



Environmental and Social Impact Assessment for the Kyzylorda Bypass, Kyzylorda-Zhezkazgan Road Project, Kazakhstan

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

Rev01

Consultancy Services Contract № 2021.002133

July 2021



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Prepared for:

European Bank for Reconstruction and Development

Prepared by:

ATMS Solutions Ltd.

Director: Dr. A. Ter-Torosyan

In cooperation with



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Rev01	Final draft of Environmental and Social Management Plan	Dr. Artak Ter-Torosyan		12.07.2021

List of Abbreviations

CFP	- Change Find Procedure
EHS	- Environmental, Health and Safety
EHSS	- Environmental, Health and Safety, Social
OHS	- Occupational Health and Safety
OHSMP	- Occupational Health and Safety Management Plan
E&S	- Environmental and Social
EBRD	- European Bank for Reconstruction and Development
EIA	- Environmental Impact Assessment
ESP	- Environmental and Social Policy
ESIA	- Environmental and Social Impact Assessment
ESMP	- Environmental and Social Management Plan
GBV	- Gender Based Violence
JSC	- Joint Stock Company
LLP	- Limited Liability Partnership
NC	- National Company
PET	- Polyethylene terephthalate
PR	- Performance Requirements
PPE	- Personal Protective Equipment
RoK	- Republic of Kazakhstan
SEP	- Stakeholder Engagement Plan
TMP	- Traffic Management Plan
ToR	- Terms of Reference
WHO	- World Health Organization
WMP	- Waste Management Plan

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

Background

The Government of Kazakhstan ("RoK") approached the European Bank for Reconstruction and Development ("EBRD" or "Bank") with the request to provide a sovereign guaranteed loan to KazAvtoZhol NC JSC¹ (the "Client") for a reconstruction of the 220 km section of Kyzylorda-Zhezkazgan road and a construction of a 14.6 km Kyzylorda Bypass (four lanes).

The Construction of the 14.6 km Kyzylorda Bypass (the "Project") is a greenfield Project that could result in potentially significant adverse future environmental and/or social impacts and thus EBRD has categorised the bypass construction as "A" per its 2019 Environmental and Social Policy. This means that a comprehensive Environmental and Social Impact Assessment ("ESIA") report and associated documents must be elaborated, followed by their public disclosure for a minimum period of 120 days.

The Bank has engaged ATMS Solutions Ltd. (Armenia) as a consultant to carry out the ESIA study of the 14.6 km Kyzylorda Bypass Construction Project and develop the related environmental and social documentation, including this Environmental and Social Management Plan ("ESMP") commensurate with the impacts and opportunities specific to the Project.

Rationale and Purpose

This ESMP establishes a critical link between the preventing, minimizing and mitigating measures/actions specified in the Project's Environmental and Social Impact Assessment ("ESIA") report and the proper implementation and management of the Environmental and Social (E&S) measures during the design, construction and operation stages of the Project. The ESMP:

- summarizes the anticipated environmental, health and safety, and social ("EHSS") impacts;
- provides details on the avoidance, mitigation or enhancement measures;
- outlines the responsibilities for implementing the avoidance, mitigation or enhancement measures; and,
- where possible, suggests cost estimates / links to funding sources for these measures.

The Project's influence on physical, biological, cultural and socio-economic environments identified and described in **Section 7** of the ESIA report have been evaluated in accordance with the Matrix of Impact / Risk significance (**Table 1**) and incorporated in this ESMP. For each impact, the relevant measures were proposed to prevent, minimize, mitigate or compensate the anticipated adverse influence and, where feasible, to enhance the potential positive impacts / benefits. A certain weight was assigned to each negative impact considering its magnitude, likelihood, duration, type and reversibility as well as the sensitivity of the E&S receptors to it (**Table 1**). Thus, the significance of each negative impact ranges from none (grey) to significant (red), whereas positive impacts are identified but not graded (green). The rated impacts, alongside the relevant mitigation and management actions, are given separately for the design, construction and operational stages in the ESMP (**Table 2**).

¹Joint Stock Company.

Table 1. Matrix of impact/risk significance

Major Impacts	Significant impact	
	Moderate impact	
Minor Impacts	Low impact	
	Negligible impact	
None		
Positive		

Structure of the ESMP and institutional arrangements

The proposed ESMP consists of three sections (A, B and C); each section summarizes the E&S mitigation and management measures for three main stages of the Project, respectively, as follows:

- A. Design / Preconstruction stage;
- B. Construction stage; and
- C. Operation stage.

