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UZMETKOMBINAT JSC

CONSTRUCTION OF A CASTING AND ROLLING COMPLEX

Environmental and Social Impact Assessment

Final Report

Book 1

128-0948-ESIA-PE-1

2023

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Environmental and Social Impact Assessment
Final Report
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128-0948-ESIA-PE-1

Director O. Vakhidova-Mordovina

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TERMS AND DEFINITIONS

Associated facilities	Associated facilities refer to facilities that are not funded as part of the Project, but which would not have been built or expanded if the Project had not been carried out, and without which the Project would not have been viable (IFC Performance Standard 1)
Impacts on the environment and social conditions	Environmental and social impacts refer to any change, potential or actual, to the physical, natural, or cultural environment, and impacts on the surrounding community and employees, resulting from the business activity to be supported (IFC Performance Standard 1)
Stakeholder	A person or an organisation that may influence, be influenced by, or perceive themselves to be influenced by activities or decision-making
The Customer (and also the initiator of the planned activities), also the Company	Uzmetkombinat JSC (UMK)
Area of influence	An area that may be affected by: (i) the project, its activities and facilities of the Customer, directly operated or managed by it (including its contractors) and included in the Project; (ii) the impacts of unplanned but foreseeable circumstances caused by the Project that may occur at a later time or somewhere else; or (iii) indirect impacts of the Project on biodiversity or ecosystem services upon which the affected communities livelihoods are dependent (IFC Performance Standard 1)
Area of influence of air emissions	Area formed by an isoline of a concentration equivalent to 0.05x MPC for all sources of chemical pollution of air for all contaminants
Initiator of planned activities	A legal or natural person who intends to carry out the proposed activity and who is responsible for preparing the documentation for the activity in accordance with the regulatory requirements for this type of activity, in order to obtain the relevant permits
Critical habitat	Critical habitat is an area that has high biodiversity value, including (i) sites required for the survival of critically endangered and(or) endangered species or areas with special significance for endemic or restricted-range species; (iii) sites that are critical for the survival of migratory species and(or) schooling species with global significance; (iv) highly endangered ecosystems and(or) unique ecosystems and(or) (iv) territories associated with key evolutionary processes (IFC Performance Standard 1)
Cumulative impacts	Impacts arising from additional impacts on the scope of activities or resources used in or directly affected by the project as a result of other existing, planned or realistically determined circumstances during the identification of risks and impacts; generally recognised as significant based on scientific opinion and/or based on the affected communities' concerns (IFC Performance Standard 1)
Makhalla	Makhalla is a residential area of the city that usually forms a community and a self-governing administrative unit of residents. Makhalla broadly refers to a district or a local community. Promoting it as a 'traditional institution', the Uzbek government has embraced makhalla as a 'fundamental unit' of society. Makhallas were legitimised into law in 1993 under the Law on Institutions of Self-Government of Citizens, otherwise known as the Makhalla Law. Every Uzbek technically belongs to a makhalla and in general no one can be excluded based on class, profession or religion https://uzbekistangid.ru/kultura/chto-takoe-makhallya-v-uzbekistane
Environmental and social impact assessment	A set of works that includes the identification, prediction and assessment of the planned activities' impact on the components of the environment and socio-economic conditions, including the analysis of alternative options for planned activities, identification of conditions for their implementation and development of measures in the field of environmental and social management, accompanied by the disclosure of relevant information about the activities and consultations with stakeholders
Post-project analysis	Monitoring activities during construction and operation of facilities, monitoring compliance with stipulations and requirements, monitoring the effectiveness of measures to prevent/minimise impacts, comparing the conclusions of the environmental impact assessment with actual impacts, and developing additional measures (if necessary)
Project, CRC Project	Intended activity - UMK project 'Construction of a Casting and Rolling Complex'

Recipient(s)	Component(s) of the natural or social environment affected by the proposed activity, in particular: ● natural environment and its individual components; ● population, individual social groups, objects of cultural heritage, etc.
Areas with rated quality indicators of human habitat	Areas where sanitary standards of ambient air in terms of chemical, biological and physical indicators of the quality of human habitat must be met: ● Residential developments ● Educational and children's institutions ● Sports facilities and grounds; ● Playgrounds; ● Recreational areas; ● Health centres; ● Spa and resort centres; ● Gardening communities, collective or private summerhouses and communities.
Transboundary impact	Any impact (not exclusively of a global nature) within an area under the jurisdiction of a country caused by a proposed activity the physical origin of which is situated wholly or in part within the area under the jurisdiction of another country (Guidelines on Environmental Impact Assessment in a Transboundary Context for Central Asian Countries, UNECE, 2019)
Khokimiyat	City or district administration
Environmental aspect	An element of an organisation's activities, products or services that interacts or may interact with the environment (ISO 14001: 2015)

ACRONYMS

TCFD	Task Force on Climate-related Financial Disclosures
JSC	Joint Stock Company
UMK	Uzmetkombinat JSC
MTS	Motor transport shop
RES	Renewable energy sources
HBI	Hot briquetted iron
EAF	Electric arc furnace
EBRD	European Bank for Reconstruction and Development
RS	Railway shop
IAAP	Index of the atmospheric air pollution
I&C	Instrumentation, controls and automation
OCS	Oxygen and compressor shop
CRC	Casting and Rolling Complex
ICO	International credit organisations
CCM	Continuous casting machine
GRM	Grievance redress mechanism
REM	Resource Efficiency Measures
IFC	International Finance Corporation
ESIA	Environmental and social impact assessment
FLW	Fuel and lubricants warehouse
EHS Guidelines	Environmental, health, and safety guidelines
OECD	Organisation for Economic Co-operation and Development
SEP	Stakeholder Engagement Plan
GHG	Greenhouse Gases (GHG)
DGTU	Dust and gas treatment unit
MPE	Maximum permissible emission
MPC	Maximum permissible concentration
PDO	Draft environmental standards for waste generation and disposal
MPCmr	Maximum permissible concentration of a pollutant in the atmospheric air, maximum one-time
MPCss	Maximum permissible concentration of a pollutant in the atmospheric air daily average
MPE	Maximum permissible emission
NFMP	Non-ferrous metal production
MRD	Mechanical repair department
RUz	Republic of Uzbekistan
SanPiN	Sanitary Rules and Regulations
PS	Performance standards
RES	Renewable energy sources
SPZ	Sanitary protection zone
CIBU	Construction and installation business unit
SRS-1	Section Rolling Shop 1
SRS-2	Section Rolling Shop 2
WCS	Wire cable shop
Uzgidromet	Centre of the Hydrometeorological Service of the Republic of Uzbekistan
RCIA	Rapid cumulative impact assessment
MCL	Mill central laboratory

TIMS	Thermal insulation materials shop
CGS	Consumer goods shop
SWPS	Slag waste processing shop
MERS	Metallurgical equipment repair shop
VEC	Valuable environmental component
ECA	Export credit agencies
ES	Energy shop
ESMS	Electric steelmaking shop
tpa	tonnes per annum

1 INTRODUCTION

The Environmental and Social Impact Assessment (hereinafter - ESIA) of the casting and rolling complex (hereinafter - CRC) construction project (hereinafter - the Project, the CRC Project) has been performed in accordance with the requirements of the International Finance Corporation (hereinafter - IFC) to attract project financing for Uzmetkombinat JSC (hereinafter - UMK).

UMK is a leading ferrous metallurgy mill in the Republic of Uzbekistan in operation since 1944.

The site is located in the eastern part of the town of Bekabad in Uzbekistan's Tashkent Region. To the north-east, east and south-east, UMK borders the Republic of Tajikistan.

At present, Uzmetkombinat JSC produces 850 thousand tonnes of steel per year and produces up to 810 thousand tonnes of finished rolled ferrous metal.

The proposed activity is construction of a Casting and Rolling Complex (CRC) for the production of hot-rolled sheets in coils from low-carbon, low-alloy steels of high-quality and ordinary quality. The infrastructure of the Casting and Rolling Complex will be integrated with the relevant facilities of UMK. As part of the project, associated (off-site) facilities were built: a power transmission line and an access motor road.

The capacity of the facility will amount to 1.093 million tonnes per annum (tpa) of liquid steel with an output of up to 1,040 thousand tpa of finished rolled products. After the proposed expansion, the steel output will be about 1.94 million tpa.

The implementation of the CRC Project is secured by a loan from Credit Suisse AG. Based on the results of the tender selection, UMK signed an agreement for the provision of environmental and social services as part of a comprehensive ESIA for the CRC project with Shaneco Group JSC (Russia) (hereinafter - Shaneco). Certain types of work as part of the ESIA were carried out by a subcontractor – Ecostandard Expert LLC (Uzbekistan) (hereinafter - Ecostandard).

During the initial stage of the ESIA process, a preliminary assessment (scoping) of the projected activities was conducted based on the materials provided by UMK, information collected from open sources and data from similar facilities. Results of the scoping stage include the following:

- identification of applicable national and international requirements;
- collection, processing and analysis of available information about the natural, social and economic conditions existing at the projected activity area;
- identification of recipients of impacts;
- identification of stakeholders;
- initial consultations with stakeholders;
- preliminary identification of the projected activity impacts;
- categorization of the CRC project.

Results of the scoping stage are presented in the Scoping Report (128-0948-SR). Based on the preliminary assessment, Terms of Reference for the ESIA were prepared.

The Terms of Reference and the Scoping Report were approved by UMK and Credit Suisse AG in November 2021.

As part of the project disclosure, the Scoping Report and the ESIA Terms of Reference were published on UMK's website for a review by stakeholders.

From October 2021 to January 2022, Shaneco and Ecostandard performed a series of activities to assess impacts and propose prevention and/or mitigation measures in accordance with the ESIA Terms of Reference. In particular, these activities included the following:

- Baseline studies:
  - Chemical pollution of ambient air;
  - Condition of soils;
  - Condition of surface and underground water;
  - Biodiversity;
  - Radiological settings;
  - Noise pollution;
  - Socio-economic conditions.

  Collection of baseline data:
  - Meteorological and climate data;
  - Water use and waste management;
  - Cultural heritage sites.
- Special investigations:
  - Energy audit;
  - Explosive zones;
  - Management of hazardous materials;
  - Traffic intensity.

In parallel with data collection and investigations, the proposed configuration of UMK's Sanitary Protection Zone (which includes CRC-related design solutions and associated changes in the mill's production plans) was developed and submitted to state authorities for approval.

Results of this stage include the following activities:

- A methodological approach to the impact assessment process was substantiated;
- Baseline environmental and social conditions within the project's area of influence were determined;
- An environmental and social impact assessment was conducted;
- A set of measures to prevent and/or mitigate adverse impacts was substantiated;
- Stakeholder engagement activities were implemented as planned.

1.1 Summary of proposed activities

The territory of UMK includes several industrial sites in Bekabad (Tashkent region). The main site is located in the eastern part of the town and includes the main production facilities of the mill (Figure 1.1.1).

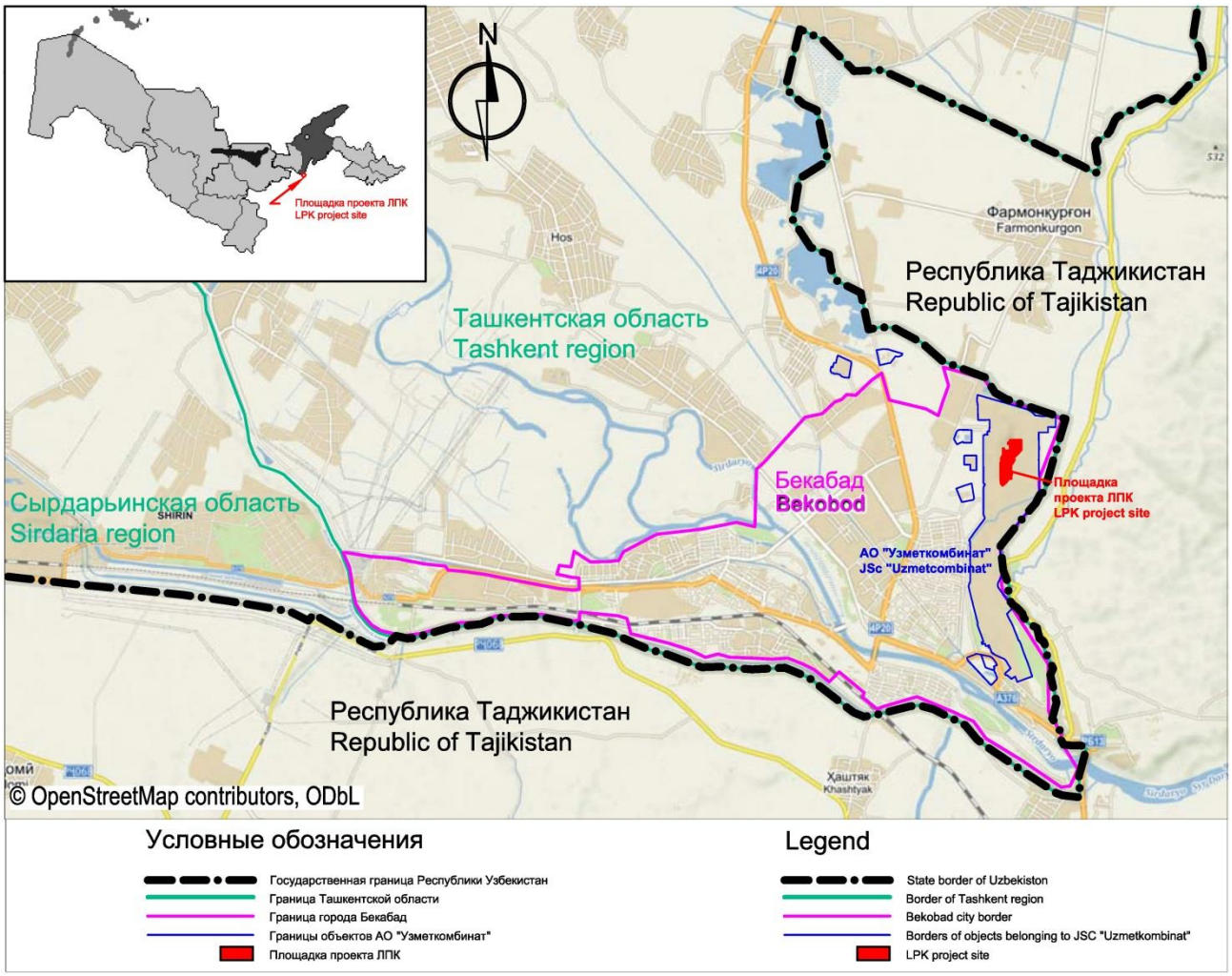


Figure 1.1.1 Area of planned activities

The Casting and Rolling Complex is intended for production of hot-rolled sheets in coils from low-carbon, low-alloy steels of high-quality and ordinary quality.

The facilities will be constructed in the areas of Electric Steelmaking Shop (ESS) and Section Rolling Shop 2 (SRS-2) of UMK that are free of any buildings.

The CRC infrastructure will be integrated with the relevant facilities of UMK (water supply, sewerage, power supply, heat supply, etc.).

ESIA included an analysis of the impacts from the following elements of the CRC:

- steel-making furnace EAF-120;
- ladle furnace;
- steel degassing installation;
- gas treatment system;
- thin slab continuous casting machine;
- tunnel-type furnace;
- hot rolling mill;
- water treatment plant;

By the time ESIA investigations began, the associated facilities of the CRC Project were in different state of readiness:

- The new 1.2 km access road to UMK was commissioned;
- The 23 km power transmission line: construction works were completed, pylons were installed, and assembly was in progress.

For this connection, the ESIA in relation to the access road and power transmission line were based on their actual readiness.

1.2 ESIA purpose and objectives

In accordance with an agreement between UMK and Shaneco, the ESIA has to be performed in line with IFC requirements. IFC PS 1 (Assessment and Management of Environmental and Social Risks and Impacts) defines the following objectives for the ESIA:

- To identify and evaluate environmental and social risks and impacts of the project.
- To adopt a mitigation hierarchy to anticipate and avoid, or where avoidance is not possible, minimise and, where residual impacts remain, compensate/offset for risks and impacts to workers, Affected Communities, and the environment;
- To promote improved environmental and social performance of clients through the effective use of management systems.
- To ensure that grievances from Affected Communities and external communications from other stakeholders are responded to and managed appropriately.
- To promote and provide means for adequate engagement with Affected Communities throughout the project cycle on issues that could potentially affect them and to ensure that relevant environmental and social information is disclosed and disseminated.

To meet these objectives, the following activities were completed as part of the ESIA for the CRC Project:

- Analysis of the baseline condition of environmental components and socio-economic settings in the project area;
- Characterisation of sources of environmental and social impacts from UMK and CRC;
- Identification and analysis of environmental and social impacts of proposed activities;
- Projection of the condition of environmental components and socio-economic settings following the CRC Project;
- Development of measures to anticipate and avoid, or where avoidance is not possible, minimise adverse impacts and associated impacts; assessment of effectiveness of these measures;
- Issuance of proposals for monitoring of the condition of environmental components and socio-economic settings in the project area.

Following this stage, an environmental and social management system of the CRC Project will be created, which will be based on UMK’s existing management system and supplemented with necessary action plans and a corresponding organisational structure. The action plans will also be based on ESIA results.

1.3 Sources of information

The following materials were used to meet the objectives above:

I. Documents provided by UMK

- CRC Project documentation:
  - Technical report 'Construction of a casting and rolling complex. Feasibility study, including:
    - Explanatory note, UkrGIPROMEZ State Enterprise, Dnipro, Ukraine, 2020;
    - Special and financial sections, SHARIF PROJECT CONSULTING LLC, Republic of Uzbekistan, 2020;
    - Environmental section, RIK UzINVESTPROJEKT LLC, Republic of Uzbekistan, 2020;
    - Technical report on geological and geophysical surveys for the CRC project. O'zGASHKLITI DUK, 2019;
    - Information report on possibilities of dewatering at the CRC site. Uzgidrogeologia State Enterprise, 2019;
  - Documents from Danieli & C. Officine Meccaniche SPA including materials prepared at request of the Consultant;
  - Environmental impact statement (draft EIS) with regard to the reconstruction and expansion of Uzmetkombinat JSC production capacities as a result of the construction of a Casting and Rolling Complex (project adjustment) in Bekabad, Tashkent region, by EKOLAB AUDIT LLC, 2020;
- environmental design documentation of UMK and inventory materials:
  - Draft environmental standards for maximum permissible emissions of pollutants for Uzmetkombinat JSC, by EKOLAB AUDIT LLC, 2020;
  - Inventory check of sources that emit pollutants into the air, EKOLAB AUDIT LLC, 2020;
  - Draft environmental standards for maximum permissible discharges of pollutants for JSC Uzmetkombinat, EKOLAB AUDIT LLC, 2020;
  - Draft environmental standards for the waste pollutant generation and disposal for JSC Uzmetkombinat, EKOLAB AUDIT LLC, 2020;
  - Inventory check of waste generation and disposal, EKOLAB AUDIT LLC, 2020;
  - consumed water and effluents metering data of UMK for 2019-2020;
  - results of UMK effluents discharge monitoring at the Syrdarya River discharge point.
  - results of the Syrdarya River natural waters monitoring upstream of UMK discharge point (reports of chemical analyses performed by the UMK laboratory within 2018-2021);
  - results of technical and drinking water monitoring by UMK (reports of chemical analyses performed by UMK laboratory within 2019-2021)
  - opinions of the state environmental expert examination agencies and authorized bodies in the field of environmental protection;
  - process flow diagrams of existing production facilities, description of the technology in the operating shops, and process regulations.
- Other documents:
  - Comprehensive energy audit of UMK. Osnova Chemical Group LLC, 2015;

- Energy passport of UMK as a fuel and energy consumer. Osnova Chemical Group LLC, 2015;
- UMK energy inspection report. GCE-Energo Scientific Centre LLC, 2021.

Under no circumstances shall the Consultant and the Subcontractor be responsible for the completeness, accuracy and relevance of input data provided by the Customer.

II. Data from open sources

- Bekabad master plan and urban planning documents, available online on the HGC geoportal of the Republic of Uzbekistan https://dshk.uz/main
- Open mapping data from the OpenStreetMaps portal used under the Open Data Commons Open Database License (ODbL) from the OpenStreetMap Foundation (OSMF), available at https://www.openstreetmap.org/ and https://nextgis.com/;
- Remote sensing data available online via Google Maps https://www.google.com/maps.
- FJSC AQUASTAT Country Profile - Uzbekistan, Food and Agriculture Organisation of the United Nations, 2020.

The preliminary assessment used open data[1] from a similar facility, the process solutions for which were developed by Danieli & C. Officine Meccaniche SPA for the VMZ project (Electrometallurgical Plant and necessary infrastructure. Production of direct reduction iron (DRI) for Electric Steel-Making Shop of EMP).

III. Results of baseline studies

From October 2021 to January 2022, Shaneco and Ecostandard performed a series of baseline studies, following which the following data was collected for the project area:

- Socio-economic settings;
- Chemical pollution of ambient air;
- Condition of soils;
- Condition of surface and underground water;
- Biodiversity (flora and terrestrial fauna, hydrobionts);
- Radiological settings;
- Noise pollution;

Results of baseline studies are summarised in reports forming the ESIA package.

1.4 Limitations and assumptions

Conclusions given in the ESIA are based on the professional experience of the Consultant and the Subcontractor, which allows design solutions to be analysed against environmental laws and regulations of Uzbekistan and the requirements of IFC, which were proposed by the Customer to be included in the regulatory framework.

The assessment was based exclusively on the documents provided by the Customer and open source data (information about the public's perception of the project, baseline environmental data, materials from public cadastral registers etc.), and materials of baseline studies.

[1] Results are provided in publicly available EIA materials.

Under no circumstances shall the Consultant and the Subcontractor be responsible for the quality and/or relevance of the input data provided by the Customer.

The CRC Project's associated facilities include a 1.2 km new access motor road to UMK and a 23 km power transmission line (see Section 4 for more details).

As of October 2021, the associated facilities have been constructed; the road has been commissioned and the power line was being prepared for commissioning.

Therefore, the ESIA materials in relation to these facilities reflect their status, while the action plans contain proposals, which can be implemented based on their status (including for the construction phase):

- Environmental and social impact assessment will not be performed;
- Action plans to prevent / minimise adverse environmental and social impacts will not be developed;
- Actions to monitor environmental and social impacts will not substantiated.

The following activities were conducted to comply with IFC PS 5 and 6:

- A retrospective assessment of the process to obtain rights to land plots for the motor road and power transmission line (a socio-economic audit);
- Assessment of current condition of biotopes affected by construction works.

1.5 Structure of the report

The draft ESIA Report includes three books:

- Book 1 (this document) presents general information about the Project and activities performed as part of the ESIA (purpose, goals, limitations, investigation methodology);
- Book 2 (128-0948-ESIA-PE-2) is based on baseline studies completed as a separate work stage and focuses on environmental and social conditions in the project area. In particular, Book 2 contains the following information:
  - Natural conditions of the project area:
    - Climate;
    - Relief;
    - Geological conditions;
    - Groundwater;
    - Soils;
    - Vegetation;
    - Wildlife;
    - Territories with special conditions of use.
  - Current environmental condition of the project area:
    - Air quality;
    - Impacts of physical factors;
    - Noise environment;
    - Vibration environment;
    - Quality of surface and underground water;

- Soils;
- Waste management facilities.

  - Socio-economic conditions in the project area.

