep records of all engagement activities including meetings attended, community meetings, focus group discussions, etc.
- Keep a library (electronic or hard copy) of all communication material.
- Conduct stakeholder interviews to gauge level of satisfaction.
- Develop and assess performance in terms of Key Performance Indicators (KPIs).
- Revise plans and activities.

5. Socio-Economic Baseline

The purpose of this section is to provide a summary of the socio-economic conditions within the project area and quantify the number and status of affected people. Land use within the project area varies considerably from farmer to farmer. Some farmers only use the land during the summer months, due to the potential for harsh frost events to result in the mass fatalities of livestock.

Although the focus of the baseline study is the Project site and surrounding communities, some national and regional level baseline information may also be included to provide a wider socio-economic context.

Table 5-1. Nearest Settlements to the Project

Settlement	Distance from the Project Site (km)	Number of Residents	Description
Melikhodja	1.6	1,701 (M= 858, F= 843)	Small village located northwest of the project site. Falls under the Melikhodja mahalla
Erkin Nafas*	0.87	719 (M=353, F= 361)	Erkin Nafas, Upka and Damhoda, grouped together by the district administration for the purpose of population estimates, are located to the northeast of the project site. These settlements are three relatively small rural villages. All three of these villages fall under the Shurak mahalla
Bulakchi	1.2	718 (M=349, F= 369)	Also located to the north east of the project site, Bulakchi is a rural village.
Suyunjon	1.35	1,177 (M= 597, F= 580)	Southwest of the project site Suyunjon is a small village which contains an electrical substation where the OTL from the project site will send the energy to be fed into the national grid. Falls under the Melikhodja mahalla Suyunjon community members get their water from a well on a farmer's land that will be affected by the OTL route Suyunjon community members are also allowed to graze their livestock on this farmers land (for an agreed price) after the harvest is collected.
Partaabad	1.8	-	The village of Partaabad is located southeast of the project site and falls within the Pasdargom District (other settlements in the Aol are in the Kattakurgan District). Falls under the Bagishamol mahalla of Pasdargom District.

Source: District Administration. Key: (*) including Upka and Damkhodza, (M) Male Population, (F) Female Population.

5.1 Local Socio-Economic Setting

The Project site is located within the Samarkand Region of Uzbekistan which has an estimated population of 3.6 million people and encompasses 14 administrative districts. There are seven communities which are located within 2km of the Solar PV Area. These communities have been identified in Figure 5-1 below:

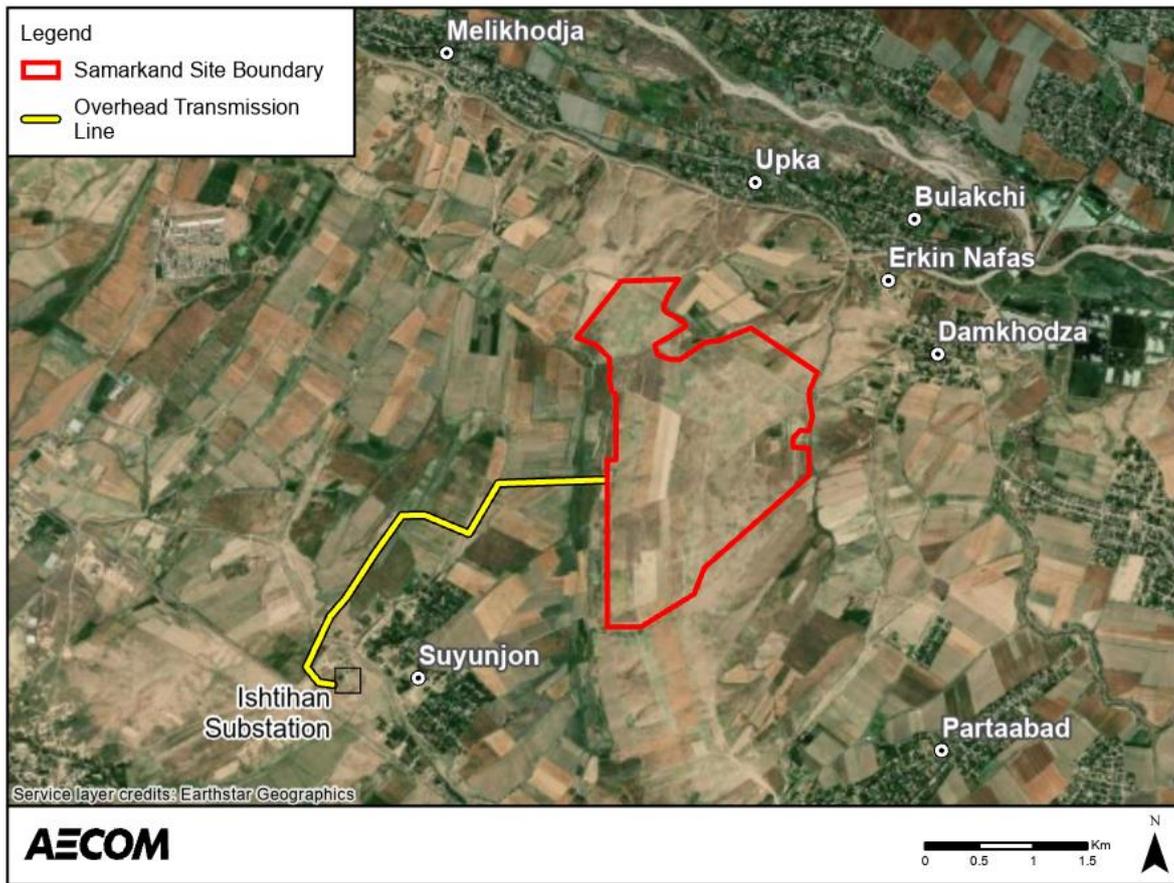


Figure 5-1. Mahallas within 2 km of the Project Site Boundary

5.1.1 Administration, Population and Ethnicity

Obligations of regions regarding environmental protection are put to the Soviets of National Deputies, headed by the Leader of administration (khokims). Regional and local government are responsible for registering and evaluating the condition of nature resources, ecologically harmful facilities and are responsible for control, nature protection and usage of nature resources.

5.1.1.1 Formal Administration

The system of public administration in Uzbekistan is comprised of two tiers, central and local. Local governments are subdivided into regional, district and city administrations. In addition, community self-governments also operate locally, although they are not part of the central public administration system (Bektemirov & Rahimov, 2001).

At the sub-district level there are mahalla Committees which act as governance institutions in towns and rural areas. Mahalla Committees are salaried state officials and as such are answerable to the local state administrators as they are fully dependent on their funding².

5.1.1.2 Population

The mahallas identified in Section 5.1 correspond to the seven settlements located within a radius of 2 km of the project site boundary. Based on satellite images and extrapolating population figures to the seemingly populated land, it has been estimated that the overall population of all seven settlements could be within the range of 5,000-6,000 inhabitants.

5.1.1.3 Ethnic composition

The Republic of Uzbekistan is a landlocked country in Central Asia and was formerly a part of the Union of Soviet Socialist Republic until it declared independence in September 1991. The country occupies a total of 448,900 square kilometres and shares borders with five other countries: Afghanistan, Kazakhstan, Kyrgyzstan, Tajikistan, and Turkmenistan.

Uzbek is the only official and most widely spoken language in the country, spoken natively by approximately 85% of the population. Russian has widespread use as an inter-ethnic communication language and as a language of governance. Other ethnic languages spoken in the country are Tajik, Kazakh, Tatar, Kyrgyz. and others. In terms of religious faith, 88% percent of the population are Muslim (primarily Sunni), 9% are Eastern Orthodox Christians and 3% are of other faiths (CIA, 2021).

² Urinboev, R. (2018). Local Government in Uzbekistan. Global Encyclopedia of Public Administration, Public Policy, and Governance .

Although detailed ethnicity information for Kattakurgan, which covers the Project Area is not available, Generally, ethnic groups living in Uzbekistan have equal access to all social and other services, including health, education, and water and sanitation. None of the groups are socially excluded either from a legal standpoint or in terms of their actual situation. Further, none of the ethnic groups maintain cultural or social characteristics separate from the mainstream Uzbekistan society that would classify them as ethnic minorities. Therefore, based on the information obtained during the site visit and stakeholder engagement, there it is understood that there are no indigenous people living in the region that meet EBRD criteria as defined in Performance Requirement 7 – Indigenous Peoples or ADB criteria defined as:

- i. self-identification as members of a distinct indigenous cultural group and recognition of this identity by others.
- ii. collective attachment to geographically distinct habitats or ancestral territories in the project area and to the natural resources in these habitats and territories.
- iii. customary cultural, economic, social, or political institutions that are separate from those of the dominant society and culture; and a distinct language, often different from the official language of the country or region.

5.1.1.4 Economy

Economically, Uzbekistan is a major producer and exporter of cotton. The area of influence is dominated by cotton production, which in turn provides more opportunities to women as seasonal farmworkers. Much of the land is also used for grazing of sheep, goats and cattle with the exception of areas used as orchards and occasional growing of winter wheat.

5.2 The Project Area: Solar PV Area

5.2.1 Historic Leaseholders

Currently there are no leaseholds present in the Solar PV Area due to all land being handed back to the Khokimiyat in 2019 in anticipation of the Project. There were however five leaseholds belonging to 5 households (41 affected people) that were terminated or altered to make way for the project. These households were identified during the ESIA scoping visits and investigated further as part of the LAA process which concluded that they should be included as part of this LRP. The approximate location of their leaseholds is shown below in Figure 5-2. Representatives of each historic lease holding household were interviewed in September and October 2022. Table 5-2 below summarises the socio-economic status of each historic lease holding household.



Figure 5-2. Historic leasehold areas to be affected by the Project

Table 5-2. Historic Landowners

Farmer and Sub-Lease Agreement	Household Size	Location of interview	Summary socio-economic status
Historic Leasehold 1	8 (5 Male, 3 Female)	AECOM/GBI visited Leaseholder 1 on his land just outside of the Project border on 20 th September 2022 and interviewed him and his father.	<p>Historic Leasehold 1 is an officially registered farm in a long-term lease contract with the district government, which sits adjacent to the project site's north-western boundary. The household has two houses, one near the project site (just outside thus not relocated) and one in the village</p> <p>The household head has a spouse, six children. The household also has three siblings and parents who also dwell with him. His two brothers are married, and each has two children. His sister is divorced and has two Children. The household is not considered vulnerable.</p> <p>The leaseholder previously leased 10 hectares (ha) of land since 2017 but has already returned 7 ha of the land for the Project. The remaining 3ha is used to grow peas and fruits as well as graze 50 sheep.</p> <p>The leaseholder claimed that he returned the land voluntarily as he was not using it and the 3 ha are enough for him now.</p> <p>The household head also works at the Masdar Lab earning 130 USD per month while his brother farms. Currently, he has 3 hectares of land and 50 sheep, whereas before he had 10 hectares of land.</p> <p>The project is not expected to cause transportation obstacles, as there is earth road outside the area between the farm and cotton fields nearby.</p>
Historic Leasehold 2	18	AECOM/GBI visited the house of the family of Leaseholder 2 on the 21 st of September but were unable to locate any family members. However, AECOM spoke to the household on the phone on the 1 st and 4 th October 2022.	<p>Historic Leasehold 2 was another officially registered farm in a lease contract with the Khokimiyat of Kattakurgan. This farmland is adjacent to the project's north-eastern boundary.</p> <p>The land was leased by two brothers and two sisters and their children (18 people in the household). Their elder brother had already relocated to Russia and became a citizen there before the project started. The other two brothers were farming the land and invested significantly in the land including building a well and an overnight shelter. Before the land was able to become profitable, the land was returned to the Khokimiyat to make way for the Project. The brothers were offered another plot of land but this land was not appropriately serviced (i.e. no power line for pump, no well for water) so the brothers refused the land and no compensation was provided. They, therefore, became in debt due to the investment they lost.</p> <p>The farmers did an independent valuation of the land and assets and the amount quoted was UZS 83 million. Unfortunately, due to COVID-19 the Khokim of the district passed away in summer of 2020. The farmer approached the new head of administration in March 2021 but had not received any information on the compensation</p> <p>These two brothers and their mother have relocated to Russia in order to earn money and repay their debts.</p> <p>Only the sister of the leaseholders was in Uzbekistan at the time of the LRP studies in September and October 2022 and it was confirmed that the household is experiencing financial difficulties. The household is considered vulnerable.</p>

Historic Leasehold 3	5 (3 Male, 2 Female)	AECOM/GBI visited Farmer #3 at the local Khokimiyat office.	<p>Historic Leasehold 3 was a formally registered farm of 60 ha used to grow crops (grain, barley, wheat) and for livestock grazing.</p> <p>At the time of the site visit (September 2021) there were no longer any physical structures on the site, although there had previously been a container on the land for the farmer to stay in when herding livestock. The farmer left the area and in February 2020 and received alternative land (20 ha) in another area.</p> <p>He agreed to take these 20 hectares of land as he claims that this was sufficient for the household and previously, he used only 30 hectares out of the 60 he owned. The new land is rain-fed same as the one he obtained before. The farmer cultivates every culture that can be grown by refeeding, including wheat and peas. Therefore, the yield depends on the weather conditions.</p> <p>He mentioned that he does not need additional land. He sold his sheep last summer as he needed funds for treatment from COVID-19 complications.</p> <p>The household head stated that only half of his current land (10 hectares) is productive, and the other 10 hectares of average quality. He used to have farm animals, including five sheep, however, he had to sell them in order to pay for COVID-19 treatment. The replacement land is also undersized and not suitable for grazing sheep.</p> <p>The household has a tractor and a container with the gas and water supply to stay overnight. This container was located at the old site and was moved to the new land.</p> <p>The household head was 70 years old at the time of the interview and thus should be considered vulnerable as would have been 68 at the time of land transfer.</p> <p>The household head has a spouse, three children, two married sons (one has four children, another one has three) and a married daughter who also has three children. All children and grandchildren are healthy.</p> <p>His two sons are migrant workers who provide for their families from abroad. The households head wife is also a pensioner, and both of them receive a government pension. They receive one of the lowest pensions due to not recording their years of employment. The household head's pension is 50 USD per month and wife's is 45 USD per month.</p>
Historic Leasehold 4	6 (4 Male, 2 Female)	AECOM/GBI met with Leaseholder 4 at the local Khokimiyat office on 20 th September.	<p>Historic Leasehold 4 is an officially registered legal leasehold farm named "Shomurod Nursakhovat" which was 67 hectares, 15 of which was used for agriculture and the rest was used for herding. The household invested heavily in the land and planted crops from 2016 until 2019 when the land was taken. They cultivated wheat, vegetables and grapes.</p> <p>The household had a well and installed electricity lines that they brought over 3 km. Additionally, they had construction where they stayed overnight. However, unfortunately, someone burned down the place when it was left at the end of 2020.</p> <p>The household used 15 hectares of the 67 hectares they had previously and the rest of the land was used by the community herders who were not satisfied that the land was taken by the Project. At the previous location, the household had fruit trees and peach trees. After a period of conflict the household started negotiating with the herders and they worked toward an agreement. Most herders went to the old land in the project area in spring.</p> <p>The household agreed to relocate to a new plot of land 4 km away from the project site under the condition that compensation be given to bring the new plot of land up to the standard of the previous land. This required installation of drilling well, power supply, and levelling of the land plot. Unfortunately, since the death of the Khokim of the district, they have also not received any compensation and are now in dept.</p> <p>Currently, the household has 10.5 hectares, 8.5 are used for agricultural crops, watermelon, melon, and wheat, and another 2 hectares for herding where recently they bought 10 sheep. The previous local Khokimiyat helped them to drill a 180-meter well on the new land, but it was unsuccessful as no groundwater was reached.</p> <p>Currently, the household and Khokimiyat have an agreement to use the water from the channel, using an electric pump in cooperation with other farmers however this has created a challenge to manage steady water flow as multiple farmers rely on it and not all are willing to pay for the electricity. This results in the electricity being cut off on regular basis. The household states that the new farm just is now (September 2022) starting to reach the productive level they had in 2019 before the project.</p>

The household member interviewed dwells with her husband, two daughters-in-law, elder son and his two children. The elder son works for the farm, however, he graduated in aviation and used to work in the airport. The elder son is currently studying history at Navoi University and will graduate this year. The younger son serves in the military and lives in Tashkent. One of her daughters is divorced and has two children, and she is looking for a job as a German translator. Another daughter is a housewife, looking after the children.

The household head interviewed was 58 and her husband is 63, they are both pensioners. She was previously a nurse for 40 years and gets 110 USD per month as a pensioner. Her husband was a doctor.

The household does not fall into a vulnerability category. All family members are well educated; however, they have been put into debt by the Project. Therefore, the Project has made them more vulnerable.

Historic Leasehold 5	4 (3 Male, 1 Female)	AECOM/GBI met with Leaseholder 5 in the parking area of the local Khokimiyat on 20th September. He came to the parking area in his car with his eldest son.	<p>Historic Leasehold was an officially registered farm of approximately 56.4 ha of land leased for 25 years. In February 2020, the farmer was requested to return 40.6 ha of land for the purposes of the Project, therefore 15.8 ha of the land was left. Out of the 56.4ha 20 were used for crops and they also had 70 sheep. They grew rainfed wheat, but it was all harvested before the land was taken. They had no investments in the land and were able to harvest everything before moving.</p> <p>The farmer said he had no objections to the project taking the land as the remaining land is enough to support his family.</p> <p>Their current land is predominantly used for planting winter wheat and corn. The farmer drilled a well in the area and installed an electricity supply. A building in the project area was destroyed and contents were stolen.</p> <p>His current farm is 15.8 ha, and 10 are used for agriculture growing rain fed wheat and 5 for pasture where they have 25 sheep.</p> <p>The household head is 65 years old and cannot walk and thus should be considered vulnerable. His wife is 60 and they live with their two adult sons who are both married, and both have two children. The household head receives 180 USD of state pension, increased due to disability. His wife receives 50 USD, one of the lowest pension levels. The eldest son is the accountant and therefore manages the farm. The younger son is a chair of the district farming association and is also employed with the national railway company.</p>
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5.2.2 Herders

The Solar PV area as well as large areas to the north and east, are currently used by community herders to graze sheep, goats and cattle as shown in Figures 5-5 and 5-6 below. Small numbers of Individual livestock are owned by households in the community who either collaborate by taking turns with herding (community herders) or they pay a professional herder to do so.

Grazing duty typically rotates on a daily basis with a single member from one household taking responsibility for the herd that day. Community herders are generally not paid for the days in which they attend to the herd, as the rotation is seen as mutually beneficial.

There are however seven professional herders who own their own livestock and will also herd livestock from other community households for a monthly fee of between 3 and 6 million som.

Other professional herders from outside of the immediate project area also may occasionally use project site which is open to anyone to use.

During AECOMs visit to the project area in September 2022, a representative of each herd was interviewed to gather socio-economic information about the herders and herding practices. It was explained that there are currently five community herds which originate from the village of Melikhodja and the herders operate on an rotational basis and are not paid. There is another community herd from Erking Nafas (Upka) which also is rotational and unpaid.

There are professional herders who herd their own herd along with herds from other households and are paid for their services.

All explained that they herd regularly from March to November and occasionally in the winter. They use the Solar PV Area and surrounding community areas to the north and east to herd.

A further census and socio-economic survey of all individual herders was then conducted between the 16th and 23rd November 2022. In total, 42 Herder households participated in the census and 218 project affected people (individuals) were recorded as part of the herder households. 7 out of 42 Herders were professional herders, whereas the rest herded on behalf of the community. The distribution of the herder households which were recorded as part of the census is as follows: 44 men, 45 women, 10 daughter-in-law, 14 grandson, 101 children, 2 grandfather, 3 grandmother and 4 individuals with no information provided.

The herder households came from the following villages within the Project area:

- Erkin Nafas (17 Community herders and 2 professional herders),
- Buloqchi (9 community herders and 2 professional herders),
- Melixo'ja (9 community herders and 2 professional herders)
- Pardabod (1 professional herder).

Amongst all households, there was a total of 167cows, 681 sheep, and 547 chickens.

All of the herders in the census were male and married, with none of the households being a female headed household.. The age amongst the herders ranged from 29-75 years of age, with the average age being 49 years old (out of 41 herders who gave their age).

Of the 42 households, the most common household size was six (over 28% of all households), with the minimum and maximum household size being 1 and 8 respectively. The main language for all households was Uzbek, and the nationality of all the herders households was Uzbek. All households declared there was an adult present that could read and write. Regarding diseases and disability, one household declared that they had two members which had been affected by poor health and noted as vulnerable. One herder suffered from a mental disability who has also been noted as vulnerable.

In total 41 herders gave education information. 4 out of 41 herders had higher education (oliy), 1 out of 41 herders had secondary school (Secondary), 1 out of 41 herders had primary school (maktab), and 35 out of 41 herders had middle school (O'rta), as their highest level of education. This is demonstrated in Figure 5-3 below. Education ranges were from all levels in Erkin nafas, but in all the other villages, the highest level of education was O'rta (middle school).