Section A describes the E&S prevention, minimization and/or mitigation measures that must be implemented by the Client (or its regional branch) and/or its relevant contractors (as is specified in the below table in relation to each measure) during the elaboration of the design documents. The actions assigned to the relevant contractors should be integrated in their respective contracts.

Section B summarizes the E&S prevention, minimization and/or mitigation measures that should be incorporated into the Tender Documents for organizations/firms bidding to work on the Project construction components (Project's Construction Contractor) and will be a part of their contracts. The accomplishment of these measures will enhance the Projects' E&S performance.

Section C envisions E&S measures to be implemented by the Client (or its regional branch) during the operation of the constructed Kyzylorda Bypass and the related infrastructure.

The necessary training or capacity-building activities are integrated in the ESMP to ensure that the ESMP actions can be effectively implemented by the relevant staff during the design / preconstruction, construction, and operation stages.

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Table 2. Environmental and Social Management Plan

No	Impacts (section in the ESIA report)	Primary impact	Proposed mitigation measures	Residual impact	Responsibility for the mitigation/management measures	Implementation schedule (timelines)	Cost estimates
A. Design / Preconstruction stage							
A-1	Impact on Soil (topsoil and subsoil) (7.2.3)		<ul style="list-style-type: none"> The land-plots to be allocated for the Project must be reasonably minimized, Implement the measure listed in item A-5. 		Specialized company to be hired by Kyzylorda Regional Branch of KazAvtoZhol NC JSC	Before the start of construction works	Own resources of KazAvtoZhol NC JSC
A-2	Impact on Water resources (7.2.4)		<ul style="list-style-type: none"> Increase the approved 49 m³/day limits of groundwater use from the bore hole No. 1 and obtain a special Water Use Permit or consider the possibility to drill additional bore holes. <p><i>If required, the changes in the Project design must be made before the start of construction works.</i></p>		Specialized company to be hired by Kyzylorda Regional Branch of KazAvtoZhol NC JSC	Before the start of construction works	Own resources of KazAvtoZhol NC JSC
A-3	Traffic Impact (7.2.6)		<ul style="list-style-type: none"> Elaborate and implement a Traffic Management Plan ("TMP") to maintain operation of construction equipment without hampering flow of vehicles and safe pedestrian movement. 		Construction Contractor	Before the start of construction works	Within the Project's Construction Contract
A-4	Waste Generation and Impact (7.2.9)		<ul style="list-style-type: none"> Prepare and put into effect a Waste Management Plan ("WMP") for the Project, Train the workers engaged in waste management on provisions of the WMP. 		Construction Contractor	Before the start of construction works	Within the Project's Construction Contract
A-5	Impact on Flora (7.2.11)		<ul style="list-style-type: none"> Develop a Site Recultivation and Vegetation Management Plan (consider the saxaul (<i>Haloxylon</i>) as a main plant to be used for the recovery of disturbed 		Specialized company to be hired by the Construction Contractor	Before the start of construction works	Within the Project's Construction Contract

No	Impacts (section in the ESIA report)	Primary impact	Proposed mitigation measures	Residual impact	Responsibility for the mitigation/management measures	Implementation schedule (timelines)	Cost estimates
			lands) following the provisions of the national regulations ² and EBRD PR6. <ul style="list-style-type: none"> Perform the vegetation clearance strictly within the allocated areas. 		Construction Contractor	Before the start of construction works	Within the Project's Construction Contract
A-6	Impact on Fauna (7.2.11)		<ul style="list-style-type: none"> Develop a Biodiversity Action Plan ("BAP"), which has to envisage capturing the tortoises and boas and relocating them to similar biotopes in the surrounding territories. The relocation has to be done in April-May when the animals get out of hibernation but before beginning their coupling and nesting. The BAP is to be agreed with EBRD before being implemented. 		Specialized company to be hired by Kyzylorda Regional Branch of KazAvtoZhol NC JSC	Prior to the start of site works	Within the Project's Construction Contract
A-7	Impact on Cultural Heritage (7.2.13)		<ul style="list-style-type: none"> Elaborate a Change Find Procedure (CFP) as per EBRD PR8 and national regulations and train the staff to be engaged in excavation and earthworks in applying the CFP. 		Construction Contractor	Before the start of construction works	Within the Project's Construction Contract
A-8	Impact on Community Health and Safety (7.3.4)		<ul style="list-style-type: none"> Organize COVID-19 pandemic vaccination of workers to be engaged in Project implementation, As indicated in item A-3, elaborate and implement TMP to maintain operation of construction equipment without hampering 		Construction Contractor	Before the start of construction works	Within the Project's Construction Contract