- Book 3 (128-0948-ESIA-PE-3) presents the following:
  - Projection of the condition of environmental components and socio-economic settings following the CRC Project;
  - Development of measures to anticipate and avoid, or where avoidance is not possible, minimise adverse impacts and associated impacts;
  - Issuance of proposals for monitoring of the condition of environmental components and socio-economic settings in the project area.

Table 1.5.1 lists information about specific reports, which were prepared during various CRC ESIA studies (including baseline studies), and which supplement the ESIA report.

Table 1.5.1 Investigations completed as part of the ESIA of the CRC Project.

No	Document	Code	Notes
1.	Air quality assessment. Monitoring of chemical pollution of ambient air.	128-0948-BLS-Air	Results of monitoring using a Zephyr sensor, diffusion tubes, filters and maps
2.	Acoustic studies	128-0948-BLS-Noise	Results of noise, vibration and infrasound measurements
3.	Soil and water studies	128-0948-BLS-GW	Results of investigations of: - soils - surface and underground water. Materials of radiological studies
4.	Floral studies	128-0948-BLS-Bio-1	Results of geobotanical studies
5.	Faunal studies	128-0948-BLS-Bio-2	Results of zoological studies of terrestrial fauna
6.	Hydrobiont studies	128-0948-BLS-Bio-3	Results of studies of hydrobionts in the river Syrdarya
7.	Assessment of community health risks associated with chemical pollution of ambient air	128-0948-HRA	Results of an assessment of community health risks associated with UMK's air emissions following commissioning of the CRC

2 REQUIREMENTS TO THE PROJECT AND ESIA

2.1 National Legislation

2.1.1 National Environmental and Social Policy

The Republic of Uzbekistan has established a national environmental, legal and institutional framework regulated by the state policy on nature protection and national guidelines to promote the sustainable use of natural resources and environmental protection, based on the following principles:

- Priority of protecting the health of human life.
- Integration of economic and environmental policies aimed at the conservation and restoration of the environment as a prerequisite for improving the standard of living of the population;
- Transition from protection of separate natural elements to general and complex protection of ecosystems;
- Responsibility of all members of society for environmental protection and biodiversity conservation.

The country is a party to a number of international and regional environmental agreements and conventions.

The Constitution and environmental legislation of the RUz establish the right of citizens for safe environment. The national legislation provides for a number of other environmental rights and responsibilities of citizens, which can be realized through individual or public efforts to protect the environment.

2.1.2 National Environmental Legal Framework

The following key laws form the national environmental legal framework of Uzbekistan.

Table 2.1.1 National laws, regulations and guidelines considered in the ESIA process.

Level of regulation	Name of documents
Basic Law of the RUz	Constitution of the Republic of Uzbekistan, 1992
Normative legal acts on environmental protection	Law of the Republic of Uzbekistan “On sanitary and epidemiological welfare of population”, 2015
	Law "On Nature Protection", 1992
	Law "On Water and Water Use", 1993
	Law "On Atmospheric Air Protection", 1996
	Law "On Protection and Use of Fauna", 1997
	Law "On Protection and Use of Flora", 1997
	Law "On Protected Natural Areas", 2004
	Law "On Subsoil", 1994
	Law "On underground water", 1993
	Law "On State Land Cadastre", 1998
	Law "On Wastes", 2002
	Law "On Environmental Expert review", 2000
	Law "On Environmental Control", 2013
	Presidential Decree No UP-5863 "On approval of the concept of environmental protection of the Republic of Uzbekistan until 2030", 30.10.2019
	Presidential Decree No PP-4477 "On approval of the Strategy for the transition of the Republic of Uzbekistan to green economy for 2019-2030”, 4.10.2019
	Presidential Decree No UP-5580 "On measures to radically improve the system of payment for the collection and removal of solid waste", 22.11.2018

Level of regulation	Name of documents
	Presidential Decree No PP-4291 "On approval of the strategy for solid waste management in the Republic of Uzbekistan for the period 2019-2028", 17.04.2019
	Resolution of the Cabinet of Ministers No 541 "On approval of the Regulations on the state environmental expert review", 07.09.2020
	Resolution of the Cabinet of Ministers of the Republic of Uzbekistan from 21.01.2014 No 14 "On approval of the Regulations on the development and approval of draft environmental standards" (as amended by the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan No 949 from 22.11.2018)
	Resolution of the Cabinet of Ministers of the Republic of Uzbekistan No 95 "On approval of normative-legal acts in the field of waste management", 06.02.2019
	Resolution of the Cabinet of Ministers of the Republic of Uzbekistan No 295 "On approval of the regulation on the order of control in the field of waste management", 27.10.2014
	Resolution of the Cabinet of Ministers of the Republic of Uzbekistan No 981 "On approval of the Regulation on the procedure for establishing water protection zones and zones of sanitary protection of water bodies in the territory of the Republic of Uzbekistan", 11.12.2019
	Regulation on the order of disposal of toxic chemicals and other toxic substances, as well as the protection and maintenance of special sites" (registered with the Ministry of Justice under No 2438 of 20.03.2013)
	Rules for industrial wastewater intake and procedure for calculation of compensation payments for excess discharges of pollutants into urban sewer systems of cities and other settlements of the Republic of Uzbekistan (Annex 1 to RCM No 11 of 2010)
	Resolution of the Cabinet of Ministers of the Republic of Uzbekistan No 737 "On improvement of the environmental monitoring system in the Republic of Uzbekistan", 05.09.2019
	SanPiN No 0350-17 "Sanitary norms and rules for the protection of atmospheric air in populated areas of the Republic of Uzbekistan".
	SanPiN No 0293-11 Hygienic Standards. The list of maximum permissible concentrations (MPC) of pollutants in the atmospheric air of settlements in the territory of the Republic of Uzbekistan
	SanPiN No 0267-09 "Sanitary norms and rules to ensure the permissible noise in the premises of residential and public buildings and in residential areas".
	SanPiN No 0088-99 Sanitary requirements for the development and approval of projects of maximum permissible discharges (MPD) of substances entering into water bodies with wastewater
	Sanitary Rules No 0289-10 Sanitary Rules and Hygienic Requirements for the Organisation of Construction and Construction Work
	SanPiN No 0146-04 Design of residential buildings in the climatic conditions of Uzbekistan
	SanPiN No 0331-16 Sanitary rules and norms of design, construction, maintenance of residential buildings in climatic conditions of Uzbekistan
	SanPiN No 0183-05 Hygienic requirements for soil quality of settlements in specific natural and climatic conditions of Uzbekistan
	SanPiN No 0191-05 Maximum permissible concentrations (MPC) and tentative permissible concentrations (TPC) of exogenous harmful substances in soil
	SanPiN No 0212-06. Sanitary rules and norms of hygienic assessment of the degree of soil contamination of different types of land use in the specific conditions of Uzbekistan
	SanPiN No 0318-15 Hygienic and anti-epidemic requirements for the protection of water bodies in the Republic of Uzbekistan
	SanPiN No 0193-06 Radiation Safety Standards (NRB-2006) and Basic Sanitary Rules for Radiation Safety (OSPORB-2006)
	SanPiN No 0297-11 Sanitary rules and norms of cleaning the territories of populated areas from solid domestic waste in the Republic of Uzbekistan
	SanPiN No 0068-96 Sanitary rules for the collection, storage, transportation, disposal and recycling of municipal solid waste (MSW) in cities of the Republic of Uzbekistan

Level of regulation	Name of documents
	SanPiN No 0127-02 Sanitary rules for inventory, classification, storage and neutralization of industrial waste
	SanPiN No 0128-02 Hygienic classifier of toxic industrial waste in the conditions of the Republic of Uzbekistan
Technical regulations and guidelines on environmental and habitat protection	O'z DSt 951:2011 Sources of centralized domestic and drinking water supply. Hygienic, technical requirements and selection rules
	GOST-23941-2002 "Noise of machines. Methods of Determination of Noise Characteristics".
	GOST 23337-78 "Noise. Methods of noise measurement in residential areas and premises of residential and public buildings"
	Instruction on the inventory of pollution sources and regulation of emissions of pollutants into the atmosphere for the enterprises of the Republic of Uzbekistan. Approved by the Order No 105 of the Chairman of the State Committee for Ecology and Environmental Protection from 15.12.2005
	GOST 31295.2-2005 "Sound attenuation during propagation on the ground".
	KMK 2.01.08-96 "Protection against noise".
	KMK 2.04.01-98 "Indoor water supply pipelines and channelization of buildings"
	KMK 2.04.03-97 "Sewage. Exterior networks and structures "
	Temporary recommendations on control of groundwater protection in the Republic of Uzbekistan". State Committee of the Republic of Uzbekistan on Geology and Mineral Resources, Tashkent, 1991
	Handbook of Environmental Specialist. Publication of the State Committee of the Republic of Uzbekistan for Ecology and Environmental Protection and State Environmental Expert review. Tashkent, 2009.

Constitution of the RUz, Articles 50, 54, 55, 93, 100. Article 55 of the Constitution of the Republic of Uzbekistan determines that the land, its subsoil, waters, flora and fauna and other natural resources are national assets and are subject to rational use and protection by the State.

The Law “On sanitary and epidemiological welfare of population” dated 26 August 2015 defines the key aspects of the state policy, rights and obligations of individuals and legal entities, and requirements to ensuring sanitary and epidemiological welfare of population.

The Law "On Nature Protection" of 9.12.1992 (as amended on 12.10.2021) establishes the legal, economic and institutional framework for environmental protection, ensures sustainable development and certain principles, including the State Environmental Expert review (SEE). Article 12 of the Law "On Nature Protection" defines the need for the rational use of natural resources and compliance with environmental requirements".

The Law "On Water and Water Use" of 6.05.1993 (as amended on 12.10.2021) provides for rational use of water resources, protection of water resources, prevention and mitigation of adverse impacts and compliance with national laws.

The Law "On Atmospheric Air Protection" of 27.12.1996 (as amended on 28.09.2020) defines the issues of preservation of the natural state of the atmospheric air; legal regulation of the activities of state bodies, enterprises, institutions, organisations, public associations and citizens in the field of protection of atmospheric air.

The Law "On Protection and Use of Flora" of 26.12.1997 (as amended on 21.09.2016) regulates relations in the field of protection and use of plants growing in natural conditions, as well as wild plants for the purpose of their restoration and genetic conservation.

The Law "On Protection and Use of Fauna" of 26.12.1997 (as amended on 19.09.2016) regulates relations in the field of protection and use of wild animals living in a state of natural freedom on land, in water, in the atmosphere and in the soil, permanently or temporarily inhabiting the territory of the Republic of Uzbekistan.

The Law "On Protected Natural Areas" of 03.12.2004 regulates the preservation of typical, unique, valuable natural objects and complexes, the genetic fund of plants and animals, the prevention of the negative impact of human activity on nature, the study of natural processes, the monitoring of the natural environment, improving environmental education and education.

The Law "On Subsoil" of 23.09.1994 (as amended on 31.08.2000) is aimed at ensuring sustainable and comprehensive use of subsoil to meet the needs of minerals, protection of subsoil, environment, security of subsoil use and protection of subsoil users, protection of interests of citizens, society and the state. It regulates issues of groundwater and soil pollution.

The Law "On State Land Cadastre" of 28.08.1998. (as amended on 17.08.2021) contains the basic rules and norms of land use and provides land rights. The law establishes the ecological value of land plots and ecosystem services.

The Law "On Wastes" (2002) (as amended on 15.11.2019) regulates waste management and empowers the State Committee for Ecology and Environmental Protection to inspect, coordinate, assess the environment and establish certain parameters of areas for waste disposal.

The Law "On Environmental Expert review" (2001) (as amended on 29.04.2021) provides for a mandatory environmental and human health impact assessment, and serves as the legal basis for the examination.

The Law "On Environmental Control" (2013) (as amended on 17.08.2021) regulates relations in the field of environmental protection. The main objectives of environmental control are prevention, detection and elimination of violations of legislation in the field of environmental protection; monitoring of the environmental situation and factors that may lead to environmental pollution, irrational use of natural resources, threat to life and health of citizens.

2.1.3 Environmental Impact Assessment Process

2.1.3.1 Legal framework

The environmental assessment of strategic documents and planned activities is based on the following legal acts:

- The national EIA procedure is regulated by:

- Law "On Environmental Expert review" of 25.05.2000, amended on 29.04.2021;
- Resolution "On Further Improvement of Environmental Impact Assessment Mechanism" (SEER), approved by the Cabinet of Ministers No 541 of 07.09.2020.

The Resolution defines the legal requirements for EIA in Uzbekistan. According to the Law and the Resolution, the State Environmental Expert Review (SEER) is a type of environmental expert review carried out by specialized expert departments to establish the compliance of planned activities with environmental requirements and to determine the permissibility of the implementation of the object of environmental expert review.

The specially authorized state body in the field of state environmental expert review is the State Committee for Ecology and Environmental Protection (Goskomekologiya). SEER is carried out by the following specialized expert divisions of Goskomekologiya:

- State Unitary Enterprise "Centre of State Environmental Expert review" of Goskomekologiya, hereinafter referred to as "SUE Centre of State Environmental Expert review";

- State unitary enterprises "Centre of State Environmental Expert review" of regions and Tashkent city;
- "SUE Centre of State Environmental Expert review" carries out state environmental expert review of EIAs of objects of economic activity belonging to I and II categories of environmental impact (high and medium risk);
- State unitary enterprises "Centre of State Environmental Expert review" of the Republic of Karakalpakstan and regions carry out environmental expert review of EIAs of economic activity objects belonging to III and IV categories of environmental impact (low risk and local impact).

2.1.3.2 EIA process and environmental decision

The purpose of the EIA is to identify, study and describe the direct and indirect impacts of planned activities on human health and safety, biodiversity, water, air, soil, land, climate and landscape, cultural heritage and material values.

Materials of the environmental impact assessment contain three stages: PEIS, EIS, and SEC.

The three stages of the EIA and their required outcomes are summarized as follows:

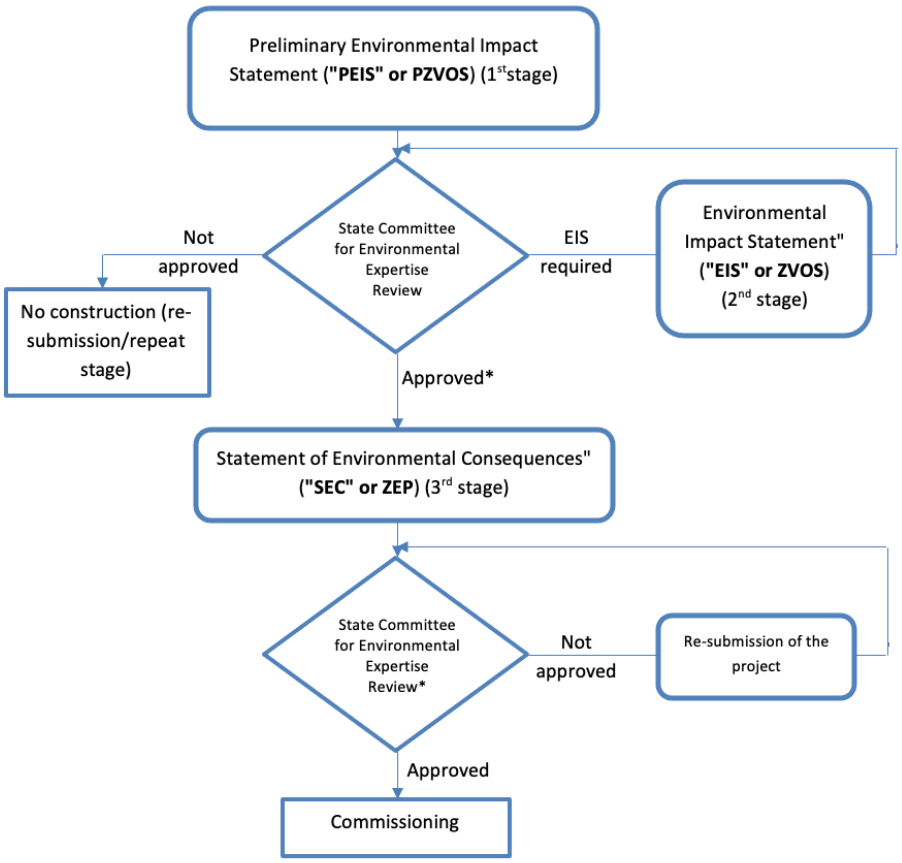
- Stage I: "Preliminary Environmental Impact Statement (“PEIS” or PZVOS), must be conducted during the planning stage of the proposed project prior to the allocation of funds for the development and implementation of the project.
- Stage II: "Environmental Impact Statement" (“EIS” or ZVOS), must be prepared within the timeframe specified in the SEER report received in Stage I for any additional studies or analyses required. The EIS must be submitted to the SEER and a positive opinion must be obtained prior to approval of the FS and hence prior to the start of construction.
- Stage III: "Statement of Environmental Consequences" ("SEC" or ZEP) is the final stage of the SEER process and should be conducted prior to commissioning the project. The report details the changes to the project made as a result of the SEER review during the first two stages of the EIA process, comments received during public consultation, environmental standards applicable to the project, and environmental monitoring requirements associated with the project and key findings.

The Resolution "On Further Improvement of Environmental Impact Assessment Mechanism" approved by the Cabinet of Ministers No 541 defines the list of activities subject to state environmental expert review (Annex 1 to the RCM), describes in detail the procedures for the organisation of SEER (Annex 2 to the RCM) and the procedure for public consultations on environmental impact assessment projects (Annex 3 to the RCM), Figure 2.1.1 (Figure 2.1.1 The EIA procedure in Uzbekistan).

All economic activities of SEER, are classified into four categories:

- Category I - "high risk of environmental impact", SEER takes 20 calendar days, all stages of EIA are required (by decision of the Goskoekspertiza);
- Category II - "medium risk of environmental impact", SEER takes 15 calendar days, all stages of EIA are required (by decision of the Goskoekspertiza);
- Category II - "low risk of environmental impact", SEER takes 10 calendar days, all stages of EIA are required (by decision of the Goskoekspertiza);
- Category IV - "local impact - SEER is conducted on the basis of the questionnaire of environmental impact assessment, completed by the client in electronic form through a

personal account on the resource of Goskomekologiya in the Internet and sent to the appropriate territorial Centre of State Environmental Expert review, the period of review is 5 calendar days.



* Category I - 20 days, Category II - 15 days

** PEIS/EIS has been approved, permits have been obtained, the application for site selection has been received, and the construction stage can begin

Figure 2.1.1 The EIA procedure in Uzbekistan

Implementation of projects without a positive conclusion of the State Environmental Expert review entails liability under Article of the Code of the Republic of Uzbekistan on Administrative Liability.

Also, Article 193 of the Criminal Code of the Republic of Uzbekistan provides for liability for violation of environmental safety standards and requirements.

According to Articles 21, 22 of the "Law on State Environmental Expert Review", a positive conclusion of the SEER is a mandatory document for opening financing by banking and other credit organisations and execution by legal entities and individuals of the implementation of the object of state environmental expert review. The term of validity of the conclusion of the state environmental expert review for materials of environmental impact assessment is 3 years, for draft environmental standards 5 years.

A positive conclusion of the State Environmental Expert review regarding the CRC project materials (Conclusion No 01-01/10-08-1245 of 26.08.2020) was received.

2.1.4 Labour legislation

The following national laws and regulations define aspects of the project's labour relations and working conditions, including occupational health and safety issues:

Table 2.1.2 Laws and regulations on labour relations.

Level of regulation	Name of documents
Normative legal acts in the field of labour, health and safety	Labour Code of the Republic of Uzbekistan, 1996
	Law of the RUz No 938-XII "On State Pension Provision of Citizens", 03.09.1993
	Law of the RUz No 510-XII "On Employment of Population", 13.01.1992
	Law of the RUz "On Protection of Citizens' Health", 1996
	Law of the RUz No 174 "On compulsory state social insurance against accidents at work and occupational diseases", 10.09.2008
	Law of the RUz "On Compulsory Insurance of Civil Liability of the Employer", 2009
	Law of the RUz "On Labour Protection", 2016
	Presidential Decree of the RUz No 5723 "On improvement of the procedure for determining the amount of wages, pensions and other payments", 21.05.2019
	Government Decree of the RUz No 4235 "On measures to further strengthen the guarantees of labour rights and support women's entrepreneurship", 07.03.2019
	Resolution of the Ministry of Employment and Labour Relations of the Republic of Uzbekistan No 22-14-02019k/k, No .48 "On approval of the List of professions and works, negatively affecting the health of women, and in which it is not recommended to use women's labour", 22.07.2019
	Resolution of the Cabinet of Ministers No 1066 "On measures to improve the activities of the Ministry of Employment and Labour Relations of the Republic of Uzbekistan" dated 31.12.2018, Appendix No 5 of the Regulations "On the establishment and organisation of labour protection services in organisations".
	Government Decree of the RUz No 4008 "On measures to create favourable conditions for employment in the territory of the Republic of Uzbekistan by qualified specialists of foreign countries", 07.11.2018
	Government Decree of the RUz No 3839 "On additional measures to further improve the system of external labour migration of the Republic of Uzbekistan" 05.07.2018
	Presidential Decree of the RUz No 5291 "On additional measures to create favourable conditions for certain categories of pensioners who are engaged in labour activities", 28.12.2017

In the Constitution of the Republic of Uzbekistan (08.12.1992), in the chapter on economic and social rights of citizens, it is defined that every citizen has the right to:

- work, free choice of work, fair working conditions and protection against unemployment in the manner prescribed by law. Forced labour is prohibited except in execution of a court sentence or in other cases provided for by law (Chapter IX, Article 37);
- rest - stated in Article 38: "Employees have the right for paid rest. The length of working hours and paid leave shall be determined by law";
- social security in old age, in case of disability, as well as loss of a breadwinner and in other cases stipulated by law (Article 39);
- qualified medical care (Article 40).
    - Women and men have equal rights (Article 46).

Everyone shall have the right, either individually or jointly with others, to file petitions, proposals and complaints with the competent public authorities, institutions or people's representatives. Applications, proposals and complaints shall be considered in the manner and within the time limits prescribed by law (Chapter VIII, Article 35).

The Labour Code of the Republic of Uzbekistan, enacted on 01.04.1996, considers labour legislation taking into account the interests of workers, employers and the state, fair and safe working conditions, protection of labour rights and health of employees.

The Code regulates labour relations and other directly related relations and is aimed at protecting the rights and freedoms of participants in labour relations, establishing minimum guarantees of rights and freedoms in the sphere of labour.

Article 6 of the Labour Code prohibits discrimination and guarantees all citizens equal rights to work; discrimination in employment relations is prohibited. Any distinction, exclusion, preference or denial of employment, regardless of nationality, race, sex, language, religion, political beliefs, social status, education, property status, which leads to a violation of equality of opportunity at work, is prohibited.

A person who believes that he or she has been discriminated against at work may apply to the court for the elimination of discrimination and compensation for material and moral damage caused to him or her.

The Law "On State Pension Provision of Citizens", No 938-XII of 03.09.1993. (as amended on 30.10.2021) defines the procedure for implementing the constitutional right of citizens of the Republic of Uzbekistan to social security in old age, in case of full or partial disability, loss of breadwinner, establishes a unified system of state pensions, the procedure for their appointment, calculation, recalculation and payment.

The Law “On Employment of Population” No 510-XII of 13.01.1992 (as amended on 06.05.1995) defines the organisational, legal and socio-economic guarantees of the implementation of human rights to obtain employment in a market economy and the equality of the various forms of ownership. It is designed to create conditions to ensure employment of the population taking into account the norms of the Constitution of the Republic of Uzbekistan and international law.

