

Environmental Monitoring Report

Semestral Report: July-December 2021

May 2022

Tajikistan: Road Network Sustainability Project (Rehabilitation and Reconstruction of Hulbuk- Temurmalik-Kangurt and Okmazor-Dangara Road Sections)

Prepared by the Project Implementation Unit for Road Rehabilitation of the Ministry of Transport of the Republic of Tajikistan for the Asian Development Bank

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Country Director
ADB Resident Mission in the
Republic of Tajik

Grant 0752-TAJ: Contract No. RNSP/CS-01, Rehabilitation of Hulbuk-
Temurmalik-Kangurt and Dangara-Okmazor Road Sections
Subject: Submission of Semi-Annual Environmental Monitoring Report (July-
December 2021) for disclosure on ADB's website

Dear Ms. Shanny Campbell,

Thank you for the assistance and support in implementation of the transport infrastructure projects.

Hereby, we are submitting you the final version of Semi-Annual Environmental Monitoring Report for the period July-Decemember 2021 under the above mentioned project for your clearance and disclosure on ADB's website.

Sincerely,

Executive director

Arabzoda N.S.

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Abbreviations

Abbreviations	Description
ADB	Asian Development Bank
BOD	Biological Oxygen Demand
CEP	Committee for Environmental Protection
COD	Chemical Oxygen Demand
CO ₂	Carbon Dioxide
DEP	Department of Environmental Protection
DMC	Developing Member Countries
SAEMR	Semi Annual Environment Monitoring Report
SSEMP	Site Specific Environment Management Plan
EMP	Environmental Management Plan
ERP	Emergency Response Plan
GoT	Government of Tajikistan
IEE	Initial Environmental Examination
LARP	Land Acquisition and Resettlement Plan
MoT	Ministry of Transport
NO	Nitrogen Oxide
NO ₂	Nitrogen Dioxide
MFF	Multitranche Financing Facility
PIU	Project Implementation Unit
PM	Particulate Matter
SEE	State Ecological "Expertise"
SO ₂	Sulphur Dioxide
TA	Technical Assistance
TMP	Traffic Management Plan
WMP	Waste Management Plan
SPS	Safeguard Policy Statement ADB
CAREC	Central Asia Regional Economic Cooperation Corridor Development Investment Program
PAM	Project Administration Manual
SNiP	Construction Standards
GRM	Construction Standards
ROW	Right of Way
CSCEC	China State Construction Xinjiang Construction Engineering Group
GOST	Technical Standard
SSBT	Self Service Betting Terminal
PPE	Personal Protective Equipment
IGRC	Inmate Grievance Regulation Committee
CBO	Community- Based Organizations
NGO	Non-Government Organisation
HSO	Health Safety Officer
OHSO	Occupational Health and Safety Officer
HTRP	Hulbuk Timur Malik Road Project
NES	National Environment Specialist
IES	International Environment Specialist
CSC	Construction Supervision Consultant
PIURR	Project Implementation Unit of Road Rehabilitation

1 INTRODUCTION

1.1 Preamble

1. This is the first Semi-Annual Environmental Monitoring Review (SAEMR) for Road Network Sustainability Project.¹

1.2 Headline Information

2. This is the first Semi-Annual Environmental Monitoring Report (SAEMR) for Road Network Sustainability Project by rehabilitating two existing road sections; the 28.7 kilometres (km) Dangara-Okmazor road and 58.57 kilometres (km) Hulbuk-Temurmalik-Kangurt section, and strengthen road safety and maintenance. It will also support local community development by linking major economic centres. The Asian Development Bank (ADB) and the Government of Tajikistan will finance the Project. Ministry of Transport (MoT) will be the executing agency for implementing the Project. The procurement procedures and administration will be performed following relevant ADB Procurement Guidelines (2017, as amended from time to time).

3. The findings are based on review of monthly engineering progress reports and quarterly monitoring reports submitted by the Contractor: China State Construction Xinjiang Construction Engineering Group Co., Ltd. (CSCEC) on the monitoring of environmental impacts, and findings obtained during the supervision of site-specific monitoring by the Environmentalist of Construction Supervision Consultant (CSC-SMEC) intermittently between November and December 2021. Further, the environmental specialist regularly supervised environmental monitoring of relevant parameters administered by the Contractor (CSCEC), additionally reviewed project design, social and associated documents. The Contractor's environmental reports include monitoring data and laboratory analysis of selected parameters as advised in EMP (CSCEC not yet started laboratory test).

4. The contract for Rehabilitation Hulbuk-Temurmalik-Kangurt Road Section, From Km0+000 To Km58+570, has been awarded to the China State Construction Xinjiang Construction Engineering Group Co., Ltd. (CSCEC).

5. The contractor for the Rehabilitation of the Dangara-Okmazor road section is not selected yet as of 31 December 2021. The tender is scheduled for the first quarter of 2022.

6. The civil works did not start within the reporting period.

¹ 54005-001: Road Network Sustainability Project | Asian Development Bank (adb.org)

2 PROJECT DESCRIPTION AND CURRENT ACTIVITIES

2.1 Hulbuk-Temurmalik-Kangurt Road Section

7. Hulbuk-Temurmalik-Kangurt road is one of the important roads of regional significance in the southeastern region of the republic and provides transport links to the population of Dangara, Baljuvan, Khovaling districts with Temurmalik and Vose districts, supply of agricultural products and industrial raw materials for the population and enterprises of the cities of Dushanbe, Kulyab, Bohtar, Khorog and other regions of the republic. Also, in future perspective the Project Road provides goods to neighboring countries, it connects the international road Dushanbe – Kulob – Khorog – Kulma with the state significance road Dangara – Kangurt – Baljuvan – Khovaling as the shortest route.

8. The road section is part of the Central Asia Regional Economic Cooperation (CAREC) transport corridor as can be seen in the following map.

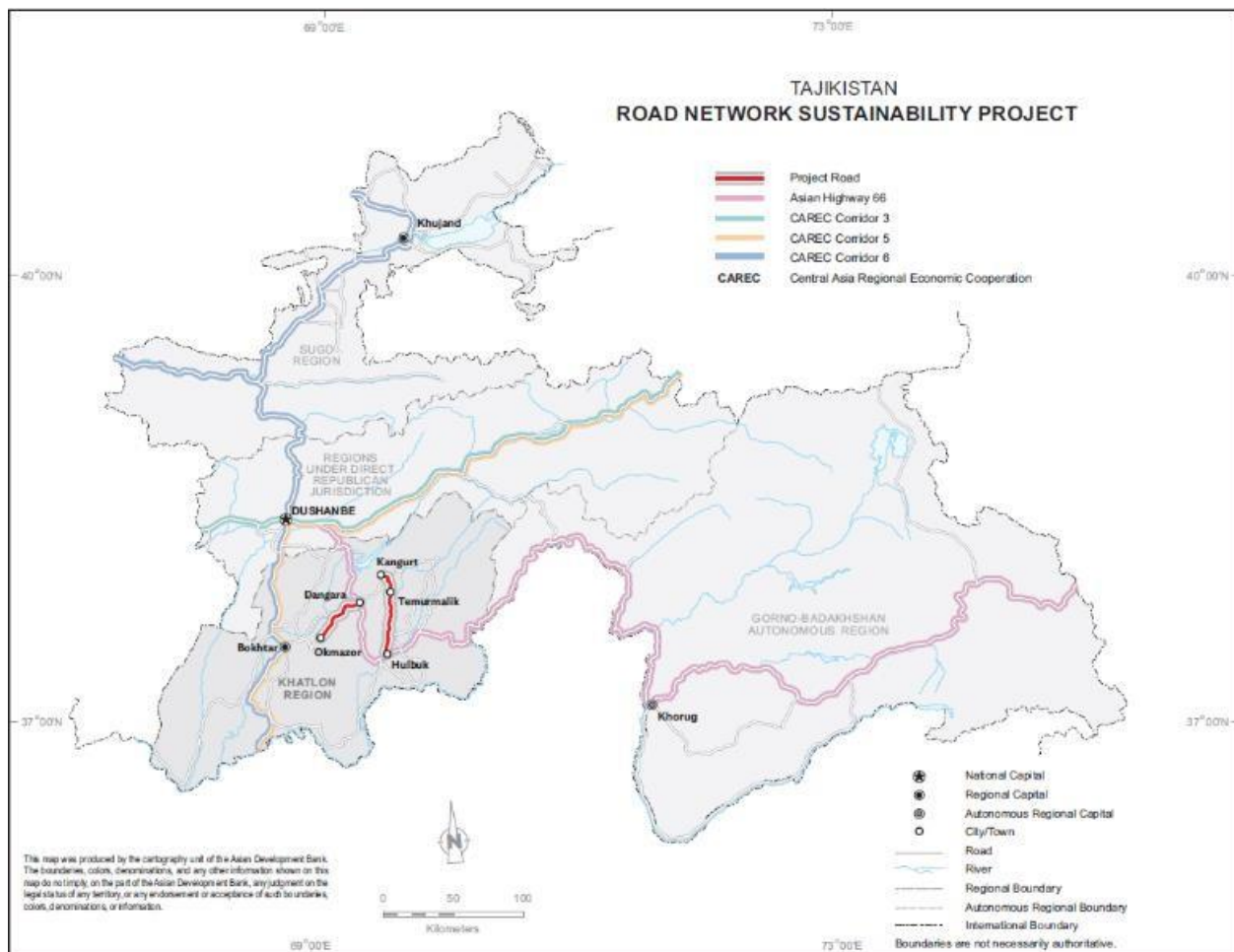


Figure 1: The Central Asia Regional Economic Cooperation Corridors

9. Hulbuk-Temurmalik-Kangurt Project road section is approximately 59 km long (km 0+000 – km 58+570) and forms one of the important roads of regional significance in the south-eastern region of the republic. It provides important transport links, supply of agricultural products and industrial raw materials. The road is running through inaccessible mountainous terrain with difficult relief and extreme weather conditions (heavy rainfall, mudflows, and snowfalls). It

passes through the territory of Vose and Temurmalik districts of Khatlon region, where it serves a population of more than 283,200 people.

