

Nur Bukhara Solar PV

Human Rights Impact Assessment

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Abbreviations

Acronym	Definition
ADB	Asian Development Bank
AoI	Area of Influence
CNNC	Chinese National Nuclear Corporation
CNTIC	Chinese National Technical Import and Export Corporation
EBRD	European Bank of Reconstruction and Development
EP4	Equator Principles 4
EPFIs	Equator Principles Equator Principles Financial Institutions
ESIA	Environmental and Social Impact Assessment
ESP	Environmental and Social Policy
FGD	Focus Group Discussion
GBVH	gender-based violence and harassment
GoU	Government of Uzbekistan
GSP	Generalized Scheme of Preferences
GSP+	Special incentive arrangement for sustainable development and good governance
HR	Human resources
HRIA	Human Rights Impact Assessment
HRIAM	Human Rights Impact Assessment and Management
HRW	Human Rights Watch
IFC	International Finance Corporation
IFIs	international finance institutions
ILO	International Labour Organization's
IPs	Indigenous peoples
KPIs	Key Performance Indicators
NGO	nongovernmental organization
OHS	Occupation Health and Safety
UAE	United Arab Emirates
UNGPs	United Nations Guiding Principles on Business and Human Rights
VPSHR	Voluntary Principles on Security and Human Rights

1 Introduction

1.1 Overview and Project background

Abu Dhabi Future Energy Company PJSC (“Masdar” or the “Developer”) has been awarded by the Ministry of Energy, Government of Uzbekistan, to design, build, finance, construct, commission and operate, maintain and transfer (DBFOMT) the Nur Bukhara Solar photovoltaic (PV) Project with a capacity of 250 MWA and 63 MW/126 MWh Battery Energy Storage System (“Project”). The Project will be designed to meet national regulations and international standards. The Project will be implemented through a long-term, i.e., 25 years power purchase agreement (a “PPA”) between Nur Bukhara Solar PV LLC Foreign Enterprise (the Project Company or the Company) and JSC National Electric Grid of Uzbekistan (“NEGU”) as the offtaker.

The Project will support Uzbekistan to:

- Reduce energy dependence on carbon-based fuels.
- Meet renewable energy targets.
- Reduce greenhouse gas emission rates.

Masdar has appointed Juru Energy Ltd. (JE or the ESIA Consultant) to perform an Environmental and Social Impact Assessment (ESIA) for the Project. The ESIA will be developed in accordance with the requirements of the International Finance Corporation (IFC) Performance Standards (PSs), Asian Development Bank (ADB) Safeguard Policy Statement (SPS) and with reference to EBRD Environmental and Social Policy 2019 (ESP 2019) Performance Requirements (PRs) and the Equator Principles. The Project is required to undergo a separate national environmental impact assessment (EIA) process, which JE will perform and submit as a separate document to the Ministry of Environment for approval.

This document is the Human Rights Impact Assessment (HRIA) and has been prepared on behalf of Masdar to guide and implement the Project in line with relevant human rights requirements and obligations. It will be submitted as part of Volume III of the ESIA. The purpose of this document is to present a Human Rights Impact Assessment (HRIA) following the Equator Principles 4 2020¹ (EP4) for the construction and operations phases of the Project. The HRIA will need to be reviewed and updated at least annually.

1.2 Objectives of the human rights impact assessment

The objective of this HRIA to identify human rights impacts on rights holders within the Project area of influence. It will provide remediation, mitigation and management commitments, to address any impacts identified. The Project construction and implementation will be conducted with respect for the human rights of people working or living within its area of influence. Including, monitoring the human rights compliance of third-party companies, such as sub-contractors, sub-sub-contractors and suppliers.

International standards define human rights, as securing dignity and equality for all. In-line with the EP4 requirements, the key human rights standards that the Project will follow are the United Nations Guiding Principles on Business and Human Rights (UNGPs). Human rights are also described in the following:

- International Bill of Human Rights – the Universal Declaration of Human Rights

¹ https://equator-principles.com/app/uploads/The-Equator-Principles_EP4_July2020.pdf

- International Covenant on Civil and Political Rights
- International Covenant on Economic, Social and Cultural Rights
- International Labor Organization's Declaration on Fundamental Principles and Rights at Work (the principles concerning fundamental rights)

1.3 Limitations

The stakeholder engagement and focus group meeting to inform this HRIA was undertaken directly following a referendum in Uzbekistan (30 April 2023) which was held to create a new version of the Constitution². As a result, local authorities were actively preparing for the referendum and unable to be fully consulted about the nature of the Project activities. In addition, there were protests in other districts (namely the Republic of Karakalpakstan) relating to the referendum. Therefore, it was determined that meetings or FGDs specifically addressing human rights issues might appear to be political in nature and in order not to disrupt the ongoing political process, or cause any concern in the local communities or with the local authorities, human rights questions have been included in general FGD and survey content.

Information on the workers from the two EPC Contractors (China National Technical Import and Export Corporation – CNTIC; and China National Nuclear Corporation - CNNC) working at the Khamza 1 and 2 substations was requested during consultations. However, only limited information has been provided. As the two companies will complete their works at the end of 2023 or the beginning of 2024, the likely direct or cumulative impacts on the workers at these locations (or in the accommodation facilities) is considered to be minimal.

1.4 Structure of the HRIA

The HRIA is structured as follows:

- Chapter 2: Project description
- Chapter 3: Applicable legal frameworks
- Chapter 4: Approach and methodology
- Chapter 5: Human rights baseline
- Chapter 6: Consultation and participation
- Chapter 7: Human rights impact assessment
- Chapter 8: Remediation, mitigation and management commitments
- Chapter 9: Monitoring and reporting

2 Project Description

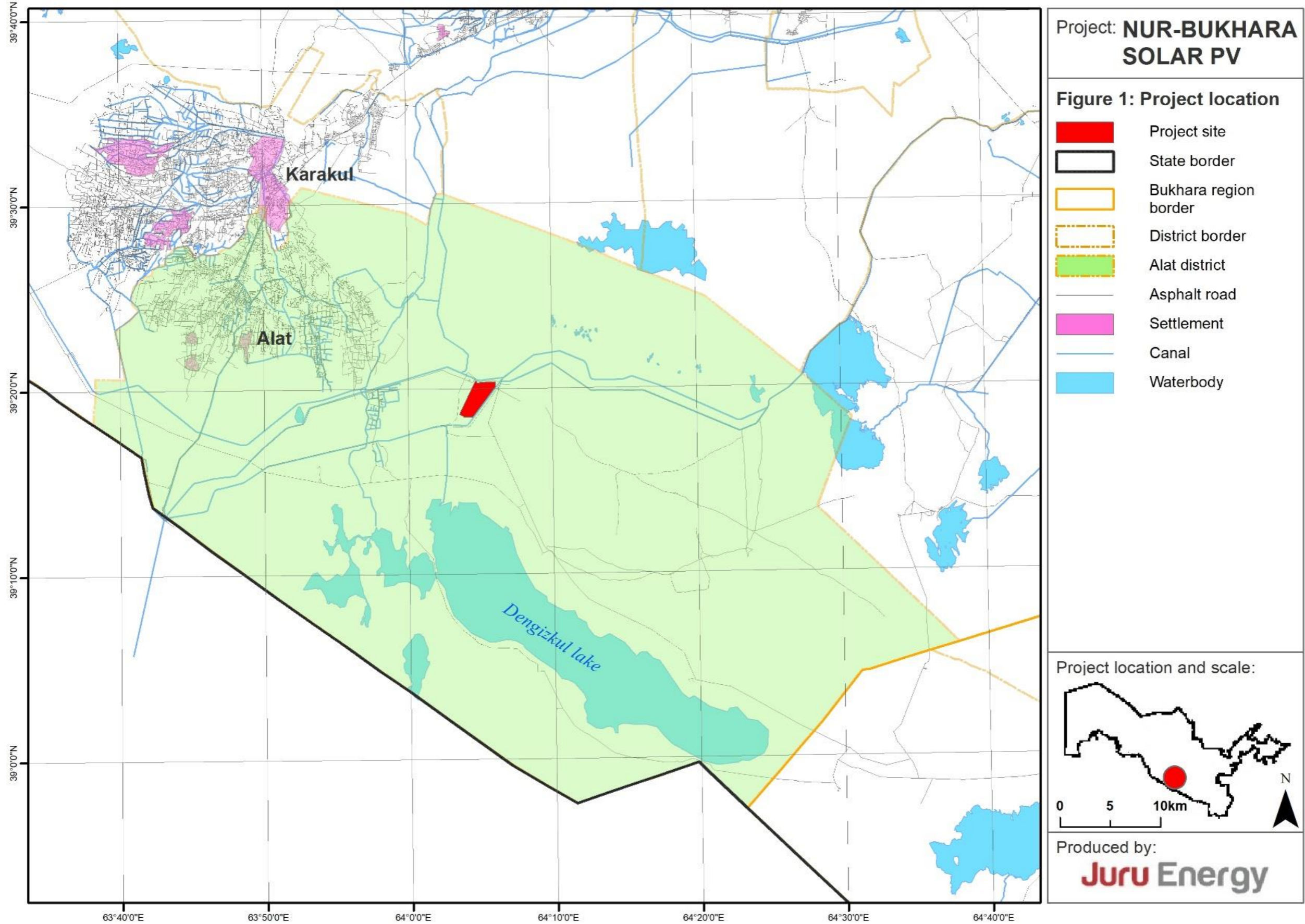
2.1 Project location

The Site covers approximately 649 ha of land in the Alat District of the Bukhara region of the Republic of Uzbekistan. It is located 24 km southeast of Alat city, close to the border with Turkmenistan, which at the closest point lies around 25 km southeast of the Site. The proposed Site is flat and is surrounded by the Amu-Bukhara canal to the North, South and East. The regional

² Four main changes were made to the constitution 1) text in the constitution is now referred to Uzbekistan as a secular State "Uzbekistan is a sovereign, democratic, social and secular State.2) All conflicts and ambiguities under the law shall be resolved in favour of the person; 3) Teachers were given special recognition under the law; 4) The President's term in office was changed from 5 to 7 years.

road R78 runs alongside the northern boundary of the Site. The location of the Project is illustrated in Figure 1.

