



REPORT

Mirny (Kazakhstan) 1GW Wind Farm Project
ESBS Report Chapter 03 - Legal Requirements

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3.0 LEGAL REQUIREMENTS

This Chapter presents an overview of the national and international regulatory framework, including policies, legislation, requirements, guidelines, and standards applicable to the Project. The chapter also includes the limits that have been considered applicable for each physical environmental component.

In the presence of multiple requirements and standards from different regulatory sources, the Project will apply the most stringent ones in order to protect the environment and the communities potentially affected and ensure compliance with all applicable national and international requirements and GIIPs (Good International Industry Practices).

3.1 National Environmental & Social Regulatory Framework

The Republic of Kazakhstan is a unitary state with a presidential system of government. The President of the Republic of Kazakhstan serves as the head of state and is the highest political official, responsible for determining the main directions of domestic and foreign policy. The President also has the authority to appoint the Government, which is accountable to the Parliament.

The Parliament of the Republic of Kazakhstan, vested with legislative authority, is a bicameral body consisting of the Senate and the Majilis, both of which function on a permanent basis. The Government, appointed by the President, exercises the executive power of the Republic, overseeing the system of executive bodies and managing their activities. The Government is composed of the Prime Minister, their deputies, ministers, and other officials, with ministries forming the structure of the Government.

Ministries typically have territorial departments that are subject to dual subordination: vertically to the respective ministry and horizontally to local administrations (e.g., departments of education, finance, etc.).

Administratively, Kazakhstan is divided into 17 regions and includes 3 cities of republican significance (Astana, Almaty and Shymkent). Each region is governed by an Akim (Regional Governor) appointed by the President, while municipal Akims are appointed by Regional Akims.

The legal system of Kazakhstan is characterized by a strict hierarchy of sources of law, which includes:

- The Constitution of the Republic of Kazakhstan;
- Constitutional laws and decrees;
- International treaties;
- Codes;
- Ordinary laws; and
- Other regulations, normative decrees, and legal obligations.

Various industry sectors are governed by specific laws and regulations, such as the Environmental Code, the Land Code, the Labor Code, the Water Code, etc..

This structure ensures that Kazakhstan's legal framework is comprehensive, addressing a wide range of substantive and procedural matters across various areas of governance and industry regulation.

Kazakhstan's governmental structure and administrative framework have undergone significant restructuring, resulting in the establishment of 21 ministries and approximately 40 committees. For the regulation of the metallurgical sector and mining, the key ministries responsible for implementing environmental legislation are the Ministry of Ecology and Natural Resources, the Ministry of Water Resources and Irrigation, the Ministry of

Energy, the Ministry of National Economy, the Ministry of Labor and Social Protection of the Population, the Ministry of Industry and Infrastructural Development, and the Ministry of Agriculture.

Under the new organizational structure, all matters related to environmental conservation, compliance with the Environmental Code (2021), and management across all industry sectors are now under the jurisdiction of the Ministry of Ecology and Natural Resources of the Republic of Kazakhstan, which oversees the following two key committees:

- Committee of Environmental Regulation and Control;
- Committee of Forestry and Wildlife.

The Committee of Environmental Regulation and Control is responsible for improving environmental quality, ensuring environmental safety, preserving natural resources, and promoting environmentally sustainable development. This includes enhancing state regulation in environmental protection, conducting state environmental control within its competence, organizing and coordinating emission regulations, issuing environmental permits, and implementing state environmental oversight. The Committee of Environmental Regulation and Control operates through 17 territorial branches (departments), each responsible for environmental regulation and control within their respective regions. These branches exercise delegated authority from the head Ministry in the capital.

The Committee of Forestry and Wildlife is responsible to carry out implementation, control, and supervisory functions in the fields of forestry, protection, reproduction, and use of wildlife, as well as specially protected natural areas.

Additionally, Akimats (local authority bodies) are actively involved in the environmental activities of enterprises and developers, including public hearings, stakeholder engagement, and other related processes.

Table 1: Republic of Kazakhstan Relevant Legal Framework

Law	Description and Relevance to Project Activities
The Environmental Code, i.e., Ecological Code (2007, as amended in 2020 and dated January 2, 2021)	<p>The Code governs the relations on protection, restoration, and conservation of the environment, use and reproduction of natural resources when conducting the economic and other activities related to the use of natural resources and environmental impact within the Republic of Kazakhstan. Participants in the relationship are individuals and legal entities and state bodies of the country.</p> <p>The environmental foundations of sustainable development are ensuring a favorable environment for human life and health; protecting the environment and preserving biodiversity; defending national interests in the use of natural resources and the impact on the environment; meeting the needs of generations, and much more. The Code provides for respect for the right of citizens to access environmental information, full public participation, and transparency of issues and measures taken to address environmental issues. The Code focuses on the Republic's global partnership to preserve, protect, and restore the health and integrity of the Earth's ecosystem, as well as to promote the development of international law relating to liability for environmental damage.</p>
The Labor Code (2015, as amended in 2020)	<p>The Code is the principal legal framework governing labor relations and employment practices in Republic of Kazakhstan. It establishes the rights and obligations of both employers and employees, providing guidelines for employment contracts, working hours, wages, and benefits. The code addresses</p>

Law	Description and Relevance to Project Activities
	<p>various aspects of labor, including the termination of employment contracts, labor rights, health and safety regulations, and protection against discrimination. It also regulates collective bargaining, the rights of trade unions, and the employment of foreign nationals in Republic of Kazakhstan. Additionally, the code contains provisions for social protection, including social security and insurance programs.</p>
<p>The Land Code (2003, as amended in 2020)</p>	<p>In accordance with this Code, land in the Republic of Kazakhstan is in state ownership. Land plots may also be privately owned on the grounds, conditions and within the limits established by this Code. The land legislation of the Republic of Kazakhstan is based on the following principles: integrity, inviolability, protection, environmental safety, and rational use; targeted use of land, payment, and priority of agricultural land; state support for the use and protection of land; conservation of land as a natural resource, the basis of life and activity of the people of the Republic of Kazakhstan, etc.</p> <p>The tasks of land legislation are: establishing the grounds for the emergence and termination of land use rights and ownership of land; regulating land relations, ensuring rational use and protection of land, reproduction of soil fertility; creating conditions for the equal development of all forms of management; protection of land rights of individuals and legal entities and the state, etc.</p>
<p>The Water Code (2003, as amended in 2021)</p>	<p>The water legislation of the Republic of Kazakhstan aims to ensure an ecologically safe and economically optimal level of water use, resource protection, and wastewater management. These objectives are directed towards preserving and enhancing the living conditions of the population and maintaining a healthy environment.</p> <p>To achieve these goals, the legislation focuses on implementing state policies related to water use and protection, regulating water relations, and establishing a legal framework for sustainable water practices. It also sets out principles for water resource management, guides the study and exploration of water resources, oversees the development of land reclamation, and ensures the protection of the population and economic facilities from water-related emergencies.</p>

The development of Kazakhstan's environmental regulatory framework commenced immediately following the country's declaration of independence in 1991. The most significant advancement in this area was the adoption of the new Environmental Code of the Republic of Kazakhstan (No. 400-VI 3PK) on January 2, 2021, which replaced the 2007 Environmental Code. The 2021 Environmental Code introduced substantial reforms and enhancements compared to the 2007 version, reflecting Kazakhstan's commitment to modernizing and strengthening its environmental protection laws. A schematic overview of the development process, along with key milestones highlighting the main achievements in the evolution of national environmental legislation, is presented in the following table, with further details on each stage provided in the accompanying text.

Table 2: Kazakhstan's environmental regulatory framework development.