10. Hulbuk-Temurmalik-Kangurt road is stretching from South to North with a total length of approximately 59 km (km 0+000 – km 58+570). It consists of two sections, the first section Hulbuk- Temurmalik (km 0+000 – km 33+400 southern part) and the second section Temurmalik-Kangurt (km 33+400 – km 58+570 northern part).

11. The existing road falls into technical road category III for the section km 0+000 – km 33+400 and category IV for the section km 33+400 – km 58+570. The different technical categories are due to the higher traffic load in the first section. The project road consists of one carriageway with two traffic lanes width of 3.50 m, respectively 3.00 m, in each lane. Present traffic volumes indicate that the existing road category might not be adequate for the anticipated future traffic volumes and improvement/upgrading of the road category should be considered and evaluated during project preparation. Figure 2 provides an overview of the Project Road.

12. Hulbuk-Temurmalik-Kangurt road rehabilitation follows the existing alignment and remains within the existing RoW. No spatial alternatives, bypasses or other, are foreseen. There might be only minor adjustments due to compliance requirements with technical design parameters.

2.1.1. Type and Category of Project

13. The existing road category according to SNiP is category III for the section km 0+000 – km 33+400 and category IV for the section km 33+400 – km 58+570. The different technical categories are due to the higher traffic load in the first section. According to the intended classification of the road, the following design speeds are to be used for Hulbuk-Temurmalik-Kangurt road section.

Table 1: Design Speeds by Terrain and Road Category

Road Section & Road Category	Design Speed in km/h		
	Level Terrain	Rolling Terrain	Mountainous Terrain
Km 0+000 – km 33+400/Road Category III	100	80	50
Km 33+400 – km 58+570/Road Category IV	80	60	40

14. The Project Road consists of one carriageway with two traffic lanes width of 3.50 m, respectively 3.00 m, in each lane. The rehabilitation will be confined to the existing RoW as far as technically feasible. No spatial alternatives are foreseen. The typical cross-section parameter for Hulbuk-Temurmalik-Kangurt road section are selected based on the road category and the location of the road within or outside settled areas in accordance with the Tajik geometric road standards. The typical cross sections are shown in Figure 3, Figure 4, Figure 5 and Figure 6.

15. Cross-section parameters are related to traffic flows and will vary with the requirements of vehicular traffic. The road cross-section incorporates all elements between the road boundaries including carriageways, shoulders, verges, including cutting or embankment slopes. The cross- section elements serve several purposes and have a significant impact on construction costs, road operation and safety. The cross section in combination with the alignment will determine the earthwork quantities. Lane and shoulder width greatly impact traffic operations and safety therefore the road width should be kept to a minimum so as to reduce the costs of construction and maintenance whilst being sufficient to carry traffic loading efficiently and safely.



Figure 2: Project Location Map of Hulbuk-Temurmalik-Kangurt Road

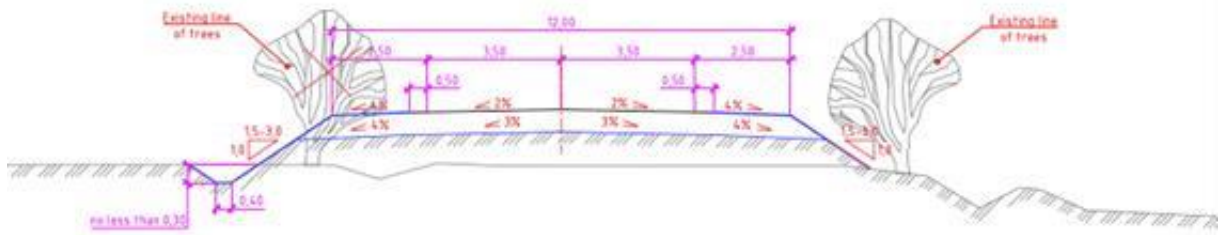


Figure 3: Typical cross-section in a rural area (category III) of Hulbuk-Temurmaliik km 0+000 – km 33+400

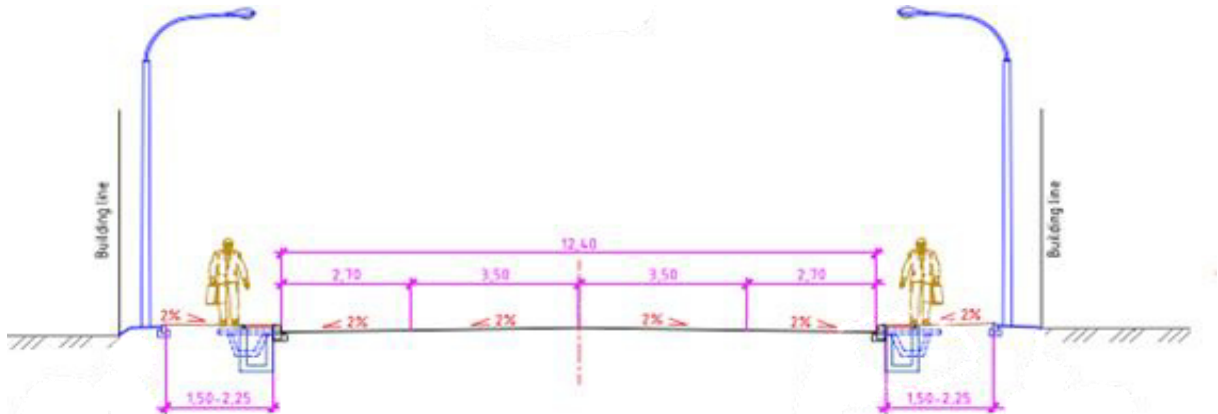


Figure 4: Typical cross-section in settled area (category III) of Hulbuk-Temurmaliik km 0+000 – km 33+400.

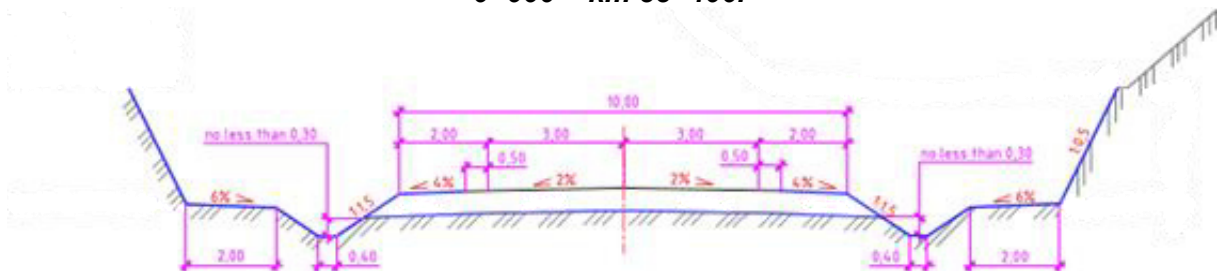


Figure 5: Typical cross-section in rural area (category IV) of Temurmaliik-Kangurt km 33+400 – km 58+570.

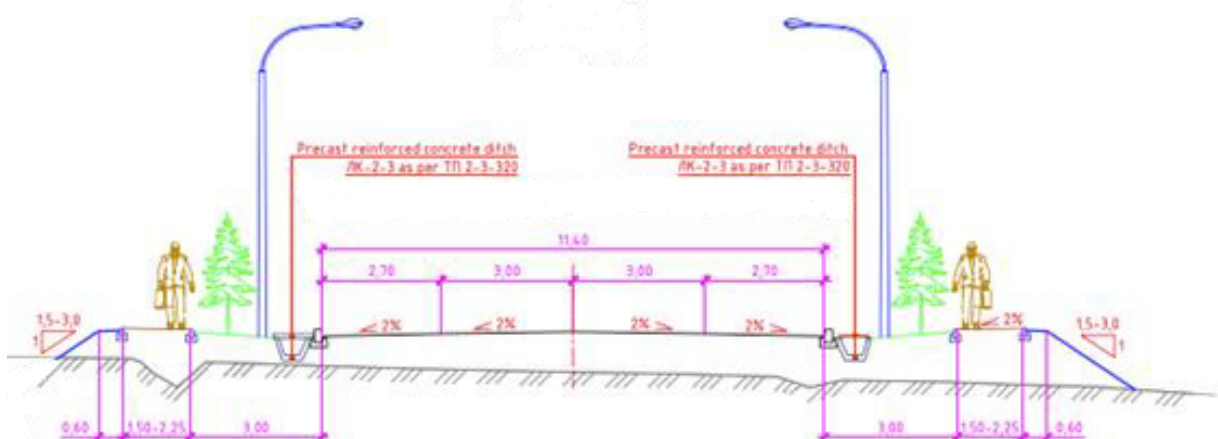


Figure 6: Typical cross-section in settled area (category IV) of Temurmaliik- Kangurt km 33+400 – km 58+570.

2.1.2. Bridges and Culverts

16. The Project involves the replacement of 8 bridges. Out of these 8 bridges, 3 bridges will be replaced by larger box culvert. The bridges most significant in terms of potential environmental impacts are the ones crossing natural watercourses. These are bridges number 6 and 7. An overview of the bridges is provided in the below table.