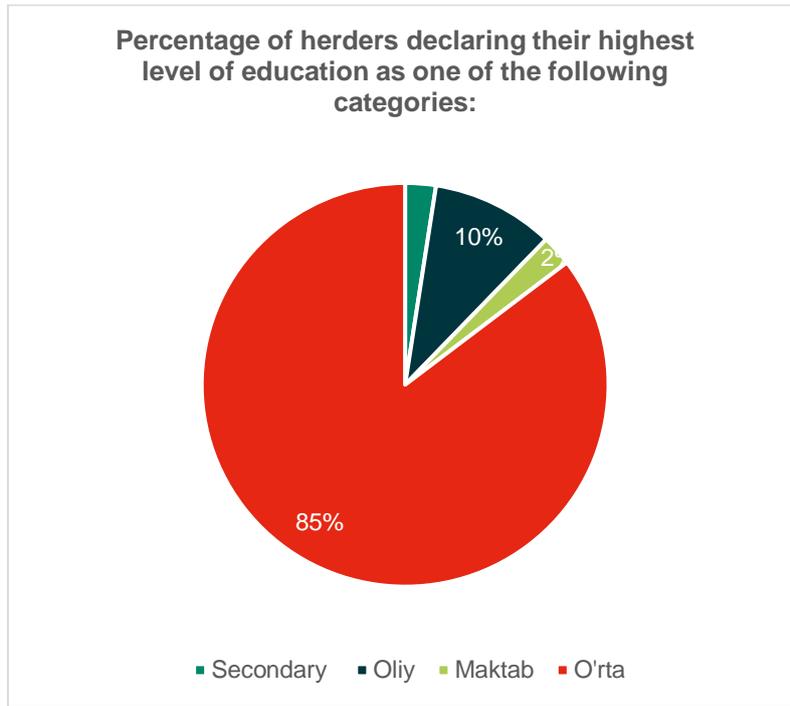


Figure 5-3. Education level of herders

All households listed food and clothing as their main expenditure, with approximately 10% of households also detailing contracts, and approximately 2% of households technology as other additional costs. 9 out of 42 herders declared that their household is in substantial debt. The majority of herders main source of household income is from profits from self-employment. All sources of household income can be found in Figure 5-4. Where applicable, the monthly payment received for herding for households was between the 3-6 million Uzbekistani sum. Regarding total household income, the minimum and maximum values amongst herder households was 780,000 and 7 million Uzbekistani sum respectively.

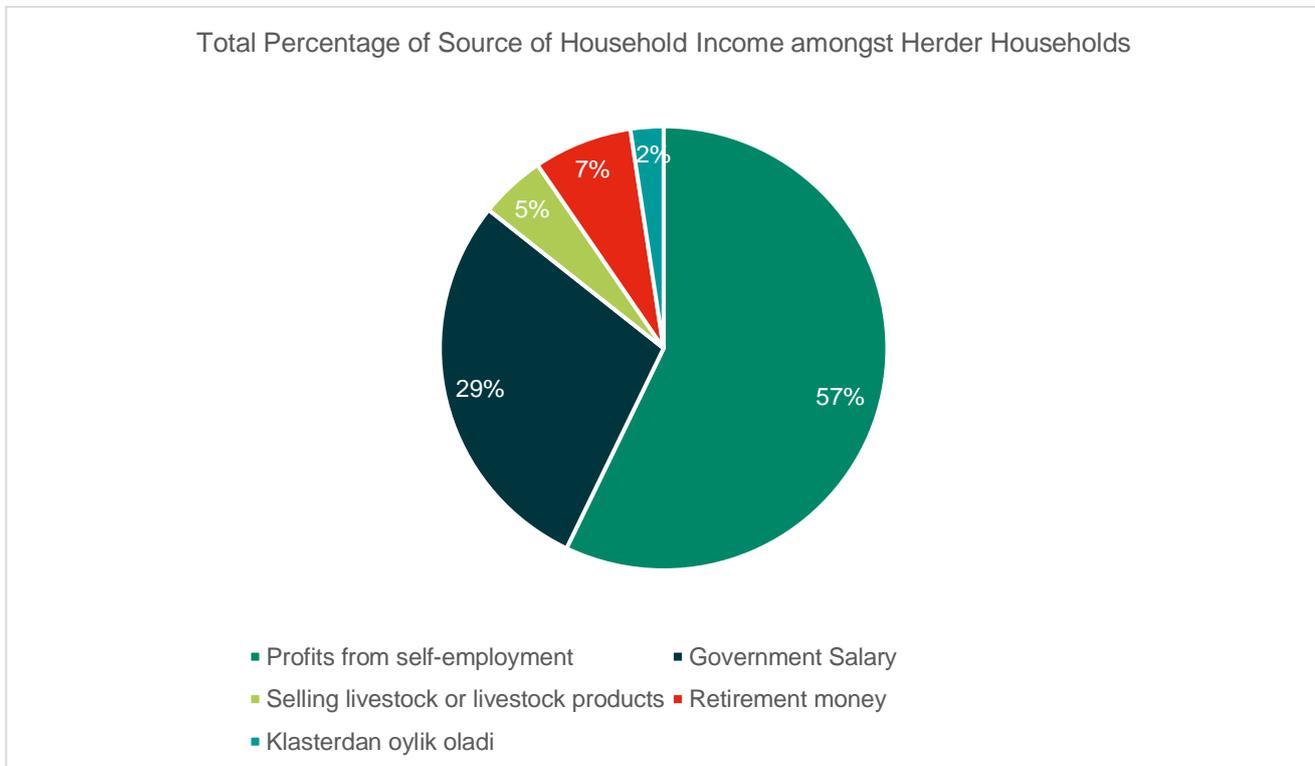


Figure 5-4. Herder source of income

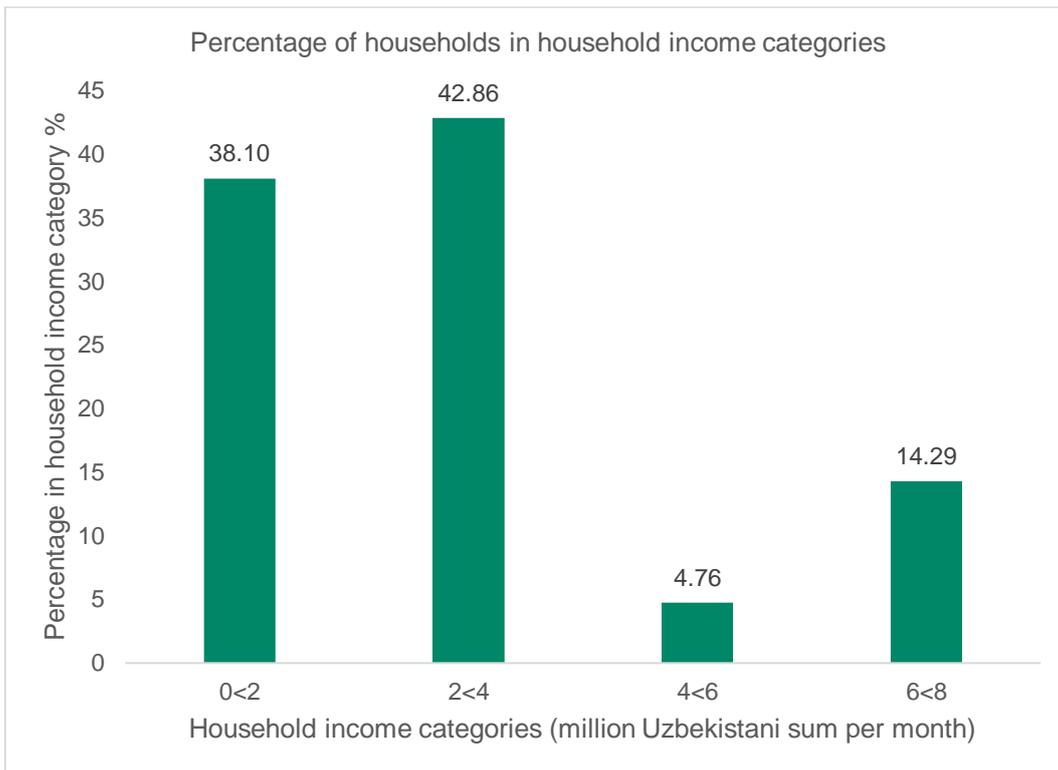


Figure 5-5- Percentage of households in household income categories



Figure 5-6. Sheep and goats being herded by community herders (taken in September 2022)



Figure 5-7. Cattle being herded by professional herders (taken in September 2022)

5.2.3 Feed collection

The Solar PV Area is also used by community members to collect feed for livestock and store it for winter. This is a natural resource that is available to the whole community. While AECOM visited the site area in September 2022, a community member was seen collecting feed and loading it onto the back of a motorbike Trailer as shown below in Figure 5-7. The feed was gathered and stored in the community as showing in Figure 5-8.



Figure 5-8. Collection of feed by community members (taken in September 2022)



Figure 5-9. Storage of feed for the winter (taken in September 2022)

5.3 The Project Area: Overhead Transmission Line

The proposed OTL route has been designed to avoid populated areas and isolated structures however, it does pass over extensive areas of cultivation whilst several poles will need to be pegged within the boundaries of farms. A preliminary analysis of the route has identified the current land uses which could potentially be affected by the construction and operation of the OTL. This analysis is based on the following assumptions:

- A clearance corridor of 32m at each side of the OTL will be required as a wayleave
- A clearance area of 5 m² has been defined around towers
- A total number 19 towers have been pre-designed

In summary, the OTL will affect four farms with leaseholds (22 affected people within these 4 households) and will need approximately 0.678 ha³ of land to be acquired. No structures were identified along the route and all the fields which will be affected grow seasonal crops. The leaseholds along the OTL are illustrated below in Figure 5-10.

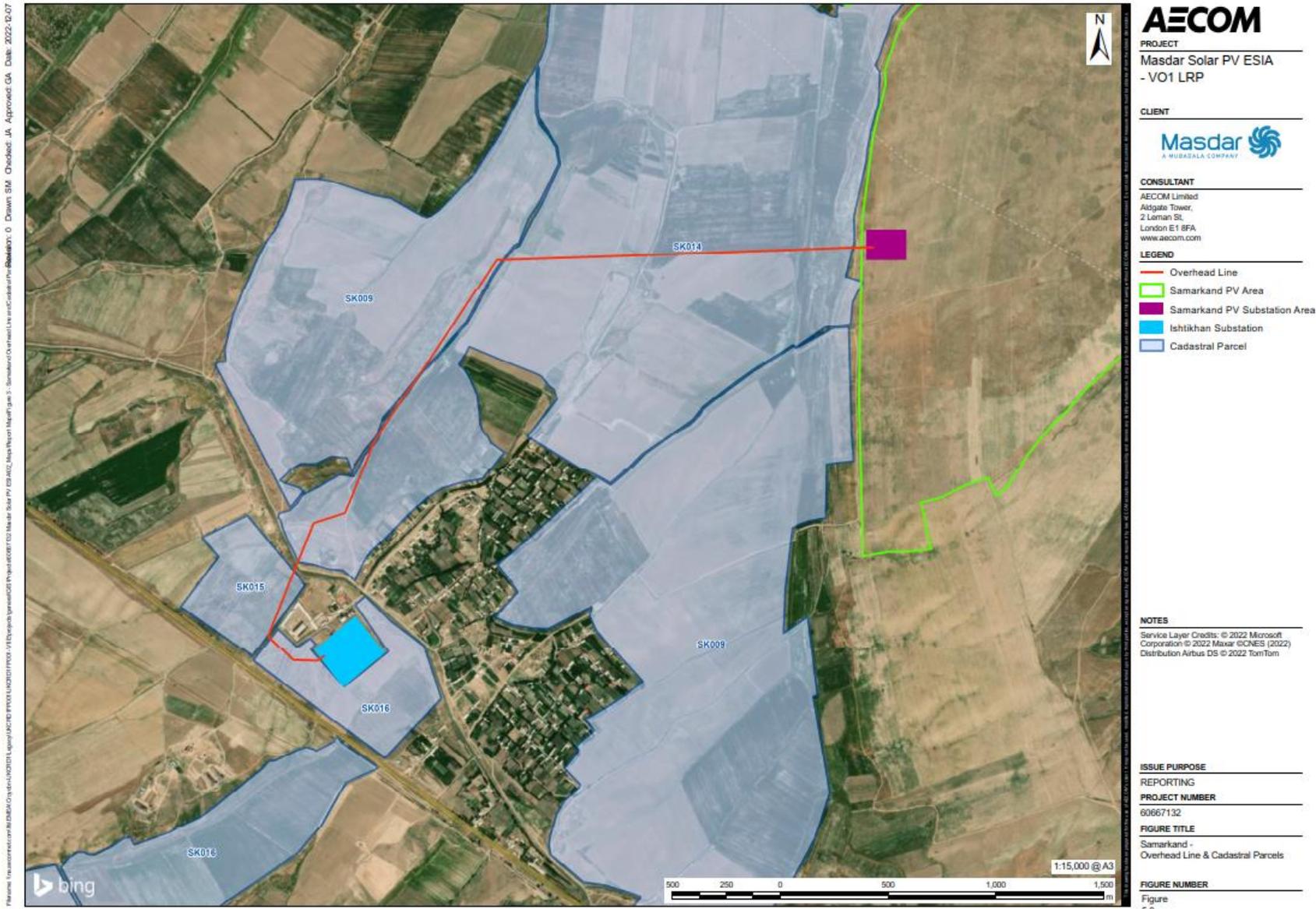


Figure 5-10. Leaseholders along the OTL

Out of the 4 farmers with leaseholds under the OTL, the largest permanent land take is 0.5% of their land for the towers. The largest temporary land take is 3% of the land for assembly areas and construction route. The commercial farmers typically employ farmworkers who help to manage the farm and seasonal formwork during harvest is a significant source of livelihood for women in the nearby communities who help with the harvest of Wheat and Cotton. The impact on these workers is however expected to be negligible.

Four Sub-Lease Agreements SK009, SK014, SK015, and SKN016 all have Project Infrastructure located inside their boundary – although the extent of impacts is minor in all cases. All were interviewed as part of the socio-economic survey and where the following was confirmed:

- All four of the affected leaseholders are male and hold a long lease for the land which is their main permanent place of farming or work.
- All of the affected leaseholders are originally from mahalla Melikhodja district of Kattakurgan.
- All leaseholders interviewed were the household heads.
- Leaseholders were typically part of a household of at least 4-persons including a wife, whose main occupation is typically home maintenance (looking after home & family).
- All heads of household and their spouses were literate.
- The majority of the affected leaseholders travel between 5 and 45 minutes to get to the affected land, typically achieved by driving.
- The affected leaseholders have all lived in the village for over 20 years and the majority of the affected leaseholders have maintained the same house throughout their lifetime.
- All affected leaseholders have stated that without this land, they will still be able to continue their current income, however there is one affected leaseholder who considers his household vulnerable.

The majority of affected leaseholders also provided household results with descriptions of their family members’ education attainment, occupation, and health status. Results across this data set pertain to a total of eight family members belonging to the four affected leaseholders.

Table 5-3. Household Count of Education Attainment

Row Labels	Count of Education Attainment
Never Attended	1
Primary School - Completed	2
Primary School - Now Attending	4
University or College	1
Grand Total	8

Leaseholders were asked about income and the cost of living, but one leaseholder was unable to provide that information. The total annual cost of living for each household is also recorded and is as follows:

- SK009: 214300000 UZM,
- SK014: 476300000 UZM
- SK015: 1470000000 UZM
- SKN016: Not available

The farmer with Sub-Lease Agreement SK015 also runs a small enterprise/engages in trading (buying/selling manufactured and processed goods) and considers this a formal enterprise (operating from a permanent building other than the home). The current approximate value of the stock of this business is 2500000000 UZM. The household’s small enterprise/trading activity also employs individuals from outside of the household (130 employees).

Two of the households admit to owing money or goods to another person, institution or business which are 430600000 UZM and 250000000 UZM, respectively. When asked to choose between never have enough; can manage to get by; comfortable; rich; and very rich, the affected leaseholders described their financial circumstances as the following:

Table 5-4. Affected Leaseholders Financial Circumstances

Affected Leaseholder with Land: **Description of Financial Circumstances**

SK009	Rich
SK014	Rich
SK015	Rich
SK016	Not available

A summary of the current socio-economic status of each affected leaseholder is provided in Table 5-5. This information is taken from a household questionnaire which took place on 2022-08-25 through a series of face-to-face meetings with the affected leaseholders at locations that they are normally resident in, including at various sites around Kattakurgan khokimiyat.

Table 5-5. Summary socio-economic status of affected leaseholders along the OHTL

Location of interview	Farmer and Sub-Lease Agreement	Household Size	Summary socio-economic status
Kattakurgan khokimiyat	Farmer with Sub-Lease Agreement SK014	4 (3 male, 1 Female)	<p>The individual providing the information is the affected leaseholder. The affected leaseholder is from Kattakurgan district of Samarkand, and now resides in the community of mahalla Melikhodja. The affected leaseholder is the Household Head and is part of a four-person household including a wife, whose main occupation qualified professional (having attained a university or college education); and two sons who are both under the official working age of 18 (currently attending primary school).</p> <p>The affected leaseholder is Male, holds a long lease for the land which is his main permanent place of farming or work. The affected leaseholder's primary residence is in Paishanba town, Mirzo Ulugbek mahalla (Baland Chordara street), Kattakurgan. The affected leaseholder travels approximately 45 minutes to get to the affected land – this is typically achieved by driving. The affected leaseholder lived in their Town or Village for 41 years but has only lived in his current house for four years (having previously lived in Alisher Navoi mahalla and moved to the area through marriage). The affected leaseholder owns/uses one plot of land which are located in mahalla Melikhodja, Kattakugan and no other people currently use the land. Without this land, the affected leaseholder will still be able to continue his current income. The affected leaseholder does not believe that the household will be significantly impacted by the project; and it is not considered a vulnerable household according to the representative of the affected leaseholder.</p>
Kattakurgan khokimiyat	Farmer with Sub-Lease Agreement SK016	7	<p>The individual providing the information is the affected leaseholder. The affected leaseholder is from Kattakurgan district of Samarkand, and now resides in the community of mahalla Melikhodja. The affected leaseholder is the HHH and part of a seven-person household.</p> <p>The affected leaseholder is Male and holds a long lease for the land which is the farmers main permanent place of farming or work. The affected leaseholder's primary residence is in Kattakurgan city, Kattakurgan. He travels approximately 20 minutes to get to the affected land – this is typically achieved by driving. The affected leaseholder lived in their Town or Village for 24 years and has maintained the same house throughout this time (having been born in the city). The affected leaseholder owns/uses one plot of land which are located in mahalla Melikhodja, Kattakugan and no other people currently use the land. Without this land, the affected leaseholder will still be able to continue his current income. The affected leaseholder does not believe they will be significantly impacted by the project; however he does consider the household to be vulnerable.</p>

Kattakurgan khokimiyat	Farmer with Sub-Lease Agreement SK009	5 (Male)	<p>The individual providing the information is an executive director of the land and a representative of the affected leaseholder which is a farming cluster, with permission to complete the survey on the affected leaseholder's behalf. The affected leaseholder of SK09 is from Kattakurgan district of Samarkand, and now resides in the community of mahalla Melikhodja. The affected leaseholder is the Household Head and part of a five-person household.</p> <p>The affected leaseholder is Male, holds a long lease for the land which is the farmers main permanent place of farming or work. The farmers primary residence is in Kattakurgan city, Kattakurgan. The affected leaseholder travels approximately five minutes to get to the affected land – this is typically achieved by driving. He lived in their Town or Village for 49 years and has maintained the same house throughout this time (having been born in the city). The affected leaseholder owns/uses one plot of land which are located in mahalla Melikhodja, Kattakugan and no other people currently use the land. Without this land, the affected leaseholder will still be able to continue his current income. The affected leaseholder does not believe that the household will be significantly impacted by the project; and it is not considered a vulnerable household according to the representative of the affected leaseholder.</p>
On Farm-site near Kattakurgan khokimiyat	Farmer with Sub-Lease Agreement SK015	6 (4 Male and 2 Female)	<p>The individual providing the information is the affected leaseholder. The affected leaseholder is from Kattakurgan district of Samarkand, and now resides in the community of mahalla Melikhodja. The affected leaseholder is the Household Head and is part of a six-person household including two sons and a daughter who are all under the official working age of 18 (currently attending primary school); a son who is under the official working age of 18 and has never attended educational services; and a wife whose main occupation is home maintenance (looking after home & family) and is literate (primary education – completed).</p> <p>The affected leaseholder is Male, holds a long lease for the land which is the farmers main permanent place of farming or work. The affected leaseholder's primary residence is in the Korrvat neighborhood in Kattakurgan city, Kattakurgan. He travels approximately 20 minutes to get to the affected land – this is typically achieved by driving. The affected leaseholder lived in their Town or Village for 40 years but has only lived in his current house for 11 years (having previously moved to the area through marriage). The affected leaseholder owns/uses three plots of land which are located in mahalla Melikhodja, Kattakugan and no other people currently use the land. Without this land, the farmer will still be able to continue his current income. The affected leaseholder does not believe that the household will be significantly impacted by the project; and it is not considered a vulnerable household according to the representative of the affected leaseholder.</p>

5.3.1 Livestock Rearing under the Overhead Transmission Line

Herding patterns across the farmers and herders vary although farmers and herders are present along the OTL, including winter months when many livestock can be lost due to severe frost. Leaseholder with Sub-Lease Agreement SK014 owns livestock (133 cattle).

The affected leaseholders' plots are used for a range of agriculture practices including to grow crops (SK009); for animal husbandry (SK014); and for afforestation (SK016). The area (hectares) of each plot is expressed in Table 5-6 below:

Table 5-6. Comparative Plot Size of Affected Leaseholders in OTL:

Affected leaseholder	Size of Plots (hectares)	What is the Plot of Land used for?
SK009	2295	Crops
SK014	403	Cotton & wheat
SK016	16	Trees
SK015	80	Animal husbandry

As noted, local residents of Kattakurgan khokimiyat use the Project Site to graze livestock and gain access to other grazing lands. The land along the transmission line is used for arable farming.

5.4 Vulnerable People

A vulnerability analysis was conducted across all the affected households including the historical leaseholders, leaseholders along the OTL and herders in the Solar PV Area. The following individuals and households were identified:

- Young Family (one household with three individuals identified)
- Elderly person (five households with five individuals identified)
- Household with member in poor health (one household with two individuals identified)
- Household with income under the poverty line (one household with four individuals identified)
- Household in financial difficulty/debt (nine households with 32 individuals identified)

The full vulnerability analysis and additional support provided is detailed in section 9 Table 9-1.

6. Assessment of Resettlement Impacts

6.1 Leaseholders

6.1.1 The Solar PV Area

The five historical leaseholders in the Solar PV Area have already experienced significant project impacts when their leaseholds were terminated or reduced to make way for the project. These impacts are explored further in the Samarkand Land Acquisition Audit which also includes an assessment of the historic resettlement process and the gaps under ADB safeguarding principles, however the mitigation of these impacts is included in this LRP.