Stage	Description
First Stage 1991-1995	<ul style="list-style-type: none"> ▪ The Soviet Union's legislative system initially served as the model. ▪ The Government developed and approved key environmental laws and regulations. ▪ The laws inadequately addressed environmental conservation aspects.
Second Stage 1996-2000	<ul style="list-style-type: none"> ▪ The foundational Concept of State Ecological Safety was approved by the President in 1996, serving as the basis for advanced environmental lawmaking. ▪ Key environmental laws, such as the Law on Ecological Expertise, were subsequently introduced. ▪ Numerous laws were amended to strengthen environmental management, conservation practices, and public health and safety.
Third Stage 2001-2006	<ul style="list-style-type: none"> ▪ The Concept for Legal Improvement at the state level was developed and adopted in 2002, forming the basis for enhancements in environmental and social legislation. ▪ New versions of key environmental laws, including those on Air, Water, Land Use, and Biodiversity, were drafted and approved.
Fourth Stage 2007-2021	<ul style="list-style-type: none"> ▪ The Environmental Code was developed and adopted in 2007. ▪ Major environmental laws were amended. ▪ Legislation on energy efficiency and renewable energy was introduced. ▪ Efforts were made to harmonize certain regulatory requirements with international standards.
Fifth Stage 2021-present	<ul style="list-style-type: none"> ▪ The new Environmental Code was developed and adopted in 2021. ▪ Kazakhstan is committed to achieving carbon neutrality by 2060. ▪ Emphasis is placed on natural resource users taking preventive measures to avoid negative environmental impacts rather than merely paying fines. ▪ New Integrated Environmental Permits have been introduced. ▪ The largest companies are required to replace outdated technologies with Best Available Technologies (BATs) by 2025. ▪ Public and non-governmental organizations participate in discussions of major projects, such as those in the mining sector, that have environmental impacts. ▪ Implementation of automated systems allows real-time monitoring of emission sources. ▪ The public will have access to data on companies and enterprises responsible for air pollution and the types of pollutants involved. ▪ A new waste classification and policy have been established.

The environmental legal framework in force in Kazakhstan, as established in the 2021 Environmental Code, is founded on the following principles:

- **Prevention Principle** - Any activity that causes or may cause environmental pollution, degradation of the natural environment, environmental damage, or harm to human life and/or health is permissible only if all necessary preventive measures are taken at the source of the environmental impact.
- **Remedial Principle** - Environmental damage must be fully remedied. If full remediation is not possible, the impact must be minimized to the greatest extent possible, considering the current level of scientific and technological development.
- **Precautionary Principle** - If an activity poses a risk of significant and irreversible environmental damage or harm to human life and/or health, effective and proportionate measures must be taken to prevent such impacts.
- **Proportionality Principle** - Environmental protection measures must be adequate and sufficient to achieve the goals and objectives of Kazakhstan's environmental legislation.
- **Polluter Pays Principle** - Entities whose activities cause or may cause environmental pollution, degradation, or harm are responsible for bearing all costs associated with compliance with environmental legislation, including the elimination of caused environmental damage, in accordance with the remedial principle.
- **Sustainable Development Principle** - Natural resources are considered the wealth of Kazakhstan and must be used sustainably. The State ensures the balanced and rational management of natural resources for the benefit of present and future generations, prioritizing the conservation of natural ecological systems, water and energy conservation, reducing the use of non-renewable resources, and promoting renewable energy and waste minimization.
- **Integration Principle** - Kazakhstan's state policy emphasizes balancing socioeconomic development with the need to ensure the ecological foundations of sustainable development.
- **Principle of Environmental Information Accessibility** - The State, guided by international treaties, ensures the public's right of access to environmental information.
- **Principle of Public Participation** - Public participation in environmental decision-making is ensured from an early stage when all project alternatives are open for consideration. State bodies and officials are required to make planned decisions with potential environmental impacts public, allowing the public to express its views, which must be considered in the decision-making process.
- **Ecosystem Approach Principle** - Planning for prospective development must consider the integrity and natural interconnections of ecological systems, prioritizing the conservation of natural landscapes, complexes, biodiversity, and the sustainable functioning of ecological systems.

Individuals and legal entities using environmental resources, such as subsoil or water users, are subject to state environmental control, which is conducted by the Committee of Environmental Regulation and Control through state environmental inspections. Business activities must comply with environmental requirements, including obtaining a positive state environmental expert evaluation for projects with environmental impacts before commissioning. Enterprises engaged in environmentally hazardous activities are required to obtain environmental insurance to cover potential damage from contamination. Additionally, all individuals and legal entities producing emissions, sewage, or waste must obtain an Environmental Permit from the Committee of Environmental Regulation and Control or its local subdivisions.

3.1.1 National Permitting Process

The national Environmental Impact Assessment (EIA) process in Kazakhstan is defined as the procedure for identifying, studying, describing, and evaluating potential direct and indirect significant impacts of planned or ongoing activities or documents being developed on the environment. The purpose of the environmental assessment is to prepare the necessary materials for making decisions that align with the goals and objectives of Kazakhstan's environmental legislation regarding the implementation of the proposed activity or the document under development.

The Environmental Impact Assessment (EIA) is conducted in accordance with the requirements of the Environmental Code of the Republic of Kazakhstan and the Instructions for Organizing and Conducting an Environmental Assessment (No. 280, dated July 30, 2021).

Environmental Assessment (EA) can be carried out in the following forms:

- Strategic Environmental Assessment (SEA) - Applied to state programs in industries, territory development programs, and master plans for settlements to assess significant environmental impacts. It is mandatory for documents related to agriculture, forestry, fisheries, energy, industry (including exploration and mining), transport, waste management, water management, telecommunications, tourism, and urban and rural development planning;
- Environmental Impact Assessment (EIA) - This involves identifying, studying, and evaluating potential significant environmental impacts of proposed activities, including construction, subsoil use, and significant changes to existing activities;
- Transboundary Impact Assessments (TIA) - This process evaluates potential significant negative impacts in an area under the jurisdiction of one state from a source located under the jurisdiction of another state;
- Environmental Assessment in accordance with the simplified procedure (screening EIA) - Conducted for activities not subject to mandatory EIA, including the development of draft emission standards for categories I and II objects, and the preparation of the "Environmental Protection" section within project documentation.

The typical National EIA Process includes the following stages:

- Introduction of the proposed activity and screening of impacts (Scoping Study);
- Defining the scope of the environmental impact assessment;
- Preparation of a report on potential impacts;
- Assessment of the quality of the EIA report;
- Issuance of a conclusion based on the EIA results (by local authorities);
- Post-project analysis and monitoring of actual impacts during the implementation of the proposed activity.

The draft EIA is subject to public hearings with the participation of interested state bodies and the public. The authorized environmental protection body uploads the draft EIA report on its official website within two working days of receiving the documents, along with an announcement of the public hearings. The draft report must be available online for at least 30 calendar days for stakeholder review.

The initiator of the proposed activity is required to announce the public hearings in both Kazakh and Russian languages at least 20 working days before the start date through a newspaper and a television or radio channel covering the relevant administrative-territorial units.

The announcement must include:

- The subject of the public hearings;
- The place, date, and time of the hearings;
- A link to the draft report and the statement on the proposed activity;
- Contact details of the initiator;
- Information on where to obtain additional details about the proposed activity and public hearings;
- Contact information for submitting comments and suggestions.

The initiator must provide copies of the statement on the proposed activity, the protocol, screening results, and the draft report upon request. Written comments from stakeholders are entered into a summary table, which is included in the public hearings' summary report along with the amended draft EIA report.

Public hearings are open to all, and participants may express comments and suggestions on the draft EIA report. Hearings are chaired by a representative of the local authority, with video and audio recordings attached to the final protocol, which is signed within two working days of the hearings' conclusion. The hearings must be completed within five consecutive business days, and the signed protocol is posted online no later than two working days after signing. The protocol must include all written comments and responses, along with information on the right to appeal the protocol according to Kazakhstan's legislation.

