



**REPUBLIC OF KAZAKHSTAN
MINISTRY OF INVESTMENT AND DEVELOPMENT
COMMITTEE FOR ROADS**

**CENTER – WEST
REGIONAL DEVELOPMENT CORRIDOR PROJECT:**

**ENVIRONMENTAL AND SOCIAL
IMPACT ASSESSMENT**

**FINANCED BY INTERNATIONAL BANK FOR RECONSTRUCTION
AND DEVELOPMENT AND REPUBLIC OF KAZAKHSTAN**

NOVEMBER 2015

Prepared for:

**Committee for Roads
Ministry of Investment and
Development Republic of Kazakhstan
47 KabanbaiBatyr Ave, Transport Tower21
Astana CityAstana City Astana**

Prepared by:



КАЗДОРНИИ

KazdorNIIin association with SAPA SZ & SAEN

21 ManatauStr, 3rd Floor, Office 10,

Tel: +7 7172 51 81 17, E-mail: pmc_kazdornii@mail.ru

EXECUTIVE SUMMARY

Background

The proposed Centre West Regional Development Corridor project is part of the transit corridor “Baku-Astrakhan-Atyrau-Aktobe-Aktau-Turkmenistan border”, which connects Kazakhstan with Azerbaijan and Europe in the west, with Russia in the north, through Iran with countries of the Persian Gulf, and Uzbekistan and Turkmenistan in the south. Estimated 2,000 km of the Center West corridor will connect Astana with Akmola, Kostanai, Aktobe, Atyrau, and Mangistau oblasts, thus linking two of four urban agglomerations, and two second-tier towns identified in the Government of Kazakhstan Program for Regional Development (PRD). The Project is expected to contribute to the local development of the regions through which it passes and promote pro-poor growth by overcoming the spatial mismatch between the location of jobs and settlements for low-income residents. A pre-feasibility study launched at the initiative of the Bank in 2014 allowed a debate within the Ministry of Investments and Development (MoID) about the benefits and weaknesses of various alternatives. Based on it, a formal feasibility study development and respective discussions with communities along the corridor took place during 2015. Following consultations, the alignment and characteristics of the road were adjusted to the needs of local communities.

The Executive Summary describes environmental and social aspects of all components of the project and summarizes the results of various environmental and social studies.

Project Description

The proposed Centre-West road project is part of transit corridor “Baku-Astrakhan-Atyrau-Aktobe-Aktau-Turkmenistan border”, which connects Kazakhstan with Azerbaijan and Europe in the west, with Russia in the north, through Iran with countries of the Persian Gulf, and Uzbekistan and Turkmenistan in the south. Estimated 2,000 km Center-West Corridor will start in Astana and pass through Akmola, Kostanai, Aktobe, Atyrau, and Mangistau oblasts, thus linking two of four identified “urban agglomerations”, and two of the identified “second-tier” towns.

The Centre-West corridor will be part of an overall network upgrade program that will also enhance existing links between Astana and Almaty (Centre South from Astana - Pavlodar - Semei - Kalbatau - Ust-Kamenogorsk) and between Astana and Ust-Kamenogorsk (Centre East from Astana - Pavlodar -Semei - Kalbatau - Ust-Kamenogorsk). The Government is aiming for completion of all the corridors by 2020.

The construction will be mainly a Class II (2 lane) standard, which indicates a well-grounded consideration of standards and costs. There will be greenfield construction of total length of approximately 450 km of road sections (e.g. Zhanteke - Arkalyk, Turgay - Yrgyz).

Section 1 (170 km) starts from about 10 km west from the city center of Astana in suburban Astana, runs in a north-westerly direction toward Zhanteke and further West. This section consists primarily of an existing two lane paved road (in poor condition). It will be expanded to four lanes on the first 98km from Astana to Zhanteke, since it is expected to carry a traffic of about 7,000 vehicles per day and the potential for tourism development of the Zhanteke region and the Ramsar wetland around the lake Tengiz of Korghalzhyn. Tolling may also be considered along the four-lane section close to Astana and consistent with a broader tolling plan currently envisaged by the GOK.

