



REPUBLIC OF TURKEY
MINISTRY OF TRANSPORT
AND INFRASTRUCTURE



TÜRKİYE EMERGENCY ROAD REHABILITATION AND RECONSTRUCTION PROJECT

ENVIRONMENTAL AND SOCIAL DUE DILIGENCE REPORT

CNR-KGM-TERRRP-ESDD-001

Rev.00

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ABBREVIATIONS AND DEFINITIONS

AIIB	Asian Infrastructure Investment Bank
AVT	Anti-Vandalism Tubes
CCTV	Closed Circuit Television System
CHMP	Cultural Heritage Management Plan
CHPRBD	Cultural Heritage Preservation Regional Board Directorate
CHS	Community Health and Safety
ÇINAR	Çınar Engineering Consultancy Inc.
CLO	Community Liaison Officer
DEHA	Deha Altyapı A.Ş. (Contractor Company)
DSM	Deep Soil Mixing
E&S	Environmental and Social
EÇBS	Integrated Environmental Information System
EIA	Environmental Impact Assessment
ENKON	Enkon İnşaat A.Ş. (Contractor Company)
ESAP	Environmental and Social Action Plan
ESDD	Environmental and Social Due Diligence
ESEL	Environmental and Social Exclusion List
ESF	Environmental and Social Framework
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESMS	Environmental and Social Management System
ESP	Environmental and Social Policy
EU	European Union
FEZA	Feza Taahhüt A.Ş. (Contractor Company)
FWT	Formwork Tubes
GBVH	Gender Based Violence and Harassment
ILM	Incremental Launch Method
ILO	International Labor Organization
INA	Important Nature Area
KBA	Key Biodiversity Area
KGM	General Directorate of Highways
LAP	Land Acquisition Plan
LARP	Land Acquisition and Resettlement Plan
LRP	Livelihood Restoration Plan
MKE	Machinery and Chemical Industry
MoEUCC	Ministry of Environment, Urbanization and Climate Change
MoTI	Ministry of Transport and Infrastructure
N/A	Not Applicable
OHS	Occupational Health and Safety
OIZ	Organized Industrial Zone
PPE	Personal Protective Equipment
RP	Resettlement Plan
SEA/SH	Sexual Exploitation and Abuse/Sexual Harassment



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SEP	Stakeholder Engagement Plan
SNH	SNH İnşaat A.Ş. (Contractor Company)
TAG Highway	Tarsus Adana Gaziantep Highway
The Project	Türkiye Emergency Road Rehabilitation and Reconstruction Project

LIST OF APPENDICES

Appendix-1 Maps of the Legally Protected and Internationally Recognized Areas



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1 INTRODUCTION

The Türkiye Emergency Road Rehabilitation and Reconstruction Project (the Project) has been planned to be prepared and implemented by General Directorate of Highways (KGM) under the Ministry of Transport and Infrastructure (MoTI) to ensure efficient execution and compliance with national regulations and Asian Infrastructure Investment Bank (AIIB) policies.

The Project will rehabilitate and reconstruct roads, tunnels, and bridges damaged by the February 2023 earthquakes that occurred in the southeast of Türkiye. The Project activities will be implemented through five (5) subprojects which will entail rehabilitation and enhancement of transportation infrastructure to meet required safety and capacity standards, as well as integration of climate-resilient measures to mitigate and withstand the impacts of seismic events in the future. The subprojects are located within the jurisdictions of the 5th Regional Directorate of Highways (Mersin) and 8th Regional Directorate of Highways (Elazığ).

The phased approach on environmental and social (E&S) assessment will be utilized for the proposed Project given the urgent need of assistance because of the earthquakes. In this context, a contract was signed between 5th Regional Directorate of Highways and Çınar Engineering Consultancy Inc. (ÇINAR) on 14.02.2024 for the preparation of Environmental and Social Documentation in accordance with the AIIB standards and national legislation.

1.1 Scope

This E&S due diligence is a requirement of AIIB for conducting the initial review of the potential environmental and social risks and impacts of the project.

This report assesses the status of each sub-project with respect to documentation, procurement of contractors, compliance with both AIIB Environmental and Social Framework¹ (ESF) and national legislation requirements, findings and recommendations with respect to environmental and social issues.

1.2 Methodology

The approach towards preparation of the ESDD report includes the following steps:

- Understanding the project components, progress and current status,
- Identifying of the applicable national legislation and international standards for the project,
- Reviewing the existing ESHS documentation regarding the project,
- Conducting site visit observations,
- Reviewing the results of the interviews held with the internal and external stakeholders,
- Performing a Gap Analysis to compare national requirements with AIIB requirements that need to be complied with,
- Identifying the actions required to be taken for full compliance,
- Identification of the responsible party or parties, and
- Estimating a time schedule for the required actions.

Site Visits

The site visits were conducted by ÇINAR's experts in March 2024 with the participation of the Environmental Experts, an Occupational Health and Safety Expert, a Biodiversity Expert and Social Experts. All sub-project construction areas and the associated facilities were visited respectively, and the site visit observations and findings are presented in Section 4.

¹ <https://www.aiib.org/en/policies-strategies/framework-agreements/environmental-social-framework.html>



2 REGULATORY FRAMEWORK

2.1 National Legislation

Turkish Environmental Law No. 2872, which was issued in the Official Gazette No. 18132 on August 11, 1983, describes the fundamental principles required to protect the environment in accordance with sustainable development and sustainable environmental goals. The Environmental Law provides a legal framework for the development of environmental regulations in accordance with national and international standards.

In addition to Environmental Law and associated regulations, several laws in relation with environmental protection, pollution prevention and control, the human rights and safety are listed below:

Table 1. Highlighted Laws Covered by National Legislation

Law	Law Number
Agricultural Reform Law on Land Rearrangement in Irrigated Areas	3083
Electricity Market Law	6446
Energy Efficiency Law	5627
Expropriation Law	2942
Forestry Law	6831
Groundwater Law	167
Highway Traffic Law	2918
Labor Law	4857
Law on Conservation of Cultural and Natural Assets	2863
Law on Measures to be taken and Aids to be provided for the Disasters Effective in Public Life	7269
Law on Right to Information	4982
Law on Soil Conservation and Land Use	5403
Mining Law	3213
Municipality Law	5393
National Parks Law	2873
Occupational Health and Safety Law	6331
Pasture Law	4342
Public Health Law	1593
Settlement Law	5543

Environmental regulations, by-laws and communiques that are valid within the above-mentioned laws are listed in Table 2.

Table 2. Prominent Regulations Covered by National Legislation

Regulation Name	Official Gazette Date	Issue
Environmental Permits and Licenses (General)		
Regulation on Environmental Impact Assessment	29.07.2022	31907
Regulation on Environmental Permits and Licenses	10.09.2014	29115
Regulation on Environmental Audit	12.06.2021	31509
Regulation Concerning Environmental Management Services	01.11.2022	32000
Climate Change		
Regulation on Minimization of Ozone Depleting Substances	07.04.2017	30031



Regulation Name	Official Gazette Date	Issue
Regulation on Monitoring of Green House Gas Emissions	17.05.2014	29003
Land Use and Soils		
Regulation on Control of Soil Pollution and Point Source Contaminated Sites	08.06.2010	27605
Regulation on Protection, Use and Planning of Agricultural Lands	09.12.2017	30265
Regulation on the implementation of articles 17 and 18 of the Forest Law No. 6831	30.11.2021	31675
Regulation on Land Consolidation and On-farm Development Services Implementation	07.02.2019	30679
Regulation Concerning the rehabilitation of the Lands Disturbed by Mining Activities	23.01.2010	27471
Regulation on Pastures	31.07.1998	23419
Water		
Regulation on Surface Water Quality	30.11.2012	28483
Regulation on Water Pollution Control	31.12.2004	25687
Regulation Concerned Water Intended for Human Consumption	17.02.2005	25730
Regulation on Urban Wastewater Treatment	08.01.2006	26047
Regulation Concerning Protection of Groundwater against Pollution and Deterioration	07.04.2012	28257
Monitoring of Surface and Groundwater Regulation	11.02.2014	28910
Regulation on Fishery Products	10.03.1995	22223
Regulation on Control of Pollution Caused by Hazardous Substances in and around the Water Bodies.	26.11.2005	26005
Communique on Sampling of Surface Water, Ground Water and Sediment and Biological Sampling	21.02.2015	29274
Regulation on Protection of Drinking-Potable Water Basins	28.10.2017	30224
Waste Management		
Regulation on Control of Packaging Wastes	26.06.2021	31523
Regulation on Waste Management	02.04.2015	29314
Regulation on the Control of Excavation Soil, Construction and Demolition Wastes	18.03.2004	25406
Regulation on the Control of Medical Wastes	25.01.2017	29959
Regulation on the Management of Waste Oils	21.12.2019	30985
Regulation on the Control of Vegetable Waste Oils	06.06.2015	29378
Regulation on the Control of Waste Batteries and Accumulators	31.08.2004	25569
Regulation on the Control of End-of-Life Tires	25.11.2006	26357
Regulation on Mining Wastes	15.07.2015	29417
Regulation on the Landfill of Wastes	26.03.2010	27533
Regulation on the Control of Waste Electrical and Electronic Equipment	26.12.2022	32055
Regulation on the Control of End-of-Life Vehicles	30.12.2009	27448
Regulation on Zero Waste	12.07.2019	30829
Notice on Fuel, Auxiliary Fuel and Alternative Raw Material Derived from Waste	20.06.2014	29036
Regulation on the Control of Collecting Wastes from the Vessels	26.12.2004	25682
Regulation on Recovery of Some Non-Hazardous Wastes	17.11.2011	27967
Air Quality		
Regulation on the Control of Industrial Air Pollution	03.07.2009	27277
Regulation on the Assessment and Management of Air Quality	06.06.2008	26898
Regulation on the Control of Exhaust Gas Emissions	11.03.2017	30004
Management of Chemicals		



Regulation Name	Official Gazette Date	Issue
Regulation on Classification, Labelling and Package of Materials and Mixtures	11.12.2013	28848
Regulation on Safety Information Forms on Hazardous Substances and Mixtures	13.12.2014	29204
Regulation Regarding Prevention of Major Industrial Accidents and Mitigation of Their Effects ("BEKRA")	02.03.2019	30702
Regulation Regarding Transport of Hazardous Materials on Highways	18.06.2022	31870
Community and Occupational Health and Safety and Labor and Working Conditions		
Regulation on Occupational Health and Safety Risk Assessment	29.12.2012	28512)
Regulation on Occupational Health and Safety Services	29.12.2012	28512
Regulation on Duties, Authority, Responsibilities and Trainings of Occupational Health and Safety Specialists	29.12.2012	28512
Regulation on Procedures and Principles of Occupational Health and Safety Training of Employees	15.05.2013	28648
Regulation on the Occupational Health and Safety Committees	18.01.2013	28532
Regulation on the Health and Safety Measures to be taken in Workplace Buildings and Additions	17.07.2013	28710
Regulation on Protection of Buildings from Fire	19.12.2007	26735
Regulation on the Emergency Cases in Workplaces	18.06.2013	28681
First Aid Regulation	29.07.2015	29429
Regulation on Protection of Workers from Dangers of Explosive Environments	30.04.2013	28633
Communique on Hazard Classes List related to Occupational Health and Safety	26.12.2012	28509
Regulation Concerning the Protection of Workers from Risks Associated with Noise	28.07.2013	28721
Regulation Concerning the Protection of Workers from Risks Associated with Vibration	22.08.2013	28743
Regulation on Health and Safety Conditions in the Use of Work Equipment	25.04.2013	28628
Regulation on Occupational Health and Safety on Construction Works	05.10.2013	28786
Regulation on Health and Safety Regarding Temporary and Time Limited Works	23.08.2013	28744
Regulation on Health and Safety Precautions Regarding Working with Chemicals	12.08.2013	28733
Regulation on Health and Safety Signs	11.09.2013	28762
Regulation on Dust Management	05.11.2013	28812
Regulation on Safety Information Forms Regarding Hazardous Materials and Mixtures	13.12.2014	29204
Regulation on Personal Protection Equipment	01.05.2019	30761
Regulation on Usage of Personal Protective Equipment in Workplaces	02.07.2013	28695
Regulation on Vocational Training of the Employees Working in Dangerous and Highly Dangerous Workplaces	13.07.2013	28706
Regulation on the Provisions of Occupational Health and Safety Training of Employees	29.12.2012	28512
Regulation on the Control of Polychlorinated Biphenyl and Polychlorinated Terphenyls	27.12.2007	26739
Regulation on Transportation of Explosives via Highways	24.04.2019	30754
Act on the Procedures and Principles on Manufacture, Import, Transportation, Storing, Sales, Usage, Disposal and Control of Explosive Materials, Hunting Equipment and Similar Exempted from Monopoly	29.09.1987	19589
Regulation on the Implementation of Law Concerning Private Security Services	07.10.2004	25606
Noise		
Regulation on Environmental Noise Control	30.11.2022	32029
Regulation on Environmental Noise Emission Caused by Equipment Used Outdoors	30.12.2006	26392



Regulation Name	Official Gazette Date	Issue
Social		
Regulation on Implementation of Resettlement Law	02.12.2007	26718
Regulation on the Implementation of Law Concerning Private Security Services	07.10.2004	25606
Biodiversity		
Regulation on the Protection of Wetlands	04.04.2014	28962
Regulation on Wildlife Preservation and Wildlife Development Areas	08.11.2004	25637
Others		
Regulation on Traffic in Highway	18.07.1997	23053 (Duplicate)
Regulation on Railway Security	19.11.2015	29537
Regulation on Critical Duties Concerning Railway Security	31.12.2016	29935
Regulation on Earthquake Technique in Construction of Coastal and Harbor Structures, Railway and Airport	18.08.2007	26617

2.2 AIIB's Environmental and Social Framework

AIIB is a multilateral financial institution, whose purpose, as set out in its Articles of Agreement (Articles), is to: (a) foster sustainable economic development, create wealth and improve infrastructure connectivity in Asia, by investing in infrastructure and other productive sectors; and (b) promote regional cooperation and partnership in addressing development challenges by working in close collaboration with other multilateral and bilateral development institutions.

The Articles require the AIIB's operations to comply with policies addressing environmental and social impacts, among other policies. The Environmental and Social Framework (ESF) incorporates AIIB's policy addressing environmental and social impacts. This ESF, as amended through November 2022, replaces the May 2021 ESF and enters into effect on November 22, 2022.

The Environmental and Social Policy (ESP) of AIIB comprises mandatory environmental and social requirements for each Project and is accompanied by (a) three associated mandatory Environmental and Social Standards (ESSs) setting out requirements applicable to Clients on; and (b) an Environmental and Social Exclusion List (ESEL) which sets forth activities and items that are excluded from financing by AIIB and that the Client is required to exclude from the Project.

The ESSs cover the following:

- ESS 1: Environmental and Social Assessment and Management,
- ESS 2: Land Acquisition and Involuntary Resettlement, and
- ESS 3: Indigenous Peoples.

ESS 1 (Environmental and Social Assessment and Management): When the Bank, AIIB, has determined, in consultation with the Client, that the Project is likely to have adverse environmental and/or social risks and impacts, it requires the Client to conduct an environmental and social assessment relating to these risks and impacts, and design appropriate measures to avoid, minimize, mitigate, offset or compensate for them, all as required under ESS 1. The objective of ESS 1 is to achieve the environmental and social soundness and sustainability of Projects and to support the integration of environmental and social considerations into the Project decision-making process and implementation.

ESS 1 applies if the Project is likely to have adverse environmental risks and impacts or social risks and impacts (or both). The scope of the environmental and social assessment and management measures are proportional to the risks and impacts of the Project. ESS 1 provides



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both for quality environmental and social assessment and for management of risks and impacts through effective mitigation and monitoring measures during the course of Project implementation.

ESS 2 (Land Acquisition and Involuntary Resettlement): If the Project is likely to involve Involuntary Resettlement the Bank requires the Client to address this in the social section of the assessment report, complemented by more in-depth coverage, as required under ESS 2. The Client covers this in a plan or framework, as applicable, which may be called a land acquisition and resettlement plan, land acquisition plan or resettlement plan (LARP/LAP/RP) or, in the case of a framework, a land acquisition and resettlement planning framework, land acquisition planning framework or resettlement planning framework (LARPF/LAPF/RPF). This plan or framework is provided to the Bank as a freestanding document, an annex to the assessment report, or incorporated as a recognizable element of the report.

The objectives of this ESS 2 are: (a) to avoid Involuntary Resettlement wherever feasible; (b) to minimize Involuntary Resettlement by exploring Project alternatives; (c) where avoidance of Involuntary Resettlement is not feasible, to enhance, or at least restore, the livelihoods of all displaced persons in real terms relative to pre-Project levels and to provide resettlement assistance; (d) to understand and address gender-related risks and differential impacts of Involuntary Resettlement; (e) to improve the overall socioeconomic status of the displaced poor and other vulnerable groups; and (f) to conceive and implement resettlement activities as sustainable development programs, providing sufficient resources to enable the persons displaced by the Project to share in Project benefits.

ESS 2 applies if the Project would or may involve Involuntary Resettlement (including Involuntary Resettlement of the past or foreseeable future that the Bank determines is directly linked to the Project).

ESS 3 (Indigenous Peoples): If the Project would involve Indigenous Peoples the Bank requires the Client to address this in the social section of the assessment report, complemented by more in-depth coverage, as required under ESS 3. The Client covers impacts on Indigenous Peoples in an Indigenous Peoples Plan or Indigenous Peoples planning framework, which is provided to the Bank as a freestanding document, an annex to the assessment report, or incorporated as a recognizable element of the report.

ESS 3 is not applicable for the Projects in Türkiye, since there is no communities or groups of people which can be identified/defined as indigenous peoples in the country.



2.3 Gap Analysis

Major gaps between national legislation and AIIB ESSs are summarized in Table 3.

Table 3. Comparison Between National Legislation and AIIB ESSs

ESS	Scope / Aim of the ESS	Gaps between the Turkish Legislation and AIIB ESSs
ESS1 Environmental and Social Assessment and Management	Environmental and Social Standard (ESS) 1 applies if the Project is likely to have adverse environmental risks and impacts or social risks and impacts (or both). The scope of the environmental and social assessment and management measures are proportional to the risks and impacts of the Project. ESS 1 provides both for quality environmental and social assessment and for management of risks and impacts through effective mitigation and monitoring measures during the course of Project implementation.	<p>The main gaps between the national EIA and the ESS1 are as follows:</p> <p>The process of integrating social impact assessment into the Turkish EIA has started in recent years. Especially with the EIA Regulation published in the Official Gazette dated 29.07.2022 and numbered 31907, social impact assessment has started to be included in Turkish EIA. Turkish EIA process is currently open for improvement but requires a fully integrated process to reach ESS1.</p> <p>In addition, the requirement to address cumulative impacts of other concurrent other projects is limited in Turkish EIA legislation. Under ESS1, cumulative impact assessment is in a more important position. On the other hand, where environmental or social risks and impacts are identified, the client is required to manage them through its Environmental and Social Management System (ESMS) consistent with ESS1. Several overarching themes such as climate change, gender equality, human rights, and water management are emphasized under ESS1. The ESMS will integrate the following components: (i) policy; (ii) identification of risks and impacts; (iii) management programs; (iv) organizational capacity and competency; (v) emergency preparedness and response; (vi) stakeholder engagement; and (vii) monitoring and review. Additionally, where the project involves specifically identified physical elements, aspects, and (associated) facilities that are likely to generate impacts, environmental and social risks and impacts will be identified in the context of the project's area of influence under ESS1.</p> <p>The preparation of Environmental and Social Management Plans together with the Stakeholder Engagement Plan (during the EIA application process) has been included in Turkish legislation with the latest regulation. However, the management plans prepared are less comprehensive than the ones required under ESS1.</p> <p>In addition, ESS1 supports the use of an effective grievance mechanism that can facilitate early indication and prompt remediation for those who believe that they have been harmed by a client's actions.</p> <p>Supply chain management is also highlighted in ESS1.</p> <p><u>Labor and Working Conditions</u></p> <p>Turkish national laws and regulations are generally close to the requirements of ESS1. The grievance mechanism for workers is the most important gap between the two parties. There are no specific requirements for the establishment and implementation of a grievance mechanism in Turkish national legislation.</p> <p>Türkiye is party to a multitude of ILO conventions, including but not limited to conventions on equal treatment of employees, gender equality, child labor, forced labor, Occupational Health and Safety (OHS), right of association and minimum wage. Accordingly, the current Turkish Labor Law (No.4857) is to large extent consistent with international requirements.</p> <p>At the project level, in order to ensure that camp site arrangements, accommodation and working conditions meet ILO standards, national studies are carried out, including gender equality and anti-discrimination, Sexual Exploitation and</p>

ESS	Scope / Aim of the ESS	Gaps between the Turkish Legislation and AIIB ESSs
		<p>Abuse/Sexual Harassment (SEA/SH), child labor, forced labor, labor rights and freedom of association. and a Labor Management Plan in accordance with international standards will be prepared and implemented in five sub-projects.</p> <p><u>Resource Efficiency and Pollution Prevention</u></p> <p>Most Turkish national laws and regulations are in line with European Union (EU) directives. There is no major gap between ESS1 and Turkish national legislation. Local EIA process is quite successful in identifying impacts but does not require provision of a detailed overview of mitigation methods and monitoring. However, within the scope of ESS1, the client needs to be considered alternatives and implement technically and financially feasible and cost-effective options to reduce project related GHG emissions during the design and operation of the project.</p> <p>Sub-Management Plans and monitoring programs have started to be integrated into Turkish legislation with the recent EIA Regulation. Furthermore, there is no major gaps between the impacts and mitigation methods in the national legislation and ESS1 on major environmental issues such as waste, air pollution, water resources, wastewater, noise level except for differences in environmental limit values (mostly ESSs are stricter).</p> <p><u>Community Health and Safety</u></p> <p>In Turkish national legislation, the general principles of community health, safety and security are fragmented under different regulations. The general principles are like ESS1. However, social issues such as labor influx, gender impacts and violence-based risks are more prominent under the ESS1 along with cumulative assessment and communication mechanism with external stakeholders.</p> <p><u>Biodiversity Management</u></p> <p>Internationally recognized areas including key biodiversity areas, important nature areas, important bird areas and important plant areas are not assessed under national legislation.</p> <p>There is no habitat assessment in national legislation.</p> <p><u>Cultural Management</u></p> <p>The national legislation covers most of the requirements of the ESS1. However, as ESS1 defines the cultural heritage covering both tangible and intangible heritage, Law No. 2863 covers only the movable and immovable tangible cultural and natural assets. In addition, while national legislation covers only registered cultural assets, ESS8 applies to all cultural heritage regardless of whether it has been legally protected.</p> <p>Under ESS1, the preparation of the Chance Find Procedure is primarily expected during construction activities, especially for the protection of tangible cultural heritage. In contrast, for intangible forms such as socio-cultural aspects, the implementation of a code of conduct and providing training to all employees become prominent compared to the national legislation.</p> <p><u>Stakeholder Engagement and Information Disclosure</u></p> <p>In the Turkish EIA legislation, EIA Report for the projects in the list of Annex-I will be made available to the public opinion at the headquarters of MoEUCC or provincial directorates. Following MoEUCC's final assessment of the EIA report, the Governor's Office will disclose its reasoned decision publicly. For the projects in the list of Annex-II, the final Project Introduction File (PIF) will be disclosed publicly at the Provincial Directorates. Similarly, public information and consultation meetings are held only the projects listed in Annex-I of the Turkish EIA Regulation.</p> <p><u>Gender Equality</u></p>



ESS	Scope / Aim of the ESS	Gaps between the Turkish Legislation and AIIB ESSs
		<p>There is no national legislation to identify potential gender-specific adverse risks and effects. However, analyzes should be carried out in accordance with AIIB requirements, plans and procedures should be developed with gender sensitive analyzes and should include equality of opportunity and socioeconomic empowerment of women. Site accommodation and working conditions were evaluated with a gender sensitive approach. According to ESDD evaluations regarding accommodation and working conditions, the Project does not cause a discriminatory or negative impact in terms of gender and does not include conditions that will lead to gender inequality. However, in order to improve the project management system in this direction, a gender sensitive approach must be included in all the requirements and the system to be developed.</p>
ESS2 Involuntary Resettlement	<p>This Environmental and Social Standard (ESS) 2 addresses impacts of Project-related land acquisition, including restrictions on land use and access to assets and natural resources, which may cause physical displacement (relocation, loss of land or shelter), and/or economic displacement (loss of land or assets, or restrictions on land use, assets and natural resources leading to loss of income sources or other means of livelihood)</p>	<p>Turkish legislation on land acquisition basically corresponds to the requirements envisaged by ESS 2. However, some gaps include Resettlement Plan (RP) preparation, the implementation of the plan, impact assessment on vulnerable groups, restoration of land-based livelihoods and the lack of recognition of informal land users and squatters.</p> <p>There are the following GAPs between Turkey National Legislation and International Standards on Land Acquisition:</p> <p>Buildings are compensated with depreciations; therefore, full replacement cost is not provided.</p> <p>According to the Resettlement Law (Law No. 5543), compensation in kind cannot be made except resettlement by the state.</p> <p>Disclosure and stakeholder engagement, Project level grievance mechanism are not defined as a part of the land acquisition process,</p> <p>Entitlement defining are limited to the legal title holders of the assets or lands for National Legislation; informal, users, tenants, common land users are not defined as beneficiary and the PAPs without recognizable claims are not eligible for expropriation compensation.</p> <p>In Turkish resettlement law, the cut-off date is defined a three-year residence time limit for non-owners.</p> <p>Restoration of livelihoods of PAPs are not covered in National Legislation and no requirements are defined for the displaced poor or other vulnerable groups to improve their socioeconomic situation.</p>

* ESS 3: Indigenous Peoples is not applicable for the Projects in Türkiye, since there is no communities or groups of people which can be identified/defined as indigenous peoples in the country.