3.1.2 Sector-Specific Requirements

The Code of Practice of the Republic of Kazakhstan 4.04-112-2014 "Design of Wind Power Plants" contains specific requirements regarding the national Environmental Impact Assessment (EIA) for the design of wind power plants (WPP):

- The project assessment of the impact of WPP construction and operation on the environment (EIA) must be developed in accordance with the requirements of the applicable regulatory documents in the field of environmental protection and ecology. The scope and content of the EIA materials are determined on a case-by-case basis during the preparation and submission of a "Statement of Intent" to local authorities (with the participation of local executive bodies in the field of environmental protection);
- The use of land outside the WPP for growing agricultural crops, haymaking, grazing, and other types of agricultural activities is not restricted. Restrictions on the use of this land for forestry and horticulture may be imposed based on the conditions of wind shadowing of the WPP by such plantings;
- When developing the EIA, it is necessary to consider data from local executive bodies in the field of environmental protection regarding the ecological value of the territory, including the presence of rare or endangered species of plants and animals, bird migration routes, etc.;
- When designing a WPP with more than three wind turbines, it is necessary to conduct seasonal observations of bird migration by a specialized ornithological organization;
- Based on the recommendations of a specialized organization, it is advisable to implement measures to prevent harm to birdlife by applying fluorescent paint to the blades, installing sound signals to deter birds, and providing illumination of the supports and blades of the wind turbines at night, during fog, and in other low-visibility conditions;
- In the design of the WPP, it is necessary to calculate the noise level and frequency spectrum expected in the nearest settlement or residential area. It is advisable to model the noise impact for various placement options of wind turbines on the WPP site, especially for settlements located less than 1 km from the WPP;

- The predicted noise level in the settlement should not exceed the permissible levels established by sanitary norms for allowable noise in residential and public buildings and residential areas;
- In resort or densely populated areas, efforts should be made to ensure that wind turbines do not disrupt the scenic landscape;
- The structures and equipment of the WPP are obstacles to aircraft flights. Daytime marking and lighting of WPP objects should be designed in coordination with the state oversight bodies for the use of airspace in the Republic of Kazakhstan;
- When coordinating the industrial WPP project, it is advisable to use photomontage or a model of the territory with the WPP layout to familiarize the public and interested organizations.

3.2 Aktas Energy Environmental and Social Standards

For this study, Aktas Energy LLP has adopted Total Energies' corporate standards and guidelines applicable to the Project, namely:

- General Specification on Geomatics, Land surveying and positioning works (GS EP POS 003);
- General Specification on Sustainable development, Social Baseline Study (GS EP SDV 101);
- General Specification on Sustainable development, Human Rights Impact Assessment (HRIA) (GS EP SDV 103);
- General Specification on Environmental & Social Impact Assessment Study of Industrial Projects Activities (GS GR HSE 410);
- General Specification on Environmental Baseline and Monitoring Studies: Onshore & Coastal Sites (GS GR HSE411); and
- General Specification on GIS Deliverables for HSE (GS GR HSE 412).

3.3 International Environmental & Social Standards

The ESIA is prepared according to Total Energies standards, to the protocols for the Wind Sector, to several lender E&S standards, and to applicable local, national, and international E&S legislation and guidelines adopted by the Republic of Kazakhstan.

Specifically, this ESIA study is prepared in accordance with:

- International Finance Cooperation (IFC) Performance Standards (2012);
- World Bank Group General EHS Guidelines (2007), Wind farm EHS Guideline and Electric Power
- Transmission & Distribution EHS Guidelines (2007);
- Equator Principles EP4 (2020);
- European Bank for Reconstruction and Development (EBRD) E&S Policy and relevant Performance Requirements (2019)¹;
- European Investment Bank (EIB) E&S Standards;

¹ Although this ESIA study was revised in December 2025, it follows the 2019 version of the EBRD E&S Policy, as the activities began in 2023. The new EBRD E&S Policy published in 2024 was not considered.

- AFD Group's Exclusion List (2022);
- Asian Development Banks (ADB) Safeguard Policies;
- The Asian Infrastructure Investment Bank (AIIB) E&S Policy;
- International Union for Conservation of Nature (IUCN) guidance on wind projects;
- Other relevant standards and guidelines relevant to the assignment (The Convention on Wetlands, BirdLife International, Eurobats recommendations and best practice guidelines, Good Practice Handbook on the Design of Post-Construction Monitoring of Bird and Bat Fatalities Wind Energy Facilities, Scottish Natural Heritage Guidance Note, etc.);
- International Labor Organization (ILO) conventions signed and ratified by the countries; and
- United Nations Guiding Principles on Business and Human Rights.

The standards are briefly described in the following sections.

3.3.1 Equator Principles (EPs)

The Equator Principles (EPs) are intended to serve as a common baseline and risk management framework for financial institutions to identify, assess and manage environmental and social risks when financing Projects.

The latest iteration of the Equator Principles is EP4, which is the 4th version in force since October 2020². EP4 is a risk management framework adopted by financial institutions members of the EP Association for determining, assessing, and managing ES risks in Projects. EP are primarily intended to provide a minimum standard for due diligence to support responsible risk decision-making. A summary of the ten principles is listed as follows:

- **Principle 1: Review and categorisation.** By this principle, the proposed project for financing is categorised based on the magnitude of its potential environmental and social risks and impacts. The categories are:
 - Category A. Projects with potential significant adverse environmental and social risks and/or impacts that are diverse, irreversible or unprecedented;
 - Category B. Projects with potential limited adverse environmental and social risks and/or impacts that are few in number, generally site-specific, largely reversible, and readily addressed through mitigation measures; and
 - Category C. Projects with minimal or no adverse environmental and social risks and/or impacts.
- **Principle 2: ES assessment.** By this principle, Projects that fall in Category A and Category B are required to conduct an Assessment process to address its relevant environmental and social risks and impacts. The Assessment Documentation should propose measures to minimise, mitigate, and offset adverse impacts in a manner relevant and appropriate to the nature and scale of the proposed Project. For Category A, and as appropriate, Category B Projects, the Assessment Documentation includes an ESIA and a CCRA. Furthermore, in limited high-risk circumstances, it may be appropriate for the client to complement its Assessment Documentation with specific human rights due diligence. A Climate Change Risk Assessment is required depending on the type of Project as well as the nature of risks. In any case, projects that have Scope 1 and Scope 2 Emissions (combined) expected to be more than 100,000 tonnes of CO₂ equivalent annually, must present a Climate Change Risk Assessment. Consideration must be given to relevant Climate Transition Risks (as defined by the Task Force on Climate-Related Financial Disclosures – TCFD)

² The Equator Principles Association, 2020 ([The Equator Principles EP4 July2020 \(equator-principles.com\)](https://www.equator-principles.com/)).

and an alternatives analysis completed which evaluates lower Greenhouse Gas (GHG) intensive alternatives.

- **Principle 3: Applicable ES standards.** By this principle, the Assessment process should, in the first instance, address compliance with relevant host country laws, regulations, and permits that pertain to environmental and social issues. For Projects located in Non-Designated Countries (as is the case for Angola), the Assessment process evaluates compliance with the then applicable IFC Performance Standards on Environmental and Social Sustainability (Performance Standards) and the World Bank Group Environmental, Health and Safety Guidelines (EHS Guidelines).
- **Principle 4: ESMS and EP action plan.** By this principle, Category A and Category B Projects are required to develop or maintain an ESMS. Moreover, an ESMP needs to be prepared by the client to address issues raised in the Assessment process and incorporate actions required to comply with the applicable standards.
- **Principle 5: Stakeholder engagement.** By this principle, Category A and Category B Projects are required to demonstrate effective Stakeholder Engagement as an ongoing process in a structured and culturally appropriate manner with Affected Communities and, where relevant, other stakeholders. For Projects with potentially significant adverse impacts on Affected Communities, the client needs to conduct an Informed Consultation and Participation process. The client needs to tailor its consultation process to: the risks and impacts of the Project; the Project's phase of development; the language preferences of the Affected Communities; their decision-making processes; and the needs of disadvantaged and vulnerable groups. This process should be free from external manipulation, interference, coercion, and intimidation.
- **Principle 6: Grievance mechanism.** By this principle, Category A and, as appropriate, Category B Projects are required, as part of the ESMS, to establish a grievance mechanism designed to receive and facilitate resolution of concerns and grievances about the Project's environmental and social performance.
- **Principle 7: Independent review.** For Project financing, according to Principle 7, Category A and, as appropriate, Category B Projects will go under an Independent Review of the Assessment Documentation including the ESMPs, the ESMS, and the Stakeholder Engagement process documentation, prepared by an Independent Environmental and Social Consultant, not directly associated with the client. This will assist the Equator Principles Financial Institutions' (EPFIs) due diligence and assess Equator Principles compliance.
- **Principle 8: Covenants.** By this principle, the client will covenant in the financing documentation to comply with all relevant host country environmental and social laws, regulations and permits in all material respects. Furthermore, for Category A and Category B Projects, the client will covenant the financial documentation to a) comply with the ESMPs and Equator Principles AP (where applicable) during the construction and operation of the Project in all material respects; b) to provide periodic reports in a format agreed with the EPFI prepared by in-house staff or third-party experts, that demonstrate compliance with the ESMPs and Equator Principles AP (where applicable), and provide representation of compliance with relevant local, state and host country environmental and social laws, regulations and permits; and c) to decommission the facilities, where applicable and appropriate, in accordance with an agreed decommissioning plan.
- **Principle 9: Independent monitoring and reporting.** To assess Project compliance with the Equator Principles and ensure ongoing monitoring and reporting after Financial Close and over the life of the loan, the EPFI will, for all Category A and, as appropriate, Category B Projects, require the appointment of an Independent Environmental and Social Consultant, or require that the client retain qualified and experienced external experts to verify its monitoring information which would be shared with the EPFI.
- **Principle 10: Reporting and transparency.** By this principle, the client reporting requirements are in addition to the disclosure requirements in Principle 5. For all Category A and, as appropriate, Category B

Projects, the client is required to a) at a minimum, provide a summary of the ESIA (accessible and available online); and b) publicly report GHG emission levels during the operational phase for Projects emitting over 100,000 tonnes of CO2 equivalent annually.