Section 2 (220km) continues West after Zhanteke to Arkalyk. This section will be a green field project as there is no existing roads at present. The new road would go through a semi desert with scattered wetlands and mostly flat terrain with some agriculture land on the last 10 km towards Arkalyk.

Section 3 (290 km) uses the existing road that connects Arkalyk to Turgay. The road also connects settlements in between, all of them being modest in size. The road often runs in parallel to an hydrographic complex made of medium size rivers and their associated tributaries and wetlands.

Section 4 (190 km) continues west after Turgay to Yrgyz (20 km to the west past Yrgyz up to the junction with the existing Western Europe- Western China Corridor). This section consists of reconstruction of an existing gravel road in a very poor condition, not accessible during the spring or autumn.

Project Components

Component 1 (US\$1,208 million): Infrastructure development and Supervision. The component will finance civil works on about 900 km of road sections between Astana and Yrgyz (or further west to Shalkar, another 100 km-to be confirmed at negotiations) and consulting services for supervision of civil works. Land acquisition and road design costs will be covered from the GOK co-financing part, and not be financed from the Loan proceeds.

Component 2 (US\$6 million) Corridor Development. The component will support: (i) preparation of a Corridor Development Action Plan (Plan) and (ii) implementation of some key priority activities from the Plan. The objective of the component is to customize the corridor to local advantage and to ensure that economically disadvantaged sparsely populated and remote areas within the corridor in Akmola, Kostanay, and Aktobe oblasts are provided with reasonable access to basic services and new markets. Local development plans and existing strengths, resources, as well as services in demand along the alignment were assessed in consultation with local communities. The assessment identified agriculture, tourism, services, and education as strategic focus of the corridor. The Plan will support activities aimed at unlocking the potential of industries identified and capacity building for local communities, such as: the development of service areas for retail and sales of local food and crafts, tourist information, transport services, pharmacies, milk collection points from local farmers, support to livestock bazaars, etc.

Component 3 (US\$20 million) Operation and Maintenance: This component will allow the MoID to implement a strategy designed with the assistance of the Bank during the preparation of the road sector reform in 2012-2013. As the road will become a new republican road, it is necessary to create facilities and equipment for operation and maintenance.

Component 4 (US\$3 million) Road Safety: The component will be implemented by the Committee of Administrative Police of the Ministry of Interior (CAP) Kazakhstan's lead road safety agency with assistance from local consultants hired under the Project. The objective of this component is to help the Kazakh authorities design National Road Safety Strategy 2016-2020 (NRSS), strengthen institutional capacity in relation to the NRSS implementation, and increase road safety education and awareness of road users in Kazakhstan.

Component 5 (US\$ 2million) Project Management: The component will be covered from the GoK budget. CR identified KazAvtozhol (KAZ) as a Project Management Unit (PMU) for the CWP and other roads projects to be financed by other IFIs. While the MoID through CR will retain the overall responsibility for the project implementation, KAZ is expected to assist the CR on day-to-day operations managing project activities, such as supervision of social, environmental, and fiduciary safeguards, provision of logistical support, M&E, inter-agency coordination, etc.

World Bank Safeguards Requirements

The project is classified Environmental Category A as per World Bank environment policy OP/BP 4.01

Environmental Assessment. This classification is substantiated by potential physical environmental and social impacts associated with rehabilitation and reconstruction of existing road to the Road Category II and greenfield construction of approximately 450 km of road sections (e.g. Zhanteke - Arkalyk, Turgay - Yrgyz) .

Environmental Assessment OP/BP 4.01 (triggered): The potential negative impacts during construction works under Component 1 include operation of borrow areas, generation of waste (construction materials, spent consumables, household waste and wastewater from camps), excessive land use, topsoil destruction and erosion.

Component 2 will finance preparation of a Corridor Development Action Plan and implementation of some key priority activities from the Plan (with focus on agriculture, tourism, services, etc.). The Plan will take into account potential negative environmental impacts of economic activity (agriculture, small businesses, tourism) and will provide guidance on mitigation measures to avoid or minimize these impacts.

Component 3 will finance the road's operation and maintenance activities. Environmental aspects of road maintenance, such as location and design of maintenance depots, transport/storage/application of de-icers, maintenance of road maintenance machinery will be addressed in design documentation and schedules of depots.