3 PROJECT DESCRIPTION

3.1 Project Background

The Project will rehabilitate and reconstruct roads, tunnels, and bridges damaged by the February 2023 earthquakes that occurred in the southeast of Türkiye. The Project activities will be implemented through five (5) sub-projects which will entail rehabilitation and enhancement of transportation infrastructure to meet required safety and capacity standards, as well as integration of climate-resilient measures to mitigate and withstand the impacts of seismic events in the future. The subprojects are located within the jurisdictions of the 5th Regional Directorate of Highways (Mersin) and 8th Regional Directorate of Highways (Elazığ).

Project summary information is provided in Table 4 and the sub-projects that are classified according to related Regional Directorates are given in Table.

Table 4. Project Summary Information

Project Name	Türkiye Emergency Road Rehabilitation and Reconstruction Project
Project Number	P000848
Sector/Subsector	Transport/Roads
Status of Financing	Under Preparation
Objective	To restore connectivity and enable safe and efficient movements of goods and people by rehabilitating essential transportation infrastructure located in the earthquake affected areas of Türkiye
E&S Category	Category B

Table 5. Classification of the Sub-projects

Responsible Regional Directorate	Project Name	Province/District
5 th Regional Directorate (Mersin)	Islahiye-Hassa-Kırıkhan Road (Km:24+500-84+500), Antakya-Reyhanlı Road (Km:0+000-42+500) Hot Bituminous Mixture Repair Work, Hatay Airport Road Soil Works, Art Structures and Superstructure Construction Work	Hatay Province
	TAG Highway Aslanlı Tunnel (Km:214+490)-Nurdağı Junction (Km: 223+115) Section, Repair of All Kinds of Damages and Strengthening of Viaducts Against Earthquakes in This Section Construction Work	Gaziantep Province Nurdağı District
	Antakya-Samandağ Road (Including Samandağ Crossing) Km: 0+000-26+850 Section Supply Works	Hatay Province Samandağ and Defne Districts
8 th Regional Directorate (Elazığ)	Repair of Technological Bridges Damaged in Earthquake (Tohma, Ağın, Beylerderesi Bridges Earthquake Damage Repair)	Malatya and Elazığ Provinces
	(Malatya-Akçadağ) Junction - Gölbaşı Road (Construction Works of Erkenek Tunnel Damaged in Earthquake and Erkenek Tunnel-Karanlıkdere Section Damaged in Earthquake)	Malatya Province Doğanşehir District and Adıyaman Province Gölbaşı District

Province and district information regarding the sub-projects is summarized in Table 5. The project encompasses Hatay, Gaziantep, Malatya, Elazığ, and Adıyaman Provinces. A map presenting the locations of all sub-projects is provided in Figure 1.



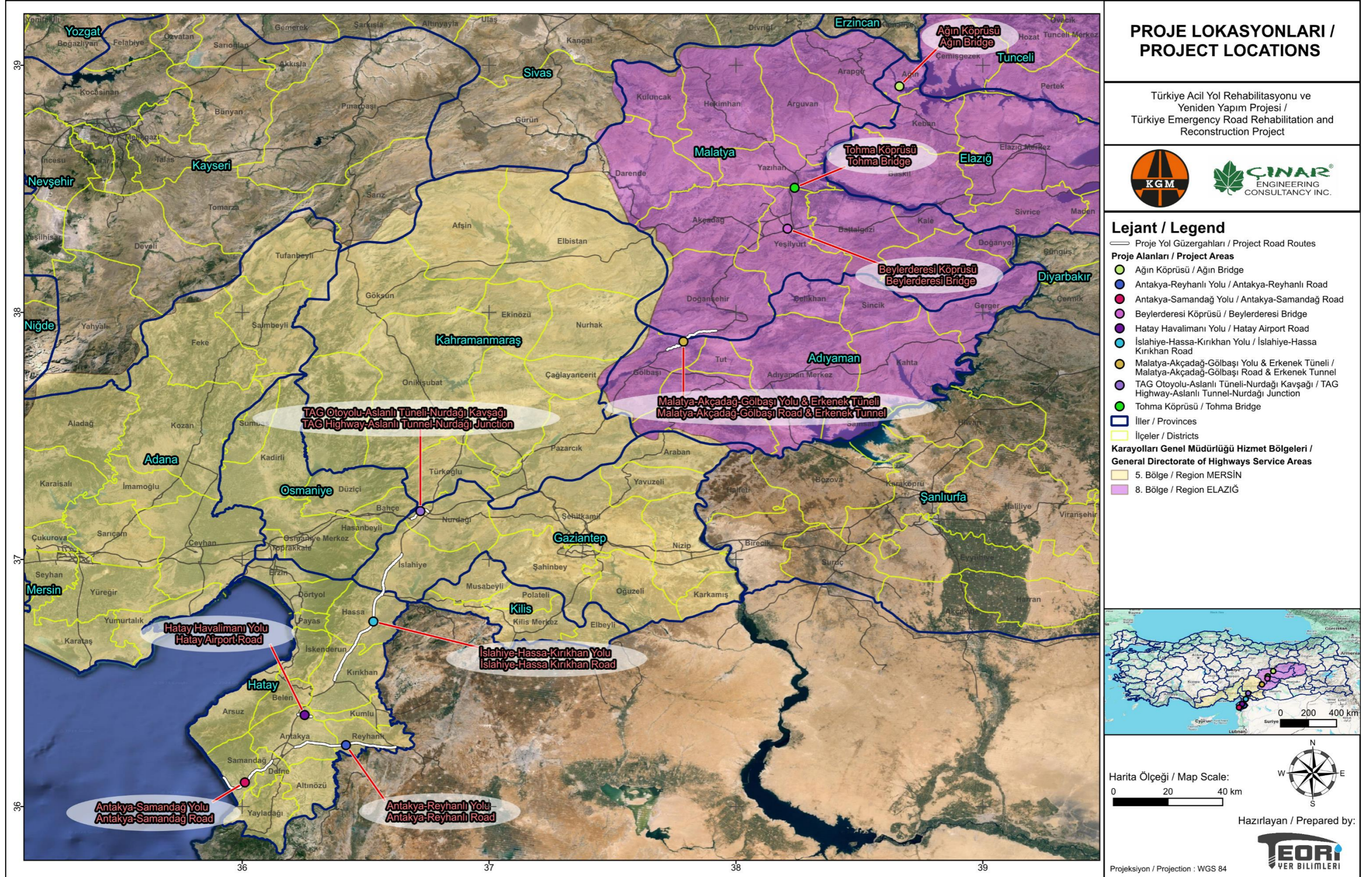


Figure 1. Project Locations Map

3.2 Sub-Projects Under the Responsibility of 5th Regional Directorate of Highways

3.2.1 İslahiye-Hassa-Kırıkhan Road

Scope of the sub-project: Repairing the breaks and deformations occurred in İslahiye-Hassa-Kırıkhan Road body across various sections. Road repair and asphalt renewal works will be carried out between KM:24+500 – 84+500. The sub-project location map is given in Figure 2.

It was stated by the contractor that the damages on the road were temporarily repaired after the earthquakes occurred in February 2023.

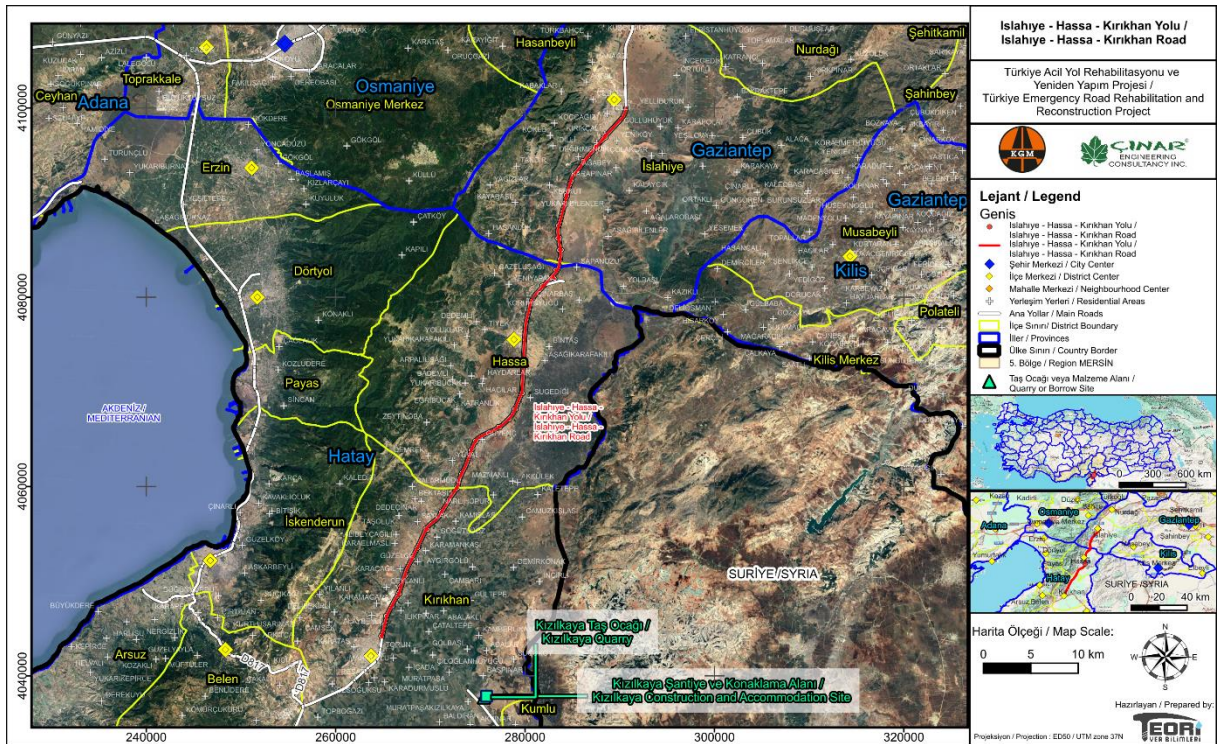


Figure 2. İslahiye-Hassa-Kırıkhan Road Sub-project Area

3.2.2 Antakya-Reyhanlı Road

Scope of the sub-project: The road repair and asphalt renewal works in various sections between KM: 0+000 – 42+500 and reconstruction of the Demirköprü (Hitit) Bridge that collapsed due to the earthquake. The sub-project location map is given in Figure 3.

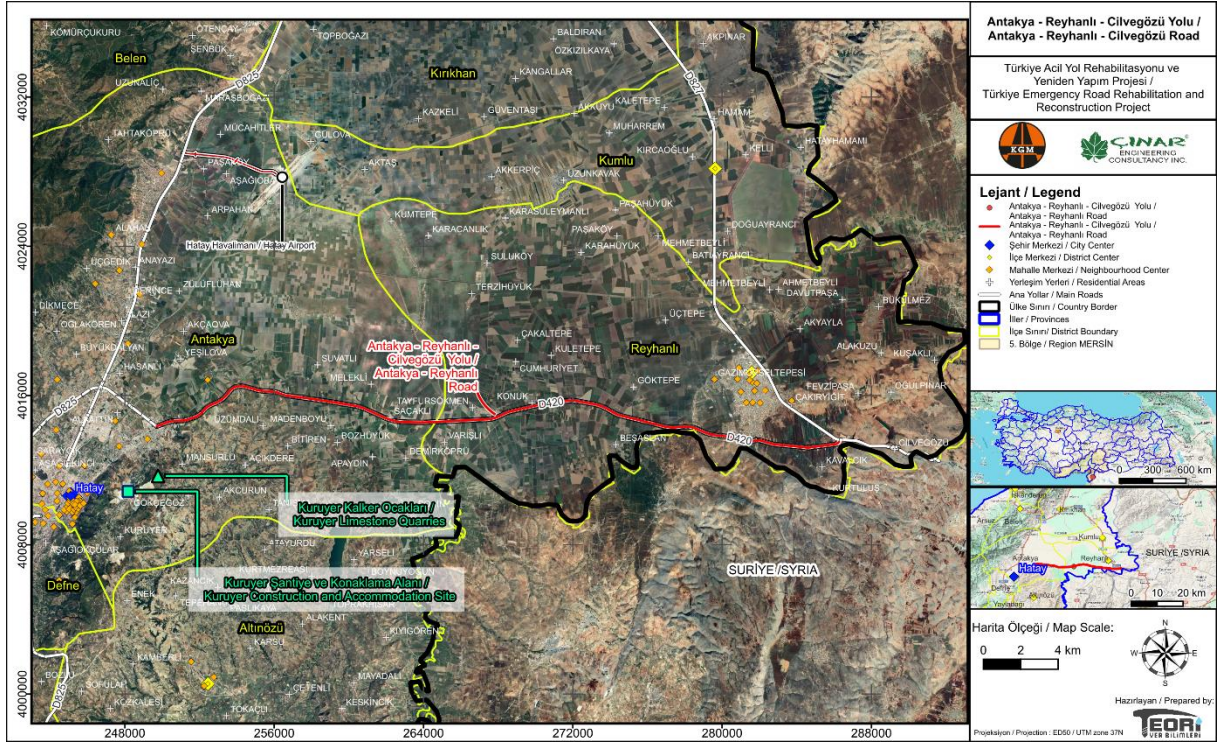


Figure 3. Antakya-Reyhanlı Road Sub-project Area

KM:19+981.00 Hittite Bridge (Demirköprü) over the Asi River, located on the Demirköprü-Reyhanlı road within the borders of Hatay province, is a twin bridge with a double platform. The part on the axis left was built in 1989, and the part on the axis right was built in 2010. As a result of the earthquakes that occurred on 06.02.2023, the bridge incurred irreparable damage due to stability losses in its foundations, primarily caused by liquefaction.

It was observed during the site visit that Demirköprü Bridge is currently being reconstructed.



Figure 4. Damage on the Bridge Piers



Figure 5. View of the Demirköprü Bridge After the Earthquake

3.2.3 Hatay Airport Road

Scope of the sub-project: The removal of deformations with earthworks, engineering structures and superstructure construction works on the connection between Hatay Airport and D825 State Road. The sub-project location map is given in Figure 6.

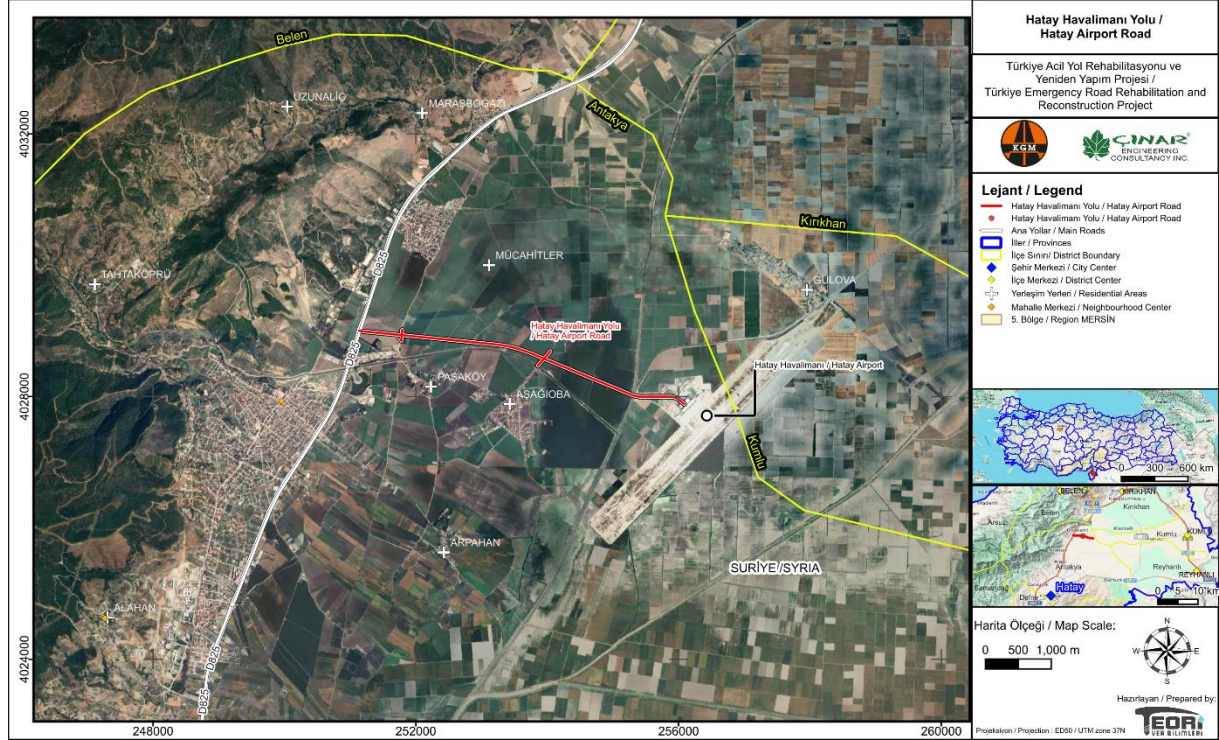


Figure 6. Hatay Airport Road Sub-project Area

Deformations that disrupted the road embankment and retaining wall structures were detected in three different locations along the route. It was determined that these deformations occurred as a result of secondary ruptures due to the main fault system and the resulting ground liquefaction problem.

The boreholes were drilled approximately every 200 meters throughout the connection road. Drilling works commenced on 22.02.2023 and completed on 20.03.2023.

It was stated by the contractor that sub-project's construction works started in October 2023 and planned to be completed in May 2024. It was observed during the site visit that the construction works are progressing rapidly. Soil reinforcement is carried out by pumping a mixture of cement and water to a depth of 20 meters with Deep Soil Mixing (DSM) machines.



Figure 7. View of the Hatay Airport Road After the Earthquake (Km:2+840-3+480)

3.2.4 TAG Highway-Aslanlı Tunnel- Nurdağı Junction

Scope of the sub-project: Repairing the breaks and deformations occurred in the sections of TAG Highway between Aslanlı Tunnel (KM: 214+490) and Nurdağı Junction (KM: 223+115). The sub-project location map is given in Figure 8.

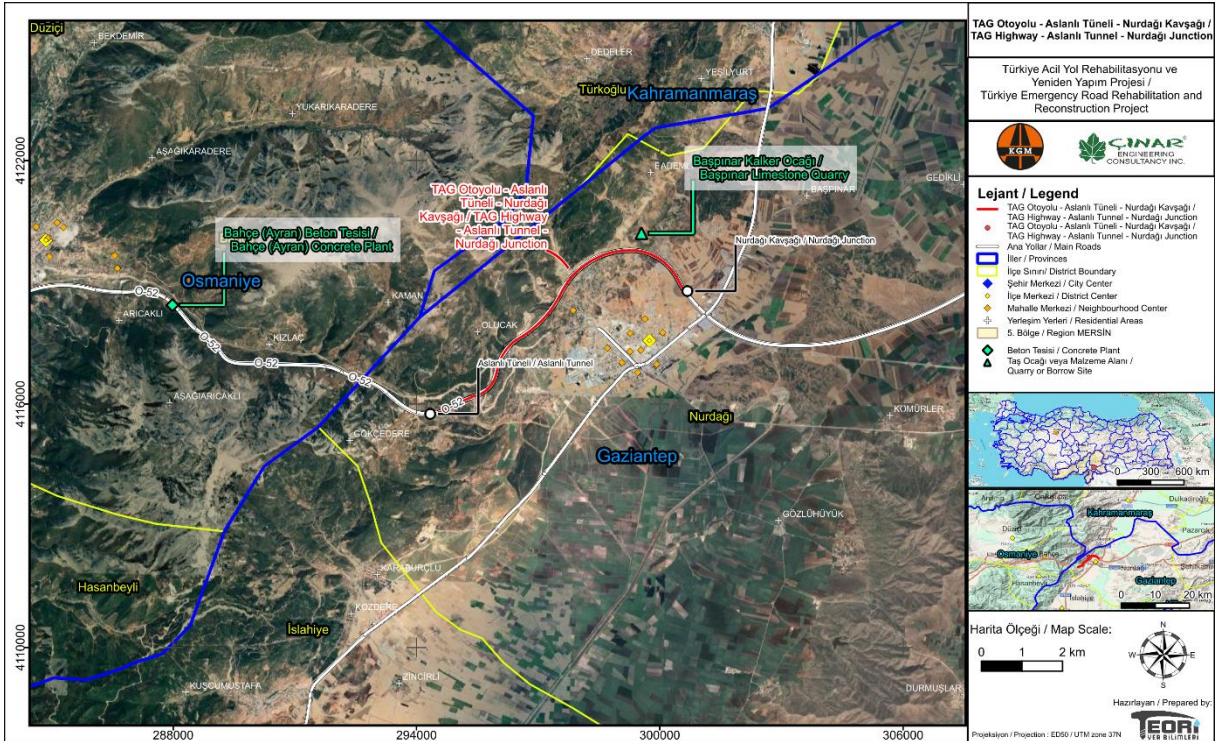


Figure 8. TAG Highway-Aslanlı Tunnel-Nurdağı Junction Sub-project Area

Due to the earthquakes that occurred on 06.02.2023, damages occurred in the expansion joints, floor concretes, approach fillings, earthquake wedges, supports and elevations of five (5) viaducts; Şehitler, Nurdağı, Atatürk, Turgut Özal and Bağcınar Viaducts (see Figure 9).



Figure 9. Location of the Viaducts within the scope of the sub-project

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Within the scope of the sub-project, it is planned to carry out superstructure repair works along the project route, including bridge auxiliary elements, supports and expansion joints. Additionally, reinforcement works are planned for the columns of the Şehitler, Nurdağı, and Başpınar Viaducts (see Figure 10, Figure 11 and Figure 12 respectively) using steel armor and carbon fiber polymer.

It was observed during the site visits that the reinforcement works were already being carried out. No active work was observed in the tunnels and highway.



Figure 10. Damages on the Piers – Şehitler Viaduct



Figure 11. Damages on the Nurdağı Viaduct



Figure 12. Damages on the Başpınar Viaduct

3.2.5 Antakya-Samandağ Road

Scope of the sub-project: Repairing the breaks and deformations that occurred on the Antakya-Samandağ Road, as well as asphalt renewal works, will be carried out between KM:0+000 – 26+850. Additionally, reclamation works for landslide control and the reconstruction of a bridge located in Sutaşı Neighborhood are also planned.

The sub-project location map is given in Figure 13.