The EPs apply globally to all industry sectors and to the following four financial products:

- Project finance advisory services;
- Project finance;
- Project-related corporate loans; and
- Bridge loans.

For each of those financial products, specific thresholds and criteria for their application have been identified in the EPs.

3.3.2 International Finance Corporation (IFC) Performance Standards

IFC Performance Standards (PSs)³ are adopted not only by the IFC but also by a large number of financial institutions, including EP Financial Institutions when they finance projects in non-designated countries like the RoK. As such, they are among the standards to be considered in assessing Project risks and impacts. The requirements of the eight PSs are summarised below:

- **Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts.** PS 1 underscores the importance of managing environmental and social performance throughout the life of a project, and in particular establishes the importance of (i) integrated assessment to identify the environmental and social impacts (including cumulative impacts from other existing, planned or reasonably defined developments in the same area of influence of a project), risks, and opportunities of projects; (ii) effective community engagement through disclosure of project-related information and consultation with local communities on matters that directly affect them; and (iii) the client's management of environmental and social performance throughout the life of the Project;
- **Performance Standard 2: Labour and Working Conditions.** PS 2 recognizes that the pursuit of economic growth through employment creation and income generation should be accompanied by protection of the fundamental rights of workers. Through a constructive worker-management relationship, and by treating the workers fairly and providing them with safe and healthy working conditions, clients may create tangible benefits, such as enhancement of the efficiency and productivity of their operations;
- **Performance Standard 3: Resource Efficiency and Pollution Prevention.** PS 3 outlines a project-level approach to resource efficiency and pollution prevention and control in line with internationally disseminated technologies and practices. In addition, this PS promotes the ability of developers to adopt such technologies and practices as far as their use is feasible in the context of a project that relies on commercially available skills, and resources;
- **Performance Standard 4: Community Health, Safety and Security.** PS 4 reflects the potential for increased risk and impact to communities associated with Project activities, equipment, and infrastructure. It requires the proponent to evaluate potential risks and impacts to the health and safety of the affected communities throughout all stages of the Project lifecycle and to establish preventative measures to the standard of good international industry practice. This includes risks associated with alteration of natural

³ IFC, 2012. *Performance Standards* (www.ifc.org/performancestandards).

resources and priority ecosystems that could adversely affect health and safety in affected communities or exacerbate climate change;

- **Performance Standard 5: Land Acquisition and Involuntary Resettlement.** PS 5 recognizes that project-related land acquisition and restrictions on land use can have adverse impacts on communities and persons that use this land. To help avoid expropriation and eliminate the need to use governmental authority to enforce relocation, clients are encouraged to use negotiated settlements meeting the requirements of PS 5, even if they have the legal means to acquire land without the seller's consent;
- **Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources.** PS 6 indicates that protecting and conserving biodiversity — the variety of life in all its forms, including genetic, species and ecosystem diversity — and its ability to change and evolve is fundamental to sustainable development. The objectives of PS 6 are 1) to protect and conserve biodiversity, 2) to maintain the benefits from ecosystem services, and 3) to promote the sustainable management and use of natural resources through the adoption of practices that integrate conservation needs and development priorities;
- **Performance Standard 7: Indigenous Peoples.** PS 7 recognizes that Indigenous Peoples, as social groups with identities that are distinct from mainstream groups in national societies, are often among the most marginalized and vulnerable segments of the population. Private sector projects can create opportunities for Indigenous Peoples to participate in, and benefit from project-related activities that may help them fulfil their aspiration for economic and social development. Furthermore, Indigenous Peoples may play a role in sustainable development by promoting and managing activities and enterprises as partners in development; and
- **Performance Standard 8: Cultural Heritage.** PS 8 seeks to protect cultural heritage that may be affected in the course of project activities. It draws on international conventions and best practices. PS 8 requires consultation with affected communities to identify cultural heritage of importance and to incorporate the views of affected communities on cultural heritage into project decision making. Consultation must also involve the relevant national or local regulatory agencies entrusted with the protection of cultural heritage. The objectives of this PS include ensuring development proponents take the necessary steps to protect cultural heritage from adverse project impacts and to take actions to support its preservation. Also, where appropriate, PS 8 requires the equitable sharing of benefits from the use of cultural heritage.

3.3.3 IFC Environmental Health and Safety Guidelines and other documents

The PSs are in turn supported by Guidance Notes that explain the means to achieve compliance with the PSs, as well as General and Industry Sector EHS Guidelines, which provide industry specific directives.

The General EHS and Sector Specific Guidelines contain the performance levels and measures that are generally considered to be achievable in new facilities at reasonable costs by existing technology. A comparison of the national regulation with the EHS Guidelines and other relevant international standards is presented in further below to set up the more stringent and consequently the applicable standard to the Project.

The following EHS Guidelines are considered applicable to the Project:

- IFC General EHS Guidelines;
- IFC EHS Guidelines for Wind Energy (2015)⁴; and

⁴ [2015-wind-energy-ehs-guidelines-en.pdf \(ifc.org\)](https://www.ifc.org/content/dam/ifc/docs/2015-wind-energy-ehs-guidelines-en.pdf).

- IFC EHS Guidelines for Electric Power Transmission and Distribution (2007)⁵.

Additionally, the following guidance is as a minimum considered applicable to the Project:

- Stakeholder Engagement: A Good Practice Handbook for Companies doing Business in Emerging Markets (IFC, 2007);
- Good Practice Handbook: Use of Security Forces: Assessing and Managing Risks and Impacts (IFC, 2017);
- Addressing Grievances from Project Affected Communities (IFC, 2009);
- Handbook for Preparing a Resettlement Action Plan (IFC, 2002);
- Good Practice Note: Managing Contractors' Environmental and Social Performance (IFC, 2017);
- EBRD/IFC Guidance Note on Worker's Accommodation: Processes and Standards (2009);
- United Nations Guiding Principles on Business and Human Rights.

3.3.4 EBRD Environmental and Social Policy and relevant Performance Requirements

Projects financed by the European Bank for Reconstruction and Development (EBRD) are expected to be designed and operated in compliance with GIIPs relating to sustainable development. To help projects achieve this goal, EBRD defined under its 2019 Environmental and Social Policy⁶, ten Performance Requirements (PRs – listed below), covering the key areas of environmental and social issues and impacts.

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

The EBRD PRs are greatly aligned with the IFC PSs. Two of the main differences are seen however, in the existence of PR 9 and PR 10.

PR 9 recognizes that financial intermediaries (FIs) are a key instrument for promoting sustainable financial markets and provide a vehicle to channel funding to the micro, small and medium-sized enterprise sector. FIs include a variety of financial service providers including, inter alia, private equity funds, banks, leasing companies, insurance companies and pension funds. In its Environmental and Social Policy, EBRD states: "*The nature of intermediated financing means that the FIs will assume delegated responsibility for environmental and*

⁵ [Final - Electric Power Transmission & Distribution.doc \(ifc.org\)](#).

⁶ [Environmental and Social Policy \(ebrd.com\)](#).

social assessment, risk management and monitoring as well as overall portfolio management. The nature of delegation may take various forms depending upon a number of factors, such as the type of finance provided. The effectiveness of the FIs environmental and social risk management will be evaluated and monitored on a continuous basis throughout the project life-cycle". This PR is not applicable to the Project.

PR 10 highlights the importance of transparent engagement among clients, workers, community representatives, and project stakeholders. This engagement improves environmental, social, and project sustainability. Effective community involvement promotes sustainable practices and yields enhanced financial and social outcomes. According to this PR, stakeholder engagement is vital for managing a project's environmental and social risks. It is an ongoing, inclusive process that should start early in the project, integral to assessing and mitigating the project's environmental and social impacts.