The Law "On Protection of Citizens' Health" 1996 (as amended on 03.08.2021) regulates the provision of guarantees of the rights of citizens to health protection by the state, the formation of a healthy lifestyle of citizens, the activities of state bodies, enterprises, institutions, organisations and public associations in the field of health protection of citizens.

The Law No 174 of 10.09.2008 "On compulsory state social insurance against accidents at work and occupational diseases" regulates relations in the sphere of compulsory state social insurance against accidents at work and occupational diseases.

The Law No 210 "On Compulsory Civil Liability Insurance of the Employer" 2009 (as amended on 04.12.2019) regulates relations in the field of compulsory employer's civil liability insurance.

2.1.5 Equal Conditions and Prohibition of Child and Forced Labour Laws

Uzbekistan has ratified 16 ILO conventions, including 8 fundamental conventions (see Subsection 2.3) prohibiting child and forced labour and any form of labour discrimination. These key labour standards have been incorporated into Uzbekistan's national labour laws.

These legislative acts take into account the interests of workers, contribute to the effective functioning of the labour market, ensure fair and safe working conditions, protect the labour rights and health of workers, promote productivity, quality of work, welfare and social well-being of the population:

- Resolution of the Ministry of Employment and Labour Relations of the Republic of Uzbekistan No 22-14-02019k/k, No 48 "On approval of the List of professions and works, negatively affecting the health of women, and in which it is not recommended to use women's labour", 22.07.2019.

- Government Decree of the RUz No 4008 "On measures to create favourable conditions for employment in the territory of the Republic of Uzbekistan by qualified specialists of foreign countries", 07.11.2018.

- Government Decree of the RUz No 3839 "On additional measures to further improve the system of external labour migration of the Republic of Uzbekistan" 05.07.2018.

Forced Labour and Child Labour

The Constitution of the Republic of Uzbekistan (Article 37) prohibits forced labour.

Article 7 of the Labour Code states that forced labour, i.e. forced performance of work under threat of any punishment (including as a means of labour discipline) is prohibited.

The right to work is granted to persons aged 16 years and older. The law allows students of secondary general, specialized secondary and vocational educational institutions to be employed as trainees to perform light work which is not harmful to their health and moral development and does not interfere with the educational process, during their free time, provided that they are 15 years old and with the written consent of one of their parents or one of the persons in loco parentis (Article 77).

According to the Labour Code, persons under the age of 15 cannot work.

Young people between 15 and 18 years old have the right to work, based on the local legislation, and have the same rights as adult workers, with some benefits due to their age (Article 240 of the Labour Code). Persons under the age of 18 can be employed only after undergoing a medical examination, and are subject to compulsory annual medical examinations until they reach the age of eighteen.

Persons under the age of 18 may be employed only for work that is not dangerous to their health, safety or morals and they are not permitted to lift or move heavy objects (Article 241 of the Labour Code).

Workers aged 15-16 years are allowed to work no more than 24 hours per week, and workers aged 16-18 years - no more than 36 hours per week. Students may be employed only in their free time and their working hours may not exceed half of the maximum working hours established for the respective age groups, i.e. students aged 15-16 may work only 12 hours per week and students aged 16-18 may work no more than 17.5 hours per week (Article 242).

Articles 49 and 51 of the Administrative Code of the Republic of Uzbekistan impose fines for violations of the above norms on forced and child labour. The law as amended on 23.08.2019 significantly increases fines for the use of administrative measures to bring workers to forced labour, which was previously practiced in the country, i.e. involved civil servants, mainly teachers, medical workers and students.

This law provides for fines of 10 to 30 minimum wages for the use of such practices. According to the ministry, if a similar offense is committed repeatedly, the perpetrators face fines of 30 to 100 minimum wages.

Criminal Code No 2012-XII of 22.09.1994 (Articles 135, 138, 148) establishes penalties for the use of forced labour.

2.1.6 Land Alienation and Livelihood Restoration Laws

In Uzbekistan, expropriation of land is provided for state and public needs under the Land Code (LC). There is no separate legal instrument for land acquisition and resettlement in Uzbekistan, but there is a framework in the form of a number of regulations, acts and codes described below.

Level of regulation	Name of documents
Normative legal acts in the social sphere, on the alienation of land	Civil Code of the RUz, 1996
	Land Code of the RUz, 1998
	Family Code of the RUz, 1998
	Tax Code of the RUz, 2007
	The Law of the RUz "On Lease", 1991
	Presidential Decree of the RUz No UP-6243 "On measures to ensure equality and transparency in land relations, reliable protection of land rights and turning them into a marketable asset", 2021
	Resolution of the Cabinet of Ministers No 911 (16.11.2019) in new edition of 01.08.2021 "On the procedure for the seizure of land and compensation to owners of real estate located on the seized land plot"
	Presidential Decree of the RUz No UP-6243 "On measures to ensure equality and transparency in land relations, reliable protection of land rights and turning them into marketable assets", 08.06.2021
	Presidential Decree of the RUz No 5491 "On additional measures to ensure the unconditional guarantee of property rights of citizens and business entities", 2019
	Presidential Decree of the RUz No 5490 "On measures to further improve the system of protection of the rights and legitimate interests of business entities", 2018
	Presidential Decree of the RUz No 5495 "On measures to radically improve the investment climate in the Republic of Uzbekistan", 2018
	Resolution of the Cabinet of Ministers of the RUz No 3857 "On measures to increase the efficiency of preparation and implementation of projects with the participation of international financial institutions and foreign governmental financial organisations", 2018
	Resolution of the Cabinet of Ministers of the RUz No 317 "On amendments and additions to some decisions of the Government of the Republic of Uzbekistan, aimed at further improvement of the registration of cadastral documentation for immovable property", 2016
	Resolution of the Cabinet of Ministers No 146 (25.05.2011) as amended by Resolution of the Cabinet of Ministers No 1024 (20.12.2019) "On measures to improve the procedure for granting land for urban development and other non-agricultural needs"

The Constitution of the Republic of Uzbekistan stipulates the following: everyone has the right to own property (Article 36). The economy of Uzbekistan, which is developing in the direction of market relations, is based on various forms of ownership.

The state guarantees freedom of economic activity, entrepreneurship and labour, taking into account the priority of consumer rights, equality and legal protection of all forms of property (Article 53); the owner has the right to own, use and dispose of his property at his own discretion.

The use of any property must not harm the environment, infringe the rights and legally protected interests of citizens, legal entities and the state (Article 54); land, its mineral resources, waters, fauna and flora, and other natural resources constitute national wealth and are rationally used and protected by the state (Article 55).

The Land Code of the Republic of Uzbekistan, 1998 (as amended on 17.08.2021) provides that withdrawal of a land plot or its part for state and public needs shall be made with the consent of the landowner or in agreement with the land user and the tenant - by the decision of the Kengashes of People's Deputies of regions, Tashkent city or the Cabinet of Ministers of the Republic of Uzbekistan, respectively (Article 37, paragraph 2).

Land plots shall be withdrawn for state and public needs only for the following purposes:

- provision of land for the needs of defence and state security, protected natural areas, creation and functioning of free economic zones;
- fulfilment of obligations arising from international treaties of the Republic of Uzbekistan;
- discovery and development of mineral deposits;
- construction (reconstruction) of highways and railroads, airports, airfields, air navigation facilities and aviation centres, railway transportation facilities, bridges, subways, tunnels, power system facilities and power lines, communication lines, space facilities, trunk pipes, engineering and communication networks;
- execution of master plans of settlements in terms of construction of facilities at the expense of the State budget of the Republic of Uzbekistan, as well as in other cases expressly provided for by the laws and decisions of the President of the Republic of Uzbekistan.

Adoption of decisions on withdrawal of land plots for state and public needs is allowed only after an open discussion with owners of immovable property located on the land plots to be withdrawn, evaluation of benefits and costs, as well as mandatory coordination with the respective Centralized Fund for compensation of losses to individuals and legal entities in connection with the withdrawal of land plots for state and public needs.

If a land owner, land user or lessee does not agree with the decision of Kengashes of people's deputies of regions and Tashkent city respectively or the decision of the Cabinet of Ministers of the Republic of Uzbekistan on withdrawal of a land plot this decision may be appealed in an established order.

Enterprises, institutions and organisations interested in the withdrawal of land plots for the construction of enterprises, buildings and structures shall be obliged, prior to the start of design, to agree in advance with landowners, land users and tenants, as well as with the mayor of the district, city, region or the Cabinet of Ministers of the Republic of Uzbekistan, the location of the facility, approximate size of the plot and conditions of its allocation, taking into account ensuring comprehensive development of the territory. Financing of design works prior to the specified prior approval is not allowed.

2.1.7 Occupational Health and Safety Laws

Legislation in the field of occupational health and safety (OHS) includes the Labour Code, the Occupational Safety and Health Act, presidential decrees, standards on occupational health and safety, decisions of the executive bodies of state power adopted within their competence in the form of decrees, orders, regulations, directives, rules, etc.

More than 30 articles of the Labour Code relate directly to health and safety. They include:

- Occupational safety and health requirements (Article 211);
- Compliance with norms, rules and instructions on occupational safety and health (Article 212);
- Conducting briefing and training on occupational safety and health of workers (Article 215);
- Regulation of working hours at hazardous production facilities for workers performing special work and workers under the age of 18 (Articles 116, 117 and 118);
- Conditions for hiring disabled people for various jobs (Article 220);

- Provision of workers with milk, therapeutic and prophylactic food, carbonated salt water, and personal protective and hygiene equipment (Article 217);
- Providing first aid to workers their transportation to medical and preventive institutions (Article 221);
- Registration and investigation of accidents at work (Article 222), etc.

Law "On Labour Protection", 2016 (as amended on 07.12.2001) establishes a unified procedure for the organisation of labour protection regardless of modes of production, forms of ownership and is aimed at ensuring the health and labour protection of citizens.

The law is aimed at further improvement of the labour protection system, increasing the responsibility of the employer and employees for compliance with the requirements in this area, defining the powers of public authorities to ensure proper control over working conditions and safety, increasing the effectiveness of public control in this area, bringing certain provisions of existing legislation into conformity with the requirements of newly adopted legislative acts in the modern market economy..

The law introduces new concepts and clearly regulates the certification of workplaces according to labour conditions, the audit of the occupational safety management system, and the investigation and registration of accidents at work and occupational diseases. The law also establishes specific mechanisms for public and trade union participation in public control in this area and sets forth their rights related directly to occupational health and safety.

The Law "On Labour Protection at Hazardous Production Facilities" adopted on August 25, 2006, defines legal, economic and social conditions for safe operation of hazardous production facilities and is aimed at preventing accidents and improving capabilities of enterprises to eliminate their consequences.

The Resolution of the Cabinet of Ministers of the Republic of Uzbekistan from 11.02.2005 No 60 introduced the rules of compensation by the employer for damage caused to employees due to injury, occupational disease or other health disorder in connection with the performance of work.

In accordance with the Occupational Safety and Health Act, an employee who has become totally or partially disabled through the fault of management as a result of an industrial accident or occupational disease shall be entitled to a lump sum benefit and compensation for health damage paid by the enterprise. The lump sum benefit is determined by the collective agreement and must not exceed one year's salary of the injured person.

In addition to the basic legislation, there are national normative documents regulating occupational health and safety issues. These include Sanitary Rules and Norms (SanPiN), State Occupational Safety Standards (GOST, SSBT), Construction Norms and Rules (SNIP), standards for harmful substances (maximum permissible concentrations and levels), regulatory guidance documents on specific issues that establish specific requirements for occupational safety at hazardous facilities, during manufacturing or use of various products, etc.

In addition to state regulatory documents, departmental and interdepartmental standards, requirements and rules of labour protection are applied in various industries.

According to the Regulation "On the order of creation and organisation of labour protection services in organisations", Appendix No 5 to the Resolution of the Cabinet of Ministers No 1066 from 31.12.2018. "On measures to improve the activities of the Ministry of Employment and Labour Relations of the Republic of Uzbekistan", each organisation must have occupational safety personnel who are responsible for:

i) Organisation of work to ensure compliance of employees with labour protection requirements;
Monitoring the compliance of employees with the laws and other normative legal acts on labour protection, normative documents in the field of technical regulation of labour protection, collective agreement, agreements on labour protection and other local normative legal acts of the organisation;

ii) Organisation of preventive work on the prevention of occupational injuries, occupational diseases and diseases caused by occupational factors, as well as work on improving working conditions;

iii) Informing and advising the employer and employees of the organisation on labour protection issues, implementation of best practices and scientific developments on labour protection issues, dissemination of knowledge on labour protection;

iv) Implementation of measures to organise induction, training, retraining and advanced training of employees of the organisation on labour protection issues.

If an organisation employs fewer than 50 people, it must have at least one health and safety specialist or one of the managers, combining the work of a health and safety specialist, and for organisations with employees over 50 people, you must create an internal health and safety service.

2.1.8 Community Health, Safety and Security Laws

The Law "On Protection of Citizens' Health" of 29.08.1996. (as amended on 03.08.2021) regulates health, safety and protection of public health. The main objectives of the law are to ensure the rights of citizens to health protection by the state; promotion of healthy lifestyles; legal regulation of the activities of state bodies, enterprises, institutions, organisations and public associations in the field of health care.

Norms of air quality and noise levels in residential areas are established by the following standards:

- SanPiN No 0293-11 Hygienic Norms. The list of maximum permissible concentrations (MPC) of pollutants in the atmospheric air of settlements in the territory of the Republic of Uzbekistan.
- SanPiN RUz No 0267-09 Hygienic Norms on permissible noise in the premises of residential and public buildings and in the territory of residential buildings.
- Preconstruction and construction works are regulated by SanPiN No 0289-10 to the organisation of construction production and construction works.

2.1.9 Cultural Heritage Laws

The Law of the RUz No 269-II "On Protection and Use of Cultural Heritage Objects" (30.08.2001), most recently amended on 19.04.2018, promotes the protection of the cultural heritage of the RUz, including tangible and intangible cultural values, by regulating legal procedures in this area.

Other main laws and regulations related to cultural heritage are:

- Law of the RUz No ZRU-229, "On Protection and Use of Objects of Archaeological Heritage" dated 13.10.2009;
- Resolution of the Cabinet of Ministers of the RUz No 47 "On approval of normative legal acts on Safeguarding Intangible Cultural Heritage" dated 23.02.2011;

- Resolution of the Cabinet of Ministers of the RUz No 881 "On Approval of the Regulations on the use of objects of tangible cultural heritage" dated 18.10.2019;
- Presidential Decree of the RUz No UP-6199 "On measures for further improvement of the state management system in the areas of tourism, sports and cultural heritage" dated 06.04.2020;
- Presidential Resolution of the RUz No PP-5150 "On measures to organise the activities of the Agency for Cultural Heritage under the Ministry of Tourism and Sports of the RUz, as well as the innovative development of the sphere" dated 19.06.2021.

The Agency of Cultural Heritage coordinates the implementation of urban planning and other economic activities on the territories classified as especially protected historical and cultural sites and objects of the world cultural heritage, while preserving their historical and cultural environment, natural landscape and identity, as well as on land plots subject to economic development (if there is a site or identified new site).

Under Article 10, Law No 269-II of the Republic of Uzbekistan On the Protection and Use of the Objects of Cultural Heritage (30.08.2001), a natural or legal person interested in obtaining permission to carry out earthworks, land management, construction, reclamation, economic and other works in the location of tangible cultural heritage and adjacent territories, conservation of tangible cultural heritage should conduct an archaeological survey of the territory, which includes: a) historical, bibliographic and archival research; b) field and desk research..

Administrative Regulations on the provision of public services for the development of architectural and planning task (Appendix No 3 to the Resolution of the Cabinet of Ministers No 370 of 18.05.2018) includes requirements and conditions for the protection of historical and cultural monuments, the environment, legal rights and interests of third parties in the placement of the object on a particular land plot, based on which the design documentation for construction (reconstruction) of the object is developed..

This Regulation applies to the development and issuance of architectural planning assignment for the design of all types of construction and reconstruction of buildings and structures, planar and linear objects, landscaping, re-profiling of buildings and structures accompanied by reconstruction, through the transfer (establishment) of the basic provisions and requirements laid down in the urban planning documentation on planning the development of territories and parts of territories (regions, settlements) of the RUz.

Consideration and approval of design and estimate documentation for compliance with the architectural and planning task is carried out by the territorial architectural and urban planning councils under the Ministry of Construction of the Republic of Karakalpakstan, the main departments of construction of regions and Tashkent - for the construction of facilities in historic areas, including areas of protection of cultural monuments, as well as public facilities.

These bodies approve the design and estimate documentation within two working days after receiving positive conclusions from all other authorized bodies.

2.2 International treaties and agreements

Table 2.2.1 presents international agreements and conventions to which the Republic of Uzbekistan is a party and whose requirements are applicable to the CRC project.

Table 2.2.1 List of International Agreements and Conventions ratified by the Republic of Uzbekistan and whose requirements are potentially applicable to the CRC Project (as of January 2022)

International conventions and treaties	Ratification by the Republic of Uzbekistan	Entry into force in the Republic of Uzbekistan	Main objectives
Environmental agreements and conventions			
Paris Convention for the Protection of the World Cultural and Natural Heritage (1972)	22 December 1995	15 June 1996	Establishing an obligation to ensure the identification, protection, preservation, promotion and transmission to future generations of cultural and natural heritage.
Bonn Convention on the Conservation of Migratory Species (1979)	1 May 1998 (accession)	1 September 1998	Global platform for the conservation and sustainable use of migratory animals and their habitats.
United Nations Framework Convention on Climate Change (1992)	20 June 1993 (accession)	21 March 1994	Stabilization and reduction of greenhouse gas emissions.
United Nations Convention on Biological Diversity (1992)	6 May 1995 (accession)	17 October 1995	Conservation of biodiversity, sustainable use of its components and equitable sharing of the benefits.
Agreement on the Conservation of African-Eurasian Migratory Waterbirds , 1995	September 1998	1 April 2004	Conservation of migratory waterbirds, especially endangered species and those with adverse conservation status.
Kyoto Protocol (1997)	20 August 1999	16 February 2005	Setting internationally binding emission reduction targets.
Paris Agreement on Climate Change (2015)	December 2015	April 2017	The Paris Agreement is an agreement under the United Nations Framework Convention on Climate Change that regulates measures to reduce the carbon dioxide content in the atmosphere from 2020.
International Labour Organisation (ILO) Agreements and Conventions on Occupational Safety and Health and Social Responsibility			
Convention No 29 "On Forced Labour" (1930)	30 August 1997	13 July 1992	Abolition of the use of forced or compulsory labour in all its forms.
Protocol of 2014 to the Convention "On Forced Labour" (1930)	25 June 2019	16 September 2020	The main purpose of the 2014 Protocol is to put an end to forced labour, to take effective measures to prevent and end its use, to provide protection and access to adequate and effective remedies for its victims.

International conventions and treaties	Ratification by the Republic of Uzbekistan	Entry into force in the Republic of Uzbekistan	Main objectives
Convention No 87 "On Freedom of Association and Protection of the Right to Organise" (1948)	25 October 2016	12 December 2017	The right to freedom of association means not only the freedom to join existing associations, but also to create new ones. Trade unions have the right to develop, without interference, the organisation's charter.
Convention No 98 "On the Application of the Principles of the Right to Organise and Collective Bargaining" (1949)	30 August 1997	13 July 1992	Protection of workers' rights to ensure that the freedom of association in the workplace is not impaired. This protection shall apply in particular to acts which have the purpose of conditioning the recruitment or retention of a worker on the condition that he or she does not join a trade union or withdraws from a trade union.
Convention No 100, ”On Equal Remuneration for Men and Women Workers for Work of Equal Value” (1951)	30 August 1997	13 July 1992	"Equal remuneration for men and women for work of equal value" refers to remuneration rates determined without discrimination on the basis of sex.
Convention No 105 "On the Abolition of Forced Labour" (1957)	30 August 1997	15 December 1997	Taking all necessary measures to ensure that compulsory or forced labour does not lead to slavery-like conditions.
Convention No 111 "On Discrimination (Employment and Occupation) Convention (1958)	30 August 1997	13 July 1992	Any distinction, exclusion or preference made on the basis of race, colour, sex, religion, political opinion, national origin or social origin which has the effect of nullifying or impairing equality of opportunity or treatment in employment or occupation.
Convention No 138 "On Minimum Age for Admission to Employment" (1973)	4 April 2008	6 March 2010	The minimum age for admission to any type of employment or other work which, by its nature or the circumstances in which it is carried out, is likely to be harmful to the health, safety or morals of a young person shall not be less than eighteen years.
Convention No 182 "On Prohibition and Immediate Action for the Elimination of the Worst Forms of Child Labour" (1999)	8 April 2008	24 June 2009	Eradicate and prevent the worst forms of child labour.

International conventions and treaties	Ratification by the Republic of Uzbekistan	Entry into force in the Republic of Uzbekistan	Main objectives
Convention No 47 " On concerning the Reduction of Hours of Work to Forty a Week" (1935)	6 May 1995	13 July 1992	The principle of a forty-hour working week, applied in a way that does not result in a lower standard of living for workers.
Convention No 52 "On Annual Holidays with Pay" (1936)	6 May 1995	13 July 1992	Every person to whom this Convention applies shall be entitled, after one year's continuous service, to annual leave with pay.
Convention No 103 "On Maternity Protection" (revised in 1952)	6 May 1995	25 September 1996	The purpose of this convention is to protect the rights of women and children.
Convention No 122 "On Employment Policy" (1964)	6 May 1995	13 July 1992	Stimulating economic growth and development, raising living standards, meeting labour needs and eliminating unemployment.
Convention No 135 "On the Protection of the Rights of Workers' Representatives in the Undertaking". (1971)	30 August 1997	15 December 1997	Adoption of proposals to protect the rights of employee representatives in the enterprise and the opportunities available to them.
Convention No 154 "On the promotion of collective bargaining" (1981)	30 August 1997	15 December 1997	Facilitation of negotiations that take place between an employer, a group of employers or one or more employers' organisations on the one hand, and one or more workers' organisations on the other.
Convention No 144 "On Tripartite Consultation for the Promotion of International Labour Standards" (1976)	4 March 2019	13 August 2020	Ensure effective consultation between government, business and labour representatives on International Labour Organisation activities.

Table 2.2.2 resents the interstate agreements of Central Asian countries in the field of environmental protection and nature management, to which Uzbekistan is a party and the provisions of which are applicable to the CRC project.

Table 2.2.2 List of International Agreements and Conventions ratified by the Republic of Uzbekistan and whose requirements are applicable to the CRC project (as of January 2022.)

No	Name of agreement	Uzbekistan	Tajikistan	Kazakhstan	Kyrgyzstan	Turkmenistan
1.	**Agreement between the Governments of the CIS member states on cooperation in the field of ecology and environmental protection**	+	+	+	+	+

No	Name of agreement	Uzbekistan	Tajikistan	Kazakhstan	Kyrgyzstan	Turkmenistan
2.	**Agreement on cooperation in joint management of use and protection of water resources of interstate sources**	+	+	+	+	+
3.	**Agreement on cooperation in the field of hydrometeorology**	+	+	+	+	–

2.3 Requirements of international financial institutions

2.3.1 General overview

The most comprehensive environmental and social requirements for investment projects are addressed in the following documents of Global Lending Agencies (hereinafter - GLAs):

- Equator Principles"[2];
- World Bank's Environmental and Social Framework [3];
- European Bank for Reconstruction and Development Environmental and Social Policy and EBRD Performance requirements [4];
- Common approaches to assessing the environmental and social impacts of export credits with government support of the Organisation for Economic Co-operation and Development (OECD)[5];
- IFC Performance Standards and IFC Environmental, Health and Safety Guidelines, including the General Guidelines and applicable Industry Sector Guidelines [6].