Table 2: Bridges of the Hulbuk-TemurmaliK-Kangurt Road Section

Bridge No.	Location (km)	Nearest settlement	Type of obstacle	Bridge length (m)	Span Arrangement (m)	Total width (m)	Bridge Area (m ²)	Remarks
1	4+267							Replacement of existing bridge by box culvert
2	11+627							Replacement of existing bridge by box culvert
3	14+255	Almurod Khojaev	existing channel	16.1	1x15	13.4	201.0	Bridge-1
4	20+785	TemurmaliK	existing channel	16.1	1x15	13.4	201.0	Bridge-2
5	22+345	Tanabchi	Channel Tanabchi	25.2	1x24	13.4	321.6	Bridge-3
6	28+240	Burdam	r. Beshkappa	25.2	1x24	13.4	321.6	Bridge-4
7	31+612	Sovet	r. Shuraksai	16.1	1x24	16.8	270.5	Bridge-5
8	30+875							Replacement of existing bridge by box culvert

2.1.3. Need for Project

17. The Project Road has deteriorated over the years and is in currently bad condition with numerous shortcomings and damages. Due to the existing poor technical condition of the Project Road during autumn and winter months, densely populated areas like Mahmatali, Guliston, Tanobchi, Savet and many other small villages are disconnected from access to medical and educational facilities, state institutions, banks and markets. Therefore, it is obvious that the rehabilitation is urgently needed.

2.2 Dangara–Okmazor road section

18. The Dangara–Okmazor road section is part of the Bokhtar-Dangara-Guliston highway, one of the most significant international trunk roads in Tajikistan. The Bokhtar-Dangara-Guliston highway is an international highway, from Levakand to Dangara Main Road 10 (RB-10) and from Dangara to Guliston Asian Highway 66 (AH-66). It provides important transport links, supply of agricultural products and industrial raw materials. The road is running partly through hilly terrain and the road alignment consist of small curves and steep gradients. It passes through the territory of Levakant after leaving Kurgonteppa. After this it passes Lokhur and Sargazon before ending in Dangara.

19. The project road section starts at Okmazor district (at km 40+000) and ends at the Dangara intersection (at km 68+700)². The length of the project road section is 28.7 km and belongs to the III technical category following the prevailing road standard in Tajikistan. The road was reconstructed in the year 2000 and provides the link between the Main Road 04 (RB-04) and the AH-66. The road is located in Dangara district, which belongs to the Khatlon region.

20. The project road consists of one carriageway with two traffic lanes width of 3.50 m, in each lane. Present traffic volumes indicate that the technical category III is adequate, and

² Bokhtar is at km 0+00.

improvements of the alignment are envisaged where the geometrical parameters of the existing road deviate substantial from the minimum desired parameters for technical category III.

21. The Dangara–Okmazor road section runs through arid country with steppe like vegetation. The relief is characterized by smooth low-lying mountains. The existing width of the roadbed ranges from 9.0 to 11.0 m. The road is in poor condition and the pavement is deteriorated shows severely damages. The alignment consists of sharp curves with radii of less than 100 m and longitudinal slopes of more than 12 %. Figure 3 provides an overview of the Project Road.

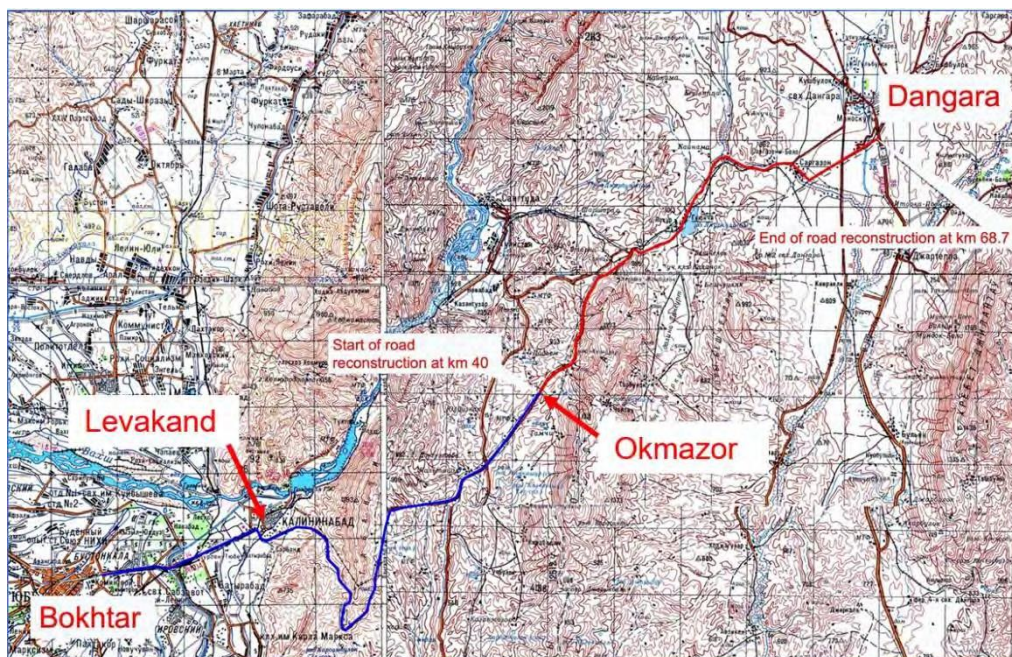


Figure 7: Project Location Map of Okmazor-Dangara Road

22. The Dangara–Okmazor road rehabilitation follows the existing alignment and remains within the existing RoW. No spatial alternatives, bypasses or other, are foreseen. There might be only minor adjustments due to compliance requirements with technical design parameters.

2.2.1 Type and Category of Project

23. The Project Road is approximately 28.7 km and forms one of the important roads of regional significance in the southern region of the Republic. The existing road category according to SNIP is category III. The project road consists of one carriageway with two traffic lanes width of 3.50 m. The typical cross section parameter for the Dangara–Okmazor road section are selected based on the road category and the location of the road within or outside settled areas following the Tajik geometric road standards. The typical cross section parameters are shown in Figure 8 and 9.

24. In settled areas, the implementation of sidewalks, street lightening and green strips for improvement of road safety are considered.

25. Cross section parameters are related to traffic flows and will vary with the requirements of vehicular traffic. The road cross section incorporates all elements between the road boundaries including carriageways, shoulders, verges, including cutting or embankment slopes. The cross section elements serve several purposes and have a significant impact on construction costs, road operation and safety. The cross section in combination with the alignment will determine the earthwork quantities. Lane and shoulder width greatly impact traffic operations and safety therefore the road width should be kept to a minimum to reduce the costs of construction and maintenance while being sufficient to carry traffic loading efficiently and safely.

26. The project road section passes through hilly to mountainous terrain. As the alignment is supposed to follow the existing road, with minor improvement of the geometry, a design speed of 50 km/h was assigned to the Dangara–Okmazor road section.

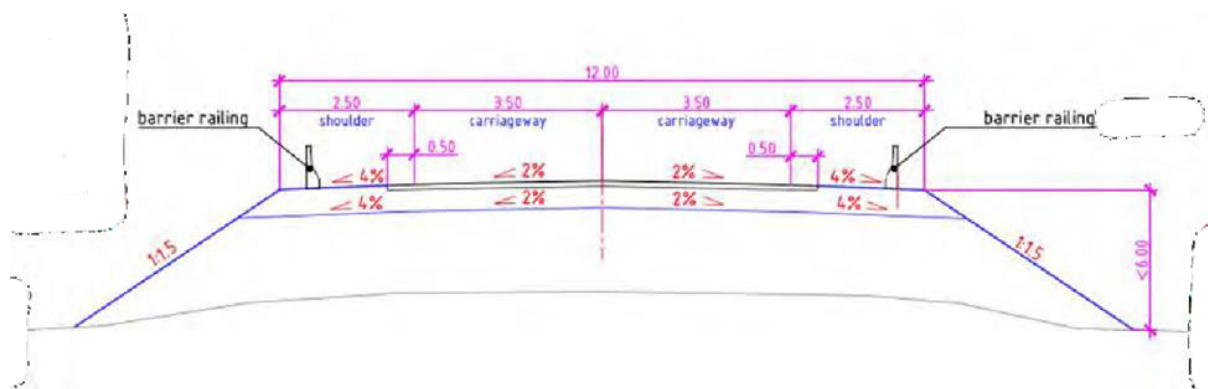


Figure 8: Typical cross-section in a rural area (category III)

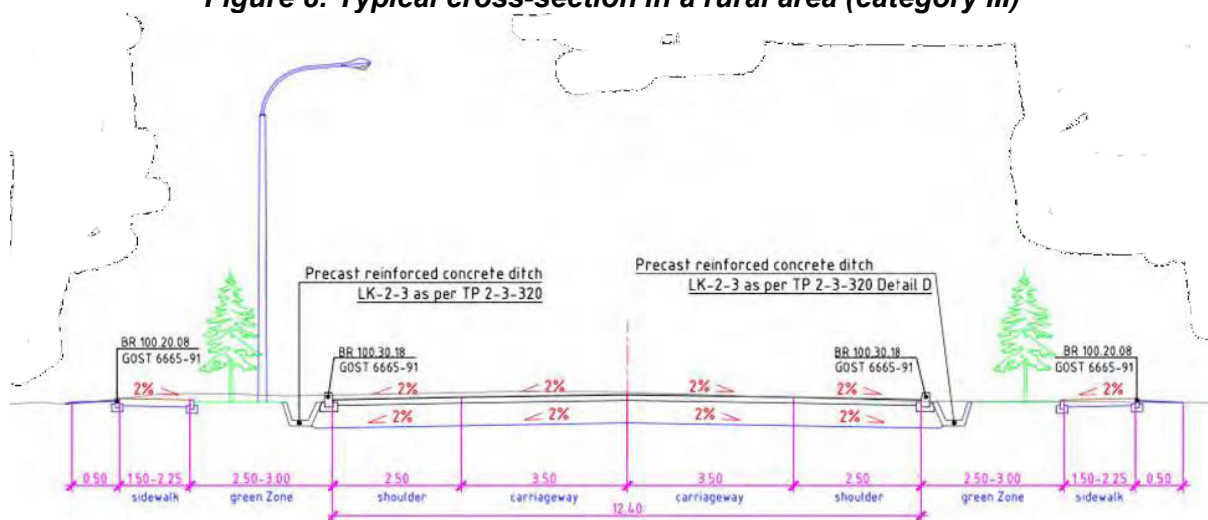


Figure 9: Typical cross section in settled area (category III)

2.2.2 Bridges and Culverts

27. There are three bridge crossings on the designed road section. This project provides construction of two bridges and one box culverts with a cross section of 6.0 x 2.5 m to replace the existing bridge. An overview of the bridges is provided in Table 3.