All five leaseholders had recently been using the land for agricultural purposes at the time when they had to return their land in February 2020, this represents an impact on their livelihood and therefore entitles all of them for livelihood restoration.

Leaseholders experienced a reduction of land ranging from 66% to 100% reduction as outlined in Table 6-1 below. It is important to note however that the level of impact is not symmetrical to the quantity of land lost due to the varying qualities of land taken and investment made into that land.

Historic leaseholders 1,3 and 5 have stated that they were able to complete their harvest before returning the land and so did not lose any crops. These leaseholders also did not invest in their land and therefore will not require compensation for these entitlements. Despite this, these three leaseholders have still lost exclusive rights to land which is scarce in the area, because of the project and it is important to recognise the livelihood impact. Given that replacement land is not a feasible option due to the scarcity of available land, these leaseholders must be eligible for increased livelihood restoration in lieu of replacement land in accordance with international best practice (See the land enhancement grant available to all historical farmers outlined in section 10). Both leaseholder 3 and 5 expressed an interest in support and employment from the project and leaseholder 1 has already been employed by Masdar at the Wind testing lab earning 130 USD per month and suggested that the household did not need any further support.

Historic leaseholders 2 and 4 should be considered significantly impacted by the project as both households both heavily invested in their land and received no compensation for their investments and were put into debt by the project. Two brothers from Leaseholder 2 have left Uzbekistan to work in Russia in order to pay off their debts. Leaseholder 4 has been paying off debts by conducting seasonal work in Uzbekistan, including as a farmworker during the cotton harvests. Both historic leaseholders 2 and 4 therefore should receive compensation at full replacement value for their investments as well as increased livelihood restoration for loss of exclusive rights to the land (See the land enhancement grant available to all historical farmers outlined in section 10).

The disruption and hardships caused by the acquisition of land should also be recognised by the Project and thus leaseholders 2 and 4 should also receive a historic disruption allowance.

Table 6-1. Summary of impacts on historic leaseholders

Historic Leaseholder	Historic Land Size	Current Land Size	% Land Reduction	Investments made in the land	Estimated value of land investments lost
1	10 ha	3 ha of remaining land	70%	No investments made besides crops that were harvested.	N/A
2	12 ha	No land	100%	Drilling a well, building an overnight shelter.	UZS 83 million (private valuation)
3	60 ha	20 ha of new land	66%	Portable container used for shelter was relocated to new land.	N/A
4	67 ha	10.5 ha of new land	85%	Electricity connection, well, shelter, water towers and labour for ploughing, seedlings (see Figure 6-1).	UZS 57 million estimated but excess of 86 million spent on the new land trying to increase its productivity.

5	56.4 ha	15.8 ha of remaining land	72%	No investments made besides crops that were harvested.	N/A
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Figure 6-1. Well drilled by leaseholder 4 in the Solar PV Area



Figure 6-2. Destroyed building built by leaseholder 4 in the Solar PV Area



Figure 6-3. Land preparations by leaseholder 4 in the Solar PV Area



Figure 6-4. Irrigation channels dug by leaseholder 4 in the Solar PV Area

6.1.2 The Overhead Transmission Line

There are 4 households with leaseholds under the OTL, all of these leaseholds are used for the purposes of commercial farming. households are described in further detail in section 5.3



Figure 6-5. view of typical farmland under the OTL

The impact on these leaseholds along the OTL can be broken down into the following types:

Permanent land take: The footprint for the OTL towers will be required for the lifespan of the project and thus should be considered a permanent land take. Each tower has been positioned to reduce the impact on farm infrastructure and assets in consultation with farmers where possible. The permanent land take for each leaseholder is less than 0.001% of the total land in the leasehold and therefore permanent impacts on livelihoods will be negligible. Crops and assets lost in this area will however be compensated at full replacement value with a cash payment.

Temporary land take: The project requires temporary access to land in order to construct the OTL. This includes:

- Temporary access roads 6m wide to each tower in order for heavy machinery to access each site.
- An additional assembly area will be required for each tower.
- A 10m wide right of way will be required for a tractor to suspend the OTL between the towers.

Temporary impacts on leaseholds, such as loss of crops or damage to assets will be compensated in cash at full replacement value. Temporary impacts are relatively small with the largest impact being 4.20% of land taken (SK014)

Conditional sterilization zone: The area of land within 32m each side of the OTL itself is considered a “sterilization safety zone”. Farmers will be able to continue to use this land and will not be impacted by the construction however they will no longer be able to grow trees over 6 meters or build structures in this area. One leasehold (SK015) uses the land to grow a pear orchard however none of the trees exceed the 6-meter threshold.

The largest percentage of land impacted by the sterilization zone is 9.5% (SK015).

The percentage of each type of land take is summarised below for each leaseholder in Table 6-2.

Table 6-2. Project land take of leaseholders along the OTL⁴

Cadastral Parcel ID	% Permanent Land Take - Tower Area	% Temporary Land Take - Construction Route 18m and tower assembly area	Land with Conditions - Sterilisation Zone 64m
SK014	0.025	1%	3.9
SK009	0.004%	0.08%	0.2
SK0016	0.5%	3%	2.2
SK0015	0.13%	1%	9.5

Due to the temporary nature of construction, it is not expected that “orphan land” (land that becomes unusable or uneconomically viable because access to it is hindered or it is cut off from the main plot of land) will cause significant impacts. This is because construction of the pylons and the suspension of the cables will occur over a short period (a few days) and will therefore not hinder access. Any claims made by farmers regarding impacts of orphan land will however be addressed through the grievance mechanism.

6.2 Informal Land Users

6.2.1 Herders and feed gatherers

As described in section 5.2.2 and 5.2.3, the Solar PV Area is used by four communities to herd livestock and collect animal feed. There are nine known herds from the four communities which are regularly taken to the Solar PV Area by community herders or professional herders.

While the project will not eliminate community grazing areas, the majority of the area will no longer be accessible, and the remaining areas to the north and east will not be sufficient to sustain the current level of grazing.

⁴ Permanent and temporary land take calculated with data provided by the cadastral office and valuation company. Land within the sterilization zone calculated by the AECOM GIS department.

Unlike the solar sites at Sherabad and Jizzakh, community grazing land at Samarkand is not abundant and there is already conflict between herders and farmers over space which was mentioned in interviews with the historical leaseholders.

The impact on the professional herders should be considered significant as the project will directly interfere with their primary source of income. Impacts will also be experienced, albeit to a lesser extent, by all households in the community who own the herds who are taken to the project area by community herders or by the professional herders.

Because of the rotational nature of the community herders, and the potential for anyone in the community and elsewhere to access and use the lands for grazing, the impact on community herders and herd owners cannot be considered on an individual basis. Therefore, any livelihood restoration measures implemented by the project must be targeted at the herders collectively and should be equally accessible to all community members.

Professional herders whose primary source of income is through herding, should be given priority for employment by the project and also be given central roles in livelihood restoration initiative so that they may retain their income.

6.3 Affected Structures

There are no structures currently affected by the project in the PV area or along the OTL. Structures along the OTL were avoided in consultation with the leaseholders. There are however historic structures that belonged to historic leaseholders 2 and 4 which are mentioned in section 6.1 but these have already been considered in their private valuations and were destroyed by unknown persons.

6.4 Economic Trees and Crops

No economic trees or crops are affected in the Solar PV area. Trees and crops are however affected along the OTL where leaseholders have been farming. As described above in section 6.1.2 the loss of these trees and crops will have a negligible permanent impact and a minor temporary impact on the leaseholders who own them due to the small percentage of land take. All impacts to trees and crops will be compensated in cash at full replacement value.

6.5 Farmworkers

Leaseholders under the OTL typically employ seasonal and permanent farmworkers to assist them with harvest or with grazing livestock on the land. While the presence of these farmworkers is noted, the impact on them is considered negligible due to the small land take on these farms and the seasonal nature in which they are employed. There are no employed farmworkers who use the PV area.

6.6 The project access route

The final access route shall be considered during detailed design with the view to select the route that reduces the potential impacts to as low as reasonably practicable. Impact associated with the access road (including but not limited to traffic safety, land ownership, noise, dust emissions) shall be assessed prior to construction and existing roads will be used and thus physical or economic displacement is not expected. If any economic or physical resettlement is required for the access road, this LRP will be subject to an addendum to include any affected persons.

7. Eligibility & Entitlements

Eligible parties (covering individuals, persons, groups of persons, families, institutions, or any other entity) may make claim for compensation or livelihood restoration for the temporary or permanent loss of land or improvements made on the land which is directly related to the project.

Eligible parties include all persons with a formal interest on the land who are evident at the time of the socio-economic census and asset survey in the form of propriety ownership, co-proprietary, leasehold, tenants, or any persons with other limited interests. Within the Project Area at Samarkand, the only formal land rights belong to leaseholders, their household and employed workers, although the impact on the latter is considered negligible as described in section 6.5.

Eligible parties can be further expanded to affected persons – persons who gain a benefit or utilise the land or improvements made on that land irrespective of their legal standing. The term Affected Parties is more comprehensive and includes:

- 1. Formal or legal rights to land and assets consistent with national law.
- 2. Customary rights to lands and assets recognised under national law.
- 3. No recognisable legal right or claim to land or assets under national law, but occupy or use the land on a regular basis at the time of the survey are ignored / tolerated by the leaseholder.
- Herders and owners of livestock who are herded at Samarkand are included as affected persons.

This LRP establishes an Eligibility Framework that aligns the definition of affected persons based on both national law and international best practice. Where the definitions differ the higher or most inclusive definition has been adopted. The framework includes interests on both land and any improvements made on the land. Eligibility is defined in Table 7-1 below.

Table 7-1. Eligibility Framework

Type of Loss	Eligible Persons	Description
Exclusive rights to land	Leaseholder	The person, family, or collective entity with exclusive rights to the land
	Tenant	Tenants recognised by the Leaseholder that actively farm or utilised portion of the land separately or jointly with the leaseholder, but do not have any claim to land itself.
	De-Facto Occupant or User	Any person, family, or collective entity that utilises land without any form of secure tenure but are ignored / tolerated by the Leaseholder.
Structures and Other Fixed Assets	Asset-Owner	The person, family, or collective entity with uncontested ownership of any structures or other fixed assets, irrespective of their tenure status to the land on which the structures or fixed assets are built.
Crops and Trees	Crop-Owner	The person, family, or collective entity that solely tends annual and perennial crops and/or trees on land, irrespective of the type of tenure on that land.
	Cluster farmers	The person, family, or collective entity that tends annual and perennial crops and/or trees on behalf of the leaseholders and has an agreed quota of production on which their salary depends.
Business	Business owners (cluster farm owners)	Those with goods, service businesses operating on land which is to be acquired by the project.
	Employees (i. e. Farmworkers)i.e	The person, family, or collective entity that farms or provides any other source of labour to a leaseholder for a daily salary (irrespective of crop output or yield).
Community Structures	Affected Community	Any community that are the owners or custodians of any structures, infrastructure or immobile fixtures that is used for the collective benefit of the community.
Communal Land	Affected Community	Any community that are the owners or custodians of any community common land that is used for their collective benefit.

7.1 Eligibility Exclusions

The Developer has communicated a moratorium (“cut-off-date”) on the 18th November 2022 which defines the limits for eligibility in terms of time. The meaning of the cut-off date was communicated to each leaseholder during the asset survey. Parties who

establish assets or crops after the cut-off date shall not be eligible for compensation for those crops or assets. The Developer's grievance mechanism shall function to investigate and make decisions on contested eligibility.

7.2 Entitlement Framework

The Entitlement Framework (Table 7-2 overleaf) defines the types of compensation or in-kind resettlement assistance to be provided to eligible persons based on the type of asset that will be lost. The framework also establishes the conditions whereby eligible persons are granted allowances or access to livelihoods restoration programs. Where possible, a range of options is provided to allow the Developer and project-affected persons to select the most suitable form of compensation.

In accordance with lender requirements, **the Entitlement Framework was subject to consultation with stakeholders during the LRP Validation meetings.**

Justification for cash-based compensation for land: Along the OTL the amount of land lost is so small it is not practicable to provide more land as it wouldn't have any economic value unless it can be adjoined with existing land which is not possible. There is also no available land close to the site and so cash compensation and livelihood restoration (including land enhancement grants) have been provided in lieu of replacement land where larger historic leaseholds have been displaced in the Solar PV Area.

Table 7-2. Entitlement Framework

Nr	Loss of asset/ Description of impact	Eligible person or group	Entitlement	Applicability	Number of eligible households
Agriculture					
1	Loss of exclusive right of access to arable land as part of a leasehold	Owners or leaseholders of arable land	<p>OPTION 1: Provide replacement plot of equal or improved productive potential within the same or improved proximity to household. Secure tenure may be obtained within leasehold tenure types if the land provided does not place the owner at risk of forced eviction. If the replacement plot is provided in-kind, upfront administrative costs involved in provision of secure tenure will be covered by the Developer (such as survey costs, statutory lease fees in the case of leasehold tenure or administrative costs).</p> <p><i>NB: Option only available to leaseholds where over 10% of the land is due to be permanently acquired by the project or if 10% of the land becomes uneconomically viable as a result of the project. This threshold should be reduced to 5% where the leaseholder is critically vulnerable.</i></p> <hr/> <p>OPTION 2: Cash compensation based on the average monthly income from the land over the last three years multiplied by the number of months that the interruption occurs, or if permanent, multiplied by four years.</p> <p><i>NB: Option to be avoided for critically vulnerable leaseholders in favour of option 1 (if the amount of land lost is greater than 5% of total landholding)</i></p>	Active	<p>There are 4 households with leaseholds under the OTL</p> <p>There are 5 households with a historic leaseholds in the PV area</p>
2	Loss of land preparation or enhancements	Farmers (with formal or informal right of access)	<p>OPTION 1: Monetary compensation at replacement value, or government rate, or whichever is higher, for land preparation (including irrigation, electricity provision, clearing or ploughing) that existed at time of the survey, to be paid after delivery of entitlement for replacement land (if applicable), so that the compensation can be used for the intended purpose of land preparation.</p> <p><i>NB: Option to be avoided for critically vulnerable households in favour of option 2 (if the amount of land lost is greater than 5% of total landholding).</i></p> <p>OPTION 2: The Developer arranges for preparation of replacement land of equivalent productive potential, on replacement plot.</p> <p>AND</p> <p>1. A Disruption Allowance equivalent to 10% of replacement value for land preparation.</p>	Active	<p>There are 4 households with leaseholds under the OTL which will be entitled to compensation for land preparation that is impacted by the OTL</p> <p>There are 2 households with historic leaseholders in the PV area which lost land enhancement as a result of the project.</p>
3	Loss of Crops	Owner of crops	<p>OPTION 1: Compensation at (1) government-established crop rate, or (2) replacement value, for crops, whichever is higher for crops that existed at time of moratorium, that were unable to be harvested, to be paid any time before the planned removal of the said crops. To be multiplied by number of seasons of lost production. This option is only permissible for situations where harvest is not possible due to the project schedule and/or life cycle of the specific crop in question.</p> <p><i>NB: For critical vulnerable households who are below the poverty line or in financial difficulty compensation may be paid in instalments to maintain food security.</i></p>	Active	There are 4 households with leaseholds under the OTL which will be entitled to compensation for lost crops impacted by the OTL

		<p>OPTION 2: Allow harvest of current crop, for crops that existed at the time of the moratorium but provide compensation for future seasons lost at (1) government-established crop rate, or (2) replacement value, for crops, whichever is higher for crops that existed at time of the survey.</p> <p>AND</p> <p>1. A Disruption Allowance equivalent to 10% of replacement value of the said crops.</p>		There are 2 households with historic leaseholders in the PV area which lost crops as result of the project.	
4	Temporary loss of ability to farm crops within temporary access areas	Farmers (with formal or informal right of access)	<p>OPTION 1: Compensation at (1) government-established rate, or (2) replacement value, whichever is higher, and predicted total annual profit from harvest, multiplied by number of seasons required to re-establish crop to productive potential to be paid in annual instalments at harvest time. This option is only permissible where harvest is not possible due to the project schedule and/or crop life cycle.</p> <p>OPTION 2: Provide transitional food support packages equivalent to lost harvest of farming households, during resettlement transition period. This option is only permissible for situations where harvest is not possible due to the project schedule and/or crop life cycle.</p> <p><i>NB: Option only available to leaseholds where access to over 20% of the land is temporarily lost</i></p> <p>AND</p> <p>1. A Disruption Allowance equivalent to 10% of replacement value of the said crops.</p>	Active	There are 4 households with leaseholds under the OHTL which will be entitled to compensation for temporary loss of ability to farm
5	Permanent loss of primary agricultural livelihood	Farmers (with formal or informal right of access) Business owners Employees or informal workers	Livelihood restoration targeted at improving and enhancing the livelihoods of the affected farmers and herders. Various livelihood restoration options may be included and will be proportionate to the level of impact. Livelihood restoration measures are detailed in section 10.	Active	<p>5 Historical leaseholders have experienced impacts on livelihood and so will be entitled to livelihood restoration.</p> <p>4 households with leaseholds along the OTL which will be entitled to livelihood restoration.</p> <p>42 Herding households will experience an impact on livelihood and will be entitled to livelihood restoration.</p>
6	Loss of productive fruit trees	Owner of trees	<p>OPTION 1: Provision of monetary compensation as determined by (1) government-established compensation rates, or (2) the cost of replanting plus cumulative lost income from productive trees (i.e., replacement rate) until tree can be re-established, whichever is the higher, for trees that existed at time of moratorium.</p> <p>For vulnerable households the compensation of lost income must be paid in periodic instalments covering the period between the loss of trees and for new trees to become productive.</p>	Active	One lease holding household along the line will lose productive trees as part of temporary impacts and

			OPTION 2: Provide replacement trees and pay for lost harvest until replacement trees reach productive age. For critically vulnerable households consider providing transitional food support packages equivalent to lost harvest of affected households for time period required for replacement trees to become productive, for trees that existed at time of moratorium. If monetary option for lost harvest is chosen, this should be paid in instalments, to enable use for intended purpose of providing for lost interim harvest.		will be entitled to compensation.
7	Loss of farm shelter, structure or built assets	Owner of shelter Informal users of shelter	OPTION 1: Provision of monetary compensation as determined by (1) government-established compensation rates, or (2) replacement value, whichever is higher, for farm shelters that existed at time of moratorium. OPTION 2: Provision of partial monetary replacement value compensation for labour, transport and transaction costs, and a package of replacement materials to enable construction of improved replacement farm shelter. AND 1. A Disruption Allowance equivalent to 10% of replacement value of the said farm shelter. 2. Permit the salvage of non-fixed materials	When Necessary (i.e if accidental damage occurs)	No lease holding households along the line will lose structures. h 1 household with a historic leasehold had buildings in the project area that were lost as a result of the project. These have already been valued.
8	Loss of Informal access to land	Informal users of land	Facilitate through the provision of support and technical advice, a formal (security of tenure) Lease/Sub-Lease Agreement including the payment of any administrative costs such as taxes, transaction, registration fees, etc. AND Cash compensation to reflect the income lost through land-access restrictions where this can be demonstrated to have occurred as a direct consequence of the changes in land use arising from the Project AND Other practical support necessary for informal land users to re-establish their livelihoods elsewhere, including the provision of livelihood restoration measures	When Necessary	No informal farmers with assets or crops have been identified. Herders do use the land and the community will be supported to secure remaining land for herders as part of livelihood restoration.
Permanent Loss of Communal Natural Resources					
9	Loss of Natural Resources, grazing land / Communal Land	Herding community as whole	OPTION 1: Identify alternative communal grazing land at an appropriate proximity to the land users and where necessary increase the carrying capacity of said land or improve access to alternative land. OPTION 2: Community Livelihood restoration initiative with sustainable agriculture project on replacement or remaining land. ,	Active	The land is used by herders (42 households)
Vulnerable Households					
10	Vulnerable or disproportionately affected households	Vulnerable households	A range of other specific assistance measures will be provided to support vulnerable and disproportionately affected people to reflect the specific vulnerability identified. For example, elderly persons and individuals with health issues will be provided with more frequent visits and communication to ensure that they are kept calm and closely informed during implementation of the LRP.	Active	15 Vulnerable households identified

11	Critically Vulnerable Households with no member able to partake in subsistence or economic activities.	Critically vulnerable households	<p>OPTION 1: Engage local government to place them on welfare scheme.</p> <hr/> <p>OPTION 2: A vulnerability allowance equivalent to minimum wage will be provided for six months to the household. The payments will be paid on a monthly basis.</p>		
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Gender

12	Gender inequality	Marginalised women in the household or community	For households significantly impacted (above 20% of land displaced by the project) All spouses to be registered as co-owners of assets prior to compensation. All compensation is to be paid to all spouses, and in cases of dispute, divided equally between spouses. All spouses to be co-signatories of all compensation agreements.	Active	Women as part of households with historical leaseholds or herding
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No-Shows/Absentees

13	No-Shows/Absentees	Owners of crops or assets which are absent at the time of survey or compensation process	Assets or crops for which the owner/s cannot be located shall be surveyed, and the value of the total compensation package (monetary and in-kind) calculated and placed within a third-party escrow account where funds are held in trust for a period of 5 years. After a 5 years period has elapsed without an asset owner making a claim, the funds will be disbursed to community development activities targeting the respective village, based on needs as determined in consultation with the Community Resettlement Committee at the time of disbursement. Should the asset owner make a claim before the 5-year period, and be able to furnish proof of asset ownership, the funds shall be disbursed to enable the asset owner to replace the affected assets.	When Necessary	No absentees identified
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Historic Impacts

14	Significant hardship caused by loss of investment in the land which was not compensated		Households that have been put into financial difficulty and experienced hardship as a result of loss of investment in the land without compensation should receive an additional disruption allowance to recognise the stress and upheaval caused by the project. The allowance should be a cash package equal to 30% of total compensation owed.	Active	2 historic leaseholders were put into dept by the project due to lost investments which were not compensated.
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8. Valuation & Compensation

8.1 The valuation regulations in Uzbekistan.

The following national laws have governed the valuation process:

- The Law About Valuation Activities (Amended 2009) which envisions that valuation is a licensed activity and the valuers should be licensed and independent (article 4). It envisages the events when valuation is mandatory including in case of acquisition of assets (article 11).
- Resolution of the Cabinet of Ministers (25 May .2011), №146 “About measures to improve the procedure for allocating land plots for urban development activities and other non-agricultural purposes” (Annex 2 – Regulations on the identification of possessors, users, tenants and landowners, and loss of agricultural and forestry production); This resolution provides the methodology and formular for calculating compensation values.
- Resolution of the Board of the Central Bank of Uzbekistan About Approval of the Procedure of valuation of the land lease rights (08th April 20014) by the Ministry of Justice.