Component 4 will finance various road safety measures which will generally have positive social impact in the project area.

The ESIA report contains an adequate project description and analysis of baseline data and, potential impacts and contains a framework of necessary mitigation measures. Site-specific EMPs and Guidance Notes for specific economic activities under Corridor Development Action Plan will be prepared to provide clear guidance and contractual obligations for environmental due diligence in further project design and implementation.

Natural Habitats OP/BP 4.04 (triggered):

The Project is not expected to impact established protected areas. The alignment goes through Akmola, Kostanay and Aktobe regions and 25km away from Kurgaldzhyn State Nature Reserve, located at the territory of the Kurgaldzhyn district, Akmola region. Nature Reserve Altyn Dala located in Kostanai region is 75-80 km away from the alignment in Amangeldy and 50-60 km - in Zhangeldinskiy district. About 90 km of the alignment will pass at a distance of 40-50km from the territory of Yrgyz-Turgai state nature reserve.

According to the data available at the Association for Conservation of Biodiversity in Kazakhstan and International Union for Conservation of Nature (IUCN) the project location passes through the summer habitat range and migration routes of Saiga tatarica, a critically endangered species of antelope. Saiga migrates in spring from the South of Kazakhstan to Akmolinskaya, Kostanaiskaya and Aktyubinskaya oblasts, the basins of the rivers Irgiz, Turgay, Ulyshilanshik and Tersakkan and Lake Tengiz. Traffic flow and the noise of moving vehicles may eventually create conditions that prevent saiga from crossing. Associated facilities (e.g. construction camps or borrow pits) may divert animals to other areas or migration routes. Additional potential impacts include cases when animals are hit by moving vehicles or hunted by construction workers or local inhabitants. Therefore, the OP 4.04 Natural Habitats is triggered for the project. Specific areas with high concentrations of saiga and potential critical habitats and their migration routes will be surveyed. The Client and their contractors will establish collaboration with environmental organizations that perform saiga monitoring which will become an important part of preparation and

implementation of site-specific EMPs. According to the report "Saiga crossing options" (by Kirk A. Olson from Smithsonian Conservation Biology Institute for the Frankfurt Zoological Society, Association for the Conservation of Biodiversity of Kazakhstan, Fauna & Flora International and Convention on Migratory Species) properly designed underpasses/crossing points are considered to be sufficiently effective and acceptable measure for saiga migration and the road would not lead to significant degradation of the habitat (i.e. not significantly interfere with migration). Specific locations for such crossings (if needed) will be determined during preparation of site-specific EMPs.

Physical Cultural Resources OP/BP 4.11 (triggered)

The inventory of known physical cultural resources conducted in the project area has not revealed PCR that may be potentially affected by the project. However, the Policy on Physical Cultural Resources OP/BP 4.11 should be triggered due to presence in the project area of so-called Turgay geoglyphs - unique and previously unstudied large-scale earthworks in Turgay region of northern Kazakhstan. While Turgay geoglyphs have not been designated a status of historical or cultural monuments to be protected according to legislation of Kazakhstan, the Client deems appropriate to take into account the sites with geoglyphs in project design and proactively ensure protection and support promotion of geoglyphs as cultural heritage and potential tourism attraction. The team is currently identifying the location of geoglyphs in relation to the proposed alignment. In case there is a threat of damage to geoglyphs, re-routing of the alignment will be done at design stage. If re-routing is not possible, Site Management Plan will be done as part of site-specific EMPs. The project will also support further research and promotion of geoglyphs as historic and cultural heritage and a tourism attraction in the project area.

Forests (OP/BP 4.36, not triggered, but addressed in ESIA)

As forests do not exist within the project area this OP/BP 4.36 is not triggered. Low-value trees and bushes in the roadside shall be cut because of the construction of the road, it will be filled according to the activities in the EAP (Environmental Management Plan). This will be specified in a separate agreement on landscaping/afforestation.

Involuntary Resettlement (OP/BP 4.12, triggered).