²Follow the provisions of Decision No. 121 of the Kyzylorda regional maslikhat dated 16.05.2017 "On approval of the rules for the maintenance and protection of green zones, improvement of the territories of cities and settlements of the Kyzylorda region". <https://adilet.zan.kz/rus/docs/V17L0005871> and Order No. 346 of the RoK Minister of the national economy dated 17.04.2015 "On approval of Guidelines for the preparation of design documents for the recultivation of the disturbed lands". <https://adilet.zan.kz/rus/docs/V1500011256>

No	Impacts (section in the ESIA report)	Primary impact	Proposed mitigation measures	Residual impact	Responsibility for the mitigation/management measures	Implementation schedule (timelines)	Cost estimates
			flow of vehicles and safe pedestrian movement.				
A-9	Land Tenure Impacts (Section 7.3.5)		<ul style="list-style-type: none"> Replace the affected land plot with an equivalent plot located just next to the affected land. 		Kyzylorda Regional Branch of KazAvtoZhol NC JSC Akimats of the Syrdarya District and the City of Kyzylorda	Before the start of construction works	-
			<ul style="list-style-type: none"> Provide alternative grazing sites for the illegal land users. 		Kyzylorda Regional Branch of KazAvtoZhol NC JSC Akimats of the Syrdarya District and the City of Kyzylorda		-
			<ul style="list-style-type: none"> Fence the construction site and camp area in order to eliminate the access of ungulates animals. 		Construction Contractor		Within the Project's Construction Contract
A-10	Impact on accessibility and connectivity (Section 7.3.6)		<ul style="list-style-type: none"> Determine the locations of temporary passages and timelines (periods of times during the day) when the herdsmen convoy the ungulates to the grazing lands and back and ensure the safe convoy of the ungulates through the specially furnished passages, Secure that the alternative grazing land is provided to the farmers by the Akimats of Syrdarya district and City of Kyzylorda (as indicated in item A-9, 2nd point). 		Kyzylorda Regional Branch of KazAvtoZhol NC JSC Construction Contractor Akimats of the Syrdarya District and the City of Kyzylorda	Before the start of construction works	Within the Project's Construction Contract
A-11	Occupational Health and Safety,		<ul style="list-style-type: none"> Elaborate an Occupational Health and Safety Management Plan ("OHSMP") to 		Construction Contractor	Before the start of construction works	Within the Project's

№	Impacts (section in the ESIA report)	Primary impact	Proposed mitigation measures	Residual impact	Responsibility for the mitigation/management measures	Implementation schedule (timelines)	Cost estimates
	Workers Rights and Working Conditions Related Impacts (7.4)		<p>include the relevant national requirements and principles of good international practice.</p> <ul style="list-style-type: none"> • The OHSMP should cover at least the following: <ol style="list-style-type: none"> 1) Identification of key risks and hazards, 2) Allocation of OHS roles and responsibilities among the managers, engineers and technicians, 3) Briefing, training and knowledge examination, 4) OHS procedures and regulations, 5) Medical examination, 6) Emergency response, 7) Management of hazardous materials, chemicals and oil / fuel, 8) Fire and electrical safety, 9) Implementation of dangerous works, 10) Personal protective equipment, 11) Supervision of sub-contractors, 12) Attestation / certification of workplaces, 13) Accident investigation, etc. • Develop and implement a Worker Accommodation Management Plan (if required) that shall at least include: <ol style="list-style-type: none"> 1) Assessment of workers' accommodation needs through estimates of local workforce availability within the Project area, 2) Availability of existing housing, 				Construction Contract