The "Equator Principles" are ten environmental and social standards that must be met when a project is financed by the relevant financing institution and the proponent of the proposed activity:

1. Analysis and classification
2. Environmental and social assessment
3. Applicable environmental and social standards
4. Social and Environmental Management System and Action Plan
5. Stakeholder engagement
6. Grievance redress mechanism
7. Independent analysis
8. Obligations

[2] https://equator-principles.com/about/

[3] https://projects.vsemirnyjbank.org/ru/projects-operations/environmental-and-social-framework

[4] https://www.ebrd.com/news/publications/policies/environmental-and-social-policy-esp.html

[5] https://www.oecd.org/trade/topics/export-credits/environmental-and-social-due-diligence/

[6] https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/policies-standards/ehs-guidelines/ehsguidelines

9. Independent monitoring and reporting
10. Reporting and transparency.

Selected comments on the "Equator Principles":

- Principle 1 provides for the categorisation of an investment project by its potential impact according to the IFC classification (see below for details).
- Principles 1-6 set out the requirements for an ESIA.
- Principle 2 requires a climate impact assessment and categorisation of the project using the Task Force on Climate-Related Financial Disclosures (TCFD) approach);
- Principle 4 requires disclosure of information on the climate impacts of proposed activities, biodiversity and potential impacts on it.

The World Bank's Environmental and Social Framework include:

- Vision for Sustainable Development, reflecting the Bank's focus on environmental and social sustainability;
- the World Bank’s Environmental and Social Policy for Investment Project Financing (IPF), which sets out the requirements that apply to the Bank;
- Environmental and Social Standards (ESS), which set out the requirements that apply to Borrowers.

The EBRD's investment activities are guided by the bank's Environmental and Social Policy, updated in 2019.

Projects financed by the EBRD must comply with ten environmental and social sustainability requirements (PR):

- PR 1 - Assessment and Management of Environmental and Social Risks and Impacts;
- PR 2 - Labour and Working Conditions;
- PR 3 - Resource Efficiency and Pollution Prevention and Control;
- PR 4 - Health, Safety and Security;
- PR 5 - Land Acquisition, Restrictions on Land Use and Involuntary Resettlement;
- PR 6 - Biodiversity Conservation and Sustainable Management of Living Natural Resources;
- PR 7 - Indigenous Peoples;
- PR 8 - Cultural Heritage;
- PR 9 - Financial Intermediaries;
- PR 10 - Information Disclosure and Stakeholder Engagement.

Export Credit Agencies (hereinafter, ECAs) of the member states of the **Organisation for Economic Cooperation and Development** (hereinafter, OECD) are guided by the OECD Recommendation of the Council on Common Approaches for Officially Supported Export Credits and Environmental and Social Due Diligence (2016).

The document contains the requirements to be applied by ECAs for screening, classification, social and environmental assessment of projects, as well as reporting and monitoring requirements.

2.3.2 IFC requirements

International Finance Corporation is a member of the World Bank Group. IFC is a recognised leader in the implementation of environmental and social sustainability requirements for investment projects.

The IFC's long-term activity in dozens of countries around the world, and the active involvement of the expert community, has resulted in a comprehensive set of effective mechanisms, including:

- Corporate policies for environmental and social sustainability;
- Performance Standards and Guidelines for their application;
- General and sectoral Environmental, Health and Safety Guidelines;
- Recommendations for assessing cumulative impacts.

The incorporation and implementation of IFC mechanisms in proposed activities will ensure that proposed activities meet the highest requirements for environmental and social sustainability.

Obviously, this fact is likely to have been the basis for the lending institutions' choice of IFC requirements when undertaking the ESIA of the CRC project. The IFC requirements taken into account during the ESIA of the CRC project will be discussed in more detail below (see Section 2.4).

2.3.2.1 IFC Performance Standards

In 2012, the IFC prepared an updated Environmental and Social Sustainability Policy and related Performance Standards (hereinafter referred to as PSs):

- PS-1: Assessment and Management of Environmental and Social Risks and Impacts;
- PS-2: Labour and Working Conditions;
- PS-3: Resource Efficiency and Pollution Prevention;
- PS-4: Community Health, Safety, and Security;
- PS-5: Land Acquisition and Involuntary Resettlement;
- PS-6: Biodiversity Conservation and Sustainable Management of Living Natural Resources;
- PS-7: Indigenous Peoples;
- PS-8: Cultural Heritage.

PS-1 sets out the following requirements:

- Establishment of baseline policies to implement and maintain the ability to comply with the laws and regulations stipulated in the host country and to achieve the project's environmental and social objectives;
- Establishment of processes to identify recurring risks and impacts in order to account for the impact of changes in the project during the life cycle of the project under consideration;
- Establishment of management mechanisms to address/minimise risks and impacts;
- Maintenance of organisational capacity and competence;
- Establishment of appropriate emergency preparedness and response mechanisms;

- Establishment of processes for ongoing interaction/communication with stakeholders;
- Establishment of processes for monitoring and analysis of environmental and social performance as a condition for continuous improvement of the project.

PS-2 uses the provisions of international conventions under ILO and UN auspices:

- Establish, maintain and improve relations between workers and management personnel;
- Promote fair relations, without discrimination and equal opportunities for workers;
- Ensure compliance with national labour and employment laws;
- Protect workers' rights by addressing the problem of child and forced labour;
- Create safe and healthy working conditions;
- Protecting and preventing the health of staff.
  - PS-3 focuses on the prevention or minimisation of adverse effects on the environment and the human habitat:
- Avoidance and/or minimisation of adverse effects on humans and the environment by eliminating or minimising pollution related to the proposed activity;
- Rational use of resources;
- Reduction of greenhouse gas emissions related to the proposed activity.

PS-4 aims to eliminate and/or minimise risks and impacts on public health, safety and security. Specific requirements apply to vulnerable groups.

PS-5 addresses impacts associated with land acquisition and restrictions on land use during project implementation (including involuntary resettlement). The standard considers both physical (resettlement) and economic displacement (loss of income sources). This standard is important in evaluating access road and transmission line construction decisions.

PS-6 deals with biodiversity conservation, using the requirements of the relevant international convention. It is important for the CRC project that habitats are considered by the Standard to be modified, natural and or critical habitats.

PS-7 considers indigenous peoples (IPs) as social groups, often belonging to marginalised and/or vulnerable segments of the population. IPs' economic, social and legal status limits the protection of their rights, especially those related to land and/or natural resource management.

PS-8 is dedicated to cultural heritage and its protection with respect to the requirements of the Convention for the Protection of the World Cultural and Natural Heritage Sites. This standard is important in considering access road and transmission line construction decisions.

Section 2.5 in Table 2.5.1 provides an overview of IFC requirements taken into account during the ESIA.

2.3.2.2 *IFC Environmental, Health and Safety Guidelines*

In order to effectively implement the provisions of the IFC PSs, a number of guidance documents (Guidelines) have been prepared to ensure that the standards are applied in the assessment of proposed activities.

Table 2.3.1 provides a brief overview of the IFC guidelines that can be used as part of the CRC project's ESIA.

Table 2.3.1 Overview of IFC guidelines that are appropriate to use as part of the CRC project's ESIA

No	Name	Brief description	Link
1.	General Guidelines on Environment, Health and Safety (hereinafter referred to as EHS Guidelines)	Document containing examples of good international industry practice of a general nature. The Guidelines set out performance levels and parameters that are generally considered achievable in newly commissioned facilities. Application of the Guidelines to existing facilities may require the development of specific targets for each facility and an appropriate timetable for achieving them.	https://www.ifc.org/wps/wcm/connect/be37221a-fc47-4379-b539-eca3fe72c3e6/General%2BEHS%2B-%2BRussian%2B-%2BFinal_.pdf?MOD=AJPERES&CVID=jqeI79F
2.	Environmental, Health, and Safety Guidelines Industry sector guidelines	Comments on the implementation of the IFC PSs.	https://www.ifc.org/wps/wcm/connect/377bfe12-a3c0-433f-a5e3-c51dbebe38d4/SectorSpecificEHSGuidelines_Applicability.pdf?MOD=AJPERES&CVID=lakafE1
3.	Environmental, Health, and Safety Guidelines for Integrated Steel Mills	International good practice document for metallurgical industries. Applicable by virtue of the sectoral affiliation of the CRC (UMK).	https://www.ifc.org/wps/wcm/connect/941b0a8c-64a2-49a7-ba1c-16a2026635ac/Integrated%2BSteel%2BMills%2B-%2BRussian%2B-%2BFinal.pdf?MOD=AJPERES&CVID=jkD2Bji
4.	Environmental, Health and Safety Guidelines for Water and Sanitation Systems	International good practice document for metallurgical industries. Applicable as UMK abstracts and discharges water using surface water bodies.	https://www.ifc.org/wps/wcm/connect/eedfad60-8972-494c-8f95-34ec51291b5f/Water_and_Sanitation%2B-%2BRussian%2B-%2BFinal_.pdf?MOD=AJPERES&CVID=jqevNNE
5.	Environmental, Health and Safety Guidelines for Electric Power Transmission and Distribution	International good practice document for electricity transmission and distribution networks. Applicable, as the company is planning to build a transmission line classified as an electricity distribution network.	https://www.ifc.org/wps/wcm/connect/47b11c82-bf10-42d9-a941-345eb92aa507/Electric%2BPower%2BTransmission%2B%26%2BDistribution%2B-%2BRussian%2B-%2BFinal.pdf?MOD=AJPERES&CVID=jkC-H1u
6.	Environmental, Health and Safety Guidelines for Waste Management Facilities	International Good Practice Document for Waste Management Enterprises. Applicable as the company manages multi-tonnage waste and has its own waste disposal facilities.	https://www.ifc.org/wps/wcm/connect/b5dffaae-94f7-45a9-a8d0-5274ec005c1e/Waste%2BManagement%2BFacilities%2B-%2BRussian%2B-%2BFinal.pdf?MOD=AJPERES&CVID=jqeDdG4

No	Name	Brief description	Link
7.	Good Practice Handbook on "Cumulative Impact Assessment and Management: Guidance for the Private Sector in Emerging Markets "	The document includes a description of a cumulative impact identification and assessment approach for the design and implementation of cumulative impact management measures. Applicable as part of the ESIA for the CRC project to assess cumulative impacts.	https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/publications/publications_handbook_cumulativeimpactassessment

2.3.2.3 Categorisation of proposed activities

- Depending on the characteristics of the project and recipients, the scale and nature of the potential impacts, the proposed activity can be categorized into one of the four categories required by the IFC:

- A – Business activities with potential significant adverse environmental or social risks and/or impacts that are diverse, irreversible, or unprecedented.
- B – Business activities with potential limited adverse environmental or social risks and/or impacts that are few in number, generally site-specific, largely reversible, and readily addressed through mitigation measures.
- C – Business activities with minimal or no adverse environmental or social risks and/or impacts.
- FI – Business activities involving investments in financial institutions (FIs) or through delivery mechanisms involving financial intermediation.
  - ERM, which conducted an environmental and social audit of UMK in September-November 2020, determined that the CRC project falls under Category A in accordance with the Equator Principles and OECD Council Recommendations.
  - As a result of the ESIA, it was determined that the CRC project falls under Category A according to IFC requirements:
- The project is potentially associated with significant adverse impacts on the environment and social conditions, some of the impacts are irreversible;
- The area of influence of the CRC project includes areas adjacent to UMK;
- Project implementation will require the implementation of various measures to prevent and/or minimise adverse environmental and social impacts.
  - The Consultant's experience in the environmental assessment of such operations indicates that the impacts of proposed activities are controllable through the use of environmental/social management and monitoring measures.

2.4 UMK Requirements

Table 2.4.1 provides an overview of the Client's requirements contained in the Terms of Reference to the ESIA Contract and taken into account during this stage of work.

Table 2.4.1 Requirements of UMK contained in the Terms of Reference to the ESIA Contract for the CRC project

IFC Performance Standard, requirements of the Terms of Reference
PS-1: Assessment and Management of Environmental and Social Risks and Impacts
Justify the zone of influence of the project, taking into account all objects and aspects/impacts
Consider GHG emissions during the operation phase
Perform an assessment of physical climate risks and transition risks
Assess project-related health risks to local communities
Evaluate baseline conditions and impacts on groundwater and soils during the construction and operation phases of the CRC
Assess baseline conditions and impacts on biodiversity during the construction and operation phases of the transmission line and access road
Consider the risks and impacts associated with the placement of construction personnel involved in the construction of project facilities
Consider social impacts, including evidence on the health of the population living near UMK
Conduct an assessment of the risks and impacts associated with an increase in vehicular traffic

IFC Performance Standard, requirements of the Terms of Reference
Consider potential impacts on local transportation infrastructure; impacts associated with the presence of shift (temporary) personnel
Consider impacts on ecosystem services (Dalverzin Channel and Syrdarya River)
Consider risks and impacts associated with the main supply chain
Evaluate noise and vibration impacts during the construction and operation phases of the CRC, including an assessment of the impact of delivery of construction materials, equipment and waste through the settlements, as well as the impact of the construction camp
Evaluate waste generation during the construction and operation phases of the CRC (including an assessment of the adequacy of existing slag dumps)
Identify all relevant stakeholders to the project. Develop a Stakeholder Engagement Plan (SEP) that meets IFC requirements. Consult affected communities at the earliest opportunity. Develop a grievance mechanism for external stakeholders
Develop a procedure for monitoring the environmental and social performance of the project
PS-2: Labour and Working Conditions
Identify and assess the social risks associated with the project supply chain
PS-3: Resource Efficiency and Pollution Prevention
Evaluate the risks associated with temporary placement and processing of slag (sufficiency of space at the existing dumps, sufficiency of capacity of slag processing plants, options for selling slag). According to the assessment results, propose more effective solutions for slag handling and storage. Consider the expediency of allocating an additional site for slag disposal and equipping it appropriately for soil and groundwater protection (if necessary)
Determine waste management measures for the construction camp
Prepare a water balance of UMK to develop and implement additional measures to save water consumption (taking into account CRC)
Suggest measures to save water resources
Evaluate the effectiveness of existing wastewater treatment facilities in terms of the use of modern technology
Consider the need to install separate wastewater treatment facilities for the CRC
Evaluate wastewater during the construction stage of the project
Conduct an assessment of existing or potential liabilities caused by environmental pollution from current or historical business operations
Calculate direct and indirect greenhouse gas emissions from the project
Identify lower greenhouse gas emission alternatives
Evaluate the climate impact of the project (assessment of Scope 1-3 emissions)
PS-4: Community Health, Safety, and Security
Assess risks and impacts associated with increased vehicular traffic and transportation of hazardous substances and materials; potential impacts on local transportation infrastructure; impacts associated with the presence of shift workers
PS-5: Land Acquisition and Involuntary Resettlement
Risks and impacts associated with land acquisition and economic displacement in connection with the construction of power lines and roads
Consider planned measures to compensate affected communities and individuals
S-6: Biodiversity Conservation and Sustainable Management of Living Natural Resources
Provide for a biodiversity baseline study and biodiversity impact assessment along the power line and access road, as well as in the area of wastewater discharge from the project facilities
PS-8: Cultural Heritage
Consider the risks and impacts associated with the potential presence of cultural heritage sites along power line routes and the access road

2.5 Requirements of the State Committee for Ecology and Environmental Protection of the Republic of Uzbekistan

A positive conclusion of the State Environmental Expert review was obtained on materials of the CRC draft EIS in 2020.

The conclusion No 01-01/10-08-1245 dated 26.08.2020 includes the following environmental conditions of the planned activity implementation.

1. Develop materials of the Statement of Environmental Consequences (SEC), in which to present environmental standards for maximum permissible emissions of pollutants into the atmosphere, waste generation and disposal, maximum permissible discharges

of pollutants with wastewater into surface water, municipal and environmental standards for wastewater discharge into sewers with subsequent submission of SEC materials for state environmental expert review.

2. In the materials of SEC, along with the developed environmental standards to set out the program of conducting environmental monitoring in the area of the facility in accordance with the requirements of RCM of the RUz from 05.09.2019 No 737 "On improvement of environmental monitoring system in the Republic of Uzbekistan".

3. Provide an act of inspection of the enterprise by an inspector of the Department of Ecology and Environmental Protection of Tashkent region on the implementation of environmental protection measures stipulated by the draft EIS and the conclusion of the expert review in the materials of the SEC.

4. Take into account that in accordance with the Presidential Decree of the RUz No 5863 from 30.10.2019. "On approval of the Environmental Protection Concept of the Republic of Uzbekistan until 2030", a moratorium on cutting down valuable species of trees and shrubs until 31.12.2020, as well as equipping sources of pollutant emissions with dust and gas collecting installations with an efficiency of not less than 99.5%.

3 ESIA METHODOLOGY

3.1 Methodology substantiation

Environmental and social impacts are any potential or actual changes in the physical, natural or cultural environment including impacts on local communities and employees caused by the proposed activity [1].

In accordance with the CRC ESIA Agreement, the assessment will be based on [1, 2] and other applicable recommendations of the IFC.

The ESIA process includes:

- Determination of the scope of investigations;
- Identification of stakeholders;
- Disclosure of information and consultations;
- Assessment of alternatives and consideration of realistic options;
- Identification and evaluation of significance of potential impacts;
- Development of impact prevention, avoidance and compensation measures;
- Substantiation of management and monitoring solutions;
- Assessment of cumulative and residual impacts.

The ESIA provides for engagement of stakeholders, including participation of organisations related to the proposed activity.

Materials listed in Section 1.3 were used as input data to determine the scope of investigations.

This section will then describe in more detail methodology of specific activities of the ESIA process.

3.2 ESIA scoping

Determining the composition and the scope of the ESIA work is one of the main tasks of the scoping stage. For this purpose, the following activities were completed during the scoping stage:

- identification of applicable national and other requirements applicable to the ESIA (the requirements were updated during the main stage of investigations; see Section 2 of this report);
- analysis of documentation about the planned activities, including the search and justification of similar facilities;
- reconnaissance survey of the site and area of the planned activities;
- collection, generalization and evaluation of available information about the natural, technogenic social and economic conditions existing at the projected activity area;
- identification of the sensitive (vulnerable) recipients of impact;
- identification of stakeholders, including initiation of interaction with their representatives;
- preliminary identification of the planned activity impacts;

As a result of these activities:

- the necessary data that were missing at the beginning of the work within the phase have been collected;
- the zone of impact has been pre-determined;
- the task for the ESIA has been prepared, the composition and content of the ESIA materials have been determined;
- A draft plan of interaction with stakeholders has been developed.

Gaps in input data were eliminated by using alternative sources of information where possible (e.g. use of publicly available data, data of specialised organisations, data from similar facilities).

Following subsequent baseline studies and at the beginning of the main ESIA stage, a package of input data was created, which was sufficient for the ESIA.

3.3 Baseline assessment

The assessment of the current situation involves fixing the initial (current) state of the components of the natural environment and socio-economic conditions within the boundaries of the zone of potential impact of the planned activities as required by IFC PS1.

This assessment was initiated at the scoping stage and was continued during the main ESIA phase.

As was noted above, gaps in the initial data were eliminated by using alternative sources of information and following baseline studies.

The assessment of the baseline condition of the natural environment and socio-economic conditions within the area of potential influence of the proposed activities is given in this report (Book 2, 128-0948-ESIA-PE-2, Sections 6, 7).

3.4 Identification and assessment of impacts

Identification and evaluation of significance of impacts include:

- impact forecast;
- the actual evaluation of significance of the impacts (for more information, see below);
- analysis of residual impacts.

During the main ESIA stage, impact and/or consequence prevention, avoidance and compensation measures were substantiated. Effectiveness of these measures is determined by the level of residual impacts in terms of their acceptability or value for recipients.

The assessment process continued until an acceptable level of residual impacts has been achieved.

3.4.1 Identification of impacts

The main methods used to identify the impacts on the natural and social environment of the area of the planned activities:

- analysis of specialised study materials, engineering survey results, urban planning and/or other territorial planning documentation, environmental monitoring data;
- analysis of decisions on planned activities and associated projects, subject to the stages of the life cycle (construction, operation, decommissioning);

- consultations with stakeholders;
- identification of impacts as a result of the analysis of the chain "source – path – recipient"[7].

Subsequently, when evaluating significance of impacts, attention is given to identification of recipients and determination their sensitivity to potential impacts (see Item 3.4.4.).

3.4.2 Life cycle stages

With regard to the environmental components and socio-economic conditions, potential impacts and their significance are established for each of the stages of the life cycle of the planned activities.

The following stages of the life cycle are considered in the ESIA:

- construction;
- operation;

Decommissioning of the CRC is not considered, because the preservation of the needs for the complex's products is assumed for a conditionally unlimited period, the forecast of impacts beyond which becomes impractical due to high uncertainty of results.

Given imminent commissioning of the associated facilities (motor road and power transmission line), projection and assessment of impacts for the construction stage of these facilities were not performed.

3.4.3 Impact characteristics

The impacts of the planned activities are classified based on their characteristics, which ultimately pre-determine the management and control capabilities. In Table 3.4.1, the characteristics of impacts adopted for the purposes of this ESIA are given.

Table 3.4.1 Characteristics of impacts

Indicator	Definition	Characteristic
Nature	Positive	Impacts associated with positive changes (consequences) for recipients
	Adverse	Impacts associated with adverse changes (consequences) for recipients
Genesis	Direct	Impacts associated to the direct interaction of the planned activities and recipients
	Indirect	Impacts not associated to the direct interaction of the planned activities and recipients
Mechanism	Cumulative	Impacts of the planned activities, the significance or consequences of which for recipients may increase as a result of impacts not related to the planned activities, but typical for the territory under consideration and/or recipients

3.4.4 Evaluation of significance of impacts

ESIA used a methodical approach enabling an analysis of potential impacts and based on several indicators (Table 3.4.2):

- extent;

[7] As per the ESIA Terms of Reference.

- duration;
- reversibility.

Table 3.4.2 Impact assessment indicators

Indicators	Values	Characteristics
Extent	On-site	The impact is localised within the boundaries of the facility site, the environmental buffer zone, and/or part of the area of the planned activities in the immediate vicinity of the facility (part of the catchment area)
	Local	The impact is localised within the area of the planned activities (administrative district, municipality) or the catchment area of a large watercourse
	Regional	The impact is localised within several districts or catchment areas of large watercourses
	Transboundary	An impact affecting recipients beyond State borders
Duration	Short-term	Impacts related to short-term or irregular events
	Mid-term	Impacts are limited to the phases of construction, operation
	Long-term	Impacts are typical for the stages of construction, operation, there are residual impacts
Reversibility	Reversible	Restoration of the recipient's original condition or as a result of corrective/compensatory measures and/or self-restoration
	Irreversible	Impacts that cause permanent changes in the recipient

As state above, the boundaries of UMK's industrial site almost fully overlap the border with Tajikistan.

UMK's unique location means any impact, even one that does not create significant consequences for the environmental and local communities, is very likely to be trans-boundary. At the same time, such trans-boundary impact will have a local or even an on-site extent (see Table 3.4.2).

Therefore, when magnitude of an impact is assessed, it cannot be automatically assumed that a trans-boundary impact would have significant adverse effects (see Table 3.4.3).