8.2 Valuation principles for this LRP

In accordance with International Best Practice, and all project sponsor standards, all compensation for crops, trees, assets and income will be based on full replacement value, which includes the market value of losses and any other transaction costs, interest accrued, transitional cost without any deductions for taxes, depreciation or materials which can be salvaged.

All affected people who have crops, assets or structures that are impacted by the project will be entitled to compensation, irrespective of their legal tenure in the project area.

Compensation will be issued prior to any adjustment of leases or land take by the project for construction.

Affected persons will have the opportunity to appeal the valuation amounts and this will trigger a re-valuation by another independent valuation company.

The principles followed for each type of compensation is broken down further below:

- Compensation for standing crops will be at replacement value based on one year of production costs and an allowance equivalent to one-year average net income based on the average income over the previous three years.
- Compensation for fruit producing trees will be based on the average income from the past three years multiplied by the years required for the tree to reach productive maturity and the cost of planting new saplings. Trees that are immature will be compensated based on the cost for planting and growing replacement trees to the same age.
- Compensation for structures is not expected to be required due to the OTL tower locations being optimised in consultation with the farmers however any unexpected damage to structures caused during construction will be based on full replacement value in accordance with the Entitlement Matrix.
- Compensation for loss of income/livelihood will be compensated based on the average monthly income for the last three years multiplied by the number of months that the interruption occurs.
- Cash compensation for permanent loss of land leased based on the average monthly income from the land over the last three years multiplied by multiplied by four years.

8.3 The valuation process

The valuation process was carried out by a local government approved valuation company in Uzbekistan with experience conducting valuations of this kind including for previous projects sponsored by ADB. The name and credentials of the valuation company are below:

- **Company Name & Address:** BAHOLASH INTEGRAL" LLC, Tashkent, Yunusabad district, Bodomzor str, 3, room 7,8,9
- **Credentials:** Membership certificate of the Public Association "Society of Appraisers, Experts and Consultants of Uzbekistan" No. 087 dated 06/15/2022
- **Insurance:** The insurance for professional activity of JSC "Kafolat" Registration number No. 15.01.2022/70-01 dated June 15, 2022. Valid from 06/16/2022-06/15/2023.

To conduct valuation activities the company is required to be a member of the Public Professional Organization.

The valuation process took place during the period from 15th September to 18th November 2022 and involved the following steps:

- Each household with a Sub-lease Agreement affected by project infrastructure (this includes the OTL but not the Solar PV Area which was historically vacated) was contacted to have a one-to-one meeting with the valuers and the district Khokimiyat at the district Khokimiyat office. Leaseholders were given an opportunity to submit any outstanding tax statements for their leases which will be used to calculate the average income from the land.
- Once the project infrastructure co-ordinates were fixed, the co-ordinates were sent to the Ministry of Energy to make an official land order for both permanent and temporary land.
- A committee was then set up which involved the following agencies:
 - Regional Khokimiyat
 - District Khokimiyat
 - District Cadastre
 - District Agricultural Department
 - District grid representative
 - Representative of valuation company
- Each cadastral parcel as part of a leasehold was examined to calculate the following land takes and impacts:
 - Permanent land take (required alterations to Sub-Lease Agreements)
 - Temporary land take (damages to crops, trees and infrastructure)
 - Damages to trees imposed by the sterilization zone height limit of 6m
- The value of lost income for permanent and temporary impacts was calculated using the above calculated land take and also the average income of the land recorded over the past three years.

The valuation provided almost final but may be subject to small changes after the disclosure process is completed to allow affected persons to submit any further documented evidence which may change the final valuation.

The valuation provided below will expire one year after the date when the valuation process began (15th September 2023) after this date, if compensation has not been paid to the affected households, a revaluation must take place and the compensation amounts must be updated.

8.4 The compensation process

The compensation methodology, payment terms, amounts and additional support have been disclosed to each household. Bank details have been collected and farmers without bank accounts have been supported to open bank accounts.

Legal agreements will be drafted by the District Khokimiat and the District Agricultural Department and signed by the company and affected household. These agreements will clearly state the total amount of compensation and support and the timing of payments.

Farmers will be notified when compensation is due for payment. The household will still have an opportunity to challenge the valuation after payment either by raising the issue directly with the District Khokimiyat or via the project grievance mechanism. This will trigger a re-valuation and if there is sufficient evidence that something was previously omitted the valuation will be amended.

Payment will typically be made using bank transfer or if preferred a cheque. The project will ensure that the type of payment is agreed before issuing payment and will ensure that the mode of payment is accessible to the affected household. A receipt of payment will be issued to both the affected household and to the company.

All agreements and payment receipts will be kept in a safe and organised manor by the company.

A summary database of payment will be maintained by the company and will inform monthly monitoring of the LRP.

8.5 Summary of final valuation results⁵

Table 8-1. Summary of valuation results

Cadastral ID	TOTAL (UZB)	Total (USD) ⁶	10% Disruption Allowance (100 USD minimum)	Total (USD)
SK014	63,389,382.61	5,578.27	557.83	6,136.09
SK009	32,490,414.78	2,859.16	285.92	3,145.07
SK016	47,449,653.23	4,175.57	417.56	4,593.13
SK015	1,590,000.00	139.92	13.99	153.91

Total Compensation & Disturbance Allowances: 14,028.20 (USD)

⁵ The above results quoted above have been calculated based on balance sheets provided by the affected households to the valuation company and are now final.

⁶ USD amount calculated using an exchange rate of 0.000088 on the 23/03/2023

9. Safeguarding Vulnerable People

The Project has the potential to impact vulnerable groups and individuals. Vulnerable people are defined as those who might be disproportionately negatively impacted by the project or who might not be able to take full advantage of project benefits. Table 9-1 below includes the typical categories for vulnerable people considered in the LRP, however it is noted that the identification of vulnerable people should not be a formulaic process and some vulnerable people may not fit into a particular category below.

Table 9-1. Vulnerability categories

Vulnerability	Explanation
Young families or orphans (where the parents are under 30) who have lost both parents	Affected people who are orphans and living with other relatives in a household are likely to be particularly susceptible to any changes in their socio-economic status in the absence of parents who would otherwise be economically active. They may also be looked after by elderly relatives.
Families with disabled parents or children	Families with a disabled adult or child are likely to be particularly susceptible to any changes in their socio-economic status, due to the need to provide care for the affected person.
A widower	A widower is likely to be particularly susceptible to any changes in their socio-economic status, due to the need to provide care for children without a partner who is economically active.
A single parent family	Single parent families are likely to be particularly susceptible to any changes in their socio-economic status, due to the need to provide care for children without a partner who is economically active.
A single retired person	Retired people are likely to be particularly susceptible to any changes in their socio-economic status due to limited sources of household income.
An elderly person (over 65 years old)	Older people may not be as economically active compared to younger people and may be more vulnerable to any change in their livelihood or living conditions. Older people may also experience greater mental stress when dealing with significant change.
Women in the family	Women are often marginalised individuals within the family household and may not be included in decision making around money or land. Women's views on how to spend compensation or which livelihood support to choose from may not be recognised.
Anyone farming or investing in the land without a legal title	Farmers who have invested in land which they hold no formal legal title are vulnerable because they are at risk of losing significant investment in the land if removed (by the project, government or title holder) without compensation or support. Even when the project intends to compensate informal land users, there is a risk that formal title holders may opt to evict informal farmers in anticipation of the project.
People in poor health	People living with physical and/or mental disabilities, or poor health status, may be vulnerable as they may experience difficulties in accessing Project-related (and non-Project-related) employment opportunities and/or undertaking livelihood activities, thereby constraining their ability to provide for themselves, leading to a reliance on relatives, community members, NGOs, and the government for support. People living with physical and/or mental disabilities, or poor health status, may be subject to discrimination and marginalisation in the workplace and/or the local community. Differential treatment and/or exclusion in these settings may lead to social isolation and reinforce the vulnerability of this group. People living with physical and/or mental disabilities, or poor health status, may need specific types of assistance to be kept adequately informed about the Project, resettlement choices, and may not understand written documents used during a resettlement implementation process. They also be discriminated against which could lead to reduced access to health care, thereby exacerbating the health problems experienced by this category of vulnerable group.

People who are discriminated against	People who experience discrimination are typically unable to be influential within the community, assist in decision making processes, and 'be heard'. People who experience discrimination can find it difficult to access employment opportunities which reduces their potential to generate income.
Households in financial difficulty or under the international poverty line of \$2.15 per day (World Bank, 2022)	Households in substantial debt may use any cash provided to clear (some or all) of their debts instead of using the money to restore their livelihood and standard of living. Additional support may be needed to these households. Households who have a very low-income are also considered to be vulnerable as any minor change in their livelihood could have significant effects.
Households with a member who is addicted to drugs or alcohol	Households with members who suffer from addiction to drugs or alcohol may be vulnerable as the household member may be inclined not to spend compensation in a way that will benefit the household as a whole. Members who suffer from addiction may also not attend any livelihood restoration initiatives.

Households or individuals who fit into one of the above criteria were identified using several information sources:

- Socio Economic Census: The socio-economic census of leaseholders and informal land users included a number of questions to identify vulnerable individuals, including household demographics, health of family members, sources of and income level.
- Women and Youth Notepad: The local Khokimiyat keep a record of vulnerable women and youth which have requested support. These are known as the Women and Youth "note pad". The Khokimiyat provided a list of known vulnerable Women and Youth that are known within the affected households.
- Key informant interviews: Interviews with Khokimiyat, local Mahalas and affected people were also used to identify any vulnerable households or individuals.
- Background research: Some groups cannot be easily identified individually in a survey due to affected person to reveal personal information but are known to exist through background research. Marginalised women in the household are one example of this.

The vulnerable groups and individuals identified in the above categories are summarised in Table 9-2 below with a justification for additional support and the type of support identified:

Table 9-2. Vulnerability Analysis

Vulnerability Category	Identified in the project area	Additional support required? (justification)	Additional support measures
Young families (where the parents are under 30) or children who have lost both parents	1 young family identified (parents aged 29 and 30), 3 individuals	No - No evidence they will be disproportionately impacted more than other families.	N/A
Families with disabled parents or children	2 individuals Identified	Yes – One herder household includes a member who suffers from a mental disability who will not be able to participate in engagement activities or livelihood restoration. Yes - One historical household includes a member with a physical disability who may not easily be able to participate in engagement activities or livelihood restoration.	All engagement historical household should be at a location accessible to the disabled family member or with a member of the family. Herder with mental disability will not be able to attend engagement activities and will require a household member to attend so that they can explain to the member where the project will be located and how this will impact herding practices. An alternative family member will need to participate in engagement activities and livelihood restoration. For the herder household with 2 members in poor health, another household member will need to participate in engagement activities and livelihood restoration. Households will be subject to additional focused monitoring during implementation of the LRP. If the household wishes to spend Livelihood Restoration packages on supporting the disabled family member rather than on investment in land, this will be permitted. The household will be encouraged to contact the Khokimiyat for further benefits and support if it has not already. The project will support the household to access existing government disability benefits by liaising with the local Khokimiyat. The project will offer critically vulnerable households' preference in employment opportunities.
A widow	None identified	N/A	N/A
A single parent family	None identified	N/A	N/A
A single retired person	None identified	N/A	N/A
An elderly person (over 65 years old)	5 households (identified (one also listed above with disability), five individuals	Yes – The household relies on a low government pension for income and will therefore be disproportionately impacted by any change in income.	Households will be subject to additional focused monitoring during implementation of the LRP. Household members will be offered preferential employment. The household will be encouraged to contact the Khokimiyat for further benefits and support if it has not already. The project will support the household to access existing government disability benefits by liaising with the local Khokimiyat.
Marginalised women in the family	Group identified as at risk	Yes – There is potential for disproportionate impacts and therefore precautionary measures must be put in place.	The LRP process will include a requirement for co-signatures where necessary. Specific livelihood restoration measures will be targeted at women and land enhancement grants (for historical farmers) will be split between farmer and spouse.
Anyone farming or investing in the land without a legal title	None identified – Herders use the land but have not invested.	N/A	N/A
Household with member in poor health	2 Individuals identified in one household.	Yes - One herder household includes two members with poor health who may not be able	Another household member will be invited to participate in engagement activities and livelihood restoration.

		to participate in engagement activities or livelihood restoration.	Households will be subject to additional focused monitoring during implementation of the LRP. If the household wishes to spend Livelihood Restoration packages on supporting the disabled family member rather than on investment in land, this will be permitted. The household will be encouraged to contact the Khokimiyat for further benefits and support if it has not already. The project will support the household to access existing government disability benefits by liaising with the local Khokimiyat. The project will offer critically vulnerable households' preference in employment opportunities.
People who are discriminated against	None identified, all are Uzbek and confirmed they are not discriminated against.	N/A	N/A
Households under the poverty line of earning \$2.15 per day	1 herder households identified which is on the poverty line (with 4 individuals), 3 more just above.	Yes - Any impact on income will have a disproportionate impact because it will affect their ability to meet basic needs such as buying food.	Household will be subject to additional focused monitoring during implementation of the LRP comparing income levels to baseline levels. The household will be encouraged to contact the Khokimiyat for further benefits and support if it has not already. The project will offer vulnerable households' preference in employment opportunities. Transitional support (available to herders until livelihood restoration is underway) may be extended for vulnerable households in financial difficulty.
Households in financial difficulty/in dept	9 identified, 32 individuals.	Yes - Two historical households have been put into dept by the project because they did not receive compensation. They are already disproportionately impacted. Yes - 6 herder households reported to be in dept due to education costs, credit for business or to pay for assets such as livestock or technology. Any impact on income will have a disproportionate impact because it will affect their ability to pay off debts.	Household will be subject to additional focused monitoring during implementation of the LRP comparing income levels to baseline levels. (Historical households) If the household wishes to spend Livelihood Restoration packages on paying off dept this will be permitted, however it would be encouraged to invest any compensation into land improvements which will enable to the household to sustainably generate additional income which will pay off depts and improve livelihoods into the future. The household will be encouraged to contact the Khokimiyat for further benefits and support if it has not already. The project will offer vulnerable households' preference in employment opportunities. Transitional support (available to herders until livelihood restoration is underway) may be extended for vulnerable households in financial difficulty.
Youth who are unable to take advantage of project benefits	None identified	N/A	N/A
Households with a member who is addicted to drugs or alcohol	None identified	N/A	N/A

10 Livelihood Restoration

As detailed in the entitlement matrix, affected households, people and groups are entitled to livelihood restoration in addition to their compensation. The objective of livelihood restoration is to address the livelihood impacts on them as described in Section 6.

10.1 Stakeholder Feedback & Participation

During interviews with Mahalas, Khokimiyat, affected households and other stakeholders, a number of possible livelihood restoration and community support measures were discussed at several stages during LRP development, these discussions are outlined below:

10.1.1 During initial data collection in September 2022 and October 2022

During discussions with the design team and interviews with herders, Mahalas, Khokimiyat and other community members possible livelihood restoration measures were discussed. The following options were discussed and ruled out for reasons explained below:

- Maintaining access to for herders to graze inside the Solar PV Area, between the panels was discussed with the design and engineering team however the health, safety and liability risks were too high for this option to be considered feasible. It was however concluded that allowing selected community members inside to collect feed manually, without bringing in any livestock could be possible.
- Creating vertical wheat feed banks was discussed as a potential option with herders as this is something that has been practiced in the community. This option was however considered less favourable than collecting feed from within the project area and so is not included in the below options. Vertical wheat feed banks could however be considered as a backup option if access to the Solar PV becomes unviable in the future and training on feed growing technology has been added.

The following Livelihood Restoration options were also discussed in September 2022 with the herders, Mahalas and Khokimiyat which are the most viable and this includes:

- Provision of training to be provided to all herders and other community members who wish to attend. The training will focus on animal veterinary health including how to identify common diseases, how to treat common diseases and injuries. This option was put forward by AECOM and discussed with herders, Mahallas and Khokimiyat.
- Assistance provided to the Mahallas to formally secure the remaining grazing with a leaseholder Agreement in order to protect it from future claims by other farmers or projects. The Mahallas would form a co-operative which would be legally be able to take out a leasehold on behalf of the community. This option was however deemed to be less feasible following further consultations in November 2022 as detailed below.
- Preferential employment of herders by Masdar during both construction and operation where possible. Provision of employment is a very common request by all people interviewed as part of the ESIA and LRP.

10.1.2 During consultations in November 2022 and LRP Verification in December 2022 and January 2023

During engagements in November 2022, further feedback was obtained from farmers along the OTL, herders and historical farmers about their preferences for livelihood restoration. A number of options were given to each for feedback. The following outcomes were obtained:

- All 5 historic farmers expressed an interest in both the land enhancement grant (with technical advice) and also employment by the project. All Historic farmers all expressed an interest in using their grant to buy sheep and to invest in the land.
- All 4 Farmers along the OTL line and their spouses expressed an interest in training on business and finance, increasing agricultural yields, veterinary training and also meat, milk and wool processing (Land enhancement grants were not an option presented to farmers along the OTL due to the very small impact). Two farmers requested specialist support with irrigation, one requested support to improve irrigation to a 20ha pear orchard which has faced issues with water supply and trees are dying, the other household specifically requested training on irrigation.
- All 42 Herders expressed an interest in access to the Feed Collection at the Solar PV Site and also the provision of materials for storage of feed and 23 of them expressed an interesting in training on milk, meal production and sewing.
- The community is interested in jobs during the construction. They asked to keep them informed of the vacancies and construction timeline. The community also expect company support in securing the left pastureland in the northwest of the project site for community pasture needs.

- The likelihood of the local community securing the remaining grazing land under a leasehold was put into doubt following consultation with Khokimiyat and Mahallas. This is because of the new land auction system put into place in Uzbekistan in February 2022 which means the cost of security land has risen significantly and the Khokimiat no longer has the ability to allocate land.

10.1.3 During ESIA & LRP Disclosure in February 2023

The project engaged with farmers, herders and specialists' organisations such as the Veterinary Department, Regional Agricultural Department, Mahalla foundation and the Youth and Women representatives from the District Khokimiyat to further understand community needs, challenges and opportunities for livelihood restoration. Engagement with NGOs was sought but it was confirmed by the above stakeholders that there are no NGOs operating in the area, only semi-government organisations. The outcomes of these meetings are discussed below in section 10.2.

10.2 Community Challenges, Needs and Opportunities

Following all the engagements mentioned above, a number of community needs, challenges and opportunities were identified which are detailed in the section below:

10.2.1 Lack of water for irrigation

Throughout all engagements with communities and farmers, access to water was continuously raised as a key challenge for farming. Particularly in the summer months, the area is very dry and getting access enough water for farming can make the difference between productive land and unproductive land. Irrigated land is considered significantly more valuable than "rain-fed" land due to the lack of rainfall. This issue was confirmed by all historical farmers interviewed and two farmers along the OTL who requested support for finding ways to improve access to water. The Regional Agricultural Office also confirmed that lack of water was the main challenge faced by farmers and there was a lack of organizations proposing effective agricultural technologies and a lack of specialists.

While access to water is likely one of the most significant challenges for the community, it is not feasible for the project to be able to assist with this issue directly. Improving access to water to all affected households would require significant irrigation engineering, the costs of which would far exceed the funds available from the project and would make the solar project un-economically viable. Local farmers have however expressed interest in learning about irrigation and water saving techniques.

Need/Opportunity: As requested by historical farmers and farmers along the OTL there is an opportunity for the project to provide training on improved irrigation techniques. The use of Solar technology in pumps could be included in this training, this wasn't specifically requested at Samarkand but was popular at other sites (Sherabad and Jizzakh) and would be a beneficial addition to this training.

10.2.2 Livestock issues

Engagement with the University Vet Department revealed that there are common livestock issues in the region including liver parasite and Fatcellosis. The University Vet Department confirmed there is a lack of knowledge of livestock issues and the best breeds. The department confirmed that local communities typically buy from the Kattakurgan city market but would benefit from using breeding farms instead. The department confirmed that Simmental Cattle (a local breed) and Merino Sheep (From Kazakhstan) where the most suitable for breeds for the area.

Need/Opportunity: The University Veterinary department confirmed that the provision of training to livestock owners by the project on how to identify common diseases, injuries and issues would give positive results. The Regional Agricultural Office also suggested that Intensive animal husbandry and stall keeping of livestock could be included in this training could be included due to the decreasing amount of land (linked to the issue below).

10.2.3 Scarcity of herding land and overgrazing

The Mahallas, Khokimiyat, Cadastral Office and Regional Agricultural Office have all raised the issue of land availability for herding as a major challenge that is worsening. Conflict over land was raised by the historical farmer 4 during interviews who explained that before her land was returned for the project, local herders would often use the land in her leasehold without her permission which resulted in aggressive confrontations. These finally resulted in her coming into an amicable agreement with the herders to share the land, however then the land was taken for the project. The scarcity of land at Samarkand is not unique and reflects an issue all over Uzbekistan as more and more unoccupied land is being allocated to bidders for private leaseholds and the district Khokimiyat has less power to control this process. Land leaseholds are frequently being purchased by wealthy individuals from Tashkent or Samarkand City who can outbid local people. The issue at Samarkand will also be exacerbated by the project itself which will take a large proportion of the land away and impact herding as described in section 6.1.1. The project is however hastening an overall trend in the country to which communities will need to adapt. As available grazing land is reduced, this puts additional pressure on the remaining land which is becoming more and more overgrazed and the quality of the land decreases.

