GREEN AND FUTURE CITIES (GFC) PROJECT

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

KARAALI WASTEWATER TREATMENT PLANT CONSTRUCTION PROJECT

of KONYA WATER AND SEWERAGE ADMINISTRATION

March 2026

Document History

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This Environmental and Social Management Plan has been prepared by POSEİDON Environmental Social Consulting Engineering Trade Ltd. Co. on behalf of KOSKİ within the scope of Green and Future Cities (GFC) Project supported by the World Bank (WB) with İLBANK as the financial intermediary

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABBREVIATIONS

AoI	Area of Influence
AF	Associated Facility
DG	Directorate General
E&S	Environmental and Social
EIA	Environmental Impact Assessment
EHS	Environmental Health and Safety
EHSG	Environmental, Health and Safety Guidelines
ERP	Emergency Response Plan
ERT	Emergency Response Teams
ESA	Environmental and Social Assessment
ESAP	Environmental and Social Action Plan
ESF	Environmental and Social Framework
ESMP	Environmental and Social Management Plan
ESMS	Environmental and Social Management System
ESP	Environmental and Social Policy
ESS	Environmental and Social Standards
ETL	Energy Transmission Line
EU	European Union
GFC	Green And Future Cities Project
GFI	Ground Fault Interrupter
GHG	Greenhouse Gas
GIIP	Good International Industry Practice
GM	Grievance Mechanism
GMP	Grievance Mechanism Procedure
GMCP	GM Contact Person
GN	Guidance Notes
HS	Health and Safety
IFC	International Finance Corporation
IFIs	International Financial Institutions
İLBANK	İller Bankası A.Ş.
KOSKİ	Konya General Directorate of Water and Sewerage Administration
KPI	Key Performance Indicator
LEL	Lower Explosive Limit
MoEUCC	Ministry of Environment, Urbanization and Climate Change
MSDS	Materials Safety Data Sheets
NO2	Nitrogen dioxide
OG	Official Gazette
OHS	Occupational Health and Safety
OHSMP	Occupational Health and Safety Management Plan
PAP	Project Affected People
PIU	Project Implementation Unit
PM	Particulate Matter
POSEİDON	POSEİDON Environmental Social Consulting Engineering Trade Ltd. Co.
PPE	Personal Protective Equipment
Project Company	Konya General Directorate of Water and Sewerage Administration (KOSKİ)
PS	Performance Standard
QAM	Quality Assurance Manager
RAQAM	Regulation on Air Quality Assessment and Management
RCIAP	Regulation on Control of Industrial Air Pollution
RD	Regional Directorate
RE	Renewable Energy
RoCIAP	Regulation on Control of Industrial Air Pollution
SCBA	Self-Contained Breathing Apparatus
SDS	Safety Data Sheets

SEP	Stakeholder Engagement Plan
SO2	Sulfur dioxide
SOP	Standard Operating Procedures
SRS	Social Responsibility Staff
Subproject	Karaali Wastewater Treatment Plant Construction Project of KOSKI
The Project	Karaali Wastewater Treatment Plant Construction Project
TMP	Traffic Management Plan
TOC	Total Organic Compounds
VOC	Volatile Organic Compounds
WB	World Bank
WBG	World Bank Group
WHO	World Health Organization
WPCR	Water Pollution Control Regulation

GLOSSARY OF TERMS

Associated facilities	Facilities or activities that are not funded as part of the Subproject and are: (a) directly and significantly related to the project; (b) carried out, or planned to be carried out, contemporaneously with the project; and (c) necessary for the project to be viable and would not have been constructed, expanded or conducted if the project did not exist. For facilities or activities to be Associated Facilities, they must meet all three criteria.
Contractor	A person or organization providing services to an employer at the client worksite in accordance with agreed specifications, terms and conditions.
Excavated material	Materials/soils that are generated as a result of excavation and other similar activities carried out prior to construction
Legally protected area	Designated terrestrial, aquatic or marine ecosystems managed under the related legislation to protect and sustain the biodiversity features, natural and associated cultural resources. Legally protected areas of Türkiye include a diversity of natural ecosystems and associated features ranging from coastal zones to mountains, deltas, forests, plains, steppe, lakes, river systems, deep valleys, canyons, and glaciers.
Material borrow site	Sites, where loose material containing gravel, sand, silt, and clay, which is formed by the natural and geological processes of rock fracturing, fragmentation, alteration, transportation, and/or in-situ sedimentation, and which has the characteristics of slope debris, are extracted to be used as fill material.
Off-site accommodation	Accommodation of workers at hotels, rented housing, etc. available in the vicinity of Subproject area.
On-site accommodation	Accommodation of workers at temporary exploration camps, construction camps, dormitories, etc. established for the Subproject on site.
Risk	A combination of the likelihood of an occurrence of a hazardous event and the severity of injury or damage to the health of people caused by this event.
Topsoil	Part of soil that provides organic and inorganic materials, air and water required for vegetative growth, and is required to be stored separate from the subsoil.

EXECUTIVE SUMMARY

The Karaali Wastewater Treatment Plant Construction Project is implemented by the Konya Water and Sewerage Administration within the scope of the Green and Future Cities Project, financed by the World Bank with İller Bankası A.Ş. acting as the Financial Intermediary. The Subproject is located in Karaali Neighborhood of Beyşehir District, Konya Province, and aims to protect the water quality of Lake Beyşehir by treating domestic wastewater generated within the service area and reducing public health and environmental risks.

The Subproject involves the construction and operation of an advanced biological wastewater treatment plant with an additional final disinfection unit. The WWTP is designed with a daily treatment capacity of 400 m³ for the design year 2050. The treatment process includes screening, grit removal, biological nutrient removal, secondary sedimentation, disinfection, and sludge handling units. Treated effluent will be discharged to the Çay Stream in accordance with national discharge standards and relevant international guidelines, taking into account the sensitivity of the Beyşehir Lake Basin. Approximately 2.1 tons/day of sludge generated from treatment processes will be transported to the Beyşehir WWTP, where it undergoes thickening; the resulting sludge is temporarily stored and then reused in agriculture as compost, subject to compliance with national regulations and quality standards. The electric transmission line will be financed within the scope of the subproject and is therefore not identified as an associated facility. However, the potable water supply connection will be constructed outside the scope of the subproject financing and is therefore identified as an associated facility. The Subproject has been classified as Moderate Risk in accordance with the İLBANK Environmental and Social Management System (ESMS) by İLBANK. Accordingly, this Environmental and Social Management Plan has been prepared to identify and manage potential environmental and social risks and impacts during the construction and operation phases.

A land acquisition assessment has been conducted in accordance with ESS5 through site visits and review of the relevant title deed records (see Annex C). The Karaali WWTP site is located on Block 257, Parcel No. 1, which is registered as Treasury land and officially allocated to KOSKİ for the construction of the wastewater treatment plant. The total surface area of the Subproject is 4,318.69 m² and it covers the entire parcel. Based on the land registry review and field verification, the Subproject footprint is entirely located within this publicly owned parcel, and no permanent or temporary private land acquisition, physical displacement, or economic displacement is required for the WWTP site. There are no trees or plants on the lands in question. No informal land users were identified during the E&S documents preparation process, and this was confirmed through field verification and consultations with the Mukhtar of Karaali Neighbourhood and a household engaged in livestock breeding during the field visits.

The existing 300 mm diameter reinforced concrete collector line (approximately 1500 m in length) is already in place and operates under gravity flow conditions; therefore, no additional land acquisition is required for the collector line. The discharge line, approximately 60 meters in length, has been designed to convey treated effluent to the Çay Stream through publicly owned land and/or within the project parcel boundaries. Accordingly, no privately owned land will be affected, and no land acquisition or restriction on land use is anticipated for the discharge line.

The Energy Transmission Line (ETL) required to supply electricity to the Karaali WWTP is planned to be approximately 1.6 km in length, based on the preliminary information provided by KOSKİ. The tentative alignment has been shared in KML format; however, it remains subject to final technical confirmation. At this stage, the ETL is expected to follow, to the extent feasible, existing road corridors and publicly accessible areas in order to minimize potential land-related impacts. Based on the preliminary routing information, no significant land acquisition or physical displacement is anticipated. Should the final alignment differ from the preliminary route, the environmental and social assessment will be updated accordingly.

Permitting processes under national legislation have been addressed within the scope of the Subproject preparation. Relevant environmental permits and approvals, including the EIA decision and other applicable land use and institutional permits, are obtained or are in progress in line with Turkish legislation. The Subproject has been designed to comply with national regulatory requirements as well as World Bank Environmental and Social Standards and World Bank Group Environmental, Health, and Safety Guidelines.