The EBRD is also committed to promoting the European Union's (EU) environmental requirements and is a signatory of the European Principles for the Environment. Some EU Directives relevant to this Project are outlined below:

- EIA Directive (2011/92/EU as amended by 2014/52/EU). Assessment of the effects of certain public and private projects on the environment;
- Birds Directive (Directive 79/409/EEC amended in 2009, becoming Directive 2009/147/EC). EU measures to protect Europe's wild bird species;
- Habitats Directive (Council Directive 92/43/EEC). EU measures to conserve Europe's wild flora and fauna;
- Water Framework Directive (2000/60/EC). Setting out rules to halt deterioration in the status of EU water bodies and achieve good status for Europe's rivers, lakes and groundwater; and
- Waste Framework Directive (Directive 2008/98/EC) sets the basic concepts and definitions related to waste management, including definitions of waste, recycling and recovery.

3.3.5 EIB E&S Standards

The European Investment Bank (EIB) is the lending arm of the European Union (EU) and promotes EU policies through its financial and other support to sustainable investment projects.

The EIB recognizes the need to ensure that environmental and social factors are considered at an early stage in the strategic decision-making process by developers, to have a real impact on the development options available. According to the February 2022 version, the EIB Environmental and Social Standards include:

- **Standard 1 - Environmental and Social Impacts and Risks.** It outlines the promoter's responsibilities with regard to the process of assessing the potential environmental, climate and/or social impacts and risks associated with the project, and developing and implementing procedures for managing and monitoring these impacts and risks throughout the EIB's project cycle.
- **Standard 2 – Stakeholder Engagement.** It outlines the promoter's responsibilities for the implementation of transparent and continuous engagement with project stakeholders.
- **Standard 3 – Resource Efficiency and Pollution Prevention.** It outlines the promoter's responsibilities to ensure an integrated approach to resource efficiency, pollution prevention and control of emissions to air, water and land, noise pollution, radiation, prevention of accidents, as well as waste management and the safe use of hazardous substances and pesticides, avoiding the shift of pollution from one environmental medium to another, ensuring consistency with the "Do Not Significant Harm" principle and thus contributing to the achievement of the "zero pollution" EU ambition target.

- **Standard 4 – Biodiversity and Ecosystems.** It outlines the promoters' responsibilities with regard to the identification, assessment, management and monitoring of the impacts and risks affecting biodiversity and ecosystems that result from the projects that the EIB finances, ensuring consistency with the “Do No Significant Harm” principle and thus contributing to putting Europe's and global biodiversity on the path to recovery by 2030.
- **Standard 5 – Climate Change.** It sets out the responsibilities of promoters with respect to climate change mitigation and adaptation and thereby to the fight against climate change.
- **Standard 6 – Involuntary Resettlement.** It outlines the promoter's responsibilities to manage involuntary resettlement risks and impacts.
- **Standard 7 – Vulnerable Groups, Indigenous Peoples and Gender.** It outlines the responsibilities of promoters in terms of assessing, managing and monitoring project impacts, risks, and opportunities related to Indigenous Peoples as well as persons or groups that are vulnerable, marginalized or discriminated against due to their socioeconomic characteristics. It also calls for consideration of gender-differentiated impacts and risks of EIB projects.
- **Standard 8 – Labour Rights.** It outlines the promoter's responsibilities with regard to the assessment, management and monitoring of labour-related impacts and risks associated with projects. It recognizes workers and employers as both rights-holders and duty-bearers.
- **Standard 9 – Health, Safety and Security.** This Standard, whilst recognizing the role of relevant authorities in protecting and promoting the health and safety of workers and the public, outlines the promoter's responsibilities in assessing, managing and monitoring occupational and public health, safety and security risks associated with projects supported by the EIB.
- **Standard 10 – Cultural Heritage.** It outlines the promoter's responsibilities with regard to identifying, assessing, managing and monitoring cultural heritage-related impacts and risks associated with the projects for which EIB financing is requested.
- **Standard 11 – Intermediated Finance.** It sets out how the environmental, climate and social (ECS) impacts and risks arising from sub-projects shall be identified, assessed for their significance, managed and monitored, in line with applicable requirements and commensurate with the sub-project's size, nature, socioeconomic context, location and sector sensitivity to ECS impacts and risks. (Not considered applicable to this Project).

3.3.6 AFD Group's Exclusion List

The Agence française de Développement (AFD) Group is supporting and accelerating the transitions towards a more just and resilient world. The Group has established high standards for social responsibility in order to ensure that its mission and its commitments are in coherence with the quality of its interventions and their sustainable development impacts. The AFD group's exclusion list is one of the tools used to implement these standards.

The exclusion list is a result of cross-cutting work by the Group and is applied by its member entities: AFD and its subsidiaries Proparco and Expertise France (together referred the “Group”). The list concerns all of the new financing granted in foreign States and in Overseas France. The Group's exclusion list will be reviewed about every five years.

The strategic orientations of AFD Group reflect the mandate conferred on it by the French State, within the framework of the 2030 Agenda of the Sustainable Development Goals and the Paris Agreement. In this capacity, it promotes social and environmental sustainability through its activities and excludes financing for a list of

activities whose demonstrable or potential detrimental impacts on human rights, inequalities, the climate or biodiversity are deemed incompatible with this objective.

3.3.7 ADB Safeguard Policies

The Asian Development Bank (ADB) Safeguard Policy Statement (SPS), of July 2009, aims to promote sustainability of project outcomes by protecting the environment and people from projects' potential adverse impacts by avoiding adverse impacts of projects on the environment and affected people, where possible; minimizing, mitigating, and/or compensating for adverse project impacts on the environment and affected people when avoidance is not possible; and helping borrowers/clients to strengthen their safeguard systems and develop the capacity to manage environmental and social risks.

To help borrowers/clients and their projects achieve the desired outcomes, ADB adopts a set of specific safeguard requirements that borrowers/clients are required to meet in addressing environmental and social impacts and risks, as follows:

- **Safeguard Requirements 1 - Environment.** It aims to ensure the environmental soundness and sustainability of projects and to support the integration of environmental considerations into the project decision-making process.
- **Safeguard Requirements 2 - Involuntary Resettlement.** It aims to avoid involuntary resettlement wherever possible; to minimize involuntary resettlement by exploring project and design alternatives; to enhance, or at least restore, the livelihoods of all displaced persons in real terms relative to pre-project levels; and to improve the standards of living of the displaced poor and other vulnerable groups.
- **Safeguard Requirements 3 - Indigenous Peoples.** It aims to design and implement projects in a way that fosters full respect for Indigenous Peoples' identity, dignity, human rights, livelihood systems, and cultural uniqueness as defined by the Indigenous Peoples themselves so that they (i) receive culturally appropriate social and economic benefits, (ii) do not suffer adverse impacts as a result of projects, and (iii) can actively participate in projects that affect them.
- **Safeguard Requirements 4 - Special Requirements for Different Finance Modalities.** In addition to standard project loans, ADB provides a variety of investment instruments, including program loans, sector finance, multi-tranche financing facilities (MFFs), emergency assistance loans, financial intermediaries and corporate finance. Safeguard Requirements 4 outlines the special requirements for different financial modalities that borrowers/clients are requested to meet.

In May 2020, considering that the SPS has some limitations, the ADB completed a full review of the SPS and has proposed an **Environmental & Social Framework (ESF)**⁷, which provides broader coverage in terms of environmental and social areas and promotes non-discrimination, especially for disadvantaged or vulnerable groups. The ESF also promotes a more integrated risk-based and adaptive management approach that aims to focus safeguard assessment and management on key risks, and with several elements to improve efficiency, without compromising on final outcomes and compliance. Within the ESF, ten (10) E&S Standards are proposed.

The draft ESF was disclosed to the public on 7 September 2023 and will be open for written comments until 31 January 2024. ADB's Board of Directors is expected to consider the final policy paper for the ESF in the second quarter of 2024. The ESF will become effective in the second quarter of 2025. The ESF will supersede the SPS. For projects that have been approved or have had a concept note approved by ADB before the effective date of the ESF, the SPS will continue to apply.