Need/Opportunity: Herding is currently the cheapest way to feed livestock in the area (animal feed costs around 500 USD per tonne if purchased on the market), however as land is becoming scarcer, more technologies are being used to grow feed in a concentrated way, this is already occurring in more developed areas near cities. There is a need for the project to provide training and technical support to herders on alternative methods and technologies to feed livestock in absence of available grazing land. Knowledge of concentrated feed growing technologies such as vertical feed banks will give herders the ability to expand their options of how to feed their livestock.

Need/Opportunity: There is also an opportunity for the project to provide herders with access to feed growing inside the PV area itself. The grass in the Solar PV area will need to be cut down by the project to ensure it does not obstruct sunlight from the solar panels. Rather than dispose of this grass, the project could provide it to livestock herders.

10.2.4 Lack of employment for women

Engagement with community members and the Deputy Head of District on women and family issues confirmed that lack of employment is a challenge in the area for men and women and that the Deputy Head is trying to support women in self-employment. There is a lack of career orientated jobs and there is also a common assumption among the community that women lack the necessary skills and experience to be employed by projects and so they typically will not apply to job opportunities. Women are generally unemployed for much of the year and will only take seasonal work. The issue of local employment is therefore challenged by both a genuine lack of skills, but also local perceptions. The lack of jobs means that women lack entrepreneurial skills and basic financial and business plan skills in order to develop an income without formal employment. There is also no public or private kindergarten in the area which puts additional burden on women.

Need/Opportunity: Deputy Head of District on women and family issues on women's issues explained there is an opportunity for the project to provide training to local women on tailoring courses, confectionery courses and business skills.

10.2.5 Low skill level and local employment with the project

Employment is by far the most requested project benefit and expectations around employment are high. One of the challenges the project will face is finding suitably qualified individuals locally to work during the construction phase and operational phase. Many local people with lower incomes will typically conduct seasonal construction work in Russia, Kazakhstan or elsewhere in the summer months. This is something they normally have to commit to in advance and while their preference might be to remain in the local area and work on the project instead, they have to commit to expat work early to guarantee an income for their family. The Karamatov Beknazar, District Youth Agency confirmed that unemployment is high among young people and vulnerable people particularly and this is one of the reasons of divorces among young families. Vulnerable young people are included in the "Youth Register" and "Women's Register" organized by the Khokimiyat and it is Government's priority to provide jobs opportunities for youth in these lists.

Need/Opportunity: There is a need to maximise local employment opportunities by the project and priority should be given to affected households, particularly vulnerable households and youth. This is included as a livelihood restoration measure for affected households, but it will also be integrated as part of a wider local employment plan.

10.2.6 Lack of Market Exporting & Logistics Knowledge

During the verification meetings at Samarkand, farmers raised the challenges of marketing and exporting agricultural produce and the Regional Agricultural Office confirmed that knowledge logistics is a key issue. It is necessary for farmers to create opportunities and improve logistics for sale and export. It's also important to have better technologies for crops storage.

Need/Opportunity: It was suggested that the project could provide training and advice to farmers to help them find local buyers who can sell their produce in larger markets and also provide advice on obtaining export licences. The regional agricultural office suggested the following topics should be included: Intensive gardening and storage of fruit and vegetables.

10.3 Summary of Livelihood Restoration Measures

Table 10-1. Summary of Livelihood Restoration Measures

Initiative Name	Target Recipients
Land Enhancement Grant	Historical F=farming households who held leaseholds within the Solar PV area
Training on Veterinary Health	Herders and farming households

Entrepreneurial Training for Women on Animal Produce	Women in affected households
Training on Irrigation Technology for Crop Yield Improvement	Historical farming households and farming households along the OTL
Training on Market Knowledge, Logistics and Exporting	Historical farming households and farming households along the OTL
Business and Financial Training	Historical farming households and farming households along the OTL
Technical Advice on Land Auction System	Mahallas
Training on Overgrazing & Alternative Feed Sources	Herding Households
Feed Collection in the Solar PV Area	Herding Households
Guaranteed Employment & Pre-Employment Training	Historical leaseholder households (one member per household) Professional Herding Households (one member per household)
Preferential Employment & Pre-Employment Training	All affected households
Transitional Support for Herders	Professional Herding Households and Vulnerable Herding Households

10.4 Detailed Livelihood Restoration Measures

Further detail of each livelihood restoration measure is outlined in further detail in Tables 10-2 – 1014

10.4.1 Land enhancement grant

Table 10-2. Land enhancement grant

Title	Description
Target Recipients	Historical Leaseholds in the PV area who lost rights to land in 2019.
Description	<ul style="list-style-type: none"> Land enhancement grant (or provision of materials, land or livestock) and technical advice given to historic leaseholders that have permanently lost a significant portion of their land to the project in order to improve the capacity of remaining land. This land enhancement grant will be issued in lieu of replacement land of which availability is scarce in the area. The value of the cash allowance will be 3000USD for households 1, 3 and 5 split equally between spouses. Farmers 2 and 4 will receive 6000USD split equally between spouses. This higher amount is to recognise the significant historical impact imposed on these families by the lack of compensation paid in 2019 and their subsequent falling into debt as a result. Payment should be conditional on it being spent to improve the capacity of the remaining land OR for improving wellbeing of the household. Free consultation and technical advice should be given to recipients of cash compensation in order to understand how they wish to invest the money and caution against possible poor investment (e.g a water well in an area where there is little chance of success). Consultation with historical farmers revealed that most farmers wish to spend the grant on livestock. The most appropriate breed of livestock for the area are Merino Sheep (Cost 350USD each) and Simmental Cattle (Cost 3000 USD each).
Objectives & links to community needs or market opportunity	<p>The overall objective of the land enhancement grant is to improve the livelihoods of five farming households that have been historically impacted by having their leaseholds terminated in the Solar PV site. 4 out of 5 Households have other alternative land which they use, and the grant will enable them to improve/enhance their livelihood by gaining higher financial returns from this land by making improvements and buying livestock. The other farmer is located outside of Uzbekistan but plans to return and invest in land with this grant.</p> <p>The households can keep their livestock until such a time when they will sell them to the Kattakurgan city market</p>

Title	Description
Risk Prevention	<p>Risks:</p> <ul style="list-style-type: none"> • Grant provided in cash could be poorly invested by the household, for example on a well that does not produce enough water. • Increase in local price of materials due to project construction. • Unmet expectations regarding the quantity of cash provided. • Unanticipated failure within 6 months (e.g the death of livestock or seedlings) <p>Prevention Measures:</p> <ul style="list-style-type: none"> • The project will work with a local agricultural specialist to provide advice to the household about how they might spend the grant. • When delivering cash payments to households, ensure both spouses are sign a written agreement on how they wish to spend the money. • Monitor price fluctuations of materials and if necessary, provide and adjustment in the cash provided. • If the livestock or seedlings die/fails within 6 months (at no fault of the household) the project should replace them or if appropriate provide alternative support (e.g materials).
Potential Resources & Partners	<p>The University Vet Department and Regional Agricultural Office have confirmed they will support the initiative by providing agricultural/vet advice to the farmers when required during implementation. The department have already recommended the most appropriate breed of livestock but will conduct a visit to the land of the two households to confirm this and provide any further advice.</p> <p>The E&S team will be responsible for sourcing the seedlings/livestock in collaboration with the household. If the household has a preferred provider this provider should be used. The E&S team will be responsible for monitoring the outcomes.</p>
Next Steps for Implementation	<ol style="list-style-type: none"> 1. Agricultural specialist from the University Vet Department and Regional Agricultural Office (or an alternative specialist institution) to visit the remaining land of the affected leaseholders to provide a free consultation and understand the feasibility of planned herding or planned investment of the household. Other ad-hoc specialist advice may be provided during the visit, such as on farming or irrigation techniques or general specialist advice. Any salaries or costs of the specialist visit will be paid for by the project. Agricultural specialist and other government representatives should be invited to this meeting including a representative of the Khokimiyat, Cadastre Office and Regional Agricultural Office. 2. After the household has received sufficient advice, E&S team to seek written confirmation of how they intend to use the cash or materials. Confirmation should include co-signature from spouses. 3. E&S team to arrange the provision of cash, materials or livestock to the household.

10.4.2 Training on Veterinary Health

Table 10-3. Training on Veterinary Health

Title	Description
Target Recipients	<ul style="list-style-type: none"> • Farmers along the OTL who own livestock or intend to • Historic leaseholders' livestock • Herders
Description	<p>Open training provided to farmers along the OTL and their household members. The training will focus on animal veterinary health including:</p> <ul style="list-style-type: none"> • Where to source the best livestock and how much to pay. • How to provide the correct nutrition to livestock in order to sell for quality meat, including what types of feed should be used and how to store the feed. • How to provide for the basic needs of the animals and how they differ for each type. • How to keep livestock safe from the cold in the winter and how to keep them healthy during droughts or when food is scarce. • How to identify and avoid common diseases. The diseases such as liver parasite, Fatcellosis poisoning and diarrhoea are the main common and problematic diseases as confirmed by university veterinary departments. • How to provide basic treatment diseases and injuries.

Title	Description
	<ul style="list-style-type: none"> How to improve sanitation by cleaning livestock and reduce chance of poisoning or diarrhoea <p>The training will be held twice, with a maximum 30 people per training</p>
Objectives & links to community needs or market opportunity	<p>The overall objective of the training is to target the challenges and needs outlined in section 10.2.2 by reducing the vulnerability of livestock owners to common animal diseases injuries, issues and climatic challenges by improving their knowledge of livestock herding practices. The University Veterinary Department confirmed that there are some common issues such as liver parasite and Fatcellosis.</p>
Risk Prevention	<p>Risks:</p> <ul style="list-style-type: none"> The training is not attended by Farmers and Herders because they do not see the value of it, or they are busy grazing. Farmers may forget their training after some time. <p>Risk Prevention:</p> <ul style="list-style-type: none"> Ensure the benefits of the training are advertised. Offer some food refreshments during the training to acknowledge the time taken to attend. Each training will be held a second time if case they cannot attend the one held in their community. A training session will be advertised at least two weeks in advance and will be held a second time if insufficient numbers attend (less than 60% of affected households represented). Training venue should be able to accommodate an attendance of 30 people maximum. The training should include the provision of educational materials which can be taken away by attendees. The training and materials must be delivered Uzbek the language.
Potential Resources & Partners	<p>The University Veterinary Department was contacted in February 2023 and confirmed they will support the project and this initiative by providing veterinary specialists to deliver the training.</p>
	<p>Available venues: Khokimiyat hall or private company venues.</p> <ol style="list-style-type: none"> The E&S team will develop a scope of work for each training course based on the description above. The E&S team will liaise with the University Veterinary Department who have already agreed to identify two specialists to deliver the training. The specialists will develop all training materials. Consult with the local mahallas to arrange suitable dates and venues and to ensure the course is appropriate advertised among communities (e.g via Telegram and noticeboards). Deliver the training at a venue accessible by all affected households distributing educational materials and taking a register of attendance.

10.4.3 Entrepreneurial Training for Women on Animal Produce

Table 10-4. Entrepreneurial training for Women on Animal Produce

Title	Description
Target Recipients	<p>Women in affected households or their household members.</p>
Description	<p>The training will focus on a number of topics including, how to process animal produce in order to increase its value and also how to use the garden or yard to grow produce that can be sold. Topics to be included in the training include:</p> <ul style="list-style-type: none"> How to process and store meat effectively How to process and store milk effectively How to process wool products Basic marketing and entrepreneurship skills <p>The training will be held twice, in two locations with a maximum 30 people per training</p>
Objectives & links to community needs or market opportunity	<p>The objective of this training is to target the challenges and needs outlined in section 10.2.4 linked to the lack of employment opportunities for women. Due to the lack of formal jobs in the area, particularly for women, there is a need for women to also have entrepreneurial skills for them to be able to generate income even if not in formal employment. The training will work towards this objective by improving the knowledge and skills of women who typically take part in the production in processing meat or milk. The training will cover several topics in order to give women a breadth of skills so they can take part in multiple opportunities.</p>

Title	Description
Risk Prevention	<p>Risks:</p> <ul style="list-style-type: none"> • The training is not attended by households because they do not see the value of it • The training is not helpful to women • Women are not able to attend due to lack of time among other duties. • Training could be too long. <p>Risk Prevention:</p> <ul style="list-style-type: none"> • Ensure the benefits of the training are advertised. • Offer some food refreshments during the training to acknowledge the time taken to attend. • The training should ideally be delivered by women who understand the challenges faced by local women. • The training should be held at an appropriate times which don't conflict with other household duties (i.e ideally held during school hours when children do not need childcare from parents) • The training could be broken down into a number of shorter sessions of half day or less. • Each Training will be held a second time if case they cannot attend the one held in their community. • A training session will be advertised at least two weeks in advance and will be held a second time if insufficient numbers attend (less than 60% of affected households represented). • Training venue should be able to accommodate an attendance of 30 people maximum. • The training should include the provision of educational materials which can be taken away by attendees. • The training and materials must be delivered Uzbek the language.
Potential Resources & Partners	<p>The Deputy Head of District on women and family issues confirmed there is no NGO organization in the district, there are only public organizations. The Deputy Head confirmed that the Businesswomen association can help with such initiatives or NGO/business companies from Samarkand city and other regions can be involved.</p>
	<p>Available venues: Khokimiyat hall or private company venues.</p> <ol style="list-style-type: none"> 1. The E&S team will develop a scope of work for each training course. 2. The E&S team will contact the recommended partners or work with the district women's specialist to identify other partners sector which could take part in the delivery of the training courses and identify at least two specialists. Female trainers will be preferred. If no such specialist is available, a practicing professional could be used with assistance provided by a training specialist to develop an engaging training package. 3. The specialists will develop all training materials informed by the above consultations and ensure they are translated. 4. Consult with the local mahallas to arrange suitable dates and venues and to ensure the course is appropriate advertised among communities (e.g via Telegram and noticeboards). 5. Deliver the training at a venue accessible by all affected households distributing educational materials and taking a register of attendance.

10.4.4 Training on Irrigation Technology for Crop Yield Improvement

Table 10-5. Training on Irrigation Technology for Crop Yield Improvement

Title	Description
Target	Open training directed at historical farmers and farmers along the OTL
Recipients	
Description	<p>The training will focus on techniques to improve irrigation and water usage:</p> <ul style="list-style-type: none"> • Irrigation techniques • Water and resource saving technologies • Introduction to micro renewables technologies • Using micro renewables (solar and wind) technology for irrigation • Crop monitoring technologies • Yield forecasting technology
Objectives & links to community needs or	<p>The objective of this training is to improve farmers knowledge irrigation techniques and the available technologies available to help with water distribution and water efficiency to address the needs and marker opportunities outlined in section 10.2.1. This training should help farmers understand how they can increase crop yields and therefore increase farming revenue.</p>

Title Description

market
opportunity

Risk
Prevention

Risks:

- The training is not attended by Farmers because they do not see the value of it, or they are busy.
- Farmers may forget their training after some time.
- The training might not be relevant to the local area.

Risk Prevention:

- Ensure the benefits of the training are advertised.
- Offer some food refreshments during the training to acknowledge the time taken to attend.
- Each training will be held a second time if case they cannot attend the one held in their community (if they are on grazing rotation for example).
- A training session will be advertised at least two weeks in advance and will be held a second time if insufficient numbers attend (less than 60% of affected households represented).
- Training venue should be able to accommodate an attendance of 30 people maximum.
- The training should include the provision of educational materials which can be taken away by attendees.
- The training and materials must be delivered Uzbek the language.
- The training should be carried out by local specialists to understand the local challenges and can offer advice that is relevant and appropriate for local farmers.

Potential Resources & Partners The Regional Agricultural Office have confirmed they will support the initiative by providing specialists to deliver the training. They also recommended that the project contact AgroBank who have previously ran successful "agriculture schools however contact with them would need to be made during implementation because of the application process.

There are also many small scale (micro renewables) solar companies operating in Uzbekistan who could be contacted in the implementation phase to participate in the training. Masdar the project developer also possess knowledge on solar technology which could be shared with farmers.

Available venues: Khokimiyat hall or private company venues.

1. The E&S team will develop a scope of work for each training course.
2. The E&S team will identify partners (such as AgroBank) which could take part in the delivery of the training courses.
3. The E&S team will identify at least two specialists for each type of training preferably with experience in delivering such training. If no such specialist is available, a practicing professional could be used with assistance provided by a training specialist to develop an engaging training package.
4. The specialists will develop all training materials informed by the above consultations and ensure they are translated.
5. Consult with the local mahallas to arrange suitable dates and venues and to ensure the course is appropriate advertised among communities (e.g via Telegram and noticeboards).
6. Deliver the training at a venue accessible by all affected households distributing educational materials and taking a register of attendance.

10.4.5 Training on Market Knowledge, Logistics and Exporting

Table 10-6. Training on Market Knowledge, Logistics and Exporting

Title Description

Target Recipients Open training directed at historical farmers and farmers along the OTL

Description The training will focus on a number of topics including:

- Providing advice on seed varieties,
- Growing high value produce such as medicinal plants
- Harvesting techniques
- Crop storage
- Marketing techniques
- Finding local buyers in markets beyond local markets
- How to export produce
- Transportation and logistics

Title	Description
	•
Objectives & links to community needs or market opportunity	The objective of this training is to improve farmers knowledge of the market and how to sell their produce more widely to address the opportunity outlined in section 10.2.6. This training should help farmers understand how they sell more produce to a wider market and therefore increase farming revenue.
Risk Prevention	<p>Risks:</p> <ul style="list-style-type: none"> • The training is not attended by Farmers because they do not see the value of it, or they are busy. • Farmers may forget their training after some time. <p>Risk Prevention:</p> <ul style="list-style-type: none"> • Ensure the benefits of the training are advertised. • Offer some food refreshments during the training to acknowledge the time taken to attend. • Each Training will be held a second time if case they cannot attend the one held in their community (if they are on grazing rotation for example). • A training session will be advertised at least two weeks in advance and will be held a second time if insufficient numbers attend (less than 60% of affected households represented). • Training venue should be able to accommodate an attendance of 30 people maximum. • The training should include the provision of educational materials which can be taken away by attendees. • The training and materials must be delivered Uzbek the language. • The training should be carried out by local specialists to understand the local challenges and can offer advice that is relevant and appropriate for local farmers.
Potential Resources & Partners	The Regional Agricultural Office have confirmed they will support the land enhancement grant project by providing specialists to deliver the training. They also recommended that the project contact AgroBank who have previously ran successful "agriculture schools however contact with them would need to be made during implementation because of the application process.
	<p>Available venues: Khokimiyat hall or private company venues.</p> <ol style="list-style-type: none"> 1. The E&S team will develop a scope of work for each training course. 2. The E&S team will identify partners (such as AgroBank) which could take part in the delivery of the training courses as well as identify existing agricultural extension services that could be highlighted to farmers during the training. 3. The E&S team consultant will identify at least two specialists for each type of training preferably with experience in delivering such training. If no such specialist is available, a practicing professional could be used with assistance provided by a training specialist to develop an engaging training package. 4. The specialists will develop all training materials informed by the above consultations and ensure they are translated. 5. Consult with the local mahallas to arrange suitable dates and venues and to ensure the course is appropriate advertised among communities (e.g via Telegram and noticeboards). 6. Deliver the training at a venue accessible by all affected households distributing educational materials and taking a register of attendance.

10.4.6 Business and Financial Training

Table 10-7. Business and Financial Training

Title	Description
Target Recipients	Open training provided to historical farmers, farmers along the OTL or their household members.
Description	<p>The training will provide a basic training on farming and business finances including:</p> <ul style="list-style-type: none"> • Business and marketing skills • How to create a business plan • How to create a budget and a financial forecast • Transportation and logistics • revenue and costs and taxes etc <p>Maximum 30 people per training</p>

Objectives & links to community needs or market opportunity The objective of this training is to help farmers increase revenue from their farms by providing them with the knowledge to improve the financial resilience stability of their business. This training will address the needs described in section 10.1.8.

Risk Prevention **Risks:**

- The training is not attended by Farmers because they do not see the value of it, or they are busy.
- Farmers may forget their training after some time.

Risk Prevention:

- Ensure the benefits of the training are advertised.
- Offer some food refreshments during the training to acknowledge the time taken to attend.
- Each Training will be held a second time if case they cannot attend the one held in their community (if they are on grazing rotation for example).
- A training session will be advertised at least two weeks in advance and will be held a second time if insufficient numbers attend (less than 60% of affected households represented).
- Training venue should be able to accommodate an attendance of 30 people maximum.
- The training should include the provision of educational materials which can be taken away by attendees.
- The training and materials must be delivered Uzbek the language.
- The training should be carried out by local specialists to understand the local challenges and can offer advice that is relevant and appropriate for local farmers.

Potential Resources & Partners The District Agricultural Department have confirmed they will support the project by providing specialists to deliver the training. They also recommended that the project contact AgroBank who have previously ran successful "agriculture schools however contact with them would need to be made during implementation because of the application process.

Available venues: Khokimiyat hall or private company venues.

7. The E&S team will develop a scope of work for each training course.
8. The E&S team will identify partners (such as AgroBank) which could take part in the delivery of the training courses as well as identify existing agricultural extension services that could be highlighted to farmers during the training.
9. The E&S team consultant will identify at least two specialists for each type of training preferably with experience in delivering such training. If no such specialist is available, a practicing professional could be used with assistance provided by a training specialist to develop an engaging training package.
10. The specialists will develop all training materials informed by the above consultations and ensure they are translated.
11. Consult with the local mahallas to arrange suitable dates and venues and to ensure the course is appropriate advertised among communities (e.g via Telegram and noticeboards).
12. Deliver the training at a venue accessible by all affected households distributing educational materials and taking a register of attendance.

10.4.7 Technical Advice on Land Auction System

Table 10-8. Technical Advice on Land Auction System

Title	Description
Target Recipients	Specialist advice provided to Mahallas
Description	Training and legal advice on how to secure legal tender for remaining community grazing land. Community members can register for land in the E-AUCTION electronic system to receive the land. There is a onetime payment is 8 million UZS (700 USD) per hectare for 30 years of land use. The Cadastral Office has confirmed that community members should not face any difficulties in using the system because the system is now electronic, and corruption is not allowed, however the auction system means that the Khokimiyat can no longer can allocate a specific plot of land to the community.
Objectives & links to community	The objective of training will be to aid the local community to pursue leasehold status for some communal grazing land potentially with co-ownership from the community. The project will not be able to guarantee the provision of land because of the new land auction system in which any person can bid to take out a leasehold, which is no longer

needs or market opportunity under the control of the Khokimiyat, however the training and advice will provide the community mahallas with the knowledge of the new system so that they may wish to pursue this if desired.