The project triggers OP/BP 4.12 policy primarily due to land acquisition activities associated with construction works. The considering the scale of the project the impacts are not expected to be significant and are related to construction of bypasses, noise, relocation of any road kiosks or small scale businesses and locations of cattle-crossing points. The Resettlement Policy Framework (RPF) has been prepared for the project to guide any necessary land activities for the proposed project. The principles and standards incorporated into the Resettlement Policy Framework have been agreed between the CR and the Bank for use throughout the Centre West Regional Development Corridor Project. Once the detailed designs are finalized, the Client will prepare the Resettlement Action Plan (RAP) in accordance with the provisions of the Resettlement Policy Framework.

The RAP will specify the procedures to be followed by the Government of Kazakhstan through the Committee for Roads (CR) and the Ministry of Investment and Development (MoID) and the actions it will take to undertake land acquisition and any resettlement. It is expected that the CR will ensure all measures necessary to minimize involuntary resettlement and land acquisition. The document will provide a description of the land, households and businesses that will be affected. The RAP's objective is to mitigate the negative impacts of land acquisition and displacement, including setting out the entitlements of the different categories of affected persons, paying particular attention to the most vulnerable groups.

The RAP will be applied to all affected persons regardless whether or not they have a legally registered title to the land. The severity of the impact will however affect the nature of the compensation and other assistance provided. The RAP will be the result of various phases of consultations, data collection and analyses. The RAP's requirements are binding to both the Government, through the Committee for Roads and the contractors for the implementation of the project

OP/BP 4.37 Safety of Dams, not triggered. No dam safety issues were identified during assessment of the project area.

OP/BP 7.50 Projects on International Waters, not triggered. No issues associated with this Policy have been identified.

Scope and Methodology of the Environmental and Social Impact Assessment (ESIA)

The ESIA has been prepared by KAZDORNII in association with SAEN Engineering Group as a part of consulting services for the Center - West Corridor and is based on the requirements of Kazakhstan legislation and World Bank Safeguard Policies.

The purpose of the ESIA is to define the baseline environmental conditions in order to identify and assess the impacts of the various activities of the proposed project. This project is currently at the stage of feasibility study and detailed design. It has not been subject to site-specific EIA yet. The ESIA contains Environmental and Social Management Framework in the form of generic EMP and Environmental Monitoring Plan which should be followed during the detailed design and preparation of site-specific Environmental Impact Assessments and Environmental Management Plans (EMPs).

The ESIA methodology includes the analysis of available baseline data (annual reports on state of environment, social-economic analysis of project region, geospatial data, expert interviews), overview of applicable environmental legislation analysis of alternatives, and discussion of mitigation measures to avoid and minimize potential negative impacts. It includes monitoring plan to assess whether mitigation is properly implemented and results in anticipated positive effects. Also, during the preparation of the ESIA consultations were held with experts from the Ministry of Transport of Investment and Development, relevant Regional Administrations, representatives of the Association for Conservation of Biodiversity in Kazakhstan, professional interest groups (e.g. "Turgay Discovery"), Regional Departments of Environment, Water, etc. of the Republic of Kazakhstan. Potential environmental impacts have been assessed according to the World Bank policy and the Kazakh environmental legislation. In addition, institutional aspects have been taken into consideration.

Environmental and Social Baseline Conditions

The Corridor alignment broadly runs through flat steppe terrain with varying climate conditions from moderate in the West to arid in the East. The section Astana – Egindikol and further West till lake Tezekpay goes through agricultural fields. Between lakes Tezekpay and Shoyyndykol the road runs through open steppe landscape with several seasonal rivers. From Shoyyndykol to Arkalyk the alignment goes again through agricultural fields.

Following the alignment from Arkalyk to NW and later to SW directions there is a visible trend towards a more arid climate, thus the bulk of the alignment of this section would run through arid steppe or semi-desert type rangeland closed to Amangeldi, with one small perennial river at approx..70 km from Arkalyk, and few temporal rivers (located in the SW of the section). Agricultural lands will be affected only around

Arkalyk.

Section Amangeldy-Turgay-Yrgyz goes through semi-desert with few temporal rivers. There are series of lakes to the South from the alignment at approximately 10-15 km from Turgay and to the North from the alignment at 60-70 km from Yrgyz.