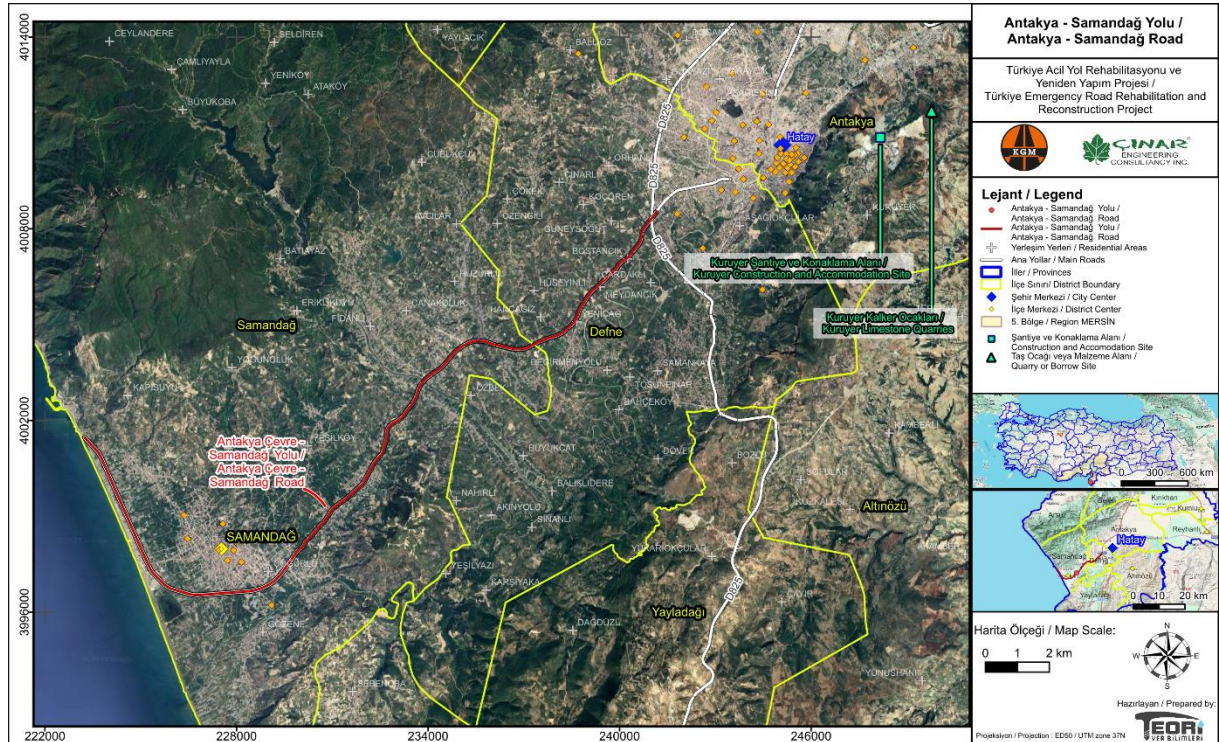


Figure 13. Antakya-Samandağ Road Sub-project Area

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Bored pile wall construction in various segments and superstructure renovation works along the 27 km road are carried out in order to prevent the risk of landslides caused by steep slopes. Additionally, a bridge will be rebuilt as part of the work. It was observed during the site visits that the landslide removal works at the 6th km are continuing by the subcontractor.



Figure 14. Landslide Removal Works



Figure 15. Bridge to be Reconstructed

3.3 Sub-Projects Under the Responsibility of 8th Regional Directorate of Highways

3.3.1 Malatya-Akçadağ-Gölbasi Road & Erkenek Tunnel

Scope of the sub-project: Construction and repair works of the damaged parts at Erkenek Tunnel and the section between Erkenek Tunnel-Karanlıkdere.

The sub-project location map is given in Figure 16.

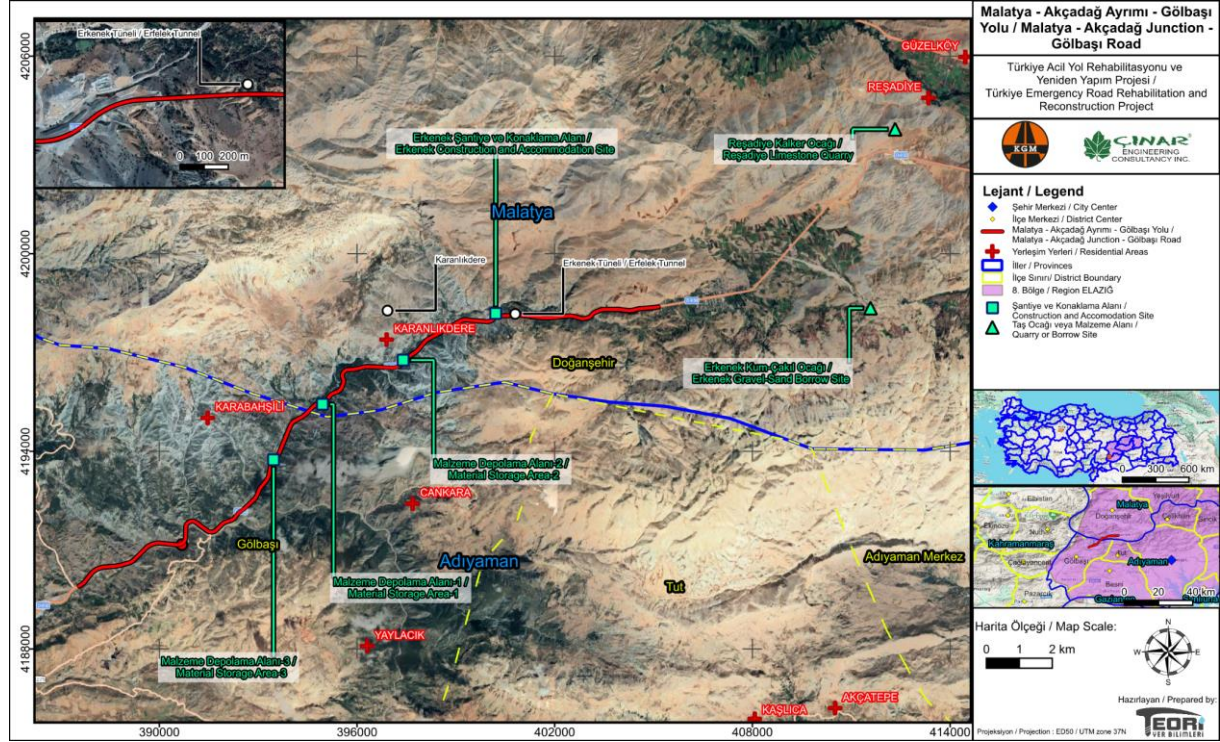


Figure 16. Malatya-Akçadağ-Gölbasi Road & Erkenek Tunnel Sub-project Area

The damages occurred at the sub-project area due to the earthquakes on 06.02.2023 can be listed as; transformer zone landslides (see Figure 17), Erkenek Tunnel entrance portal area (see Figure 18), Erkenek Tunnel internal lining structure, deformations occurring in fillings, and damages occurred in Erkenek Tunnel electromechanical systems. The extension of the Erkenek Tunnel's entrance portal (see Figure 19) by 48 meters is also planned within the scope of the sub-project.

Works planned to be conducted in the Erkenek Tunnel (systems that require partial or complete renewal);

- Feeding
- Lighting Systems
- Telecontrol System
- Traffic Control System
- Closed Circuit Television System (CCTV)
- Public Announcement System
- Fire Detection and Alarm System
- Ventilation Systems
- Fire Response Systems
- Emergency Communication Systems



Figure 17. Damage on the Transformers Zone (Malatya-Gölbasi Road KM:89+260-KM:30+100)



Figure 18. Damage on Erkenek Tunnel Entrance Portal Area



Figure 19. Erkenek Tunnel – Entrance Portal

3.3.2 Repair Works of Technological Bridges

3.3.2.1 Beylerderesi Bridge

Scope of the sub-project: Replacement of the structural bearings and expansion joints
The sub-project location map is given in Figure 20.

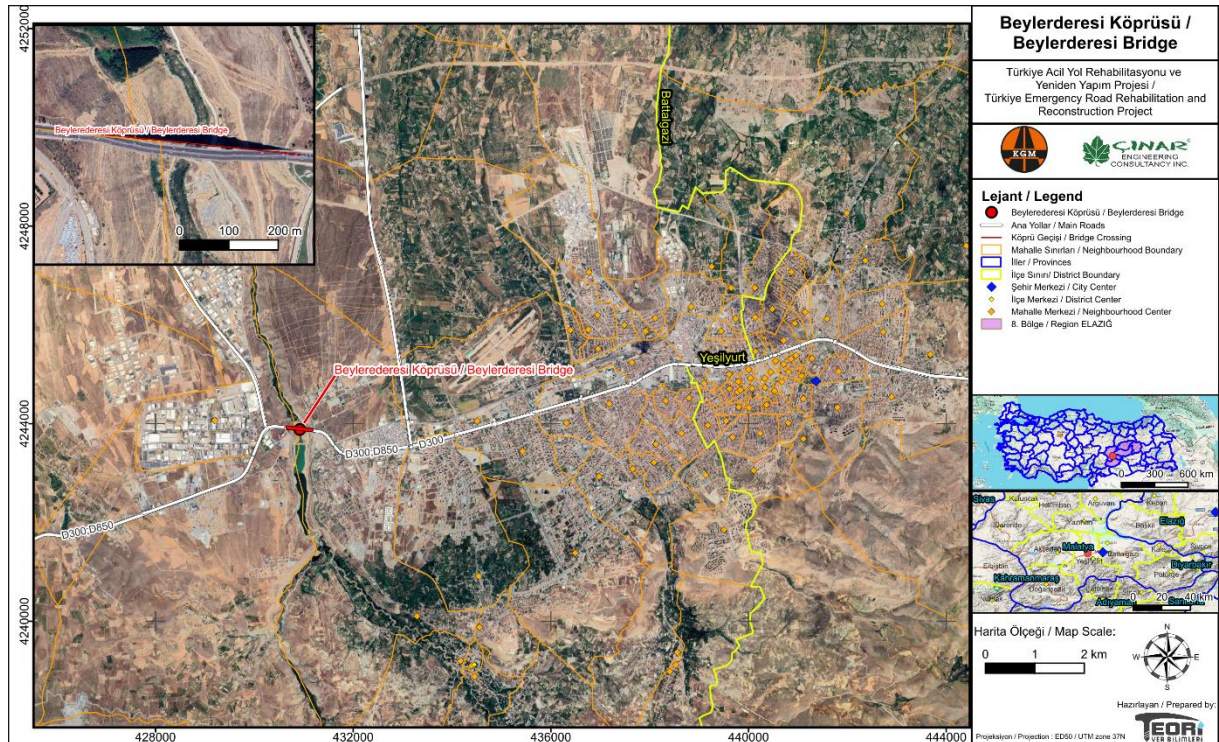


Figure 20. Beylerderesi Bridge Sub-project Area

Beylerderesi Bridge (also known as Turgut Özal Viaduct, see Figure 21) was constructed as a post-tensioned balanced cantilever type, spanning 420 meters in length, with a platform width of 24 meters (equivalent to 2 lanes in each direction), and an average height of 55 meters.

Numerous hairline shear cracks (see Figure 22) were identified at the edge openings of the bridge, particularly in the anchorage areas. Additionally, the teflon coatings on the 4 bearings (see Figure) on both sides has worn off and requires replacement.



Figure 21. Beylerderesi Bridge



Figure 22. Hairline Shear Cracks



Figure 23. Damages on the Structural Bearings

3.3.2.2 Tohma Bridge

Scope of the sub-project: Replacement of the structural bearings, expansion joints and viscous dampers

The sub-project location map is given in Figure 24.



Figure 24. Tohma Bridge Sub-project Area

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Tohma Bridge (also known as Şehit Gaffari Güneş Bridge) provides both road and rail transportation. The railway on the bridge encompasses both freight and passenger transportation.

The steel beams used in the construction of the bridge, weighing a total of 2,700 tons, were manufactured with a height of 3 m and a width of 16 m; and was placed by pushing along the bridge axis with the "Incremental Launch Method (ILM)".

Due to the earthquake impact on the bridge, structural damage occurred to the 2x2 viscous dampers on both side piers, 20 pot bearings on the two side piers, 8 on the middle piers, and the modular expansion joints on both side piers.



Figure 25. Freight Train Crossing the Tohma Bridge

3.3.2.3 Ağın Bridge

Scope of the sub-project: Replacement of damaged anchor covers and inclined suspension cables

The sub-project location map is given in Figure 26 and a general view of the bridge is given in Figure 27.

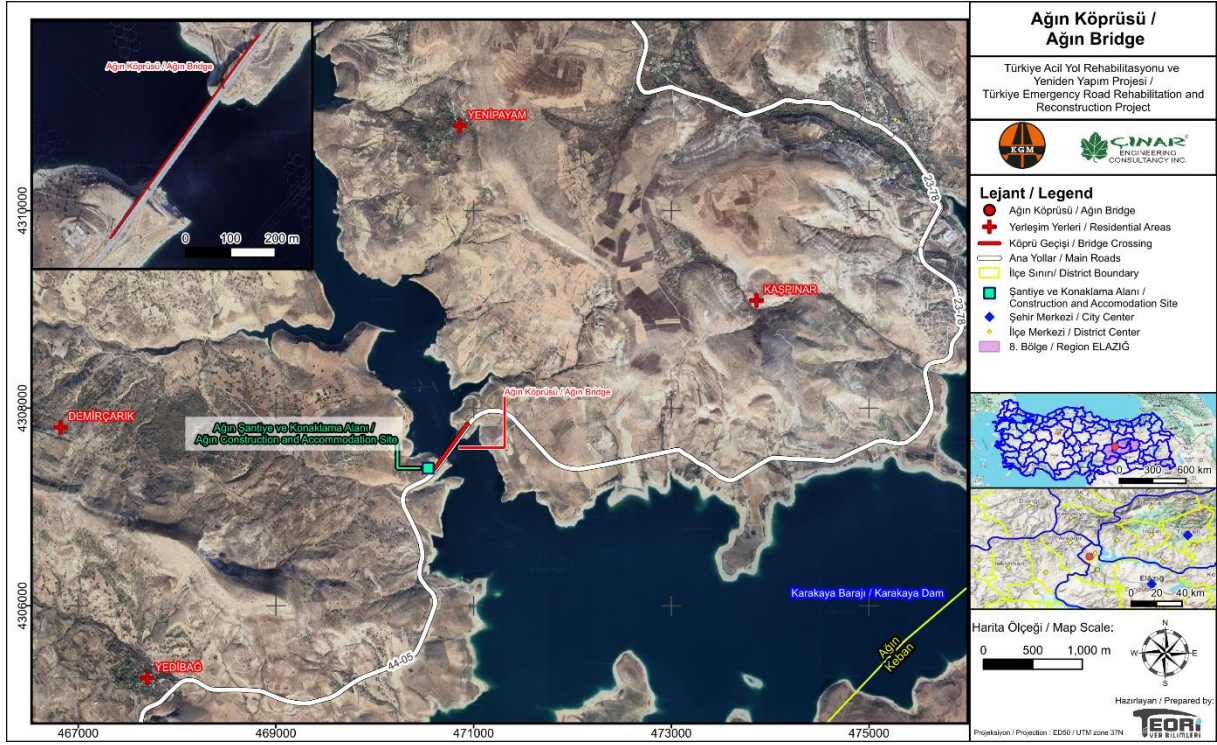


Figure 26. Ağın Bridge Sub-project Area

As part of the sub-project, inspections are planned for all equipment, including the deck level and above the pylon area, encompassing all cables, steel connection parts (such as formwork tubes (FWT), anti-vandalism tubes (AVT), transition tubes, etc.), deviators, guide assemblies, and accuracy checks for anchor block-rope routes within the FWT.

Dismantling of cable suspension ropes, anchor covers, injection dismantling of the rope bundle, nail checks and inspection, anchor covers, injection, installation of anchor covers and re-injection, disassembly and supply of damaged inclined suspension cable system and re-assembly and anchoring of the cable system works will also be conducted.



Figure 27. General View of Ağın Bridge



Figure 28. Damaged Suspension Cables

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4 ENVIRONMENTAL AND SOCIAL DUE DILIGENCE

4.1 Islahiye-Hassa-Kırıkhan Road

4.1.1 General Information

- “Kızılkaya Limestone Quarry” and “Kızılkaya Construction and Accommodation Site” will be utilized within the scope of the sub-project. These sites are located in the same area with an approximate distance of 300 meters.
- Damages on the road were temporarily repaired after the earthquake.
- Construction activities have not commenced yet.

4.1.2 Assessment of the Social Findings

4.1.2.1 Population Change

For the Sub-Project, in the Kırıkhan-Kızılkaya Construction Site, 80 workers and 25 technical personnel are accommodating, which is located next to the Kızılkaya Quarry in the Kızılkaya Village. No negative impact is expected on population change and migration.

The nearest settlement is Muratpaşakızılkaya and is approximately 1000 meters away from the camping area. Majority of workers working in the project are men. Considering this situation, in order to avoid negative communication with the surrounding settlements and to prevent conflicts arising from social and cultural disagreements, the interaction between workers and local people will be minimized and all needs will be met within the camp area. Training on CHS, SEA/SA, traffic security, communication with local people should be provided for workers, security personnel and drivers staying at the camp site, and the code of conduct should also include compliance with the measures taken on these issues as part of the contracts.



Figure 29. Nearest Settlement - Muratpaşakızılkaya

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Vulnerable Groups: The Construction Site is not expected to have a direct negative impact on vulnerable groups or gender issues. There is a container camp area (see Figure 30) in the Project area of influence of the road passing through Ardıçlı Town and temporary shelter areas.



Figure 30. Container Camp Location

Necessary information sharing and mitigation measures should be developed and implemented to ensure that the daily lives of vulnerable groups affected by the earthquake are not slowed down. It should be ensured that their access to health and education services is not slowed down due to traffic congestion or road restrictions caused by road construction.

4.1.2.2 Community Health and Safety

Traffic Impacts: İslahiye-Hassa-Kırıkhan Road (see Figure 31) is approximately 80 km line passing through residential areas. Therefore, sub-project should be managed and monitored with the traffic safety measures and trainings to be provided to the workers, drivers. Especially for the sensitive points such as schools, container camps, hospitals etc. along the route will be considered and related stakeholders should be informed on the health and safety measures, construction schedule and road restrictions, if occurred.

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Figure 31. Islahiye-Hassa-Kırıkhan Road

It was observed that, some shepherds are using the access roads of the Construction Site with their animals. Therefore, on the access roads of the Kuruyer Construction Site, due to the heavy vehicle traffic, traffic accident risk may increase and local people who are engaged in the husbandry activities may be adversely impacted.



Figure 32. Shepherd with animals

Health and safety information should be provided to the local settlements and Project workers, drivers and signings should be placed.

Measures should be taken in these areas to minimize the dust, traffic risks in the related Project ESMP and sub management plans.

4.1.2.3 Resettlement and Land Acquisition

There is no need for land acquisition within the scope of the Sub-Project activities.

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It has been also learned that the land used within the scope of Construction Site is unused empty treasury land, surrounding with quarry areas. However, information on the previous condition of the land and permissions to use the land should be provided.

Therefore, a potential physical displacement will not occur due to the Sub-Project activities.

4.1.2.4 Loss of Livelihood

A potential economic displacement will not occur due to the Sub-Project activities.

On the access roads of the Kırıkhan-Kızılkaya Construction Site, due to the heavy vehicle traffic and excavation works may occur dust impact on the agricultural/ husbandry activity near the construction activities and Project transportation roads including Construction Site.

In the context of not restricting access to lands where livelihoods are maintained, it is important not to close the passageways and livestock access roads used by the local people, and to determine the needs of the local people in this regard.

Considering the impacts of this Project, its impacts on livelihoods should be determined through consultation.

4.1.2.5 Infrastructure and Services

For the Kırıkhan-Kızılkaya Construction Site, it's learned that domestic wastes have been collected by Kırıkhan Municipality and have been sent to licensed waste management facilities. Construction and excavation wastes have been sent to storage areas designated by KGM or transferred to be used in other projects.

Drinking water is provided from ready-bottled water, mains water obtained through neighboring facility ("Aslar Beton") is used as utility water. There is a 20-ton water storage tank with water booster system. 80 m3 is in the process of being activated. Electrical infrastructure is available and there is also an emergency generator.

4.1.2.6 Labour and Working Conditions

80 workers and 25 technical personnel are accommodating at the Construction Site, which is located next to the Kızılkaya Quarry in the Kızılkaya Village.

There are 3 shuttle vehicles for transporting workers in the campus. Approximately 40 local employees are employed, 5 of whom are female employees. The female cafeteria worker is an earthquake victim and is staying at the camp site with her family.

There are showers, toilets, rest areas and a dining hall within the Camp Site to meet all accommodation needs of the Workers. The views from the campsite are given in Figure 33.





Figure 33. Construction Camp Site Views

It was observed that the construction site area has not been fenced off, and there is no security. This situation may create security issues for both outside visitors and workers.

4.1.3 Assessment of the Environment, OHS and Biodiversity-Related Findings

Due diligence findings regarding the Islahiye-Hassa-Kırıkhan Road sub-project and its associated facilities are given in Table 6. The findings of this sub-project are presented together with the Hatay Airport Road sub-project, as both utilize the same construction sites and quarry.

4.2 Hatay Airport Road

4.2.1 General Information

- Construction works commenced in October 2023 and planned to be completed in May 2024. The entrance of the construction area is shown in Figure 34.
- “Kızılkaya Limestone Quarry” and “Kızılkaya Construction and Accommodation Site” is utilized within the scope of the sub-project. These sites are located in the same area with an approximate distance of 300 meters.
- In the sub-project area, soil reinforcement works are carried out by using DSM machines. DSM method is an in-situ soil mixing technology that mixes existing soil with cementitious materials using mixing shafts consisting of auger cutting heads, discontinuous auger flights, and mixing paddles (see Figure 35).
- The material excavated from the site was stockpiled on the side road.
- Waste management is not handled properly.
- Two fuel tanks were observed on-site.
- Maintenance works are conducted – oil spills were observed. There are no spill kits.
- Meals are coming from Kızılkaya Construction Site. No cooking on-site.
- It was declared that groundwater wells are used for water supply.



Figure 34. Entrance of the Sub-Project Construction Area



Figure 35. Deep Soil Mix (DSM) Machines on-site

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4.2.2 Assessment of the Social Findings

Since Kırıkhan-Kızılkaya Construction Site is also used for this Sub-Project, the evaluations made within the scope of Islahiye-Hassa-Kırıkhan Road Sub-project will also be valid within the scope of this Sub-Project (see Section 4.1.2).

4.2.3 Assessment of Environment, OHS and Biodiversity-Related Findings

Due diligence findings regarding the Hatay Airport Road sub-project and its associated facilities are given in Table 6. The findings of this sub-project are presented together with the Islahiye-Hassa-Kırıkhan Road sub-project, as both utilize the same construction sites and quarry.



Table 6. Due Diligence Findings for Islahiye-Hassa-Kırıkhan Road and Hatay Airport Road Sub-projects and their associated facilities

Topic/Issue	Kızılkaya Construction and Accommodation Site	Kızılkaya Quarry	Islahiye-Hassa-Kırıkhan Road Construction Area	Hatay Airport Road Construction Area
Owner of the associated facility or work carried out	FEZA	The quarry has been allocated to three different companies by KGM (FEZA, "Aslar Beton" and "Nas Beton")	FEZA	FEZA
Specifications and properties of facility or work	Accommodation containers Cafeteria (see Figure 36)	No accommodation on-site Asphalt Plant belonging to FEZA with a capacity of 450 tons/hour (see Figure 37) Crusher with a capacity of 390,000 tons/year (see Figure 38)	No accommodation on-site Construction activities have not started yet.	No accommodation on-site Deep soil mixing machines (DSM) and cementitious materials preparation stations (see Figure 39 and Figure 40)
EIA Opinion	There is an "EIA out of scope" decision.	For the Asphalt Plant Facility, the decision "EIA is not Required" was made by Hatay Provincial Directorate of Environment and Urbanization on 02.02.2018. The decision of 'EIA is not required' for the addition of a crushing and screening facility to the existing facility was given by the Hatay Provincial Directorate of EUCC on 02.03.2024.	As per the official letters from Hatay Provincial Directorate of EUCC (dated 7.12.2023 and numbered E-26634441-220.03-8142460) and Gaziantep Provincial Directorate of EUCC (numbered E-46818599-000-8190252), the activities to be carried out within the scope the subproject are determined as "EIA out of scope".	The decision "EIA out of scope" was made by Hatay Provincial Directorate of EUCC, dated 7.12.2023 and numbered E-26634441-220.03-8141979.
Environmental Permit	Any activity listed in Annex-1 and Annex-2 of the Environmental Permit and License Regulation has not been carried out within the boundaries of the construction site.	There is an environmental permit belonging to FEZA on air emission issued by Hatay Provincial Directorate of EUCC, valid until 11.09.2028. There is a raw material production permit numbered 31/2006-11(ER:3119679) in an area of 17.19 hectares. Blasting permits should be shared.	N/A	N/A
Working hours and shifts	08:00-17:00 (single shift) On the other hand, it was stated that some works require double shifts.	Quarry activities are carried out during the daytime as needed.	Construction activities have not started yet.	08:00-17:00 (single shift) On the other hand, it was stated that some works require double shifts.
Service procurement	Environmental consultancy OHS service Civil works manufacturing	No information is available	N/A	N/A
<u>Water and Wastewater Management</u>				
Water supply – for drinking purposes	The drinking water needs of the personnel have been met from bottled water.	The drinking water needs of the personnel have been met from bottled water.	Construction activities have not started yet.	The drinking water needs of the personnel have been met from bottled water.
Water supply – for personnel usage	Groundwater has been utilizing. There are two storage tanks of 20 m ³ each available.	The facilities at the Kızılkaya construction and accommodation site have been utilized.	Construction activities have not started yet.	Opportunities in nearby facilities have been used.
Water supply – for process	Groundwater has been utilizing. There are two storage tanks of 20 m ³ each available.	Mains water has been supplied through the neighboring facility "Aslar Beton", which has infrastructure.	Construction activities have not started yet.	Process water for DSM stations has been purchased through tankers and provided by using groundwater.
Wastewater management	Wastewater infrastructure works are continuing, the old septic tank is being demolished (see Figure 41) and the new septic system is about to be completed (see Figure 42). Service has been received from Kırıkhan Municipality in the previous periods.	The facilities at the Kızılkaya construction and accommodation site have been utilized.	Construction activities have not started yet.	There was no wastewater infrastructure in the construction area, it was stated that the opportunities of nearby facilities have been used.