Risk Prevention	<p>Risks:</p> <ul style="list-style-type: none"> Community expectations of security the remaining land may not be met due to the significant costs of land leasehold now due to the auction system means the community may not have the funds to be able to obtain any land. Conflict between communities and community herders over the remaining land which becomes overgrazed. Despite a leasehold, the community is unable to stop other herders from other areas from using the land. <p>Risk Mitigation:</p> <ul style="list-style-type: none"> Engagement with the mahallas to manage expectations. Engagement with the mahallas to develop an agreed governance system to ensure equal usage of the land. Input from a grazing specialist to ensure future grazing is sustainable and avoiding over grazing. The project will ensure the Khokimiyat will intervene if other community herders from elsewhere encroach on the leasehold.
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Potential Resources & Partners The Khokimiyat and Cadastral Office is supportive of the initiative, however they have highlighted the risk that they are no longer able to allocate land themselves, however they will provide the training and advice.

Available venues: Khokimiyat hall or private company venues.

Next steps for implementation

1. E&S team to develop TOR for training.
2. E&S team to commissions the Khokimiyat and Cadastral Office to develop the training.
3. E&S team to liaise with the Mahallas to find a suitable venue and date.

10.4.8 Training on Overgrazing and Alternative Feed Sources

Table 10-9. Training on Overgrazing and Alternative Feed Sources

Title	Description
Target Recipients	Herding households
Description	<p>Training on how to grow feed for livestock in a concentrated way utilising technology such as vertical feed banks.</p> <p>Topics will include:</p> <ul style="list-style-type: none"> Background into land scarcity and raise awareness about the future of herding Overgrazing and how to graze sustainability in a smaller area Alternative sources of animal feed and technologies such as vertical feed banks.
Objectives & links to community needs or market opportunity	The objective of the training is to address the challenges and needs outlined in section 10.2.3 regarding the scarcity of land available for herding, by providing community herders and professional herders with knowledge on how to create additional sources of feed.
Risk Prevention	<p>Risks:</p> <ul style="list-style-type: none"> The training is not attended by Farmers and Herders because they do not see the value of it, or they are busy grazing. Farmers may forget their training after some time. <p>Risk Prevention:</p> <ul style="list-style-type: none"> Ensure the benefits of the training are advertised. Offer some food refreshments during the training to acknowledge the time taken to attend. Each training will be held a second time if case they cannot attend the one held in their community. A training session will be advertised at least two weeks in advance and will be held a second time if insufficient numbers attend (less than 60% of affected households represented). Training venue should be able to accommodate an attendance of 30 people maximum. The training should include the provision of educational materials which can be taken away by attendees. The training and materials must be delivered Uzbek the language

Potential Resources & Partners The Regional Agricultural Office have confirmed they will support the initiative by providing specialists to deliver the training. They also recommended that the project contact AgroBank who have previously ran successful "agriculture schools however contact with them would need to be made during implementation because of the application process.

Available venues: Khokimiyat hall or private company venues.

Next steps for implementation	<ol style="list-style-type: none"> 1. The E&S team will develop a scope of work for each training course. 2. The E&S team will identify partners (such as AgroBank) which could take part in the delivery of the training courses. 3. The E&S team will identify at least two specialists for each type of training preferably with experience in delivering such training. If no such specialist is available, a practicing professional could be used with assistance provided by a training specialist to develop an engaging training package. 4. The specialists will develop all training materials informed by the above consultations and ensure they are translated. 5. Consult with the local mahallas to arrange suitable dates and venues and to ensure the course is appropriate advertised among communities (e.g via Telegram and noticeboards). 6. Deliver the training at a venue accessible by all affected households distributing educational materials and taking a register of attendance.
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10.4.9 Vertical Feed Bank Pilot Scheme

Table 10-10. Vertical Feed Bank Pilot Scheme

Title	Description
Target	Professional herders
Recipients	Community herders
Description	Following the training on overgrazing and alternative feed sources which will be provided to all herders as mentioned above in section 10.4.9, the Project will co-fund a Pilot scheme for the vertical feed banks with professional herders and representatives of community herders. The project developer will co-fund the scheme for 2 years.

Vertical feedbanks are currently being used in other areas in Uzbekistan in areas where there is less land available. They consist of vertically stacked beds which are used to grow animal feed (usually winter wheat) in a concentrated area as shown in the image below.



Figure 10-1 – Example of vertical feed bank (Source: Green Business Solutions)

Feedbanks required access to water and electricity. The feedbanks have also been reported to produce more nutritious feed for animals meaning less feed is needed per animal and result in the quality of meat being improved which can be sold for a higher price. A vertical feedbank of 10 by 10 meters cost will produce around 2 tonnes of feed per day⁷

⁷ Estimated provided by a specialist in this technology contacted by Green Business Solutions.

The pilot scheme will ensure that herders are given long term exposure to the technology and can share their experience with other community members. The feed banks, along with the feed collection from the Solar PV area will also bring down the cost of feed in the local area.

The inputs will include:

- Construction materials for the vertical feed bank
- Purchase of seeds
- Employment/contracting of specialist feedbank “director” who will provide specialist training to professional herders during set up (visiting weekly) and then will oversee its progress for a year (visiting monthly), and will then provide continuing advice for the years to follow visiting the area whenever needed. The feedbank director has already been identified and has experience with this technology.

The project could involve the construction and management of one large feedbank or smaller feedbanks close to herders’ residences depending on their preferences.

Professional herders will be invited to participate in the pilot scheme and one representative from each community herd. A business plan/concept will be developed by the feedbank director in consultation with herders with the objective of producing a sustainable profit-making enterprise within 2 years.

Objectives & links to community needs or market opportunity	<p>The objective of the training is to address the challenges and needs outlined in section 10.2.3 regarding the scarcity of land available for herding, by providing professional herders with an opportunity to develop a more concentrated way to feed livestock and improve yields.</p> <p>The initiative will also provide another alternative source of livestock feed for the community which is cheaper than buying feed from local markets which are transported in from elsewhere.</p>
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The feedbank is intended to provide herders a way to continue and adapt with their current livelihood.

Risk Prevention	<p>Risks:</p> <ul style="list-style-type: none"> • Not all professional herders will be interested in this initiative. • After training, herders may still need access to advice. • The initiative will not be successful if not carefully managed. • Professional herders may want to be employed by other elements of the solar project during the construction phase and may not have time. • Conflict may arise with other community members if the project is fully funded by the project, or herders may not buy into it.
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Risk Management:

- Other herders could be employed if not all professional herders want to be involved and professional herders may choose other employment opportunities instead.
- An initiative “director” will be employed/contracted by the project who has experience of running these initiatives or similar.
- The start of this initiative should be timed to begin towards the end of construction when construction jobs are being reduced.
- The project will be co-funded by the herders) (20% input from the herders will be encouraged) to increase “buy-in” and reduce conflict with the surrounding community who may think a free program is unfair.
- The project will conduct an interim evaluation to see how the initiative is progressing and check that it is mitigating the impacts to herders from loss of access to grazing area. In case the measures are ineffective, some additional actions or interventions might be required.

Potential Resources & Partners	Green Business Solutions will partner with Masdar to implement this initiative and they will contract the initiative director who is a qualified agrotechnologist who has already been contacted and provided input into this section.
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Next steps for implementation	<ol style="list-style-type: none"> 1. Appointment of initiative director to provide training and oversee the pilot 2. Contact the herders for a meeting with the initiative director to develop a business concept 3. Conduct any surveys or capacity assessments required to determine the appropriate scale of the initiative. 4. Obtain suitable water and electricity supply. 5. Wait until construction is over (or is slowing down) so that the herders are free to begin the initiative. 6. All vertical feed banks should be constructed by the herders while the initiative director is present on site to ensure they are fit for purpose. 7. The initiative director should purchase the seeds for the feed in consultation with the herders. 8. Once feed is generated the professional herders are free to use it while also providing at a discounted price to community herders.
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10.4.10 Feed Collection in the Solar PV Area

Table 10-11. Feed Collection in the Solar PV Area

Title	Description
Target Recipients	Professional herders Community herders
Description	<ul style="list-style-type: none"> • The initiative involves the collection, storage and distribution of feed from the Solar PV area for herders who are displaced by the project. The feed will be collected from within the Solar PV Area between the solar panels and under them by community members who are employed by the project. • All grass and vegetation in the Solar PV Site will need to be managed by the project to stop the grass obstructing sunlight reaching the panels and to manage fire risk. • Typically, the water and dew which drips from the over the edge of the solar panels results in more vegetation in a smaller area and grass starts growing in areas that in the past were not vegetated as humidity concentration and shade allow for it. • Professional herders who were using the site previously will be given priority to be employed by the project to collect the feed for themselves and they will then be able to sell to the community members who previously paid them to herd or feed to community herds as part of a paid service. • Community herders who are displaced by the community will be given free access to collect feed on a rotational basis similar to their current herding rotation. • Training will be provided to community members who are given access, on how to collect the feed safely without risk to themselves or the project. • The project will provide tools and vehicles for the collection of the feed, the exact methods to be used will be confirmed by the operational and maintenance team. • Access to the site will be from the south and so the project will provide transport for community members employed to manage, collect, and distribute grass so they can deliver it to the communities to the north. • The project will aid the 42 herders to improve their feed storage facilities at their home by providing materials. The Mahalla has confirmed that each family has a place in the yard, usually it's the barn roof. The feed should be stored in the place with the roof cover to protect from the moisture, however it should be well-ventilated place. Each household yard has enough place to store the feed. • The project will be responsible for acquiring any additional liability insurances required for this initiative.
Objectives & links to community needs or market opportunity	The objective of the training is to address the challenges and needs outlined in section 10.2.3 regarding the scarcity of land available for herding, by providing community herders and professional herders with an opportunity to collect feed from within the Solar PV area to feed livestock as an alternative to herding.
Risk Prevention	<p>Risks:</p> <ul style="list-style-type: none"> • Health and safety risks to those accessing the project (e.g interaction electrical cables). • The initiative may have a transitional period before it is fully operational while access to the site is denied. • Conflict within the community over who gets access or fair distribution. • Communities are unable to store the feed without it rotting. • The initiative will not be successful if not carefully managed. <p>Risk Prevention:</p> <ul style="list-style-type: none"> • Health and safety training will be provided to all selected individuals who can access the site to collect feed. • Transitional support in the form of livestock feed should be provided to households with livestock while the feedback initiative is being put into operation. • During the planning and set up of the initiative, the implementation team will engage with the herders and the local mahallas to agree who will be given access and how it will be distributed. • Training will be provided to the community on how to effectively store the feed in ways to increase its longevity of use and to avoid over stocking.
Potential Resources & Partners	<p>The University Veterinary Department has expressed support to the project, and they will provide specialists to assist in the further development and implementation of this initiative.</p> <p>The project developer Masdar is the main partner in this initiative by allowing access to the Solar Area and has committed to this initiative.</p>

Title	Description
Next steps for implementation	<ol style="list-style-type: none"> 1. Access to the site should be kept open for herders for as long as possible while other areas of the project are being constructed (e.g. include a gap in fences erected until the construction of the Solar PV Area commences). 2. CLOs to notify communities of when the land will be closed off for access well in advance. 3. A soon as access to the Solar PV Area is removed, the project must provide transitional support to the community who own livestock until the feed collection initiative is operational. Transitional support will include the provision of feed for communities. 4. E&S team to arrange for a land capacity assessment of the land inside the Solar PV Area. 5. E&S team to work with the engineering and design team to establish where within will be accessible for selected community members to collect feed (i.e between the panels, under the panels etc.). 6. E&S team to work with the engineering and design team to conduct a thorough health and safety risk assessment regarding access to the area. This should be done once the layout of the site is known and must include the identification of any hazards (e.g overground cables etc) and ways to secure these safely so that feed collection will not interfere with these. 7. E&S team to understand what kind of liability insurance will be needed for selected community members. 8. E&S team to appoint a specialist in sustainable grazing from the University Veterinary Department in order to input into the detailed design of the initiative. 9. Specialists and partners should provide technical input including: <ol style="list-style-type: none"> a. Identification of any suitable alternative species of feed that might increase yield. b. Identifying effective ways to collect and store the feed. c. Confirming how frequently feed should be collected. 10. E&S team and project CLOs to conduct a “co-design” process with the community, including mahallas, professional and community herders and the LRP committee. This process will include a participatory and iterative design process which will also include the grazing specialist and the project design team. The objective of the co-design will be to develop a number of operational protocols and governance structures for the initiative to ensure that it is successful and that it operates in a way that the community agrees with. 11. Conduct a survey of feed storage facilities of head herder household to establish if their facilities are suitable for long term storage of feed (up to 1 year). 12. Provide materials to herders who require them to construct improved feed storage facilities at their home. 13. Agree who from each community will be employed to access to the Solar PV area and have responsibility of collecting and distributing feed collected within the PV areas to the 42 herders. 14. Source appropriate transportation tools and vehicles, e.g quad bikes and trailers which can be used to transport feed. These tools and vehicles should remain property of the initiative/project and should be used by community members employed by the project. 15. Provide HSE training and any other training required to selected individuals. 16. The first “pilot” season of feed collection should be conducted while the affected community are still receiving transitional support (albeit reduced to avoid overstocking of feed). 17. Any necessary changes to methods, personnel or governance should be made following the first season and following seasons where necessary

10.4.11 Guaranteed Employment & Pre-Employment Training

Table 10-12. Guaranteed Employment & Pre-Employment Training

Title	Description
Target Recipients	Guaranteed employment of one household member for: <ul style="list-style-type: none"> • Historical leaseholder households • Professional Herders
Description	Guaranteed employment for: Historical leaseholder households, Vulnerable herder households and Professional Herders during the construction phase of the project. The type of employment may include: Construction, security, cleaning, maintenance depending on required qualifications. Selected members will be provided pre-employment training by Masdar. The contents of that training will be specific to the jobs available. This training may be made available to other households but is not guaranteed.
Objectives & links to community needs or market opportunity	The objective of this initiative is to maximise local employment specifically within affected households. The objective of the pre-employment training to vulnerable households to ensure that households who may not initially possess the skills required to be employed by the project are able to have their skills enhanced so that employment is possible.
Risk Prevention	Risks:

Title	Description
	<ul style="list-style-type: none"> Vulnerable people may still not possess the necessary skills to be employed even after training. Some vulnerable people may be unable to work. Expectations of employment is high in the surrounding communities, and it is possible these expectations will not be met.
	<p>Risk Prevention:</p>
	<ul style="list-style-type: none"> Masdar should aim to provide basic training to all employees to allow them to fulfil their employment duties, however vulnerable households affected by the project should receive additional training. Where vulnerable people are unable to work (e.g due to age, disability or illness) a member of their household could be considered. Engagement regarding local employment should be frequent and informative to all nearby communities. Where a significant drop in local employment is foreseen, for example when moving from construction to operations, an engagement plan should be put in place to manage expectation.
Potential Resources & Partners	Masdar and the EPC contractor will be responsible for ensuring that all those guaranteed employment are given employment during the construction period. Masdar will be responsible for providing a list of all those guaranteed employment to the EPC contractor.
Next steps for implementation	<ol style="list-style-type: none"> E&S team to consult with Masdar HR team to identify possible local employment opportunities for those guaranteed employment. Consult with households to select which member will be employed and share the types of jobs available. Training should be provided to affected persons for them to fulfil their duties successfully. Upskilling will be provided to vulnerable households and particularly women so that they can take advantage of employment opportunities.

10.4.12 Preferential Employment & Pre-Employment Training

Table 10-13. Preferential Employment & Pre-Employment Training

Title	Description
Target Recipients	All affected households however vulnerable households will be given priority.
Description	<p>Preferential employment of affected households and particularly vulnerable people during the construction phase of the project.</p> <p>Employment of households will be subject to the affected person having the required skills needed by Masdar, however additional training will be provided to vulnerable household members so they can take advantage of employment opportunities associated with the project.</p> <p>Employment for all other households (not vulnerable) will also be limited by the needs of the project and cannot be guaranteed. Employment will not exclude anyone from compensation or livelihood restoration to which they are entitled to.</p> <p>Vulnerable households will be provided pre-employment training by Masdar. The contents of that training will be specific to the jobs available. This training may be made available to other households but is not guaranteed.</p>
Objectives & links to community needs or market opportunity	The objective of this initiative is to maximise local employment specifically within affected households. The objective of the pre-employment training to vulnerable households to ensure that households who may not initially possess the skills required to be employed by the project are able to have their skills enhanced so that employment is possible.
Risk Prevention	<p>Risks:</p> <ul style="list-style-type: none"> Vulnerable people may still not possess the necessary skills to be employed even after training. Some vulnerable people may be unable to work. Expectations of employment is high in the surrounding communities, and it is possible these expectations will not be met. <p>Risk Prevention:</p>

Title	Description
	<ul style="list-style-type: none"> Masdar should aim to provide basic training to all employees to allow them to fulfil their employment duties, however vulnerable households affected by the project should receive additional training. Where vulnerable people are unable to work (e.g due to age, disability or illness) a member of their household could be considered. Engagement regarding local employment should be frequent and informative to all nearby communities. Where a significant drop in local employment is foreseen, for example when moving from construction to operations, an engagement plan should be put in place to manage expectation.
Potential Resources & Partners	Masdar and the EPC contractor will be responsible for ensuring that all project affected people are given preference for employment during the construction period. Masdar will be responsible for providing a list of all affected people and vulnerable individuals to the EPC contractor.
Next steps for implementation	<ol style="list-style-type: none"> E&S team to consult with Masdar HR team to identify possible local employment opportunities. E&S team to consult with the local Mahallas to identify vulnerable people who might be suitable for employment. Care must be taken to avoid nepotism by the Mahallas. A set of employment criteria should be developed by the E&S team should be developed and shared with the community for transparency on hiring practices. A local employment plan should be developed to boost local employment opportunities generally. Training should be provided to affected persons for them to fulfil their duties successfully. Upskilling will be provided to vulnerable households and particularly women so that they can take advantage of employment opportunities.

10.4.13 Transitional Support for Herders

Table 10-14. Transitional Support for Herders

Title	Description
Target Recipients	Professional herders Vulnerable herders
Description	Provision of feed for vulnerable herders and herders at risk of losing significant income temporarily after the Solar PV site is blocked off for construction and while the feed collection initiative is still being set up. Feed costs around 500 USD per tonne and can be purchased from Kattakurgan city market.
Objectives & links to community needs or market opportunity	The objective of the transitional support is to minimise the temporary impacts on professional herders and vulnerable herders while all other livelihood restoration measures are set up.
Risk Prevention	<p>Risks:</p> <ul style="list-style-type: none"> There is a risk that herders become dependent on the transitional support. There is a risk that transitional support ends too early. <p>Risk Prevention:</p> <ul style="list-style-type: none"> Ensure the decision to terminate transitional support is based on sound monitoring data against the baseline. Gradual decline in transitional support may be appropriate rather than a single termination date.
Potential Resources & Partners	The project developer Masdar holds sole responsibility for this initiative but must partner with the Mahallas and the herders themselves. Feed can be purchased from Kattakurgan city market however the herders themselves may have preferred providers.
Next steps for implementation	<ol style="list-style-type: none"> Contact vulnerable herders and professional herders to enquire about their ability to store feed if provided and how much feed would be required to sustain their herd during the construction period. Locate a source of animal feed that can be transported to the communities during the construction period. Arrange for the feed to be trucked into the communities on a monthly basis. Monitor the usage of feed and income levels and ensure that the feed collection initiative at the Solar PV Site is operational before terminating the transitional support

11. Implementation

11.1 Roles and Responsibilities

The implementation of the LRP will be undertaken by the following entities. The roles and responsibilities are described in Table 11-1 below.

Table 11-1. LRP Roles responsibilities

Entity	Responsibilities as part of LRP implementation
LRP Implementation Manager & and Community Liaison Manager	<ul style="list-style-type: none"> • Overall responsibility for the day-to-day implementation of the LRP initiatives. • Oversight of the Community Liaison Officer • Gather monitoring and evaluation data on the implementation of the LRP to be shared with the Developers E&S Manager • Responsibility for identifying the need for any amendments to the LRP following the selection of final access road and accommodation arrangements (if necessary).
Samarkand LRP Committee	<ul style="list-style-type: none"> • Oversee implementation of Community Development Plan and LRP and assist in the provision of livelihood restoration. • Reviewing of LRP monitoring reports and evaluation the ongoing progress of the LRP using the internal and external monitoring and evaluation indicators. The objectives of the review should be continual improvement of performance and prevent reoccurrence of issues and challenges. • Indicate when the LRP Completion Audit should be conducted • Verify that all expenditure is fully accounted for which will inform future financial auditing. • Assist in the resolution of grievances where required. • Review and resolution of all appealed grievances. • Monitoring the effectiveness of the grievance mechanism.
Masdar Community Liaison Officers (At least one CLO must be female)	<ul style="list-style-type: none"> • To manage the project grievance mechanism, responding to the grievant in the first instance and maintain contact with grievant throughout the process, investigating and close out of grievances within input from the JCDC. • Managing the compensation process, including the issuing of compensation documents and payments and storage and of all confidential information. • Receiving and in filing grievance forms and reporting to the E&S team. • Maintaining stakeholder engagement plan and database including minutes of meetings. • Communicating with the community about upcoming activities, meetings and trainings. • Prepare posters, press releases, media release and other external engagement for the LRP where appropriate.
Technical Specialists	<ul style="list-style-type: none"> • To provide specialist services in relation to the implementation of the LRP for example the development and delivery of training materials.
Developer's E&S Team	<ul style="list-style-type: none"> • To prepare and implement the companies Environmental and Social Management Systems including this LRP. • To prepare and maintain all confidential records of affected persons, their livelihood restoration choices and proof of compensation payments. • Maintain an up-to-date Stakeholder Engagement Database and manage the CLOs in the documenting of engagement activities. • Maintain an up-to-date Grievance Database and managing the CLOs in the documenting of grievances. • Providing capacity building activities to the CLOs and teams implementing the LRP. • Maintain a project Environmental and Social Risk Register including risks associated with land acquisition and the LRP. • Co-ordinate the activities of the Community Liaison Officers. • Prepare LRP monitoring reports to reflect the current status of implementation. • Responsibility for amendments to the LRP following the selection of final access road and accommodation arrangements (if necessary).
Ministry of Energy	<ul style="list-style-type: none"> • Responsible for official land order and approval of valuation • General oversight of the LRP project
Local Khokimiyat	<ul style="list-style-type: none"> • Assistance enrolling vulnerable people onto existing government support programs where appropriate. • Assistance with identifying vulnerable people in the community.