Table 3.4.3 Impact magnitude

Impact	Criteria
Minor	The impact does not affect the recipients' indicators, their values are comparable to background levels, the functions and processes inherent in the recipient are not disturbed, the changes are within the limits of natural variability
Low	Changes that can be recorded by generally applicable monitoring methods, while the changes do not affect significant functions of ecosystems or communities Spread: on-site or local Duration: short-term, medium-term or long-term Reversibility: reversible
Medium	Impacts that can lead to changes in ecosystems or in the way and quality of life of communities, but without their transformation, loss (full or partial) of their natural functions Spread: local or regional Duration: med-term or long-term Reversibility: reversible or irreversible
High	Impacts associated with the transformation of ecosystems and/or the loss of their functions, the transformation of the quality of life of communities Spread: regional Duration: med-term or long-term Reversibility: reversible or irreversible

The significance of the impact is determined by its magnitude and the sensitivity of the recipient. The sensitivity of a recipient to impacts depends on its resilience to changes (the

ability to restore and/or to maintain the significant functions) and the recipient's value/uniqueness.

Table 3.4.4 Sensitivity of recipients

Value of a recipient	Resiliency of a recipient	
	Resilient	Not resilient
Not significant	Minor	Low
Significant	Medium	High

In Table 3.4.5 the classification features of the impacts are presented, which make it possible to evaluate their significance.

Table 3.4.5 Impact significance evaluation matrix

Magnitude (degree) of the impact	Sensitivity of a recipient			
	Minor	**Low**	**Medium**	**High**
Minor	Negligible	Negligible	Negligible	Negligible /low
Low	Negligible	Low	Low/Moderate	Moderate
Medium	Negligible	Low/Moderate	Moderate	High
High	Low	Moderate	High	High

The evaluation of significance of impacts is also carried out taking into account the implementation of measures to prevent and/or minimise the negative impacts and/or their consequences.

At the final stage of the assessment, this algorithm is used to assess residual impacts, which take into account measures to anticipate and avoid, or where avoidance is not possible, minimise and compensate/offset for risks and impacts.

3.5 Recommendations

Evaluation of impact significance creates a platform to develop measures to prevent / minimise impacts and to monitor effectiveness of such measures.

Substantiation of the measures is based on the hierarchy proposed in IFC PS 1:

- Avoidance;
- Minimisation;
- Restoration of affected components or ecosystems or communities (if applicable);
- Compensation to affected components or ecosystems or communities (if applicable);
- Offset[8] (if applicable).

The ESIA gave special attention to impacts with high significance. However, measures were proposed for other impacts, too.

3.6 Cumulative impacts

Cumulative impacts are impacts generally recognised as important on the basis of scientific concerns and/or concerns from affected communities.

Requirements and approaches to assessment of cumulative impacts are given in several IFC documents:

- PS 1 [1];

[8] Typically used for biodiversity preservation measures.

- Guidance Notes [2], key provisions of GN37-GN43:
  - GN37. Multiple environmental and social impacts from existing projects, combined with the potential incremental impacts resulting from proposed and/or anticipated future projects may result in significant cumulative impacts
  - GN38. Where the project involves specifically identified physical elements, aspects and facilities that are likely to generate impacts, the risks and impacts identification process should include an assessment of the combined effects of the multiple components associated with the project. In situations where multiple projects occur in, or are planned for, the same geographic area, it may also be appropriate for the client to conduct a Cumulative Impact Assessment (CIA).
  - GN39. Cumulative impacts are those that result from the incremental impact of the project when added to other existing, planned and reasonably predictable future projects and developments.
  - GN40. The critical element of a CIA is to determine how large an area around the project should be assessed, what an appropriate period of time is, and how to practically assess the complex interactions among different projects occurring at different times. A CIA is fundamentally similar to an ESIA and, therefore often relies on established ESIA practices.
  - GN41. Paragraph 8 of Performance Standard 1 requires that, where the project to be financed involves specifically identified physical elements, aspects and facilities that are likely to generate impacts, the risks and impacts identification process by the client identifies and assesses cumulative impacts from further planned development of the project and other project-related developments, any existing project or condition whose impacts may be exacerbated by the project. The assessment should be commensurate with the incremental contribution, source, extent, and severity of the cumulative impacts anticipated, and be limited to only those impacts generally recognised as important on the basis of scientific concerns and/or concerns from affected communities. Potential impacts that would occur without the project or independently of the project should not be considered.
  - GN42. The client’s baseline study should identify any relevant condition associated with existing projects that could be exacerbated by the project to be financed and could lead to cumulative impacts. In terms of anticipated future projects, priority should be given to assessing cumulative impacts stemming from the project being considered for financing, such as further planned developments associated with the project and other future developments of the same type in the project's area of influence that are realistically defined at the time of the assessment.
  - GN43. Where appropriate, the client should use commercially reasonable efforts to engage relevant government authorities, other developers, affected communities, and, where appropriate, other relevant stakeholders, in the assessment, design, and implementation of coordinated mitigation measure to manage the potential cumulative impacts resulting from multiple projects in the same project’s area of influence.
- Good Practice Handbook on Cumulative Impact Assessment and Management: Guidance for the Private Sector in Emerging Markets [3].

For this project, a rapid cumulative impact assessment (RCIA) was used, which is described in [3].

A cumulative impact assessment requires:

- Forecast of combined (cumulative) impacts of the project and other activities / projects, and natural conditions including assessment of sustainability of Valued Environmental and Social Components (VECs);
- Substantiation of measures to rule out significant risks for VECs.

The RCIA provides for the following process [3]:

- Scoping Phase I – VECs, Spatial and Temporal Boundaries;
- Scoping Phase II – Other Activities and Environmental Drivers
- Establishment of information on Baseline Status of VECs
- Assessment of cumulative Impacts on VECs
- Assessment of significance of Predicted Cumulative Impacts
- Management of Cumulative Impacts.

It should be noted that the CIA was performed from a quality perspective; however, this assessment is based on measurable indicators of impacts and/or environmental characteristics, which were determined through special studies.

The ESIA covered VECs, which are important for an assessment of consequences resulting from cumulative impacts.

The environmental and social impacts typical for the project area were considered from their significance perspective, i.e. an assessment was performed for the recipients for which the Project is believed to be a source of significant impacts.

The spatial boundaries of the investigations included areas, on which activities impact VECs simultaneously with impacts from the Project.

IFC PS 1 requires that ongoing, proposed or reasonably expected activities not directly related to the Project should also be covered.

For temporal boundaries, the RCIA recommends using life cycle stages of the CRC project.

Further clarification of the assessment scope aimed to identify historical, current or proposed activities and/or environmental parameters typical for the area in questions and potentially associated with impacts on VECs.

Information about environmental and social conditions in the project area is based on baseline studies, data from open sources and/or information provided by authorised bodies.

The CIA itself includes the following:

- Identification of VECs and evaluation of their sustainability to impacts;
- Identification of external activities including environmental factors potentially affecting VECs.

The impact significance evaluation followed the approach described above in Section 3.4.

Management of cumulative impacts was based on the hierarchy of measures described in Section 3.5 (avoid – minimise – restore – compensate).

General, a CIA does not create the need for specific or unique prevention and/or mitigation measures. However, the Consultant did not rule out the necessary of considering additional measures to be discussed with stakeholders (businesses, local administrations and environmental authorities).

3.7 Presentation of results

Results of the impact assessment are presented in line with the matrix given in Table 3.7.1

The matrix is completed for each recipient for each stage of the project's life cycle. It consists of two parts: the first part evaluates sensitivity of the recipient, while the second part characterises the impact.

The impact assessment a priori assumes that recommended prevention, mitigation and compensation measures will be implemented (if such measures are developed).

The last line of the matrix characterises residual impacts, i.e. it assesses the impacts that can be anticipated after implementation of all measures recommended by this investigation.

References

1. Performance Standards on Environmental and Social Sustainability. IFC, 2012.
2. Guidance Notes: Performance Standards on Environmental and Social Sustainability. IFC, 2012.
3. Good Practice Handbook on "Cumulative Impact Assessment and Management: Guidance for the Private Sector in Emerging Markets". IFC, 2013.

Table 3.7.1 Matrix for assessing impact significance (to be completed for each stage of the project's life cycle)

Life cycle stage: *specify*

Recipient: *specify*

Part 1. Recipient's sensitivity: specify (several recipients can be indicated)

Significance	**Sustainability**	
	Sustainable	Not sustainable
Not significant	Minor	Low
Significant	Medium	High

Part 2. Characterisation of the impact (for every recipient, if applicable)

Impact	Specify		**Nature**	**Genesis**	**Mechanism**
			Positive / adverse	Direct / indirect	Cumulative (mark if applicable)
Primary impact	**Extent**	**Duration**	**Reversibility**	**Magnitude**	**Significance**
	Site Local Regional Transboundary	Short-term Medium-term Long-term	Reversible Irreversible	Negligible Low Medium Large	Negligible Low Medium Large
Consequences	• … • …				
Measures	• … • …				
Residual impact	**Extent**	**Duration**	**Reversibility**	**Magnitude**	**Significance**
	Site Local Regional Transboundary	Short-term Medium-term Long-term	Reversible Irreversible	Negligible Low Medium Large	Negligible Low Medium Large

4 DESCRIPTION OF THE PROPOSED ACTIVITIES

4.1 Historical background and current activities

Uzmetkombinat is a leading ferrous metallurgy company in Central Asia.

UMK is located in the eastern part of the city of Bekabad in Uzbekistan's Tashkent Region. It borders Tajikistan from the north-east, east and south-east. Residential areas are located to the west, north-west and south-west of the industrial site, and the minimum distance to residential housing is 50 m. 250 m to the south-west from the site runs the river Syrdarya (Figure 4.1.1).

Total acreage of UMK site is 322.5 ha (based on updated information).

The main stages of the development of Uzmetkombinat JSC are presented in Table 4.1.1.

Table 4.1.1 UMK development stages

Year	Commissioning of facilities	Note
1944	Open hearth shop	On March 5, 1944 , the first Uzbek steel was smelted
1946	Section Rolling Shop 1 (SRS-1)	
1962	Steel continuous-casting machine	With increase in the capacity of steel ladles
1974	Consumer goods shop (CGS)	
1978	Electric steelmaking shop (ESMS);	As part of three ASMF-100NZA with a capacity of 100 tonnes with 63 MVA transformers, three four-strand radial CCMs with a section of 320 by 250 mm
1984	Section Rolling Shop 2 (SRS-2);	
2002	ESMS (upgrade)	Replacement of ASMF-100NZA for ASMF-100UMK with a complex steel processing unit with a capacity of up to 550 ktpa
2004	Slag waste processing shop (SWPS)	Organised for processing of own dumps of UMK
2006	Non-ferrous metals shop (NFMS)	Full technological cycle of manufacture of tapes and strips made of copper and its alloys with a design capacity of 4 ktpa
2007	Steel-wire workshop (SWWS);	Reorganised from a steel-wire section
2008	ESMS (upgrade)	Replacement of the furnace transformer ASMF-100UMK with an increase in productivity by 100 ktpa and bringing the capacity of the ESMS to 950 thousand tonnes / year, reconstruction of the gas cleaning device ASMF-100UMK
2013	ESMS (upgrade)	Reconstruction of CCM No. 3 with an increase in productivity from 370 ktpa to 850 ktpa
2014	Thermal insulation materials shop (TIMS)	
2014	Open-hearth shop decommissioned	Due to low profitability and high costs of raw materials and energy resources
2018	Ferroalloy shop (FAS)	In accordance with the Decree of the Government of the Republic of Uzbekistan No. PP-3468 RU of 09.01.2018.
2019	Manufacture of steel wire rod at the mill 300 SRS-2	In accordance with the Decree of the Government of the Republic of Uzbekistan No. PP-3468 RU of 09.01.2018.

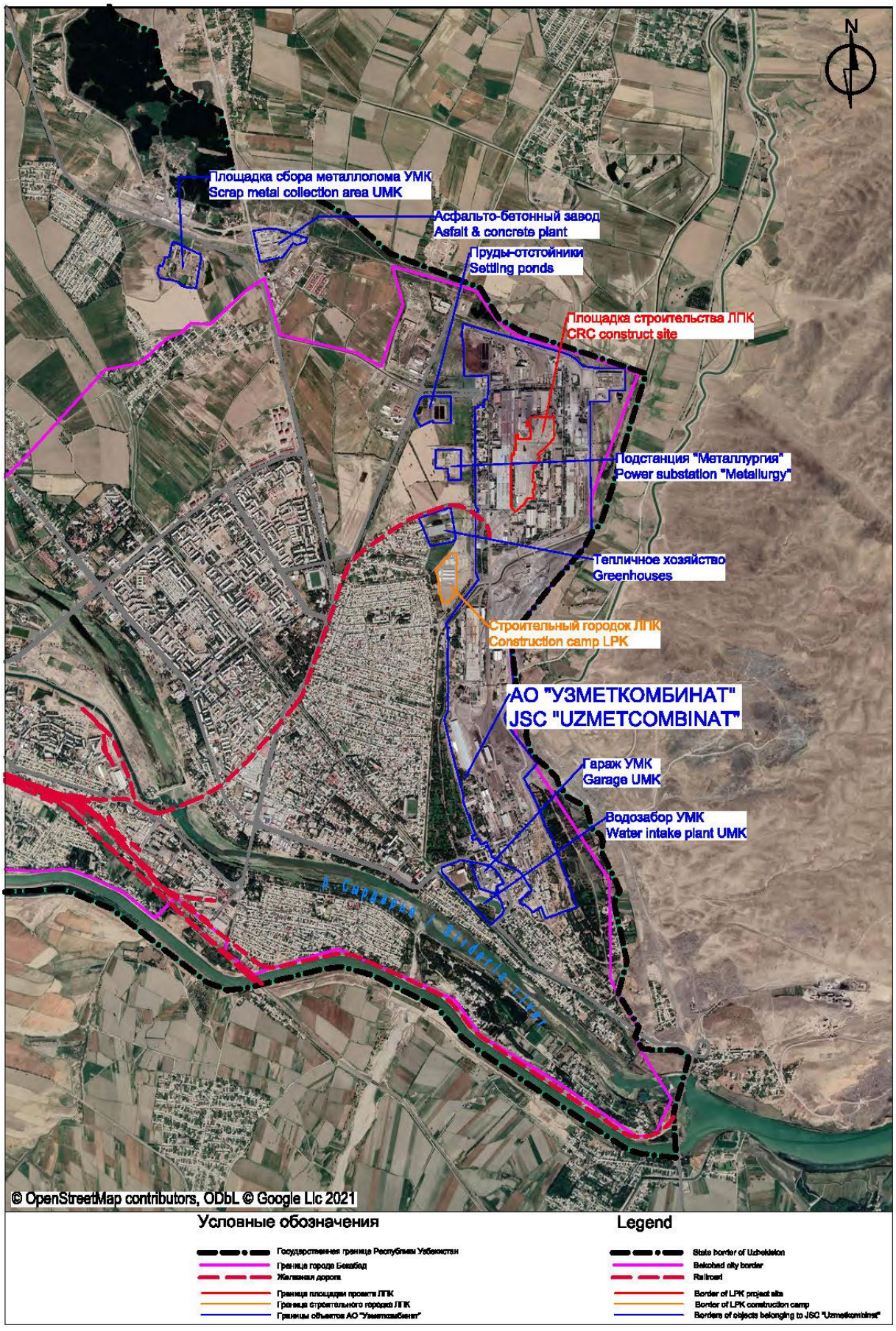


Figure 4.1.1 UMK and adjacent facilities

Below is the composition of current production facilities at UMK based on the latest organisational chart[9].

Production facilities

1. Electric steelmaking shop
2. Section Rolling Shop 1
3. Section Rolling Shop 2
4. Drop hammer shop
5. Shop for consumer products
6. Shop for non-ferrous metals
7. Shop for thermal insulation materials
8. Steel-wire shop
9. Ferroalloy shop

Facilities under construction

1. Casting and Rolling Complex.

Auxiliary facilities

1. Metallurgical equipment repair workshop
2. Casting shop
3. Mechanical workshop
4. Steelwork shop
5. Electrical repair workshop
6. Energy repair workshop
7. Energy shop
8. Grid and substation shop
9. Oxygen compressor shop
10. Electrotechnical laboratory
11. Central automation and mechanisation laboratory
12. Railway shop
13. Motor vehicle shop
14. Slag dump processing shop
15. In-house paramilitary security
16. Construction and assembly department
17. Laboratory for automated systems
18. Angren area
19. Materials supply shop
20. Mining complex
21. Department of capital construction, construction and assembly works
22. Quality control, standardisation and certification functions:
22.1. Quality control and compliance function
22.2. Non-destructive testing laboratory
22.3. Pyrotechnical control function
22.4. Central laboratory
23. Technical support and communications functions
23.1. Communications and process dispatch function
23.2. Instrumentation and automation function
23.3. Metrological function
23.4. Engineering and technical function.

[9] The list includes business units within the legal structure of UMK.

Other business units

Other organisations

Foreign organisations

Blank shop (branches of Uzmetkombinat JSC).

Currently, along with the rolling of ferrous metals, the main products marketable on the domestic and foreign markets, other products are also produced at UMK.

In Table 4.1.2 the information about the product range is presented.

Table 4.1.2 Range of products manufactured at UMK

Item No.	Product name	
1.	Rolled ferrous metal products	Steel balls
2.		Fittings
3.		Circle
4.		Square
5.		Strip
6.		Angle bars
7.		Channel bar
8.		Hexagon
9.		Ferrous alloys
10.		Wire rod
11.		Wire
12.	Metal items	Welding electrodes
13.		Hardware (nails, bolts, nuts, wire mesh)
14.		Enamelled tableware
15.	Copper and copper alloy mill products	Foil and tape, copper, brass
16.		Brass strips
17.		Radiator strips - copper and brass
18.		Copper and copper alloys of general purpose for the electrical industry, construction purposes
19.	Non-metallurgical products	Basalt-based thermal insulation materials (slabs, mats, rolls)
20.		Welding fluxes
21.		Iron cinder
22.		Steelmaking slag
23.		Gaseous nitrogen, argon, oxygen
24.		Liquid technical oxygen

Table 4.1.3 (prepared on the basis of the company's certificate provided as part of the Proposed waste generation and disposal limits for Uzmetkombinat JSC by ECOLAB-AUDIT LLC, 2020) presents information on the main production indicators of UMK for 2018-2020.

Table 4.1.3 Main output indicators of UMK

Item No.	Product name	UoM	2018, actual	2019, actual	2030
1.	Steel	Tonnes	911.197	950.137	943.805
2.	Ferroalloys FeSi; FeSiMn	Tonnes	3916	17183	25001
3.	Ready rolled products	Tonnes	1060666	1067774	1010000
4.	including				
5.	Rolled sections	Tonnes	815520	866717	806456
6.	Steel grinding balls	Tonnes	235159	188125	158000
7.	Steel wire	Tonnes	9987	10584	9457

Item No.	Product name	UoM	2018, actual	2019, actual	2030
8.	Iron rod (5.5-16.0 mm)	Tonnes	-	2348	9087
9.	Steel enamelled tableware	thousand sums	52889389	45477841	75864000
10.	Heat insulation materials	Tonnes	7390	12192	10000

4.2 CRC Project

4.2.1 Process solutions and human resources

In order to increase the capacity of UMK and expand the range of products, it is planned to create a CRC comprising of the following areas:

- ASMF-120;
- UPK;
- UVS;
- Gas cleaning system;
- Thin slab CCM;
- Tunnel-type furnace;
- Hot rolling mill;
- Water treatment plant.

CRC is an integrated production complex consisting of an ESMS, a continuous steel casting section (hereinafter – CSCS) and one rolling mill operating in a single process flow.

The capacity of the new ESMS will be 1,093 ktpa of liquid steel. The total volume of steel produced by UMK after its expansion will amount to 1940 ktpa.

It is planned that a steel carrier can transfer the liquid steel in the amount of ~358 thousand tonnes/year from the ESMS under construction to the existing ESMS for continuous casting, for the manufacture of rolled sections in the amount of 341 thousand tonnes/ year at the existing rolling mill.

The output of finished rolled products at the CRC will amount to 1040 ktpa, including:

- 540 ktpa of hot-rolled coils intended for the manufacture of thin cold-rolled (c/r) sheet at another enterprise;
- 400 ktpa – for domestic market;
- 100 ktpa – for export.

Danieli & C. Officine Meccaniche SPA, an Italian Company, was approved as the metallurgical equipment supplier for the designed Casting and Rolling Centre (CRC)

No fundamental changes are envisaged in the melting process, out-of-furnace processing and casting of steel in comparison with the existing electric steelmaking shop of UMK, except for the planned increase in the production program.

The hot-rolled strip production process includes the following working operations:

- cutting of a thin continuously cast slab using shears (as part of a continuous casting machine);
- input of the cut slab into the through tunnel furnace, where it is heated to the rolling temperature;

- hydraulic descaling of the thin slab surface with high-pressure water after heating in a roller furnace;
- slab rolling in five stands of a continuous group to the final strip thickness;
- control of the strip parameters at the exit from the group of stands using a measuring device;
- cooling of the strip by a laminar system on the discharge roller table to the required coiling temperature;
- strip coiling on a downcoiler;
- strapping, weighing, marking and delivery of coils to the warehouse of finished products using a coil removing conveyor with walking beams and electric overhead cranes;
- strip inspection and sampling on the inspection line, manual coil banding and its transfer to the warehouse for cooling;
- cooling of hot-rolled coils in the warehouse;
- shipment of finished products to consumers by rail and road.

After production of hot-rolled steel sheets, a thin slab passes along a roller table equipped with side guides, through a gas cutting machine and a descaling device. It then reaches the mill, where it is rolled to the desired predetermined thickness. The mill consists of five stands. The finishing rolling stands have a four-roll design, i.e. they are equipped with two work rolls and two back-up rolls.

The slab thickness at the entrance to the mill is 50-60 mm, the width is 800-1,300 mm. The thickness range of the obtained strip is 1.6-12.7 mm. This is followed by transfer of rolled steel to the coiler for metal coiling, then air cooling and packaging are carried out.

A roller hearth furnace will operate as part of the casting and rolling unit, representing a kinematic and process connecting link between CCM and the rolling mill.

The process flow diagrams of the ESMS and the CRC rolling production are presented in Figure 4.2.1 and Figure 4.2.2.

The sheet finishing section for the hot-rolled coils is designed for mechanical processing of hot-rolled coils, including:

- descaling with brush machines;
- longitudinal and transverse trimming of edges;
- gas cutting.

The area for maintenance and repair of mechanical equipment of the sheet-rolling production is designed to carry out relevant work using manual arc welding and gas cutting of carbon steel. The roll grinding workshop is intended for regrinding and repolishing of work and back-up rolls and other rollers used in the rolling production.