No	Impacts (section in the ESIA report)	Primary impact	Proposed mitigation measures	Residual impact	Responsibility for the mitigation/management measures	Implementation schedule (timelines)	Cost estimates
			<ul style="list-style-type: none"> 3) Assessing impacts of workers' accommodation on communities, drafting of the relevant mitigation measures, 4) Applicable standards and guidance for workers' accommodation, 5) Management of workers' accommodation, including consultations and grievance mechanisms. 				
B. Construction stage							
B-1	Impact on Soil (topsoil and subsoil) (7.2.3)		<ul style="list-style-type: none"> • Store topsoil separately in a designated place, covered by waterproof tent, uncompressed and in such a manner that is does not lose its fertile characteristics, • Use the removed top-soil for: <ul style="list-style-type: none"> 1) strengthening of roadsides, slopes and culverts, 2) landscaping the areas adjacent to the bypass and lands that temporarily allocated for the Project needs, 3) landscaping of disturbed areas. • To ensure stability, the soil piles shall not be higher than 2 m. Manage the piles in a manner to avoid erosion and washing off, • Prohibit the operation of old and improper construction equipment and vehicles, • Transport the friable materials by trucks equipped with the waterproof canvas, 		Construction Contractor	During the construction works <i>Designated training with the staff of Construction Contractor before the start and regularly during the construction works</i>	Within the Project's Construction Contract

№	Impacts (section in the ESIA report)	Primary impact	Proposed mitigation measures	Residual impact	Responsibility for the mitigation/management measures	Implementation schedule (timelines)	Cost estimates
			<ul style="list-style-type: none"> • Store the oil products and chemicals separately, in special drums / tanks laid on the secondary containments or trays, • Conduct refilling of oil, fuel and other chemicals on special protective berms, • Equip the facilities designated for oil and chemicals storage and heavy trucks transporting the same materials with the relevant spill-kits, • Store the construction and other friable materials in separately allocated areas, fenced and covered with waterproof tent, • Train the staff on safe implementation of construction works and response on possible environmental accidents (spills, leakages, etc.), • Prepare soil quality monitoring plan (<i>conduct soil quality analysis at selected points within the 20 m from the road edge</i>). 				
B-2	Impact on Landscape and Visual Amenity (7.2.4)		<ul style="list-style-type: none"> • Install screens or fences along the periphery of the Construction Camp, construction sites and parking area (the fences shall have the same color as and blend with the surroundings), • Cover the stockpiles of construction materials and topsoil with the canvas having the same color as the surrounding area, 		Construction Contractor	During the construction works	Within the Project's Construction Contract

No	Impacts (section in the ESIA report)	Primary impact	Proposed mitigation measures	Residual impact	Responsibility for the mitigation/management measures	Implementation schedule (timelines)	Cost estimates
			<ul style="list-style-type: none"> Determine the dimensions of the stockpiles so that to avoid their visibility from the A17 and M32 roads, Limit operations to day-time only. 				
B-3	Traffic Impact (7.2.6)		<ul style="list-style-type: none"> Before the start of construction works and regularly perform traffic safety awareness raising campaign for the staff of Construction Contractor and Project suppliers, Install awareness raising posters along the A17 and M32 roads to inform drivers and passengers about the Project, terms of its implementation, speed limits, etc., Strictly follow the provisions of TMP while performing the construction works, Enforce speed limits and traffic rules to all operators. 		Construction Contractor	During the construction works Traffic safety awareness raising <i>with the staff of Construction Contractor before the start and regularly during the construction works</i>	Within the Project's Construction Contract
B-4	Greenhouse Gases Emissions (7.2.7)		<ul style="list-style-type: none"> Maximize the use of construction materials and products with recycled or secondary and low carbon content, from renewable sources and offering sustainability benefit, Use locally-sourced materials where available and practicable to minimize the distance materials are transported from source to site, Use efficient equipment/machinery and heavy trucks, and/or those powered by electricity from alternative/lower carbon fuels. 		Construction Contractor	During the construction works	Within the Project's Construction Contract

№	Impacts (section in the ESIA report)	Primary impact	Proposed mitigation measures	Residual impact	Responsibility for the mitigation/management measures	Implementation schedule (timelines)	Cost estimates
B-5	Impact on Air Quality (7.2.8)		<ul style="list-style-type: none"> • Use modern construction machinery equipped with engines compliant with at least Euro IV standards, with emission control and minimal noise characteristics, • Perform regular technical maintenance of used construction equipment and heavy vehicles, • While transporting friable materials keep the body of heavy vehicles covered, • Store friable materials at the Technical Site and top-soil under the waterproof tent, • Restrict excavation and earthworks during the periods of strong winds, • Apply regular watering to on-site and off-site dirt roads, especially during the excavation and other earthworks, • Minimize the period between excavation and backfilling works, • Prohibit construction materials and waste burning, • Develop and implement work timelines so as to: <ol style="list-style-type: none"> 1) minimize the number of simultaneously, operating machinery and equipment, 2) allocate different time slots for traffic of construction machinery and vehicles to and from construction sites, 		Construction Contractor	During the construction works	Within the Project's Construction Contract