Topic/Issue	Kızilkaya Construction and Accommodation Site	Kızilkaya Quarry	Islahiye-Hassa-Kırıkhan Road Construction Area	Hatay Airport Road Construction Area
Raw Material Supply	Kızilkaya Quarry	N/A	Raw materials have been supplied from Kızilkaya Quarry (owned by KGM), Opal Quarry and Bozkayalar Quarry.	Raw materials have been supplied from Kızilkaya Quarry (owned by KGM), Opal Quarry and Bozkayalar Quarry.
Pollution Prevention & Waste Management				
Hazardous Wastes	Hazardous waste has been stored in the temporary waste storage area. The dispatch of hazardous waste has been carried out through the online platform of Ministry of EUCC, which is Integrated Environmental Information System (EÇBS)/Waste Management Application (MoTAT).	Existing areas on the construction site are being used.	Construction activities have not started yet.	Waste management practices in the deep soil mixing stations were found to be inadequate, considering national legislation and international standards. Wastes have been stored in open areas regardless of their type and hazard class. (see Figure 43 and Figure 44)
Non-Hazardous Wastes	Domestic wastes have been collected by Kırıkhan Municipality.	Domestic wastes have been collected by Kırıkhan Municipality.	Construction activities have not started yet.	Waste management practices in the deep soil mixing stations were found to be inadequate, considering national legislation and international standards. Wastes have been stored in open areas regardless of their type and hazard class.
Temporary Waste Storage Area	In the temporary waste storage area, hazardous wastes have been stored in compartmentalized and labeled (in accordance with the waste code) areas on the concrete floor. Although the area is covered, it should be enclosed on all four sides instead of using wire fences to protect it from external factors (precipitation, intrusions of living creatures). Additionally, it is important to maintain and clean the area regularly, and hazardous waste should be sent to licensed disposal companies within a maximum of 6 months (see Figure 45).	Existing areas on the construction site are being used.	Construction activities have not started yet.	It was stated that the wastes have been sent to the Kızilkaya construction site.
Topsoil	N/A	N/A	Construction activities have not started yet.	Topsoil has been sending to the storage areas determined by KGM and included in the contracts, or it has been given to the requesting citizens by signing a letter of consent.
Excavation wastes	N/A	N/A	Construction activities have not started yet.	Construction and excavation wastes have been sending to the storage areas determined by KGM and included in the contracts.
Construction wastes	N/A	N/A	Construction activities have not started yet.	Construction and excavation wastes have been sending to the storage areas determined by KGM and included in the contracts.
Chemical Management	Chemicals have been using and stored in a designated chemical storage area. BEKRA Notification should be shared (see Figure 46).	Existing areas on the construction site are being used.	Construction activities have not started yet.	During the site visit, it was observed that secondary containment structures have not been used at the concrete plants. There are two fuel storage tanks on-site.
Soil Contamination Risk	It should be ensured that hazardous wastes and chemicals are not stored outside designated impermeable areas.	During the site visit, no soil contamination was detected.	Construction activities have not started yet.	It was observed that some parts of the soil have been contaminated due to poor chemical and waste management (see Figure 43 and Figure 44).
Air Quality and Noise	Generators with capacities of 400 kW and 110 kW have been used for 8 hours per day. In accordance with the Regulation on Control of Industrial Air Pollution, emission measurements	Within the scope of the environmental permit on air emissions, the current air emission report should be shared.	Construction activities have not started yet.	A generator has been used in each deep soil mixing station.

Topic/Issue	Kızilkaya Construction and Accommodation Site	Kızilkaya Quarry	Islahiye-Hassa-Kırkhan Road Construction Area	Hatay Airport Road Construction Area
	<p>are required if the usage period exceeds 500 hours per year.</p> <p>Since the site is located far from residential areas, it does not pose a significant impact in terms of environmental noise.</p>	<p>It was declared that dust prevention techniques have been adopted (watering with sprinkler).</p> <p>Since the quarry is located far from residential areas, it does not pose a significant impact in terms of environmental noise. By effectively using the Grievance Redressal Mechanism, complaints should be resolved, and necessary mitigating measures should be taken.</p>		<p>Since the activity areas are located away from residential areas, no significant risk is anticipated in terms of environmental noise.</p>
Community Health and Safety				
Security	The construction site area lacks surrounding fences and a security service; instead, it relies on its own guards.	The construction site area lacks surrounding fences and a security service; instead, it relies on its own guards.	Construction activities have not started yet.	The area where the work was carried out is closed to transportation.
Information and Warning/Safety Signs	The presence of warning/safety signs, including speed limits, is found to be insufficient.	The presence of warning/safety signs, including speed limits, is found to be insufficient.	Construction activities have not started yet.	The information sign is available. (see Figure 47)
Occupational Health and Safety				
OHS Documents	<p>Occupational Health and Safety Professional Contracts are available.</p> <p>The Risk Analysis Report was prepared by the contractor company FEZA on 18.08.2023.</p> <p>The Health and Safety Plan was prepared by the contractor company FEZA on 18.08.2023.</p> <p>The Emergency Response Preparedness Plan was prepared by the contractor company FEZA on 18.08.2023.</p> <p>Within the scope of annual plans and reports, "Annual Training Plan, Annual Work Plan, and Annual Evaluation Report" have been prepared.</p> <p>OHS trainings have been provided and records have been maintained.</p>	<p>Occupational Health and Safety Professional Contracts are available.</p> <p>The Risk Analysis Report was prepared by the contractor company FEZA on 18.08.2023.</p> <p>The Health and Safety Plan was prepared by the contractor company FEZA on 18.08.2023.</p> <p>The Emergency Response Preparedness Plan was prepared by the contractor company FEZA on 18.08.2023.</p> <p>Within the scope of annual plans and reports, "Annual Training Plan, Annual Work Plan, and Annual Evaluation Report" have been prepared.</p> <p>OHS trainings have been provided and records have been maintained.</p>	<p>Occupational Health and Safety Professional Contracts are available.</p> <p>The Risk Analysis Report was prepared by the contractor company FEZA on 18.08.2023.</p> <p>The Health and Safety Plan was prepared by the contractor company FEZA on 18.08.2023.</p> <p>The Emergency Response Preparedness Plan was prepared by the contractor company FEZA on 18.08.2023.</p> <p>Within the scope of annual plans and reports, "Annual Training Plan, Annual Work Plan, and Annual Evaluation Report" have been prepared.</p> <p>OHS trainings have been provided and records have been maintained.</p>	<p>Occupational Health and Safety Professional Contracts are available.</p> <p>The Risk Analysis Report was prepared by the contractor company FEZA on 18.08.2023.</p> <p>The Health and Safety Plan was prepared by the contractor company FEZA on 18.08.2023.</p> <p>The Emergency Response Preparedness Plan was prepared by the contractor company FEZA on 18.08.2023.</p> <p>Within the scope of annual plans and reports, "Annual Training Plan, Annual Work Plan, and Annual Evaluation Report" have been prepared.</p> <p>OHS trainings have been provided and records have been maintained.</p>
Emergency Drills	The Emergency Drill has not been conducted yet.	The Emergency Drill has not been conducted yet.	The Emergency Drill has not been conducted yet.	The Emergency Drill has not been conducted yet.
Safety of the construction/accommodation area	<p>Ergonomics, thermal comfort, natural ventilation, and natural lighting have been prioritized in office areas.</p> <p>There is a dining hall. The meals are cooked and served by chefs (see Figure 48).</p> <p>At the Kızilkaya Construction and Accommodation Site, exposed rebar, nailed boards, untidy ground, irregular excavation areas, and slopes pose a danger (see Figure 49 and Figure 50).</p> <p>The vehicle parking areas have been designated, but the vehicles have not been parked facing the exit direction (see Figure 51).</p> <p>Emergency assembly areas have been designated, and directional signs have been used.</p> <p>Fire extinguishers are available in dormitories, administrative buildings, and construction sites.</p>	<p>There are no warning signs in the work area.</p>	<p>No work was being carried out during the site visit.</p>	<p>At the Hatay Airport Road Construction Site, warning signs and safety barriers around excavation areas are insufficient.</p> <p>At the Hatay Airport Road Construction Site, nailed boards, hazardous behaviors leading to fire risks, irregular excavation areas, and slopes pose a danger (see Figure 52).</p> <p>There are areas where working at heights is carried out without using safety harnesses (see Figure 53).</p>

Topic/Issue	Kızılkaya Construction and Accommodation Site	Kızılkaya Quarry	Islahiye-Hassa-Kırıkhan Road Construction Area	Hatay Airport Road Construction Area
	Wire insect screens are available to protect against flying insects.			
Procurement and Usage of PPE	All employees are provided with work shoes, high visibility jacket, and helmets. Employees working at heights or involved in welding tasks are provided with PPE such as harness lanyard, goggles, earplugs, gloves, etc.	All employees are provided with work shoes, high visibility jacket, and helmets. Employees working at heights or involved in welding tasks are provided with PPE such as harness lanyard, goggles, earplugs, gloves, etc.	All employees are provided with work shoes, high visibility jacket, and helmets. Employees working at heights or involved in welding tasks are provided with PPE such as harness lanyard, goggles, earplugs, gloves, etc.	All employees are provided with work shoes, high visibility jacket, and helmets. Employees working at heights or involved in welding tasks are provided with PPE such as harness lanyard, goggles, earplugs, gloves, etc.
Occupational Accident	No occupational accidents have occurred at the Kızılkaya construction and accommodation site.	No occupational accidents have occurred at the Kızılkaya Quarry.	There has been one (1) occupational accident at the project area. There has been no permanent disability. The accident has been resulted in minor injuries.	No occupational accidents have occurred at the Hatay airport road construction area.
Biodiversity Management				
Biodiversity Consideration	Although the Kızılkaya Construction and Accommodation Site is an existing facility, its location within a Legally Protected Area and the presence of a sensitive wildlife species make it necessary to evaluate and implement appropriate measures for any activities conducted in this area.	Although the Kızılkaya Quarry is an existing facility, its location within a Legally Protected Area and the presence of a sensitive wildlife species makes it necessary to evaluate and implement appropriate measures for any activities conducted in this area.	The Islahiye-Hassa-Kırıkhan Road is an existing road. No direct impact is expected from the project; however, indirect pollution of water resources may occur due to work on river crossings. Necessary measures will be taken to prevent these effects.	The Hatay Airport Road is an existing road. No direct impact is expected from the project; however, indirect pollution of water resources may occur due to work on river crossings. Necessary measures will be taken to prevent these effects.
Biodiversity Impacts	The Kızılkaya Construction and Accommodation Site is located within a Legally Protected Area and will be evaluated in detail in the ESIA.	The Kızılkaya Quarry is located within a Legally Protected Area and will be evaluated in detail in the ESIA.	The Islahiye-Hassa-Kırıkhan Road is an existing road. No additional impacts on biodiversity are determined.	The Hatay Airport Road is an existing road. No additional impacts on biodiversity are determined.
Critical Habitats	The Kızılkaya Construction and Accommodation Site is located within a Legally Protected Area and will be evaluated in detail in the ESIA.	The Kızılkaya Quarry is located within a Legally Protected Area and will be evaluated in detail in the ESIA.	The Islahiye-Hassa-Kırıkhan Road is an existing road. No critical habitat is determined.	The Hatay Airport Road is an existing road. No critical habitat is determined.
Natural Habitats	The Kızılkaya Construction and Accommodation Site is an existing facility. Also, the surroundings contain modified habitats. Therefore, the impact on natural habitats is expected to be low.	The Kızılkaya Quarry is an existing facility. Also, the surroundings contain modified habitats. Therefore, the impact on natural habitats is expected to be low.	The Islahiye-Hassa-Kırıkhan Road is an existing road, therefore impact on natural habitats is expected to be low.	The Hatay Airport Road is an existing road, therefore impact on natural habitats is expected to be low.
Protected Areas*	The Kızılkaya Construction and Accommodation Site is situated within the Mountain Gazelle Wildlife Development Area, which is a Legally Protected Area. Despite being an existing facility, it remains threatened and falls within the distribution range of a protected species (<i>Gazella gazella</i>). Any adverse effects will be evaluated in detail in the ESIA.	The Kızılkaya Quarry is situated within the Mountain Gazelle Wildlife Development Area, which is a Legally Protected Area. Despite being an existing facility, it remains threatened and falls within the distribution range of a protected species (<i>Gazella gazella</i>). Any adverse effects will be evaluated in detail in the ESIA.	The Islahiye-Hassa-Kırıkhan Road is situated adjacent to the boundary of Haydarlar Lake, which is a Locally Important Wetland, a Legally Protected Area. Additionally, it falls within the Amanos Mountains Important Plant Area (KBA), an Internationally Recognized Area. However, due to the existing road infrastructure and surrounding urbanization, the impact on these areas is expected to be low. Nevertheless, measures should be taken to avoid activities that could affect the wetland system during work conducted around Haydar Lake, such as pollution of streams flowing into the lake, waste disposal within the area, and prevention of dust formation.	The Hatay Airport Road intersects with the Amanos Mountains Important Plant Area (KBA) and the Altınözü Tepeleri Important Natural Area (KBA), both of which are Internationally Recognized Areas. However, due to the existing road infrastructure and surrounding urbanization, the impact on these areas is expected to be low.
Cultural Heritage Management				
Official correspondence	No information is available	No information is available	For Hassa-Kırıkhan part , as per the official letter from Hatay Cultural Heritage Preservation Regional Board Directorate, dated 09.12.2023 and numbered E-85020971-755.99-4550539, In the Saylak Junction Region, the road passes through the 3 rd degree archaeological site section	As per the official letter, dated 08.12.2023 and numbered E-85020971-165.02.03-4515487, from the Hatay Cultural Heritage Preservation Regional Board Directorate, it has been observed that the area covering Hatay Province, Antakya District, Airport Connection Road is not within the

Topic/Issue	Kızılkaya Construction and Accommodation Site	Kızılkaya Quarry	Islahiye-Hassa-Kırıkhan Road Construction Area	Hatay Airport Road Construction Area
			<p>of the Saylak Mevkii Ancient Settlement, which is registered as a 1st and 3rd degree archaeological site by the Adana Cultural and Natural Heritage Preservation Regional Board; In the Akbez bridge section, it was seen that the road passes through the 3rd degree archaeological site section of the Çukurtarla Ruin, which was registered as a 1st and 3rd degree archaeological site by the Adana Cultural Heritage Preservation Regional Board Directorate. It has been determined that there is no objection from the Regional Board in carrying out Hot Bituminous Mixture asphalt construction and repair and intersection construction works, provided that they remain within the existing road corridor; however, it has been stated that permission must be obtained from the Regional Preservation Regional Board Board before any construction and physical implementation to be carried out in the protected areas mentioned above and in the protected areas located near the Hassa-Kırıkhan State Road.</p> <p>For Nurdağı-İslahiye part, as per the official letter from Gaziantep Cultural Heritage Preservation Regional Board Directorate, dated 21.12.2023 and numbered E-71691431-165.99-4528707, in the examinations carried out by the Regional Board Directorate's experts, it was understood that there are no immovable cultural assets within the scope of Law No. 2863 on the property and its immediate surroundings. For this reason, there is no objection to carrying out road improvement work on the specified route in terms of the Regional Board's legislation. However, if any finds or remains that qualify as immovable cultural assets that need to be protected are encountered during the physical and construction interventions to be carried out in the area, the work must be stopped immediately and this must be reported to the nearest Museum Directorate, the headman in the village or the local administrative authorities in other places within 3 (three) days at the latest.</p>	<p>scope of Law No. 2863 or registered archaeological, historical, urban sites or immovable cultural assets that need to be protected are within the protection area. It was stated that no movable or immovable cultural property was found.</p>

*Maps of the Legally Protected and Internationally Recognized Areas are given in Appendix-1.



Figure 36. Kizilkaya Construction and Accommodation Site



Figure 37. Asphalt Plant in Kizilkaya Quarry



Figure 38. Crusher in Kizilkaya Quarry



Figure 39. Deep Soil Mixing Station-1 at the Hatay Airport Road



Figure 40. Deep Soil Mixing Station-2 at the Hatay Airport Road



Figure 41. Old Septic Tank in the Kizilkaya Construction and Accommodation Site



Figure 42. New Septic Tank in the Kizilkaya Construction and Accommodation Site



Figure 43. Poor Management of Wastes and Chemicals-1 at the Hatay Airport Road



Figure 44. Poor Management of Wastes and Chemicals-2 at the Hatay Airport Road



Figure 45. Temporary Waste Storage Area in the Kızılkaya Construction and Accommodation Site



Figure 46. Chemical Storage Tank in the Kızılkaya Construction and Accommodation Site



Figure 47. Warning Sign at the Hatay Airport Road Construction Site



Figure 48. The Dining Hall at the Kızılkaya Construction and Accommodation Site



Figure 49. Non-conformity at the Kızılkaya Construction and Accommodation Site-1

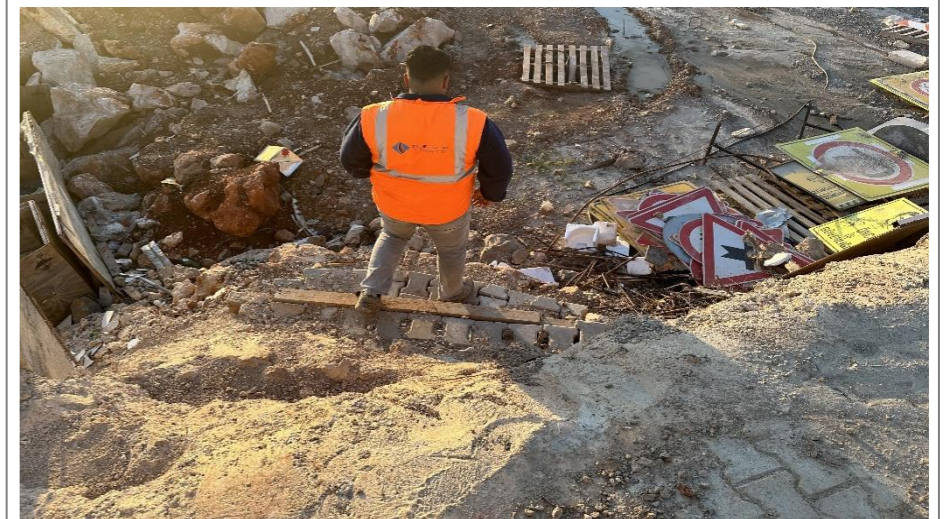


Figure 50. Non-conformity at the Kızılkaya Construction and Accommodation Site-2



Figure 51. Parking area at the Kızılkaya Construction and Accommodation Site



Figure 52. Non-conformity at the Hatay Airport Road Construction Site



Figure 53. At the Hatay Airport Road Construction Site, Working at Heights

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4.3 Antakya-Reyhanlı Road

4.3.1 General Information

- “Kuruyer Limestone Quarries” and “Kuruyer Construction and Accommodation Site” will be utilized within the scope of the sub-project. Kuruyer Construction site is still under construction. It is anticipated that the use of the construction site will begin in April.
- Kızılkaya Construction and Accommodation Site is currently being used until the Kuruyer Construction and Accommodation Site is completed.
- It was observed during the site visit that Demirköprü Bridge is currently being reconstructed (see Figure 54).
- Road renewal and partial arrangement activities are being carried out in various sections.



Figure 54. Demirköprü Bridge Construction Area

4.3.2 Assessment of the Social Findings

4.3.2.1 Population Change

Antakya Kuruyer Construction Site will be used for the Antakya-Reyhanlı Road construction activities. The camp site is in the installation process and located in the Narlıca Kuruyer Village boundaries.



Figure 55. Antakya Kuruyer Construction Site

There will be accommodation for a maximum of 150 people. Nearest resident is approximately 1250 m from the Kuruyer Construction Site. This distance falls within Project AoI. Worker accommodation will be temporary due to the nature of the work and Project activities will not trigger population migration to the region.

Gender Issues: It is expected that the majority of workers working in the project will be men. Considering this situation, in order to avoid negative communication with the surrounding settlements and to prevent conflicts arising from social and cultural disagreements, the interaction between workers and local people will be minimized and all needs will be met within the camp area. Training on CHS, SEA/SA, traffic security, communication with local people should be provided for workers, security personnel and drivers staying at the camp site, and the code of conduct should also include compliance with the measures taken on these issues as part of the contracts.

Vulnerable People: Along the Antakya-Reyhanlı Road, there are temporary shelter areas in Üzümdalı location. As shown in Figure 56 below, there is a tent area on the highway between Alaattin and Üzümdalı.

Necessary information sharing and mitigation measures should be developed and implemented to ensure that the daily lives of vulnerable groups affected by the earthquake are not slowed down. It should be ensured that their access to health and education services is not slowed down due to traffic congestion or road restrictions caused by road construction.

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Figure 56. Temporary Shelter Areas in Üzümdalı location

4.3.2.2 Community Health and Safety

The road under construction is the road leading to the Cilvegözü border gate and the roads are heavily used by many heavy vehicles/trucks. However, recently it has been closed to the passage of trucks and trailers. Heavy vehicles that want to go to the border pass through the neighborhood using the back roads (Alaattin Neighborhood). Even though it is independent of the KGM Project impacts, this situation occurs community health and safety risks and problems on the village roads used. Considering these risks and current impacts, not using roads other than the main road within the scope of the Project, and not allowing trucks and heavy vehicles to enter villages and neighborhoods are among the concerns highlighted by the local people and the mukhtars as an important issue.



Figure 57. Antakya/Reyhanlı/Cilvegözü State Highway

The settlement in Tayfursökmen district is close to the road where the work will be carried out. The repair work of the collapsed bridge in Demirköprü neighborhood has been continuing for about one year. Interviews were held with the Demirköprü Mukhtar and business owners, and according to the information received, it was stated that even if precautions were taken, dust and noise were intense, and traffic problems and negative effects were experienced from time to time.

The Mukhtar of the Demirköprü stated that heavy vehicles crashed into buildings and caused damage while using narrow roads. There are container areas, earthquake martyrs' cemetery and Tayinat Mound on the road where work will be carried out within the scope of the Project.

Kuruyer Limestone Quarry will be utilized for concrete production activities. It is planned that another company will extract the material from the quarry. It was declared that limestone would be purchased.



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Intense heavy vehicle traffic, excavation truck traffic may pose a risk for settlements and agricultural/husbandry activities near the construction activities and Project transportation roads including Kuruyer Construction Site. Measures should be taken in these areas to minimize the dust, traffic risks in the related Project ESMP and sub management plans.

4.3.2.3 Resettlement and Land Acquisition

There is no need for land acquisition within the scope of the Sub-Project activities.

The land used within the scope of Antakya Kuruyer Construction Site is treasury land, around which mining, and quarry activities continue. Information on the previous condition of the land and permissions to use the land should be provided.

Therefore, a potential physical displacement will not occur.

4.3.2.4 Loss of Livelihood

Potential Economic Displacement, Restrictions on Land Use: The project activities in the Antakya-Reyhanlı Road does not have a direct negative impact on the livelihoods of the local people.

The land used within the scope of Antakya Kuruyer Construction Site is treasury land, around which mining, and quarry activities continue. Information on the previous condition of the land and permissions to use the land should be provided and potential physical displacement should be assessed.

Due to the heavy vehicle traffic and excavation works may occur dust impact on the agricultural/ husbandry activity near the construction activities and Project transportation roads including Kuruyer Construction Site.