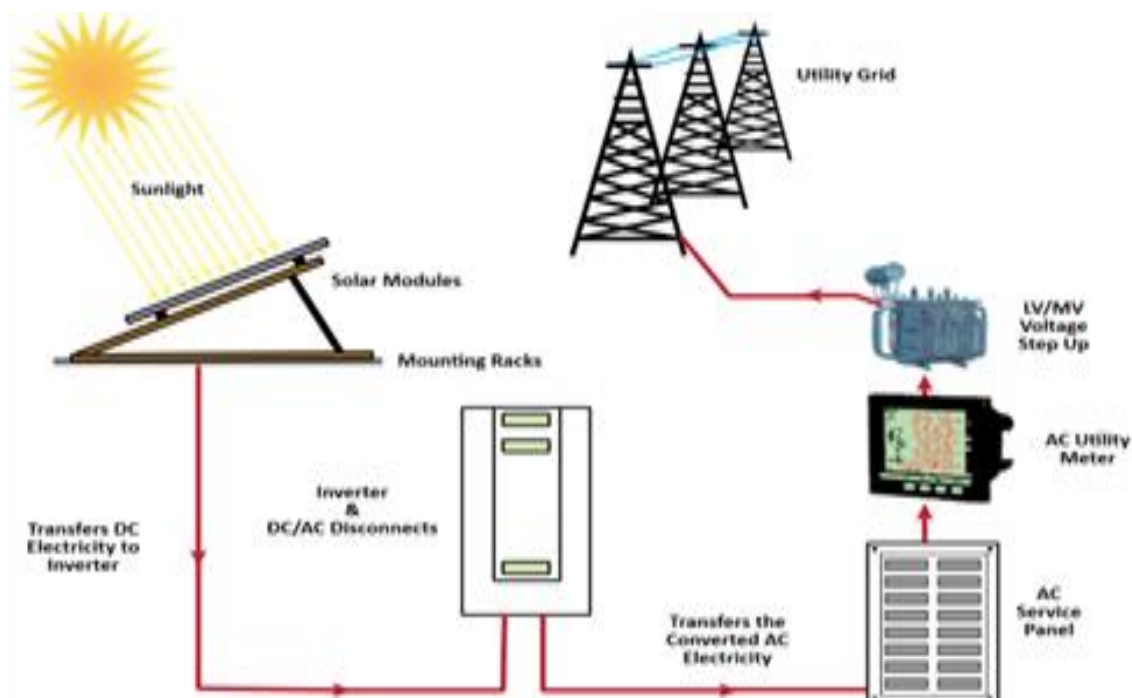
Figure 1: Project location



2.2 Project technology

Photovoltaic (PV) power uses solar panels to convert sunlight into electricity by converting solar radiation into DC electricity. PV inverters convert the direct current into alternating current, and the transformers (located in the Power Stations) will raise the voltage from Low Voltage (LV) to Medium Voltage (MV). Then, the energy generated will be conducted through an underground medium voltage (MV) network of 35 kV to the 35/220 kV Substation. An overview of the process is illustrated in Figure 2 below.

Figure 2: Overview of the PV process (compiled from IFC, 2015)



The main components of the Project are:

- 513,582 PV modules (half-cut monocrystalline silicon technology)
- Inverters and transformers
- Li-Io battery energy storage system (BESS) (four x 40ft containers)
- Underground cabling system
- 35/220 kV Substation
- Grid connection to an existing overhead transmission line (OHTL), "Karku'l 500 SS" - "Hamza-2 SS" from the Project's Substation via a 30m 220 kV Line-in-Line-Out (LILO) connection
- Dismantling and rebuilding of approximately 200 m of existing OHTL w to enable the new LILO link to be made
- On-site buildings, including an operational control centre, office, welfare facilities, security guard house, storage facilities and stores
- New access from Highway R78
- New internal access roads
- Site drainage system

The following activities will be undertaken to develop the Project:

- Site mobilization.
- Civil works
- Procurement and transportation of equipment

- Equipment installation
- Waste generation and disposal
- Commissioning
- Operation and maintenance (O&M)
- Decommissioning

Construction of the Project will be confined to the project site, access road and existing OHTL right of way, and the duration will be approximately 12 to 16 months. The main construction activities are site clearance (rocks, debris, non-functional utilities, vegetation), establishing vehicle access to the Site, civil works (OHTL, substation and main Site), equipment delivery of PV panels and supporting infrastructure), BESS, installation and commissioning. Site establishment and civil works are expected to take three months, followed by eight months for installation and a further three months for commissioning. Work on-site is planned to start at the end of 2023. A material storage area will be established within the main site boundary. At this time, the water source for the construction process will be tankered to the Site. Cement will be from a nearby batching plant (not produced on-site).

The Project may have some on-site accommodation, but contractors will also use offsite accommodation provided it meets Lender standards and adheres to the management and measures stipulated in the ESIA.

The expected lifetime of the PV infrastructure is 25 years (at least), and ten years for the battery system. At the end of its lifetime, options will be considered to replace, repair or remove all infrastructure from the Site.

2.3 Land ownership status

The allocated Site will be provided to the Project via a Land Lease Agreement (LLA) between Nur Bukhara LLC and the Ministry of Energy. The land is currently owned by the Sericulture and Wool Industry Development (SWID) Committee, which has the ability to provide LLA's to limited liability companies (LLCs) in order to use it for grazing purposes. There are three existing LLAs that have been identified, held by Buhoro Karakol Cluster LLC and "Alat Qorakolchilik" LLC, entities that administer the land and a herder and his partner who have a short term (10 months) LLA. For further information on land use see the Project ESIA or the Livelihood Restoration Plan.

2.4 Definition of the Project impact area

The Project footprint (or Project site) is the area within the yellow section in Figure 3. It is the area where the Project components will be constructed, and currently contains two abandoned mining areas. The footprint is used by local community members for grazing livestock.

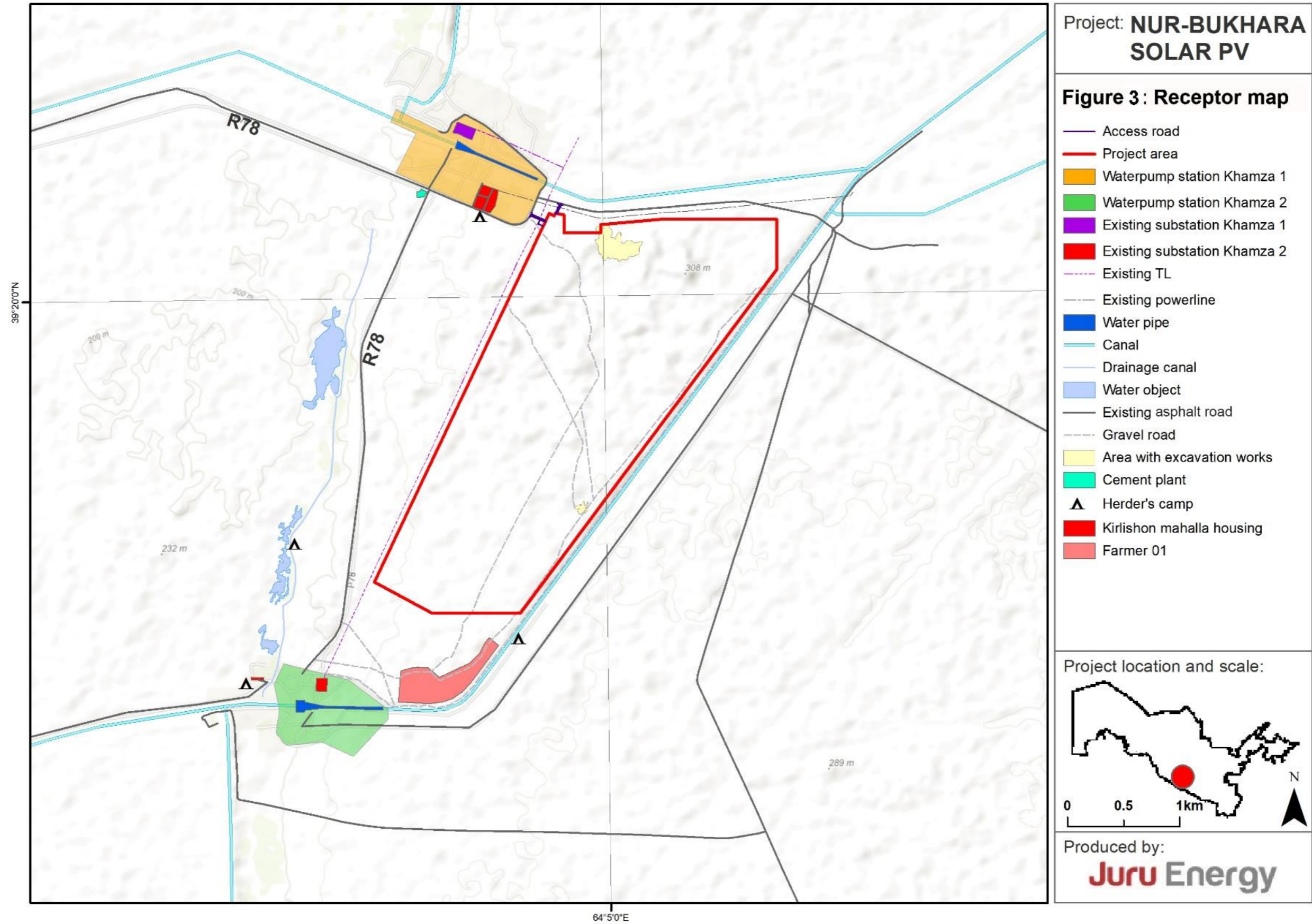
For the purpose of this HRIA, the Project area of impact (Aoi) will be considered to be the Project footprint, the surrounding infrastructure and the two nearest communities (the Aoi communities). This includes the Khamza 1 and Kamza 2 pumping stations, the farm which is just outside the Project footprint at the south, four herder camps in the area surrounding the Project footprint (that are only used during the spring months) and the communities of Kulchovdur and Kirlishon located close to the Project site.