№	Impacts (section in the ESIA report)	Primary impact	Proposed mitigation measures	Residual impact	Responsibility for the mitigation/management measures	Implementation schedule (timelines)	Cost estimates
			<ul style="list-style-type: none"> 3) minimize overall idle operation and fuel consumption, 4) avoid operating machinery and equipment during smog and atmospheric temperature inversions, • Enforce the use of Personal Protective Equipment ("PPE") and in particular the respirators and protective masks. 				
B-6	Waste Generation and Impact (7.2.9)		<p><i>General measures</i></p> <ul style="list-style-type: none"> • Elaborate and implement waste handling procedures for the construction operations, • Apply waste management hierarchy approach (prevention, minimization, reuse, recycling, energy recovery, disposal) while implementing the construction activities, • Equip the construction site, camp and associated infrastructure with the waste separate collection / storage containers and locations, • Furnish the waste storage / collection facilities with fences, fire extinguishers, secondary containment trays, oil and chemicals spill clean up kits, etc., • Sign contracts with the licensed waste recycling companies (at least for ferrous and non-ferrous scrap, Polyethylene Terephthalate ("PET") bottles and paper) to hand them over the generated wastes, 		Construction Contractor	During the construction works	Within the Project's Construction Contract

№	Impacts (section in the ESIA report)	Primary impact	Proposed mitigation measures	Residual impact	Responsibility for the mitigation/management measures	Implementation schedule (timelines)	Cost estimates
			<ul style="list-style-type: none"> Enforce the use of PPE and in particular, the protective clothes, shoes, gloves, respirator / masks for the workers dealing with the waste. 				
			<p><i>Waste transportation</i></p> <ul style="list-style-type: none"> Transport all types of wastes using adequate, sealed and covered transportation means in order to avoid the leakage or dispersal of the waste on roads and surroundings, Restrict to abandon the wastes on the route and/or to dispose them in unauthorized locations, Choose the routes involving the least risk for the transportation of waste from the area of its generation to its storage and recycling / disposal area, Instruct the waste truck drivers on waste transportation safety rules. 		Construction Contractor	During the construction works	Within the Project's Construction Contract
			<p><i>Household and construction waste management</i></p> <ul style="list-style-type: none"> Equip the construction site with household collection containers / bins, Sign a contract with household and construction waste collection companies ("Kyzylorda Tazaligi" LLP) for regular removal of household waste from the construction site. 		Construction Contractor	During the construction works	Within the Project's Construction Contract

№	Impacts (section in the ESIA report)	Primary impact	Proposed mitigation measures	Residual impact	Responsibility for the mitigation/management measures	Implementation schedule (timelines)	Cost estimates
B-7	Noise and Vibration Impact (7.2.10)		<ul style="list-style-type: none"> • Perform regular technical maintenance of used construction equipment and heavy vehicles, • Limit truck routes and speed (keep the recommended speed) where trucks may pass close to the sensitive receptors (in particular, when heavy trucks transporting the construction materials from Belkul railway station to the Project site), • Regulate the simultaneous operation of construction equipment (prevent the joint operation of noisy equipment), • Install mobile noise protective screens during construction works, if required, • Keep restrictions on working hours, weekends or public holidays, stop operation of construction equipment during night time (21:00-08:00), • Enforce the use of PPE and in particular, the protective devices capable to reduce the sound level at the ear to acceptable levels, • Provide employees engaged in "noisy" operations with additional 15 minutes break per 2 hours. 		Construction Contractor	During the construction works	Within the Project's Construction Contract
B-8	Impact on Flora (7.2.11)		<ul style="list-style-type: none"> • Start implementing the Site Recultivation and Vegetation Management Plan. 		A specialized company / agronomist to be hired by the Construction Contractor	After completion of bypass construction, during the landscaping works	Within the Project's Construction Contract