Measures should be taken in these areas to minimize the dust, traffic risks in the related Project ESMP and sub management plans.

4.3.2.5 Infrastructure and Services

During the process of meeting the electricity, water and sewage needs for the camp site to be used within the scope of the project, pressure should not be put on the services used by the local people. It has been learned that Kuruyer Construction Site will use groundwater. In addition, all other usage permits must be obtained, documented and monitored.

It has been learned that it is planned to establish an asphalt plant, a concrete plant/crusher and a mechanical plant. It has been stated that the necessary permits will be obtained in the upcoming periods. It has been declared that groundwater will be used.

In order for the project not to have an impact on ecosystem services and infrastructure, taking the necessary precautions to protect water resources, making water resources measurements and obtaining permits will be important stages in this process.

4.3.2.6 Labour and Working Conditions

There are currently 10 employees in the Kuruyer Camp Site. Infrastructure works continue and transportation is provided by shuttle vehicles. The rooms have air conditioning and there will be separate showers, toilets, dining halls and social areas for men and women. It is also planned to build a masjid and ablution facility.



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4.3.3 Assessment of the Environment, OHS and Biodiversity-Related Findings

Due diligence findings regarding the Antakya-Reyhanlı Road sub-project and its associated facilities are given in Table 7. The findings of this sub-project are presented together with the Antakya-Samandağ Road sub-project, as both utilize the same construction sites and quarry.

4.4 Antakya – Samandağ Road

4.4.1 General Information

- “Kuruyer Limestone Quarries” and “Kuruyer Construction and Accommodation Site” will be utilized within the scope of the sub-project. Kuruyer Construction site is still under construction. It is anticipated that the use of the construction site will begin in April.
- Kızılkaya Construction and Accommodation Site is currently being used until the Kuruyer Construction and Accommodation Site is completed.
- There is a ready-mixed concrete facility located on the construction area with a capacity of 50 m³/hour for the reconstruction works of Demirköprü Bridge.
- Asphalt renewal works have not commenced yet.
- It was observed during the site visits that the landslide removal works at the 6th km are continuing by the subcontractor (see Figure 58).



Figure 58. Landslide Removal Works at the Project Site



Figure 59. Endpoint of the Sub-project Area

4.4.2 Assessment of the Social Findings

4.4.2.1 Population Change

The camp site is in the installation process and located in the Narlıca Kuruyer Village boundaries. There will be accommodation for a maximum of 150 people. Nearest resident is approximately 1250 m from the Kuruyer Construction Site. This distance falls within Project Aol.

It is expected that the majority of workers working in the project will be men. Considering this situation, in order to avoid negative communication with the surrounding settlements and to prevent conflicts arising from social and cultural disagreements, the interaction between workers and local people will be minimized and all needs will be met within the camp area.

Training on CHS, SEA/SA, traffic security, communication with local people should be provided for workers, security personnel and drivers staying at the camp site, and the code of conduct should also include compliance with the measures taken on these issues as part of the contracts.

4.4.2.2 Community Health and Safety

Samandağ Belt Highway is approximately 27 km line passing through residential areas as shown in Figure 60.

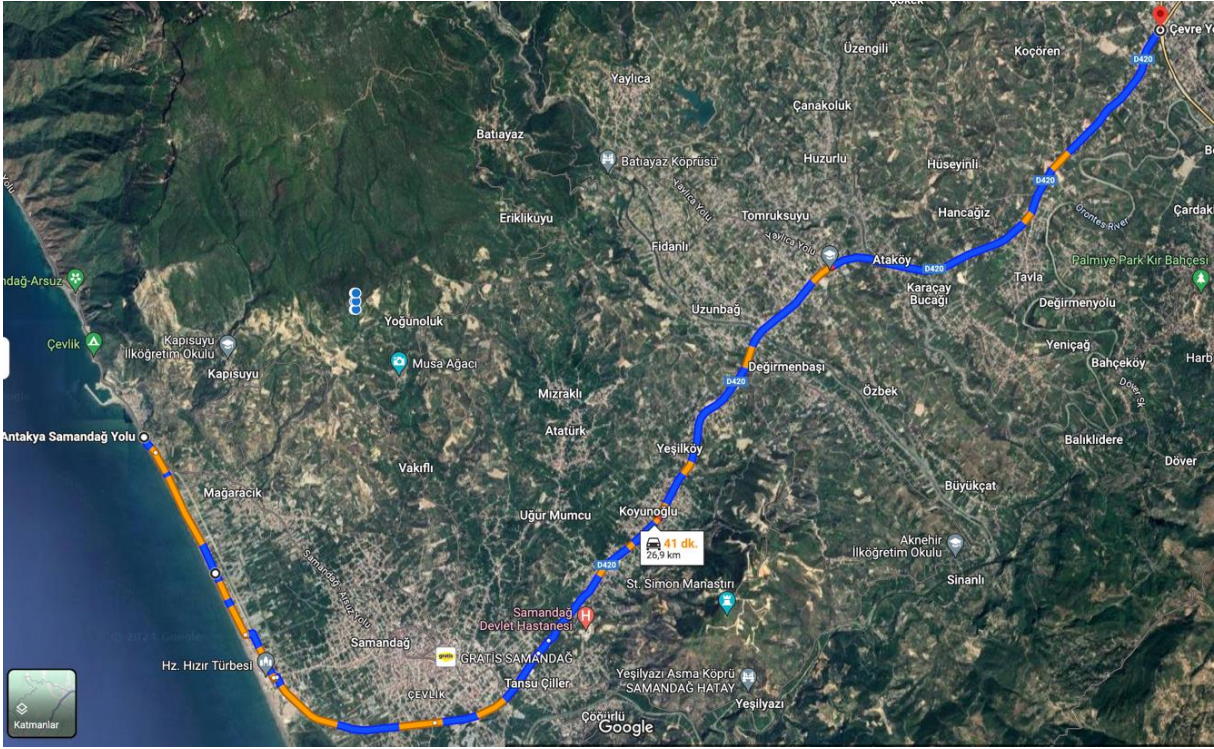


Figure 60. Samandağ Belt Highway Route

Also, a landslide has damaged the road in Küçükkaracaay District as shown in Figure 61 below and restoration works have been started. Container camping areas are available in various locations throughout the region.



Figure 61. Landslide in Küçükkaracaay District Road

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The sub-project should be managed and monitored with the traffic impact mitigation measures with trainings to be provided to the drivers, workers especially for the sensitive points such as schools, container camps, hospitals etc. in the Aol.

4.4.2.3 Resettlement and Land Acquisition

In addition to the current community health and safety issues, land acquisition is also highlighting an important issue on the sub-project study area. There is a private parcel in the expropriation process in the Sutaşı location of the Defne region in this region.

Additional land acquisition is required for the Supply Construction Work of Antakya-Samandağ Road (Including Samandağ Passage) Km: 0+000-26+850, located within the borders of the 5th Regional Directorate of Highways.

KGM carries out the following procedure in this regard;

KGM submits the Expropriation Plan prepared according to the approved Project to the Ministry for a "Public Interest Decision" by the General Directorate of Highways. Following the Public Interest Decision, declarations are sent to the relevant cadastral directorates for registration. As a result of the registrations, a valuation report is prepared for the immovable properties within the road construction and safety area, the determined prices are forwarded to the relevant parcel owners and bargaining negotiations are held. For the parcels for which an agreement is reached, an allowance is requested from KGM, and the expropriation money is deposited into the owners' accounts.

At the end of this process, which is carried out in accordance with Article 27 of the Expropriation Law, the "Price Determination and Registration case" specified in Article 10 of the Expropriation Law is filed by KGM with the relevant Court of First Instance for the parcels for which no agreement can be reached. The amount determined by the judge as a result of the determination of the impartial expert is deposited into the account of the court by the KGM, thus ensuring the registration of the parcel.

In this context, at the stage of expropriation of the existing parcel, KGM will start purchasing negotiations with the parcel owners after completing the Valuation procedures.





Figure 62. Project Land Acquisition Parcel

The studies have been carried out so far for Sutaşı District, 200 Island, Parcel No. 105, which falls within the Antakya-Samandağ State Highway expropriation corridor, are listed below;

- Expropriation Plan Approved and Public Interest Decision was taken.
- Measurement was made on the basis of the Valuation Appraisal on the parcel and the outbuildings (tree, type of tree, age, wall, pole, etc.) entering the expropriation corridor were determined.
- In order to obtain the zoning and construction characteristics that are the basis for the Valuation Appraisal of the parcel, the zoning status was asked from Samandağ Municipality in an official letter.
- Inspections and surveys continue at the Land Registry Directorate and locally for recent comparable sales around the parcel.

Potential Physical Displacement

On the expropriated parcel a family affected by the earthquake is currently residing in a temporary container shelter. Regarding this vulnerable household's occupancy of the parcel, the Hatay Governorship, Provincial Disaster and Emergency Directorate issued a letter dated 22.02.2024, stating that 'the individual in question has been acknowledged as eligible for one house. However, the allocation date for the housing cannot be determined at this time, as the allocation process is conducted through random selection from among the disaster houses constructed in accordance with Law No. 7269.

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4.4.2.4 Loss of Livelihood

A potential economic displacement will not occur due to the Sub-Project activities. Due to the heavy vehicle traffic and excavation works may occur dust impact on the agricultural/husbandry activity near the construction activities and Project transportation roads including Kuruyer Construction Site.

4.4.2.5 Infrastructure and Services

During the process of meeting the electricity, water and sewage needs for the camp site to be used within the scope of the project, pressure should not be put on the services used by the local people. It has been learned that Kuruyer Construction Site will use groundwater. In addition, all other usage permits must be obtained, documented and monitored.

It has been learned that it is planned to establish an asphalt plant, a concrete plant/crusher and a mechanical plant. It has been stated that the necessary permits will be obtained in the upcoming periods. It has been declared that groundwater will be used.

In order for the project not to have an impact on ecosystem services and infrastructure, taking the necessary precautions to protect water resources, making water resources measurements and obtaining permits will be important stages in this process.

4.4.2.6 Labour and Working Conditions

There are currently 10 employees in the Kuruyer Camp Site. Infrastructure works continue and transportation is provided by shuttle vehicles. The rooms have air conditioning and there will be separate showers, toilets, dining halls and social areas for men and women. It is also planned to build a masjid and ablution facility.

4.4.3 Assessment of the Environment, OHS and Biodiversity-Related Findings

Due diligence findings regarding the Antakya-Samandağ Road sub-project and its associated facilities are given in Table 7. The findings of this sub-project are presented together with the Antakya-Reyhanlı Road sub-project, as both utilize the same construction sites and quarry.



Table 7. Due Diligence Findings for Antakya-Reyhanlı Road and Antakya-Samandağ Road Sub-projects and their associated facilities

Topic/Issue	Kuruyer Construction and Accommodation Site	Kuruyer Limestone Quarries	Antakya-Reyhanlı Road Construction Area	Antakya-Samandağ Road Construction Area
Owner of the associated facility or the works carried out	DEHA	KGM	FEZA	DEHA
Specifications and properties of facility or work	This construction and accommodation site is still under construction (see Figure 63). Planned facilities: Concrete plant capacity: 95 m ³ /h Asphalt plant capacity: 240 tons/h	No accommodation on-site Crushing and screening facilities The plan is to extract 5,000,000 tons of material annually and operate crushing and screening facilities with a total capacity of 390,000 tons (see Figure 64).	No accommodation on-site Concrete plant with a capacity of 50 m ³ /hour (see Figure 65)	No accommodation on-site Construction activities have not started yet.
EIA Opinion	There is an "EIA is out of scope" decision dated 01.03.2024 and numbered E-26634441-220.03-8932722, received from Hatay Provincial Directorate of EUCC for concrete plant.	A decision of "EIA Not Required" was issued on 20.11.2023 for the Limestone Quarry and Crushing Screening Facilities project, which is permitted on a 24.91-hectare area for raw material production with permit certificate of 31/2023-09 (ER: 3480631).	The "EIA is out of scope" decision was made by Hatay Provincial Directorate of EUCC within the scope of the official letter dated 07.12.2023. On the other hand, since the concrete plant capacity is below the limit (100 m ³ /hour) specified in the EIA Regulation lists, it is considered out of scope for EIA.	As per the official letter from Hatay Provincial Directorate of EUCC, dated 18.12.2023 and numbered E-26634441-611.02-8160875, the "EIA is out of scope" decision was made.
Environmental Permit	The environmental permit process must be initiated before the asphalt plant and concrete plant become operational.	Developments and documents regarding the environmental permit process should be shared with blasting permits.	N/A	N/A
Working hours and shifts	Single shift is planned to be 08:00-17:00	Single shift is planned to be 08:00-17:00	Single shift is planned to be 08:00-17:00	Single shift is planned to be 08:00-17:00
Service procurement	OHS service Environmental consultancy	No information is provided	No information is provided	No information is provided
<u>Water and Wastewater Management</u>				
Water supply – for drinking purposes	The drinking water needs of the personnel will be met from bottled water.	The drinking water needs of the personnel will be met from bottled water.	The drinking water needs of the personnel will be met from bottled water.	Construction activities have not started yet.
Water supply – for personnel usage	Utility water will be provided from groundwater. Well drilling work has been continuing. There will be two tanks with a volume of 20 m ³ .	No information is provided	No information is provided	Construction activities have not started yet.
Water supply – for process	Utility water will be provided from groundwater. Well drilling work has been continuing. There will be two tanks with a volume of 20 m ³ .	No information is provided	No information is provided	Construction activities have not started yet.
Wastewater management	There is a septic tank with a volume of 120 m ³ . Wastewater will be collected with a vacuum truck by Antakya Municipality.	No information is provided	No information is provided	Construction activities have not started yet.
Raw Material Supply	Kuruyer Limestone Quarries	N/A	Kızılkaya Quarry	Kuruyer Limestone Quarries
<u>Pollution Prevention & Waste Management</u>				
Hazardous Wastes	It was declared that a temporary waste storage area will be established.	No information is provided	Existing areas on the construction site are being used.	Construction activities have not started yet.
Non-Hazardous Wastes	It was declared that a temporary waste storage area will be established.	No information is provided	Existing areas on the construction site are being used.	Construction activities have not started yet.

Topic/Issue	Kuruyer Construction and Accommodation Site	Kuruyer Limestone Quarries	Antakya-Reyhanlı Road Construction Area	Antakya-Samandağ Road Construction Area
Temporary Waste Storage Area	It was declared that a temporary waste storage area will be established.	No information is provided	Existing areas on the construction site are being used.	Construction activities have not started yet.
Topsoil	It was declared that the topsoil has been sent to the storage areas indicated by KGM or given to citizens who request it.	N/A	It was declared that the topsoil has been sent to the storage areas indicated by KGM or given to citizens who request it.	It was declared that the topsoil has been sent to the storage areas indicated by KGM or given to citizens who request it.
Excavation wastes	N/A	No information is provided	It was declared that the excavation wastes have been sent to the storage areas indicated by KGM. It has been also used in backfilling where appropriate.	It was declared that the excavation wastes have been sent to the storage areas indicated by KGM. It has been also used in backfilling where appropriate.
Construction wastes	It was declared that the construction wastes have been sent to the storage areas indicated by KGM	No information is provided	It was declared that the construction wastes have been sent to the storage areas indicated by KGM.	It was declared that the construction wastes have been sent to the storage areas indicated by KGM
Chemical Management	It is planned to have a chemical storage area on the site.	No information is provided	Existing areas on the construction site are being used.	Construction activities have not started yet.
Soil Contamination Risk	No evidence of soil contamination was detected during the site visit.	No information is provided	During the site visit, no soil contamination was observed.	Construction activities have not started yet.
Air Quality and Noise	This construction and accommodation site is still under construction. It is anticipated that generators will be used.	By effectively using the Grievance Redressal Mechanism, complaints should be resolved, and necessary mitigating measures should be taken.	Within the scope of the environmental permit on air emissions, the current air emission report should be shared.	Construction activities have not started yet.
Community Health and Safety				
Security	This construction and accommodation site is still under construction.	No information is provided	N/A	Construction activities have not started yet.
Information and Warning/Safety Signs	This construction and accommodation site is still under construction.	No information is provided	Warning signs have been placed in the areas where work has been carried out to avoid disrupting traffic flow.	Construction activities have not started yet.
Occupational Health and Safety				
OHS Documents	Occupational Health and Safety Professional Contracts are available. The Risk Analysis Report was prepared by the contractor company DEHA on 11.03.2024. The Health and Safety Plan was prepared by the contractor company DEHA on 11.03.2024. The Emergency Response Preparedness Plan was prepared by the contractor company DEHA on 11.03.2024. Within the scope of annual plans and reports, "Annual Training Plan, Annual Work Plan, and Annual Evaluation Report" have been prepared. OHS trainings have been provided and records have been maintained.	Occupational Health and Safety Professional Contracts are available. The Risk Analysis Report was prepared by the contractor company DEHA on 11.03.2024. The Health and Safety Plan was prepared by the contractor company DEHA on 11.03.2024. The Emergency Response Preparedness Plan was prepared by the contractor company DEHA on 11.03.2024. Within the scope of annual plans and reports, "Annual Training Plan, Annual Work Plan, and Annual Evaluation Report" have been prepared. OHS trainings have been provided and records have been maintained.	Occupational Health and Safety Professional Contracts are available. The Risk Analysis Report was prepared by the contractor company FEZA on 18.08.2023. The Health and Safety Plan was prepared by the contractor company FEZA on 18.08.2023. The Emergency Response Preparedness Plan was prepared by the contractor company FEZA on 18.08.2023. Within the scope of annual plans and reports, "Annual Training Plan, Annual Work Plan, and Annual Evaluation Report" have been prepared. OHS trainings have been provided and records have been maintained.	Occupational Health and Safety Professional Contracts are available. The Risk Analysis Report was prepared by the contractor company DEHA on 11.03.2024. The Health and Safety Plan was prepared by the contractor company DEHA on 11.03.2024. The Emergency Response Preparedness Plan was prepared by the contractor company DEHA on 11.03.2024. Within the scope of annual plans and reports, "Annual Training Plan, Annual Work Plan, and Annual Evaluation Report" have been prepared. OHS trainings have been provided and records have been maintained.
Emergency Drills	The Emergency Drill has not been conducted yet.	The Emergency Drill has not been conducted yet.	The Emergency Drill has not been conducted yet.	The Emergency Drill has not been conducted yet.
Safety of the construction/accommodation area	During the site visit, it was observed that the building constructions at The Kuruyer Construction and Accommodation Site were completed, while landscaping works were still ongoing.	Work has not yet commenced on the Kuruyer Limestone.	At the Antakya-Reyhanlı Road Construction Site, warning signs and safety barrier around excavation areas are insufficient (see Figure 70).	Construction machinery was working in the landslide area on the Antakya-Samandağ road (see Figure 71).

Topic/Issue	Kuruyer Construction and Accommodation Site	Kuruyer Limestone Quarries	Antakya-Reyhanlı Road Construction Area	Antakya-Samandağ Road Construction Area
	<p>It was observed that safety measures were not taken for excavated areas during landscaping (see Figure 66).</p> <p>It has been observed that there are no informational or warning signs in the construction site that is still under installation.</p> <p>It has been observed that the procurement of items to be used for accommodation has been completed (see Figure 67 and Figure 68).</p> <p>The administrative building and dormitory building have been constructed with emphasis on natural lighting, natural ventilation, and thermal comfort (see Figure 69).</p>			
Procurement and Usage of PPE	All employees are provided with work shoes, high visibility jacket, and helmets. Employees working at heights or involved in welding tasks are provided with PPE such as harness lanyard, goggles, earplugs, gloves, etc.	All employees are provided with work shoes, high visibility jacket, and helmets. Employees working at heights or involved in welding tasks are provided with PPE such as harness lanyard, goggles, earplugs, gloves, etc.	All employees are provided with work shoes, high visibility jacket, and helmets. Employees working at heights or involved in welding tasks are provided with PPE such as harness lanyard, goggles, earplugs, gloves, etc.	All employees are provided with work shoes, high visibility jacket, and helmets. Employees working at heights or involved in welding tasks are provided with PPE such as harness lanyard, goggles, earplugs, gloves, etc.
Occupational Accident	No occupational accidents have occurred at the Kuruyer Construction and Accommodation Site.	No occupational accidents have occurred at the Kuruyer Limestone Quarries.	There have been two (2) occupational accident at the project area. There has been no permanent disability. The accidents have been resulted in minor injuries.	No occupational accidents have occurred at the Antakya-Samandağ road construction area.
Biodiversity Management				
Biodiversity Consideration	Although Kuruyer Construction and Accommodation Site is an existing facility, detailed evaluation will be given in the ESIA.	Although Kuruyer Limestone Quarries is an existing facility, detailed evaluation will be given in the ESIA.	The Antakya-Reyhanlı Road is an existing road. No direct impact is expected from the project; however, indirect pollution of water resources may occur due to work on river crossings. Necessary measures will be taken to prevent these effects.	The Antakya-Samandağ Road is an existing road. No direct impact is expected from the project; however, indirect pollution of water resources may occur due to work on river crossings. Necessary measures will be taken to prevent these effects.
Biodiversity Impacts	The Kuruyer Construction and Accommodation Site is located within an Internationally Recognized Area, and detailed evaluation will be given in the ESIA.	The Kuruyer Limestone Quarries is located within an Internationally Recognized Area, and detailed evaluation will be given in the ESIA.	The Antakya-Reyhanlı Road is an existing road. No additional impacts on biodiversity are determined.	The Antakya-Samandağ Road is an existing road. No additional impacts on biodiversity are determined.
Critical Habitats	The Kuruyer Construction and Accommodation Site is located within an Internationally Recognized Area. Detailed evaluation will be given in the ESIA.	The Kuruyer Limestone Quarries is located within an Internationally Recognized Area. Detailed evaluation will be given in the ESIA.	The Antakya-Reyhanlı Road is an existing road. No critical habitat is determined.	The Antakya-Samandağ Road is an existing road. No critical habitat is determined.
Natural Habitats	The Kuruyer Construction and Accommodation Site area, although a large portion has been cleared, still contains natural habitats such as patches of forest and woodland-clearing interfaces. Detailed evaluation will be given in the ESIA.	The Kuruyer Limestone Quarries area, although a large portion has been cleared, still contains natural habitats such as patches of forest and woodland-clearing interfaces. Detailed evaluation will be given in the ESIA.	The Antakya-Reyhanlı Road is an existing road, therefore impact on natural habitats is expected to be low.	The Antakya-Samandağ Road is an existing road, therefore impact on natural habitats is expected to be low.
Protected Areas*	The Kuruyer Construction and Accommodation Site area intersects with the Altınözü Tepeleri Important Nature Area (INA), an Internationally Recognized Area. Due to the existing facility and area, the impact is assessed to be low.	The Kuruyer Limestone Quarries area intersects with the Altınözü Tepeleri Important Nature Area (INA), an Internationally Recognized Area. Due to the existing facility and area, the impact is assessed to be low.	The Antakya-Reyhanlı Road passes through several Internationally Recognized Areas, including the Amanos Mountains Important Plant Area (IPA), Samandağ Sand Dunes Important Nature Area (INA), and Amanos Mountains Important Nature Area (INA). Due to the existing road infrastructure, the impact on the protected areas is considered to be low. Additionally, the road is located 150 meters away from the Mileyha Wetland of Local Importance, a Legally Protected Area. Detailed evaluation will be given in the ESIA.	The Antakya-Samandağ Road passes through the Altınözü Tepeleri Important Nature Area (INA), an Internationally Recognized Area. Due to the existing road infrastructure, the impact on the protected area is considered to be low.