Construction activities are planned to be implemented over a period of approximately 12 months following the completion of permitting and mobilization processes. Operation activities will commence after completion of construction and commissioning of the facility and will be carried out by KOSKİ in compliance with the Operation ESMP Matrix and national regulatory requirements.

Key environmental risks during the construction phase include temporary and localized impacts related to air quality, noise, traffic and road safety, soil disturbance, waste generation, and occupational health and safety. These impacts are expected to be short-term and manageable through the implementation of good international industry practices and the mitigation measures defined in the Construction ESMP Matrix. During the operation phase, potential risks are mainly associated with sludge management, odor, chemical handling, wastewater discharge quality, and worker health and safety. These risks are addressed through operational controls, monitoring activities, and institutional arrangements defined in the Operation ESMP Matrix.

The ESMP establishes mitigation and monitoring measures for both construction and operation phases, defines the roles and responsibilities of KOSKİ, contractors, and supervision consultants, and sets out monitoring, reporting, and corrective action mechanisms. A grievance mechanism is in place to receive and address concerns from workers and local communities throughout the Project lifecycle.

Overall, the Karaali WWTP Subproject is expected to deliver significant environmental and social benefits by improving wastewater management and protecting sensitive water resources within the Beyşehir Lake Basin. With the effective implementation of the ESMP, identified risks can be reduced to acceptable levels, and the Subproject can be implemented in compliance with applicable national legislation and World Bank requirements.

1. INTRODUCTION

1.1. Background

Türkiye has ambitious climate goals to reach net zero emissions by 2053. Türkiye ratified the Paris Agreement in October 2021. Cities play a major role in Türkiye's development and will be critical for achieving stronger, more sustainable growth driven by productivity improvements, and green transition for meeting national mitigation and resilience goals. Türkiye's cities are key to ensuring the resilience of people, productive activity, and public finances under mounting climate risks. Türkiye's people and assets are increasingly concentrated in cities, with above-average exposure to climate risks exacerbated by inadequate infrastructure and services. Rapid urban growth paired with insufficient consideration of climate risks in spatial planning, investment prioritization, and construction have resulted in urban populations and assets that are increasingly concentrated in areas exposed to climate hazards, with inadequate provisions for resilience, and rising associated damage estimates.

The Green and Future Cities Project (GFC), supported by the World Bank and implemented in Türkiye through İller Bankası A.Ş (İLBANK). İLBANK, is a strategic initiative aimed at fostering climate-resilient and sustainable urban development. As urbanization accelerates, cities face increasing challenges related to greenhouse gas emissions, environmental degradation, and vulnerability to climate-related risks. GFC seeks to address these challenges by providing municipalities with the financial, technical, and institutional support needed to implement green infrastructure and low-carbon solutions. Konya, one of Türkiye's largest and fastest-growing cities, has been selected under GFC due to its rapid urbanization, high energy consumption, and significant exposure to climate-related challenges, including water scarcity and heat stress. By targeting Konya, the project aims to demonstrate how comprehensive climate-resilient urban planning and sustainable infrastructure investments can be effectively implemented in a major urban center.

GFC will be financed by World Bank (WB) to support participating municipalities and utilities in Türkiye to plan for and invest in climate resilience and greenhouse gas (GHG) reductions. İLBANK will be acting as the Financial Intermediary (FI).

İLBANK has established an Environmental and Social Management System (ESMS) effective on 24th of Dec 2023. The ESMS is aimed at ensuring systematic identification, assessment, management, monitoring, and reporting of the environmental and social (E&S) risks and impacts of the projects and subprojects financed by the International Finance Institutions (IFIs). This process should be implemented on an ongoing basis throughout their loan duration in line with the requirements of the national legislation, international agreements and conventions ratified by Türkiye and E&S standards of lending IFIs (World Bank for the GFC). As a critical element of the ESMS, İLBANK has adopted and published an E&S Policy applicable to all İLBANK projects and subprojects financed through IFIs.

Within the scope of the İLBANK's ESMS and World Bank Environmental and Social Framework (ESF), projects are classified as either High Risk, Substantial Risk, Moderate Risk or Low Risk taking into account relevant potential risks and impacts, such as the type, location, sensitivity and scale of the project; the nature and magnitude of the potential E&S risks and impacts; the capacity and commitment of the Borrower; and other relevant areas of risks that may result in unintended impacts.

"Karaali Wastewater Treatment Plant Construction Project" (Subproject) is planned to be implemented by Konya Water and Sewerage Administration General Directorate in Konya province, Beyşehir district, Karaali neighborhood, block 257, parcel no. 1.

The implementation of the Karaali Wastewater Treatment Plant Project will generate significant environmental, social, and economic impacts. Primarily, through the advanced biological treatment of domestic wastewater, the water quality of Lake Beyşehir will be preserved, the risk of eutrophication will be reduced, and biodiversity will be safeguarded. This will not only improve the ecological balance of the lake but also contribute to the protection of groundwater resources.

The Project is categorized as of Moderate Risk as per the Risk Screening conducted under İLBANK ESMS and World Bank ESF. One of the tasks under the scope of the Project is the preparation of an Environmental and Social Management Plan (ESMP) in accordance with İLBANK's ESMS and WB ESF including applicable Environmental and Social Standards (ESSs), World Bank Group (WBG) General Environment Health and Safety (EHS) Guidelines and Industry Sector Guidelines, and the national legislation in force in Türkiye.

This ESMP has been prepared by POSEİDON Environmental Social Consultancy Trade Ltd. Co. (POSEİDON) based on the environmental and social impact and risk assessment studies conducted for the subproject, which addresses site-specific mitigation, monitoring, and institutional measures to be taken during pre-construction, land preparation, construction, and operation phases of the Project to either eliminate or reduce these adverse environmental and social impacts to acceptable levels. Moreover, a Stakeholder Engagement Plan (SEP) is also prepared for the subproject.

This ESMP provides instructions, responsibilities, and guidelines to the responsible parties with a set of mitigations, monitoring, and institutional measures to be taken during the implementation (construction) and operation of the subproject to avoid potential

adverse environmental and social impacts or reduce to acceptable levels. For all monitoring requirements, the technical parameters are defined along with the appropriate responsibilities and reporting procedures. Moreover, a grievance mechanism for receiving and addressing all grievances, complaints, and comments related to the subproject is set out in this ESMP.

The ESMP has identified mitigation measures and monitoring activities to reduce and avoid impacts and risks associated with the subproject. A summary of the mitigation measures is given in Table 24.

KOSKİ is the owner of the proposed subproject. During operation phase, an operator team assigned by KOSKİ, will ensure compliance of the national and international legislation.

A stand-alone Stakeholder Engagement Plan (SEP) has also been developed for the Subproject.

1.2. Objective of the ESMP

This ESMP has been prepared to outline the measures to be taken during the construction (implementation) and operation (throughout the sub-financing agreement lifecycle) of the Subproject to eliminate or offset adverse E&S impacts and risks, or to reduce them to acceptable levels; as well as the actions required to carry out these measures.

1.3. Overview of E&S Requirements Applicable to the Subproject

In this scope, the subproject will be in compliance with the World Bank's WB/ESF (2018) and İLBANK ESMS as well as the WB Environment, Health and Safety Guidelines (EHSGs) listed below:

- World Bank Group (WBG) General Guidelines on Environment, Health and Safety (EHS),
- WBG Water and Sanitation EHS Guidance,
- WBG Waste Management EHS Guidelines, and
- WBG EHS Guidelines for Electric Power Transmission and Distribution.

Table 1 outlines the relevance of the WB ESSs to the Subproject.

Table 1. Relevance of the WB ESSs to the Subproject

ESSs	Definition	Relevance to the Subproject
ESS 1	Assessment and Management of E&S Risks and Impacts	Relevant to the Subproject
ESS 2	Labor and Working Conditions	Relevant to the Subproject
ESS 3	Resource Efficiency and Pollution Prevention and Management	Relevant to the Subproject
ESS 4	Community Health and Safety	Relevant to the Subproject
ESS 5	Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Relevant to the Subproject
ESS 6	Biodiversity Conservation and Sustainable Management of Living Natural Resources	Relevant to the Subproject
ESS 7	Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Not relevant in Türkiye
ESS 8	Cultural Heritage	Relevant to the Subproject
ESS 9	Financial Intermediaries	Not relevant to the Subproject
ESS 10	Stakeholder Engagement and Information Disclosure	Relevant to the Subproject

When national requirements differ from the levels and measures presented in the EHSGs, the Subproject will achieve or implement whichever is more stringent.