No	Impacts (section in the ESIA report)	Primary impact	Proposed mitigation measures	Residual impact	Responsibility for the mitigation/management measures	Implementation schedule (timelines)	Cost estimates
B-9	Impact on Fauna (7.2.11)		<ul style="list-style-type: none"> Conduct the excavation and earthworks starting from the July (avoid construction activities in breeding period between the mid of March and June) to October (beginning hibernation period), Stop the construction works when the nests of big birds are found, give them time and possibility to leave the site. 		Construction Contractor	During the construction works	Within the Project's Construction Contract
B-10	Impact on Cultural Heritage (7.2.13)		<ul style="list-style-type: none"> Maintain a 50-m buffer zone from the ethnographic period cemetery boundaries (Object 8). Any construction work should be prohibited within the buffer zone, Install the protective fence along the perimeter of the ethnographic period cemetery (Object 8), If necessary, coordinate protection measures in relation to other sacred objects for the period of the excavation / earthworks with the local executive body. 		Construction Contractor	During the excavation works	Within the Project's Construction Contract
B-11	Impacts on Public Facilities and Infrastructure (7.3.3)		<ul style="list-style-type: none"> Apply measures for mitigation of physical impact factors such as dust, noise, vibration and traffic limitations etc. potentially disturbing the visitors/customers of the affected facilities. 		Construction Contractor	As per the Sections 7.2.6, 7.2.8 and 7.2.10	Within the Project's Construction Contract
			<ul style="list-style-type: none"> Conduct regular discussions/consultations with the representatives of the public facilities and infrastructure, including proper management of grievances received. 		Kyzylorda Regional Branch of KazAvtoZhol NC JSC Construction Contractor	as per the Project's SEP provisions	Own resources of KazAvtoZhol NC JSC Within the Project's

№	Impacts (section in the ESIA report)	Primary impact	Proposed mitigation measures	Residual impact	Responsibility for the mitigation/management measures	Implementation schedule (timelines)	Cost estimates
							Construction Contract
B-12	Impact on Community Health and Safety (7.3.4)		<ul style="list-style-type: none"> • Restrict access to the construction site, install physical barriers around open trenches, as well as the warning signs, • Develop instructions for the security personal, including provisions on conflict prevention and resolution, • Organise the construction camp as per the IFC and EBRD guidance note on workers' accommodation (2009)³, • Implement a preventive mechanism for the infection diseases spread, including mandatory body temperature check at the beginning of each shift, prohibited access to the Project area with the flu-like symptoms, install hand sanitizers at the construction site, • Follow the technical specifications for the road construction to avoid failures during the Project operation stage, • Implement measures listed in items B-5 and B-7. 		Construction Contractor	During the construction stage	Within the Project's Construction Contract

³IFC (International Finance Corporation) and EBRD (European Bank for Reconstruction and Development). 2009. Guidance note: Workers' accommodation: processes and standards, https://www.ebrd.com/downloads/about/sustainability/Workers_accomodation.pdf

№	Impacts (section in the ESIA report)	Primary impact	Proposed mitigation measures	Residual impact	Responsibility for the mitigation/management measures	Implementation schedule (timelines)	Cost estimates
B-13	Impact on accessibility and connectivity (7.3.6)		<ul style="list-style-type: none"> • Appoint flagmen to regulate traffic at the entrance and exit points of the technological ground road, • During the construction stage provide the visitors of the cemetery and OTL technicians with the contact data of the person responsible for the traffic issues. This person should ensure save movement of the visitors and technician along the technological road to their destinations and back. 		Construction Contractor	During the construction stage	Within the Project's Construction Contract
B-14	Occupational Health and Safety, Workers Rights and Working Conditions Related Impacts (7.4)		<ul style="list-style-type: none"> • Assign a Health and Safety Manager for the Project, • During the construction stage implement the measures set in the OHSMP. 		Construction Contractor	During the construction stage	Within the Project's Construction Contract
			<ul style="list-style-type: none"> • Conduct third party labour audits of the Project's construction contractor (and its subcontractors) to assess the compliance of labour practices to the national regulations, ILO and EBRD requirements, including: <ol style="list-style-type: none"> 1) Human Resources ("HR") policies and employee documentation, 2) Child and forced labour, 3) Non-discrimination and equal opportunity, including existing practices to prevent and address violence and harassment, inter alia GBV, 		Specialized company to be hired by Kyzylorda Regional Branch of KazAvtoZhol NC JSC	Before the start and during the construction stage	Own resources of KazAvtoZhol NC JSC