Table 3: Bridges of the Dangara–Okmazor Road Section

Bridge No.	Location (km) ¹⁹	Nearest settlement	Type of obstacle	Bridge length (m)	Span Arrangement (m)	Total width (m)	Bridge Area (m ²)	Remarks
Br-6	58+674	vil.Sargazon	existing channel	55.34	15+24+15	14.8	799.20	New construction
Br-7	61+80	dis.Dangara		15.64	1x15	11.7	175.50	Dismantling of the existing bridge and replacement by box culvert 6.0x2.5 m
Br-8	66+031	dis.Dangara	existing channel	25.46	1x24	13.4	321.60	New construction

2.2.3 Need for Project

28. The Project Road has deteriorated over the years and is in currently bad condition with numerous shortcomings and damages. Due to the existing poor technical condition of

the road, road transport is getting unreliable and expensive. Therefore, rehabilitation of the Dangara–Okmazor road is urgently needed.

2.3 Project Contracts and Management

29. The contract for Rehabilitation Hulbuk-Temurmalik-Kangurt Road Section, Lot- 1 km0+000 to km33+400 Hulbuk – Temurmalik and Lot- 2 km33+000 to km58+570 Temurmalik - Kangurt, on August 30, 2021 has been awarded to the China State Construction Xinjiang Construction Engineering Group Co., Ltd. The construction works not started; the project works are scheduled to be completed on April 24, 2023. The Contractor already started mobilization activities.

30. Tender for Rehabilitation Okmazor-Dangara is scheduled in the first quarter of 2022.

31. The PIU is supported by the Project Supervision Consultant (CSC) - SMEC Ltd. The contract with SMEC Intl. Pty Ltd was concluded on 8 October 2021 for period of 36 months including DNP (Defects Notification Period).

32. The initial environmental examination report was submitted by the PIURR to the State Ecological Expertise (SEE) (Committee for environmental protection under the Government of Tajikistan) on 13.10.2020 for Hulbuk-Temurmalik-Kangurt Road section and 11.11.2020 for Okmazor-Dangara Road section. The “environmental appraisal/approval” was obtained from SEE on 16.10.2020 (Registration No. 1411-15) for Hulbuk-Temurmalik-Kangurt Road section and on 16.11.2020 (Registration No. 1537-15) for Okmazor-Dangara Road section. Resolutions of SEE shared with the Regional environmental protection departments. With the aim of protection and Improvement of environment proposed to comply with conditions and status of implementation shown in Table 4 below: Summary of civil works contracts and works’ progress is summarized in Table 5. All awarded contracts included EMPs cleared by ADB and conditions of applicable national IEE clearance (listed in Table 4).

Table 4: State environmental expertise conditions and implementation status

no	SEE Condition	Implementation status
Hulbuk-Temurmalik-Kangurt Road section		
1	Requirements of construction rules and norms, Strict observance of road construction, ecological norms and the legislation of the Republic of Tajikistan in the field of environment protection should be followed during the project implementation;	Ongoing, implementation will be monitored
2	By the contractor should be appoint the person responsible for carrying out control;	Environmental Engineer and HS Engineers appointed by Contractor
3	The contractor develops an action plan for environmental protection, which is agreed with the local environmental authorities;	Ongoing, SSEMP will be developed by Contractor
4	In order to protect the atmosphere and prevent dust, the work area should be regularly sprayed;	Ongoing, implementation will be monitored. The atmospheric air protection and dust suppression plan will be developed by Contractor
5	During construction work the requirements of construction rules and regulation, safety should be followed and take the necessary measures;	Ongoing, implementation will be monitored
6	Trees that interfere with the construction process should be removed only in coordination with the authorized state body in the field of environment protection;	The permit for cutting trees will be given step by step, after the Contractor submits the SSEMP.
7	Planting and transplanting seedlings should be conducted in accordance with the design and agro-technical rules;	Ongoing, implementation will be monitored

no	SEE Condition	Implementation status
8	Technical construction works to be carried out in accordance with the requirements of environmental norms and minimum impact on the environment;	Ongoing, implementation will be monitored
9	In accordance with the established procedure to implement departmental control over compliance with the requirements of measures in the field of environmental protection;	Ongoing, implementation will be monitored
10	To dispose of solid household waste in the official landfill in accordance with the established procedure;	The contractor will agree with municipals to disposal of waste in official landfills. Waste management plan will be developed by the contractor.
11	Construction waste generated during and after construction works should be sorted and disposed of in an official dump in coordination with the authorized state body in the field of environmental protection;	The contractor will agree with municipals to disposal of waste in official landfills. Waste management plan will be developed by the contractor.
12	In case of departure from the territory of construction facilities, equipment and vehicles should be washed in accordance with the rules and their cleanliness should be ensured;	Ongoing, implementation will be monitored
13	During locating an asphalt plant and processing of inert materials in accordance with the requirements of the legislation in the field of environmental protection and sanitation, it is necessary to prepare the report on environmental impact assessment should be submitted to the State Environmental Expertise of the Committee for Environmental Protection under the Government of the Republic of Tajikistan for obtaining of conclusion.	The contractor will agree with municipals the location of asphalt plant. Conclusion of SEE will be obtained.
14	To implement normative and legal acts, state standards, sanitary, safety and environmental standards during the construction of drainage system;	Ongoing, implementation will be monitored
15	Carry out technological work in accordance with the requirements of environmental impact;	Ongoing, implementation will be monitored
16	Copy of this report should be submitted to local environmental authorities.	Copy of the conclusion of SEE provided to local environmental protection authorities
Okmazor-Dangara Road section		
1	Requirements of construction rules and norms, Strict observance of road construction, ecological norms and the legislation of the Republic of Tajikistan in the field of environment protection should be followed during the project implementation;	Ongoing, implementation will be monitored
2	by the Contractor should be appoint the person responsible for carrying out control;	Environmental Engineer and HS Engineers appointed by Contractor
3	The Contractor develops an action plan for environmental protection, which is agreed with the local environmental authorities;	Ongoing, SSEMP will be developed by Contractor
4	To protect the atmosphere and prevent dust, the work area should be regularly sprayed;	Ongoing, implementation will be monitored. The atmospheric air protection and dust suppression plan will be developed by Contractor

no	SEE Condition	Implementation status
5	During construction work the requirements of construction rules and regulation, safety should be followed and take the necessary measures;	Ongoing, implementation will be monitored
6	Trees that interfere with the construction process should be removed only in coordination with the authorized state body in the field of environment protection;	The permit for cutting trees will be given step by step, after the Contractor submits the site-specific EMP
7	Planting and transplanting seedlings should be conducted following the design and agro-technical rules;	Ongoing, implementation will be monitored
8	Technical construction works to be carried out following the requirements of environmental norms and minimum impact on the environment;	Ongoing, implementation will be monitored
9	Following the established procedure to implement departmental control over compliance with the requirements of measures in the field of environmental protection;	Ongoing, implementation will be monitored Ongoing, implementation will be monitored
10	To dispose of solid household waste in the official landfill following the established procedure;	The contractor will agree with municipals to disposal of waste in official landfills. Waste management plan will be developed by the contractor.
11	Construction waste generated during and after construction works should be sorted and disposed of in an official dump in coordination with the authorized state body in the field of environmental protection;	The contractor will agree with municipals to disposal of waste in official landfills. Waste management plan will be developed by the contractor.
12	In case of departure from the territory of construction facilities, equipment and vehicles should be washed following the rules and their cleanliness should be ensured;	Ongoing, implementation will be monitored
13	During locating an asphalt plant and processing of inert materials following the requirements of the legislation in the field of environmental protection and sanitation, it is necessary to prepare the report on environmental impact assessment should be submitted to the State Environmental Expertise of the Committee for Environmental Protection under the Government of the Republic of Tajikistan for obtaining of conclusion.	The contractor will agree with municipals the location of asphalt plant. Conclusion of SEE will be obtained
14	To implement normative and legal acts, state standards, sanitary, safety and environmental standards during arrangement of drainage/diverting to avoid waterlogging/pollution;	Ongoing, implementation will be monitored
15	Carry out technological work following the requirements of environmental impact;	Ongoing, implementation will be monitored
16	Copy of this report should be submitted to local environmental authorities.	Copy of The conclusion of SEE provided to local environmental protection authorities

SSEMP = site-specific environmental management plan, SEE = State Ecological Expertise

Table 5: Summary of Civil Works Contracts and works' progress

Package	Scope	Contractor	Signed	Approval Date			Environmental personnel		Civil Work		(%) Progress as of	
				SSEMP	COVID-19 HSMP	ERP	Environmental officer	Health and Safety officer	Start	End	30 Jun 2021	31 Dec 2021
Package 1 (CW-01) Lot 1	Hulbuk-Temurmalik Road Section	China State Construction Xinjiang Construction Engineering Group Co., Ltd	30.08.2021	Not submitted	Not submitted	Not submitted	Mr. Jamaluddin Bekov	Mr. Ma Zhang Liang	(Q1 2022)	(Apr 2023)	0%	0%
Package 1 (CW-01) Lot 2	Temurmalik-Kangurt Road Section	China State Construction Xinjiang Construction Engineering Group Co., Ltd	30.08.2021	Not submitted	Not submitted	Not submitted	Mr. Jamaluddin Bekov	Mr. Ma Zhang Liang	(Q1 2022)	(Apr 2023)	0%	0%
Package 2 (CW-02)	Okmazor-Dangara Road Section	N/A	(Q1 2022)	N/A	N/A	N/A	N/A	N/A	(Q2 2022)	(Q3 2023)	0%	0%

Note: The Month/Years in brackets are planned schedule.