	<ul style="list-style-type: none">• Assistance with resolution of any further compensation claims.
Regional Agricultural Office	<ul style="list-style-type: none">• Assistance with the implementation of livelihood restoration training by assisting to locate and recruit specialists.• Assistance with the provision of future agricultural data as part of ongoing livelihood monitoring.
Local Mahallas	<ul style="list-style-type: none">• Assistance to organise community meetings and gather herders for training.• Assistance to communicate key project information to the community.• Assistance to resolve specific grievances where necessary.• Assistance providing monitoring information where necessary.
Land administration authorities (Regional khokimiyat)	<ul style="list-style-type: none">• Responsible for issuing leaseholds• Manage the land acquisition process• Partake in all official engagements regarding land

11.2 Composition of the LRP Committee

The project will assemble a LRP Committee in order assist the implementation and monitoring of the LRP. The composition of the LRP Committee is expected to include:

- The Ministry of Energy
- Regional Agricultural Office
- Cadastral Office
- Masdar Community Liaison Office
- Representatives from the local Khokimiyat including:
 - Representative for Women
 - Representative for Youth
 - Male and female representatives from local mahallas
 - A male and female representative of Lease holding households under the OTL
 - A male and female representative of herding households

Additional committee members may be added while specific livelihood restoration initiatives are implemented, this may include representatives from NGOs or Civil Society.

Where necessary the LRP committee may be broken down into sub-committees with specific responsibilities, for example implementation of specific livelihood initiatives.

The LRP Committee will meet every three months during construction of the project and implementation of the livelihood restoration initiatives. Once all initiatives have been implemented and all compensation has been paid the LRP Committee will meet every six months until the LRP Completion Audit is undertaken.

Before the LRP Committee is set up, the representatives of leaseholders and herders should be selected using cultural appropriate but also fair and transparent selection process.

All members of the committee will be provided training which should include:

- The objectives, scope, roles and responsibilities of the LRP and the LRP committee
- Understanding eligibility and entitlement
- The livelihood restoration initiatives
- The gaps between national legislation and lender standards
- The grievance mechanism
- The monitoring and evaluation process and the LRP's responsibilities with regards to monitoring.
- Identifying and addressing conflicts of interest.

In the case where a conflict of interest is identified, the member in question should be prohibited for taking part in key decisions that interact with the conflict, or an alternative member will be chosen.

Masdar E&S department will develop a Terms of Reference (ToR) for the LRP Committee which will be agreed with the committee itself.

11.3 Implementation Schedule

Table 11-2. Implementation Schedule

LRP Implementation Activity	Milestone	Month:	1	2	3	4	5	6	7	8	9
Disclosure/consultation of final LRP	Before site mobilisation for construction	Month 1									
Recruitment/appointment of internal personnel required for LRP implementation (implementation manager and CLO etc)	Before site mobilisation for construction	Month 1									
Issuing of compensation and adjustment of Sub-Lease Agreements	Before start of construction of the OTL and PV area (at a minimum before each affected household loses access to the land). If households are absent at the time of compensation payment, the compensation will be placed in a 3 rd party escrow account before land take.	Month 1									
Issuing of compensation report to lenders	Before start of construction of the OTL and PV area (at a minimum before each affected household loses access to the land).	Month 1									
Any amendments to the LRP should be made following the selection of final access road and accommodation arrangements (if necessary).	Before site mobilisation for construction	Month 1									
Project announcement that construction will begin	Before site mobilisation for construction	Month 1									
Selection of affected people to be employed in the construction phase	Before site mobilisation for construction	Month 1-2									

LRP Implementation Activity	Milestone	Month:	1	2	3	4	5	6	7	8	9
Establishment of LRP Committee including any necessary training/briefing.	Before start of construction	Month 1-2									
Vulnerability allowance	Vulnerability allowance payments to commence as soon as land take (temporary or permanent) occurs and continue for six months or longer if necessary.	Month 2-ongoing									
Provision of transitional support to professional and vulnerable herders	Until the Solar PV feed collection is operational	Month 3-8									
Selection of affected household members to take part in livelihood restoration	Within 2 months from the start of construction	Month 3-4									
The provision of livelihood restoration related training to the affected farmers and herders.	Within 6 months from the start of construction	Month 3-12									
Commencement of the vertical feedbank initiative.	Co-design to commence within Month 3-4 and pilot to begin within 1 month of completion of construction	Month 3-12									
Commencement of Solar PV Feed Collection once construction is complete	Within 1 month of the completion of construction	Month 6 - 18									
Monitoring of the Livelihood Restoration process	Ongoing until the completion audit	For 24 months									Ongoing for 24 months
Mid-term audit	1 year after finalisation of LRP										
Completion Audit	Once all LRP activities are complete										

11.4 Implementation budget

The estimated costs for LRP implementation are included in Tables 11-3, 11-4 & 11-5. These costs are provisional estimates and the costs of livelihood restoration may be reduced depending on the daily rates of specialists and once final options are chosen by affected people. It should be noted that Table 11-5 includes costs for LRP management which could be reduced depending on the company's internal resource arrangements.

Table 11-3. Draft Compensation Costs

Compensation	Assumptions/Notes	Amount (USD)
Compensation amount for leaseholds along the OTL	Based on the valuation provided by the valuer	14,028.20
Estimated compensation for historical leaseholds/households 2	81,139,075 (UZB) - (based on their own official valuations by the Khokimiyat, provided to AECOM) converted to USD using an exchange rate of 0.000088 from 23/03/2023	7,104.24
Estimated compensation for historical leaseholds/households 4	86,164,400 (UZB) - (based on their own official valuations by the Khokimiyat, shared with AECOM) converted to USD using an exchange rate of 0.000088 from 23/03/2023	7,582.47
Disruption/Transport allowances for historic farmers	Disruption allowance of 100 USD for all historical farmers and an additional 100 USD for farmer 3 (As required in the SCA)	600.00
		29,350.91

Table 11-4. Livelihood Restoration Costs

Livelihood Restoration Measures	Assumptions/Notes	Amount (USD)
Land enhancement grant (significant hardship allowance) to historical farmers	1,500 USD given to historical farmer and 1,500 USD given to spouse of historical farmers 1, 2 and 3. 3,000 given to historical farmer and 3,000 given to spouses of historical farmers 2 and 4 to account for the "significant hardship caused by loss of investment)	21,000.00
Agricultural technical advice to historical farmers	10 days of specialist time (400 USD per day)	4,000.00
Training on Veterinary Health	20 days of specialist time (400 USD per day)	8,000.00
Entrepreneurial Training for Women on Animal Produce	20 days of specialist time (400 USD per day)	8,000.00
Training on Irrigation Technology for Crop Yield Improvement	20 days of specialist time (400 USD per day)	8,000.00
Training on Market Knowledge, Logistics and Exporting	20 days of specialist time (400 USD per day)	8,000.00
Business and Financial Training	20 days of specialist time (400 USD per day)	8,000.00
Training on Overgrazing & Alternative Feed Sources	20 days of specialist time (400 USD per day)	8,000.00
Financial and Material inputs for Vertical Feed Bank Pilot for one year	2 years of co-finance including \$15,000 for initial set up and then \$3,000 per month for the first year oversight and ongoing inputs followed by \$1,500 per month for the second year.	69,000.00
Technical Advice on Land Auction System	3 days of specialist time (400 USD per day)	1,200.00

Feed Collection at the Solar PV Site	100 days of specialist time (400 USD per day) for training, risk assessment and co-design. 10,000 needed for common infrastructure. 10 days of specialist engineer (1000 USD per day). Insurance costs and design costs to be sourced from project construction and operation budgets.	60,000.00
Materials for storage facilities at herders home	500 USD each for 42 herders	21,000.00
Provision of legal clerk to secure remaining land	30 days of specialist time (400 USD per day)	12,000.00
Vulnerability Allowance/Transitional support	6 months of minimum wage (80 USD per month) for 15 households to be paid on a monthly basis.	7,200.00
Materials & Equipment for LR measures (printing and food for meetings etc)		6,000.00
		249,400.00

Table 11-5. LRP Management Costs

LRP implementation management tasks	Assumptions/Notes	Amount (USD)
Management of compensation process	2 days per household of a local consultant time (400 USD per day)	6,400.00
Set up of one committee	3 days of local consultant time (400 USD per day)	1,200.00
Organisation of Committee meetings (one per quarter)	Local consultant will attend 6 committee meetings (400 USD per day)	2,400.00
Stakeholder Engagement Activities & Co-ordination of trainings	40 days of local consultant time (400 USD per day)	16,000.00
Grievance Officer	2 days per month for 6 months, followed by 1 day per month for 18 months (400 USD per day)	12,000.00
Monitoring & Evaluation	3 days per month for 2 years of local consultant (400 USD per day) & 1 days per quarter of an international specialist (1000 USD per day)	36,800.00
Completion Audit	5 days of an independent international specialist (1500 USD per day)	7,500.00
Materials & Equipment engagement (printing and food for meetings etc)	N/A	2,000.00
CLO	CLO annual salary for two years	4,800.00
Technical Oversight	1.25 days per month of international specialist time (1000 USD per day) for 12 months	15,000.00
Completion Audit	3 days of an independent international specialist (1500 USD per day)	4,500.00
		108,600.00

Total LRP Cost (USD): **387,350.91**

Total LRP Cost with 20% Contingency (USD): **464,821.09**

12. Monitoring & Reporting

Monitoring is a critical part of a resettlement and livelihood restoration. Monitoring is required in order to assess whether the goals of the livelihood restoration and compensation plan are being met. Monitoring primarily involves the systematic use of information to determine the extent to which plans are being implemented effectively. The purpose of LRP monitoring will be to verify that:

- Actions and commitments described in the LRP are implemented
- Eligible people and communities receive their full compensation prior to the start of the construction.
- Vulnerable households received adequate support and are not worse off as a result of the project
- Livelihood restoration programmes are achieving their aims and being effectively implemented
- Complaints and grievances lodged by affected people are followed up and, where necessary, appropriate corrective actions are taken
- If necessary, changes in in the LRP and associated procedures are made to improve delivery of entitlements to affected people.

The data collected as part of the LRP socio-economic baseline is to provide a baseline against which indicators for livelihood restoration can be monitored.

The design of the monitoring plan should comprise two levels of monitoring: internal and external.

12.1.1 Internal Monitoring

Internal monitoring is an internal management function allowing the LRP management (or agency elected to implement the LRP) to measure physical progress against milestones set out in the LRP.

Internal monitoring should:

- Ensure that due process has been followed in the notification of stakeholders, with adequate public meetings being held.
- Verify delivery and usage of compensation and entitlements.
- Verify that the Livelihood Restoration has been implemented in accordance with the provisions of the LRP.
- Maintain records of any grievances that require resolution.
- Oversee that all LRP measures are implemented as approved by the project management and relevant local authorities.
- Verify that funds for implementing livelihood restoration activities are provided in a timely manner, are sufficient for their purposes, and are spent in accordance with the provisions of the LRP.
- Document timely completion of LRP obligations (i.e. payment of the agreed-upon sums, provision of training materials etc)
- Ensure that monitoring and evaluation reports are submitted

12.1.2 External Independent Monitoring

External Independent Monitoring takes the form of effects and impact monitoring, should be conducted every six months until the close out audit decrees that the LRP objectives have been met.

Both internal and external monitoring reports should be used to assess whether any changes should be made to the LRP during implementation. This provides an opportunity for frequent monitoring and evaluation, and results of this can be incorporated into a continuous improvement feedback loop. The LRP management should meet after each monitoring exercise to consult over findings of the monitoring evaluation and decide whether steps should be taken to address issues highlighted by monitoring reports.

12.1.3 Indicators

A number of objectively verifiable indicators shall be used to monitor the impacts of the compensation and livelihood restoration activities. These indicators will be targeted at quantitatively measuring the socio-economic status of the affected people, to determine and guide improvement in their social well-being.

These indicators are listed below.

Table 12-1. Input indicators to monitor the impacts of the compensation and livelihood restoration activities

Indicator	Information Source	Frequency	Data gathering responsibility
Input Indicators			
Overall spend of the LRP	Financial Records	Monthly	LRP Implementation Manager
Distribution of spending by:	Financial Records	Monthly	LRP Implementation Manager
<ul style="list-style-type: none"> • Compensation payments • Livelihood Restoration Initiative • Community Development Plan • Additional assistance provided to vulnerable people • Resolution of grievances 			
Number of cash compensation payments made	Financial Records & Compensation Database	Monthly	LRP Implementation Manager
Number of resources assigned to implement the LRP.	Human Resources	Monthly	LRP Implementation Manager
The frequency of meetings of the Samarkand Community Development Committee	Engagement Database	Monthly	LRP Implementation Manager
Number of engagements with:	Engagement Database	Monthly	LRP Implementation Manager & Community Liaison Officer
<ul style="list-style-type: none"> • Historical leaseholders • Herders • Lease holding households along the OTL • Women in households along the OTL • Vulnerable households 			
Number of vulnerability allowances paid	Financial Records	Monthly	LRP Implementation Manager & Community Liaison Officer
Number of vulnerable people referred to government support programs	Engagement Database	Monthly	LRP Implementation Manager & Community Liaison Officer
Agricultural technical advice to historical farmers	Training Records	Monthly until complete	LRP Implementation Manager

Delivery of Training on Veterinary Health	Training Records	Monthly until complete	LRP Implementation Manager
Delivery of Entrepreneurial Training for Women on Animal Produce	Training Records	Monthly until complete	LRP Implementation Manager
Delivery of Training on Irrigation Technology for Crop Yield Improvement	Training Records	Monthly until complete	LRP Implementation Manager
Delivery of Training on Market Knowledge, Logistics and Exporting	Training Records	Monthly until complete	LRP Implementation Manager
Delivery of Business and Financial Training	Training Records	Monthly until complete	LRP Implementation Manager
Delivery of Training on Overgrazing & Alternative Feed Sources	Training Records	Monthly until complete	LRP Implementation Manager
Delivery of Technical Advice on Land Auction System	Training Records	Monthly until complete	LRP Implementation Manager
Number of trainings been provided to selected community members to access the Solar PV Area	Livelihood Restoration Records	Monthly	Community Liaison Officer

Output Indicators

Herders' perception of the training provided	Feedback Survey following the training	Every 6 months	Community Liaison Officer
Women's perception of training provided	Feedback Survey following the training	Every 6 months	Community Liaison Officer
Herders and surrounding communities' perception of the feed bank initiative	Survey 1 month after mast installed and every 6 months thereafter	Every 6 months	Community Liaison Officer
Training attendance	Livelihood Restoration Records	Monthly	Community Liaison Officer
Quantity of feed fathered from the PV Solar Site and given to each community	Livelihood Restoration Records	Monthly	Community Liaison Officer
Number of households being provided feed by the Solar PV feed collection	Livelihood Restoration Records	Monthly	Community Liaison Officer
Revenue generated from the Solar PV feed collection	Livelihood Restoration Records	Monthly	Community Liaison Officer
Farmer's (along the OTL) perception of the project	Perception survey 1 month after compensation issued and every 6 months thereafter	Every 6 months	Community Liaison Officer

Herder's perception of the project	Perception survey following the training and every 3 months thereafter	Every 6 months	Community Liaison Officer
Community perception of the project	Perception survey	Every 6 months	Community Liaison Officer
Effectiveness of training to actually restore/enhance ability to maintain or increase income	Multiple sources including perceptions, training records and impact monitoring	Every 6 months	LRP Implementation Manager & Community Liaison Officer
Effectiveness of Solar PV feed collection to actually restore/enhance ability to maintain or increase income	Multiple sources including perceptions, usage records and impact monitoring	Every 6 months	LRP Implementation Manager & Community Liaison Officer
Issuing of the land enhancement grant to the historical farmers	Payment record	Every 3 months	LRP Implementation Manager & Community Liaison Officer
Type of usage of the land enhancement grant by the historical farmers	Engagement records	Every 3 months	LRP Implementation Manager & Community Liaison Officer
Historical farmers perception of the livelihood restoration programme	Engagement records	Every 3 months	LRP Implementation Manager & Community Liaison Officer
Number of cash compensation payments received	Samarkand LRP Committee	Monthly	LRP Implementation Manager
Number of grievances received	Grievance Mechanism	Monthly	LRP Implementation Manager
Number of grievances open and closed	Grievance Mechanism	Monthly	LRP Implementation Manager
Average time taken to resolve grievances	Grievance Mechanism	Monthly	LRP Implementation Manager
Interim evaluation of the progress of the vertical feed bank	Engagement with herders & LRP records	1 year after the start of the initiative	LRP Implementation Manager

Impact indicators

Changes in where herders now choose to herd	Socio-Economic Survey	Every 6 months	Community Liaison Officer
Changes to the income received by professional herders	Socio-Economic Survey	Every 6 months	Community Liaison Officer
Changes to the income received by vulnerable community and herders	Socio-Economic Survey	Every 3 months	Community Liaison Officer
Time taken to reach grazing land making sure it aligns with predicted impact	Socio-Economic Survey	Every 6 months	Community Liaison Officer
Number of herds in the three communities	Socio-Economic Survey	Every 6 months	Community Liaison Officer
Number of diseases reported among livestock	Socio-Economic Survey	Every 6 months	Community Liaison Officer
Number of diseases/injuries to livestock that were home treated because of training provided by the project	Socio-Economic Survey	Every 6 months	Community Liaison Officer
Number of livestock per herd the three communities	Socio-Economic Survey	Every 6 months	Community Liaison Officer
Changes to the roles and income of women	Socio-Economic Survey	Every 6 months	Community Liaison Officer
Changes to the income of historical farmers households	Socio-Economic Survey	Every 6 months	Community Liaison Officer
Women's perception of how their quality of life has changed	Socio-Economic Survey	Every 6 months	Community Liaison Officer
Number of households considered vulnerable	Socio-Economic Survey	Every 6 months	Community Liaison Officer
Vulnerable people income compared to baseline levels	Socio-Economic Survey	Every 6 months	Community Liaison Officer
Vulnerable people spending compared baseline levels	Socio-Economic Survey	Every 6 months	Community Liaison Officer
Number of individuals with health issues compared to the baseline	Socio-Economic Survey	Every 6 months	Community Liaison Officer
Number of vulnerable households reporting financial difficulty	Socio-Economic Survey	Every 6 months	Community Liaison Officer
Number of vulnerable households reporting difficulty providing food for the family.	Socio-Economic Survey	Every 6 months	Community Liaison Officer
Number of vulnerable households reporting changes to their living conditions/livelihood compared to baseline levels.	Socio-Economic Survey	Every 6 months	Community Liaison Officer
Number of vulnerable households enrolled in government support services	Socio-Economic Survey	Every 6 months	Community Liaison Officer

12.1.4 LRP Completion Audit

The developer will commission a LRP completion audit with an independent consultant to verify that the LRP has been fully implemented and has been effective in restoring and where possible enhancing the livelihoods of affected persons. Where the completion audit recognises that the Livelihood Restoration activities have not been successful in fulfilling the goals of the LRP it will recommend corrective actions where necessary.

- The objectives of the LRP completion audit include:
- Assess the effectiveness of the LRP implementation in minimise the impacts associated with economic displacement
- Ensure that all entitlements and commitments in the LRP have been delivered
- Assess if livelihoods have been successfully restored
- Ensure that the grievance mechanism is effectively implemented and is accessible to the community.
- Identify the need for any corrective actions that might improve the overall performance of the livelihood restoration initiatives and compensation process.

Appendix A - LRP Summary

Impacts and Land Requirements

Minimising Displacement

The project first took steps to minimise displacement including:

- **Boundary adjustments:** Masdar, AECOM and its local subconsultant Green Business Innovation (GBI) worked with the local cadastral office to ensure that the boundary of the Solar PV Area did not overlap with any existing leaseholds (not including historical leaseholds that had already been terminated). The local cadastral office provided a map of leaseholds to AECOM and Masdar that were held in the area. GBI, AECOM, Masdar and the local cadastral office then worked together to revise the project boundaries from the ones originally provided to Masdar by the Ministry of Energy to ensure no further displacement of leaseholds occurred within the solar PV area.
- **Transmission Route Selection:** The primary route for the OTL was designed in consultation with affected leaseholders along the route of the line in order to avoid structures, high value crops or other social receptors where possible.

Displacement Impacts

The project will however still cause displacement on households outlined below. A total of 51 households and 281 people are impacted by the solar PV site and the OTL. Out of this group 5 households have already been significantly impacted (over 10% of their land temporarily or permanently impacted) by historical resettlement related to the project.

Type of affected households	No. of Households	No. of individuals	No. of significantly impacted Households >10%	No. of significantly impacted Individuals >10%
Historical Farming Households with Sub-Lease Agreements in the Solar PV Area were already displaced in 2019 and are included in the LRP.	5 Households	41 People	5 Households	41 People
Farmers with Sub-Lease Agreements along the Overhead Transmission Line will be impacted by a small amount of land take for towers, and temporary impacts during construction.	4 Households	22 People	0	0
Informal land users (Professional and Community Herder) using the Solar PV Area will lose access to this area for grazing herds.	42 Households	218 People	The land is a community resource and therefore the % of land take per household cannot be calculated.	