A summary of the national legislation and international standards applicable to the management of environmental, social, health, and safety aspects of the Subproject is provided in Annex -K

1.4. Review and Update

This ESMP will be reviewed and updated by the Sub-borrower as necessary during Subproject implementation to reflect changes in national legislative framework, İLBANK's policies, or other developments. Specific circumstances warranting updates may include changes in the organizational structure, significant incidents or accidents, or the incorporation of new tools, software or database into the İLBANK E&S Risk Management System.

The Sub-borrower will notify İLBANK of any updates made to the ESMP and will ensure that such updates do not result in deviation from the requirements set forth by the national legislation and the E&S requirements applicable to the Subproject.

1.5. Implementation Arrangements

The Sub-borrower will hold ultimate responsibility for implementing this ESMP, ensuring compliance by the Sub-borrower and contractor teams (including sub-contractors engaged for the Subproject) throughout the sub-financing agreement lifecycle.

The Sub-borrower will ensure that adequate financial and human resources are allocated to enable effective ESMP implementation across the Sub-borrower, supervision consultant, and contractor organizations throughout the sub-financing agreement lifecycle.

The Sub-borrower will determine the arrangements for the Subproject's operation and will be responsible for ensuring compliance with the national legislation and Operation ESMP matrix during its operation phase.

The roles and responsibilities of the Sub-borrower, contractor and sub-contractor teams concerning ESMP implementation are detailed in Chapter 5.

2. SUBPROJECT DESCRIPTION

2.1. Subproject Information

The primary objective of the Karaali Wastewater Treatment Plant Project is to protect the water quality of Lake Beyşehir—one of the largest freshwater lakes in Türkiye and a source of drinking and utility water—by treating domestic wastewater originating exclusively from Karaali Neighborhood of Beyşehir District, thereby reducing public health risks and contributing to the sustainable environmental development of the region.

Karaali WWTP Subproject is designed as an advanced biological wastewater treatment system with an additional final disinfection. The WWTP will have a daily capacity of 400 m3 with a target year of 2050, and it is expected to serve a population of 3014. The resulting sludge (approximately 2.1 tons/day) will be transported to the Beyşehir WWTP, where it undergoes thickening; the resulting sludge is temporarily stored and then reused in agriculture as compost, subject to compliance with national regulations and quality standards.

For the Wastewater Treatment Plant (WWTP), an existing collector line is already available. According to the information provided by KOSKİ officials, the existing collector line has been used to convey wastewater collected from Karaali Neighborhood to a septic tank (foseptik) system in the past. The septic tank will be decommissioned under the Subproject, and the collected wastewater will instead be directed to the Karaali WWTP for treatment and subsequent discharge to the Çay Stream in compliance with applicable discharge standards. Although no official records are available regarding the exact construction date or the contractor responsible for the installation of the existing collector line, KOSKİ representatives have confirmed that the hydraulic capacity of the line is sufficient to meet the design flow requirements of the Karaali WWTP. In addition to this, approximately 1500 meters of 300 mm diameter HDPE-based corrugated pipes will be supplied and installed for the required connections. Furthermore, around 60 meters of discharge pipeline will be constructed to convey the treated effluent to the designated receiving water body. The discharge point has been determined as Çay Stream.

In the Karaali Wastewater Treatment Plant, the receiving body for the treated effluents is the Çay Stream, and the discharge standards to be applied in the plant design have been determined by taking into account both national and international regulations. In particular, the Urban Wastewater Treatment Regulation, the Water Pollution Control Regulation, and the European Union Directive 91/271/EEC on Urban Wastewater Treatment have been considered.

Since the Karaali Wastewater Treatment Plant is located within the scope of the Special Environmental Protection Provisions of Lake Beyşehir, the receiving body has been evaluated as a sensitive water body. Therefore, it has been deemed necessary that the treatment process applied in the plant should not be limited to secondary treatment only, but should be designed based on advanced biological treatment, including nitrogen and phosphorus removal.

The units included in the WWTP will consist of the following:

- Inlet structure,
- Drum screen,
- Inlet pumping station,
- Biological phosphorus removal tanks,
- Aeration tanks,
- Final sedimentation tanks,
- Disinfection unit,
- Effluent flowrate measurement structure,
- Sludge storage tank
- Operation Building

The flow chart of the units is presented in Figure 3-2. Detailed technical information about the units is provided in Section 3.2.1.

Additional information on the construction and operation phase activities and facilities, as well as Associated Facilities (AFs), is provided in the subsequent sections of this Chapter.

Table 2. Key Technical Information on the Subproject

Component	Features
Sanitation	

Component	Features
Sewerage	The Subproject includes a connection to the existing sewerage infrastructure serving Karaali Neighbourhood. An existing reinforced concrete sewer collector pipeline with a diameter of 300 mm and an approximate length of 1500 meters conveys wastewater to the Karaali WWTP site. The collector line operates under gravity flow conditions. • Type of sewer: Sewerage system • Length: 1500 m • Diameter: 300 mm • Material: Reinforced concrete • Gravity-fed or pressurized system: Gravity-fed • Capacity: 3,014 PE No new main sewerage lines or pumping stations are planned within the scope of the Subproject.
Wastewater Treatment Facilities	The Subproject consists of the construction and operation of the Karaali Wastewater Treatment Plant, designed as an advanced biological wastewater treatment system with final disinfection. The WWTP has a design capacity of 400 m³/day for the target year 2050 and is expected to serve a population of approximately 3,014. The treatment process includes preliminary treatment (screening and grit removal), biological treatment, secondary sedimentation, final disinfection, and sludge handling units. Automation and control systems will be installed to ensure efficient operation. Detailed descriptions of the treatment components are provided in Section 3.2.2.
Pumping and Lifting Stations	No separate wastewater pumping or lifting stations are included within the scope of the Subproject, apart from internal process-related pumping units within the WWTP.
Others	The WWTP will be equipped with auxiliary systems including flow meters, valves, corrosion protection measures, fire protection systems, and a SCADA-based automation and control system to ensure safe and efficient operation.

2.2. Subproject Location

The Subproject is located in Konya Province, Beyşehir District, Karaali Neighborhood, on Block 257, Parcel No. 1. The parcel is registered as Treasury land and has been officially allocated to KOSKİ for the construction of the wastewater treatment plant (see Annex C). Information on the parcels overlapping with the Subproject is presented in Table 3.

The total surface area of the Subproject is 4,318.69 m², and it covers the entire parcel. No additional land outside this parcel will be required for the WWTP facility. The coordinates of the site are provided in Annex B. Photographs of the site are provided in Annex E.

The existing 300 mm diameter collector line is already in place and does not require additional land acquisition. The discharge line (approximately 60 m) is designed to remain within publicly owned land. An Energy Transmission Line (ETL) of approximately 1.6 km is planned to supply electricity to the Karaali WWTP. The alignment is subject to final technical confirmation; however, based on the current information, no land acquisition is expected. The assessment will be updated if any changes occur. Further details on parcel ownership, land acquisition methods, and status are provided in Section 3.4.

A map of the Subproject location is presented in

Figure 2-1. A map of the collector line and site access route is presented in Figure 2-2; the discharge point, Çay Stream, and WWTP area are presented in Figure 2-3.

Table 3 Parcels Overlapping with the Karaali Wastewater Treatment Plant Subproject

District	Neighborhood/Village	Lot/ Parcel No.	Land Registry Type	Current Land Use
Beyşehir	Karaali Neighborhood	Block 257, Parcel No. 1	Treasury Land	Raw Land