⁷ [Environmental and Social Framework \(adb.org\)](https://www.adb.org/en/environmental-social-framework)

3.3.8 AIIB Environmental and Social Policy

The Asian Infrastructure Investment Bank (AIIB) Environmental and Social Policy (ESP) supports their clients in achieving environmentally and socially sustainable development outcomes.

The ESP (2022) comprises mandatory environmental and social requirements for each Project and is accompanied by:

- a) Three associated mandatory Environmental and Social Standards (ESSs) setting out requirements applicable to Bank Clients on, respectively:

ESS 1 – Environmental and Social Assessment and Management;

ESS 2 – Land Acquisition and Involuntary Resettlement;

ESS 3 – Indigenous Peoples; and

- b) An Environmental and Social Exclusion List (ESEL).

To facilitate implementation of the ESP, including the ESSs and ESEL, mandatory procedures have been issued by the Bank's President in a Directive on Environmental and Social Policy. The Directive describes the Bank's roles and responsibilities and environmental and social information disclosure requirements.

3.3.9 Applicable Treaties and Conventions

In addition to the main national and international legislation and regulations on environmental requirements mentioned above, Kazakhstan is also party to several international treaties relevant to E&S aspects.

Table 3: Relevant International Treaties to which Kazakhstan is signatory.

No	Name conventions, agreements	Document of accession of the Republic of Kazakhstan / ratification
1	Convention on Biological Diversity. Rio - de - Janeiro, May 22, 1992	RK Law on ratification of 19.08.1994, No 918
2	The UN Convention to Combat Desertification	RK Law on ratification of 07.07.1997 No 149-1
3	United Nations Framework Convention on Climate Change (UNFCC), Rio - de - Janeiro, June 16, 1992	RK Law on ratification of 04.05.1995 № 2260
4	Framework Convention for the Protection of the Marine Environment of the Caspian Sea (Tehran, November 4 of 2003)	RK Law on the Ratification of 13 December 2005 No 97-III.
5	Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal. Basel, 20-22 March 1989	RK Law on ratification of 10.02.2003, No 389-II
6	Stockholm Convention on Persistent Organic Pollutants. Stockholm, May 22, 2001	RK Law on ratification of 07.06.2007. No 259
7	Convention on the Transboundary Effects of Industrial Accidents	RK Law on ratification of 23.10.2000 No 91-II
8	Convention on Long-range Transboundary Air Pollution. Geneva, 13 November 1979	RK Law on ratification of 23.10.2000, No 89-II
9	Convention on Environmental Impact Assessment in a Transboundary Context Espoo (Finland), 25 February 1991	RK Law on ratification of 21.10.2000, No 86 -II
10	Convention on the Protection and Use of Transboundary Watercourses and International Lakes, Helsinki 17.03.1992	RK Law on ratification of 23.10.2000 No 94-II
11	Vienna Convention for the Protection of the Ozone Layer. Vienna, March 22, 1985	Act of accession of Kazakhstan to the Vienna Convention on 30.10.1997 No 177-I

12	Montreal Protocol on Substances that Deplete the ozone layer. Montreal, September 16, 1987	Law of the Republic of Kazakhstan on joining from 30.10.1997g. No 176
13	Montreal Protocol on Substances that Deplete the Ozone Layer and the London Amendment thereto (May 2002)	Law of the Republic of Kazakhstan on joining from May 7, 2001, No 191-II
14	Convention of the World Meteorological Organization, October 11, 1947	Resolution of accession to the Convention signed 18.12.1992r. No 1791-XII
15	Convention on public participation in decision-making in the field of environmental medium (Aarhus)	RK Law on ratification of 23.10.2000 No 92-II
16	The Rotterdam Convention on the Prior Informed Consent Certain Hazardous Chemicals and Pesticides in International Trade	RK Law on ratification of 20.03.2007 No 239
17	Convention for the Protection of Cultural and Natural Heritage	RK Law on ratification of 29.07.1994
18	<p>The Ramsar Convention on Wetlands - Wetlands of International Importance especially as Waterfowl Habitat.</p> <p>The Convention on Wetlands, known as the Ramsar Convention⁸, is an intergovernmental environmental treaty established in 1971 by UNESCO, which came into force in 1975. It provides for national action and international cooperation regarding the conservation of wetlands, and wise sustainable use of their resources. Ramsar identifies wetlands of international importance, especially those providing waterfowl habitat. A Ramsar site is a wetland site designated to be of international importance under the Ramsar Convention</p>	RK joined on 13.12.2005, No 94-III
19	Convention on International Trade in Endangered Species of Wild Fauna and Flora, which are under Endangered	RK Law on ratification of 06.04.1999, No 372-1
20	<p>Convention on the Conservation of Migratory Species of Animals (Bonn Convention, 1979).</p> <p>As an environmental treaty of the United Nations, the Convention of Migratory Species (CMS), signed on 1979 in Bonn, provides a global platform for the conservation and sustainable use of migratory animals and their habitats. CMS brings together the States which migratory animals pass through, the Range States, and lays the legal foundation for internationally coordinated conservation measures throughout a migratory range.</p> <p>As the only global convention specializing in the conservation of migratory species, their habitats and migration routes, CMS complements and co-operates with a number of other international organizations, NGOs and partners in the media as well as in the corporate sector. In this respect, CMS acts as a framework Convention.</p> <p>UN CMS has created an Energy Task Force, which aims to develop best practice including for renewables sector⁹.</p>	RK Law on ratification of 13.12.2005, No 96
21	"On ratification of the Amendment to the Montreal Protocol on Substances that Deplete Ozone Layer, adopted in Montreal on 1517 September 1997 "	RK Law on ratification of April 6, 2011, No 426-IV
22	"On ratification of the Amendment to the Montreal Protocol on Substances that Deplete Ozone Layer, adopted in Copenhagen on 23-25 November 1992 "	RK Law on ratification of 23. 04. 2014 No 198-V
23	Convention on Civil Liability for Oil Pollution Damage	RK Law on ratification of 05.06.1994 No 244

⁸ <https://www.ramsar.org/>

⁹ <https://www.cms.int/en/taskforce/energy-task-force>.

24	Convention for the Prevention of Pollution from Ships	RK Law on ratification of 4.05.1994 r. No 244
25	Convention on the Prohibition of Military or Any Other Hostile Use of impact on the environment	RK Law on ratification of 20.02.1995, No 301-X-III
26	Kyoto Protocol to the UN Framework Convention on Climate Change	RK Law on ratification of March 26, 2009, No 144-IV
27	The Cartagena Protocol on Biosafety to the Convention on Biological Diversity	RK Law on ratification of June 17, 2008, No 43-IV
28	Protocol Concerning Regional Preparedness, Response, and Cooperation Incidents oil pollution, the Framework Convention for the Protection of the Marine Environment Caspian Sea	Signed in 19.05. 2018, No 718
29	Protocol for the Protection of the Caspian Sea against pollution from land-based sources and Land-based Activities in the Framework Convention for the Protection of the Marine Environment Caspian Sea	Signed in 1.11. 2021 № 71-VII
30	On ratification of the Protocol on Pollutant Release and Transfer Registers to the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters.	Law of the Republic of Kazakhstan dated December 12, 2019, No. 279-VI

Moreover, Kazakhstan has ratified several fundamental labour standards established by the International Labour Organization (ILO).

International labour standards are legal instruments drawn up by the ILO's constituents (governments, employers and workers) and setting out basic principles and rights at work. They are either Conventions (or Protocols), which are legally binding international treaties that may be ratified by member states, or Recommendations, which serve as non-binding guidelines. In many cases, a Convention lays down the basic principles to be implemented by ratifying countries, while a related Recommendation supplements the Convention by providing more detailed guidelines on how it could be applied. Recommendations can also be autonomous, i.e. not linked to a Convention. Once a standard is adopted, member states are required under article 19(6) of the ILO Constitution, to submit it to their competent authority (normally Parliament) within a period of twelve months for consideration. In the case of Conventions, this means consideration for ratification. If it is ratified, a Convention generally comes into force for that country one year after the date of ratification.