At the time of writing this HRIA there was a worker accommodation camp within the Khamza 1 compound and a concrete batching plant, just outside the substation boundaries used by workers from CNTIC, which is undertaking construction works on the Khamza 1 substation. At the time of writing the HRIA there were also workers from a different EPC Contractor, CNNC Ind. undertaking

reconstruction works at the Khamza 2 substation. They are located in a walled area just outside the southern part of the Project footprint.

The Kirlishon community is located approximately 10 km north-west of the Project site. However, Jiydali settlement, made up of six households, with eight families is considered part of the community, and is located approximately 400 m north of the Project site within the complex of the Khamza 1 substation. Kirlishon community includes 142 households (not including the six households in Jiydali settlement). Kulchovdur community is located approx. 11 km northwest of the Project site. The total number of households is 545, according to the information provided by the makhalla.

Figure 3: Receptor map (project site and direct area of impact)



3 Legal and Institutional Framework

The human rights requirements specified by the legislation of the Republic of Uzbekistan and internationally are summarized in the following sections. The Project Company commits to “Supporting and protecting human rights” in the Project E&S policy (refer to Volume III: ESMP). In addition to this E&S Policy, there are other policies that are also adopted and applied for the Project. These include: Human Resources Policy, Code of Ethics, Policy Against Bribery and Corruption, Recruiting Policy, Supply Chain (Procurement) Policy, and Communication Policy.

3.1 National regulations

As a member of the United Nations (UN), Uzbekistan, supports and implements all of the UN's major international instruments relating to the protection of human rights and freedoms, including the:

- UN Universal Declaration of Human Rights;
- Human Rights Council Resolution No. 30/15 on human rights and preventing and countering violent extremism; and
- Convention on the Elimination of All Forms of Discrimination.

Uzbek legislation, relevant to human rights has been set up to prevent infringement of human rights and freedoms, as well as to develop the necessary organizational, legal, social, economic, spiritual, and moral grounds for human rights protection. Two key legislative acts have been discussed in further detail below:

3.1.1 Constitution of the Republic of Uzbekistan (1992)

The Constitution asserts that “democracy in the Republic of Uzbekistan shall be based upon common human principles, according to which the highest values shall be the human being, his life, freedom, honour, dignity and other inalienable rights.”

Chapter V (Articles 19-21) of the Constitution is named ‘Guarantees of human rights and freedoms’. It is specially related to human rights and includes the following articles:

- Article 19: Human rights based on the principles of international norms, are guaranteed to everyone (since the birth). Human rights are equal for each citizen no matter of gender, age, religious beliefs, nationality.
- Article 20: Rights prescribed in the Constitution cannot be limited unless there is a certain resolution from the Court.
- Article 21: Rights of people cannot be limited or violated, only in case of actions may pose a harm to society and contradicts main principles of legislation in force.
- In addition, Constitution also prescribes human rights in various spheres (civil, social, education, economic etc) in Chapters V-X.

The Oily Majlis (parliament) has an elected and authorized person to deal with human rights issues. The authorized person is a part of the Republic of Uzbekistan’s Legislative Chamber.

3.1.2 Law of the Republic of Uzbekistan ‘On protection of women from harassment and abuse’ (2019).

Specifically concerning the human rights of women, in 2019 Uzbekistan signed the Law of the Republic of Uzbekistan ‘On protection of women from harassment and abuse’, № LRU-561. The Law defines protection for women against harassment and violence as a ‘system of urgent measures of economic, social, legal, organizational, psychological and other, nature in order to eliminate the danger to women's life and health, to ensure their safety and to prevent repeated illegal actions against them’.

3.1.3 Other relevant legislation

Other relevant legislation of the Republic of Uzbekistan include:

- National Human Rights Strategy (approved by Presidential Decree on 22 June 2020. No. PD-6012)
- Law on guaranteeing equal rights and opportunities for women and men (2019) (№ LRU-562);
- Law on Mediation (№ LRU-482, 2018);
- Law on Public Control (№ LRU-474, 2018); and
- Law on Administrative Procedures (№ LRU-457, 2018)

The international commitments made by the Republic of Uzbekistan in relation to human rights are listed below:

- The Universal Declaration of Human Rights
- The International Covenant on Civil and Political Rights
- The International Covenant on Economic, Social and Cultural Rights
- The International Labour Organization’s (ILO) Declaration on Fundamental Principles and Rights at Work³
- United Nations Guiding Principles on Business and Human Rights (UNGP) – discussed further in the next section.

3.2 Lender requirements

3.2.1 International Finance Corporation

IFC requires that clients that request funding from the bank, should “respect human rights, which means to avoid infringing on the human rights of others and address adverse human rights impacts business may cause or contribute to”.

Human rights are a cross-cutting topic within the IFC Performance Standards (PSs); meaning that there is no one PS dedicated to human rights, but instead it is reflected across all of the PSs. Therefore, IFC suggests that in undertaking a due diligence study of the Project against its PSs, that would address many relevant human rights issues.

IFC states that in a limited number of high-risk circumstances, the client should prepare a specific human rights due diligence as relevant to the particular business, in addition to its process of

³ . ILO considers its eight core conventions to be “fundamental” and they form the basis of the ILO 1998 Declaration of Fundamental Principles and Rights at Work. These eight conventions underpin the four United Nations Global Compact Labour Principles, see A/HRC/14/27 and <https://www.unglobalcompact.org/Issues/Labour>

identifying environmental and social risks and impacts. It is not specified in the PSs which high-risk circumstances would require the human rights due diligence. It is understood that this would be defined on a case-by-case basis.

3.2.2 Asian Development Bank

The Asian Development Bank Safeguard Policy Statement does not include specific requirements related to human rights, except in the case of indigenous peoples (which have not been identified in the Project Aol).

3.2.3 Equator Principle IV

The Equator Principles is a voluntary set of principles institutions, called Equator Principles Financial Institutions (EPFIs), sign on to, in order to show their commitment to assess and manage the environmental and social risks of their projects. Upon signing EPFIs commit to the following:

- “We will fulfill our responsibility to respect Human Rights in line with the United Nations Guiding Principles on Business and Human Rights (UNGPs) by carrying out human rights due diligence”;

The Equator Principles, specifically mention the UNGPs in relation to human rights, corporate social responsibility and responsibilities of corporate entities on communities (UNGPs are discussed further in the next section).

Under the Equator Principles EPFIs are expected to undertake an assessment of potential adverse Human Rights impacts for each of their projects and include it as part of the ESIA package. EPFIs need to provide a suitable explanation if they determine that a human rights impact assessment is not necessary. The explanation should include how the determination was made and which stakeholder groups and vulnerable populations (if present) were considered in the analysis⁴.

3.2.4 United Nations Guiding Principles on Business and Human Rights (UNGP)

The responsibility to respect human rights is considered under the UNGPs as a global standard of expected conduct for all business enterprises wherever they operate. The UNGPs exist independently of a states’ ability and/or willingness to fulfil their own human rights obligations and exist over and above compliance with national laws and regulations protecting human rights. Therefore, the UNGPs have been used as the key principles for preparing this HRIA.

Businesses (or in this case the Project) are required to identify measures for the prevention, mitigation and, where appropriate, remediation of adverse human rights impacts. The UNGPs state that businesses can also undertake other commitments or activities to support and promote human rights, but these actions will not offset any failure to respect human rights evidenced in their business operations. Businesses must respect the states’ abilities to meet its human rights obligations, and should in no way undermine a state’s actions, in a way that might weaken the integrity of judicial processes.

⁴ https://equator-principles.com/app/uploads/The-Equator-Principles_EP4_July2020.pdf

The UNGPs include 15 foundational principles (Principles 1-15) and nine operational principles (Principles 16-24) that are most relevant to this Project. The following principles (which are also the principles identified in the Equator Principles) have been provided in full below:

- Principle 11: Business enterprises should avoid infringing on the human rights of others and should address adverse human rights impacts with which they are involved.
- Principle 12: The responsibility of business enterprises to respect human rights refers to internationally recognized human rights –understood, at a minimum, as those expressed in the International Bill of Human Rights and the principles concerning fundamental rights set out in the International Labor Organization’s Declaration on Fundamental Principles and Rights at Work.
- Principle 13: The responsibility to respect human rights requires that business enterprises avoid causing or contributing to adverse human rights impacts through their activities and address such impacts when they occur.
- Principle 14: The responsibility of business enterprises to respect human rights applies to all enterprises regardless of their size, sector, operational context, ownership and structure. Nevertheless, the scale and complexity of the means through which enterprises meet that responsibility may vary according to these factors and with the severity of the enterprise’s adverse human rights impacts.
- Principle 15: Business enterprises should have policies and processes appropriate to their size and circumstances in place, including:
 - (a) A policy commitment to meet their responsibility to respect human rights (Principle 16).
 - (b) A human rights due diligence process to identify, prevent, mitigate and account for how they address their impacts on human rights (Principle 17).
 - (c) Processes to enable the remediation of any adverse human rights impacts they cause or to which they contribute (Principle 22).

3.3 Generalized Scheme of Preferences (GSP)

The Generalised Scheme of Preferences (GSP) contains 27 core international conventions on human and labour rights, environmental and climate protection and good governance. Uzbekistan has committed to meet these conventions. They are included in the “special incentive arrangement for sustainable development and good governance (GSP+) under the unilateral Generalized Scheme of Preferences (GSP)”. This means that the European Union will closely monitor Uzbekistan to ensure that its legislative acts reflect the commitment the country has made under GSP+⁵.