Figure 2-1. Map of Subproject Location

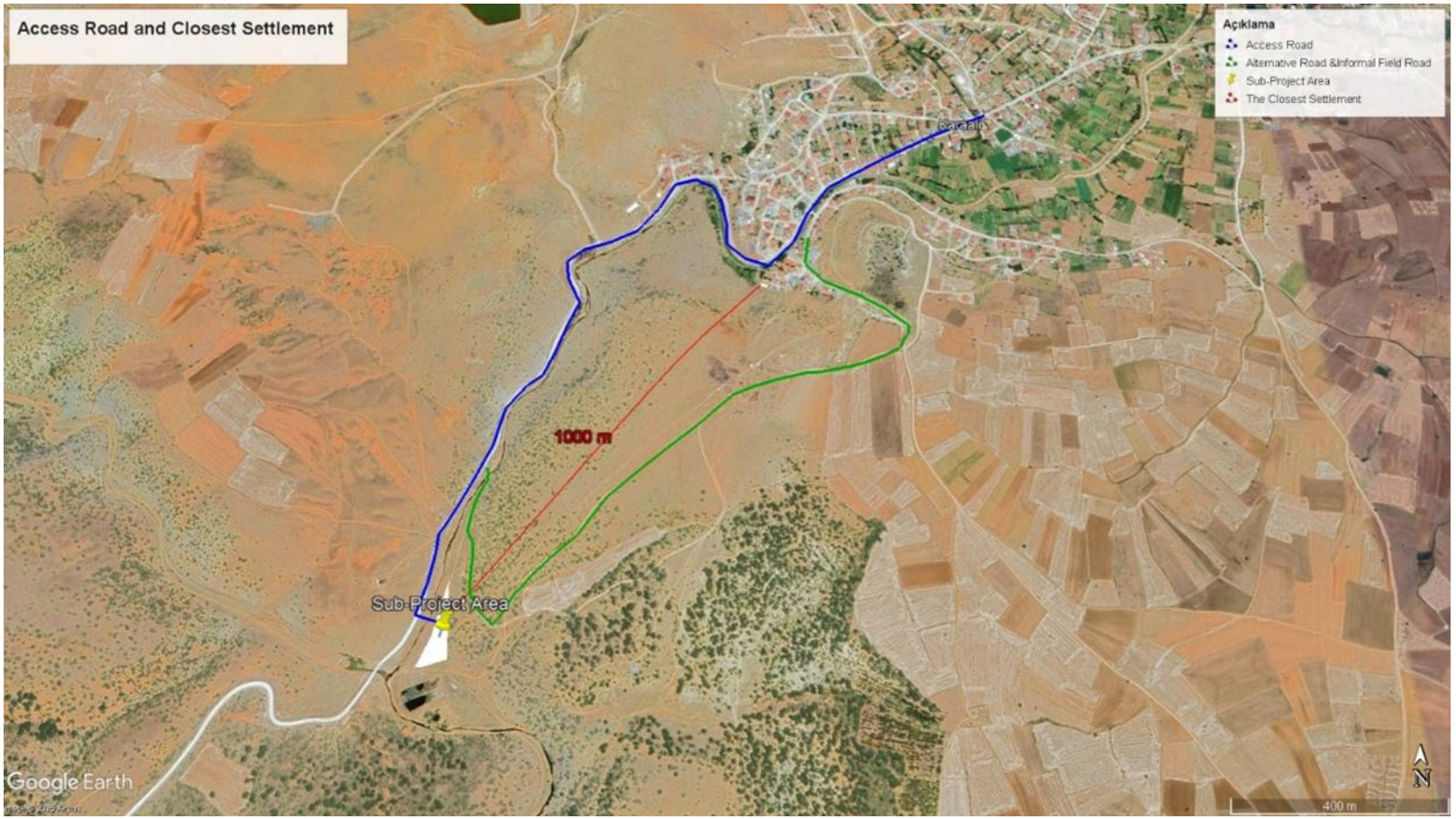
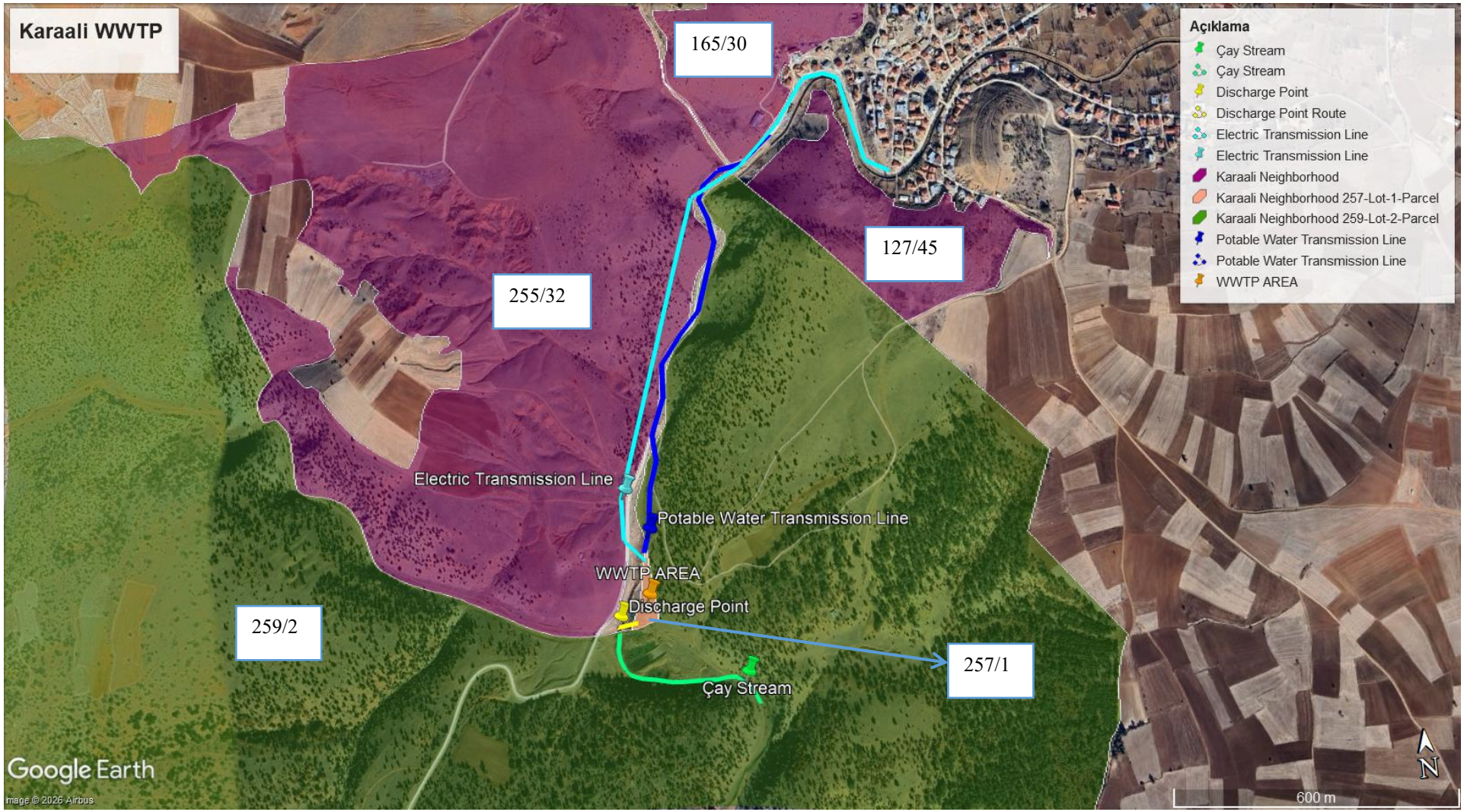


Figure 2-2 Map of Collector Line and Access Route

Figure 2-3 Discharge Point, Çay Stream and WWTP Area with Parcel Numbers



2.3. Site Access Route

Access to the Karaali Wastewater Treatment Plant Subproject area will be provided through existing local roads. The main access route originates from Kazım Karabekir Street, which is the primary road passing through Karaali Neighborhood. While traveling along Kazım Karabekir Street in the east–west direction within the settlement area, access to the Subproject site is achieved via a secondary road branching off from this main road.

The secondary access road connects the residential area of Karaali Neighborhood to the Subproject area and continues southwards towards the project site. This route is currently in use, and no new access road construction is envisaged within the scope of the Subproject. Construction vehicles, machinery, and material transport will utilize this existing route during the construction phase.

The access route mainly passes through rural and sparsely populated areas outside the dense residential fabric. Nevertheless, traffic movements during construction may temporarily increase along Kazım Karabekir Street and the connecting secondary road. Relevant traffic management, road safety, and community safety measures will be implemented in accordance with the ESMP, particularly to minimize potential risks to residents and road users.

No permanent modification, widening, or realignment of the existing access roads is planned. Any minor, temporary arrangements required during construction will be implemented in coordination with local authorities and reinstated upon completion of construction works.

2.4. Associated Facilities

According to the World Bank's Environmental and Social Framework (ESF), an Associated Facility refers to a facility or activity that is not financed as part of the project but is directly and significantly related to it, carried out or planned to be carried out contemporaneously, and necessary for the project to be viable.

A 1.8 km potable water connection line will be constructed to connect the facility to the existing KOSKİ main network. This line will be financed and implemented by KOSKİ. The potable water supply line and electric transmission line can be seen in Figure 2-3.

No other associated facilities triggering additional environmental or social impacts have been planned at this stage (Table 4).

Table 4. List of Associated Facilities of the Subproject

Associated Facility (AF)	Criteria			Notes/ Remarks
	(a) Is the AF directly and significantly related to the Subproject	(b) Is the AF carried out, or planned to be carried out, contemporaneously with the Subproject	(c) Is the AF necessary for the Subproject to be viable and would not have been constructed, expanded or conducted if the Subroject did not exist.	
Potable Water Supply Line (1.8 km connection to existing KOSKİ main network)	Yes	Yes	Yes	This infrastructure is considered an Associated Facility and its environmental and social aspects have been assessed in this ESMP.