COVID-19 HSMP = COVID-19 Health and Safety Management Plan, ERP = Emergency Response Plan, SSEMP = site-specific environmental management plan

2.3.1 Project environmental management

33. The Project Implementation Unit for Road Rehabilitation set up by Resolution of the Government of Tajikistan for management of the contract implementation has mobilized Environmental Specialists respectively for Hulbuk-Temurmalik-Kangurt Road Section and Okmazor-Dangara Road Section, in January of 2022.

34. CSC hired National environmental consultant in March 2022 and International environmental consultant in October 2021.

35. Summary of mobilization of environmental personnel for this project is in the Table 6 below

Table 6: Summary of Environmental Personnel

Environmental Personnel	Allocated PMs	Date of assignment	Name
Environmental Safeguards Specialist under the PIURR (for Hulbuk-Temurmalik-Kangurt Road Section)	Full-time	Jan 2022	Safaro Najubullo
Environmental Safeguards Specialist under the PIURR (for Okmazor-Dangara Road Section)	Full-time	Jan 2022	Shuhrat Tilavov
International Environmental Specialist (IES) under the CSC	8 PMs (intermittent)	October 2021	Mohsin ALMAJI
National Environmental Specialist (NES) under the CSC	18 PMs (intermittent)	March 2022	Dilshod DADOBAEV
Environmental Specialist under the Contractor	till end of project (continuous)	November 2021	Jamaluddin BEKOV
Health and Safety engineer under the Contractor	till end of project (continuous)	November 2021	Ma Zhang Liang

PIURR = Project Implementation Unit for Road Rehabilitation, PM = person-month, CSC = Project Supervision Consultant

36. Project Organization Structure and environmental team are shown in Figure 10.

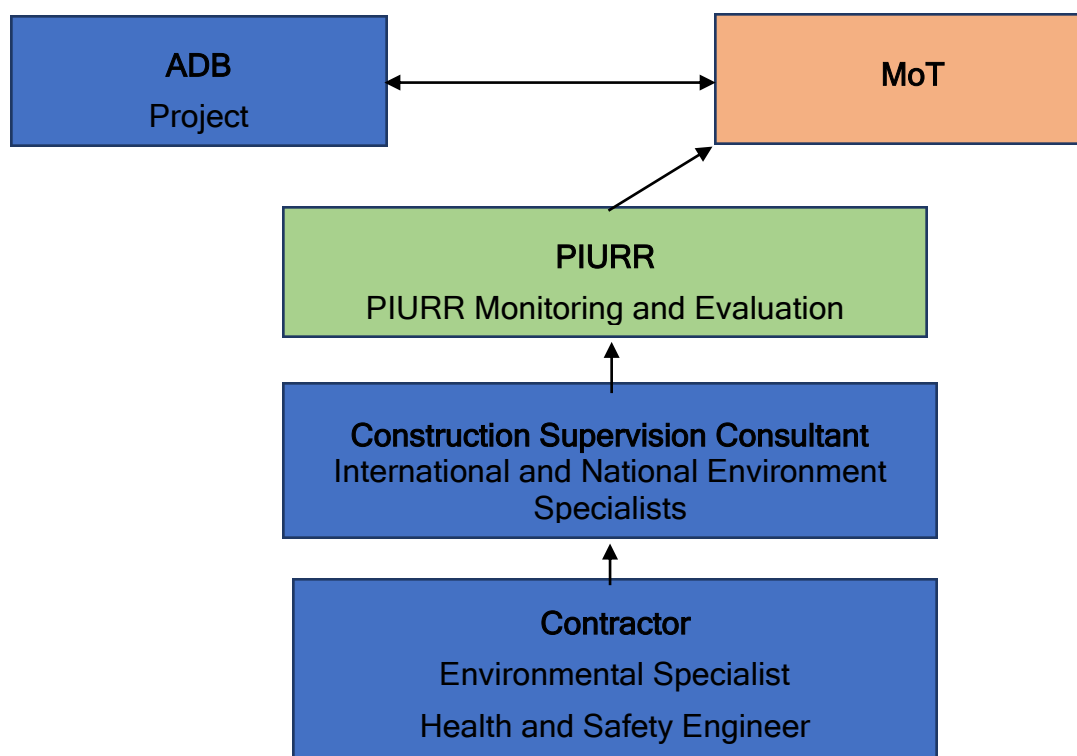


Figure 10: Project Environmental Organization Chart

2.4 Project Activities During Current Reporting Period

37. N/A – no civil works commenced during reporting period.

2.5 Changes in project design

38. No changes in project design were done in the reporting period.

2.6 Description of Any Changes to Agreed Construction methods

39. No changes to agreed construction methods were done in the reporting period.

3 ENVIRONMENTAL SAFEGUARD ACTIVITIES

3.1 General Description of Environmental Safeguard Activities

40. The IEE for both Hulbuk-Temurmalik-Kangurt and Okmazor-Dangara road sections was cleared by ADB and disclosed in ADB and MoT sites.

41. The IEE for both road sections submitted to State Ecological expertise of the Committee for environmental protection under Government of Tajikistan (CEP) for getting their positive conclusion (clearance).

42. Regarding the permissions for cutting trees, the Committee for Environmental Protection indicated that the permit for cutting trees will be given step by step, after the Contractor submits the SEMP for consideration to the Committee for Environmental Protection.

43. Activities carried out by Environmental consultants during the monitoring period (international and national, respectively) are provided in Table 7 below.

Table 7: Environmental Safeguards Activities Carried out During Reporting Period (July-December 2021)

Environmental Safeguard Activities
The international environmental expert of Supervision Consultant (SMEC)
<ul style="list-style-type: none">- Ensured the construction methods proposed by the contractor like SEMP for carrying out the works are satisfactory,- Performed sound environmental standards of the construction works on the basis of the Asian Development Bank (ADB) Environment Source Book and World Bank Group's Environment, Health and Safety Guidelines 3,- Prepared environmental monitoring plan and annual report of implementing the plan,- Reviewed of Semi Annual Environment Monitoring Report (SAEMR) and finalized,
The national environmental expert of Supervision Consultant
<ul style="list-style-type: none">- Ensured the construction methods proposed by the contractor like SEMP for carrying out the works are satisfactory,- Performed sound environmental standards of the construction works on the basis of the Asian Development Bank (ADB) Environment Source Book and World Bank Group's Environment, Health and Safety Guidelines 3,- Ensured inspection of contractor's construction equipment; safety of the works, property, personnel, and general public;- Carried out environmental management seminars for contractors, and engineers at project site;- Prepared of Semi Annual Environment Monitoring Report (SAEMR) and finalized,

3.2 Grievance Redress Mechanism Functioning

44. During implementation of the Project, there might be several issues related to environmental and social hazards and disputes on entitlement processes occurred due to the Project activities. No complaints received within reporting period.

45. A Grievance Redress Mechanism has been set up for the Project to deal with both the environmental and social issues of the Project.

46. Grievance redressal is being handled by Project Implementation Unit of Road Rehabilitation (PIURR). Grievances not redressed by the PIURR but will be brought to the Independent Grievance Redress Committee (GRCE) set up to monitor Project

implementation. The GRCE, is chaired by Principal Secretary, Urban Affair Department with representatives, state government agencies, community- based organizations (CBOs) and NGOs. Grievance Redress Committee (GRCE) established at municipal level as a project-specific instrument, which is functional only for the period of the project implementation. Grievance Redress Commission (GRCN) is formed as permanently functional informal structure within the IA to ensure grievance review, resolution and record.

- **Grievance Redress Commission:** Grievance Redress Commission (GRCN) is formed by the order of the Head of RDMRDI as a permanently functional informal structure, engaging personnel of RDMRDI from all departments having regard to the environmental and resettlement issues and complaint resolution. This includes top management, Environmental and Social Safeguards Units, Legal Departments, PR department and other relevant departments (depending on specific structure of the IA). The GRCN is involved at the Stage 2 of grievance resolution process. The Order shall also state that if necessary, representative of local authorities, NGOs, auditors, representatives of APs and any other persons or entities can be engaged in a work of GRCN.
- **Grievance Redress Committee:** Grievance Redress Committee (GRCE) is an informal, project- specific grievance redress mechanism, established to administer the grievances at Stage 1. This informal body will be established at community level in affected Municipality (village/community authority). The GRCE shall include representatives of Municipal LAR Teams and local communities. The RD representative in the Municipal LAR Team shall coordinate the GRCE formation. He/she will then be responsible for the coordination of GRC activities and organizing meetings (Convener). In addition, GRCE shall comprise involved villages or his/her representative, representatives of APs, women APs (if any), and appropriate local NGOs to allow voices of the affected communities to be heard and ensure a participatory decision-making process.