No	Impacts (section in the ESIA report)	Primary impact	Proposed mitigation measures	Residual impact	Responsibility for the mitigation/management measures	Implementation schedule (timelines)	Cost estimates
			4) Wages, benefits and conditions of work, including workers' accommodation, 5) Grievance mechanisms, • Contractually oblige the construction contractor and subcontractors to adopt and follow a Code of Conduct for non-discriminatory employment.				
B-15	COVID-19 (7.4)		<ul style="list-style-type: none"> • Perform risk assessment of workplaces to be engaged in and/or to be created during Project implementation in respect of COVID-19 exposure pursuant to the WHO guidance⁴, • Define the rights, duties, and responsibilities of workers and managers engaged in Project implementation, • Elaborate COVID-19 prevention and management action plan (if required), <p><i>The EBRD Briefing Note on COVID-19 workplace risk assessment can be used as an alternative option to conduct a risk assessment of the Project's workplaces.</i></p>		Construction Contractor	During the construction stage	Within the Project's Construction Contract
C. Operation stage							
C-1	Impact on Geology (7.2.2)		<ul style="list-style-type: none"> • Plan erosion-resisting measures, such as strengthening the slopes of earth roadbed by hydroseeding. 		A specialized company to be hired by the Kyzylorda Regional Branch of KazAvtoZhol NC JSC	After completion of the bypass construction, during	Own resources of KazAvtoZhol NC JSC

⁴https://www.who.int/publications/i/item/WHO-2019-nCoV-Adjusting_PH_measures-Workplaces-2020.1

No	Impacts (section in the ESIA report)	Primary impact	Proposed mitigation measures	Residual impact	Responsibility for the mitigation/management measures	Implementation schedule (timelines)	Cost estimates
			<ul style="list-style-type: none"> Regularly monitor the state of and sedimentation in runoff water culverts and discharge outlets and ensure their safe operation. 		Kyzylorda Regional Branch of KazAvtoZhol NC JSC	<p>the landscaping works</p> <p>Every six month during the operation stage</p>	
C-2	Impact on Soil (topsoil and subsoil) (7.2.3)		<ul style="list-style-type: none"> Consider phytoremediation as a measure for reduction of soil contamination (if relevant). Regularly clean the roadbed of the Kyzylorda Bypass from garbage and debris. 		<p>A specialized company to be hired by the Kyzylorda Regional Branch of KazAvtoZhol NC JSC</p> <p>Municipal waste collection company Kyzylorda Regional Branch of KazAvtoZhol NC JSC</p>	<p>After completion of the bypass construction, during the landscaping works</p> <p>As per the approved municipal waste collection schedule</p>	Own resources of KazAvtoZhol NC JSC; Municipal waste collection company under its contract
C-3	Impact on Water resources (7.2.4)		<ul style="list-style-type: none"> Design and implement actions / solutions to minimize the potential contamination of the Kokjide irrigation channel (when operated) by the bypass runoff and debris. Regularly pump out and remove the sewage from the septic tank of planned rest area at km 13+745. 		<p>Design Company Kyzylorda Regional Branch of KazAvtoZhol NC JSC</p> <p>Specialized company "Kyzylorda Tazali"</p>	<p>When the Kokjide irrigation channel will be operated</p> <p>Regularly as per the agreed time-schedule</p>	Own resources of KazAvtoZhol NC JSC; Specialized company "Kyzylorda Tazali" under its contract
C-4	Impact on Landscape and Visual Amenity		<ul style="list-style-type: none"> Recultivate and landscape the Project area, 		A specialized company to be hired by Kyzylorda	After the commissioning of the bypass	Own resources of KazAvtoZhol NC JSC

No	Impacts (section in the ESIA report)	Primary impact	Proposed mitigation measures	Residual impact	Responsibility for the mitigation/management measures	Implementation schedule (timelines)	Cost estimates
	(7.2.5)		<ul style="list-style-type: none"> Create the green protective zones consisting of aboriginal (site specific) trees and shrubs (mainly haloxylon) on both sides of the bypass. Monitor the conditions of vegetation on the bypass planted green protective zones. 		Regional Branch of KazAvtoZhol NC JSC	Regularly as per the agreed time-schedule	A specialized company under its contract
C-5	Traffic Impact (7.2.6)		<ul style="list-style-type: none"> Equip the planned bypass with regulating pedestrian passways, where relevant, Install indicative marks and signs at the Kyzylorda Bypass entering and exit points, near the transport junctions and passways for herded animals. 		Kyzylorda Regional Branch of KazAvtoZhol NC JSC	After the commissioning of the bypass	Own resources of KazAvtoZhol NC JSC
C-6	Greenhouse Gases Emissions (7.2.7)		<ul style="list-style-type: none"> Duly perform the bypass technical maintenance and repair in order to maximize the operational life-time and minimize the need for maintenance and repair (and all associated emissions), Specify and use materials with a view to maximize the potential for reuse and recycling of the materials/elements at the end-of-life stage, Operate, maintain and refurbish the Project using best-practice approaches and efficient plants and equipment. 		Kyzylorda Regional Branch of KazAvtoZhol NC JSC	During the operation stage	Own resources of KazAvtoZhol NC JSC
C-7	Waste Generation and Impact (7.2.9)		<ul style="list-style-type: none"> Equip the road with banners informing people about their responsibility for illegal littering. 		Kyzylorda Regional Branch of KazAvtoZhol NC JSC	Within the six months after the commissioning of the bypass	Own resources of KazAvtoZhol NC JSC