4 Approach and Methodology

This section provides information about the data collection and consultation processes used to inform the HRIA and the methodology that describes the severity of human rights impacts on right holders and duty bearers.

⁵ <https://trade.ec.europa.eu/doclib/press/index.cfm?id=2263>

The Guide to Human Rights Impact Assessment and Management (HRIAM) states that the scope of a human rights risks and impact assessment should consider, at the very minimum:

- The key human rights risks associated with the country of operation.
- The human rights risks of key business relationships, including associated facilities and third-party organizations.
- The human rights risks and impacts relating to the business activity itself.
- The range of stakeholders (potential and actual) that are directly or indirectly affected by the business activity.
- The nature and level of the risks and impacts, at different key stages of the project's lifecycle.

The Project Company plans to apply to a financial institution for the financing of the Project. It is likely that this institution will follow the IFC, EBRD and/or the Equator Principles guidelines as they relate to human rights. Therefore, this HRIA has been prepared to meet the relevant performance standards/requirements.

4.1 Data collection

A socio-economic profile of the AOI was developed, through a socio-economic survey of households in the AOI communities, which was undertaken from 17 – 21 April 2023. A total of 190 households in Kulchovdur (approximately 35% of the 545 total households) and 74 households in Kirlishon (approximately 52% of the 142 total households) were surveyed. Table 1 below demonstrates the sample sizes.

Table 1: Survey sampling of AOI communities

No	Name of community	Overall number of households	Proposed number of households for survey (as planned)	Surveyed number of households
Alat District				
1.	Kirlishon	142	71	74
2.	Kulchovdur	545	190	190
3.	Total	687	261	264

Information on the workers from the two Chinese companies (CNTIC and CNNC) that are working at the Khamza 1 and 2 substations was requested during consultations.

Section 5 of this HRIA provides a socio-economic baseline of the Project site, it is based on existing secondary information and the results of the socio-economic survey.

4.2 Approach to assigning severity

In an ESIA the **significance** of a risk or impact is identified. However, in the case of an HRIA, UNGP Principle 14 requires that the **severity** of the human rights impacts is identified. As per Principle 14 'severity of impacts will be judged by their scale, scope and irremediable character'⁶. The Equator Principles, go further than the UNGP as they require that impacts are managed based on

⁶ guidingprinciplesbusinesshr_en.pdf (ohchr.org)

those which are most severe (based on scale, scope, and remediability), **and those** which have the greatest likelihood of occurring.

The following definitions have been used for human rights indicators to determine the severity of risks and impacts:

- Scale: how serious are the impacts for the victim?
- Scope: how many people could be affected by the harm?
- Remediability: will a remedy restore the victim to the same or equivalent position before the harm; how easy or difficult would it be for the victim to get a remedy?
- Likelihood: what is the likelihood of the impact occurring?

The level of one indicator can have an effect on all of the other indicators. For example, the greater the scale and/or scope of an impact, the less likely or adequate a remedy might be to address the impact.

For the purposes of this HRIA the severity of an impact has been determined using the categories included in Table 2.

Table 2: Categories of Human Rights Risk or Impact Severity

Category	Severity Indicator	Description	Score
Scale	Low	Impact will be short-lived	1
	Medium	Impact can be addressed, but may last a few years	2
	High	Impact will last the lifetime of the victim and it not easily addressed	3
Scope	Few people	Less than 10% of the relevant group will be impacted	1
	Some people	11-50% of the relevant group will be impacted	2
	Many people	More than 50% of the relevant group will be impacted	3
Remediability	Highly likely	There is an established means to provide remediation and it is widely accepted	1
	Moderately likely	There is no means to access remediation, but it will not be difficult to put in place, the remediation is likely be accepted	2
	Unlikely	There is no means to access remediation, it will be difficult to put in place, and the remediation is unlikely be accepted	3
Likelihood	Unlikely	Impact has not been identified in this type of project before.	1
	Moderately likely	Impact has occurred previously in the same type of project, but may or may not be relevant to this project	2
	Highly likely	This is an issue that has already been identified in the Project Aol	3

Each human rights risk or impact will receive a final score that is an addition of the scores of all five categories. An impact that has a risk score of **nine** or more is considered severe, the higher the severity number, the higher the priority the risk or impact should have to be mitigated by the Project. The vulnerability of rights holders will also be taken into account when assessing the severity of a risk or impact.

4.3 Human rights baseline⁷

The following sections provide a human rights baseline, for the Project. This information is based on the socio-economic survey undertaken in April 2023 and publicly available secondary information. As the workers at the Khamza 1 and 2 sites (CNTIC and CNNC workers) will only be located in the Project AoI for a short time, they have been included separately in their own section below.

4.4 Population

According to the Statistics Agency of Uzbekistan, the total resident population of Uzbekistan was 35.3 million in 2022. As of January-March 2023, the population of the Bukhara region totalled 2,016,600 people. For the same period the population of the Alat District reached 103,100 people. The population of the Kirlishon and Kulchovdur communities were reported to be 669 and 2,636 people respectively in 2022.

4.5 Governance, institutions and power

The government of Uzbekistan is administered by two main governing bodies, central and local government. Central government focuses on administration management for the entire country. Local government has three pillars; regional, District and city administration. There are local councils at all levels that are headed by a chairman, or hokim (hokim is translated as deputy ruler/controller). Regional, District and city hokims also act as the head of the local executive branch or hokimiyat.

4.6 Community of self-government

Community self-government exists below the District level through community organizations called Mahallas, they are not a public administration system, but can also provide governance. A government ministry has been set up, which manages the issues of mahalla and family at the state level. This ministry has given legitimacy to the mahalla, as an important social institution supporting the family, women and the elderly, protecting their rights and legitimate interests, and providing support to families in need.

The Mahalla's responsibility is to resolve local issues in accordance with the interests, traditions, language and ethnic background of local people. Other self-governing bodies also include citizen assemblies (kishlaks or auls). Mahallas are the most active form of self-government structure, with kishlaks or auls used only in rural areas with diverse communities.

5 Poverty, Income and Employment

5.1 Poverty

Prior to the COVID-19 pandemic, Uzbekistan had been gradually reducing its levels of poverty. However, the pandemic pushed a number of households that were vulnerable to such changes,

⁷ The information in this section is summarised from the ESIA 2022. Please refer to the ESIA for reference sources unless noted in the following footnotes.

back under the poverty line. In 2020 UNDP determined that 1.3% of the population (approximately 448,000 people) may have fallen back into poverty as a result of COVID-19⁸.

As of 2021 the Asian Development Bank (ADB) calculated that a total of 17% of the population of Uzbekistan lived under the national poverty line (the minimum consumption expenditure index is used as the poverty line, which was 440,000 SOM in 2021⁹). That is 6% higher than 2019 (11%). A total of 6.6% of the working population earned less than the \$1.90 purchasing power parity poverty indicator¹⁰. This percentage has reduced from 7.2% in 2019.

Uzbekistan's remote and sparsely populated rural provinces, where most of the households are employed in agriculture, and few receive remittances, generally experience higher levels of poverty.

Respondents to the socio-economic survey were asked whether their income is sufficient or not. The majority of respondents indicated that their income is enough only to cover basic needs. Of all of the respondents in the AOI communities, 18.3% stated their income was not enough to cover basic needs and 3.1% said their income is not enough to cover expenses even for food. Community members from Kulchovdur community were more likely to say their income was not enough to cover basic needs (21.6% as opposed to 9.7%). Surveyed household members in general did not own a lot of household items, which can verify the majority of households reporting that their income is not enough to buy anything.

5.2 Income

Uzbekistan has remained as a lower-middle income group since 2001 (having briefly been classified as a low-income country during 1998–2000). The agricultural, forestry and fishery sectors are the key industries in Bukhara region, together they make up 9.4% of the total production in the Republic of Uzbekistan. The economy of Alat District is primarily based on agriculture (cultivating cotton, wheat, corn, fruits, and vegetables). The cotton and grain industries are considered well-developed sectors. Other key sectors include, livestock farming, the food industry, textiles, consumer goods and building materials.

The average monthly salary of a person living in Bukhara region amounted to 2,505,300 UZS (or approximately USD \$220) as per statistics provided for 2022. The average monthly salary of a person living in Alat District amounted to 2,662,800 UZS (or USD \$235) in 2022. The average family income reported by survey respondents was 3979,300 UZS (or approximately USD \$347) with a per capita income of 786,300 UZS (or USD \$67). While the AOI communities are considered to be relatively poor compared to the rest of the District, the District salaries and per capita household incomes cannot be directly compared, as the calculation of per capita income will include both workers and dependents.

5.3 Employment

In Alat District, the total number of people employed in the labour market is 43% of the population. In 2022 there were a total of 377 people who had migrated for work purposes. The majority of

⁸ <https://www.undp.org/press-releases/uzbekistans-health-care-system-economy-hit-hard-covid-19>

⁹ Uzbekistan sets official poverty line (kun.uz)

¹⁰ <https://www.adb.org/countries/uzbekistan/poverty#:~:text=Poverty%20Data%3A%20Uzbekistan&text=In%20Uzbekistan%2C%2017.0%25%20of%20the,die%20before%20their%205th%20birthday.>

economically active people are employed in the agricultural sector (32%). In the AoI the largest group of respondents were pensioners (20.8%) followed by 12.3% of respondents stated they are employed in the government sector.

As of the first quarter of 2021 the unemployment rate in Uzbekistan was 10.5%. This relates to 1.9 million people that were unemployed. The unemployment rate for youth, 16-30 years, is higher at 20.1%, and also for women, at 17.4%.

In the Project AoI, the number of people that are registered as being unemployed people is 0.1% of the population, while those who are not registered as being unemployed make up another 7.8%. Survey respondents were asked the main threats that impact their income and 39.8% of respondents indicated unemployment (with more people from Kulchovdur (42.6%) concerned about unemployment than Kirlishon (32.4%).