47. Representative of the Resettlement and Environment Division of RD is coordinating the work of the Committee and at the same time he/she is nominated as a contact person for collecting the grievances and handling grievance log. The local authorities at the municipal level, civil works Contractor, Supervising Company (Engineer), as well as APs (through informal meetings) will be informed about the contact person and his contact details are available in offices of all mentioned stakeholders.

48. The Contact Person collects and records the grievances, informs all members of the Committee and the management of RD regarding the essence of the problem, engages the relevant stakeholders in discussions with the applicant of grievance, handles the process of negotiation with AP at the stage 1 of the grievance resolution. The Contact Person prepares the minutes of meetings and ensures signatures. In case if the grievance is resolved at the stage 1, the Contact Person records the fact of closing the grievance in his log and informs RDMRDI management about this in written. If the complainants are not satisfied with the GRC decisions, they can always use the procedures of Stage 2 of grievance resolution process. In that case the Contact Person helps the AP in lodging an official complaint (the plaintiff should be informed of his/her rights and obligations, rules and procedures of making a complaint, format of complaint, terms of complaint submission, etc.).

49. The APs should be informed about the available GRM. This could be achieved through implementing information campaigns, distributing brochures (e.g. Communication Plan), keeping all focal points up-to-date & maintaining regular communication with them, allowing multiple entry points for complaints, introducing forms for ease of reporting complaints.

3.2.1 Grievance Redress Procedures

50. Brief description of all stages of Grievance Resolution Process are given in the Table 8 below:

Table 8: Grievance Resolution Process

Steps	Action level	Process
Stage 1 (IGRC Level)	Step 1: Informal negotiations with APs	The complaint is informally reviewed by the GRCE Contact Person
		Representative of Environmental and Resettlement Unit of IA/PIURR, which takes all necessary measures to resolve the dispute amicably. At this stage, Contact Person engages in discussions with AP only those members of the
		If the oral grievance is not solved during the negotiations, the GRCE will assist the aggrieved APs to formally lodge the grievances to the GRCE.
	Step 2: Formal negotiations with APs GRCE level resolution of grievance	The aggrieved APs shall submit their complaints to the IGRC within 1 week after completion of the negotiations at the village level or later, as he wishes. The aggrieved AP shall produce documents supporting his/her claim. The GRCE Contact Person will review the complaint and prepare a Case File for GRCE hearing and resolution. A formal hearing will be held with the GRCE at a date fixed by the GRCE Contact Person. On the date of hearing, the aggrieved AP will appear before the GRCE at the Municipality office for consideration of grievance. The member secretary will note PIURR the statements of the complainant and document all details of the claim.
		The decisions from majority of the members will be considered final from the GRCE at Stage 1 and will be issued by the Contact Person/Convenor and signed by other members of the IGRC. The case record will be updated and the decision will be communicated to the complainant AP.
		After implementation of the agreed action the Protocol of Grievance Closure is prepared by the Contact Person. The protocol will be signed by the Chairman of IGRC and by the claimant.
Stage 2	Step 3 Decision from central IA/PIU GRCN	If any aggrieved AP is unsatisfied with the IGRC decision, the next option will be to lodge grievances to the IA/PIURR at the national level. GRCE should assist the plaintiff in lodging an official complaint to GRCN (the plaintiff should be informed of his/her rights and obligations, rules and procedures of making a complaint, format of complaint, terms of complaint submission, etc). The aggrieved AP shall produce documents supporting his/her claim, in accordance with the legal requirements (Administrative Code of Tajikistan). The GRCN of the IA shall review the complaint in compliance with the procedures specified in the Administrative Code of Tajikistan. If needed, a formal hearing will be held with the GRCN at a date fixed by the GRCN member secretary. On the date of hearing, the aggrieved AP will appear before the GRCN at the IA office for consideration of grievance. The Contact

Steps	Action level	Process
		person will note PIURR the statements of the complainant and document all details of the claim. The plaintiff shall be informed of the decision.
Stage 3	Step 4 Court decision	If the IA/PIURR decision fails to satisfy the aggrieved APs, they can pursue further action by submitting their case to the appropriate court of law (Rayon Court). The aggrieved AP can take a legal action not only about the amount of compensation but also any other issues, e.g. occupation of their land by the contractor without their consent, damage or loss of their property, restrictions on the use of land/assets, etc.

3.2.2 Grievance Log

51. The Grievance Logs will be developed at both – GRCE and GRCN levels.
52. The Grievance Logs will be developed and managed by the RD representative at site (Convener of the GRCE/Contact Person) and will be kept at site (in the IA/PIU office or Engineer's office).
53. The records in Grievance logs include the following information:
 - Name and contact details of the claimant
 - Date of receiving claim
 - Form of claim – (oral or written)
 - To whom the claim has been addressed initially (entry point)
 - The brief description of the essence of claim
 - The stages, dates and participants of negotiations with the AP with GRCE (stage 1)
 - Minutes of meetings
 - Final decision of the GRCE (in case of the dispute is resolved, the decision is about closure of the issue. In case if the dispute remains unresolved, the decision is about passing to the stage 2 of the grievance redress process)
 - Date of decision of GRCE
 - Documents prepared by AP with the help of GRCE for passing to GRCN
54. The copies of the records/documents may be also kept in the municipal office.

3.3 Site Audits

55. N/A: during the current reporting period, no inspections were carried out by the Environmental specialists as no construction works were started.

3.4 Issues Tracking (Based on Non-Conformance Notices)

56. N/A: due to the fact that no any construction activities were carried out, during the current reporting period no issues were tracked.

3.5 Trends

57. N/A: this report is the first semi-annual environmental monitoring report

3.6 Unanticipated Environmental Impacts or Risks

3.6.1 COVID-19 Impact

58. During the reporting period, COVID-19 is viewed as an unanticipated impact and risk to the community and workers. There were no major delays during the monitoring period due to the COVID-19 situation. No cases of COVID-19 among workers were reported during the monitoring period.

59. The Contractor will develop Occupational Health and Safety Plan as part of its SEMP which includes, inter alia, corresponding measures on prevention of the spread of COVID-19. The Contractor's SEMP also will include Emergency Management Plan.

4 RESULTS OF ENVIRONMENTAL MONITORING

4.1 Overview of Monitoring Conducted during Current Period

60. The survey of potential nesting sites was undertaken by the Contractor's ecologist. The survey did not identify any nests within the project ROW prior to the commencement of works in February 2022.

After consultation with an ornithologist from the Institute of Zoology of the Academy of Sciences of the Republic of Tajikistan, it was decided to conduct a second joint study in May 2022 after the eggs hatch. Also, prior to nesting, trees within the project area that could potentially form nests were felled.

4.2 Trends

61. N/A: due to the fact that no construction activities were carried out no any trends which may be developing.

4.3 Summary of Monitoring Outcomes

62. N/A: due to the fact that no construction activities were carried out no any monitoring activities have been completed.

4.4 Material Resources Utilisation

63. N/A: no construction activities were carried out during reporting period, no resources yet utilised.

4.5 Waste Management

64. N/A: no construction activities were carried out during reporting period, no waste were generated.

4.6 Health and Safety

4.6.1 Community Health and Safety

65. N/A: due to the absence of construction works there are no any issues.

4.6.2 Worker Safety and Health

66. N/A: no construction activities were carried out during reporting period.

4.7 Summary of Monitoring Outcomes

67. The monitoring of the works is progressing well and follows the requirements of EMP. The Consultant has made efforts based on the findings of the monitoring period to train the Contractor's environmental staff and ensure that the project is implemented in a manner that is compliant with the environmental requirements of the project.

68. Status of compliance with related covenants on environmental safeguards in the Project's Grant Agreement signed between Republic of Tajikistan and ADB on December 25, 2020³ is summarized in Table 9.