The ILO Governing Body had initially identified eight “fundamental” Conventions, covering subjects that were considered to be fundamental principles and rights at work: freedom of association and the effective recognition of the right to collective bargaining; the elimination of all forms of forced or compulsory labour; the effective abolition of child labour; and the elimination of discrimination in respect of employment and occupation. These principles were also covered by the ILO Declaration on Fundamental Principles and Rights at Work (1998). Following the adoption of the Protocol of 2014 to the Forced Labour Convention, 1930, a ninth ILO instrument was then considered as “fundamental”. At the 110th Session of the International Labour Conference in June 2022, the ILC adopted a Resolution on the inclusion of a safe and healthy working environment in the ILO’s framework of fundamental principles and rights at work. As a result, the ILO Declaration on Fundamental Principles and Rights at Work, 1998, has been amended to this effect and the Occupational Safety and Health Convention, 1981 (No. 155) and the Promotional Framework for Occupational Safety and Health Convention, 2006 (No. 187) are now considered as fundamental Conventions within the meaning of the 1998 Declaration, as amended in 2022.

Kazakhstan has ratified the following ILO conventions:

- Convention No. 29 on Forced Labour and Convention No. 105 on the Abolition of Forced Labour;
- Convention No. 138 on Minimum Age and Convention No. 182 on the Worst Forms of Child Labour;

- Convention No. 111 on Discrimination (Employment and Occupation);
- Convention No. 87 on Freedom of Association and Protection of the Right to Organize;
- Convention No. 98 on the Right to Organize and Collective Bargaining;
- Convention No. 100 on Equal Remuneration.

3.4 Wind Sector Relevant Guidelines and Protocols

Numerous guidelines have been developed with the purpose of helping developers, borrowers, Public Authorities and Institutions in preparing and assessing new WPPs. These are briefly described in the following sections.

3.4.1 Bird Life International

Since the late 1970s, BirdLife Partners have worked to identify, document and protect the places of greatest significance for the conservation of the world's birds called Important Bird and Biodiversity Areas (IBAs). BirdLife Partners and other experts have to date identified and documented more than 13,000 sites (International Bird Areas, IBAs) in over 200 countries and territories worldwide, as well as in the marine environment. These sites provide the BirdLife Partnership and others with a focus for conservation action, planning, and advocacy. BirdLife Partners are engaged in a diverse range of activities at and for IBAs, including monitoring, research, management, restoration, public awareness, safeguard and the promotion of sustainable economic alternatives.

Similarly, on the IBA criteria, BirdLife supported the IUCN in the development of the Key Biodiversity Area (KBA) Standard for identifying sites that contribute significantly to the global persistence of biodiversity.

3.4.2 EUROBATS recommendations and best practice guidelines

The *Agreement on the Conservation of Populations of European Bats*¹⁰ (EUROBATS) entered into force in 1994. In 2001, the Agreement became part of the United Nations Environment Programme (UNEP). As of May 2019, 37 out of 63 Range States are Parties to the Agreement. EUROBATS aims to protect all 51 European bat species through legislation, education, conservation measures and international co-operation with Agreement members and with those who have not yet joined. The Agreement provides a framework of co-operation for the conservation of bats throughout Europe, Northern Africa and the Middle East.

Key requirements include:

- Consider bats at regional level during designating priority area for wind energy development;
- Consider locating wind turbines away from narrow bat migration and commuting routes as well as from areas where bats gather for foraging and roosting;
- Create buffer zones around nationally and regionally important roosts;
- Do not install wind turbines within all types of woodland or within 200 m due to the high risk of fatalities;
- Construction Phase activities that are likely to have an impact on bats should be planned, whenever possible, for times of day/year when they do not impact bats. This requires local knowledge about the bat species present in the area, knowledge of the presence of hibernacula and maternity roosts, and an understanding of their annual life cycle;

¹⁰ https://www.eurobats.org/official_documents/agreement_text

- Construction should take place at appropriate times to minimize impacts on noise, vibrations, lighting, and other related disturbance on bats;
- During operation consideration should be given to the use of planning and operational conditions on development permissions for wind farm projects to restrict the operation of wind turbines at times of peak bat activity such as during the autumn migration and swarming periods. Possible planning and operational conditions could include shutting down the turbines during the night during critical periods of the year.

3.4.3 Good Practice Handbook on the Design of Post-Construction Monitoring of Bird and Bat Fatalities Wind Energy Facilities

The Good Practice Handbook (GPH) is being prepared for IFC, KFW and EBRD by a consultant team for a pool of International Financial Institutions as a briefing note for the United Nations Convention on Migratory Species Energy Task Force (UN CMS TSF) and it is specifically related to direct impacts to bird and bat populations resulting from collisions. The main focus of the GPH is onshore wind projects, however the methods are intended to be applicable to transmission and distribution lines as well. The GPH will set EBRD's methodology for post construction monitoring of fatalities through carcass surveys and will help with monitoring post construction impacts and verify these in a systematic manner. Although not specifically relevant for Scoping phase, it will be relevant during ESIA process.

3.4.4 Industry Guidance Document – Decommissioning of Onshore Wind Turbines

Although many wind turbines in Europe today are already reaching their maximum lifespan, there is still no international standard for the decommissioning of wind turbines. WindEurope therefore launched a Task Force for Dismantling and Decommissioning to produce guidelines for sustainable decommissioning. The document¹¹ summarises that work with the aim of inputting the elaboration of an international standard through the International Electrotechnical Commission. As such, the document should be used as non-prescriptive general guidance, providing only high-level information on decommissioning and dismantling steps for onshore wind farms.

3.4.5 Scottish Natural Heritage Guidance Notes

Scotland's Nature Conservation Agency (now known as NatureScot) has published a number of guidance notes and studies to support the developers and the authorities in the process of authorization of new wind farms. The more relevant are:

- *Scottish Natural Heritage Wind Farm General pre-application and scoping advice for onshore wind farms*¹², a note to support in the scoping phase of a project;
- *Recommended bird survey methods to inform impact assessment of onshore wind farms*¹³;
- *Siting and Designing Wind Farms in the Landscape*¹⁴ helps to guide wind farms towards those landscapes most able to accommodate them;
- *Guidance - Assessing the cumulative impact of onshore wind energy developments*¹⁵.

¹¹ [WindEurope-decommissioning-of-onshore-wind-turbines.pdf](#)

¹² [Advice on wind farm development | NatureScot](#)

¹³ [Recommended bird survey methods to inform impact assessment of onshore windfarms | NatureScot](#)

¹⁴ [Siting and designing wind farms in the landscape - version 3a | NatureScot](#)

¹⁵ [Guidance - Assessing the cumulative landscape and visual impact of onshore wind energy developments | NatureScot](#)

3.4.6 IUCN – Mitigating biodiversity impacts associated with solar and wind energy development

In 2021 it was released by The Biodiversity Consultants, the IUCN - *Mitigating biodiversity impacts associated with solar and wind energy development – Guidelines for project developers*¹⁶, a document to provide practical support for solar and wind energy developments (onshore and offshore) by effectively managing risks and improving overall outcomes related to biodiversity and ecosystem services. The Guideline also includes some practical mitigation solutions that can be adopted by developers, investors and operators.

3.5 Project Standards

To meet Lenders' requirements, the Project is required to comply with the most stringent limits defined in the applicable legislation, regulation, and standards.

The comparison among the different limits to define the Project standards is detailed further below.

Water survey

Considering the need of water for drinking and construction purposes (e.g., concrete preparation, firefighting, kitchen feeding) the site workers will access groundwater.

WSP team conducted the groundwater sampling and testing to assess the contamination levels.

In order to adopt the most stringent threshold limit values, WSP considered the following Project standards:

- World Health Organization (WHO) Guidelines for drinking-water quality (4th edition 2022);
- Hygienic Standards for Safety Indicators of Domestic-Drinking and Cultural-Household Water Use, approved by the Order of the Minister of Health of the Republic of Kazakhstan dated November 24, 2022, No. ҚР ДСМ-138" (*Adilet.zan.kz. 2022 - О внесении изменений и дополнений в некоторые законодательные акты Республики Казахстан по вопросам защиты животных, On Amendments and Additions to Certain Legislative Acts of the Republic of Kazakhstan on Animal Protection*). Reference standard values considered consist of thresholds set for drinking water (almost all parameters), domestic water bodies (only K, NO₂ and BOD₅) and fishery water bodies (only NH₄).

Table 4: Groundwater Standards – Threshold limit values adopted as Project standards.