Erosion or rock falls, landslides and mudflows are not seen as significant potential risk for the road.

The entire project corridor shows anthropogenic impact mainly in forms of animal husbandry and agriculture. There will be no conversion of pristine, untouched habitats under the project. Akmola, Kostanay and Aktobe oblasts – are main agricultural regions of the Republic of Kazakhstan. The major economic activity is agriculture (grain production) and animal husbandry. The route will pass mainly through rural areas with low population density.

Location and Analysis of Alternatives

Out of seven alternatives initially, three alignment alternatives were prioritized based on pre-feasibility assessment and further consultations with local administrations, citizens, and businesses (See Annex A for Route Options and B for CAREC Corridors). Alternative route options do not differ significantly in terms of potential environmental impacts. All three routes pass via Korgalzhyn, Arkalyk, and Turgay. Project Alternative 1, total of 1267 km, continues to the West via Yrgyz, Shalkar and Emba up to Kandagash and Aktobe. This alternative envisions the construction of 452 km of new road sections and rehabilitation of 692 km of roads. The Alternatives 2 and 3 are connected to the existing M-32 (Samara-Shymkent) road at Yrgyz and Karabutak respectively. They require rehabilitation of 297 km of roads, and 452 km and 583 km of new construction respectively. In all three alternatives, the highest traffic is expected at the road sections spanning from Astana to Arkalyk connecting the two economic centers. The rehabilitation and new construction of these sections will spur generation of local and regional trips due to improvement of travel conditions and enhanced connectivity. Economic analysis also takes into account generated trips between settlements along the routes and major economic centers, as well as diversion of long-distance and international traffic from an existing alternative road Astana-Atbasar-Kostanay-Karabutak-Aktobe.

Based on economic analysis of alternatives Route 1 was chosen as preferred alignment. The preferred option contributes to development of the central regions (e.g., areas around Arkalyk, Turgay, Akshiganak, Yrgyz, and Shalkar).

Cumulative Impacts

In future, the improved access will have broader economic/social development implications particularly of new or significantly improved roads. These future developments are not considered to be associated with this project in the sense of needing to apply the safeguard policies to them. This is because there are no specific developments that can be expected as a result of the project.

Impact Mitigation and Environmental Management

The design of the road sections includes measures for the minimization of environmental impacts. The route follows mainly the existing alignment (in the form of asphalt or gravel road) and thus it is limiting the conversion of land to other land use types. The design will include measures to increase traffic safety by speed controls, pedestrian crossings and underpasses. The design will also undertake into account requirements stipulated by farmers along the alignment for safe crossings of animals and farm machinery through agricultural underpasses. Targeted interventions to protect saiga will be developed by the Client in

collaboration with Association for Conservation of Biodiversity in Kazakhstan during preparation of site-specific EMPs. These interventions will be based on surveys of saiga populations and monitoring of their migration routes.

The project will not result in any significant negative social impacts. There is a social assessment ongoing, which will confirm this and will also help to design the project to achieve maximum social benefits.

The location of geoglyphs in relation to the proposed alignment is currently being identified. In case there is a threat of damage to geoglyphs, re-routing of the alignment will be done at design stage. If re-routing is not possible, Site Management Plan will be done as part of site-specific EMPs. The project will also support further research and promotion of geoglyphs as historic and cultural heritage and a tourism attraction in the project area.

Chance finds procedure is described in the ESIA. The requirements regarding chance finds will be included in the construction contracts. The design will take into account the results from hydrographic and hydrological studies, installing sufficient culverts to avoid damming of permanent or seasonal watercourses and the creation of swamps or waterlogged areas. The design of bridges is taking into account the seasonality of discharges, as well as the likelihood of flash floods.

Most of the impacts during construction period will be mitigated by good housekeeping practices. There will be standard procedures for the control and mitigation of impacts, such as dust, noise, exhaust fumes and liquid discharges from camps and the road platform. Surface watercourses will be protected by settling ponds and, if appropriate, filters (e.g. straw bales). Wastewater from construction camps as well as septic sludge will be transported to existing wastewater treatment plants along the alignment. Small-scale waste water treatment stations will be operational as alternative solution for treatment of waste water from construction camps. It is not expected that groundwater will be affected by the project, as no deep excavations or major cuts are planned.