5.4 Ethnicity and indigenous peoples

The Uzbek ethnic group is the largest ethnic group in the Republic of Uzbekistan. According to official estimates (estimated to 2017), the ethnic Uzbek majority makes up 83.8% of the population (26.9 million people) and the next largest group are Tajiks, which made up 1,544,700 (4.8% of the population). The ethnic composition of Alat District is predominantly Uzbek (98.3%), with the remainder of the District coming from the following ethnic groups Turkmen (0.5%), Kazakhs (0.5%), Russians (0.1%), Tajiks (0.2%) and representatives of other nationalities (0.4%).

The survey identified that the majority (97.9%) of the people in the surveyed communities are Uzbek while 2.1% are from other nations of Central Asia (Kazakhs, Tajiks, Turkmen, and Kyrgyz).

The survey showed that all the respondents speak Uzbek language. Site observations found that while Uzbek is widely spoken, community members also use a mixture of words from a dialect spoken in the southern part of Uzbekistan.

No Indigenous peoples (IPs) were observed during the site visit or identified during communications with the nearest communities. IPs are not present in the AOI communities.

5.5 Religion

Uzbek citizens are free to practice religion, and not be discriminated against because of their religion under the Constitution of the Republic of Uzbekistan. Human Rights Watch (HRW) has alleged that there have been cases where these rights have been denied, such as Muslims being spuriously accused of religious extremism and having to shave their beards. HRW reports that US Commission on International Religious Freedom (USCIRF) has recommended that Uzbekistan be placed on a watch list for violators of religious freedoms¹¹.

Official statistics on religion are not available for Uzbekistan. The U.S. government estimates that 88% of Uzbekistan's population is Muslim¹², while the Ministry of Foreign Affairs estimates 93-94% of the population is Muslim. The Muslim population is predominantly Sunni Muslim. The next largest religion is Christianity, with the Russian minority groups predominantly practicing as Orthodox Christians.

¹¹ <https://www.hrw.org/world-report/2023/country-chapters/uzbekistan>

¹² <https://www.cia.gov/the-world-factbook/countries/uzbekistan/>

The socio-economic survey did not include questions related to religion due to sensitivity to this type of question for people in the region. However, it is estimated that the majority of people in the Aol communities are Muslim. Site observations as well as consultations conducted with local communities at the Scoping and ESIA stages did not reveal presence of attributes of religions that could cause conflict or cause individuals to be more vulnerable to human rights impacts.

5.6 Overseas migrants

Migration for work is relatively common in Uzbekistan, both internally and to other countries. When migrating overseas the countries that Uzbeks generally travel to include Russia (there are reduced levels in 2023 due to the Russian war with Ukraine), Kazakhstan, the United Arab Emirates (UAE), Turkey, the Republic of Korea and Europe. Immigrants to Uzbekistan predominantly come from the neighbouring countries of Kazakhstan, Tajikistan, Russia, Kyrgyzstan, and Turkmenistan.

In Alat District In 2022 there were a total of 377 people who had migrated for work and approximately 37 (14.1%) of the surveyed households, stated that they have household members who have migrated to work in other regions of Uzbekistan or abroad. Almost all of the households with labour migrants had only one person that had migrated for work.

5.7 Labor

Uzbekistan has put in place legislation to prohibit forced labour. In January 2020 the Uzbek government criminalized the repeated use of forced labour and in February 2021, Article 148 (2) was amended to criminalize all “administrative forced labour”¹³. The International Labour Organization (ILO) fundamental conventions on forced labour (C029) has also been ratified.

Significant effort and improvements have been made by the government to identify and prosecute cases of forced labour, showing encouraging levels of awareness of the issues. However, cases continue to occur. The ILO’s “2020 third-party monitoring of child labour and forced labour during the cotton harvest in Uzbekistan”¹⁴ reports that there were instances of forced labour, labour with poor contracting conditions, or lacking the correct processes in 2020.

Historically forced labour has been predominantly linked to the cotton industry. The ILO has also identified cases in landscaping, cleaning and construction works. There were 106 cases of forced labour identified by the ILO in 2020. Much of the forced labour that exists today is undertaken as part of the traditional “hasher” system, which requests that people provide their labour voluntarily for the community benefit¹⁵.

5.8 Children

While child labour has been identified in the past in Uzbekistan, the government is working towards addressing the issue. Child workers were almost exclusively employed in agriculture (most notably cotton) or in informal sectors.

No schoolchildren in the Aol were identified as participating in paid work. A small number of children are involved in un-paid work to assist their households. In the Aol communities, adult

¹³ <https://www.hrw.org/world-report/2021/country-chapters/uzbekistan#>

¹⁴ https://www.ilo.org/washington/WCMS_767756/lang--en/index.htm

¹⁵ <https://www.state.gov/reports/2021-trafficking-in-persons-report/uzbekistan/>

family members are used as a source of labour by 94.6% of surveyed households, while 8.8% use their children, and 5.4% hire workers.

In Kirlishon community children do not work at all. However, in Kulchovdur community 11.3% of surveyed households stated that their children are active in different household chores. These children work every day between 1 and 7 hours per day with the majority working 3-4 hours per day (46.2% of children that work).

5.9 Gender relations, discrimination and harassment

Although Uzbekistan prohibits violence against women and girls, there is no reliable data on domestic violence in Uzbekistan where many victims remain silent for fear of bringing shame to their families (ADB,2018).

It should be noted that Uzbekistan has experienced an increase in domestic violence since the outbreak of COVID-19. Alongside the economic hardships which have resulted in income and job losses in many households, there has been an increase in the rates of physical, verbal, emotional, economic, and sexual abuse against women and girls.

According to the Ministry of Internal Affairs, local law enforcement in Uzbekistan issued more than 8,430 protection orders to ensure security of domestic violence victims between January to October 2020. Out of these, 4330 experienced physical abuse, while around 3,200 suffered emotional abuse (World Bank, 2021). The number of unreported cases is expected to be much higher. In over 7,600 cases, women and girls in Uzbekistan experienced violence within their own families and in almost 5,920 of these cases, the aggressors were the husbands.

Women are considerably more involved in agricultural activities (60.2%) compared to men (39.8%) in the Aol communities. Survey results reveals that women are expected to perform domestic chores like cooking and washing in their families. While the men are more involved in going to the market, the purchase of food and non-food items.

5.10 Housing and land

All of the land in Uzbekistan was transferred to ownership by the State under the 1998 Land Code of the Republic of Uzbekistan. The land for the Project site is administered by the State Committee of Sericulture and Wool Industry Development (SWID). There are no structures or crops on the land allocated to the Project. There is one short-term (10 months) land lease issued for the Project site to a herder and his partner. They are using the land for grazing, the land is also being grazed by herders under an informal agreement with Alat Qorakolchilik" LLC,.

Almost all (99.3%) of the surveyed households in the Aol reported that they had agricultural land plots (within their communities, not on or near the Project site). Of the total respondents 89.4% have tomorka (household garden plots), while 9.9% have tomorka and other areas of land as well, 0.8% of respondents reported that they do not have land. Of the respondents that own land, the total plot area for 91.4% of respondents was up to 0.5 hectares, and the remaining 8.6% own land plots larger than 0.5 hectares.

5.11 Health and education

5.11.1 Education

The right to education is guaranteed to all citizens of the Republic of Uzbekistan under the Constitution, where it states that “[e]very person has a right to education”. The State oversees education and provides free education up to secondary school. Almost 100% of the Uzbek population has at least a secondary education with women and men both at an equal ratio of 99.9%. Survey responses show that only 0.7% of household members were recorded as illiterate. However, the rate of attending higher education is also low (3.7%) in the surveyed area.

Of the total surveyed population all students (both boys and girls) eligible to attend schools/colleges/lyceums were attending these types of schools located in their communities. Many households stated that they do not send their children to kindergarten, due to the fact that the kindergarten is far away. More than half of the children and students in Kulchovdur community have to travel more than 1 km to reach either kindergarten or school. Kirlishon community members are in general closer to education facilities.

In Kulchovdur 75.7% of respondents stated that the school have everything students need, while 20.1% stated that the school is equipped with only essentials, 0.5% think that schools are poorly equipped, and 3.7% found it difficult to answer. In Kirlishon 91.8% respondents think that school is well equipped, while 8.2% believe that school is equipped with only essentials.

5.11.2 Health

Uzbekistan has a public healthcare system and a small scale private health sector. Overall, local communities in regions of Uzbekistan and in particular in districts have only limited number of healthcare services. In general cities in Uzbekistan are serviced by family polyclinics, while rural areas are serviced by rural medical centers. Usually, villages have only one policlinic to provide first aid and general medical consultations. For specified medical services villagers have to refer to District or regional medical centres. In the Aol communities, only one policlinic was observed in Kirilishon community.

Survey respondents were asked if they found their local health services to be well equipped, and 91.6% of all respondents stated that their local health facilities were well equipped, 0.4% were not satisfied, while 8% of respondents found the question difficult to answer.

5.12 Criminal justice and order

Human Rights Watch (HRW) has reported incidents in Uzbekistan in 2022 where the law enforcement offices used excessive force on largely peaceful protestors¹⁶. In the past it has mentioned that security services in Uzbekistan retain “enormous power” which they can use against their critics. A decree was signed in 2018 to reduce the power of the security services. However, HRW alleges that their power remains significant¹⁷ as evidenced in the response to the 2022 protests.

¹⁶ <https://www.hrw.org/world-report/2023/country-chapters/uzbekistan>

¹⁷ <https://www.hrw.org/world-report/2021/country-chapters/uzbekistan#>

All households in the Aol stated that in relation to justice, access to the social benefits, public utilities, policing etc, they have a makhalla -self governing organisation, that is under management of relevant district/city khokimiyat. It is managed by Chairman of makhalla in their community.