Topic/Issue	Kuruyer Construction and Accommodation Site	Kuruyer Limestone Quarries	Antakya-Reyhanlı Road Construction Area	Antakya-Samandağ Road Construction Area
Cultural Heritage Management				
Official correspondence	No information is available	No information is available	<p>As per the official letter from Hatay Cultural Heritage Preservation Regional Board Directorate (CHPRBD), dated 18.12.2023 and numbered E-85020971-165.99-4545304, the road route overlaps with the Ilıca Ancient Settlement 1st degree archaeological site, the Kavalcık Necropolis 3rd degree archaeological site, and the Tell Tayinat Mound 1st and 3rd degree archaeological site, registered by Adana CHPRBD.</p> <p>The road route has borders with Bahlile Mound 3rd degree archaeological protected area registered by Adana CHPRB, Askerçayırı 1st degree archaeological protected area and Reyhanlı Cemetery 1st degree archaeological protected areas, registered by Hatay CHPRBD.</p> <p>It has been determined that there are Büyük Algene and Küçük Algene Mound 1st degree archaeological sites in the immediate vicinity of the road route, registered by Adana CNHPRBD.</p> <p>Since there are protected areas that overlap with the road route and are adjacent to the border, detailed information, documents and additional studies have been requested by the Board and it was stated that no works should be carried out without receiving a final opinion letter from the institution.</p> <p>If any finds or remains that qualify as immovable cultural assets that need to be protected are encountered during the physical and construction interventions to be carried out in the area, the work must be stopped immediately and this must be reported to the nearest Civil Administrative Authority or Museum Directorate, and information should be obtained from the relevant institution as to whether there is a Natural Site in the area in question.</p>	<p>As per the official letter from Hatay CHPRBD, dated 19.12.2023 and numbered E-85020971-165.02.03-4550554, it has been observed that a part of Hatay Province Samandağ State Road (Antakya Beltway Road) (Including Samandağ Passage) remains within the 1st and 3rd degree archaeological site boundaries of Seleukeia Pieria Ancient City, which registered as a 1st, 2nd and 3rd degree archaeological site by the Supreme Council of Immoveable Cultural and Natural Heritage (and its borders were finalized by Adana CHPRBD).</p> <p>Since there are protected areas that overlap with the road route; detailed information, documents and additional studies have been requested by the Directorate and it was stated that no works should be carried out without receiving a final opinion letter from the institution.</p>

*Maps of the Legally Protected and Internationally Recognized Areas are given in Appendix-1.



Figure 63. Kuruyer Construction and Accommodation Site



Figure 64. Kuruyer Limestone Quarry



Figure 65. Concrete Plant used for Bridge Construction in Demirköprü



Figure 66. Non-Conformity in Kuruyer Construction and Accommodation Area



Figure 67. Accommodation Items in Kuruyer Construction and Accommodation Area



Figure 68. Cafeteria Items in Kuruyer Construction and Accommodation Area



Figure 69. Office Building in Kuruyer Construction and Accommodation Area



Figure 70. Antakya-Reyhanlı Road Construction Area



Figure 71. Landslide Area on the Antakya-Samandağ Road.

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4.5 TAG Highway – Aslanlı Tunnel – Nurdağı Junction

4.5.1 General Information

- “Ceyhan Construction and Accommodation Site”, “Başpınar Limestone Quarry”, “Tatarlı Basalt Quarry”, and “Bahçe (Ayran) Concrete Plant” will be utilized within the scope of the sub-project.
- Ceyhan Construction and Accommodation Site is the Contractor’s (SNH) main accommodation site which has actively been used since 2019 for different projects (see Figure 72, Figure 73, and Figure 74).
- Meals are being prepared at the Ceyhan Construction and Accommodation Site (see Figure 75) and distributed to the personnel working on different sites within the scope of the sub-project.
- Additionally, several apartments from the lodging of 5th Regional Directorate of Highways were reorganized and allocated to the project personnel (see Figure 76). Approximately 30 personnel are staying at this accommodation area (also known as Bahçe Accommodation Area). Showers, toilets, cafeteria, and social areas are available.



Figure 72. Entry of Ceyhan Construction and Accommodation Site



Figure 73. Ceyhan Construction and Accommodation Site - Offices



Figure 74. Ceyhan Construction and Accommodation Site - Accommodation Area



Figure 75. Ceyhan Construction and Accommodation Site – Kitchen



Figure 76. The lodging of 5th Regional Directorate of Highways

4.5.2 Assessment of the Social Findings

4.5.2.1 Population Change

Ceyhan Construction Site is used for the construction works of the sub-project. The construction site is located in Ceyhan.

143 workers are accommodated at the construction site, which is approximately 20 km away from the nearest settlement. The worker accommodation area is an isolated area from its

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surroundings, and all the needs of the workers are met within the camp area. Project work has limited communication and interaction with the local population, and the camp site does not have any negative impact on the surrounding settlements or the local population.

4.5.2.2 Community Health and Safety

Within the scope of the Tag Highway sub-project, work has started on 5 viaducts with a total length of 8.63 km, namely Şehitler, Nurdağı, Atatürk, Turgut Özal and Başpınar Viaducts, and it has been informed that the temporary repairs on the superstructures have been completed. Aslanlı Tunnel and Kömürcüler Junction are also within the scope of the works. The quarry, which is actively used and will operate within the scope of the project, is on the side of the road near Başpınar and there is no settlement around it. Başpınar Village is the closest village to the quarry. will be provided via the KGM transportation road, without using village roads. Başpınar Village, the closest village, has its own village road and work trucks do not use the village road.



Figure 77. Başpınar Village and Başpınar Viaduct

Although the project activities are not expected to pose a significant community health and safety risk, PAPs/households interviews need to be held in the residential buildings/houses located under the viaducts and/or nearby the limestone quarry; that are likely to be affected due to the dust, vibration and vehicle traffic impacts.

4.5.2.3 Resettlement and Land Acquisition

A physical displacement will not occur due to the Sub-Project activities.

4.5.2.4 Loss of Livelihood

An economic displacement will not occur due to the Sub-Project activities. There will be no restrictions on land use.

4.5.2.5 Infrastructure and Services

Drinking water for Ceyhan Construction Camp Site is provided from ready-bottled water, utility water is provided from Hacı Sabancı OIZ, and irrigation water is obtained from groundwater well. For the use of groundwater well, the usage license must be shared. Hot water is supplied via solar panels. Electrical infrastructure is available and there is also an emergency generator. The campsite does not create any pressure on local settlements and local services.

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4.5.2.6 Labour and Working Conditions

143 workers are accommodated at the construction site, which is approximately 20 km away from the nearest settlement. The worker accommodation area is an isolated area from its surroundings; therefore, it does not have any interaction or communication with the local people that may pose a risk regarding SEA/SH.

There is no affected settlement around the KGM worker accommodation area in Bahçe. Since the employees do not have any communication or interaction with the local people and all needs are met within the camp area, there is no risk on SEA/SH.

Bahçe Accommodation Area

A facility belonging to the KGM was rented in Bahçe Town for the accommodation of the workforce in the works carried out within the scope of the Tag Highway viaduct and tunnel works, and approximately 30 workers are accommodated here. All workers are men. The accommodation area is isolated from its surroundings, not directly interacting with the local people. The area has been fenced off, and security is present at the campsite entrance.

Workers provide transportation to the Project area via Project services. The campus has showers, toilets and social areas, and workers' meals are provided by KGM.

Ceyhan Construction and Campsite

Camp site OHS, working conditions and accommodation conditions are assessed. Engineer and worker dormitories are separate and have showers, toilets and a common activity area. Men's and women's toilets are separated. Hot water is provided by solar energy and the municipality's mains water is also used. Drinking water is packaged and supplied from private companies. There is an active workers' dining hall serving all workers.

Field findings and evaluations show that accommodation and working conditions are carried out in accordance with the Working Conditions and Community Health and Safety requirements defined within the scope of AIB ESS 1 Environmental and Social Management System for Ceyhan Construction Camp Site and Bahçe Accommodation Site.

4.5.3 Assessment of the Environment, OHS and Biodiversity-Related Findings

Due diligence findings regarding the TAG Highway-Aslanlı Tunnel-Nurdağı Junction sub-project and its associated facilities are given in Table 8.



Table 8. Due Diligence Findings for TAG Highway – Aslanlı Tunnel – Nurdağı Junction Sub-Project and its associated facilities

Topic/Issue	Ceyhan Construction and Accommodation Site	Bahçe (Ayran) Concrete Plant	Tatarlı Basalt Quarry	Başpınar Limestone Quarry	TAG Highway – Aslanlı Tunnel – Nurdağı Junction Sub-Project Construction Area
Owner of the associated facility or work carried out	SNH	SNH	KGM	KGM	KGM
Specifications and properties of facility or work	Asphalt plant with a capacity of 320 tons/hour (Hot Bituminous Mixture production) (see Figure 78). Accommodation Site There are solar panels for hot water supply (see Figure 84).	No accommodation on-site Concrete Plant with a capacity of 90 m ³ /hour (see Figure 79). Office containers	No accommodation on-site Mechanical plant/crusher with a capacity of 500 tons/hour (see Figure 80)	No accommodation on-site Material extraction works have not started yet. 1,200,000 tons of limestone will be produced annually. Work will be conducted in the quarry for a duration of 24 months, with 96 explosions per year (see Figure 81)	No accommodation on-site Reinforcement and repair works of the highways and viaducts
EIA Opinion	“EIA Not Required Decision” issued by Adana Provincial Directorate of Environment and Urbanization, dated 27.02.2020 with decision number of 90438820 220-02 E-202097-1186 for asphalt plant facility.	Since the production capacity of the concrete plant is below the limit value specified in the Annex-2 of EIA Regulation, it is exempt from the EIA process.	Facility activities was evaluated as 'out of scope' in accordance with (repealed) Provisional Article 3 of the EIA Regulation No. 29186 dated 25.11.2014, as per the official letter from the Adana Provincial Directorate, dated 13.07.2020, numbered 90438820-220.03-E.19946.	Facility activities was evaluated as 'out of scope' in accordance with (repealed) Article 24 (Extraordinary Situations and Special Provisions) and Provisional Article 2 of the EIA Regulation No. 31907 dated 29.07.2022, as per the official letter from the MoEUCC, dated 08.02.2024 and numbered E-14108550-220.01-8709304.	Since the operations to be carried out only include maintenance on the existing road, the project has been considered exempt from the EIA Regulation as per the official letter from Gaziantep Provincial Directorate of EUCC, dated 05.01.2024 and numbered E-46818599-220.03-8417181.
Environmental Permit	Environmental Permit Certificate which is valid until 12.10.2026, issued by Adana Provincial Directorate of Environment and Urbanization, dated 13.10.2021 with document number of 288804714.0.1 on air emission and wastewater discharge for “SNH İnşaat A.Ş.”	Since the total production capacity is above 10 m ³ /hour, which is the limit value specified in the Annex-2 of the Environmental Permit and License Regulation, the facility is subject to an Environmental Permit. It was informed that that the environmental permit process is continuing (in the process of applying for a temporary activity certificate).	Mines and quarries (for Group I (a and b), Group II (including limestone), Group IV and Group V) with a mining capacity of 150 tons/day and above and Open and/or not fully closed storage and/or screening-packaging facilities with a storage capacity of 200 tons/day or more and where substances that can cause dust are transferred and/or filled and unloaded are within the scope of Annex-2 list of the current Environmental Permit and License Regulation. The opinion of the Adana Provincial Directorate of EUCC and relevant documents should be shared.	Mines and quarries (for Group I (a and b), Group II (including limestone), Group IV and Group V) with a mining capacity of 150 tons/day and above and Open and/or not fully closed storage and/or screening-packaging facilities with a storage capacity of 200 tons/day or more and where substances that can cause dust are transferred and/or filled and unloaded are within the scope of Annex-2 list of the current Environmental Permit and License Regulation. The opinion of the Gaziantep Provincial Directorate of EUCC and relevant documents should be shared. It is known that the raw material production permit, covering an area of 24.63 hectares, was obtained with Access Number 3483952 on 1.10.2023.	N/A
Working hours and shifts	08:00-18:00 and single shift (+overtime work)	08:00-18:00 and single shift (+overtime work)	No information is available	Material extraction works have not started yet.	08:00-18:00 and single shift (+overtime work)
Service procurement	Environmental Consultancy (“Meriç Mühendislik”)	Environmental Consultancy (“Atasar Mühendislik”)	Environmental Consultancy	Material extraction works have not started yet.	N/A
Water and Wastewater Management					

Topic/Issue	Ceyhan Construction and Accommodation Site	Bahçe (Ayran) Concrete Plant	Tatarlı Basalt Quarry	Başpınar Limestone Quarry	TAG Highway – Aslanlı Tunnel – Nurdağı Junction Sub-Project Construction Area
Water supply – for drinking purposes	The drinking water needs of the personnel have been met from bottled water.	The drinking water needs of the personnel have been met from bottled water.	The drinking water needs of the personnel have been met from bottled water. There is a water storage tank with a volume of 40 m ³ .	Material extraction works have not started yet.	The drinking water needs of the personnel have been met from bottled water.
Water supply – for personnel usage	The water supply has been made from Hacı Sabancı OIZ.	Water used for the personnel has been purchased and delivered to the facility via tankers.	Water used for the personnel has been purchased and delivered to the facility via tankers. There is a water storage tank with a volume of 40 m ³ .	Material extraction works have not started yet.	Water used for the personnel and used in the process has been purchased and delivered to the site via IBC tanks.
Water supply – for process	The water used for process have been obtaining from Hacı Sabancı OIZ and whereas groundwater well has been using for irrigation purposes. The license to use the groundwater well should be shared.	Water used in the process has been purchased and delivered to the facility via tankers.	Water used in the process has been purchased and delivered to the facility via tankers.	Material extraction works have not started yet.	Water used for the personnel and used in the process has been purchased and delivered to the site via IBC tanks.
Wastewater management	<p>Only domestic wastewater has been generated. There is a biological package wastewater treatment plan (WWTP) with 20 m³/day capacity (see Figure 82). The WWTP project approval letter is available, dated 25.06.2022 an numbered 79694804-110.03.03-E.17593, issued by Adana Provincial Directorate of Environment and Urbanization.</p> <p>Within the scope of the environmental permit on air emission and wastewater discharge, internal monitoring is carried out by taking a sample every 4 months.</p> <p>On the other hand, there is no rainwater collection system.</p>	<p>Domestic wastewater has been stored in a septic tank. Service has been receiving from the municipality for disposal.</p> <p>The wastewater generated in the concrete facility has been collected in staged sedimentation ponds and then reused in the process (see Figure 83)</p>	Domestic wastewater has been stored in a septic tank. Service has been receiving from the municipality for disposal.	Material extraction works have not started yet.	There was no portable toilet in the activity area, employees have been benefiting from the services available nearby.
Raw Material Supply	Bitumen has been providing by KGM. Other raw materials have been supplied from Tatarlı Basalt Quarry and Yılkale Limestone Quarry.	Raw materials have been obtained from the Tatarlı Basalt Quarry, but external purchases also occur.	N/A	N/A	The supply of cement-based building components (grout material) has been carried out through purchasing.
<u>Pollution Prevention & Waste Management</u>					
Hazardous Wastes	The generated hazardous wastes have been sending to licensed companies after being stored in the temporary waste storage area. Annual waste declaration was made on Integrated Environmental Information System ("EÇBS"), which is the online system of the Ministry of EUCC.	It has been declared that the facility has EÇBS registration. It is recommended to share waste generation and shipping records.	Information regarding the management of hazardous waste has not been shared.	Material extraction works have not started yet.	There were no containers on site for hazardous and non-hazardous waste.
Non-Hazardous Wastes	Domestic wastes have been collected by Ceyhan Municipality. According to the Monthly Activity Report (February 2024), there is no generation of packaging, excavation and medical wastes. In the office building, recycling bins are	Domestic wastes have been collected by Bahçe Municipality.	Domestic wastes have been disposed of in the municipality's garbage containers using the company's own vehicles.	Material extraction works have not started yet.	There were no containers on site for hazardous and non-hazardous waste.

Topic/Issue	Ceyhan Construction and Accommodation Site	Bahçe (Ayran) Concrete Plant	Tatarlı Basalt Quarry	Başpınar Limestone Quarry	TAG Highway – Aslanlı Tunnel – Nurdağı Junction Sub-Project Construction Area
	available in compliance with zero waste approach (see Figure 85).				
Temporary Waste Storage Area	<p>There was no temporary waste storage area in compliance with national legislation. There is no closed area, wastes have been kept in containers, and there were no waste code labels specific to the type of waste. (see Figure 86).</p> <p>Industrial Waste Management Plan valid until 19.04.2024 exist, and Hazardous Substances and Hazardous Waste Compulsory Liability Insurance is valid until 13.07.2024.</p> <p>It was stated that new temporary waste storage area will be established.</p>	There was no temporary waste storage area in compliance with national legislation.	There was no temporary waste storage area in compliance with national legislation.	No information is available	There was no temporary waste storage area in the construction area.
Topsoil	It was stated that the excess excavation material and topsoil have been sending to the area where KGM and General Directorate of Forestry were determined.	N/A	It was stated that the excess excavation material and topsoil have been sending to the area determined by KGM and General Directorate of Forestry.	Material extraction works have not started yet.	It was stated that the excess excavation material and topsoil have been sending to the area determined by KGM and General Directorate of Forestry.
Excavation wastes	It was stated that the excess excavation material and topsoil have been sending to the area where KGM and General Directorate of Forestry were determined.	N/A	N/A	Material extraction works have not started yet.	It was informed that the excess excavation material and topsoil have been sending to the area determined by KGM and General Directorate of Forestry.
Construction wastes	N/A	N/A	N/A	Material extraction works have not started yet.	It was informed that the construction materials have been sending to the area determined by KGM.
Chemical Management	<p>There is chemical use and storage in the facility The drip tray is available (see Figure 87).</p> <p>The facility has been evaluated as out of scope according to BEKRA Regulation.</p>	It was observed during the field visit that there was no chemical storage.	It was stated that chemicals have not been stored.	No information is available	There was no chemical storage on the site. Fuel supply has been done by mobile vehicles.
Soil Contamination Risk	There is a secondary containment structure for the diesel tank. However, for other storage tanks, anti-leakage measures should be taken to prevent soil contamination (see Figure 88 and Figure 89).	No soil contamination was observed during the site visit.	No information is available	Material extraction works have not started yet.	It was observed that the soil in the activity area of Başpınar Viaduct was contaminated due to leakage of cement-based building component (grout material). Chemical substance management must be carried out effectively and secondary containment structures must be used (see Figure 90)
Air Quality and Noise	Electrical infrastructure is available. Besides, there is an emergency generator. Within the scope of the environmental permit on air emission and wastewater discharge, the last air emission measurement was carried out on 25.08.2023. Emission sources include asphalt plant chimneys, hot burners, bunkers and stock areas.	<p>Electrical infrastructure is available. Besides, there is no emergency generator. The environmental permit process on air emissions is continuing. After the Environmental Permit Certificate is received, the document should be shared.</p> <p>It has been declared by the environmental consultant that the</p>	<p>Electrical infrastructure is available. Besides, there is no emergency generator. The opinion of the Adana Provincial Directorate of EUCC for environmental permit on air emissions and relevant documents should be shared.</p> <p>By effectively using the Grievance Redressal Mechanism, complaints</p>	Material extraction works have not started yet.	By effectively using the Grievance Mechanism, complaints should be resolved, and necessary mitigating measures should be taken.

Topic/Issue	Ceyhan Construction and Accommodation Site	Bahçe (Ayran) Concrete Plant	Tatarlı Basalt Quarry	Başpınar Limestone Quarry	TAG Highway – Aslanlı Tunnel – Nurdağı Junction Sub-Project Construction Area
	<p>To prevent dust formation, there is a water jet system and dust reduction system in the stock area. It was declared that periodic irrigation has been carrying out in unpaved stock areas and access roads.</p> <p>On the other hand, the facility is exempt from obtaining an environmental permit for noise with the letter issued by Adana Provincial Directorate of Environment, Urbanization and Climate Change, dated 14.09.2020 and numbered 73971906-150/E.8381.</p>	<p>bunkers will be renovated as closed and dust reduction precautions will be taken.</p> <p>Since the location of the facility is far from residential areas, no significant impact on noise is expected.</p>	<p>should be resolved, and necessary mitigating measures should be taken.</p>		
Community Health and Safety					
Security	The facility area was surrounded by fences. There is a security cabin at the entrance (see Figure 91).	The facility area has not been surrounded by fences.	The quarry has not been surrounded by fences.	The quarry has not been surrounded by fences.	It was observed that the roads were closed to transportation in the areas where the activity was carried out.
Information and Warning/Safety Signs	Information and warning signs are also available (see Figure 92).	The number of the warning/safety signs should be increased.	No information is available	Material extraction works have not started yet.	The number of the warning/safety signs should be increased.
Occupational Health and Safety					
OHS Documents	<p>The Risk Analysis Report was prepared by the contractor company SNH in May 2023</p> <p>The Emergency Response Preparedness Plan was prepared by the contractor company SNH in May 2023</p> <p>Within the scope of annual plans and reports, "Annual Training Plan, Annual Work Plan, and Annual Evaluation Report" have been prepared in January 2024.</p>	<p>The Risk Analysis Report was prepared by the contractor company in March 2024</p> <p>The Emergency Response Preparedness Plan was prepared by the contractor company SNH in March 2024</p> <p>Within the scope of annual plans and reports, "Annual Training Plan, Annual Work Plan, and Annual Evaluation Report" have been prepared in March 2024</p>	<p>The Risk Analysis Report was prepared by the contractor company SNH in May 2023</p> <p>The Emergency Response Preparedness Plan was prepared by the contractor company SNH in May 2023</p> <p>Within the scope of annual plans and reports, "Annual Training Plan, Annual Work Plan, and Annual Evaluation Report" have been prepared in January 2024.</p>	<p>Material extraction works have not started yet.</p>	<p>The Risk Analysis Report was prepared by the contractor company SNH in June 2023</p> <p>The Health and Safety Plan was prepared by the contractor company SNH in July 2023</p> <p>The Emergency Response Preparedness Plan was prepared by the contractor company SNH in June 2023</p> <p>Within the scope of annual plans and reports, "Annual Training Plan, Annual Work Plan, and Annual Evaluation Report" have been prepared.</p>
OHS Training	OHS trainings have been provided and records have been maintained.	OHS trainings have been provided and records have been maintained.	OHS trainings have been provided and records have been maintained.	Material extraction works have not started yet.	<p>OHS trainings have been provided and records have been maintained.</p> <p>All employees who will work at heights have received 'Working at Heights Training'.</p>
Emergency Drills	A fire and rescue drill was conducted on August 26, 2023.	The Emergency Drill has not been conducted yet.	A fire and rescue drill was conducted on March 13, 2023.	Material extraction works have not started yet.	A fire and rescue drill was conducted on August 26, 2023.
Safety of the construction/ accommodation area	<p>At the Ceyhan construction and accommodation site, fire extinguishers are available both in work areas and in accommodation as well as offices.</p> <p>At the Ceyhan construction and accommodation site, emergency assembly area signs, illuminated</p>	<p>The surroundings of the sedimentation pool are not fenced off with barriers, posing a risk of falling (see Figure 83)</p> <p>Electrical periodic maintenance has not been conducted yet, and the electrical panels are not in insulated areas.</p>	<p>The surroundings of the excavation areas have not been enclosed with safety barriers.</p> <p>Electrical periodic maintenance was conducted in August 2024.</p>	<p>Material extraction works have not started yet.</p>	<p>A safe distance has not been designated to prevent approaching the high cliffs, and warning signs have not been placed (Figure 95).</p>

Topic/Issue	Ceyhan Construction and Accommodation Site	Bahçe (Ayran) Concrete Plant	Tatarlı Basalt Quarry	Başpınar Limestone Quarry	TAG Highway – Aslanlı Tunnel – Nurdağı Junction Sub-Project Construction Area
	<p>emergency exit signs, and directional signs are available. Additionally, OHS information and warning signs are also available (see Figure 94).</p> <p>There is a laundry room available in the accommodation areas, and bedsheets are changed with new ones once every 10 days.</p> <p>Electrical periodic maintenance was conducted in August 2024.</p> <p>Ergonomics, thermal comfort, natural ventilation, and natural lighting have been prioritized in office and accommodation areas.</p> <p>Wire insect screens are available to protect against flying insects.</p>				
Procurement and Usage of PPE	All employees are provided with work shoes, work clothes, gloves, masks, goggles, and helmets. Additionally, the maintenance team has been provided with harness lanyard.	All employees are provided with work shoes, work clothes, gloves, masks, goggles, and helmets. Additionally, the maintenance team has been provided with harness lanyard.	All employees are provided with work shoes, work clothes, gloves, masks, goggles, and helmets. Additionally, the maintenance team has been provided with harness lanyard.	Material extraction works have not started yet.	All employees are provided with work shoes, work clothes, gloves, masks, goggles, and helmets. Additionally, the maintenance team has been provided with harness lanyard.
Occupational Accident	No occupational accidents have occurred at the Ceyhan Construction and Accommodation Site	No occupational accidents have occurred at the Bahçe (Ayran) Concrete Plant	There has been one (1) work accident at the project site. There has been no permanent disability. The accident has been resulted in minor injuries.	Material extraction works have not started yet.	There has been one (1) work accident at the project site. There has been no permanent disability. The accident has been resulted in minor injuries.
Biodiversity Management					
Biodiversity Consideration	The Ceyhan Construction and Accommodation Site is an existing facility. No direct impact is expected from the project.	Although Bahçe (Ayran) Concrete Plant is an existing facility. Detailed evaluation will be given in the ESIA.	Although Tatarlı Basalt Quarry is an existing facility, detailed evaluation will be given in the ESIA.	Although Başpınar Limestone Quarry is an existing facility, detailed evaluation will be given in the ESIA.	The TAG Highway-Aslanlı Tunnel-Nurdağı Junction is an existing road. No direct impact is expected from the project; however, indirect pollution of water resources may occur due to work on river crossings. Necessary measures will be taken to prevent these effects.
Biodiversity Impacts	The Ceyhan Construction and Accommodation Site is an existing facility. No additional impacts on biodiversity are determined.	The Bahçe (Ayran) Concrete Plant is located within Internationally Recognized Areas, and detailed evaluation will be given in the ESIA.	The Tatarlı Basalt Quarry is not located within Legally Protected Areas and Internationally Recognized Areas. Detailed evaluation will be given in the ESIA	The Başpınar Limestone Quarry is located within an Internationally Recognized Area, and detailed evaluation will be given in the ESIA	The TAG Highway-Aslanlı Tunnel-Nurdağı Junction is an existing road. No additional impacts on biodiversity are determined.
Critical Habitats	The Ceyhan Construction and Accommodation Site is an existing facility. No critical habitat is determined.	The Bahçe (Ayran) Concrete Plant is located within Internationally Recognized Areas. As the project is situated within this Internationally Recognized Areas, detailed evaluation will be given in the ESIA	The Tatarlı Basalt Quarry is not located within Legally Protected Areas and Internationally Recognized Areas. Detailed evaluation will be given in the ESIA.	The Başpınar Limestone Quarry is located within an Internationally Recognized Area. Detailed evaluation will be given in the ESIA.	The TAG Highway-Aslanlı Tunnel-Nurdağı Junction is an existing road. No critical habitat is determined.
Natural Habitats	The Ceyhan Construction and Accommodation Site is an existing facility, therefore impact on natural habitats is expected to be low.	The Bahçe (Ayran) Concrete Plant is an active facility, with forest ecosystem in the surrounding, which is a natural habitat. Detailed evaluation will be given in the ESIA.	The Tatarlı Basalt Quarry area, although a portion has been cleared, still contains natural habitats. Detailed evaluation will be given in the ESIA.	The Başpınar Limestone Quarry area, although a portion has been cleared, still contains natural habitats such as patches of forest and woodland-clearing interfaces. Detailed evaluation will be given in the ESIA.	The TAG Highway-Aslanlı Tunnel-Nurdağı Junction is an existing road, therefore impact on natural habitats is expected to be low.