All environmental mitigation measures to be carried out by the contractors during the construction period will be integrated in the tender documents and become part of the contract. The contractors will be required to have permanent staff on site with the specific responsibility of environmental and social management (including a grievance specialist), reporting to the supervision engineers and local authorities.

During operation, the functionality of noise and traffic safety measures described above in the Section on design will be monitored and maintained. Any required modifications, upgrades or additions will be flagged and integrated into the road repair and maintenance plans for rectification.

Public Consultations and Disclosure

To ensure that all views and concerns of all stakeholders are appropriately reflected in project design and implementation, and environmental and social safeguards instruments fully capture the baseline situation, the expected impacts and the views and concerns of the PAPs, two sets of consultations were undertaken during the preparation of the Bank financed project. The first round of public consultations was carried out on June 9-12, 2015 in 5 regions of Akmola oblast (Tselinograd, Kurgaldzhin, Egindikol, Atbasars and Zharkaiyn rayons), in Kostanay oblast (in Arkalyk town, Amangeldy and Dzhangeldy rayons), and also in Yrgyz rayon of Aktobe oblast. On June 29, 2015 public hearings were held in Akmol, Zhanteke, Egindikol, Sochinskii villages. Public consultations gave the opportunity to local residents and other project stakeholders to get acquainted with the general details of the project and to discuss environmental and social aspects, and to provide comments to be included in the ESIA and RPF. The draft ESIA was disclosed in

the Infoshop (in English) and locally (in Russian) by the Client on September 29, 2015. The second round of public consultations was organized on the draft ESIA on November 9-11 for local communities along the alignment (Zhanteke, Egyndykol, Sochinskoye, Arkalyk, Amangeldy, Torgay, and Yrgyz). The finalized ESIA was disclosed locally and in the Infoshop. More informal consultations will be done during implementation through:

- The preparation and dissemination of a brochure in Kazakh and Russian, explaining the project, works required and anticipated timing of the works; and
- Setting up a formal grievance redress committee with a representation from the local community. The Project supervision Consultant in association with the contractor and CR will be responsible for managing the effective grievance redress program.

Environmental and Social Management Framework (ESMF)

The Environmental and Social Management Framework (ESMF) in this ESIA document is presented in the form of generic EMP and has been prepared as part of the EISA study in order to define the environmental measures and procedures that will need to be adopted by the construction company for the contractors and other parties responsible for project implementation. It will provide the guidance for preparation of site-specific Environmental Management Plans (EMPs). The ESMF may need to be revised during the course of the project implementation.

The ESMF is designed to contain the following information:

- potential environmental and social impacts
- mitigation measures;
- institutional roles for implementation of mitigation measures during construction and operation of the road;
- monitoring plan.

The site-specific EMPs will define the timing, frequency, duration and cost of mitigation measures in the form of implementation schedule, and these actions will be integrated into the overall project work plan.