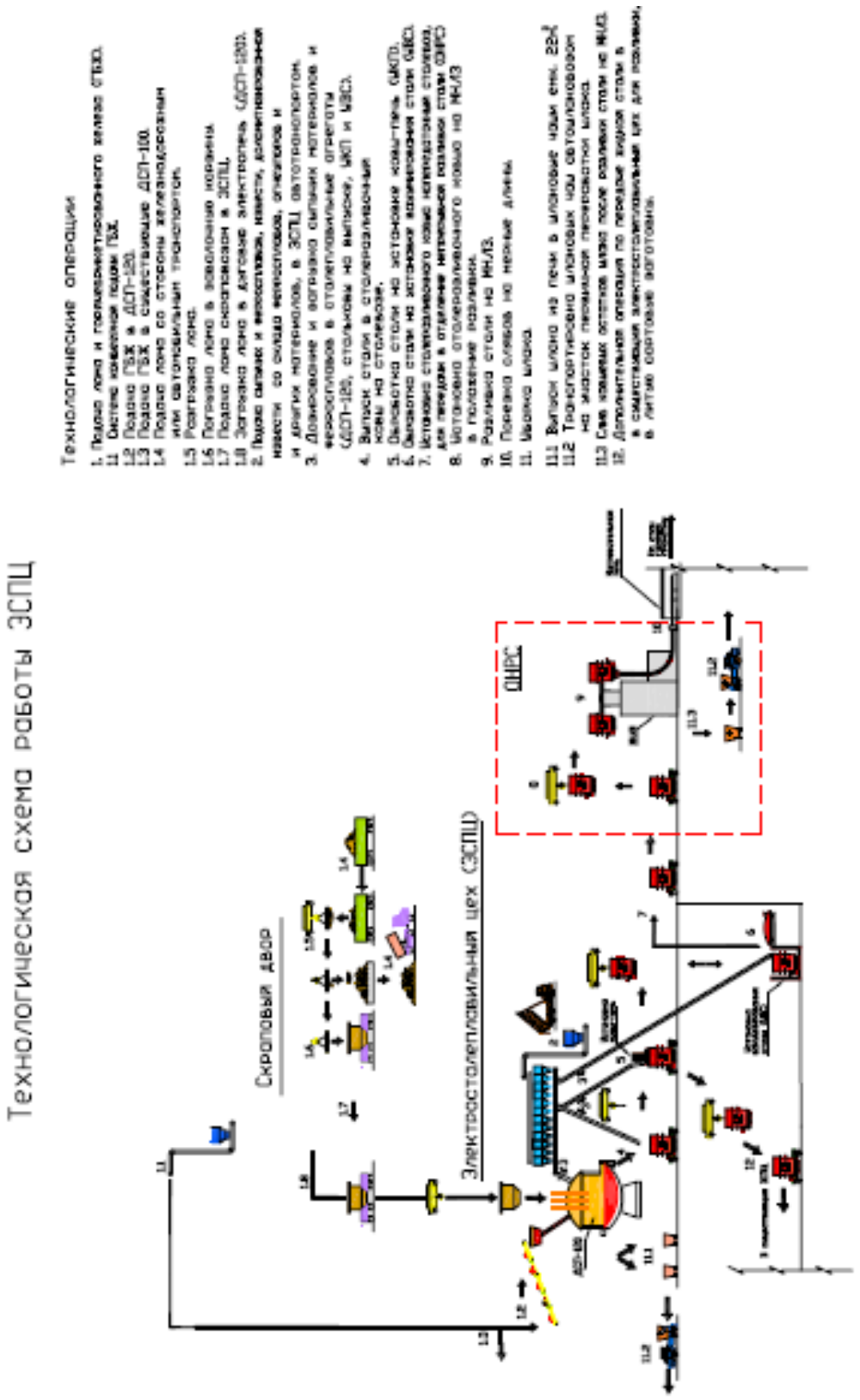


Figure 4.2.1 ESMS process flow diagram

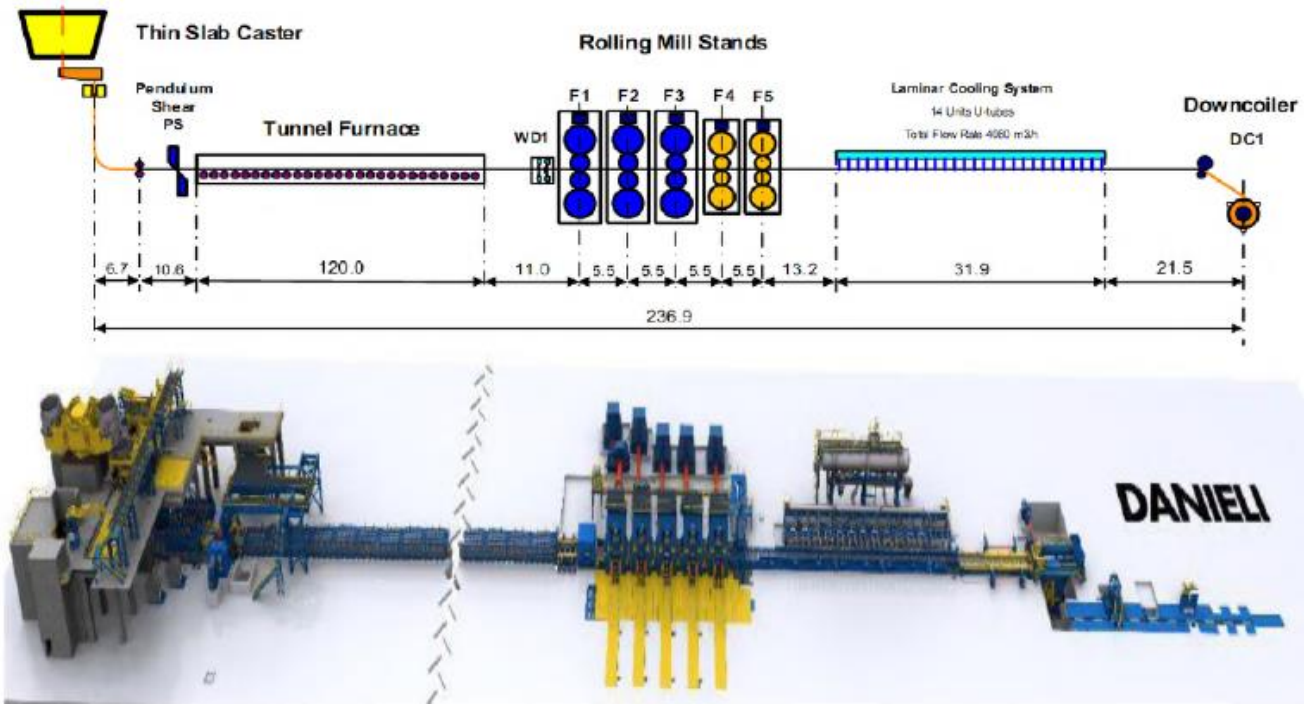


Figure 4.2.2 CRC rolling process

Appendix 4.2.1 presents an analysis of compliance of the main technical solutions developed by Danieli and adopted in the feasibility study [1] with the best available techniques.

Based on the combination of the considered technical characteristics of the CRC main (metallurgical) and auxiliary (water supply, wastewater treatment, concentration cycles) equipment, it may be concluded that the planned activity is mainly based on the best available techniques.

The CRC demand for labour resources will be 1253 people including 1091 blue-collar staff and 162 white-collar staff.

4.2.2 Land use

The construction of the CRC is planned on the industrial site of UMK, on a plot free from development with a total area of 32.85 ha.

Changes in the functional organisation of the territory and territorial separation of lands for the placement of CRC facilities are not required.

The needs of the CRC in transport and engineering services will be provided by UMK's existing and under-construction infrastructure.

4.2.3 Water supply

Water supply to the CRC is provided by connecting the designed networks to the existing water supply networks of UMK.

The source of domestic, drinking and industrial water supply of UMK is surface water intake No. 1 from the Dalverzin channel.

The industrial water supply of UMK is organised through the multiple use of recycled water in the water circulation systems of the enterprise (the local water circulation system of Rolling Mill 1, the combined water circulation system of the electric steelmaking shop and

Rolling Mill 2, as well as a number of the local systems used for water supply of 'clean' circulation cycles of steelmaking and rolling equipment - see also Section 4.2.4).

Fresh water from the water intake is used to feed the water circulation cycles of the plant.

Water from main water intake No. 1, which has undergone water treatment depending on the water consumption purposes, enters the drinking or industrial water storage reservoirs, from where it is supplied by the pumps of the 2nd stage pumping station to the domestic, drinking, industrial and fire water pipelines and transferred to water consumers. Water from artesian wells is used to feed the 'clean' circulation cycles.

To lower the groundwater level, UMK has a network of water lowering wells (36 wells) at the site. Underground water is partially used to make up for losses in the water balance of the plant; the rest of the volume is diverted to the Dalverzin channel.

The water supply to the CRC main industrial consumers is envisaged through commissioning of new water recycling systems.

The main characteristics of UMK's water consumption after CRC commissioning are presented in the water consumption and wastewater disposal balance of UMK (see 128-0948-ESIA-PE-2, Section 9.5).

The CRC production needs will be fully met through the use of underground (ground) water coming from water lowering well with an estimated flow rate of 80 l/s. Existing water intake No. 1 from the Dalverzin channel, as well as treated industrial and storm water runoffs of the enterprise (see 128-0948-ESIA-PE-2, Section 9.5) are considered as a backup source of water supply for the CRC.

The source of the CRC domestic and drinking water supply is water intake No. 1, the drinking water supply to the facility will be ensured by connecting to UMK domestic and drinking water pipeline; the planned increase in drinking water consumption during the CRC operation is 4.4% according to the presented characteristics of the water balance (see 128-0948-ESIA-PE-2, Section 9.5).

It is supposed to fill the CRC circulating systems with technical water from existing water intake No. 1. Its reserve capacity (30 thousand m3/day) provides the possibility of accumulating the necessary circulating water reserves in 7 days (see 128-0948-ESIA-PE-2, Section 9.5).

4.2.4 Wastewater disposal

The wastewater receiver of the designed CRC is the existing networks of UMK's industrial, storm water and domestic sewerage system.

The main characteristics of the plant's water disposal system, taking into account the prospect of the CRC commissioning, are presented in water consumption and wastewater disposal balance of UMK (see 128-0948-ESIA-PE-2, Section 9.5).

Industrial wastewater, together with surface (storm water) runoff from the territory of the plant after internal mechanical (industrial and storm water) treatment facilities, is discharged through one outlet with a capacity of up to 30.0 thousand m3/day (outlet No. 1) into the Syrdarya River.

Currently, the storm water runoffs are collected and disposed only from the part of the UMK site, located to the north of the Dalverzin channel; at the same time there is no storm sewer system in the part of the integrated iron-and-steel works' territory located to the south of the channel (including the territory of the slag disposal area), and no organised storm

water disposal is carried out. Proposals for wastewater disposal in the northern part of the UMK site are considered in 128-0948-ESIA-PE-2, Section 9.5.

The existing industrial and storm water treatment facilities are represented by two horizontal two-section settling tanks with a volume of 7,000 m3 each. To reduce the consumption volumes of natural water coming from water intake No. 1, a partial return of treated industrial and storm water is carried out for its reuse for the process needs (Figure…).

Water from lowering wells, not used for the needs of the enterprise, is diverted without treatment through three outlets No. 2 (up to 15%), No. 3 (up to 8%) and No. 4 (up to 12%) to the Dalverzin channel (see Section 4.2.3).

The process requirements for recycled water are met by additional treatment of return flows (after horizontal settling tanks) at the filtering and pumping station facilities located on the territory of UMK (mechanical filters loaded with quartz sand).

To treat water of 'dirty' circulating cycles (the local water circulation system of Rolling Mill 1, the combined water circulation system of the electric-furnace melting shop and Rolling Mill 2), horizontal settling tanks operate in the northern part of the UMK territory, separating recycled water and iron scale. Water from the settling tanks of circulating cycles does not enter the UMK general water disposal system. In order to ensure the temperature conditions in the circulating systems, the return circulating water is cooled in the cooling towers.

To cool the steel-melting and steel-rolling equipment (arc, heating and induction furnaces, steel continuous casting machines, etc.), the enterprise operates local 'clean' circulation cycles, water to which is supplied by 5 central pumping stations (CPS). The fan or spray cooling towers are used as a rule to ensure the temperature conditions of the cooling water of 'clean' circulation cycles.

According to the data of the energy survey of UMK conducted in 2015 and 2021, the existing water circulation systems of the enterprise are characterized by a high degree of wear.

It is not planned to discharge effluents into water bodies during the CRC operation, since the entire volume of drainage water (2522.88 thousand m3/year) is planned to be used for the process needs of the facility (make up for losses).

The entire volume of industrial and storm water can be used for the production needs of UMK by reducing withdrawal of technical water at water intake No. 1 from the Dalverzin channel (see 128-0948-ESIA-PE-2, Section 9.5).

Domestic wastewater from the facility is disposed to the city network, then to the treatment facilities of the city of Bekabad under contracts between UMK with Bekabad Suvakova, a wastewater treatment organisation.

A significant increase in the load on the city networks and the municipal wastewater treatment facilities during the period of the CRC operation is not predicted, since according to the presented characteristics of the balance of water consumption and water disposal the volume of domestic wastewater from the enterprise during this period will increase by only 4.4% (see 128-0948-ESIA-PE-2, Section 9.5).

4.2.5 Heat and power supply

Existing operations of UMK are supplied with heat and power by the energy shop, which includes 4 boiler houses that provide main and auxiliary production facilities with process steam, recovered heat from metallurgical units, hot water for domestic needs, softened water for technical needs, and also heating during the cold season.

According to the feasibility study of UkrGIPROMEZ, the heat consumption for the CRC heating in the maximum winter rated conditions will be 9.3 MW (8.0 Gcal/h). Taking into account hot water supply arrangements, the total heat consumption will be 9.9 MW (8.52 Gcal/h).

To meet the demand for heat, it is planned to build a hot water boiler house consisting of two hot water boilers with a thermal output of 4.65 MW (4.0 Gcal/h) each and one hot water boiler with a thermal output of 0.6 MW (0.52 Gcal/h), operating on natural gas.

It is planned to install modern boilers with an efficiency of ~ 94% from the leading manufacturers, supplied complete with burners, fittings, automation and security systems, control and management equipment, in a turnkey modular boiler house.

To provide for external power supply of at least 260 MW for the CRC, it is planned to build a 220 kV double-circuit overhead line with a power of 314 MW (power transmission line), a 220 kV outdoor switchgear from Syrdarya TPP to Metallurgia 220/110/10 kV substation and Pechnaya 220/35 kV substation with a length of 23 km.

The new power transmission line refers to the associated facilities (projects) of the CRC project. This project is currently at the final stage of implementation (power transmission towers have been installed, wires and other equipment are being installed).

4.2.6 Transport support

According to pre-design materials prepared as part of the feasibility study of UkrGIPROMEZ, the volume of external transportation by railway transport of the CRC will amount to 1986.521 thousand tonnes/year, including 1256.521 thousand tonnes/year of incoming goods and 730.00 thousand tonnes/year of outgoing goods.

The external transportation volume as a whole across UMK will increase significantly, the additional measures for external rail transport should be taken into account outside the feasibility study as a separate project.

The design decisions were considered and taken for the CRC facilities as part of the feasibility study, in the volume of the main indicators for the general plan and transport.

The access railway tracks are subject to reconstruction in order to ensure the safety margins of the buildings to the designed CRC facilities:

- the total length of the re-laid tracks is 1,500 m;
- the total length of the dismantled tracks is 900 m;

The reconstructed railway tracks serve for placing cars with charge materials to the scrap yard and the hot-briquetted iron warehouse.

In order to provide access roads to the designed CRC facilities for the process vehicles and fire trucks, the pre-design solutions envisage construction of motor roads and driveways with a total area of 53.750 thousand m², including: reinforced concrete ones with an area of 22.750 thousand m² and asphalt concrete ones with an area of 31.000 thousand m².

In order to improve efficiency of the logistics schemes within UMK taking into account future cargo traffics and to fully ensure the internal integrated complex conveys carried out by public and special vehicles, the materials of the feasibility study of UkrGIPROMEZ provide for purchase of 2 slag trucks, 1 cement truck for transporting coke, 2 dump trucks with a carrying capacity of 30 tons for transportation of cooled slag to the central processing plant and 1 dump truck with a carrying capacity of 15 tonnes for delivery of bulk materials.

A 1.2 km long motor road was built for development of the UMK transport service scheme. The new access road to UMK is one of the associated facilities (projects) of the CRC project.

4.2.7 Waste management

The analysis of process solutions specified in the Feasibility Study dated 2020 and EIS materials indicates that in the course of operation of CRC facilities, generation of 28 types of waste is anticipated.

According to the draft EIS, operation of the CRC is not expected to generate Hazard Class 1 waste, although four types Hazard Class 2 waste will be generated:

- Spent lubricants based on petroleum oils;
- Spent hydraulic mineral oils not containing halogens;
- Spent compressor mineral oils;
- Other spent mineral oils (petroleum products caught by water recirculation systems).

It is proposed that this waste will be transferred to specialised organisations for disposal.

It is expected that following commissioning of the CRC, waste generation will increase by almost 320 000 tpa, although the waste nomenclature will not change significantly.

A significant part of industrial waste (about 26% of the total amount) in terms of the nomenclature and generation volume will be disposed according to the existing processes through their re-usage in the processes at the plant.

Based on a preliminary assessment, additional amounts of steel slag generated by the CRC will not result in the need to expand the temporary slag storage area (provided the slag waste processing plan is implemented).

The remaining share of production waste (about 70% of the total amount) will be sold to specialized organisations for use as secondary raw materials or for neutralization in accordance with the contracts with UMK.

A small part of waste (less than 4%), unsuitable for recycling, will be removed and placed at a waste disposal area.

UMK has an agreement with Landfill 17 in Bekabad District for the disposal of solid domestic waste.

A decision to create an internal waste disposal facility for UMK will be made before commissioning of the CRC.

A detailed assessment of waste management practices is given in Report 128-0948-ESIA-PE-3, Section 9.4.

4.2.8 Sanitary Protection Zone

In accordance with the requirements of SanPiN 0350-17 'Sanitary norms and rules for protection of the atmospheric air in populated areas of the Republic of Uzbekistan', for the facilities that are sources of the atmospheric air pollution, a sanitary protection zone (SPZ) should be created, and its width is determined by the production facility class.

The SPZ size is determined, first of all, by the class of the enterprise according to the classification given in the indicated sanitary rules, according to which a metallurgical production belongs to category 1 of environmental impact and should have a SPZ size of 1,000 m (Sub-Item 1, Item 6.1.2. Metallurgical, machine-building and metalworking

enterprises). SPZ size sufficiency should be confirmed by calculations of the predicted levels of the atmospheric air chemical and acoustic pollution.

The proposed SPZ configuration for Uzmetkombinat was developed in 2022 taking into account the CRC commissioning. The SPZ document substantiated the decision to establish the SPZ as an integral zone, including the calculated zone of the atmospheric pollution and the noise discomfort zone.

The calculated SPZ size will be 45-289 m[10] in the northern direction, 7-273 m in the north-eastern direction, 9-19 m in the eastern direction, 14-18 m in the south-eastern direction, 0-342 m in the southern direction, 33-104 m in the south-western direction, 364-380 m in the western direction, and 163-627 m in the north-western direction.(Appendix 4.2.2).

The SPZ document will be sent for approval to authorised state sanitary and epidemiological supervision authorities in Q1 2022.

4.2.9 Emergency situations

The documentation [1, 2] considers the most likely emergency situations that can occur at the CRC.

The specifics of metallurgical production determine that the most likely accidents on the main process equipment, such as lining burn-outs, destruction of housings in case of failures of cooling systems of metallurgical units with the spillage of large volumes of molten metal and slag, are of high risk for maintenance personnel and property, but their impact, as a rule, does not extend beyond the workshop and is insignificant for public health and environmental components.

The processes that are carried out in the ESMS, SMS-1, SMS-2 and similar processes that are envisaged to be carried out on the process lines of the CRC are associated with the circulation of large volumes of metal heated to a high temperature, which causes a fire hazard in this production process.

Taking into account the constant presence of metal heated to temperatures exceeding the flash point of methane in the production buildings of the CRC, ignition is possible in case depressurization of gas equipment, and in case of untimely containment - the occurrence and development of a fire event.

The above scenarios of occurrence and development of emergency situations related to malfunctions on gas equipment have no specifics and are applicable to any facilities where natural gas is used.

It should be noted that accidents on equipment which use the natural gas as fuel are hazardous primarily for the personnel and property complex of the CRC. In case of successful containment (prevention of fire development), such an accident has no significant consequences for the components of the natural environment. In case of explosive destruction of gas equipment, only local (within the industrial site) thermal and mechanical impacts are possible.

In the event of a fire event proliferation, potential impacts on the environment, buildings and structures, the consequences and the measures taken to reduce them are of generic nature and do not have specific features typical for the CRC.

Based on operation of production facilities of similar designation, facilities where emergencies can be a source of increased environmental hazards include gas treatment equipment of aspiration systems.

[10]SPZ size is indicated from the border of the UMK site.

Sources

1. Technical report 'Construction of a casting and rolling complex. Feasibility study "Explanatory Note, SE "UkrGIPROMEZ", Dnepr, Ukraine, 2020.

2. Environmental impact statement (draft EIS) with regard to the reconstruction and expansion of Uzmetkombinat JSC production capacities as a result of the construction of a Casting and Rolling Complex (project adjustment) in Bekabad, Tashkent region, by EKOLAB AUDIT LLC, 2020.

4.3 Associated facilities (projects)

According to the definition given in IFC PS1, associated facilities refer to facilities that are not funded as part of the project and that would not have been constructed or expanded if the project did not exist and without which the project would not be viable.

Associated facilities (projects) of the CRC project are a new access road to UMK with a length of 1.2 km, and a power line with a length of 23 km.

A concrete-mortar unit, which is planned to be installed at UMK (Environmental Impact Statement for the installation of a concrete-mortar unit in Bekabad, Tashkent region. ECO-HAN-PROJECT, 2020) is a temporary structure. It will function during the construction of buildings and structures of the CRC, after which it will be dismantled. The unit is related to the activities of a contracting organisation and the main purpose of its creation is to reduce the cost of materials. According to the set of characteristics, the unit does not fully meet the above criteria of the IFC PS1 and is not considered as an associated facility in this paper.

The characteristics of the associated objects are presented in Table 4.3.1 Characteristics of associated facilities , the location of the facilities is presented in Figure 4.3.1.

Table 4.3.1 Characteristics of associated facilities

No. Item	Indicator	Characteristic
Motor road		
8. 1	Name	Construction of a 1.2 km motor road from the entrance to Bekabad to Uzmetkombinat
9. 2	Length, km	1.2 km
10. 3	Width of the roadbed	9.0 m
11. 4	The beginning of the road (border crossing)	4P20 "Korasuv - Buka - Bekabad "
12. 5	The end of the road (border crossing)	4K788 " Bekabad– Yangibazar "
13. 6	Areas where the right-of-way passes through the territory	Bekabad district
14. 7	Road class, type	II
15. 8	Structure of the roadbed	Asphalt concrete mix, grade II
16. 9	Project status	Commissioned
Power transmission line		
17. 1	Name	Metallurgy Line No. 5, 6
18. 2	Length, km	23 km
19. 3	ROW width	25 m from the end wire
20. 4	The beginning of the power transmission line (border crossing)	Syrdarya TPP
21. 5	The end of the power transmission line (border crossing)	Pechnaya substation, Metallurg substation
22. 6	Areas where the power transmission line	In Syrdarya region: Shirin town, Bayavutsky district

No. Item	Indicator	Characteristic
	right-of-way passes through the territory	In Tashkent region: Bekabad district, Bekabad town
23. 7	Power transmission line characteristics (power, availability of bird protection devices)	220 kV, wire AC 400/51 Transmittable power 314 MW The installation of bird protection devices is provided
24. 8	Information about the number of supports, decisions on the bases	114 supports, anchor bases
25. 9	Project status	Supports are almost fully installed, wires and other equipment are being installed

As of January 2022, associated facilities have been built and have already been commissioned (motor road) or are being prepared for commissioning (power transmission line): Figure 4.3.2; Figure 4.3.3.