Topic/Issue	Ceyhan Construction and Accommodation Site	Bahçe (Ayran) Concrete Plant	Tatarlı Basalt Quarry	Başpınar Limestone Quarry	TAG Highway – Aslanlı Tunnel – Nurdağı Junction Sub-Project Construction Area
Protected Areas*	The Ceyhan Construction and Accommodation Site is not located within Legally Protected Areas and Internationally Recognized Areas. Therefore, no impact is expected.	The Bahçe (Ayran) Concrete Plant is located in the Amanos Mountains Important Plant Area (IPA) and amanos Mountains Important Nature Area (INA), Internationally Recognized Areas. Due to the existing facility, the impact on the protected area is considered to be low.	The Tatarlı Basalt Quarry is not located within Legally Protected Areas and Internationally Recognized Areas. Therefore, no impact is expected.	The Başpınar Limestone Quarry is located in the Amanos Mountains Important Plant Area (IPA), an Internationally Recognized Area. Due to the existing road infrastructure, the impact on the protected area is considered to be low.	The TAG Highway-Aslanlı Tunnel-Nurdağı Junction passes through the Amanos Mountains Important Plant Area (IPA), an Internationally Recognized Area. Due to the existing road infrastructure, the impact on the protected area is considered to be low.
Cultural Heritage Management					
Official correspondences	No information is available	No information is available	No information is available	No information is available	According to the official letter, numbered E-71691431-165.99-4528960, from Ministry of Culture and Tourism-General Directorate of Cultural Heritage and Museums, Gaziantep Cultural Heritage Preservation Regional Board Directorate, there are no immovable cultural assets within the scope of Law No. 2863 on the property and its immediate surroundings. However, if any finds or remains that qualify as immovable cultural assets that need to be protected are encountered during the physical and construction interventions to be carried out in the area, the work must be stopped immediately and this must be reported to the nearest Museum Directorate, the headman in the village or the local administrative authorities in other places within 3 (three) days at the latest.

*Maps of the Legally Protected and Internationally Recognized Areas are given in Appendix-1.





Figure 78. Asphalt Plant in Ceyhan Construction and Accommodation Site



Figure 79. Bahçe (Ayrın) Concrete Plant



Figure 80. Tatarlı Basalt Quarry



Figure 81. Başınar Limestone Quarry



Figure 82. Package WWTP in Ceyhan Construction and Accommodation Site



Figure 83. Staged Sedimentation Ponds



Figure 84. Solar Panels in Ceyhan Construction and Accommodation Site



Figure 85. Recycling Bins in Ceyhan Construction and Accommodation Site



Figure 86. Waste Containers in Ceyhan Construction and Accommodation Site



Figure 87. Chemical Storage Area in Ceyhan Construction and Accommodation Site



Figure 88. Diesel Tank in Ceyhan Construction and Accommodation Site



Figure 89. Storage Tanks in Ceyhan Construction and Accommodation Site



Figure 90. Soil Contamination in the activity area of Başpınar Viaduct



Figure 91. Entrance of Ceyhan Construction and Accommodation Site



Figure 92. Information and warning signs in Ceyhan Construction and Accommodation Site



Figure 93. Information and warning signs in the activity area of Başpınar Viaduct



Figure 94. Information and Warning Signs in Ceyhan Construction and Accommodation Site



Figure 95. Working Area in the activity area of Başpınar Viaduct

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4.6 Malatya-Akçadağ-Gölbaşı Road & Erkenek Tunnel

4.6.1 General Information

- Construction activities have not started yet (at the tender stage).
- EIA Exemption opinion for the sub-project was obtained from Malatya Provincial Directorate of Environment, Urbanization and Climate Change with the letter dated 21.12.2023 and numbered 8286086.
- Three permanent material storage areas are planned to be used within the scope of the sub-project. Two of them are located near the Karanlıkdere Stream.
- “Erkenek Construction and Accommodation Site” will be utilized within the scope of sub-project works. This site has not been established yet and will be constructed after the tender stage.
- Reşadiye limestone quarry and Erkenek gravel-sand borrow site are planned to be utilized for the material supply.
- It is planned to utilize a concrete plant with a capacity of 200 m³/h, a mechanical plant with a capacity of 400-600 tons/h, an asphalt plant with a capacity of 240 tons/h and a crusher with a capacity of 300 tons/h. It should be noted that the stated capacities are predictive and subject to change based on the consultant company’s assessment after the tender stage.
- It was stated by 8th Regional Directorate of Highways that the damages on the road were temporarily repaired after the earthquake.



Figure 96. Damage on the Road - 1



Figure 97. Damage on the Road – 2



Figure 98. View from Erkenek Construction and Accommodation Site - 1



Figure 99. View from Erkenek Construction and Accommodation Site - 2

4.6.2 Assessment of the Social Findings

4.6.2.1 Population Change

There are no settlements around Erkenek Tunnel, but there are a few businesses within the impact area of the project road. Project works will be carried out at the exit of the tunnel. Erkenek construction site has not been installed yet. Project activities will not cause any population influx or demographic change on local communities.

4.6.2.2 Community Health and Safety

There are several businesses within the Project's impact area around Erkenek Tunnel. These businesses are resting facilities that sell food and beverages, and are areas where passengers stop for short periods of time and spend time.

During the construction works to be carried out here, accident risks due to heavy vehicle traffic may arise. In order to avoid this risk, it is important to place construction warning signs and reduce the speed limit.

Businesses in this area will need to be informed about the Project and health and safety meetings will be held.

4.6.2.3 Resettlement and Land Acquisition

No land acquisition is required within the scope of project activities. Erkenek construction site has not been mobilized and started to install yet. The empty treasury land will be used for

Erkenek construction site. Detailed documentation and data regarding land use should be provided and evaluated.

4.6.2.4 Loss of Livelihood

Potential economic displacement or restrictions on land use will not be occurred.

The surroundings of Erkenek Tunnel are businesses, recreation facilities selling food and beverages, and areas where passengers stop for short periods of time.

In order for these businesses not to lose customers during construction works and to continue their business safely, mitigation measures to prevent loss of livelihood should be planned in consultation with the businesses.

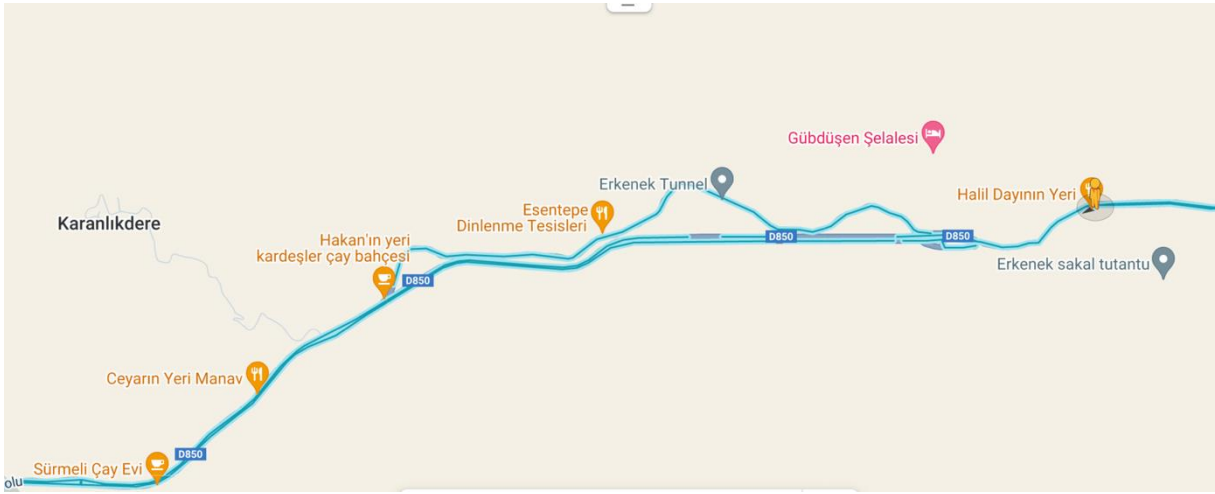


Figure 100. Map of the businesses around Erkenek Tunnel



Figure 101. Businesses around Erkenek Tunnel

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4.6.2.5 Infrastructure and Services

In the campsite installation, permissions and capacity determinations regarding the infrastructure used must be taken. An evaluation should be made with more detailed information regarding the health services to be provided for workers staying in this area.

4.6.2.6 Labour and Working Conditions

Work and working conditions must be planned and carried out in accordance with AIIB standards and national legislation.

In this context, management plans and mitigation measures should be implemented to monitor employee conditions, social compliance issues, include a code of conduct in contracts, and keep accommodation conditions at ILO standards.

4.6.3 Assessment of the Environment, OHS and Biodiversity-Related Findings

Malatya-Akçadağ-Gölbaşı Road & Erkenek Tunnel

Since the construction activities have not started yet, the assessment regarding environmental and OHS issues could not be conducted. Maps of the Legally Protected and Internationally Recognized Areas are given in Appendix-1.

- Biodiversity Consideration: The Malatya-Akçadağ-Gölbaşı Road & Erkenek Tunnel is an existing road. No direct impact is expected from the project; however, indirect pollution of water resources may occur. Necessary measures will be taken to prevent these effects.
- Biodiversity Impacts: The Malatya-Akçadağ-Gölbaşı Road & Erkenek Tunnel is an existing road. No additional impacts on biodiversity are determined.
- Critical Habitats: The Malatya-Akçadağ-Gölbaşı Road & Erkenek Tunnel is an existing road. No critical habitat is determined.
- Natural Habitats: The Malatya-Akçadağ-Gölbaşı Road & Erkenek Tunnel is an existing road, therefore impact on natural habitats is expected to be low.
- Protected Areas: The Malatya-Akçadağ-Gölbaşı Road & Erkenek Tunnel is not located within Legally Protected Areas and Internationally Recognized Areas. Therefore, no impact is expected.

Reşadiye Quarry

Since the material excavation activities have not started yet, the assessment regarding environmental and OHS issues could not be conducted.

- Biodiversity Consideration: The Reşadiye Quarry is not constructed and is still in natural habitat. Detailed evaluation will be given in the ESIA.
- Biodiversity Impacts: The Reşadiye Quarry is not located within Legally Protected Areas and Internationally Recognized Areas. Detailed evaluation will be given in the ESIA.
- Critical Habitats: The Reşadiye Quarry is not located within Legally Protected Areas and Internationally Recognized Areas. Detailed evaluation will be given in the ESIA.
- Natural Habitats: The Reşadiye Quarry area contains natural habitats. Detailed evaluation will be given in the ESIA.
- Protected Areas: The Reşadiye Quarry is not located within Legally Protected Areas and Internationally Recognized Areas. Therefore, no impact is expected.



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Erkenek Gravel-Sand Quarry

Since the material excavation activities have not started yet, the assessment regarding environmental and OHS issues could not be conducted.

- Biodiversity Consideration: The Erkenek Gravel-Sand Quarry is not constructed and is still in natural habitat. Detailed evaluation will be given in the ESIA.
- Biodiversity Impacts: The Erkenek Gravel-Sand Quarry is not located within Legally Protected Areas and Internationally Recognized Areas. Detailed evaluation will be given in the ESIA.
- Critical Habitats: The Erkenek Gravel-Sand Quarry is not located within Legally Protected Areas and Internationally Recognized Areas. Detailed evaluation will be given in the ESIA.
- Natural Habitats: The Erkenek Gravel-Sand Quarry area contains natural habitats. Detailed evaluation will be given in the ESIA.
- Protected Areas: The Erkenek Gravel-Sand Quarry is not located within Legally Protected Areas and Internationally Recognized Areas. Therefore, no impact is expected.

Erkenek Construction and Accommodation Site

Since the campsite construction activities have not started yet, the assessment regarding environmental and OHS issues could not be conducted.

- Biodiversity Consideration: Although Erkenek Construction and Accommodation Site is a partly cleared area, detailed evaluation will be given in the ESIA.
- Biodiversity Impacts: The Erkenek Construction and Accommodation Site is not located within Legally Protected Areas and Internationally Recognized Areas. Detailed evaluation will be given in the ESIA.
- Critical Habitats: The Erkenek Construction and Accommodation Site is not located within Legally Protected Areas and Internationally Recognized Areas. Detailed evaluation will be given in the ESIA.
- Natural Habitats: The Erkenek Construction and Accommodation Site area, although a portion has been cleared, still contains natural habitats. Detailed evaluation will be given in the ESIA.
- Protected Areas: The Erkenek Construction and Accommodation Site is not located within Legally Protected Areas and Internationally Recognized Areas. Therefore, no impact is expected.

Material Storage Areas (1&2&3)

- Material Storage Area-2 and Material Storage Area-3 are located near the Karanlıkdere stream.
- Biodiversity Consideration: Although Material Storage Areas are partly cleared, detailed evaluation will be given in the ESIA.
- Biodiversity Impacts: The Material Storage Areas are not located within Legally Protected Areas and Internationally Recognized Areas. Detailed evaluation will be given in the ESIA.
- Critical Habitats: The Material Storage Areas are not located within Legally Protected Areas and Internationally Recognized Areas. Detailed evaluation will be given in the ESIA.
- Natural Habitats: The Material Storage Areas contains natural habitats. Detailed evaluation will be given in the ESIA.
- Protected Areas: The Material Storage Areas are not located within Legally Protected Areas and Internationally Recognized Areas. Therefore, no impact is expected.



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4.7 Repair Works of Technological Bridges

4.7.1 General Information

Beylerderesi Bridge

- Construction activities have not started yet, Enkon İnşaat A.Ş. (ENKON) is the main Contractor company.
- The required materials are awaited for the commencement of construction works.
- There will be no accommodation on-site. Guest house of 8th Regional Directorate of Highways is planned to be used for accommodation.



Figure 102. View of The Beylerderesi Bridge



Figure 103. Damages on the Bridge

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Figure 104. Yeşilvadi Reservoir and Beylerderesi Stream under the Beylerderesi Bridge

Tohma Bridge

- Tohma Bridge is also known as Şehit Gaffari Güneş Bridge.
- Seismic bearings and expansion joints on the bridge will be replaced. The required materials are awaited for the commencement of construction works.
- There is a railway on the bridge for both freight and passenger transportation.
- Construction activities have not started yet, ENKON is the main Contractor company.
- Tohma Construction Site will be used within the scope of the sub-project.



Figure 105. View of the Tohma Bridge

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Ağın Bridge

- Ağın Bridge is also known as Şehit Mehmet Şevket Uzun Bridge.
- Construction works commenced in January 2024 and planned to be completed in May 2024.
- The company ENKON was appointed by KGM as the official contractor. "Freysaş" was appointed as a subcontractor by ENKON.
- It is planned to carry out damage detection and repair work for 32 inclined suspension wires.
- No accommodation on-site. Staff working within the scope of the project use teacher's lodge, rental houses and guesthouses for accommodation.



Figure 106. General View of Ağın Bridge -1



Figure 107. General View of Ağın Bridge -2



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4.7.2 Assessment of the Social Findings

4.7.2.1 Population Change

Project activities will not cause any population influx or demographic change on local communities, vulnerable groups or gender. However, accommodation areas will need to be isolated from local settlement areas, all needs of workers will be met from camp sites, and training defined within the scope of CHS will be provided.

4.7.2.2 Community Health and Safety

Tohma Bridge and Beylerderesi Viaduct are actively used. Construction area is far from residential areas. However, there is a container town located in the city park at the exit of the Beylerderesi Viaduct.

Considering the proximity of Tohma and Ađın camping areas to residential areas, it is important to provide the following training to workers and security personnel staying in the camping areas.

- SEA/SH
- Gender Based Violence and Harassment (GBVH)
- Workers' rights
- Project standards and human rights
- Community relations with local people
- Use of power (for security)
- CHS
- Social and cultural induction

4.7.2.3 Resettlement and Land Acquisition

There is no need for land acquisition for the Renovation of Technological Bridges Damaged in the Earthquake sub-project activities. In this context, the potential will not be a physical displacement. However, the following information was obtained within the scope of camp site and construction site installation:

Tohma Camp Site is installing on a land which includes a private 2-storey house structure belonging to the owner of the construction site parcel.





Figure 108. 2-storey house structure in the Tohma Camp Site Parcel

Since the land owner's previous house was destroyed in the earthquake, he had a house built on this empty parcel of his own after the earthquake and he still lives in this area. The landowner rented the land to the Project by consent in return for an agreement and was not subject to any loss of rights or forced physical resettlement.

4.7.2.4 Loss of Livelihood

Potential involuntary resettlement is not anticipated. However, the effect of affecting economic activities may occur. Situations in which this effect may occur are revealed by the following findings.

The land owner of the Tohma Construction Site continues his livestock farming activities on the land and its surroundings. Although there is no physical forced resettlement in this context, project impacts that may have a negative impact on livelihoods should be monitored, and compensation should be provided if necessary to prevent loss of livelihood by consulting with PAPs.

A private company has fishing activities under the Ađın Bridge as shown in the figure below.



Figure 109. Fishing Activity under the Ağın Bridge

Even though Project Works have a content that will not affect the fishing activity and fishing area, the PAPs carrying out the fishing and the business will be interviewed within the scope of the Project's Livelihood Restoration Plan (LRP) and ecosystem services impact assessment under the ESIA.

4.7.2.5 Pressure on Infrastructure and Services

Tohma Construction Site: Electrical infrastructure is available, but there is no generator for emergencies. Drinking water is provided from ready-bottled water, whereas mains water is utilized as utility water. Permissions and capacity determinations regarding the infrastructure used must be made. An evaluation should be made with more detailed information regarding the health services to be provided for workers staying in this area.

Any pressure on local infrastructure and services will not be occurred due to the Ağın Construction Site activities.

4.7.2.6 Labour and Working Conditions

Tohma Camp Site: As of the beginning of March, there are 5 employees at the construction site, which is under installation, and 3 workers accommodation are provided in this camping area. A cook was employed in the camp area to meet the food needs of the workers. The campus, located in front of Tohma Stream, is approximately 4 km away from the nearest settlements, Sürün Village and Durucasu. As of the first week of March, the administrative building has been completed and a cafeteria exists in the construction site.

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Ağın Construction Site: Reinforcement works on the Ağın Bridge continue. There is no accommodation at the construction site and 12-20 personnel work on bridge repair works.

The infrastructure is not ready yet, the septic system will be installed. Currently, the facilities at the nearby petrol station are being used. Approximately 10 workers use the temporary construction site established close to this area. Workers are accommodated in the highways' nursing home, 22 km away from the construction site, and are transported by shuttle service. There are no female employees. Workers have their meals from the outside providers. Temporary accommodation areas have electric radiators and air conditioning.

4.7.3 Assessment of the Environment, OHS and Biodiversity-Related Findings

Due diligence findings regarding the Repair Works of Technological Bridges sub-project and its associated facilities are given in Table 9.



Table 9. Due Diligence Findings for Repair Works of Technological Bridges and Related Associated Facilities

Topic/Issue	Beylerderesi Sub-project Area	Tohma Construction and Accommodation Site and Sub-project Area	Ağın Construction Site and Sub-project Area
Owner of the associated facility or work carried out	ENKON	ENKON	ENKON
Specifications and properties of facility or work	The work has not started yet.	The work has not started yet. The site is under construction. There are administrative offices for KGM and ENKON and accommodation areas currently available.	Office containers Material storage areas
EIA Opinion	As per the official letter from Malatya Provincial Directorate of EUCC, dated 21.12.2023 and numbered E-90215094-220.99-8285690, the subproject is exempt from the EIA.	As per the official letter from Malatya Provincial Directorate of EUCC, dated 15.12.2023 and numbered E-90215094-220.03-8235886, the subproject is out of scope in accordance with the national EIA Regulation.	As per the official letter from Elazığ Provincial Directorate of EUCC, dated 14.12.2023 and numbered E-14698725-220.03-8216290, maintenance, repair and renovation operations of the Ağın Bridge were evaluated as out of scope since they are not included in the EIA Regulation Lists.
Environmental Permit	N/A	N/A	N/A
Working hours and shifts	The work has not started yet.	The work has not started yet. The site is under construction.	08:00-16:30 with single shift (+overtime work)
Service procurement	The work has not started yet.	The work has not started yet. The site is under construction.	OHS Service
Water and Wastewater Management			
Water supply – for drinking purposes	The work has not started yet.	The drinking water needs of the personnel have been met from bottled water.	The drinking water needs of the personnel have been met from bottled water.
Water supply – for personnel usage	The work has not started yet.	Mains water has been used.	Utility water has been delivered to the site by tankers and it was stated that analyzes have been carried out.
Water supply – for process	The work has not started yet.	Mains water has been used.	Utility water has been delivered to the site by tankers and it was stated that analyzes have been carried out.
Wastewater management	The work has not started yet.	There is a septic tank belongs to the landowner near the construction site.	Wastewater infrastructure has not existed yet, a septic system will be installed.
Raw Material Supply	It will be procured through purchases from abroad.	It will be procured through purchases from abroad.	It will be procured through purchases from abroad.
Pollution Prevention & Waste Management			
Hazardous Wastes	The work has not started yet.	No information has been shared.	No agreement has been made yet regarding waste disposal facilities.
Non-Hazardous Wastes	The work has not started yet.	Domestic wastes have been collected by the municipality.	Domestic wastes have been collected by the Ağın Municipality (see Figure 110).
Temporary Waste Storage Area	The work has not started yet.	The work has not started yet. The site is under construction.	A temporary waste storage area in compliance with national legislation has not yet been constructed. The container and waste code are available for a specific waste (see Figure 111). A spill kit is available on site (see Figure 112).
Topsoil	N/A	N/A	N/A
Excavation wastes	N/A	N/A	N/A
Construction wastes	It is planned to separate construction materials according to their types and allocate them to the Machinery and Chemical Industry (MKE).	It is planned to separate construction materials according to their types and allocate them to the Machinery and Chemical Industry (MKE).	It is planned to separate construction materials according to their types and allocate them to the Machinery and Chemical Industry (MKE).