2.5. Other Institutions' Infrastructure to be Displaced

Within the scope of the Karaali Wastewater Treatment Plant Subproject, potential overlaps with existing infrastructure owned by other institutions are being assessed. For this purpose, Konya Metropolitan Municipality initiated official correspondence on January 15, 2026 with 15 relevant institutions, including MEDAS, TEIAS, BOTAS and DSI, requesting institutional opinions and infrastructure layout plans for the Karaali WWTP and its associated pipelines (see Annex D).

Based on preliminary reviews, no overlapping infrastructure has been identified within the Karaali Subproject area. However, confirmation is pending receipt of official responses from the relevant institutions.

In the event that any infrastructure overlap is identified during the construction phase, the relevant utilities will be relocated or protected by the Contractor under the supervision of the Sub-borrower in accordance with applicable regulations. Measures to

minimize potential impacts of such displacement works on local stakeholders are described in Chapter 4, while stakeholder communication procedures are outlined in the SEP.

In addition, during excavation works for the Karaali WWTP and associated pipelines, the potential presence of asbestos-containing materials (ACM) in older underground utilities will be taken into consideration. If asbestos is encountered, works will be carried out in accordance with national legislation and the World Bank EHS Guidelines.

2.6. Subproject Impact Area

The Area of Influence (AoI) of the Subproject has been defined as a 500-meter radius around the WWTP site, taking into account the spatial extent of potential environmental and social impacts that may arise during the construction and operation phases. The location of the Project at the national and provincial levels is presented in Figure 2-4 and Figure 2-5.

Figure 2-6 illustrates the Project's potential Area of Influence (500-meter radius) together with the closest settlement area. During the determination of the Area of Influence, attention was given to the presence of sensitive receptors such as educational facilities, health services, places of worship, and residential areas. Based on the spatial assessment presented in Figure 2-6, no sensitive receptors are located within the defined 500-meter AoI boundary. The nearest settlement, Karaali Neighbourhood, is located approximately 1,000 meters from the subproject site.

Figure 1-3 also identifies sensitive receptors located in the vicinity of the Project area. These include:

- Beyşehir Karaali Family Health Center,
- School,
- Mosque,
- Coffee shop.

Access to the Subproject site will be provided through the existing local road network. The main access route originates from Kazım Karabekir Street, which passes through Karaali Neighbourhood. While traveling along Kazım Karabekir Street in the east–west direction within the settlement, access to the Project site is achieved via a secondary road branching from this main road. The route shown in pink in Figure 2-6 represents the existing access road.

This route is currently in use, and no new access road construction is envisaged within the scope of the Subproject. During the construction phase, machinery and material transportation will utilize this existing road.

The access route primarily passes through rural and sparsely populated areas. However, temporary increases in traffic may occur along Kazım Karabekir Street and the connecting secondary road during the construction phase. Relevant traffic management, road safety, and community health and safety measures will be implemented in accordance with the ESMP.

No permanent widening, modification, or realignment of the existing roads is planned. Any minor temporary arrangements required during construction will be implemented in coordination with local authorities and reinstated upon completion of the works.