Thus, with regard to the motor road and power line, the information reflecting the current status of the projects will be provided in the materials of the ESIA, and proposals will be prepared in the Action Plans, the implementation of which is possible subject to the current status of the projects (the construction phase has been completed).

Activities associated with the operation of the accommodation camp of the construction contractor (Renaissance Heavy Industries), delivery of construction materials, equipment and waste may impact the environment and residents of adjacent makhallas, and so necessary investigations were performed during the main stage of the ESIA process.

However, the construction contractor’s accommodation camp and delivery of construction materials, equipment and waste cannot be considered associated facilities / projects in the strict sense of this term (as the existence of the camp will be limited to the construction phase, while transportation of cargoes is not a facility or a project), and the ESIA covered social and environmental impacts / risks associated with the camp operations and transport services for UMK (see 128-0948-ESIA-PE-3, Sections 9 and 10).

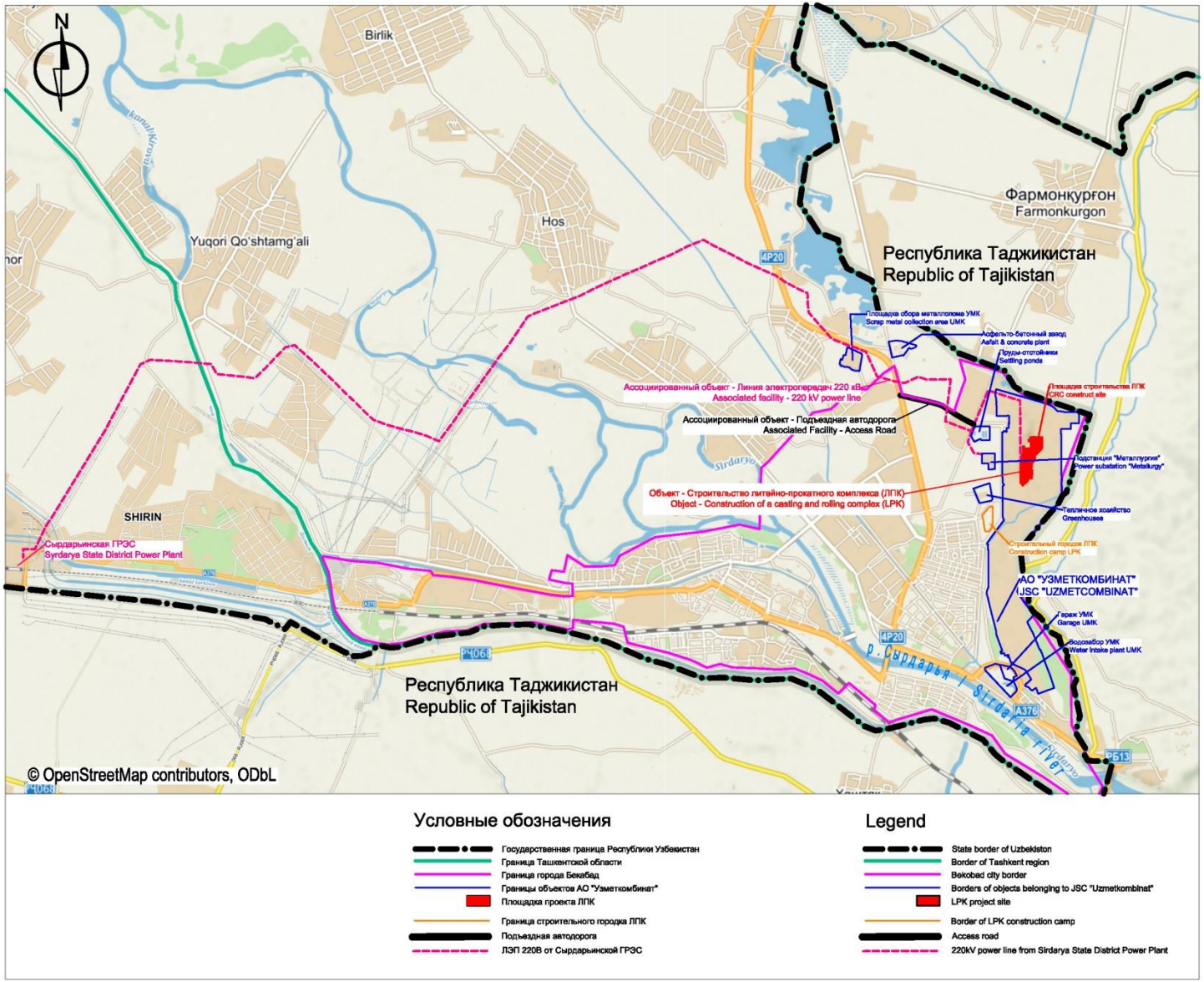


Figure 4.3.1 Associated facilities (projects)

Figure 4.3.2 The new motor road joining Buyuk Ilak Yuli Street (Bekabad)

Figure 4.3.3 Power line pylons at the point of connection to the Syrdarya TPP

4.4 Alternatives to proposed activities

4.4.1 Zero alternative

The zero alternative is a conventional name of a possible alternative associated with the rejection of the planned activity. When evaluating this alternative as required by IFC PS1, the following should be taken into account:

- Improving the competitiveness of the metallurgical industry of the Republic of Uzbekistan through the construction of new high-tech industries is a public priority for

sustainable development, the rejection of the planned activities is not economically justified.

- The CRC is designed for the manufacture of hot-rolled (h/r) steel sheet in rolls, the main part of which, within the project under consideration, will be used as a blank for the manufacture of cold-rolled (c/r) sheet metal at the facilities of the joint venture Tashkent Metallurgical Plant LLC. The rejection of the planned activities will indirectly lead to a revision of the development programs of other industries in the Republic of Uzbekistan.
- The site of the planned activity is located on the industrial site of UMK – a production area where it is possible to arrange new production facilities, while the use of existing areas on the UMK site for other purposes is impractical.
- The planned activities are inevitably associated with an increase in the man-caused load on the environment, however, the use of modern end-to-end technology that reduces specific emissions of pollutants into the atmospheric air due to the efficient use of heat generated by a continuous casting machine (hereinafter referred to as CCM) of the steel billet during its hot rolling is characterized by high environmental efficiency.
- The implementation of the concept will contribute to the socio-economic development of the region, the rejection of the investment plan means the non-use of the existing potential (resources, personnel).
- The availability of a package of permits for the activities currently being carried out and the practice of approval of the project documentation for new construction and reconstruction of sites of UMK confirm the existence of public preferences regarding the use of the industrial potential of the region.
- The condition for the permissibility of the planned activity is the development and implementation of design solutions that ensure the compliance with the principle of guaranteed non-exceeding of the permissible level of impact on the components of the natural environment and the population/personnel.

Taking into account the foregoing, the conclusion about the preference of the CRC construction and operation in comparison with the zero alternative was made already at the stage scoping stage (128-0948-SR), and so no detailed analysis of the zero alternative was performed.

4.4.2 CRC location

The analysis of the available information allows to assert that the arrangement of the CRC at UMK is optimal from the investment efficiency perspective.

The construction of the CRC on another (newly allocated) industrial site will be accompanied by:

- the need to obtain rights to new land plots – a site for the arrangement of CRC facilities and infrastructure facilities[11];
- significant withdrawal of land for the site and infrastructure - roads, utilities, etc.;
- additional negative impact on the environment of engineering and service facilities - since when arranging the CRC at UMK, the facilities of the Complex will be largely

[11] When placing the CRC on the UMK site, the land allotment is required only for associated facilities (motor way and power transmission lines).

serviced by existing UMK units, while the placement on a separate industrial site will require the creation of their own services, which will affect the efficiency of the use of resources, primarily of land ones;

- the need to organise a separate sanitary protection zone.

Thus, with all other things being equal, the alternative location of the planned facility is less preferable and a detailed comparison of the scenarios for the arrangement of the CRC site in the ESIA studies is impractical.

4.4.3 Process alternatives

During the development of the feasibility study, Ukrgipromez performed a comparison of technical and economic indicators of the manufacture of hot-rolled steel sheets in rolls in the following scenarios:

- Scenario 1 from Danieli & C. Officine Meccaniche S.P.A. (Italy): manufacture of hot rolled sheet metal in rolls at the QSPCOMPACT plant;
- Scenario 2 from SMS Group GmbH (Germany): manufacture of hot-rolled sheet metal in rolls in a new integrated CSP complex (CRC);
- Scenario 3 from Primetals Technologies Austria GmbH (Austria): manufacture of hot-rolled sheet metal in rolls in a continuous flow with a QUANTUM electric arc furnace.

A detailed comparative analysis of technological solutions, which made it possible to identify the advantages and disadvantages of the scenarios considered, is given in Appendix "G" of the feasibility study [1].

To provide the complex with metal charge, three scenarios for the operation of an arc steelmaking furnace (hereinafter referred to as ASMF) were considered in the feasibility study:

- Scenario 1- 100% in the charge of scrap metal;
- Scenario 2 – 50% in the charge of scrap metal and 50% hot-briquetted iron (hereinafter - HBI);
- Scenario 3 – 70% in the charge of scrap metal and 30% of HBI.

The use of a specific composition of the metal charge in the smelting of steel in the ASMF is determined depending on the grade composition of the steel and the availability of scrap metal at the plant.

The current situation with a shortage and high cost of scrap metal, deterioration of its quality (increased content of non-ferrous metals, decreased bulk density, etc.), as well as the need for additional processing and bringing to industrial use, and carrying out the charging process in several steps, negatively affects the technical and economic indicators of steel production (increased duration of melting, electricity consumption, refractories, charge materials).

Therefore, the process alternatives were fully considered, both in terms of the main equipment and in terms of the raw materials used, on the basis of which the conclusions presented below were made.

1. A comparative analysis of the technical and economic indicators of the technologies under consideration and the possibility of arranging the CRC equipment in the master plan of UMK confirmed the preference for building a complex using the technology and equipment supplied by Danieli, Italy.

2. Taking into account the range of sizes and quality requirements of the smelted steel, as well as the need to use original iron-containing raw materials, the smelting charge during steel smelting in ASMF is adopted according to scenario No. 2 (50% scrap metal and 50% HBI), which will provide:
   - the possibility for producing the "pure" steel of the required quality;
   - increasing the density of the metal charge;
   - reducing the number of charges and reducing the energy consumption.

4.4.4 Transport

The solutions covered by this subsection are not alternatives as such but reflect a possible approach to supply of transport services to UMK which may be implemented in the coming years.

Due to the CRC commissioning, the amount of external railway transportation in general for UMK will significantly increase.

According to the study of the processing capacity compliance of the terminals at the new logistics centre of Uzmetkombinat, it is planned to expand the railway infrastructure of UMK to meet the projected amounts of freight traffic (Tashkent Institute of Railway Engineers, 2020), by building the following:

- railway branches from the main running line, to the HBI warehouse with a length of up to 400 m;
- a railway branch to the scrap metal storage with a total length of up to 700 m;
- a railway branch to the finished products storage with a length of up to 700 m;
- an additional reception and departure line with a length of at least 650 m at station Zavodskaya;
- 6th overhead road and a railway track with a length of 1,200 m at station Prokatnaya to unload scrap;
- a new connecting track with a length of 140 m at station Zavodskaya to optimise railway throughput.

The following options were proposed to remove cooled slag:

- Scenario 1: expansion of the car fleet at station Severnaya to 30 railcars and construction of a railway track with a length of 250 m, adjacent to track No. 18;
- Scenario 2: removal of cooled slag by trucks. Two vehicles with the load capacity of 25÷30 tonnes will be required.

It is proposed to implement these activities within UMK site as a separate project. The timing of this project has not been defined as input data for its detailed environmental and social assessment is currently unavailable.

Currently, UMK’s railway transport impacts residential housing in makhallas crossed by a railway track that connect the external railway system with UMK’s railway facilities.

The Master Plan of Bekabad (2010) proposed relocation of the railway track from outside residential areas and construction of a southern bypass that would enter UMK from the south (Figure 4.4.1).

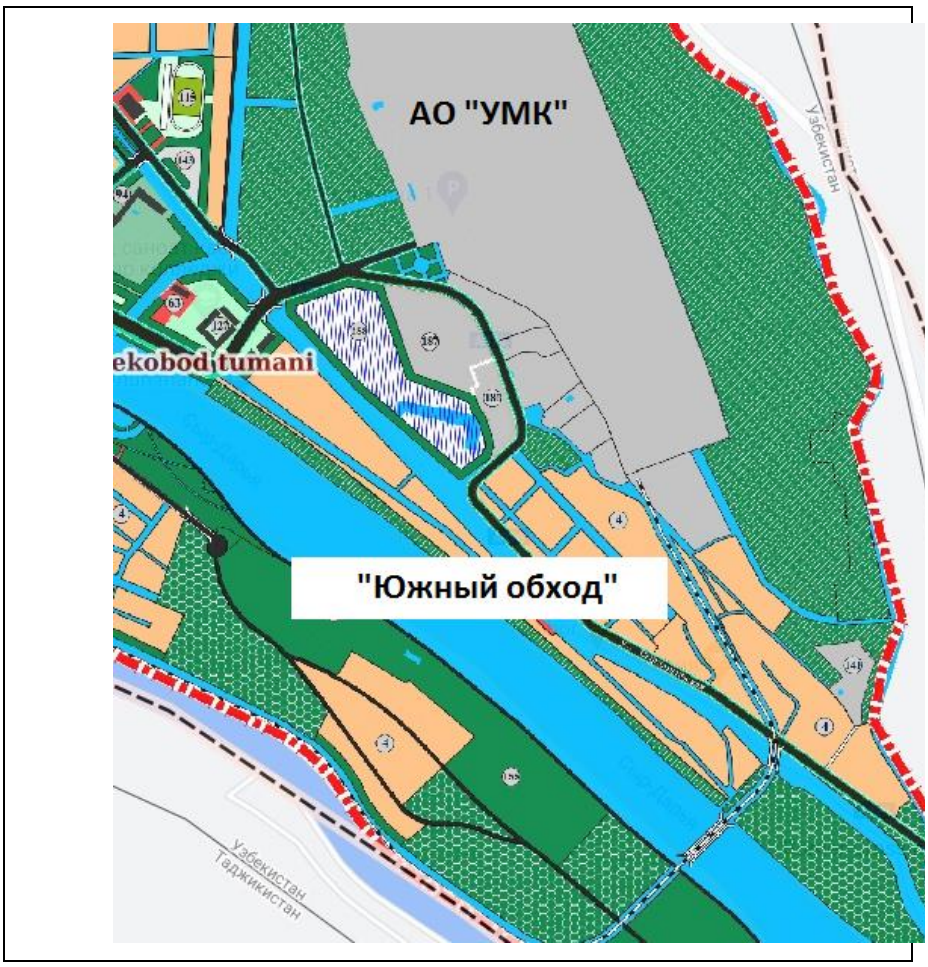


Figure 4.4.1 Proposed relocation of railway transport at UMK (Bekabad Master Plan, 2010 [12])

According to information obtained during interviews, UMK had in the past used exactly this arrangement, but the tracks were later dismantled due to demarcation of the border with Tajikistan.

It is obvious that restoration of the southern bypass will reduce the railway transport's impact on residential areas; however, the timing of this project has not been defined as input data for its detailed environmental and social assessment is currently unavailable.

4.5 Aspects and impacts of proposed activities

4.5.1 Environmental aspects and associated impacts

The scoping stage determined the following environmental components that can be affected by the Project:

- Lands
- Ambient air
- Soils
- Surface water
- Groundwater

[12] https://dshk.uz/uz/main?p=null&lat=41.77950486590359&lng=62.24853515625001&z=6&t=20

- Flora and wildlife.

Table 4.5.1 presents the environmental aspects of current operations of UMK and the CRC Project, which can affect environmental components, local communities and UMK employees, and which were analysed during ESIA investigations.

Table 4.5.1 Environmental aspects of the Project

Activity / process	Environmental aspects	Potential impacts	Recipients
Siting of project facilities	• Land withdrawal (actually withdrawn for the associated facilities (motor road and power transmission line)[13]	• Loss of habitats • Disturbance of soil cover	• Soils • Flora • Wildlife
Construction works (earth and civil works)	• Air emissions • Dewatering in workings • Generation of surface run-offs • Noise • Generation of waste	• Changes in land use structure • Changes in air quality • Changes in hydrological and hydrochemical regimes of surface and underground water • Changes in acoustic conditions • Indirect impacts on environmental components in the vicinity of waste disposal facilities	• Ambient air • Surface water • Groundwater • Soils • Flora • Wildlife • Communities • Employees
Main production activities (production of steel, rolled products and other metallurgical products)	• Air emissions • Generation of surface run-offs • Noise • Generation of waste	• Changes in air quality • GHG emissions / climate change • Changes in acoustic conditions • Indirect impacts on flora, wildlife and soils • Indirect impacts on environmental components in the vicinity of waste disposal facilities	• Ambient air • Surface water • Groundwater • Soils • Flora • Wildlife • Communities • Employees

[13] The associated facilities were constructed and were (road) or are being commissioned (power transmission line), and are not covered by the assessment.

Activity / process	Environmental aspects	Potential impacts	Recipients
Support of operations (repairs, water supply, wastewater disposal, dewatering, housekeeping)	• Air emissions • Abstraction of surface water • Dewatering • Generation of surface run-offs • Generation of process wastewater • Noise • Generation of waste	• Withdrawal of resources (groundwater) • Withdrawal of resources (abstraction of surface water) • Changes in natural regimes of groundwater • Changes in air quality • Changes in hydrological and hydrochemical regimes of surface and underground water • Changes in acoustic conditions • Indirect impacts on flora, wildlife and soils • Indirect impacts on environmental components in the vicinity of waste disposal facilities	• Ambient air • Surface water • Groundwater • Soils • Flora • Wildlife • Communities • Employees
Transport and logistics (delivery of materials, fuel, shipment of products, other transportation, storage of hazardous materials)	• Air emissions • Generation of surface run-offs • Noise • Generation of waste	• Changes in air quality • GHG emissions / climate change • Changes in acoustic conditions •	• Ambient air • Communities
Heat and power supply	• Air emissions • Generation of surface run-offs • Generation of process wastewater • Noise • Generation of waste	• Changes in air quality • GHG emissions / climate change • Changes in hydrochemical regime of surface water • Changes in acoustic conditions • Indirect impacts on environmental components in the vicinity of waste disposal facilities	• Ambient air • Surface water • Communities • Employees
Amenity services (including during construction phase)	• Generation of domestic wastewater • Generation of domestic waste and their equivalents (office, food waste etc.)	• Changes in hydrochemical regime of surface and underground water • Indirect impacts on environmental components in the vicinity of waste disposal facilities	• Surface water In the vicinity of waste disposal facilities: • Ambient air • Soils • Flora • Wildlife • Communities

4.5.2 Social aspects and associated impacts

The scoping stage determined the following social components that can be affected by the Project:

- Lands

- Local communities
- Employees
- Health & safety
- Labour market
- Labour and working conditions
- Cultural heritage.

Table 4.5.2 Social aspects of the Project presents the social aspects of current operations of UMK and the CRC Project, which can affect social components and which were analysed during ESIA investigations.

Table 4.5.2 Social aspects of the Project

Activity / process	Social aspects	Potential impacts	Recipients
Siting of project facilities	• Land withdrawal[14]	• Withdrawal of lands occupied by farms • Loss of perennial plantations • Loss of harvests • Loss of income	• Farmers / farms • Farm personnel
Construction works (earth and civil works)	• Land withdrawal • Community health and safety • Labour market • Labour and working conditions • Cultural heritage	• Changes in land use structure • Restriction of access to resources • Intensification of traffic • Training, employment • Inflow of workforce and accommodation camps • Disruption of public order • Child and forced labour • Impacts on community health and safety • Impacts on employee health and safety • Impacts on cultural heritage sites	• Farmers / farms • Farm personnel • Communities • Employees • Cultural heritage sites
Main production activities (production of steel, rolled products and other metallurgical products)	• Community health and safety • Labour market • Labour and working conditions	• Emergencies • Population's income from development of UMK • Training, employment • Impacts on community health and safety • Impacts on employee health and safety	• Communities • Employees

[14] Actual withdrawal took place in relation to implementation of associated projects (23 km power transmission line and a 1.2 km motor road). The associated facilities were constructed and were (road) or are being commissioned (power transmission line), and are not covered by the assessment

Activity / process	Social aspects	Potential impacts	Recipients
Support of operations (repairs, water supply, wastewater disposal, dewatering, housekeeping)	• Community health and safety • Labour and working conditions	• Withdrawal of resources (abstraction of surface water) • Intensification of traffic • Emergencies • Impacts on community health and safety • Impacts on employee health and safety	• Communities • Employees
Transport and logistics (delivery of materials, fuel, shipment of products, other transportation, storage of hazardous materials)	• Community health and safety • Labour and working conditions	• Intensification of traffic • Emergencies • Impacts on community health and safety • Impacts on employee health and safety	• Communities • Employees
Heat and power supply	• Community health and safety • Labour and working conditions	• Restriction of access to resources • Changes in acoustic conditions • Emergencies • Impacts on community health and safety • Impacts on employee health and safety	• Communities • Employees
Amenity services (including during construction phase)	• Community health and safety • Labour and working conditions	• Training, employment • Inflow of workforce and accommodation camps • Disruption of public order • Child and forced labour • Impacts on employee health and safety	• Communities • Employees

5 INFORMATION DISCLOSURE AND STAKEHOLDER ENGAGEMENT

This section reviews the disclosure, consultation and stakeholder engagement activities implemented as part of the ESIA process. It summarises the results of these activities and identifies actions planned for future phases of the project life cycle, as detailed in the Stakeholder Engagement Plan.

In particular, the section presents:

- Principles of Consultation;
- Consultation Requirements;
- Stakeholder Identification;
- Consultation Activities and Outcomes;
- Project Grievance Redress Mechanism.

5.1 Principles of Consultation

Early and ongoing consultation, disclosure and meaningful stakeholder engagement are key requirements for projects financed by International Lenders. The ESIA builds on the consultation activities included in the Stakeholder Engagement Plan (SEP) developed to guide stakeholder engagement and disclosure throughout the project life cycle.

The SEP is designed to guide public consultation and disclosure activities through to completion of the ESIA, at all stages of the project life cycle. It is a strategic document for planning meaningful and appropriate consultation with key stakeholders and will be periodically updated as the Project progresses. Stakeholders are defined as individuals and entities who have an interest in, are affected by, or may affect the outcome of the Project. The specific objectives of the SEP are to provide a consultation strategy for the Project to:

- Ensure that all legal and international requirements related to consultation are met.
- Involve the full range of stakeholders in Project planning to improve the design, implementation, and monitoring of Project activities.
- Encourage open dialogue with affected communities (ACs) in the Project areas.
- Inform all interested and affected parties about the progress of the Project.
- Provide a grievance mechanism so that ACs can file complaints and be assured that they will be appropriately addressed by the Project.

The SEP is based on the principles that interaction with the public must be free of external manipulation, interference, coercion, and intimidation and must be based on timely, relevant, understandable, and accessible information. Consultation activities should always be well planned and based on the principles of respectful and meaningful dialogue.

5.2 Consultation Requirements

5.2.1 Overview

This section provides an overview of the national and international disclosure, consultation and stakeholder engagement requirements applicable to the Project.