³ ADB. Grant Agreement (Special operations) for Road Network Sustainability Project (December 25, 2020): <https://www.adb.org/sites/default/files/project-documents/54005/54005-001-grj-en.pdf>

Table 9: Grant Agreement Compliance Status

Schedule	Paragraph	Covenant	Compliance Status
3	3	<p><u>Environment</u></p> <p>The Recipient through MoT, shall not award any Works contract which involves environmental impacts until;</p> <p>(a) the relevant environmental authority of the Recipient has granted the final approval of the IEE;</p> <p>(b) the Recipient through MoT, has incorporated, the relevant provisions from the EMP into the Works contract.</p>	<p><u>Complied</u></p> <p>(a) IEE approved by Environmental authorities of Tajikistan</p> <p>(b) provisions of EMPs are included to the works contract</p>
3	5	<p>The Recipient, through MOT shall ensure that the preparation, design, construction, implementation operation and decommissioning of the Project and all Project facilities comply with</p> <p>(a) all applicable laws and regulations of the Recipient relating to environment, health and safety,</p> <p>(b) the Environmental Safeguards; and</p> <p>(c) all measures and requirements set forth in the IEE, the EMP and any corrective or preventative actions set forth in the Safeguards Monitoring Report.</p>	<p><u>Complied</u></p> <p>MoT ensures that preparation and design will comply with Environmental Safeguards requirements and applicable laws and regulations of Tajikistan. MoT/PIURR has appointed Environmental Safeguards Specialists to ensure compliance.</p>
3	9	<p>Human and Financial Resources to Implement Safeguards Requirements</p> <p>The Recipient, through MOT, shall make available necessary budgetary and human resources to fully implement the EMP and the LARP</p>	<p><u>Complied</u></p> <p>There are 2 Environmental Specialist hired by PIURR, IES and NES hired by CSC.</p>
3	10	<p>Safeguards - Related Provisions in Bidding Documents and Works Contracts</p> <p>The Recipient, through MOT, shall ensure that all bidding documents and contracts for Works contain provisions that require contractors to</p> <p>(a) comply with the measures relevant to the contractor set forth in the IEE the EMP and the LARP (to the extent they concern impacts on affected people during construction), and any corrective or preventative actions set out in a Safeguards Monitoring Report:</p> <p>(b) make available a budget for all such environmental and social measures,</p> <p>(c) provide the Recipient, through MOT, with a written notice on any unanticipated environmental, resettlement or indigenous peoples risks or impacts that arise during construction, implementation or operation of the Project that were not considered in the IEE the EMP or the LARP</p> <p>(d) adequately record the condition of roads agricultural land and other infrastructure</p>	<p><u>Complied, Ongoing</u></p> <p>IEE and EMPs are included to the works bidding documents</p>

Schedule	Paragraph	Covenant	Compliance Status
		<p>prior to starting to transport materials and construction</p> <p>(e) reinstate pathways, other local infrastructure and agricultural land to at least their pre-project condition upon the completion of construction</p> <p>(f) prepare and finalize a site-specific environmental management plan which shall be submitted to and approved by the Recipient prior to the commencement of any Works.</p>	
3	11(a)	<p>Safeguards Monitoring and Reporting</p> <p>The Recipient, through MOT, shall</p> <p>(a) submit semi-annual Safeguards Monitoring Reports to ADB, and disclose relevant information from such reports to affected persons promptly upon submission;</p> <p>(b) if any unanticipated environmental and/or social risks and impacts arise during construction, implementation or operation of the Project that were not considered in the IEE, the EMP, or the LARP, promptly inform ADB of the occurrence of such risks or impacts, with detailed description of the event and proposed time-bound corrective action plan</p> <p>(c) report any actual or potential breach of compliance with the measures and requirements set forth in the EMP or the LARP promptly after becoming aware of the breach</p>	<p><u>Complied</u></p> <p>Information from this first SAEMR will be translated in Russian⁴ and disclosed on project website⁵</p>
3	12	<p>Prohibited List of Investment</p> <p>The Recipient shall ensure that no proceeds of the Grant are used to finance any activity included in the list of prohibited investment activities provided in Appendix 5 of the SPS</p>	<p><u>Complied, ongoing</u></p> <p>MoT ensures that no proceeds of the Grant are used to finance any activity included in the list of prohibited investment</p>
3	13	<p>Illegal trafficking</p> <p>The Recipient shall undertake adequate measures to detect and prevent trafficking of humans, wildlife, endangered species, and illegal substances on the Project roads</p>	<p><u>Complied, ongoing</u></p> <p>Public security authorities and MoT/PIURR with support of CSC, continuously monitoring to detect and prevent illegal trafficking</p>
3	14(a)	<p>Labor Standards, Health and Safety</p> <p>The Recipient shall ensure that the core labor standards and the Recipient's applicable laws and regulations are complied with during Project implementation The Recipient, through MOT, shall include specific provisions in the</p>	<p><u>Complied, ongoing</u></p> <p>MoT ensures and monitor that during project implementation will comply with Labor Standards, Health and</p>

⁴ The report will be disclosed in Russian language because all affected people well understand Russian

⁵

Schedule	Paragraph	Covenant	Compliance Status
		<p>bidding documents and contracts financed by ADB under the Project requiring that the contractors, among other things</p> <p>(a) comply with the Recipient's applicable labor law and regulations and incorporate applicable workplace occupational safety norms,</p> <p>(b) do not use child labor,</p> <p>(c) do not discriminate workers in respect of employment and occupation,</p> <p>(d) do not use forced labor;</p> <p>(e) allow freedom of association and effectively recognize the right to collective bargaining;</p> <p>(f) disseminate, or engage appropriate service providers to disseminate, information on the risks of sexually transmitted diseases, including HIV/AIDS, to the employees of contractors engaged under the Project and to members of the local communities surrounding the Project area, particularly women</p>	<p>Safety requirements and applicable laws and regulations of Tajikistan. MoT/PIURR has appointed the Environmental and Social Safeguards Specialist and agreed with CSC to ensure compliance.</p>
3	15	<p>The recipient shall strictly monitor compliance with the requirements set forth in paragraph 14 above and provide ADB with regular reports.</p>	<p><u>Complied, ongoing</u></p> <p>This first SAEMR includes Health and safety monitoring results will be provided to ADB and disclosed in Russian project website. Social safeguards monitoring report will also prepared and disclosed.</p>

69. Status of compliance with the Project EMP attached to IEE is summarized in Table 10 and Table 11.

Table 10: Implementation Status of EMP during the pre-construction period for Hulbuk-Temurmalik-Kangurt road section

Activity/Location	Potential Impact	Mitigation / Management Measure	Compliance Attained	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
Pre-works documentation and establishment of more recent baseline environmental conditions	Possible obsolete information not capturing site-specific baseline and pre-works conditions	1. As part of preparation of site-specific EMP (SSEMP), undertake documentation, photographs (with Global Positioning System [GPS] coordinates), environmental sampling and analyses (thru in-house or 3 rd party authorized laboratory).	<u>Yes, ongoing</u> Contractor concluded contract with Laboratory to take photographs GPS coordinates, environmental sampling and analyses. Fully compliant in March 2022.		
Project road traversing alongside or cutting cliffs, particularly loess cliffs which bears potential nesting sites for cavity nesters such as bee-eater (<i>Merops apiaster</i>) or rollers (<i>Coraciidae</i>)	Possible destruction of bird nesting sites and their offspring. Possibly affected bird species are the bee eater (<i>Merops apiaster</i>), the European roller (<i>Coracias garrulous</i>), starlings (lane or Indian starling) and birds of the weaver family, e.g. the Indian sparrow.	2. Prior to construction a fast-track ecological survey should be conducted for purpose of identification of nesting sites at cliffs in the construction corridor.	<u>Yes, ongoing</u> Survey of identification of nesting sites conducted by environmental specialist of contractor. Repeat survey will be conducted in May 2022 when nests will be inhabited. Chapter 4,		
		3. Provide workforce awareness training program to prevent hunting/poaching/collecting rare seeds, etc.	<u>Yes, ongoing</u> Training conducted. All new workers being trained before starting his work		
		4. In case nesting sites are identified, then construction schedule should consider nesting season in order to avoid bird losses.	<u>Yes, ongoing</u> No nesting site at risk identified. Repeat survey will be conducted in May 2022 when nests will be inhabited. If case identifying nesting sites at risk work schedule will be updated		

Activity/Location	Potential Impact	Mitigation / Management Measure	Compliance Attained	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
		5. Also required tree felling and site clearance activities which involves the remove of vegetation should be outside nesting season (preferably between October and February).	<u>Yes, ongoing</u> Tree felling and site clearance activities done in February 2022 (Chapter 4)		
		6. In cases where this is not possible, preliminary check of the elements immediately before work and subsequent fencing and exclusion of workers and construction objects from the zone where these species are present during construction until they are no longer used.	<u>Yes, ongoing</u> Under monitoring		
		7. Sympathetic restoration of temporary building sites, i.e., re-planting of local plant and animal species with increased biodiversity value.	<u>Yes, ongoing</u> Replanting scheduled after completion of works		
Road alignment in areas of tree plantations. There is a considerable number of tree losses involved	Tree losses that cannot be prevented. Main species are pines, cypresses, elms, poplars, willows and robinia. Based on the conducted surveys, 4,367 trees need to be felled. 331 trees are dug out and transplanted.	8. Any tree losses are to be compensated by new plantations at a ratio of 1:2. This means that at least 8,734 trees are to be newly planted for compensation. In addition, 331 trees are dug out and transplanted.	<u>Yes, ongoing</u> Replanting scheduled after completion of works.		
		9. Plantations should be conducted after technical works have been completed. Planting time should be restricted to	<u>Yes, ongoing</u> Replanting scheduled after completion of works.		

Activity/Location	Potential Impact	Mitigation / Management Measure	Compliance Attained	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
		spring (March till April) and/or autumn (September till October).			
		10. Locations for tree plantings are within the existing RoW at the locations where tree losses occur.	<u>Yes, ongoing</u> Replanting scheduled after completion of works.		
		11. Trees to be planted should have the following parameters: 1.5 – 2 m height, age 5 – 6 years in ratio. Transport, storage and planting of seedlings must be conducted in compliance with agrotechnical rules.	<u>Yes, ongoing</u> Replanting scheduled after completion of works.		
		12. Distance in between individual trees should be 6 – 8 m.	<u>Yes, ongoing</u> Replanting scheduled after completion of works.		
		13. Species: poplars, willows, walnuts, robinia, pines, cypresses, elms.	<u>Yes, ongoing</u> Replanting scheduled after completion of works.		
		14. Any introduction of foreign and invasive species will not be considered.	<u>Yes, ongoing</u> Replanting scheduled after completion of works.		
Rehabilitation and/or replacement of existing culverts, implementation of new culverts. Locations are shown in the technical drawings.	Potential damage to local irrigation system if new culverts should not be sufficiently dimensioned or in case that not all existing culverts should be rehabilitated in the course of the road rehabilitation.	15. In the course of the road rehabilitation all existing culverts will be replaced. All culverts are sufficiently dimensioned in order to prevent any damages or blockages to the existing local irrigation systems.	<u>Yes</u> The designed capacity of all culverts will be higher than existing .		