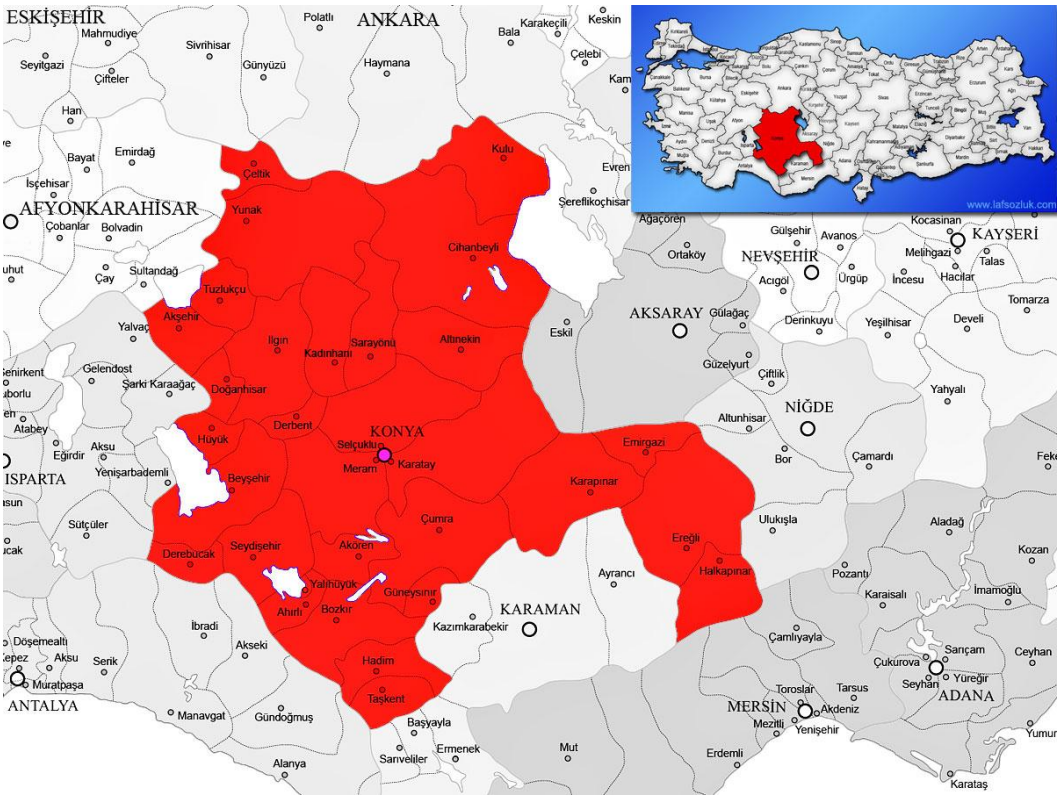


Figure 2-4 Display of Konya Province on the Map of Türkiye

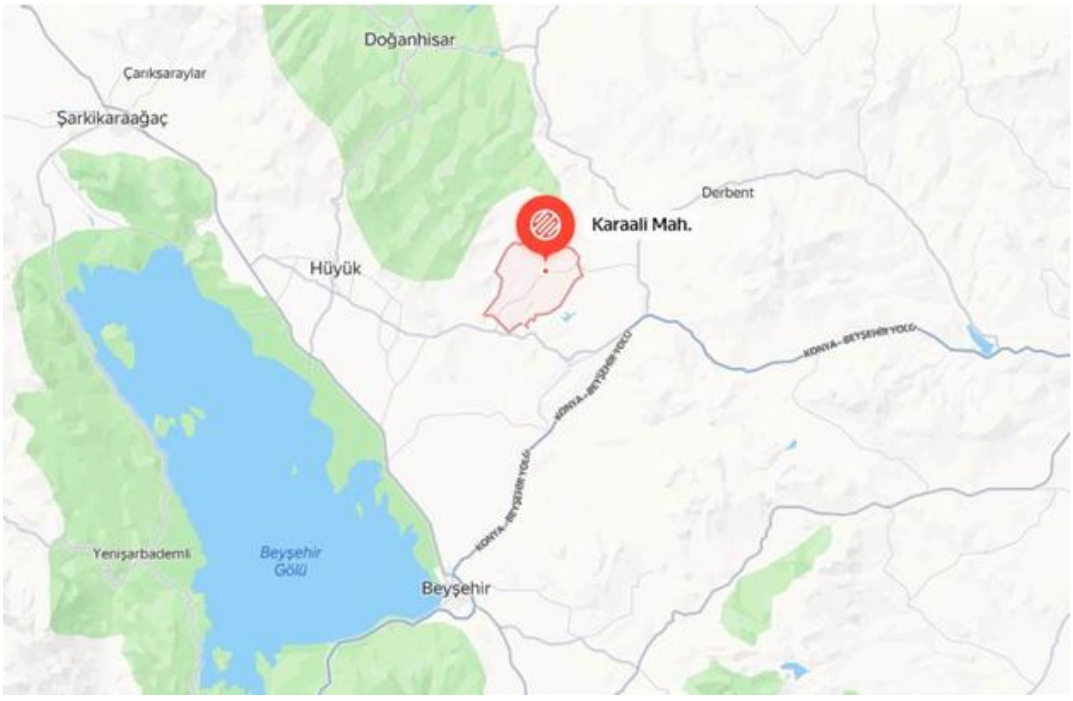


Figure 2-5 Display on the Map of Karaali Neighborhood

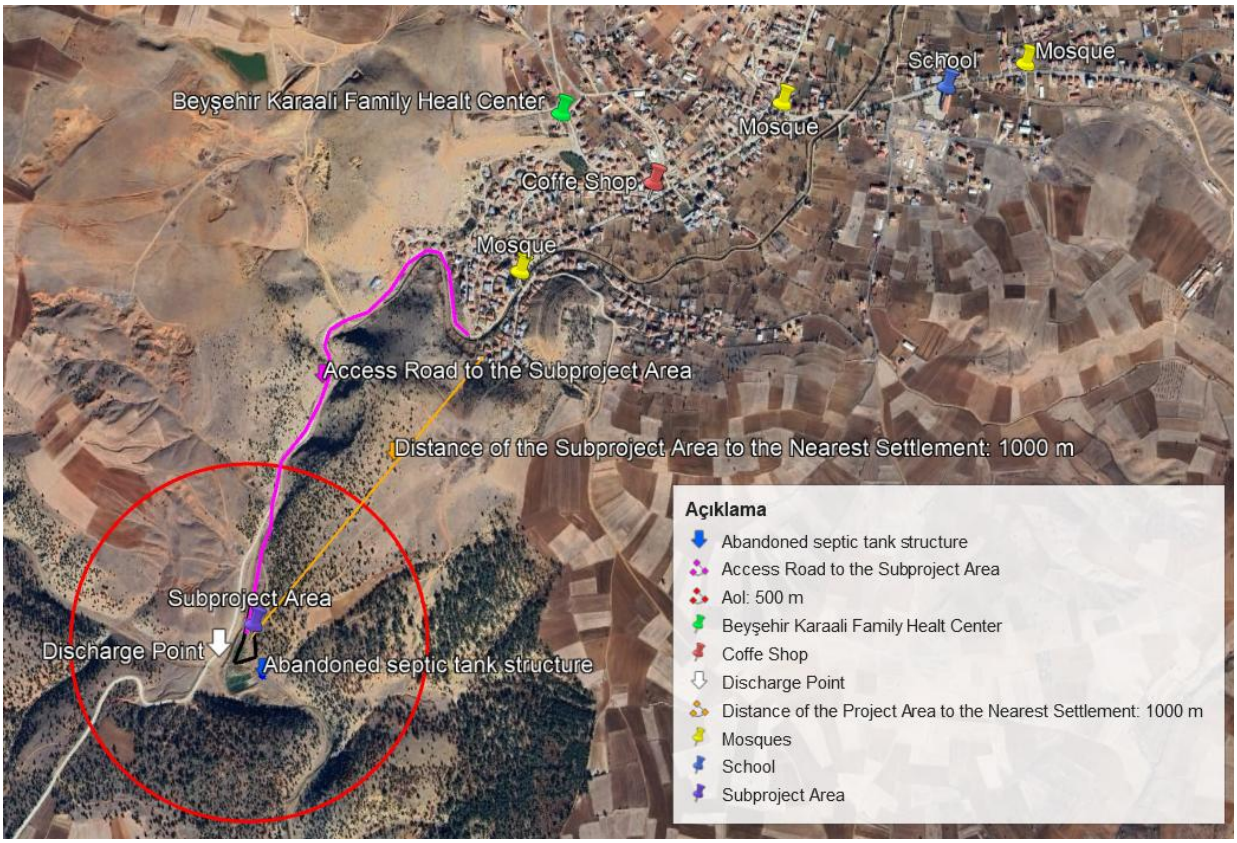


Figure 2-6 Project Potential Area of Influence (AoI)

2.7. Environmental and Social Baseline

This section contains information on the physical, biological, and socioeconomic environment of the Subproject area and its immediate surroundings. Descriptions and information provided in this chapter, regarding current conditions of the Subproject area and its vicinity, are based on data acquired from and reports prepared by related public and private institutions, field studies conducted for the identification of physical, biological, and socio-economic environment, Geographical Information Systems (GIS) studies, and satellite imagery.

Table 5 presents a summary of the baseline field studies conducted as part of the ESMP study.

Table 5 Summary of Baseline Field Studies

Subject	Date of the Field Study	Experts who Participated in the Field Study
Physical, Biological, and Socioeconomic Environment	20 August 2025	Fikret Varol (Environmental Engineer), İrem Ağaççıoğlu (Environmental Engineer), Ceyda Terzi (Environmental Engineer), Ali Can Can (Sociologist), and Gözde Yurttaş (Biodiversity Expert)
Physical, Biological, and Socioeconomic Environment	13 November 2025	Fikret Varol (Environmental Engineer), İrem Ağaççıoğlu (Environmental Engineer), Ceyda Terzi (Environmental Engineer), Ali Can Can (Sociologist), and Gözde Yurttaş (Biodiversity Expert)

2.7.1. Physical Environment

2.7.1.1. Topography

The Project area is located within the boundaries of Karaali Neighborhood of Beyşehir District, Konya Province. Beyşehir District is situated in a transition zone between the Central Anatolia and Mediterranean regions and is characterized by a closed basin topography. The general landform of the district consists of a large depression area dominated by Lake Beyşehir at its center, surrounded by mountainous and hilly terrains.

Areas surrounding Lake Beyşehir are generally characterized by low slopes and relatively flat morphology, while the southern, western, and southwestern parts of the basin are influenced by the extensions of the Taurus Mountains, particularly the Anamas and Dedegöl Mountain ranges, where elevations locally exceed 2,000 m above sea level. As a result, the district exhibits a heterogeneous topographical structure where flat plains and rugged mountainous areas coexist. The average elevation of the Beyşehir district center ranges between approximately 1,125 and 1,150 m above sea level.

Karaali Neighborhood is a rural settlement located to the east and northeast of Lake Beyşehir, at relatively higher elevations compared to the lakeshore plains. The average elevation of Karaali is approximately 1,270 m above sea level. The local topography is predominantly characterized by gently sloping to mildly undulating terrain with occasional low hills. Steep slopes and rugged mountainous formations are limited, and the landscape largely consists of plateaus and gently elevated areas suitable for agricultural activities.

Within the Project area and its immediate surroundings, the dominant topographical features include low- to moderately sloped lands, agricultural fields, and rural settlement areas. The soil surface is generally composed of natural sedimentary formations, and no large-scale landslides, extreme slopes, or sharp topographical breaks have been identified. This indicates that topography-related risks during construction and operation phases are expected to be limited.

2.7.1.2. Geology

The Karaali Wastewater Treatment Plant Subproject is located in Karaali Neighborhood within the Beyşehir District, which lies in the Beyşehir closed basin of the Western Taurus Mountains. The Subproject area is situated on the relatively flat lowland portion of the Beyşehir Plain, south of Lake Beyşehir, where geological conditions are dominated by Quaternary alluvial deposits.

The geological structure of the Subproject site is primarily characterized by unconsolidated to semi-consolidated alluvial materials, including clay, silt, sand, and locally gravel, which have been deposited by historical fluvial and lacustrine processes associated with Lake Beyşehir and its tributaries. These formations are typical of lowland basin environments and differ from the steep, rocky, and forested mountainous units surrounding the basin.

No active fault lines or major geological discontinuities have been identified within the immediate vicinity of the Subproject site. The relatively flat topography and homogeneous alluvial ground conditions reduce the likelihood of slope instability or rockfall

risks. However, due to the fine-grained nature of alluvial soils, localized settlement potential may exist, which has been taken into consideration during the design of the wastewater treatment plant structures.

The geological characteristics of the Karaali WWTP site are considered suitable for the planned construction activities, provided that standard foundation design practices and ground preparation measures are implemented in accordance with national regulations and good engineering practice.

2.7.1.3. Tectonics and Seismicity

The Karaali Wastewater Treatment Plant Subproject is located within the Beyşehir closed basin, which forms part of the tectonically complex Western Taurus region of Türkiye. This region has been shaped by compressional and extensional tectonic regimes associated with the convergence of the African and Eurasian plates.

The Beyşehir basin is bordered by major tectonic structures related to the Taurus orogenic belt; however, the Subproject site itself is not located directly on or immediately adjacent to any mapped active fault lines. The dominant tectonic features in the wider region include normal and strike-slip faults controlling basin formation, while active faulting intensity decreases toward the central lowland areas of the basin where the Subproject is situated.

According to the Türkiye Earthquake Hazard Map (see Figure 2-7), the Karaali area is classified within a moderate seismic hazard zone. Expected seismic activity is mainly associated with regional fault systems rather than site-specific tectonic features. No surface rupture risk has been identified at the Subproject location.

Given the relatively flat topography and absence of steep slopes, secondary seismic hazards such as landslides or rockfalls are not anticipated within the Project area. However, due to the presence of alluvial soils typical of the Beyşehir Plain, potential ground shaking amplification and localized settlement effects have been considered in the structural design of the wastewater treatment plant.