Client requirements require that the Project complies with the provisions of the IFC Environmental and Social Sustainability Policy, IFC PS requirements and international industry best practice with respect to information disclosure and stakeholder engagement.

These requirements have been taken into account in stakeholder engagement planning and form the basis of the Project's consultation process, as described below.

5.2.2 National Consultation Requirements

Public interaction and disclosure begins at the earliest stages of project planning and is regulated as part of the national Environmental Impact Assessment (EIA) procedure.

"Regulations on the procedure of public consultations on environmental impact assessment projects", (Appendix No 3, RCM of the Republic of Uzbekistan No 541 of 07.09.2020) regulates the procedure of public hearings on proposed, planned or existing activities related to high risk of environmental impact (hereinafter - I category) and medium risk of impact (hereinafter - II category.

A summary of the non-technical nature of the proposed, planned or existing economic activity shall be submitted to the public consultation, which shall include:

- Brief description of the activity;
- Review of variants of technological solutions and solutions for the sites of the planned activity;
- Brief assessment of the existing environmental and socio-economic conditions;
- Brief description of the sources and types of negative impacts on the environment associated with the project implementation;
- Forecast and assessment of possible changes in environmental and socio-economic conditions;
- Forecast and assessment of possible projected emergency situations;
- Measures to prevent, minimise and/or offset adverse impacts;
- Assessment of possible significant transboundary impacts (if applicable).

In addition, public consultations may be held on existing activities of categories I and II of impact in the case of legitimate complaints of individuals or legal entities.

Public consultations presuppose equal rights for all to express their reasoned opinion on the issue under discussion based on the study of documentary information relevant to the issue under discussion and not containing confidential information.

Participants in the public consultations are stakeholders, including:

- Non-governmental non-profit organisations;
- Citizens' self-governance bodies;
- Mass media.

Representatives of authorized bodies on ecology and environmental protection participate in public consultations as observers.

The organisers of public consultations are the district (city) khokimiyats.

The results of the public consultation shall be documented in the minutes of the public consultation, which shall be signed by the chairperson and the secretary.

One copy of the protocol within one working day is provided to the client, the second copy kept by the organiser of the public consultation.

Information about the conducted public consultation, with a copy of the minutes attached, is sent by the organiser of the public consultation for information to the territorial bodies of the State Committee for Ecology and Environmental Protection.

As a result of the public consultation, a decision on public support of the proposed or planned economic activity in the area under consideration or on refusal of public support of the proposed or planned economic activity in the area under consideration may be made.

A public consultation is considered legally competent only if at least ten representatives of interested parties participate in it.

Since the Client did not hold public consultations and hearings at the stage of developing the SEP, and considering that the existing approach to public consultations in Uzbekistan does not require involvement of the general public and is often limited to consultations with authorized state bodies, the planning of stakeholder participation and information disclosure about the Project is based on the best industry international practices and applicable international requirements.

5.2.3 International Consultation Requirements

According to the categorization of IFC projects, the CRC Project is categorized as "A".

The project is categorized as "A" because it is predicted that the proposed activity is a source of significant environmental and/or social impacts, which at the time of its categorization are difficult to determine or assess and therefore require a comprehensive assessment of environmental and social impacts, based on broad public participation and disclosure of information to key stakeholders.

IFC PS-1 on the assessment and management of environmental and social risks and impacts includes appropriate requirements for disclosure activities and stakeholder consultation. The activities must:

- begin at an early stage of the project cycle;
- continue on an ongoing basis throughout the project lifecycle;
- be based on the prior disclosure and dissemination of relevant, transparent, objective, meaningful and easily accessible information which is in a culturally appropriate local language(s) and format and is understandable to Affected Communities;
- focus on those directly affected as opposed to those not directly affected;
- be free of external manipulation, interference, coercion, or intimidation;
- ensure meaningful participation and meaningful dialogue with the public where applicable;
- be documented.

The IFC Access to Information Policy specifies that for Category "A" projects, a summary of the findings and recommendations of the review must be disclosed and include, at a minimum, the following information:

- indication of the Performance Standards and applicable mechanisms for handling referrals, including the Compliance Advisor/Ombudsman;
- justification for the IFC classification of the project category;
- description of the main social and environmental risks and impacts of the project;
- key measures to limit such risks and impacts, as well as additional activities and actions to be implemented in order to comply with the IFC PS on the project;

- electronic copies or links to websites where the ESIA materials are available;
- additional documents such as action plans, stakeholder engagement plans, resettlement action plans, etc.

5.3 Stakeholder Identification

Stakeholders are defined by the Project as individuals or groups of individuals who are directly or indirectly affected by the Project and who may have an interest in and/or an opportunity to affect the outcome of the Project, positively or negatively.

Stakeholders may include vulnerable or disadvantaged groups or individuals living in the Project Area of Influence, their formal and informal representatives, regional and district government or local self-governments, community organisations and special interest groups, academia or educational institutions.

Nine major stakeholder groups are currently identified in relation to the Project. Table 5.3.1 presents an analysis of the stakeholders, their interests in relation to the Project, as well as proposed methods of disclosure and interaction with them.

Table 5.3.1 Project stakeholders and methods of interaction with them

Stakeholder group	Status					Methods of interaction													
	Key	Secondary stakeholder	Affected party	Stakeholder	Decision-maker	Personal meetings	Official correspondence	ESIA Disclosure	Consultations on land acquisition	ESMP Disclosure[15]	Human Resources Policy Disclosure	Counselling in case of staff reduction	Interaction with the CLO	Interaction with EHS manager[16]	Interaction with the Labour and Social Affairs Manager	Mechanism for receiving complaints from the public	Mechanism for receiving workplace complaints	Monitoring and reporting	Client's website
Affected population, vulnerable and socially unprotected groups																			
Residents of Bekabad city, Bekabad and Bayaut districts of Tashkent and Syrdarya regions, including vulnerable and disadvantaged groups:	x		x		x					x		x	x		x			x	
disabled people	x		x		x					x		x			x			x	
pensioners	x		x		x					x		x			x			x	
disadvantaged population	x		x		x							x			x			x	
unemployed	x		x		x					x		x	x		x			x	
women and households headed by women	x		x		x					x		x			x			x	
children under the age of 15	x		x		x							x			x			x	
Local farmers whose farms may be affected as a result of the Project	x		x		x	x		x	x	x			x		x			x	
Mukimiy, Metallurg, Saikhun, Uzbekistan and Tarakkiyot makhallas	x		x		x	x		x		x		x	x		x				
Employees, third-party workers and workers' representatives																			
Local residents	x		x		x					x	x		x	x	x	x	x		x
Employees of "UMK" JSC	x		x		x					x	x		x				x		x
Construction workers	x		x		x								x			x	x		x
Trade unions and employee representatives	x		x			x				x	x		x		x	x	x		x
Credit Suisse AG Bank		x		x			x	x	x	x	x				x				
International Labour Organisation		x		x			x			x			x						
Territorial and regional state authorities, local authorities, controlling and state organisations																			
Ministry of Economy and Industry of the Republic of Uzbekistan		x		x			x	x		x			x	x	x				
Ministry of Foreign Affairs of the Republic of Uzbekistan		x		x			x	x		x			x	x	x				
Ministry of Employment and Labour		x		x			x	x		x			x	x	x				
Ministry of Foreign Affairs of the Republic of Tajikistan		x		x			x	x		x			x	x	x				
Khokimiyat of Bekabad city	x		x			x	x	x	x	x			x		x				
District khokimiyats (Bekabad and Bayaut districts)	x		x			x	x	x	x	x			x		x				
Enclaves of Uzbekistan on the territory of the Republic of Tajikistan	x		x			x		x		x			x		x				
Local environmental authorities	x		x			x		x		x			x		x	x			
Local cadastral bodies	x		x			x		x	x	x			x		x	x			
Local bodies of labour and employment	x		x			x		x		x			x		x				
Tashkent region departments of cultural heritage	x		x					x	x	x			x						
Consultants																			
SHANECO GROUP JSC	x		x			x			x	x				x					
Ecostandard Expert LLC	x		x			x			x	x									
Public associations and organisations																			
Uzbek-German Forum on Human Rights International Organisation against Slavery International Forum on Labour Rights Women's Committee of Uzbekistan Others (to be identified through disclosure of the SEP)		x		x						x			x		x				
Contractors, suppliers and private enterprises																			
Local suppliers of raw materials and supplies	x		x			x				x			x		x	x	x		
Local contractors, Renaissance Heavy Industries LLC	x		x			x			x	x			x		x	x	x		x
Other businesses (to be identified through disclosure of the SEP)	x		x			x				x			x						
Other stakeholders																			
Local newspapers, local radio stations, local television stations		x		x		x			x	x	x		X		x				

[15] Environmental and Social Management Plan

[16] Environment, Health and Safety

5.4 Project Consultation Activities and Outcomes

5.4.1 Overview

This section describes the activities undertaken during the ESIA process and their results, and summarizes the activities planned for the remainder of the Project life cycle in accordance with the SEP and the requirements outlined in Section 5.2.

5.4.2 Local Community Representatives

Project initiators will cooperate with local self-government bodies in the project area - makhallas. Makhallas are headed by elected chairpersons of the citizens' gathering and are supported by councillors and representatives of khokimiyats (advisers for the elderly and veterans, youth and women, advisers for community safety, sports, etc.).

In order to reach makhalla members near the project area who do not have access to the Internet, such as the elderly or poor families, UMK will liaise with makhalla chairpersons, collaborating directly on stakeholder engagement activities.

Printed copies of the SEP project documents and non-technical summary (NTS) will be posted in the makhallas located in the project area of influence. Community representatives will be encouraged to encourage residents to participate in the consultation process and to receive feedback from their communities and pass it on to the Community Liaison Officer (CLO). The role and functions of the CLO are discussed in more detail in subsection 5.4.3.

5.4.3 Community Liaison Officer

The Client's organisation appointed a specialist responsible for public relations (Community Liaison Officer (CLO), whose responsibilities include ensuring at all stages of the Project constructive and meaningful interaction with local residents who are affected by or interested in the implementation of the Project.

The CLO will function throughout the life cycle of the Project. The CLO is responsible for the implementation of the SEP activities. In addition, the CLO is responsible for organising and holding meetings with stakeholders, their protocols, as well as continuous interaction with the population in the Project area of influence.

Vosit Kenjabaev, the CRC lead engineer, was appointed the person responsible for interaction with the public, in particular for the reception, registration and work with appeals and complaints of citizens during the project preparation, construction and operation stages.

5.4.4 ESIA Consultation and Disclosure

Identification of Project stakeholders was initiated at the stage of preparation of the Scoping report based on the results of the inspection of the site and adjacent areas, desktop studies and initial consultations with regional and local authorities and local self-government bodies. In October 2021, a series of consultations were held with the following Project stakeholders:

- Bekabad city khokimiyat;
- Khokimiyat of Bekabad district, Tashkent region;
- Khokimiyat of Bayaut district, Syrdarya region;
- Khokimiyat of Shirin city, Syrdarya region;

- Department of Ecology and Environmental Protection of Bekabad city and Bekabad district;
- Department of Land Resources and State Cadastre of Bekabad city and Bekabad district, and Bayaut district;
- Centre for Sanitary and Epidemiological Surveillance of Bekabad city;
- Forestry of Bekabad district;
- Association of Farmers of Bekabad and Bayaut district;
- Makhallas - Mukimiy, Metallurg, Saikhun and Uzbekistan.

Consultations are used to disclose information about the Project, explain the ESIA procedure, request baseline data, identify related projects, stakeholders and their interests, and understand the concerns about the Project. Concerns are caused by the health and safety of the population, providing vulnerable and unprotected people the opportunity to benefit from the positive effects of the Project.

The Preliminary Environmental and Social Assessment Report provides an overview of the dates, participants and key issues raised during the preliminary consultations. All these activities were conducted in the form of face-to-face meetings with the participation of representatives of UMK and the Project consultants.

The second stage of consultations was conducted in December 2021:

- Focus groups (women, youth, residents of the project area) with representatives of Mukimiy, Metallurg, Saikhun, Uzbekistan and Tarakkiyot makhallas. These makhallas were identified at the stage of initial assessment of the project during consultations with the administrative bodies and responsible representatives of the combine, as populated areas within 1000 m from the borders of the complex);
- In-depth interviews with farmers affected by the project, during construction of associated facilities, road 1.2 km from UMK to R-20 highway and power transmission line 23 km from Syrdarya GRES to UMK's Metallurgiya 220/110 kV substation (checking procedures for land alienation, compensation payments);
- In-depth interviews with chairpersons of makhalla committees located in the project impact area.

Table 5.4.1 provides a list of all conducted focus groups.

Table 5.4.1 List of focus groups

No	Date	Region	District /makhalla	Number of participants	Participants
1.	9 December 2021	Tashkent region	Bekabad / Saikhun	9	Men of the local community
2.	9 December 2021	Tashkent region	Bekabad / Uzbekistan	9	Women of the local community
3.	9 December 2021	Tashkent region	Bekabad / Metallurg	6	Men of the local community
4.	9 December 2021	Tashkent region	Bekabad / Tarakkiyot	9	Men and women of the local community
5.	9 December 2021	Tashkent region	Bekabad / Mukkimiy	8	Men and women of the local community
6.	10 December 2021	Tashkent region	Bekabad	5	Affected farmers (2 women and 3 men)
7.	10 December 2021	Syrdarya region	Bayaut	5	Affected farmers (5 men)
Total				51	

In general, the respondents of focus groups were quite positive about the project. Residents of makhallas who participated in the focus groups planned and expected that in the future, due to the creation of additional jobs at the opening of the CRC, additional employment opportunities would appear for young people and able-bodied unemployed. They expected that UMK would allocate a quota for the employment of residents of the project area and vulnerable groups.

The main concerns of the residents of the project area are related to air pollution; already now, according to most of the participants, there is an unpleasant smell and yellow smoke coming from the plant at night. At the same time, there were fears that an increase in the volume of production will have a serious impact on the environment and public health.

Focus groups determined that for the local population (residents of the makhallas) non-agricultural or commercial income (work in the makhallas, office work, pension benefits, work in the markets, etc.) are the main and only sources of income.

During focus groups with farmers from Bekabad and Bayaut districts, whose lands were affected during the construction of associated facilities, power lines and roads, a mixed assessment of the project activities was received. The main reason why the respondents were not positive towards the project was that the construction of these facilities affected the land and crops not considered in the preliminary independent evaluation.

In connection with these allegations, the Consultant has initiated a Social Audit process on land acquisition and compensation issues in project activities.

All focus group participants completed a short socio-economic questionnaire in Uzbek. The focus group questionnaires were summarized and used to compile the socio-economic baseline section (28-0948-ESIA-PE-, Section 7). A total of 51 questionnaires were received from communities, farmers, including 18 from women.

In-depth interviews were also conducted with all representatives of farms affected by project activities on land acquisition and compensation payments.

A summary of disclosure activities implemented in October-December 2021 is presented in Table 5.4.2.

Table 5.4.2 Disclosure Activities.

Activities	Result
Publication of the report on the ESIA study program	Project documents are made publicly available in Russian and English. Disclosure was made on the website of the Client, within ten days from the date of publication of the ESIA Study Program Report. The contact information of the responsible representative of UMK (e-mail, address, phone number) was indicated on the website. The ESIA Study Program Report was also sent to the chairpersons of makhalla committees in printed form.
Receiving comments and suggestions on the ESIA Study Program Report	The collection of comments and suggestions lasted until December 23, 2021. The Client has confirmed to the Consultant in writing that no comments or suggestions from stakeholders were recorded during the report disclosure period.

5.4.5 Plan of consultations for the project life cycle

The project's SEP describes ongoing stakeholder engagement throughout the project life cycle, including construction and operation stages. Activities include consultations as needed with makhalla representatives, disclosure to local communities at key stages of the project such as start and end of construction, regular website and social media updates, updates to the SEP, and annual project reporting.

5.5 Community Engagement and Community Asset Programmes

The project now promotes sustained engagement with local communities to align their interests and make the community a direct stakeholder.

To build the capacity of engagement with the local community, it is recommended that UMK:

- Communicate the most complete information about CRC activities in a timely manner to all Stakeholders.
- Develop and implement training programs, a transparent recruitment procedure among residents of the region (including women, young people and representatives of vulnerable groups).
- Develop and implement a social investment program based on regular consultations with the ACs.
- To promote the participation of small and medium-sized businesses in the CRC and to implement social partnership measures in the region of operation.

5.6 Project Grievance Redress Mechanism

The Project defines a grievance as an actual or perceived problem that may give rise to a grievance. As a general policy, UMK will actively work to prevent the causes that give rise to grievances by implementing mitigation measures (as defined in the ESIA and ESMP) and continuous engagement with Community Liaison Officers.

Anyone can file a complaint about a project activity if one believe that a practice has a negative impact on them, their community, the environment, or their quality of life. Stakeholders can also submit comments and suggestions.

5.7 Confidentiality and Anonymity

The Client will take measures to ensure confidentiality (upon request) and guarantee anonymity in the preparation of annual reports. Disclosure of personal data of individuals will be made only with their consent.

Investigations will be conducted in a respectful and confidential manner. The aggrieved party will recognise the need to disclose personal information in certain situations, and Client representatives will identify those situations and seek appropriate consent to proceed with the investigation and resolution of the situation.

5.8 Reporting and Resolution of Complaints

The Grievance Redress Mechanism, discussed in detail in the SEP, is a formalized tool for receiving, acknowledging, investigating, and resolving complaints, grievances, and concerns from affected communities and individuals, as well as other stakeholders.

The purpose of this mechanism is to offer predictable, transparent and credible processes for all parties, with relatively inexpensive, fair and effective results. It also aims to ensure a gender-sensitive, inclusive and culturally appropriate process that is accessible to all community members.

Effective stakeholder engagement is aimed at building trust and maintaining constructive relationships with communities and stakeholders, encouraging a positive perception of the Project and contributing to its successful development and implementation.

5.8.1 National requirements to complaint resolution

Management of public complaints and grievances in Uzbekistan is based on an established mechanism in accordance with the Law of the Republic of Uzbekistan No ZRU-378 of 03.12.2014 "On complaints of legal entities and individuals". Interested parties can file their complaints through the Internet portal https://my.gov.uz/ru. In addition, since 2017, in every region, district, city and town there are so-called "Public Consultation Points", where people can come with their complaints and appeals.

The Ministry of Employment and Labour Relations of the RUz operates a feedback mechanism to address any labour-related complaints investigated by local labour inspectors across the country. This feedback mechanism is available on the hotline number +998 71 200-06-00.

The Federation of Trade Unions also receives and investigates labour-related complaints at the hotline number (0-371) 200 10 92.

To achieve national compliance, the project's grievance mechanism will not prevent aggrieved parties from contacting national/state legal systems to resolve grievances at any stage of the grievance procedures. Affected parties may apply to the court at any stage of the grievance or appeal process.

5.8.2 Appeals handling and reporting

The Client has its own Internet resource http://www.uzbeksteel.uz/ and a separate link for disclosure of information about the Project http://www.uzbeksteel.uz/ovos-i-ss/4874, as well as a tool for the public to file complaints and appeals. Complaints and appeals can also be sent directly to CLOs. These CLOs are listed in Table 5.8.2.

The main stages of handling complaints and appeals include: receipt and registration, categorization, investigation, preparation of response, demands/appeals, responding and closing the complaint/appeal.

Receipt/registration: complaints and appeals will be recorded in the official system of registration of complaints, which is the responsibility of the CLO.

Complaints can be submitted in writing by filling out a special form, (provided in the SEP), by contacting the CLO directly, through a local government representative or electronically through the Client's website. Contact information of the CLO will be provided in the Project information materials, e.g., in the non-technical summary.

Categorization: all incoming applications will be classified by the CLO in accordance with the criteria as specified in Table 5.8.1.

Investigation: Where an investigation is required, the appropriate employees of the Client and external organisations will provide the necessary assistance to do so. The CLO in conjunction with the Client's management will form an investigation team to include specific specialists whose qualifications are appropriate to the subject matter of the appeal.

The purpose of the investigation will also be to determine the nature of the event that gave rise to the request, i.e. whether it was an isolated event or whether it may recur. The investigation will identify and carry out the necessary activities, procedures, equipment or training to eliminate the incident and prevent its recurrence.

Response: The CLO shall give the complainant a written (or, if it is difficult for the complainant to understand the written text, verbal) explanation of the complaint procedure, its results, the actions to be taken to address the causes of the complaint, as well as the work being done on the issue to ensure compliance with relevant environmental and social

management systems. In certain cases, the CLO will monitor whether the complainant is satisfied with the decision made or measures taken.

Table 5.8.1 Classification criteria for the complaint/appeal

Criteria	Level of risk (to health, safety, or the environment)	Resolution
Low	No or low risk	The complaint may not be related to the Project, the complaint received can be a comment or request. CLO acknowledges the complaint within 3 days and conducts an investigation, documents its results and responds within 14 days from the date of receipt of the complaint.
Medium	Potential risk and a single incident	The CLO acknowledges the complaint within 3 days. The investigation is conducted by the CLO and the appropriate team. The Site Manager or Health and Safety Manager, if necessary, may decide to suspend work until the investigation is completed, in order to determine the necessary measures to correct the violation. The CLO will respond to the complaint within 14 days of receipt of the complaint. Measures to correct the violation can be simple, quick, such as those involving a change of procedure, and low cost.
High	Probable risk and possibility of recurrence	The CLO acknowledges the complaint within 3 days and engages the Project Manager to form a task force to promptly investigate and resolve the complaint. The CLO responds to the complaint within 14 days from the date of receipt of the complaint. If the resolution of the complaint requires more time, the CLO informs the complainant within 14 days from the date of receipt of the complaint and sends a response within 30 days. If necessary, the response may be in the form of a press release.

Closure: In the logbook, the complaint is closed as follows:

- Settled. Response communicated, agreed to, and/or implemented.
- Not settled. The complainant disagrees with the decision and applies to other organisations for settlement.
- Denied. Applicant cannot be contacted and cannot be traced.

CLO will report on the activities of the treatment of appeals on a monthly basis in the preparatory stage, weekly during construction stage and twice a year during the operation stage, excluding personal data of applicants in order to protect confidential information and guarantee anonymity.

This procedure will be free of charge and will exclude any harassment of Project-affected persons or other stakeholders. The proposed grievance procedure is shown schematically in the Annex to the SEP.

Vosit Kenjabaev, the CRC lead engineer, is responsible for reviewing appeals from citizens and other interested parties. Comments and appeals should be sent to the address below (preferably in writing by filling out the complaint/appeal form provided in the SEP).

Table 5.8.2 Community Liaison Officer

To	CRC Lead Engineer Vosit Kenjabaev
Address	Republic of Uzbekistan, 110502, Tashkent region, Bekabad city, 1 Sirdaryo str;
Phone	**+ 998 90 336 33 13**
E-mail	v.kenjabaev@uzbeksteel.uz

5.8.3 Reporting of complaints and appeals

The CLO will be responsible for preparing the following reports:

- Monthly reports on complaints received to the Client's management during the preparation stage of the Project;
- Weekly reports on complaints received to the Client's management during the construction stage;
- Semi-annual reports on complaints received to the Client's management during the operation stage;
- Annually provide information on complaints received to international lenders as part of the annual reporting on the environmental and social aspects of the Project.

5.8.4 Annual Reporting

Throughout the term of the loan agreement, the Client will prepare an annual report to international lenders summarizing information on compliance with environmental, health and safety requirements, progress with the ESMP, CLO activities and public complaints received, as well as updates to the SEP.