Activity/Location	Potential Impact	Mitigation / Management Measure	Compliance Attained	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
Reconstruction of bridges over the Shuraksay River, 2 creeks and 5 irrigation channels	Potential water erosion processes at bridge and river embankments.	16. Design of erosion protection measures at lower parts of bridge embankments. Prefabricated concrete protection plates prevent erosion processes at the lower and bridges lateral parts of bridge and river embankments. Detailed design of the respective protection measure is drafted in the technical design documentation for the respective	<u>Yes</u> Final detailed design contains construction of concrete protection plates for prevent erosion		
Road traversing through 23 villages	Potential loss of building structures and assets. (tree losses, masonry retaining wall, private yards, building structures).	17. The chosen alignment and cross section will aim on reducing the loss of building structures as far as technically feasible.	<u>Yes</u> Final detailed design been prepared so that minimize the impact on private property		
		18. Loss of structures that cannot be prevented will be compensated according to the LARP.	<u>Yes</u> LARP prepared and loss property had been fully compensated to PAPs		
Within settlements disproportionate encroachment on poor people's assets.	Loss of wealth and property of poor people. Poor and vulnerable households might be affected.	19. Resettlement Specialist will issue LARP covering assessment of loss and compensation procedure.	<u>Yes</u> LARP prepared and disclosed in MoT and ADB sites		

Table 11: Implementation Status of EMP during the pre-construction period for Okmazor-Dangara road section

Activity/Location	Potential Impact	Mitigation / Management Measure	Compliance Status	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
Pre-works documentation and establishment of more recent baseline environmental conditions	Possible obsolete information not capturing site-specific baseline and pre-works conditions	1. As part of preparation of site-specific EMP (SSEMP), undertake documentation, photographs (with Global Positioning System [GPS] coordinates), environmental sampling and analyses (thru in-house or 3rd party authorized laboratory).	Not yet due (no civil works contractor awarded).		
Project road traversing alongside or cutting cliffs, particularly loess cliffs which bears potential nesting sites for cavity nesters such as bee-eater (<i>Merops apiaster</i>) or rollers (<i>Coraciidae</i>)	Possible destruction of bird nesting sites and their offspring. Possibly affected bird species are the bee eater (<i>Merops apiaster</i>), the European roller (<i>Coracias garrulous</i>), starlings (lane or Indian starling) and birds of the weaver family, e.g. the Indian sparrow.	2. Prior to construction a fast track ecological survey shall be conducted for purpose of identification of nesting sites at cliffs in the construction corridor. In case nesting sites are identified, then construction schedule shall consider nesting season to avoid bird losses..	Same as above.		
		3. Also required tree felling and site clearance activities which involves the remove of vegetation should be outside nesting season (preferably between October and February).	Same as above.		
Road alignment in areas of tree plantations. There is a considerable number of tree losses involved	Tree losses that cannot be prevented. Main species are pines, cypresses, elms, poplars, willows and robinia.	4. Any tree losses are to be compensated by new plantations at a ratio of 1:2. This means that at least 278x2 trees are to be newly planted for compensation.	Same as above.		
		5. Plantations should be conducted after technical works have been	Not yet due (no civil works		

Activity/Location	Potential Impact	Mitigation / Management Measure	Compliance Status	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
	Based on the conducted surveys, 278 trees need to be felled.	completed. Planting time should be restricted to spring (March till April) and/or autumn (September till October).	contractor awarded).		
		6. Locations for tree plantings are within the existing RoW at the locations where tree losses occur.	Same as above.		
		7. Trees to be planted should have the following parameters: 1.5 – 2 m height, age 5 – 6 years in ratio. Transport, storage and planting of seedlings must be conducted in compliance with agrotechnical rules.	Same as above.		
		8. Distance in between individual trees should be 6 – 8 m.	Same as above.		
		9. Species: poplars, willows, walnuts, robinia, pines, cypresses, elms.	Same as above.		
		10. Any introduction of foreign and invasive species will not be considered.	Same as above.		
Rehabilitation and/or replacement of existing culverts, implementation of new culverts. Locations are shown in the technical drawings.	Potential damage to local irrigation system if new culverts should not be sufficiently dimensioned or in case that not all existing culverts should be rehabilitated in the course of the road rehabilitation.	11. In the course of the road rehabilitation all existing culverts will be replaced. All culverts are sufficiently dimensioned in order to prevent any damages or blockages to the existing local irrigation systems.	Same as above.		

Activity/Location	Potential Impact	Mitigation / Management Measure	Compliance Status	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
Reconstruction of bridges over rivers creeks and irrigation channels	Potential water erosion processes at bridge and river embankments.	12. Design of erosion protection measures at lower parts of bridge embankments. Prefabricated concrete protection plates prevent erosion processes at the lower and bridges lateral parts of bridge and river embankments. Detailed design of the respective protection measure is drafted in the technical design documentation for the respective	Not yet due (no civil works contractor awarded).		
Road traversing through five villages	Potential loss of building structures and assets. (tree losses, masonry retaining wall, private yards, building structures).	13. The chosen alignment and cross section will aim on reducing the loss of building structures as far as technically feasible	Same as above.		
		14. Loss of structures that cannot be prevented will be compensated according to the LARP.	Same as above.		
Consultations with the project affected villages	Compensation claims	15. Access to Information/ Public Relations	Same as above.		
		16. Convene a public consultation meeting (including the contractor) prior to contractor's mobilization to provide basic project information and construction scheduling, establish and explain the GRM including proactive arrangements for keeping the public informed of road rehabilitation activities.	Same as above.		
Complaints/grievances	Compensation claims	17. Establishment of GRM by Resettlement Specialist to ensure that affected persons have	Not yet due (no civil works		

Activity/Location	Potential Impact	Mitigation / Management Measure	Compliance Status	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
		information on the procedure to submit a complaint, in case they have one.	contractor awarded).		
Road traversing cattle crossings	Possible accidents because of collision with cattle	18. As the Project Road will be rehabilitated along the existing alignment involving only little cross section widening there is no impact on existing cattle crossings expected.	Same as above.		
		19. Adequate safety measures for accident prevention at cattle crossings include pertinent traffic signs and speed limits at relevant sections	Same as above.		
Within settlements disproportionate encroachment on poor people's assets.	Loss of wealth and property of poor people. Poor and vulnerable households might be affected.	20. Resettlement Specialist will issue LARP covering assessment of loss and compensation procedure.	Yes LARP prepared and disclosed in ADB and MoT sites		

5 FUNCTIONING OF THE SSEMP

5.1 SSEMP Review

70. The contract for Rehabilitation Hulbuk-Temurmalik-Kangurt Road Section, From Km0+000 To Km58+700, has been awarded to the China State Construction Xinjiang Construction Engineering Group Co., Ltd. (CSCEC).

71. The site-specific environmental management plan of Contractor is in process of development and will be submitted in January 2022. No civil works will be commenced before the approval of SSEMP of Contractor by PIRR.

72. The contractor for the Rehabilitation of the Dangara-Okmazor road section is not selected yet as of 31 December 2021. The tender is scheduled for the second quarter of 2022.

6 GOOD PRACTICE AND OPPORTUNITY FOR IMPROVEMENT

6.1 Good Practice

73. N/A: no construction works were commenced.

6.2 Opportunities for Improvement

74. N/A.

7 CONCLUSIONS AND RECOMMENDATIONS

76. Table 12 summarizes the issues identified during the monitoring period (until December 2021).

Table 12: Issues identified during the monitoring period

Issue	Required Action	Responsibility	Timing (Target Dates)
1. An environmental safeguards expert under the PIURR (ESE-PIURR) has not been mobilized as of 31 Dec 2021 (Table 6).	Hire environmental safeguards expert under the PIURR	PIURR	CLOSED environmental safeguards experts were hired in January 2022.

77. The contract for Rehabilitation Hulbuk-Temurmali-Kangurt Road Section, From Km0+000 To Km58+700, has been awarded to the China State Construction Xinjiang Construction Engineering Group Co., Ltd. (CSCEC).

78. The contractor started development of the SSEMP of the base of EMP which was part of bidding documentation.

79. The contractor for the Rehabilitation of the Dangara-Okmazor road section is not selected yet as of 31 December 2021. The tender is scheduled for the first quarter of 2022.

80. The clearance (positive conclusion) from the State ecological expertise of CEP was received and shared with the regional environmental protection departments. Other permits for trees cutting, storage sites for construction waste, excess soil, solid waste to be generated during construction of sewage collector also to be receiving.

81. The environmental management team for the implementation of environmental safeguards requirements is almost established by all parties.

82. No construction works has been started in reporting period.

83. GRM is established, no complaints received within reporting period.

7.1 Recommendations

84. The SSEMP should include specific H&S plan regarding the COVID-19. SSEMP should be submitted by Contractor and approved by PIU at least 30 days before commencement of civil works.

85. Other permits/agreements regarding the disposal of any hazardous waste, siting of Contractor's office etc. should be taken/concluded as per national environmental legislation requirements and put to the record folder of PIURR and CSC.

86. Ensure further proper functioning of GRM, availability of complaint logbooks at construction sites.