Displacement and impacts on land

The project will cause three types of land impacts:

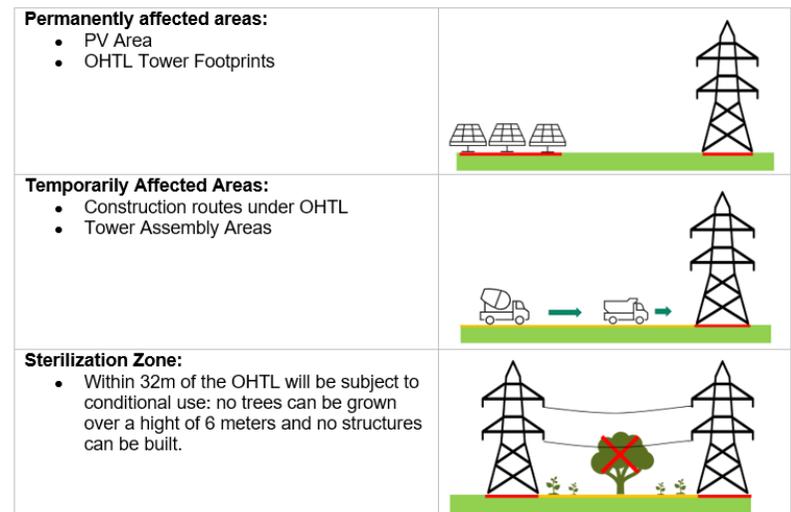
Permanent land take: The solar PV site will require 438 ha. The footprint for the OTL towers also require 0.2310ha and will be required for the lifespan of the project and thus should be considered a permanent land take. The permanent land take for each leaseholder is less than 0.001% of the total land in the leasehold (excluding historical leaseholds).

Temporary land take: The project requires temporary access to land in order to construct the OTL. This includes:

- Temporary access roads 6m wide to each tower in order for heavy machinery to access each site.
- An additional assembly area will be required for each tower (total area of 1.33ha)
- An 18m wide right of way will be required for a tractor to suspend the OTL between the towers.

Temporary impacts are relatively small with the largest impact being 4.20% of land taken.

Conditional sterilization zone: The area of land within 32m each side of the OTL itself is considered a "sterilization safety zone". Farmers will be able to continue to use this land and will not be impacted by the construction however they will no longer be able to grow trees over 6 meters or build structures in this area.



Objectives & Policy Framework

Objectives of the LRP

The LRP was developed to manage the land acquisition process and mitigate the remaining displacement related impacts on affected people. The LRP has the following objectives:

- Define national and international requirements for economic displacement.
- Outline procedures for the land acquisition and compensation to be carried out by State parties.
- Identify affected people and understand the socio-economic characteristics of affected households.
- Evaluate and assess the socio-economic activities that are located within the Project Site.
- Define appropriate levels and means of compensation for losses resulting from the Project in line with National Law and lender standards.
- Identify other assistance and measures to enable affected households to restore and improve their livelihood.
- Define roles and responsibilities of key parties in the Project.
- Propose an appropriate grievance resolution mechanism.
- Evaluate and address disclosure and consultation requirements required by the Project lenders.

Entitlements

All displaced people will be entitled to support by the project and the type of support.

The main entitlements include:

- Compensation for all assets, crops and trees
- Compensation for lost income
- Livelihood restoration for all displaced households
- Additional safeguards and support for vulnerable households and individuals

These entitlements are outlined in greater detail in the Entitlement Matrix on the next two pages.

Project Requirements:

National laws applicable to land acquisition for the project are described in detail in the LRP.

Beyond Uzbek legal requirements, the project lenders who are financing the project also have standards which must be followed by the project, these include:

- **Asian Development Bank (ADB)** - Safeguard Policy Statement (SPS)
- **The European Bank for Reconstruction and Development (EBRD)** - Environmental and Social Policy (ESP) and Performance Requirement (PR) 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement addresses impacts on land acquisition.
- **The Asian Infrastructure and Investment Bank (AIIB)** - Environmental and Social Framework and Environmental and Social Standard 2: Land Acquisition and involuntary Resettlement.
- **The European Investment Bank (EIB)** - Environmental and Social Standards. This includes, Standard 6 – Involuntary Resettlement.

The above standards all have similar requirements which include:

- Avoid involuntary resettlement wherever possible.
- Enhance, or at least restore, the livelihoods of all displaced persons in real terms relative to the pre-project levels.
- Improve the standards of living of vulnerable groups.
- Engage directly with affected persons through meaningful consultation.
- Compensation rates applied must be at “full replacement value”.

Objectives & Policy Framework

Objectives of the LRP

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- Define national and international requirements for economic displacement.
- Outline procedures for the land acquisition and compensation to be carried out by State parties.
- Identify affected people and understand the socio-economic characteristics of affected households.
- Evaluate and assess the socio-economic activities that are located within the Project Site.
- Define appropriate levels and means of compensation for losses resulting from the Project in line with National Law and lender standards.
- Identify other assistance and measures to enable affected households to restore and improve their livelihood.
- Define roles and responsibilities of key parties in the Project.
- Propose an appropriate grievance resolution mechanism.
- Evaluate and address disclosure and consultation requirements required by the Project lenders.

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- Improve the standards of living of vulnerable groups.
- Engage directly with affected persons through meaningful consultation.
- Compensation rates applied must be at “full replacement value”.

Valuation and Compensation

Provision of compensation

In accordance with national and international requirements, temporary and permanent impacts on leaseholds, such as loss of crops or damage to assets will be compensated in cash at full replacement value which includes the market value of losses and any other transaction costs, interest accrued, transitional cost without any deductions for taxes, depreciation or materials which can be salvaged.

All affected people who have crops, assets or structures that are impacted by the project will be entitled to compensation, irrespective of their legal tenure in the project area.

Compensation will be issued prior to any adjustment of leases or land take by the project for construction.

Affected persons will have the opportunity to appeal the valuation amounts and this will trigger a re-valuation by another independent valuation company.

Valuation principles:

The following valuation principles were followed to determine compensation amounts:

- Compensation for standing crops will be at replacement value based on one year of production costs and an allowance equivalent to one-year average net income based on the average income over the previous three years.
- Compensation for fruit producing trees will be based on the average income from the past three years multiplied by the years required for the tree to reach productive maturity and the cost of planting new saplings. Trees that are immature will be compensated based on the cost for planting and growing replacement trees to the same age.
- Any unexpected damage to structures caused during construction will be based on full replacement value in accordance with the Entitlement Matrix.
- Compensation for loss of income/livelihood will be compensated based on the average monthly income for the last three years multiplied by the number of months that the interruption occurs.
- Cash compensation for permanent loss of land leased based on the average monthly income from the land over the last three years multiplied by multiplied by four years.

The valuation process

The valuation process was carried out by a local government approved valuation company in Uzbekistan with experience conducting valuations of this kind including for previous projects sponsored by ADB. The name of the valuation company is below:

- **Company Name & Address:** *BAHOLASH INTEGRAL" LLC, Tashkent, Yunusabad district, Bodomzor str, 3, room 7,8,9*

The valuation process took place during the period from 15th September to 18th November 2022 and involved the following steps:

1. Each household was contacted to have a one-to-one meeting with the valuers and the district Khokimiyat at the district Khokimiyat office and given an opportunity to submit evidence to calculate the average income from the land.
2. A committee was then set up which involved the District Khokimiyat, District Cadastre, District Agricultural Department, District grid representative, Representative of valuation company
3. Each cadastral parcel as part of a leasehold was examined to calculate the following land takes and impacts
4. The value of lost income for permanent and temporary impacts was calculated using the above calculated land take and also the average income of the land recorded over the past three years.

Cut off date

After the completion of the valuation surveys a project wide cut-off date was then announced through the local Khokimiyat district wide telegram channel and also on the farmers telegram channel. The final cut-off date was **18th November 2022**. Any new crops planted, or infrastructure developed in the project area after this date will not be considered for compensation.

Entitlement Matrix

Loss of asset/ Description of impact	Eligible person or group	Entitlement	Applicability
Loss of exclusive rights of access to arable land as part of a leasehold	Owners or leaseholders of arable land or those with formal title	<p>OPTION 1: Cash compensation based on the average monthly income from the land over the last three years multiplied by the number of months that the interruption occurs, or if permanent, multiplied by four years.</p> <p>NB: Option to be avoided for critically vulnerable leaseholders in favour of option 1 (if the amount of land lost is greater than 5% of total landholding)</p> <p>OPTION 2: Provide replacement plot of equal or improved productive potential within the same or improved proximity to household. Secure tenure may be obtained within leasehold tenure types if the land provided does not place the owner at risk of forced eviction. If the replacement plot is provided in-kind, upfront administrative costs involved in provision of secure tenure will be covered by the Developer (such as survey costs, statutory lease fees in the case of leasehold tenure or administrative costs).</p> <p>NB: Option only available to leaseholds where over 10% of the land is due to be permanently acquired by the project or if 10% of the land becomes uneconomically viable as a result of the project. This threshold should be reduced to 5% where the leaseholder is critically vulnerable.</p>	Active
Loss of land preparation or enhancements	Farmers (with formal or informal right of access)	<p>OPTION 1: Monetary compensation at replacement value, or government rate, or whichever is higher, for land preparation (including irrigation, electricity provision, clearing or ploughing) that existed at time of the survey, to be paid after delivery of entitlement for replacement land (if applicable), so that the compensation can be used for the intended purpose of land preparation.</p> <p>NB: Option to be avoided for critically vulnerable households in favour of option 2 (if the amount of land lost is greater than 5% of total landholding).</p> <p>OPTION 2: The Developer arranges for preparation of replacement land of equivalent productive potential, on replacement plot.</p> <p>AND</p> <p>1. A Disruption Allowance equivalent to 10% of replacement value for land preparation.</p>	Active
Loss of Crops	Owner of crops	<p>OPTION 1: Compensation at (1) government-established crop rate, or (2) replacement value, for crops, whichever is higher for crops that existed at time of moratorium, that were unable to be harvested, to be paid any time before the planned removal of the said crops. To be multiplied by number of seasons of lost production. This option is only permissible for situations where harvest is not possible due to the project schedule and/or life cycle of the specific crop in question.</p> <p>NB: For critical vulnerable households who are below the poverty line or in financial difficulty compensation may be paid in instalments to maintain food security.</p> <p>OPTION 2: Allow harvest of current crop, for crops that existed at the time of the moratorium but provide compensation for future seasons lost at (1) government-established crop rate, or (2) replacement value, for crops, whichever is higher for crops that existed at time of the survey.</p> <p>AND</p> <p>1. A Disruption Allowance equivalent to 10% of replacement value of the said crops.</p>	Active
Temporary loss of ability to plant or harvest crops within temporary access areas due to the project schedule.	Farmers (with formal or informal right of access)	<p>OPTION 1: Compensation at (1) government-established rate, or (2) replacement value, whichever is higher, and predicted total annual profit from harvest, multiplied by number of seasons required to re-establish crop to productive potential to be paid in annual instalments at harvest time. This option is only permissible where planting or harvest is not possible due to the project schedule and/or crop life cycle.</p> <p>OPTION 2: Provide transitional food support packages equivalent to lost harvest of farming households, during resettlement transition period. This option is only permissible for situations where planting or harvest is not possible due to the project schedule and/or crop life cycle.</p> <p>NB: Option only available to leaseholds where access to over 20% of the land is temporarily lost.</p> <p>AND</p> <p>1. A Disruption Allowance equivalent to 10% of replacement value of the said crops.</p>	Active
Permanent loss of primary agricultural livelihood	Farmers (with formal or informal right of access) Business owners Employees or informal workers	<p>Livelihood restoration targeted at improving and enhancing the livelihoods of the affected farmers and herders. Various livelihood restoration options may be included and will be proportionate to the level of impact.</p> <p>A significant impact allowance will be provided to any household which loses more than 10% of its income earning assets permanently. The allowance will be equivalent to six months of monthly minimum wage.</p>	Active
Loss of productive fruit trees	Owner of trees	<p>OPTION 1: Provision of monetary compensation as determined by (1) government-established compensation rates, or (2) the cost of replanting plus cumulative lost income from productive trees (i.e., replacement rate) until tree can be re-established, whichever is the higher, for trees that existed at time of moratorium.</p> <p>For vulnerable households the compensation of lost income must be paid in periodic instalments covering the period between the loss of trees and for new trees to become productive.</p> <p>OPTION 2: Provide replacement trees and pay for lost harvest until replacement trees reach productive age. For critically vulnerable households consider providing transitional food support packages equivalent to lost harvest of affected households for time period required for replacement trees to become productive, for trees that existed at time of moratorium. If monetary option for lost harvest is chosen, this should be paid in instalments, to enable use for intended purpose of providing for lost interim harvest.</p>	Active

Entitlement Matrix

Loss of asset/ Description of impact	Eligible person or group	Entitlement	Applicability
Loss of farm shelter, structure or built assets	Owner of shelter	OPTION 1: Provision of monetary compensation as determined by (1) government-established compensation rates, or (2) replacement value (excluding depreciation), whichever is higher, for farm shelters that existed at time of moratorium.	When Necessary
	Informal users of shelter	OPTION 2: Provision of partial monetary replacement value compensation for labour, transport and transaction costs, and a package of replacement materials to enable construction of improved replacement farm shelter. AND 1. A Disruption Allowance equivalent to 10% of replacement value of the said farm shelter. 2. Permit the salvage of non-fixed materials	
Loss of Informal access to land	Informal users of land	Facilitate through the provision of support and technical advice, a formal (security of tenure) Lease/Sub-Lease Agreement including the payment of any administrative costs such as taxes, transaction, registration fees, etc.	When Necessary
		Cash compensation to reflect the income lost through land-access restrictions where this can be demonstrated to have occurred as a direct consequence of the changes in land use arising from the Project AND Other practical support necessary for informal land users to re-establish their livelihoods elsewhere, including the provision of livelihood restoration measures	
Permanent Loss of Natural Resources, grazing land / Communal Land	Grazing community as whole	OPTION 1: Identify alternative communal grazing land at an appropriate proximity to the land users and where necessary increase the carrying capacity of said land or improve access to alternative land. OPTION 2: Community Livelihood restoration initiative with sustainable agriculture project on replacement or remaining land.	Active
Temporary Loss of Natural Resources, grazing land / Communal Land	Grazing community as whole	Community transitional support in the form of temporary access to alternative land or provision of feed during the period of disturbance	Not Active
Loss of employment or loss of salaried income.		The project will seek to protect any employees from job losses or reduction in income by seeking a legal agreement with their employer to ensure their income is not affected. If however unanticipated job losses or reduction of salary do occur, the project will compensate affected employees (formal and informal) based on the average monthly salary calculated over the last three years for a period of six months and they will also be entitled to specific livelihood assistance (to be developed if this impact occurs, it is currently not expected to occur).	Not Active
Vulnerable or disproportionately affected households	Vulnerable households	A vulnerability allowance equivalent to minimum wage will be provided for six months to the household. Priority for employment in project-related jobs, training opportunities, self-employment and wage employment assistance. A range of other specific assistance measures will be provided to support vulnerable and disproportionately affected people to reflect the specific vulnerability identified. For example, elderly persons and individuals with health issues will be provided with more frequent visits and communication to ensure that they are kept calm and closely informed during implementation of the LRP. Engage local government to place them on welfare scheme.	Active
Gender inequality	Women in significantly impacted households	For households significantly impacted (above 10% of land displaced by the project): All spouses to be registered as co-owners of assets prior to compensation. All compensation is to be paid to all spouses, and in cases of dispute, divided equally between spouses. All spouses to be co-signatories of all compensation agreements.	When Necessary
No-Shows/Absentees	Owners of crops or assets which are absent at the time of survey or compensation process	Assets or crops for which the owner/s cannot be located shall be surveyed, and the value of the total compensation package (monetary and in-kind) calculated and placed within a third-party escrow account where funds are held in trust for a period of 5 years. After a 5 years period has elapsed without an asset owner making a claim, the funds will be disbursed to community development activities targeting the respective village, based on needs as determined in consultation with the Community Resettlement Committee at the time of disbursement. Should the asset owner make a claim before the 5-year period, and be able to furnish proof of asset ownership, the funds shall be disbursed to enable the asset owner to replace the affected assets.	When Necessary
Significant hardship caused by loss of investment in the land which was not compensated	Historical Households 2 and 4	Households that have been put into financial difficulty and experienced hardship as a result of loss of investment in the land without compensation should receive an additional disruption allowance to recognise the stress and upheaval caused by the project. The allowance should be a cash package equal to 30% of total compensation owed and is included with the "land enhancement grant".	Active

Livelihood Restoration and other Support

In addition to receiving compensation, all affected persons will have access livelihood restoration initiatives and vulnerable households will also receive additional support. The livelihood restoration and vulnerability support initiatives are outlined below.

Livelihood Restoration Initiative	Target recipients	Description
Land enhancement grant	Historical Leaseholds only	Land enhancement grant (or provision of materials, land or livestock) and technical advice given to historic leaseholders that have permanently lost a significant portion (>10%) of their land to the project in order to improve the capacity of remaining land. This land enhancement grant will be issued in lieu of replacement land of which availability is scarce in the area. Consultation with historical farmers revealed that most farmers wish to spent the grant on livestock.
Training on Veterinary Health & free consultation	Herders Farmers along the OTL	Open training provided to all herders and farmers along the OTL and their household members. The training will focus on animal veterinary health including how to identify common diseases, how to treat common diseases and injuries. A free consultation will be provided to all professional herders and one representative of each community herd
Entrepreneurial Training for Women on Animal Produce	Women in affected households (Herders and Farmers)	Open training provided to spouses of all herders and farmers along the OTL and their household members. The training will focus on how to increase the value of meat, milk and wool products on the market.
Technical training on how to improve agricultural crop yields.	Farmers along the OTL and historical farmers	Open training provided to farmers along the OTL. The training will focus on techniques to improve crop yield such as providing advice on seed varieties, irrigation techniques, harvesting techniques.
Training on Market Knowledge, Logistics and Exporting	Farmers along the OTL and historical farmers	Open training and advice on how to market agricultural produce and how to export internationally. The training will focus on a number of topics including: Providing advice on seed varieties, growing high value produce such as medicinal plants, harvesting techniques, crop storage, marketing techniques, finding local buyers in markets beyond local markets, how to export produce and transportation and logistics.
Business and financial training	Farmers along the OTL	Open training provided to farmers along the OTL The training will provide a basic training on farming and business finances including the budgeting and forecasting of income, revenue and costs and taxes etc
Training on Overgrazing & Alternative Feed Sources	Herding Households	Training on how to grow feed for livestock in a concentrated way utilising technology such as vertical feed banks. Topics will include: Background into land scarcity and raise awareness about the future of herding; Overgrazing and how to graze sustainability in a smaller area; and, Alternative sources of animal feed and technologies such as vertical feed banks
Feed Bank in the Solar PV Area	Professional herders and Community herders	Development of a "feed bank" which involves the collection, storage and distribution of feed for livestock herds who are displaced by the project. The feed will be collected from within the Solar PV Area between the solar panels and under them (where possible). Professional herders who are displaced will be able to collect the feed free of charge and then sell to the community members who previously paid them to herd or feed to community herds as part of a paid service. Community herders who are displaced by the community will be given free access to collect feed on a rotational basis similar to their current herding rotation.
Technical Advice on Land Auction System	Mahallas	Specialist advice provided to Mahallas
Guaranteed employment of a household member	Historical leaseholder household Vulnerable herder household Professional herders household	Guaranteed employment (if accepted by the household) for one member of the household for Historic leaseholder households, vulnerable herders and professional herders.
Preferential employment	All Herders Farmers along the OTL	Preferential employment for some herders and vulnerable people during the construction phase of the project. Employment will be subject to the affected person having the required skills needed by Masdar, however where possible training will be provided. Employment will also be limited by the needs of the project and cannot be guaranteed. Employment will not exclude anyone from other livelihood restoration measures to which they are entitled to.
Transitional support	Professional herders Vulnerable community herders	Provision of feed for vulnerable herders and herders at risk of losing significant income temporarily after the Solar PV site is blocked off for construction and while the feed bank is still being set up.
Vulnerability Allowance	Vulnerable Households only	A vulnerability allowance equivalent to minimum wage will be provided for six months to the household.

Implementation Arrangements

Project Resources

In order to effectively implement the LRP, the project will appoint the following resources (See LRP for full list):

- A LRP implementation manager with overall responsibility of day to day implementation of the LRP.
- A designated Community Liaison Officer (CLO) to manage the project grievance mechanism, manage the compensation process and keep the community informed of project progress.
- Technical specialists responsible for monitoring the progress of LRP implementation in accordance with international best practice.

The LRP Committee

The project will also assemble a LRP Committee in order assist the implementation and monitoring of the LRP. The composition of the LRP Committee is expected to include:

- Regional Agricultural Office
- Cadastral Office
- Masdar Community Liaison Office
- Representatives from the local Khokimiyat
- Male and female representatives from local mahallas
- Male and female representatives of affected households

LRP Implementation Schedule

The LRP implementation schedule is below (subject to change):

Workstream	2023									2024					
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Appointment of resources															
Payment of compensation															
Transitional Support															
Livelihood Restoration & Monitoring															

Project Grievance Mechanism

At all times, Masdar will accept comments, complaints and grievances concerning the Project in both verbal and written formats. Persons responsible for addressing grievances are outlined below:

Khurshid Karamatov, Masdar Solar Community Liaison Officer (CLO) **Kkaramatov@masdar.ae** **(+99893) 522-00-70**

Saida Yusupova, Community Liaison Manager **Saidayusupova@gmail.com** **(+99890) 319-77-21**

All written and/or verbal complaint will be recorded by the Masdar CLO.

The following information should be submitted with a complaint:

- Name (anonymous complaints are accepted), address, (community name) and full contact details.
- Date, time and place where complaint was received.
- Description of complaint (including third parties such as construction contractors) and location of the issue.
- Preferred means of communication for future contact.

Any grievance will be acknowledged by the Masdar CLO within 5 working days

Most grievances should be resolved within one month of receiving the grievance, for more complex investigations, the complainant will be updated within two weeks of the grievance being received and an updated timeline of how it will be resolved will be provided.