№	Impacts (section in the ESIA report)	Primary impact	Proposed mitigation measures	Residual impact	Responsibility for the mitigation/management measures	Implementation schedule (timelines)	Cost estimates
			<ul style="list-style-type: none"> Equip the roadsides with household waste / litter collection containers. The containers must be regularly disinfected, Organize the regular collection and removal of the household waste from the containers installed along the bypass. 		Kyzylorda Regional Branch of KazAvtoZhol NC JSC Municipal waste collection company	Immediately after the commissioning of the bypass	Own resources of KazAvtoZhol NC JSC Municipal waste collection company under its contract
C-8	Noise and Vibration Impact (7.2.10)		<ul style="list-style-type: none"> Conduct noise dispersion modeling, design and implement noise protection measures (if commercial facilities are established along the bypass). 		A specialized company to be hired by Kyzylorda Regional Branch of KazAvtoZhol NC JSC	When the commercial facilities will be established at the bypass roadsides	Own resources of KazAvtoZhol NC JSC A specialized company under its contract
C-9	Impact on Flora (7.2.11)		<ul style="list-style-type: none"> Continue implementing the Site Recultivation and Vegetation Management Plan as applicable to the Project operations, Hire a specialized company / agronomist to: <ol style="list-style-type: none"> take care of the rehabilitated area, regularly monitor the recultivated and replanted areas. 	Negligible after 5-8 years from the bypass commissioning	A specialized company / agronomist to be hired by the Kyzylorda Regional Branch of KazAvtoZhol NC JSC	During the operation stage	Own resources of KazAvtoZhol NC JSC, a specialized company under its contract
C-10	Impact on Fauna (7.2.11)		<ul style="list-style-type: none"> Consider the possibility of furnishing the roadsides with natural fences (backfills of gravel) to limit the small animals' access to the roadbed. 		Kyzylorda Regional Branch of KazAvtoZhol NC JSC	Within the six months after the commissioning of the bypass	Own resources of KazAvtoZhol NC JSC

№	Impacts (section in the ESIA report)	Primary impact	Proposed mitigation measures	Residual impact	Responsibility for the mitigation/management measures	Implementation schedule (timelines)	Cost estimates
			<ul style="list-style-type: none"> Perform monitoring as per the BAP as well as a 5-year monitoring of the fauna species, in the areas along the bypass as well as on the recultivated lands (294.34 ha) temporarily allocated for the Project needs (preferably in spring season). If risks to or deaths of animals are detected, explore the reasons and take preventive actions (e.g., additional fencing or installation of warning signs). 		A specialized company to be hired by the Kyzylorda Regional Branch of KazAvtoZhol NC JSC	Within the five years after the commissioning of the bypass	Own resources of KazAvtoZhol NC JSC
C-11	Impact on Community Health and Safety (7.3.4)		<ul style="list-style-type: none"> Monitor the technical conditions of the bypass during its operational phase, provide timely maintenance if necessary, Limit and control the weight of trucks entering the bypass to avoid negative impacts of the overweight vehicles on its cover. 		Kyzylorda Regional Branch of KazAvtoZhol NC JSC	During the operation stage	Own resources of KazAvtoZhol NC JSC
C-12	Occupational Health and Safety, Workers Rights and Working Conditions Related Impacts (7.4)		<ul style="list-style-type: none"> Elaborate and implement a Health and Safety Management Procedure for the bypass maintenance works based on the Construction OHSMP and considering the lessons learned from the OHS performance from the construction activities, as well as the Client's existing experience, Follow the requirements of the relevant national OHS legislation. 		Kyzylorda Regional Branch of KazAvtoZhol NC JSC	During the operation stage	Own resources of KazAvtoZhol NC JSC