The distance of the Site from the nearest local communities means that the influence of security services hired for the Project will be low on community members. On-site security, which will be hired by the EPC Contractor, will be the most relevant security services for the Project. However, if there is an incident on Site where a law is broken, or if it is out of the ability of the security staff to manage, then police or national security services may need to be called.

5.13 Human trafficking

The US State Department Trafficking in Persons Report (2022) continued to find that Uzbekistan does not fully meet the minimum standards for trafficking in persons, but due to increased efforts made by the government since the previous year, and considering the impact of COVID-19, the country continues to remain on Tier 2.

In 2021 the Government of Uzbekistan identified 175 victims of human trafficking, an increase of 25 from the previous year. Of the 175 victims 124 were women and 38 were men. Sale of children made up 13 of the cases¹⁸.

The Project is located approximately 25km from the border with Turkmenistan, but it does not involve movement of people as part of its operations. Because of its proximity to the border, there may be a small chance of human trafficking in relation to migrant workers, who would most likely be used during the construction phase,, however this is not expected.

5.14 Civil society freedoms

HRW reports that there have been a number of failed attempts from NGOs and civil societies to request changes related to human rights from the Ministry of Justice. There is draft NGO code that is before Uzbek authorities, but this has stalled according to HRW. HRW alleges that authorities are hindering NGO's work with "excessive and burdensome registration requirements"¹⁹.

In August 2020 the government of Uzbekistan published the Draft Law on Public Assemblies. It does not meet international rights standards for public assemblies, as it required organizers to apply for permission to hold a mass event at least 15 working days prior to the event²⁰.

A total of 13.0% of survey respondents stated that they were aware of NGOs operating in their communities, 28.2% stated there were no such organizations, and the majority (58.8% of respondents) could not answer the question. Of those that did know of NGOs working in the Aol, the following NGOs were identified:

- Society of the Blind
- Red Cross
- Centre "Sakhovat va kumak"
- Support Centre for the Disabled

¹⁸ <https://www.state.gov/reports/2022-trafficking-in-persons-report/uzbekistan/>

¹⁹ <https://www.hrw.org/world-report/2023/country-chapters/uzbekistan>

²⁰ <https://www.hrw.org/world-report/2021/country-chapters/uzbekistan#>

5.15 Vulnerability of rights holders

The following rights holders have been identified through consultation, secondary data and surveys, as being the most vulnerable to impacts on their human rights:

- Women – women have restricted access to employment opportunities, cultural norms that restrict their rights, and are more susceptible to gender-based violence and other forms of harassment;
- People living with disabilities – these people are less likely to be able to assert their rights;
- Illiterate – although a small percentage of the total population, they are less likely to be able to identify their rights and defend them;
- Youth and children – are less likely to be able to identify their rights and defend them, they are more likely to be unemployed and predisposed to accept poor working conditions or exploitative employment in order to obtain a job, they are also more likely to be impacted by child labour; and
- Migrant workers – are less likely to be able to identify their rights and defend them, they are more likely to be impacted by employers reducing their rights to non-exploitative employment.

5.16 CNTIC and CNNC workers

There are 131 workers from the company CNTIC working on the Khamza 1 substation, of those, 34 workers all are of Chinese origin, and the remaining 97 are Uzbek. The Uzbek workers have been provided with worker accommodation, within the Khamza 1 substation area, and the Chinese workers are accommodated in units next to the construction sites. CNTIC plans to complete their work and demobilization early in 2024.

CNNC has a total of 110 workers working on reconstruction of the Khamza 2 substation. Of those workers, 40 are of Chinese origin and 70 are Uzbek. The Uzbek workers live in worker accommodation that is located in a walled compound just outside their work site, while the Chinese workers are accommodated in units placed next to the construction site, similar to the CNTIC workers. CNNC commenced work in 2019 and it expects to complete its work and demobilize in December 2023.

6 Consultation and Participation

This section has been prepared, based on information from the Project Stakeholder Engagement Plan (SEP) (dated 01 June 2023) and identifies the relevant human rights stakeholders split into rights holders and duty bearers. For each stakeholder, the consultation undertaken for the Project has been provided and methods to undertake future engagement have been proposed. In order to prepare a HRIA, the risks to human rights need to be identified. This should be done through meaningful consultation with human rights stakeholders as is further discussed in this section.

6.1 Identification of rights-holders and duty bearers

Table 3 provides an overview of the key rights-holders and duty bearers for the Project. It also identifies how they have been (or will be) consulted about the Project. Herders, agricultural land users, residents of local communities and construction workers are likely to be the main rights-

holders. The Project Company, EPC contractor and the construction sub-contractors will be the main duty bearers for the Project.

Table 3: Rights holders and duty bearers identified for the HRIA

Stakeholder groups	Category	Communication method
Herders (that use the Project site for livestock grazing)	Rights holder	Face-to-face meetings, phone calls, letters, focus group discussions, access to public hearings/meetings, visual aids and leaflet distribution, social media, and media release
Informal land users within the Project site (if any)	Rights holder	
Agricultural land users using the land outside the Project site	Rights holder	
Women community members	Rights holder	
Youth community members	Rights holder	
Users of the Amu-Bukhara Canal (for activities such as drinking water, irrigation, fishing and recreation)	Rights holder	
Kulchovdur community members	Rights holder	
Kirlishon community members	Rights holder	
EPC construction workers	Rights holder	Business correspondence, phone calls, face-to-face meetings, focus group discussions, access to public hearings/meetings, visual aids and leaflet distribution, social media, media releases
Sub-contractor workers	Rights holder	
Project company and its staff	Duty bearer/ Rights holders	
Residents and staff of the temporary labour accommodations	Duty bearer/ Rights holder	
EPC contractor	Duty bearer	
Construction sub-contractors/suppliers	Duty bearer	
Management and staff of the Khamza 1 substation	Other/ Rights holder	Business correspondence, phone calls, face-to-face meetings, focus group discussions, access to public hearings/meetings, visual aids and leaflet distribution, social media, media releases
Management and staff of the Khamza 2 substation	Other/ Rights holder	
Owners and staff of the concrete batching plant	Other/ Rights holder	
Bukhara Region Khokimiyat	Other	Business correspondence, phone/video calls, visual aids and leaflet distribution
Alat District Khokimiyat	Other	
State organizations	Other	
Government bodies	Other	Business correspondence, phone/video calls
NGOs/human rights organizations	Other	Business correspondence, phone/video calls, access to public hearings/meetings, social media
Academic/educational institutions	Other	

Stakeholder groups	Category	Communication method
Relevant regional and local mass media (Bukhara regional TV channels and mass media department of Bukhara regional and Alat district khokimiyats)	Other	Business correspondence, phone/video calls, access to public hearings/meetings, social media, media releases
Lenders/Financial institutions (expected to be entities that follow IFC, ADB, EBRD and/or the Equator Principles).	Duty bearer	Business correspondence, phone/video calls

6.2 ESIA and HRIA Consultations

Projects that are category I or II for environmental impact must hold public hearings on the environmental impact of the Project, according to the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan No. 541 dated 07.09.2020 “On further improvement of the mechanism for assessing environmental impact”. Lenders also have requirements for disclosure of ESIA information and informed consultation with Project stakeholders (see the SEP (ESIA Volume VI) for further details).

6.3 Household surveys

Household surveys were undertaken in the communities of Kulchovdur and Kirlishon in April 2023. A total of 264 surveys were completed with local community members. Their responses have been used to inform the baseline section (section 5) of this report. The main concerns raised during the social site survey were related to environmental or ecological impacts, noise and dust and damage to infrastructure, however it is important to note that more than 40% of respondents considered that the Project would not impact anyone.

6.4 Local authority meetings

Meeting have been held with the Alat District Municipality, and the community leaders of the Kulchovdur and Kirlishon communities. These meetings have been primarily for information disclosure purposes, to keep these authorities informed about the Project and also to ask specific topic-related questions (such as in relation to the use of the Abu-Bukhara Canal, or the use of the Project site for herding and applicable land lease agreements). None of them had a negative opinion about the Project and they support the kick-off of the Project.

6.5 Public hearings

Three rounds of public hearings were undertaken on 19 April 2023 to disclose the national Environmental Impact Assessment (EIA). They were held at the Kulchovdur and Kirlishon communities and the Alat District municipality. None of the attendees at the public hearings raised concerns about the Project. However, they do have some expectations about receiving employment prospects from the construction of the Project.

Public consultation meetings were held on 30 and 31 May 2023 to disclose the draft ESIA. There were representatives of Masdar (duty bearers), members of the communities (rights-holders), and local government representatives (others) represented at the meetings. During the meetings community members were concerned about their livelihoods, but their concerns were eased when they were informed that alternative grazing land is available. The other key comments raised were an expectation that they would receive employment opportunities on the Project, and requests

for the Project to assist in community development activities, which the Project has taken under advisement.

6.6 Interviews with governmental institutions

Primary discussion with government institutions has been undertaken via official letter. However, many interviews have also been conducted over the period March to May, 2023 in order to discuss the Project, both by telephone and in-person. At each of the in-person meetings, a Project leaflet was also supplied. See the Project SEP for a list of consultations undertaken. No specific concerns were raised about the Project implementation plans.

6.7 Focus group discussions

Focus Group Discussions (FGDs) were held in May 2023 to inform the ESIA and this HRIA. General FGDs were undertaken, and human rights questions were added.

The main discussions during the FGDs were focused on the location of the Project and the impact that this would have on local herders. FGD attendees requested the project location to be changed, or alternative land to be identified. Other requests included job opportunities during the implementation of the Project.

7 Human Rights Impact Assessment

Based on articles of the Universal Declaration of Human Rights, this section discusses the human rights that are relevant for a solar power project of this type. Where relevant, the human rights risks for this Project have been discussed in relation to the construction, operations and decommissioning phases of the Project.