Parameters	Units	WHO Standards, 4 th edition 2022	National Standards	Project Standards (µg/l)
As Arsenic	µg/l	10	50	10
Al Aluminium	µg/l	200	500	200
Ba Barium	µg/l	1300	100	100
B Boron	µg/l	2400	500	500
Cd Cadmium	µg/l	3	1	1

¹⁶ [2021-004-En.pdf \(iucn.org\)](#)

Parameters	Units	WHO Standards, 4 th edition 2022	National Standards	Project Standards (µg/l)
Cr Chromium	µg/l	50	50	50
Cu Copper	µg/l	2000	1000	1000
Fe Iron	µg/l	<i>Not of health concern at levels causing acceptability problems in drinking-water.</i>	300	300
Pb Lead	µg/l	10	30	10
Mn Manganese	µg/l	80	500	80
Hg Mercury	µg/l	6	0,5	0,5
Ni Nickel	µg/l	70	10	10
Th Thorium	Bq/l	<i>Guidance levels for the natural occurring radioactive isotopes Thorium-230 (belonging to the uranium decay series), Thorium-232 (that starts the thorium decay series) and Thorium-228 (belonging to the thorium decay series) are of 1 Bq/l. This pollutant is part of the radiological survey, here will be assessed only his existence/absence.</i>	none	0
Zn Zinc	µg/l	<i>No health-based guideline value is proposed for zinc in drinking-water. However, zinc concentrations at levels above 3 mg/l may not be acceptable to consumers.</i>	5000	3000
Mg Magnesium	mg-eq/L	<i>Total dissolved solids (TDS) comprise inorganic salts (principally calcium, magnesium, potassium, sodium, bicarbonates, chlorides and sulfates). This value is considered not of health concern at levels found in drinking-water.</i>	<i>Hardness (concentration of Ca and Mg) maximum 7 mg-eq/L</i>	7
Ca Calcium	mg-eq/L	<i>TDS comprise inorganic salts (principally calcium, magnesium, potassium, sodium, bicarbonates, chlorides and sulfates).</i>	<i>Hardness (concentration of Ca and Mg) maximum 7 mg-eq/L</i>	7

Parameters	Units	WHO Standards, 4 th edition 2022	National Standards	Project Standards (µg/l)
		<i>This value is considered not of health concern at levels found in drinking-water.</i>		
Na Sodium	µg/l	<i>TDS comprise inorganic salts (principally calcium, magnesium, potassium, sodium, bicarbonates, chlorides and sulfates). This value is considered not of health concern at levels found in drinking-water.</i>	200000	200000
K Potassium	µg/l	<i>TDS comprise inorganic salts (principally calcium, magnesium, potassium, sodium, bicarbonates, chlorides and sulfates). This value is considered not of health concern at levels found in drinking-water.</i>	100	100
Cl Chloride	µg/l	5000	305000	5000
HCO ₃ Bicarbonate	µg/l	<i>Total dissolved solids (TDS) comprise inorganic salts (principally calcium, magnesium, potassium, sodium, bicarbonates, chlorides and sulfates). This value is considered not of health concern at levels found in drinking-water.</i>	400000	400000
SO ₄ Sulfate	µg/l	<i>TDS comprise inorganic salts (principally calcium, magnesium, potassium, sodium, bicarbonates, chlorides and sulfates). This value is considered not of health concern at levels found in drinking-water. No health-based guideline value is proposed. because of the gastrointestinal effects resulting from ingestion of drinking-water containing high sulfate levels, it is recommended that health authorities be notified of sources of drinking water that contain sulfate concentrations in excess of 500 mg/l.</i>	500000	500000
BOD	µgO ₂ /l	none	3000	3000

Parameters	Units	WHO Standards, 4 th edition 2022	National Standards	Project Standards (µg/l)
Biochemical Oxygen Demand				
COD Chemical Oxygen Demand	µgO ₂ /l	none	15000	15000
TSS Total Suspended Solids	µg/l	Mainly consisting of turbidity, expressed as nephelometric turbidity units (NTU). It describes the cloudiness of water caused by suspended particles (e.g. clay and silts), chemical precipitates (e.g. manganese and iron), organic particles (e.g. plant debris) and organisms. From a health perspective, the limit value shall be NTU<1 or – where this is not achievable – at least <5.	250	250
TPH Petroleum Hydrocarbons	µg/l	Exposure to the constituents of petroleum products through drinking-water is frequently short term, as the result of an accidental spill or short-term incident. Such incidents may lead to high concentrations of total petroleum hydrocarbons. However, a number of the most soluble aromatic hydrocarbons will be detectable by taste or odour at concentrations below those concentrations of concern for health, particularly for short-term exposure.	100	100
Total faecal coliform	µg/l	Water intended for human consumption should contain no faecal indicator organisms.	Absence in 100 ml	0
Phosphate	µg/l	Phosphate is not harmful to humans. Phosphates to drinking water to prevent the release of metals in drinking water.	3500	3500
Oxidizability	µg/l	The oxidizability content points out the existence of a contamination of organic matter.	5000	5000
Ammonium NH ₄	µg/l	No health-based guideline value is proposed. Ammonia in drinking-water is not of immediate health relevance, and therefore no health-based guideline value is proposed. Toxicological effects are	500	500

Parameters	Units	WHO Standards, 4 th edition 2022	National Standards	Project Standards (µg/l)
		<i>observed only at exposures above about 200 mg/kg body weight.</i>		
Nitrate NO ₃	µg/l	50000	45000	45000
Nitrogen Dioxide NO ₂	µg/l	3000	3300	3000

Environmental radiation survey

Given the existence of decommissioned uranium mining facilities, a radiological baseline study has been carried out within the Project area and closer to the uranium mines.

Regarding the ambient gamma dose rate, a threshold of 1 mSv was assumed. Regarding the soil, the dose rates on the soil samples were calculated from the specific activity of the samples and correlated with field data.

For conducting the ambient gamma dose rate $H^*(10)$ (in units of nSv/h) survey, the soil sampling and analysis by gamma spectrometry for the natural radionuclides U-238, Ra-226, Pb-210, Ra-228, Th-232, K-40 and the water sampling and analysis for radionuclides, the following guidelines, laws and regulations have been considered:

- ICRP Publication 103: The 2007 Recommendations of the International Commission on Radiological Protection. Annals of the ICRP, Elsevier, 2007;
- World Health Organisation (WHO): Guidelines for drinking-water quality, 4th Edition, Geneva, 2022;
- Dose Calculation Guidelines for Mining (Berechnungsgrundlage Bergbau). Federal Office for Radiation Protection, March 2010. urn:nbn:de:0221-20100329966;
- World Health Organization: Uranium in Drinking-water - Background document for development of WHO Guidelines for Drinking-water Quality, 2012, WHO/SDE/WSH/03.04/118/Rev/1;
- Council Directive 2013/51/EURATOM of 22 October 2013 laying down requirements for the protection of the health of the general public with regard to radioactive substances in water intended for human consumption. Official Journal of the European Union, L 296/12, 07.11.2013 Council Directive 2013/51/EURATOM.

The following table details the reference levels considered for the groundwater samples.

Table 5: Chemicals threshold limit values adopted as Project standards for the groundwater samples.

Parameters	Units	Project Standards (World Health Organisation WHO Guidelines for drinking-water quality. 4 th Edition, 2022)
U-238	Bq/l	10
U-234	Bq/l	1
Ra-226	Bq/l	1
Pb-210	Bq/l	0.1

Parameters	Units	Project Standards (World Health Organisation WHO Guidelines for drinking-water quality. 4 th Edition, 2022)
Pb-210	Bq/l	0.1
Ra-228	Bq/l	0.1
U	µg/l	30*

*a more stringent threshold of **15 µg/l** was provided in the WHO guidelines 3rd Edition, 2004

Noise

Considering the expected noise emissions during the construction phase, WSP considered the following Noise standards.

Table 6: Noise Level Guidelines (IFC Environmental Health and Safety Guidelines).

Environment	Time Base	Unit	Project Standards (as per IFC guidelines)
Residential; institutional; educational ¹⁷	Day time 07:00 - 22:00	LAeq [dB]	55
	Nigh time 22:00 - 07:00	LAeq [dB]	45
Industrial; commercial	Day time 07:00 - 22:00	LAeq [dB]	70
	Nigh time 22:00 - 07:00	LAeq [dB]	70

¹⁷ Guidelines values are for noise levels measured out of doors. For acceptable indoor noise levels for residential, institutional, and educational settings refer to WHO (1999).



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