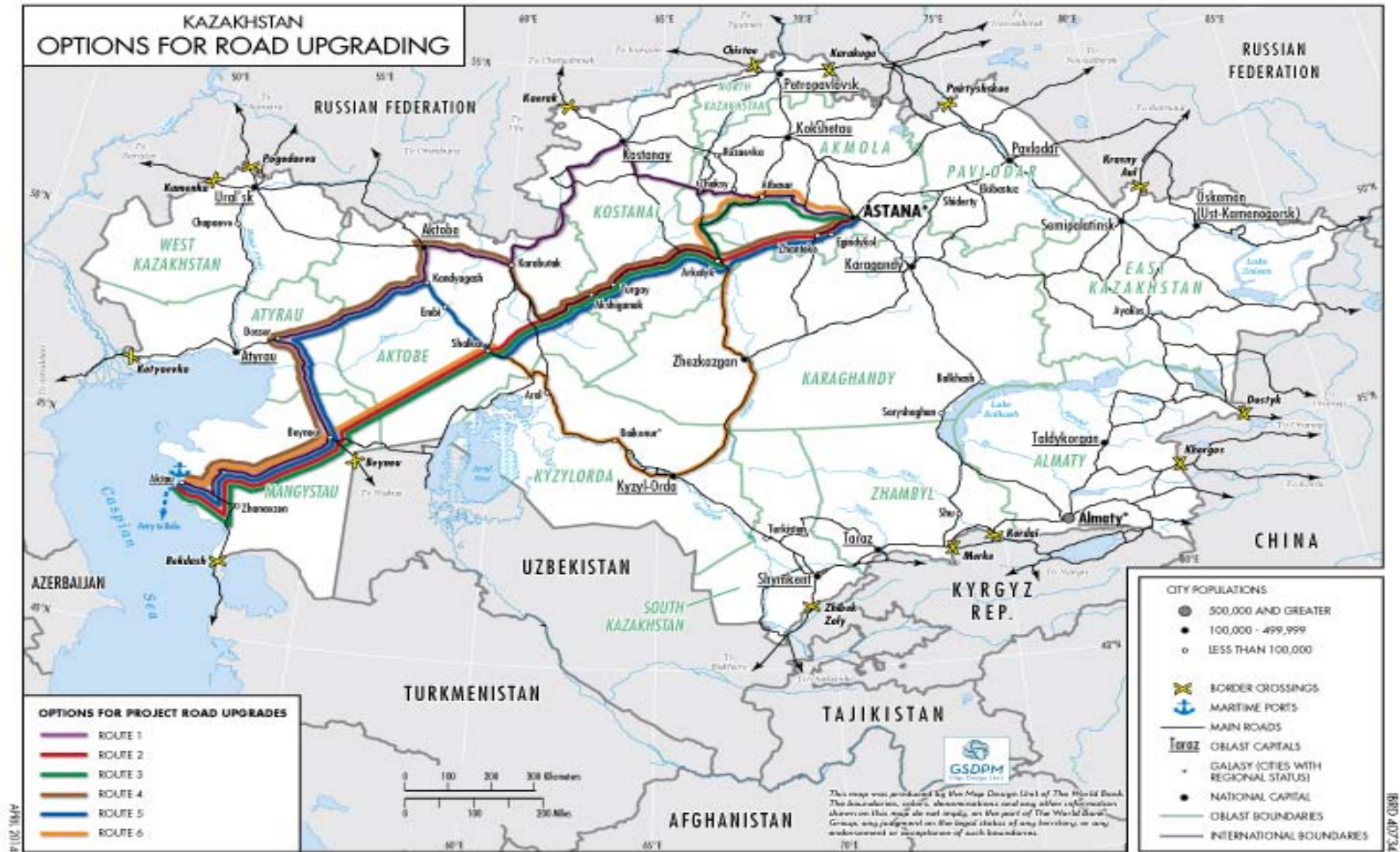
Monitoring Plan will set out the ways in which the monitoring of the environmental impacts and the implementation of the mitigation measures during the construction phase will be carried out. The monitoring will be focused on the limited number of impacts identified during the ESIA to ensure the efficiency of the planned mitigation measures.

Findings, Recommendations and Conclusions

The project will have moderate environmental impacts during construction and operation periods. With appropriate mitigation referred to in the ESIA and EMF, particularly during the construction phase of the project, none of the impacts referred to in the ESIA will be significant. Construction of the Center-West corridor will bring social and economic benefits for the population living along the alignment. High quality, safe and accessible under any weather conditions road will allow efficient transport of goods produced in China, Kazakhstan, Russia, and also in Europe and other Central Asia countries. Agricultural products (key economic sector of this region), grown within this area and other locally produced commodities could be delivered to larger markets. Workforce will gain mobility. Tourism, although not developed yet, is important for the communities living along the corridor. The new roads will provide additional incentive for development of existing and new tourism products. There will be also more

opportunities for new jobs and business development. Population of Akmola, Kostanai and Aktobe Regions will benefit from shorter travel time to other cities and regions, located in central and western areas of Kazakhstan.

ANNEX A - ROUTE OPTIONS



ANNEX B - CAREC CORRIDORS



MARCH 2014

IBRD/ADP/255