The following articles have been identified as being relevant to the Project:

- [Article 2](#) – rights and freedoms, without distinction of any kind, such as race, color, sex, language, religion, political or other opinion, national or social origin, property, birth or other status.
- [Article 3](#) – right to life, liberty and security of person
- [Article 4](#) – right that no one shall be held in slavery or servitude
- [Article 7](#) – right to be equal before the law and be entitled without any discrimination to equal protection of the law
- [Article 13](#) – right to freedom of movement and residence within the borders of each state
- [Article 17](#) – right to own property alone as well as in association with others
- [Article 18](#) – right to freedom of thought, conscience and religion
- [Article 19](#) – right to freedom of opinion and expression
- [Article 20](#) – right to freedom of peaceful assembly and association
- [Article 23](#) – right to work, to free choice of employment, to just and favourable conditions of work and to protection against unemployment
- [Article 24](#) – right to rest and leisure, including reasonable limitation of working hours and periodic holidays with pay.
- [Article 25](#) – right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care

Human rights is a cross cutting topic, that can impact people in a number of different areas of the Project implementation, such as labour and working conditions, health and safety and more. Therefore, some of the articles above relate to more than one of the rights discussed in the following sections. This section should also be read in conjunction with the relevant Project plans and procedure. For example, security is only discussed in the HRIA in relation to human rights, for further information on Project security, the Security Management Plan should be reviewed.

7.1 Rights to non-discrimination and equal opportunities

This section relates to Article 2 on enjoying freedom without the discrimination. Discrimination in the Project could be in relation to employment opportunities, training and retrenchment, and could impact any workers on the Project.

Baseline data shows that in Uzbekistan there can be some legal, or cultural distinctions levied against rights holders in relation to gender, sexuality and religion, among others. This discrimination is not specific to construction, or solar projects and has been generally discussed in relation to national security personnel, who are unlikely to be on Site, unless there is a serious incident that cannot be resolved by the Project security personnel.

Table 4: Human Rights Severity Score

Category	Description	Score
Scale	Medium – Discrimination could stop someone from earning and income or receiving a greater income. This could cause impacts in the medium term.	2
Scope	Few people – Discrimination on the Project is likely to impact individuals rather than groups of people.	1
Remediability	Moderately likely – Some impacts can be remediated through the Project, but those that are related to legislation or national security services, will be difficult to remediate.	2
Likelihood	Moderately likely – There are some discriminations, such as sexuality that have a legal backing and the baseline identified instances of discrimination based on gender and religion.	2
TOTAL SCORE		7

7.2 Rights to participation and freedom of assembly

This section relates to Article 20 of the Universal Declaration of Human Rights and the right to participate in strikes or protests or assert their rights to assembly. It discusses any possible human rights violations that could impacts Project workers, including Project Company workers, EPC Contractor workers and any contractors and subcontractors, as well as community members or civil society groups and the rights of workers to join collective bargaining agreements or worker organizations.

There have been some reported situations where the national security forces have overstepped their responsibilities and used excessive force and impacting rights-holders' right to participate in free assembly. However, the distance from the Project to the nearest communities reduces the risk that community members would be sufficiently impacted by the Project that they would wish to protest.

Table 5: Human Rights Severity Score

Category	Description	Score
Scale	Low – The majority of impacts would only last for the duration of the strike.	1
Scope	Medium -This will impact small groups of people, either workers from one company or community members	2
Remediability	Unlikely – Should the government security forces be involved, rather than Project security, the Project would not have any say in remediation.	3
Likelihood	Moderately likely – There have been reported incidence of rights abuses relating to freedom of assembly, but they will be less likely due to the distance between the Project site and the nearest communities	2
TOTAL SCORE		8

7.3 Rights to safe and healthy workplaces

This section relates to Articles 3, 24 and 25 and relates to the labour rights of the Project Company workers, the EPC Contractor, contractors and sub-contractors as well as supply chain workers.

The ESIA has a chapter that assesses occupational health and safety (OHS) risks for the Project. It also includes current legal framework in Uzbekistan for protecting human rights relating to worker rights and welfare. It identified the following risks for construction:

- Fire
- Electrocutation
- Induced voltage at worksite
- Lifting operations
- Working at heights
- Exposure to chemicals and hazardous materials
- Emergency and abnormal situations
- Working in remote areas
- Extreme temperatures
- Dust storms and other climate related events
- Traffic
- Electromagnetic frequency
- Working in areas where there are wild animals, grazing animals.

During construction health and safety impacts include the movement of heavy machinery, excavation, handling of chemicals, working at heights. Risks are more likely to occur when workers are not familiar with the type of works, they are required to undertake and/or the associated hazards of each type of work. It is the duty of the Project, the EPC Contractor and subcontractors to protect their workers from the identified risks.

There will continue to be OHS risks during the operations phase, but they will be limited compared with construction phase.

Table 6: Human Rights Severity Score

Category	Description	Score
Scale	High – Victims of unsafe working conditions could have long-term and/or life-altering injuries	3
Scope	Many people – All workers on Site could be victim to unsafe working conditions and become potential victims	2
Remediability	Highly likely – health insurance and government legislation mean that remediation is possible and highly accepted	1
Likelihood	Moderately likely – construction worksites are often hazardous places, local community members will be hired as a priority, but they do not, generally have construction experience.	2
TOTAL SCORE		8

7.4 Rights to non-exploitative employment and working conditions

This section relates to Articles 4, 7,13 and 23 covers and covers the labour rights including the rights for the workers of the Project Company, its contractors and sub-contractors as well as supply chain workers.

There will be approximately 600 workers during peak construction, with a large percentage of them migrant, or expatriate workers (the worker breakdown is expected to be 60% Uzbek workers and 40% expatriate workers). During the operations phase the number of workers will be reduced, to approximately 25 workers, who will likely all be Uzbek workers. During the construction phase, workers will also be vulnerable to various forms of harassment, exploitation and abuse, aggravated by traditionally male working environment. If it occurs, gender based violence and harassment (GBVH) may be committed by co-workers or construction supervisors and can be attributed to gender stereotypes about the sexual availability of female construction workers.

The Project will construct worker accommodation on Site, but there is also the possibility that accommodation within the local community will be used.

Migrant workers are particularly vulnerable to human rights risks, by their employers, as they are away from their home country sometimes working in different languages, and under new employment laws. Some human rights risks could include restricting access, by withholding documents such as passports, provision of insufficient food or accommodation, withholding or non-payment of salaries and overtime, and/or not being provided with suitable contracts to outline their work obligations. Influx in workers from outside the Project region could also increase the likelihood of GBVH.

Incidences of child and forced labour have been identified in Uzbekistan, with a small number of those being in the construction sector. Therefore, there is a chance that this type of labour is identified in subcontractor or supply chain companies.

Table 7: Human Rights Severity Score

Category	Description	Score
Scale	Medium – The victims of child/forced labour or GBVH will likely experience impacts for the medium term as these people are particularly vulnerable.	2
Scope	Few people – These impacts will likely be targeted at individual rights holders rather than at groups	1
Remediability	Moderately likely – Child/forced labor and GBV are recognized issues in Uzbekistan and remediation, while not easily achieved, should be possible.	2
Likelihood	Moderately likely – Child/forced labor and GBV have been identified in construction projects in Uzbekistan, so they are possible.	2
TOTAL SCORE		7

7.5 Rights to safe and healthy communities

This section relates to Article 3 and the risks to vulnerable groups in the community due to the influx of workers (which could include GBV/H illness & disease, STDs, impacts resulting from security responses).

The closest communities are Kulchovdur and Kirlishon, which are approximately 10 km from the Project site, The ESIA shows that there are only limited impacts to the local communities as a result of the Project. However, there may be human rights impacts as a result of the influx of people, the presence of workers and worker accommodation near the communities and workers living within local communities.

Workers at the CNTIC and CNNC work sites and worker accommodation generally keep within their compounds and are not expected to have a lot of interaction with the Project workers. Additionally, both works will be completed at the end of 2023 or the beginning of 2024, so the overlap between the workforces will be minimal.

It is anticipated that a large percentage of workers will be expatriate workers (approximately 40% of the workers). Their cultural or religious differences could cause conflict with the local communities and the workers at the Khamza 1 and 2 construction sites.

No adverse Human Rights impacts are expected for the community during the operation phase.

Table 8: Human Rights Severity Score

Category	Description	Score
Scale	High – Due to the rural and isolated nature of the local communities which could make them vulnerable to such impacts	1
Scope	Few people – Human rights impacts would most likely be on individuals rather than groups in a community.	1
Remediability	Moderately likely – There may be some societal restrictions to people raising concerns, or receiving such remediation	2
Likelihood	Moderately likely – Due to the influx of a large number of migrant workers and the requirement for accommodation within the communities.	2
TOTAL SCORE		6

7.6 Rights to privacy and data security

The Project Company and its contractors and subcontractors will need to obtain personal data on all of its workers, for legal, payroll and safety reasons, as well as to assess suitability for employment opportunities. So this section relates to all workers on Site. The Project may also need to keep personal details of Project stakeholder during stakeholder engagement activities, and through the Project grievance mechanisms.

Any intentional, or unintentional breach of personal data could impact the rights of the rights holders, through cyber-attacks, or data theft.

Table 9: Human Rights Severity Score

Category	Description	Score
Scale	Medium – Impacts of cyber-crime can take some years to be remediated.	2
Scope	Many people – Data breaches could impact whole companies of people	3
Remediability	Moderately likely – There are legal mechanisms that could be implemented to remediate impacts.	2
Likelihood	Unlikely – The type of data that the Project will be keeping is unlikely to be maliciously targeted, but it is possible that it will be unintentionally disclosed.	1
TOTAL SCORE		8

7.7 Rights to safe and respectful security

This section relates to Articles 18 and 19 of the Universal Declaration of Human Rights as it relates to freedom of religion and freedom of opinion of expression. It will also relate to the right to safe and healthy workplaces.