Topic/Issue	Beylerderesi Sub-project Area	Tohma Construction and Accommodation Site and Sub-project Area	Ağın Construction Site and Sub-project Area
Chemical Management	The work has not started yet.	The work has not started yet. The site is under construction.	There is a chemical storage area and material warehouse. Drip trays have been used (see Figure 113 and Figure 114).
Soil Contamination Risk	The work has not started yet.	During the field visit, no soil contamination was detected.	During the field visit, no soil contamination was detected.
<i>Air Quality and Noise Management</i>	The work has not started yet.	There is no use of generator, there is electrical infrastructure. No significant impact is expected in terms of environmental noise and adverse effects on air quality.	There is no use of generator, there is electrical infrastructure. No significant impact is expected in terms of environmental noise and adverse effects on air quality.
Community Health and Safety			
Fencing of the facility area Security cabin	The work has not started yet.	This construction and accommodation site is still under construction.	The construction site area has been partially fenced (see Figure 115), there is no security cabin available, and a guard is on duty at night.
Information and Warning/Safety Signs	The work has not started yet.	This construction and accommodation site is still under construction.	It is recommended to increase the number of warning signs and signs.
Occupational Health and Safety			
OHS Documents	The work has not started yet.	There is no Risk Analysis Report to be prepared for the accommodation area. There is no Risk Analysis Report to be prepared for the accommodation area.	Occupational Health and Safety Professional Contracts are available. The Risk Analysis Report was prepared by the contractor company ENKON on 22.02.2024. The Health and Safety Plan was prepared by the contractor company ENKON in February.2024. The Emergency Response Preparedness Plan was prepared by the contractor company ENKON on 22.02.2024. Within the scope of annual plans and reports, "Annual Training Plan, Annual Work Plan, and Annual Evaluation Report" have been prepared. OHS trainings have been provided and records have been maintained.
Emergency Drills	The work has not started yet.	The work has not started yet.	The Emergency Drill has not been conducted yet.
Safety of the construction/accommodation area	The work has not started yet.	Work has not started yet. There is no construction site; only accommodation site is available (see Figure 116) Ergonomics, thermal comfort, natural ventilation, and natural lighting have been prioritized in office and accommodation areas (see Figure 117). Wire insect screens are available to protect against flying insects.	The scaffold has been set up for the repair work on the Ağın Bridge (see Figure 118). Traffic is restricted under controlled conditions.
Procurement and Usage of PPE	The work has not started yet.	The work has not started yet.	All employees are provided with work shoes, work clothes, gloves, masks, goggles, and helmets. Additionally, the maintenance team has been provided with harness lanyard.
Occupational Accident	No occupational accidents have occurred at the Beylerderesi construction area.	No occupational accidents have occurred at the Tohma accommodation site and sub-project construction area	No occupational accidents have occurred at the Ağın construction and sub-project area.
Biodiversity Management			
Biodiversity Consideration	The Beylerderesi Bridge is an existing bridge. No direct impact is expected from the project; however, indirect pollution of water	The Tohma Bridge and Tohma Construction and Accommodation Site is an existing bridge and facility. No direct impact is expected from the project; however, indirect pollution of water resources may	The Ağın Bridge and Ağın Construction Site are already existing facilities. No direct impact is expected from the project; however, indirect pollution of water resources may occur due to work on river



Topic/Issue	Beylerderesi Sub-project Area	Tohma Construction and Accommodation Site and Sub-project Area	Ağın Construction Site and Sub-project Area
	resources may occur due to work on river crossings. Necessary measures will be taken to prevent these effects.	occur due to work on river crossings. Necessary measures will be taken to prevent these effects.	crossings. Necessary measures will be taken to prevent these effects.
Biodiversity Impacts	The Beylerderesi Bridge is an existing bridge. No additional impacts on biodiversity are determined.	The Tohma Bridge and Tohma Construction and Accommodation Site is an existing bridge and facility. No additional impacts on biodiversity are determined.	The Ağın Bridge and Ağın Construction and Accommodation Site is an existing bridge and facility. No additional impacts on biodiversity are determined.
Critical Habitats	The Beylerderesi Bridge is an existing bridge. No critical habitat is determined.	The Tohma Bridge and Tohma Construction and Accommodation Site is an existing bridge and facility. No critical habitat is determined.	The Ağın Bridge and Ağın Construction and Accommodation Site is an existing bridge and facility. No critical habitat is determined.
Natural Habitats	The Beylerderesi Bridge is an existing bridge, therefore impact on natural habitats is expected to be low.	The Tohma Bridge and Tohma Construction and Accommodation Site is an existing bridge and facility, therefore impact on natural habitats is expected to be low.	The Ağın Bridge and Ağın Construction and Accommodation Site is an existing bridge and facility, therefore impact on natural habitats is expected to be low.
Protected Areas*	The Beylerderesi Bridge is not located within Legally Protected Areas and Internationally Recognized Areas. Therefore, no impact is expected.	The Tohma Bridge and Tohma Construction and Accommodation Site are not located within Legally Protected Areas and Internationally Recognized Areas. Therefore, no impact is expected.	The Ağın Bridge and Ağın Construction and Accommodation Site are not located within Legally Protected Areas and Internationally Recognized Areas. Therefore, no impact is expected.
Cultural Heritage Management			
Official correspondence	As per the official letter from Malatya Provincial Directorate of Culture and Tourism, dated 28.12.2023 and numbered E-28262782-166.99-4592830, since no movable or immovable cultural property falling within the scope of Law No. 2863 was found during the surface examinations carried out by the Museum Directorate experts, there is no objection to carrying out sub-project operations. However, if any finds or remains that qualify as immovable cultural assets that need to be protected are encountered during the physical and construction interventions to be carried out in the area, the work must be stopped immediately and this must be reported to the nearest Museum Directorate, the headman in the village or the local administrative authorities in other places within 3 (three) days at the latest.	As per the official letter from Malatya Provincial Directorate of Culture and Tourism, dated 28.12.2023 and numbered E-28262782-166.99-4592777, in the examinations carried out by the Regional Board Directorate's experts, it was understood that there are no immovable cultural assets within the scope of Law No. 2863 on the property and its immediate surroundings. For this reason, there is no objection to carrying out the subproject.	As per the official letter from Elazığ Provincial Directorate of Culture and Tourism, numbered E-11277799-165.99-4575053, as a result of the examination, it was determined that the Ağın Bridge does not display any cultural property characteristics within the scope of Law No. 2863. However, if any finds or remains that qualify as immovable cultural assets that need to be protected are encountered during the physical and construction interventions to be carried out in the area, the work must be stopped immediately and this must be reported to the nearest Museum Directorate, the mukhtar in the village or the local administrative authorities in other places within 3 (three) days at the latest.

*Maps of the Legally Protected and Internationally Recognized Areas are given in Appendix-1.





Figure 110. Domestic Waste Containers in the Ağın Construction Site



Figure 111. Hazardous Waste Containers in the Ağın Construction Site



Figure 112. Spill Kit in the Ağın Construction Site



Figure 113. Chemical Storage Area in the Ağın Construction Site



Figure 114. Material Warehouse in the Ağın Construction Site



Figure 115. Surrounding of the Ağın Construction Site



Figure 116. Tohma Accommodation Site



Figure 117. Office Room in Tohma Accommodation Site



Figure 118. The scaffold set up at the Ağın Bridge

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5 ENVIRONMENTAL AND SOCIAL ACTION PLAN

The fundamental aim of Environmental and Social Action Plan (ESAP) is to identify the proposed actions for ensuring the implementation of actions related to environmental, social, occupational health and safety, labor, and working conditions in accordance with national legislation and international standards.

The ESAP prepared specifically for the subprojects is given in Table 10.



Table 10. Environmental and Social Action Plan for the Subprojects

ESAP No.	Action	Environmental and Social Risks (Liabilities and Benefits)	Requirements	Resources, Investment Needs, Responsibility	Timetable	Target and Evaluation Criteria
ESS 1: Environmental and Social Assessment and Management						
General						
1.1	Completion of EIA decisions for activities within the scope of the EIA Regulation and submission to the Bank	Managing the environmental and social risks of the project in an effective way	National Legislation	The contractor under the supervision of the Borrower (KGM)	Within 1 month after Signing the Loan Agreement	Obtaining all EIA opinions and submitting them to the Bank
1.2	Obtaining final approval from relevant institutions (Cultural Heritage Preservation Regional Board Directorate, Ministry of Energy and Natural Resources, BOTAŞ, Ministry of Energy and Natural Resources, Nature Conservation and Wetlands Branch Directorate, Provincial Directorates of Culture and Tourism) based on previous correspondence conducted prior to activities to be carried out in the protected areas and existing energy infrastructure areas	Managing the environmental and social risks of the project in an effective way	National Legislation	The contractor under the supervision of the Borrower (KGM)	Within 1 month after Signing the Loan Agreement	Obtaining all final approval opinions of institutions and submitting them to the Bank
1.3	Completion of the environmental permit process for each asphalt plant, concrete plant, mechanical plant/crusher and quarry/borrow site and submitting them to the Bank	Managing the environmental and social risks of the project in an effective way	National Legislation	The contractor under the supervision of the Borrower (KGM)	Within 1 month after Signing the Loan Agreement	Obtaining all permissions and submitting them to the Bank
1.4	Obtaining blasting permits for the quarries/borrow sites that have been/will be blasted and submitting them to the Bank	Managing the environmental and social risks of the project in an effective way	National Legislation	The contractor under the supervision of the Borrower (KGM)	Within 1 month after Signing the Loan Agreement	Obtaining all permissions and submitting them to the Bank
1.5	Preparation of the Environmental and Social Impact Assessment (ESIA) Report including Environmental and Social Management Plan (ESMP)	Managing the environmental and social risks of the project in an effective way	AIIB ESS 1	Borrower / Environmental Consultant Firm to be approved by the Bank	Within 1 month after Signing the Loan Agreement	Preparation of the ESIA report / Implementation during construction and operation period
1.6	Preparation of E&S Management Plans (including Pollution Prevention and Waste Management Plan, Construction Site Management, Hazardous Substance Management Plan, Traffic Management Plan, Occupational Health and Safety Management Plan, Emergency Preparedness and Response Plan, Community Health and Safety Management Plan, Labor Management Plan, Stakeholder Engagement Plan including Grievance Mechanism, Biodiversity Management Plan, Resettlement Plan, Gender Action Plan, Cultural Heritage Management Plan or Chance Find Procedure)	Managing the environmental, social, OHS and community related risks of the project in an effective way	AIIB ESS 1	Borrower / Environmental Consultant Firm to be approved by the Bank	Within 1 month after Signing the Loan Agreement	Preparation of E&S management plans / Implementation during Construction period and updating if necessary
1.7	Ensuring that all personnel receive EHS training	Managing the environmental, social, OHS and community related risks of the project in an effective way	National Legislation AIIB ESS 1	The contractor under the supervision of the Borrower (KGM)	Implementation during the construction and operation periods	Training records
1.8	Conducting periodic E&S Monitoring studies to check the compliance of project activities with national legislation and AIIB ESSs	Managing the environmental and social risks of the project in an effective way	National Legislation AIIB ESS 1	Borrower / Environmental Consultant Firm to be approved by the Bank	Quarterly Monitoring during the construction period	Submission of Environmental & Social Monitoring Reports to the Bank
1.9	Incorporating the contract terms of compliance of the subcontractor activities with the legislation and the project company environmental and social management plans	Managing the environmental and social risks of the project in an effective way	National Legislation AIIB ESS 1	Borrower	Before the construction period / during the construction and operation period	Including the practices in subcontractor contracts

ESAP No.	Action	Environmental and Social Risks (Liabilities and Benefits)	Requirements	Resources, Investment Needs, Responsibility	Timetable	Target and Evaluation Criteria
1.10	Identification of responsibilities for the effective management of environmental, social and OHS issues	Effective management of the environmental and social risks of the project	National Legislation AIIB ESS 1	Borrower	Within days of signing the loan agreement	Internal Audits
Chemical Management						
1.11	BEKRA Notification for areas where chemical storage is carried out via the MoEUCC's online platform	Managing the environmental and social risks of the project in an effective way	National Legislation	The contractor under the supervision of the Borrower (KGM)	In case of the chemical storage or usage	Documentation
1.12	Taking necessary precautions during the storage of hazardous materials for each activity site	Minimizing the risks that threaten effective traffic management and community health and safety	National Legislation AIIB ESS 1	The contractor under the supervision of the Borrower (KGM)	Implementation during the construction and operation periods	Internal Audits and visual observations
Water and Wastewater Management						
1.13	In case of groundwater use, obtaining a usage license for each well and submitting it to the Bank	Managing the environmental and social risks of the project in an effective way	National Legislation	The contractor under the supervision of the Borrower (KGM)	Before using the groundwater well	Obtaining a usage license
1.14	Making necessary analysis in case of drinking water supply from wells	Protection of employee health	National Legislation	The contractor under the supervision of the Borrower (KGM)	Quarterly analysis	Compliance of the analysis results with the criteria of Regulation on Water Intended for Human Consumption
1.15	Preventing the discharge of wastewater into the receiving environment without treatment, storing it in leak-proof septic tanks and ensuring its disposal in licensed facilities (sharing the identification document and analysis results with the Bank if a package WWTP facility is available)	Minimizing the risks that threaten receiving environment	National Legislation AIIB ESS 1	The contractor under the supervision of the Borrower (KGM)	During the construction & operation periods	Wastewater disposal records Analysis results of the treated water (in case package WWTP exists)
Waste Management						
1.16	Establishment of temporary waste storage area for each waste generated area	Managing the environmental, social, OHS and community related risks of the project in an effective way	National Legislation AIIB ESS 1	The contractor under the supervision of the Borrower (KGM)	Before starting activities	Compliance with project standards/requirements
1.17	Ensuring that hazardous wastes are disposed of by licensed disposal companies / Keeping waste records and making waste declarations and shipping notifications via online platform of MoEUCC (EÇBS/Waste Management Application)	Waste reduction, resource conservation and effective waste management Ensuring proper hazardous waste management to prevent soil, surface water and groundwater pollution	National Legislation AIIB ESS 1	The contractor under the supervision of the Borrower (KGM)	Implementation during the construction and operation periods	Waste records Waste declaration and shipping notifications Related contracts
Air Quality and Noise Management						
1.18	Preparation of air emission measurement reports for facilities subject to the air emission permit	Detecting the level of air quality	Regulation on Control of Industrial Air Pollution	The contractor under the supervision of the Borrower (KGM)	Implementation during the construction and operation periods	Preparation of air emission measurement reports
1.19	In case of complaints, noise and air quality measurements are made at the closest sensitive receptors	Detecting the level of noise	Regulation on assessment and management of environmental noise	The contractor under the supervision of the Borrower (KGM)	Implementation during the construction and operation periods	Complaint record, noise and air measurement result Noise and air quality measurement result

ESAP No.	Action	Environmental and Social Risks (Liabilities and Benefits)	Requirements	Resources, Investment Needs, Responsibility	Timetable	Target and Evaluation Criteria
1.20	Periodic maintenance and repair work to minimize the noise caused by the vehicles and equipment used in the construction and operation phase.	Minimizing environmental noise	Regulation on assessment and management of environmental noise	The contractor under the supervision of the Borrower (KGM)	Implementation during the construction and operation periods	Maintenance-repair records
OHS Management						
1.21	Recording Occupational Accidents / Preparing OHS Performance Reports / Reporting All Kinds of OHS sourced Occupational Accident Statistics Together with Root Cause Analysis	Managing risks arising from OHS	National Legislation AIIB ESS 1	Borrower	Quarterly throughout the loan term	Reporting OHS Performance Report and Occupational Accident Statistics to the Bank throughout the Loan Term
1.22	In addition to OHS training, the following trainings will be included in the basic annual training plan and provided to all employees. All employees will have received this training before starting work. <ul style="list-style-type: none"> - Workers rights - Social Gender-Based Discrimination, Violence and Sexual Harassment - grievance mechanism - Code of Conduct - Social and Cultural induction - Community health and safety measures - Vulnerable Groups in the Project Aol - HR policy requirements according to the AIIB 	An effective labour management	National Legislation AIIB ESS 1	Borrower	Before workers start working Before construction	Training topics are included in the annual Training Plan All workers are provided the target trainings
Community Health and Safety						
1.23	Placing safety and traffic signs visibly on the access roads near and around the project site.	Minimizing the risks that threaten effective traffic management and community health and safety	National Legislation AIIB ESS 1	Borrower	Implementation during the construction and operation periods	Visual observations
1.24	CHS - Traffic Risks Management Prepare a driver training plan to ensure that all drivers (including the sub-contractors drivers) are provided with the traffic and road safety trainings Prepare driver training, driver code of conduct and the disciplinary procedures Evaluate training plan's performance and effectiveness and make the required improvements when necessary Provide regular safe driving training courses to all drivers	An effective traffic management	AIIB ESS 1	Borrower	Before and during construction	Training topics are included in the annual Training Plan All drivers are provided the target trainings
1.25	CHS - Traffic Risks Management Provide information to the local settlements and stakeholders on road safety, traffic measures and Project health and safety measures Provide health an safety informations related to the Project CHS risks to children, elderly, women, non-Turkish speakers, disabled people, illiterate PAPs living in the Project Aol including pedestrian safety.	An effective traffic management and stakeholder engagement	AIIB ESS 1	Borrower	Before and during construction	Information meeting topics are included in the SEP All targeted groups are provided the related information on traffic, health and safety Consultation and information meetings, participants are recorded

ESAP No.	Action	Environmental and Social Risks (Liabilities and Benefits)	Requirements	Resources, Investment Needs, Responsibility	Timetable	Target and Evaluation Criteria
Biodiversity Management						
1.26	Personnel vehicles, construction machines and other vehicles should avoid using vehicles outside the designated routes as much as possible, and all vehicles should not interfere with the natural habitat outside the project area.	Ensuring the protection of biodiversity	National Legislation AIIB ESS 1	The contractor under the supervision of the Borrower (KGM)	Implementation during the construction and operation periods	Internal Audits
1.27	Accidental Damage to Habitats Although these are mainly existing roads and facilities, negative impacts on the surrounding area can occur, e.g. caused by accidental discharges into the canals/rivers and habitats. Working practices, training of staff, and incident response plans need to consider this.	Risk of non-compliance and fines	AIIB ESS 1	KGM Project Manager and KGM Environmental Manager	From start of site works up to and inclusive of operation of KGM	No accidental discharges into the canals/rivers and habitats
1.28	Ensure that the necessary measures are implemented to mitigate and manage potential impacts to habitats including terrestrial species.	Impact mitigation and management	AIIB ESS 1	Internal resources and contractors	Prior to and during construction works	Impacts to habitats and species appropriately mitigated and managed.
Culture Heritage Management						
1.29	In case of a possible chance finding, notification of the related Museum Directorate	Managing the cultural heritage related risks of the project in an effective way	National Legislation AIIB ESS 1	The contractor under the supervision of the Borrower (KGM)	Implementation during the construction period	Official correspondence
1.30	Providing information on socio-cultural heritages (handicraft, weaving, agriculture and animal husbandry, etc.) defined or not defined in the National Legislation and not harming these elements	Protection of cultural heritage	National Legislation AIIB ESS 1	The contractor under the supervision of the Borrower (KGM)	Implementation during the construction and operation periods	Including the practices in the ESIA
Management of Labor and Social Issues						
1.31	Preparing the stakeholder engagement plan including Grievance Mechanism Procedure according to the AIIB standards.	Positive communication with the surrounding communities, efficient stakeholder engagement and managing the environmental and social risks of the project in an effective way.	National Legislation AIIB ESS 1	Borrower / Consultant Firm	Within 1 month after Signing the Loan Agreement	Submission of the plan to AIIB in appropriate standards
1.32	Appoint a CLO to implement and manage the SEP.	Positive communication with the surrounding communities, efficient stakeholder engagement	AIIB ESS 1	Borrower	Within 1 month after Signing the Loan Agreement	Hiring an appropriate CLO for the Project
1.33	Establishment of the External Grievance Mechanism (GM) specific to External Stakeholders of the Project Grievance mechanism and complaints line to be developed in a way to track GBVH issues. GBVH focal points shall be assigned and trained to manage GBVH related complaints: The necessary application forms, tracking forms and registration and tracking log for the grievance mechanism will be developed. This log will contain all the information defined in the complaint mechanism procedure.	Positive communication with the surrounding communities, efficient stakeholder engagement and managing the environmental and social risks of the project in an effective way. Prevention of gender-based violence and harassment	National Legislation AIIB ESS 1	Borrower / Consultant Firm	Within 1 month after Signing the Loan Agreement	Submission of the plan to AIIB in appropriate standards

ESAP No.	Action	Environmental and Social Risks (Liabilities and Benefits)	Requirements	Resources, Investment Needs, Responsibility	Timetable	Target and Evaluation Criteria
	All external complaints will be recorded in this log and managed in accordance with the procedure, and the entire complaint management process will be recorded and closed.					
1.34	Disclose SEP & GM on website and in the local settlements Holding a SEP & GM introduction meeting Update the SEP & GM according to the stakeholder feedback	Positive communication with the surrounding communities, efficient stakeholder engagement and managing the environmental and social risks of the project in an effective way.	National Legislation AIIB ESS 1	Borrower / Consultant Firm	Within 3 months after Signing the Loan Agreement	SEP & GM of the Project ESIA published on the Project website and distributed to the local communities SEP introduction meeting to the Stakeholders of the Project Update and disclose the final SEP & GM according to the stakeholder feedback
1.35	Annually review and update the SEP & GM	Sustaining the positive communication with the surrounding communities, efficient stakeholder engagement and managing the environmental and social risks of the project in an effective way.	National Legislation AIIB ESS 1 ESS 2: Land Acquisition and Involuntary Resettlement	Borrower	Annually	Disclosure of the reviewed and updated SEP & GM in web site annually
1.36	Ensuring the implementation of External Grievance Mechanisms	An effective grievance mechanism	AIIB ESS 1	Borrower	Monthly & Quarterly	Monitoring and reporting the GM records to AIIB monthly and quarterly
1.37	Security Prepare a security management procedure in line with AIIB ES1, including but not limited to the following tools: security management policy, security guard's code of conduct, training plans and program, community relations, tracking system.	An effective labour management	National Legislation AIIB ESS 1	Borrower	Before workers start working Before construction	Submission of the plan to AIIB in appropriate standards Training topics are included in the annual Training Plan All Security are provided the target trainings
1.38	Ensure all workers (both for sub-contractors) are informed and have access to the contracts and Code of Conduct	An effective labour management	National Legislation AIIB ESS 1	Borrower	Before workers start working	Submission of the draft of the contracts and CoC of the workers (both for sub-contractors)
1.39	Establishment of the Workers Grievance Mechanism (GM) including GBVH issues. The necessary application forms, tracking forms and registration and tracking log for the grievance mechanism will be developed. This log will contain all the information defined in the complaint mechanism procedure. All workers complaints will be recorded in this log and managed in accordance with the procedure, and the entire complaint management process will be recorded and closed.	An effective workers grievance mechanism	National Legislation AIIB ESS 1	Borrower	Before and during construction	Submission of the Workers GM to AIIB in appropriate standards, including GBVH issues, application forms, tracking forms and registration and tracking log.

ESAP No.	Action	Environmental and Social Risks (Liabilities and Benefits)	Requirements	Resources, Investment Needs, Responsibility	Timetable	Target and Evaluation Criteria
1.40	<p>Ensuring the implementation of Worker's Grievance Mechanisms</p> <p>All developed forms are located in the common areas with complaint boxes</p> <p>The grievance mechanism will be disclosed and explained in detail to all workers.</p> <p>The person responsible for the workers Grievance mechanism will be appointed</p>	An effective workers grievance mechanism	AIIB ESS 1	Borrower	Monthly & Quarterly	Monitoring and reporting the GM records to AIIB monthly and quarterly
ESS 2: Involuntary Resettlement						
2.1	Preparation of the RAP including LRP according to the AIIB standards	Avoid or minimize physical displacement and mitigate adverse social and economic impacts from construction activities	National Legislation AIIB ESS 2	Borrower	Prior to construction and during construction	Submission of the plan to AIIB in appropriate standards
2.2	Disclosure and update the RAP including LRP	Avoid or minimize physical displacement and mitigate adverse social and economic impacts from construction activities	National Legislation AIIB ESS 2	Borrower	Prior to construction and during construction	Disclosure of the updated RAP including LRP
2.3	Implementing the LRP	Avoid or minimize physical displacement and mitigate adverse social and economic impacts from construction activities	AIIB ESS 2	Borrower	During construction	Implementation the Plan according to the schedule Monitoring and reporting the implementation process monthly and quarterly to the AIIB