The WWTP structures will be designed and constructed in accordance with the Turkish Seismic Code and relevant national standards to ensure structural integrity and operational safety under seismic loading conditions.

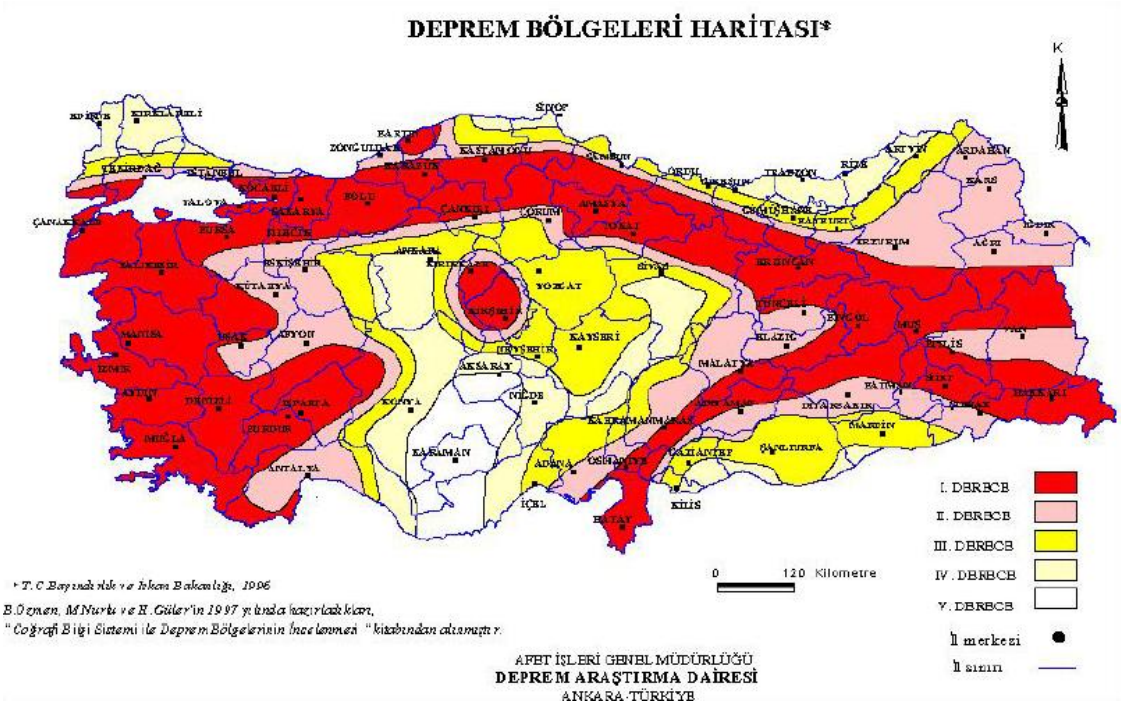


Figure 2-7 Earthquake Map of Türkiye

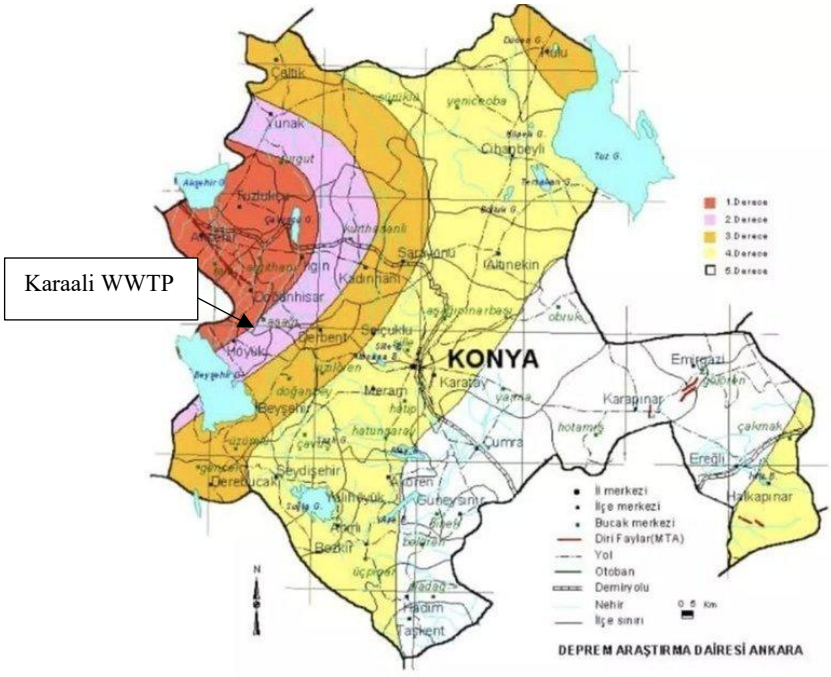


Figure 2-8 Earthquake Map of Konya Province

2.7.1.4. Soil and Land Composition

The Subproject area is located in Karaali Neighborhood of Beyşehir District, Konya Province, where land use is predominantly agricultural with scattered rural settlements. The surrounding area mainly consists of cultivated and fallow lands, reflecting long-term agricultural use.

Soils in the Subproject area are generally derived from sedimentary formations typical of the Beyşehir Basin and are composed mainly of clayey to loamy materials. These soils exhibit moderate fertility and water retention capacity, suitable for agricultural

activities. Organic matter content is generally low to moderate, consistent with semi-arid climatic conditions. No peat soils, contaminated land, wetlands, or waterlogged soils have been identified within the Subproject footprint.

The terrain is generally stable and characterized by low to moderate slopes. The risk of severe soil erosion is considered low; however, localized surface erosion may occur during intense rainfall events, particularly in areas with limited vegetation cover.

Overall, soil and land composition within the Project area are considered suitable for the proposed Project activities. With the implementation of standard good international industry practices (GIIP), potential impacts on soil quality and land productivity are expected to be limited.

2.7.1.5. Meteorology and Climatic Characteristics

Due to its geographical location in the northern part of the Mediterranean Region and within the Lakes Region, the project area exhibits a transitional climate characteristic between the Mediterranean and Central Anatolian climates. The region shows the typical climatic features of the Lakes Region, with hot summers and cold, rainy winters. The moderating effect of the lake located in the southern parts of the district gradually diminishes toward higher elevations, where harsher climatic conditions prevail.

According to the information obtained from KOSKİ, minimum and maximum wastewater temperature values are considered in the process calculations. Within this scope, the wastewater temperature values used for the Karaali Subproject were determined based on the minimum and maximum wastewater temperatures recorded at the Beyşehir and Hüyük Wastewater Treatment Plants operated by KOSKİ.

An evaluation of the meteorological parameters monitored by the Turkish State Meteorological Service (MGM) for the Konya region for the 1991–2020 period[1] is presented in the table below.

Table 6 Meteorological Data from the Konya Meteorological Observation Station

Meteorological Parameters	January	February	March	April	May	June	July	August	September	October	November	December	Annual
Mean Temperature (°C)	-0.3	1.3	6.0	10.9	15.9	20.5	24.1	24.0	19.4	13.4	6.2	1.5	11.9
Mean Highest Temperature (°C)	4.6	6.9	12.5	17.6	22.8	27.4	31.0	30.9	26.7	20.4	12.7	6.3	18.3
Mean Lowest Temperature (°C)	-3.9	-3.3	0.2	4.4	9.0	13.6	17.1	17.2	12.3	7.0	0.8	-2.2	6.0
Average Sunshine Duration (hours)	3.4	4.9	6.3	7.2	8.7	10.3	11.1	10.8	9.7	7.6	5.3	3.3	7.4
Average Number of Rainy Days	10.53	8.97	9.80	10.83	12.47	8.10	3.00	2.63	4.40	7.27	7.13	10.10	95.2
Average Monthly Total Precipitation (mm)	35.9	23.1	27.4	34.2	38.2	27.8	6.5	6.5	15.9	29.7	34.5	45.6	325.3

Temperature

The annual mean temperature in the region is 11.9°C. An analysis of monthly mean temperatures indicates that the highest value, 31.0°C, occurs in July. From a seasonal perspective, the average temperature is 0.83°C in winter and 22.9°C in summer. The mean temperature in autumn is 13.0°C, while the mean temperature in spring is 10.8°C. The annual mean maximum temperature of the region is 18.3°C. An assessment of monthly mean maximum temperatures shows that the highest value, 31.0°C, is recorded in July, whereas the lowest value, 4.6°C, occurs in January. The annual mean minimum temperature is 6.0°C. Based on monthly mean minimum temperatures, the highest value is observed in August at 17.2°C, while the lowest value is recorded in January at –3.9°C.