For the safety of workers, community members and the protection of Project equipment, the Project will be fenced and patrolled by a private security firm that will likely be hired by the Main EPC Contractor. These security personnel will be site-based at the gates and on patrol around the Site during construction. There will likely be security guards, but fewer in number, and perhaps in conjunction with electronic security services during operations. It is anticipated that the security personnel will be unarmed.

The likelihood of conflict between community members and security personnel is reduced due to the distance from the nearest communities, however herders do use the land around the Project site. The most likely reason for conflict would be members of the public trespassing on the construction areas. There could also be events of security guards conflicting with Project workers.

Table 10: Human Rights Severity Score

Category	Description	Score
Scale	High - Depending on the use of force, during the conflict, victims could have life-long impacts.	3
Scope	Few people - The impacts would likely be to individuals, rather than groups of people.	1
Remediability	Moderately likely - Victims may feel they cannot ask for, or will not be given remediation, due to the position of power the security guards have.	2
Likelihood	Unlikely - This risk is less likely due to the distance between the Project site and the nearest communities	1
TOTAL SCORE		7

7.8 Rights to own property

This section relates to Article 17 and the rights of people to own property. Baseline information shows that the government owns the land of the Project, but two herders have a short term lease to use the land. These herders will lose the right to use the land. However, they have been provided alternative land to use.

Table 11: Human Rights Severity Score

Category	Description	Score
Scale	Low - The land lease agreement was only in place for 10 months. Also alternative land has been identified.	1
Scope	Few people - The Project is only impacting the land lease of the two herders. The remainder of the households do not have formal rights to use the land	1
Remediability	Likely - Alternative land has been identified that has sufficient calorific value to feed the herders' livestock..	1
Likelihood	Highly likely - The Project has identified that it needs the land for the Project, so the land will need to be used.	3
TOTAL SCORE		6

8 Remediation, Mitigation and Management Commitments

8.1 Human rights policy

The Developer commits to protect human rights, as stipulated in its Environmental and Social Management System (ESMS) Manual. The EPC Contractor will be expected to disclose its human rights expectations of personnel, local communities, sub-contractors and other suppliers directly linked to the construction and operations phases of the Project, in a similar policy, or in its HR policy.

8.2 Human resources policy

Masdar has a Human Resources Policy that applies to all of Project Company personnel. It will disclose this document to the EPC Contractor for its information. The policy follows national requirement, IFC requirements, UN Guiding Principles on Business and Human Rights. and the International Labor Organization (ILO).

The EPC Contractor and its suppliers will also each be required to develop Human Resources Policies and internal (worker) grievance mechanisms aligned with IFC PS2, ADB SPS and following

UN Guiding Principles on Business and Human Rights. The HR Policy(s) will include the ability of workers to bargain collectively, including to join trade unions, and restrict the working age to 18. Training on the HR Policy will also be regularly undertaken.

8.3 Working conditions and worker code of conduct

A document elaborating on the Human Rights Policy will be prepared by the Project Company for the workers, and a similar document will also need to be prepared as a Project-specific document by the EPC Contractor, to include the working conditions to be expected by worker of the EPC Contractor, contractors and subcontractors.

Information on working conditions will include national and international requirements, with information on pay and payslip deductions, leave entitlements, working hours, accommodation provisions etc. The code of conduct will include on-site “dos and don’ts”, such as use of alcohol and drugs, harassment, and interactions with members of the community among others.

There will be a separate Workers Code of Conduct prepared for security guards.

8.4 Personal data security policy

The Project will prepare a Personal Data Collection Policy explaining how it will protect any and all of the personal data it collects, including policies on how people will be able to access and edit the data, and how long the data will be kept before it is destroyed.

8.5 Stakeholder engagement and communications

A Stakeholder Engagement Plan (SEP) has been prepared for the Project (Volume VI of the ESIA), which includes a Project grievance mechanism. Consultation has already started at the writing of this HRIA and the grievance mechanism is functioning.

The SEP includes stakeholder mapping, identifying specific types of engagement for each stakeholder. The SEP includes a commitment to transparent, culturally appropriate and timely disclosure of information and engagement for all stakeholders, including methods to identify and disclose information to vulnerable stakeholders.

The grievance mechanism has been designed to be transparent and accessible to identified stakeholders. There is the possibility to raise grievances confidentially and there will be a referral and support system for any workers reporting cases of GBVH.

The project company team will include a community liaison officer (CLO) to maintain communication with the local leaders and community members throughout the Project lifetime.

8.6 Security management plans

A Security Management Plan will be prepared by the security provider, and checked for suitability by Masdar, the Project Company and the EPC Contractor. The plan will be based on a risk assessment and will discuss the way the security company can mitigate the security risk on Site, such as the number of security guards, supervisors and security equipment required, the shifts guards will work and whether they will be armed.

It will also specifically require that security guards are checked for past abuses (a security background check for a criminal record) and are provided with the relevant training, such as use

of force and training in the Voluntary Principles on Security and Human Rights (VPSHR, 2021) and on how to handle grievances related to GBVH from the community.

8.7 Occupational health and safety plans

A Project-specific OHS plan has been prepared by the Project Company as part of the ESMS documentation. This document will be provided to the EPC Contractor and subcontractors for implementation on site. The EPC Contractor will be required to ensure subcontractor's is undertaking OHS in compliance with the plan. The OHS plan will be relevant for all workers on Site. However, it will be expected that all contractors prepare their own OHS plans (which will be checked by the EPC Contractor) in line with the Project OHS plan. The OHS plan will follow GIIP H&S principles with a complete system of inspections and audits aligned with ISO 45001. Legal requirements and duty of care will also be considered.

The OHS plan will specify the required number of OHS personnel per worker, as well as the proposed medical facilities and/or ambulance and personnel that will be located on Site, in case of an emergency. It will specify training for all workers, both work-specific training for each new task, as well as general OHS training and 5-minute tool-box-talks at the beginning of each workday (which will all be recorded and monitored).

Workers will be trained in their responsibilities to identify and stop any dangerous acts they see on Site (or notify an OHS staff member straight away) even if it is not part of their work responsibility. Should there be incidents these will be documented and reported, with follow-up actions identified.

8.8 Supply chain risk management

Supply chain management for contractors and subcontractors has been prepared as part of the ESMS. This will be provided to the EPC Contractor and suppliers for their implementation. Masdar suppliers are required to provide evidence of no supply chain risks, as part of their supplier contracts, the requirements will cascade down the supply chain. For off-site suppliers of the EPC Contractor, a Supply Chain Management Plan will be prepared, that will assess the risk of supply-chain human rights risks, such as child and forced labor and severe OHS incidents and identify how these risks can be mitigated, through contracts, monitoring, engagement etc.

In addition, the EPC Contractor will require that its suppliers and subcontractors provide GBVH training to their staff in accordance with the Worker Code of Conduct.

8.9 Community health, safety and security plans

Given the distance to local communities, community health and safety was not considered a significant risk to the Project in the ESIA, however, a number of plans will be prepared, that will reduce the risk of impacts to local communities, such as the Security Management Plan, Worker Code of Conduct and Stakeholder Engagement Plan.

Workers, particularly migrant workers, will be provided training, based on the Worker Code of Conduct, on interactions with local community members, sensitivity training, and training on GBVH. Should it be deemed necessary, through a risk assessment, training will also be provided to community members on GBVH (and how to report any incidences), and the potential risk to community members of communicable diseases (including sexually transmitted diseases). This

risk was not identified in the ESIA phase, but may be identified by the Community Liaison Officer (CLO) during the construction phase.

8.10 Providing access to remedy

Masdar has made a commitment to provide remedy, should any human rights impacts be identified. Identification of human rights impacts will likely be made through the grievance mechanisms (for both workers and local communities).

8.11 Summary

None of the identified impacts reached the threshold risk score of **nine** or more and therefore none of the risks are considered severe. Remediation and mitigation measures will be put in place, which will reduce the severity of the risks and impacts identified.

9 Monitoring and Reporting

9.1 Internal reporting

Internal reporting will be specified in the ESMP, and will be required for this HRIA. The Project will report against a number of key performance indicators (KPIs) specific to the HRIA, in monthly and annual reporting. This reporting will also identify any lessons learned, or any unexpected risks identified and how they were mitigated, it is expected that this will be identified through the Project grievance mechanism.

KPIs relevant to human rights risks and impacts are included in Table 12.

Table 12: Project KPIs – Human Rights

KPI ref	KPI	Target	Data Collection Frequency	Monitoring measure	Responsibility
HRIA-01	Human rights related monitoring and inspections/audits undertaken	Zero non-conformities of violations of human rights	Monthly	Monitoring reports, and/or audit findings	Project Company/ EPC contractor
HRIA-02	Corrective actions on human rights/security related issues	100% of corrective actions are completed within stated timeframe	Monthly	Monthly monitoring reports	Project Company/ EPC contractor
HRIA-03	Relevant remediation, mitigation and management plans prepared	All relevant remediation, mitigation and management plans prepared	Once (first quarterly report)	Plans (checked and approved)	Project Company/ EPC contractor
HRIA-04	Number of community members know how to use the GRM	All community members report they know how to use GRM	Semi-annual	Minutes of meetings	Project Company
HRIA-05	Number of grievances related to human rights or security that have been satisfactorily resolved and documented.	100% of grievances resolved within timeframe stipulated in GRM	Monthly	Grievance log	Project Company
HRIA-06	No. gender equity impacts or complaints	Zero GBVH or gender-related grievances Zero non-conformities on violation of human rights related to gender equity	Monthly	GBBH/gender related grievances raised. Monitoring reports, and/or audit findings	Project Company/ EPC contractor

9.2 External reporting

As required by the Equator Principles 10, the results of the HRIA will need to be reported in a transparent manner. This will be undertaken along with the existing and planned stakeholder engagement for the ESIA and per the Stakeholder Engagement Plan. Relevant monitoring findings and KPIs related to human rights will be reported by the Project Company in its annual reports. The HRIA will also be disclosed on the Masdar website on the project information page.