[1]Source: https://www.mgm.gov.tr/veridegerlendirme/il-ve-ilceler-istatistik.aspx?k=H&m=KONYA

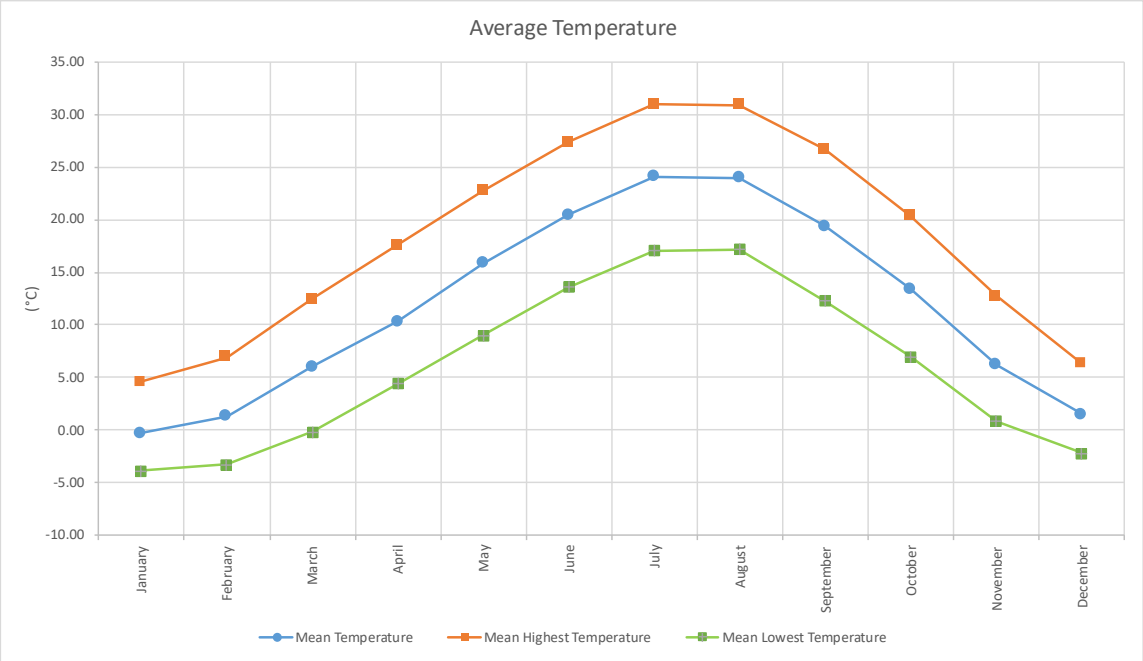


Figure 2-9 Average Temperatures

2.7.1.6. Air Quality

No site-specific ambient air quality measurements have been conducted within the Karaali WWTP area. However, the Project site is located in a rural setting characterized by agricultural land use and very low traffic density. There are no industrial facilities, major emission sources, or high-capacity roads in the immediate vicinity of the Subproject area. The nearest sensitive receptors consist primarily of scattered residential units within Karaali Neighborhood, located at a distance from the proposed WWTP site. Given the absence of significant stationary or mobile emission sources and the rural character of the area, baseline air quality conditions are considered to reflect typical background levels associated with low-density rural settlements. Therefore, construction-related air quality impacts are expected to be temporary, localized, and manageable through the mitigation measures defined in the ESMP.

Since no baseline air quality measurements have been conducted directly at the Project site, data from the nearest monitoring station were utilized to represent the background conditions. Accordingly, data from the Konya – Laboratory Air Quality Monitoring Station, located approximately 56 km east (94 °) of the Project site in Karaali District, were evaluated for the period between 26.07.2024 and 26.07.2025. The results of this assessment are summarized in Table 7. The annual average concentrations were 28.13 µg/m³ for particulate matter (PM10), 8.61 µg/m³ for fine particulate matter (PM2.5), 29.97 µg/m³ for nitrogen dioxide (NO_2), and 8.70 µg/m³ for sulfur dioxide (SO_2). When compared with the annual limit values specified in the Turkish Regulation on Air Quality Assessment and Management as well as the European Union Air Quality Directive, all measured parameters remain below the legal thresholds. However, when evaluated against the updated World Health Organization (WHO) Air Quality Guidelines (2021), it was found that especially PM2.5 and NO_2 concentrations exceed the recommended limits. This indicates that, while current air quality is in compliance with national and regional standards, exposure to pollutants at these levels may pose risks to sensitive groups in terms of public health.

Table 7 Konya - Laboratory Air Quality Monitoring Station Measurement Results

Parameter	Annual Avg. Value (µg/m³)	National Legislation Annual Limit Value (µg/m³)	WHO Guideline Value (µg/m³)
PM10	**28,13**	40	15
PM2.5	**8,61**	25	5
NO2	**29,97**	40	10
SO2	**8,7**	20	(No annual limit)

If deemed necessary in response to complaints or concerns raised by stakeholders, site-specific baseline air quality measurements may be conducted by the Contractor prior to and during the construction phase.

For public comprehension, the air quality levels have also been evaluated according to the Türkiye Air Quality Index (AQI) classification, as presented in Table 8. The average PM10 concentration measured at the Laboratory Station (28 µg/m³) corresponds to the 'Good' category of the AQI, indicating that the general air quality in the region is considered good. Taking into account the rural characteristics of the Subproject area, the absence of significant traffic or industrial sources in the vicinity, and the fact that the measured concentrations remain below national limits, it can be concluded that the Project site is generally characterized by low background air pollution levels.

Table 8 Air Quality Index Levels

Air Quality Index (AQI)	PM10 (µg/m³)	Description
Good	0-50	Air quality is satisfactory, and air pollution poses little or no risk.
Moderate	51-100	Air quality is acceptable; however, some pollutants may pose a moderate health concern for a very small number of people who are unusually sensitive to air pollution.
Unhealthy for Sensitive Groups	101-150	Members of sensitive groups may experience health effects. The general public is not likely to be affected.
Unhealthy	151-200	Everyone may begin to experience health effects, and members of sensitive groups may experience more serious health effects.
Very Unhealthy	201-300	Health alert conditions may arise. The entire population is more likely to be affected.
Hazardous	301-500	Emergency conditions. The entire population is more likely to be affected with serious health effects.

2.7.1.7. Noise

In Türkiye, the Regulation on Environmental Noise Control, published in the Official Gazette dated 30.11.2022 and numbered 32029, regulates the environmental noise. The regulation sets noise limits applicable to various areas (e.g., industrial areas, residential areas, or a combination of both) for three time periods. Similarly, the WBG General EHS Guidelines sets limits for noise for two types of receptors and two time periods. The guideline requires that noise levels do not exceed the given levels or result in a maximum increase in background levels of 3 dB at the nearest receptor location off-site. The limit values of national and international standards are summarized in Table 9 and Table 10:

Table 9 Environmental Noise Level Limit Values

Noise Source	Measured Parameter	Environmental Noise Level		
		Day (07:00 - 19:00)	Evening (19:00 - 23:00)	Night (23:00 - 07:00)
Industrial facilities, transportation resources	**$LA_{eq,5min.}$**	**65 dB(A)**	**60 dB(A)**	**55 dB(A)**
Workplaces(2)	$LA_{eq,5min.}$	Background + 5 dB(A)		Background + 3 dB(A)
In case of more than one workplace(3)	$LA_{eq,5min.}$	Background + 7 dB(A)		Background + 5 dB(A)
All resources	LC_{max}	100 dB(C)		

(1): These limit values are valid as of 31.12.2023. These limit values are provided in every 1/3 octave band of the determined frequency range. In the acoustic reports prepared until this date; environmental noise measurement results and the measures determined as a result of the measurement result are included.

(2): Each workplace that contributes to the background noise level is co-responsible for ensuring this limit value. Each workplace takes the necessary measures according to the contribution rates to noise.

Table 10 Noise Limit Values of WBG General EHS Guidelines (One-hour Leq-dBA)

Receptor	Daytime (07:00 – 22:00)	Nighttime (22:00 – 07:00)
Residential areas	**55**	**45**
Commercial/industrial areas	70	70

No baseline noise measurements have been conducted in the Project area. However, the site is located in a rural setting with no significant industrial or high-traffic noise sources in the vicinity. Existing noise levels are considered to be mainly influenced by agricultural activities, local transportation, and natural background sounds (e.g., wind, birds, animals). Therefore, it is assumed that the current ambient noise levels are low and below the limit values set by the Turkish Regulation on the Assessment and Management of Environmental Noise (2010) and in line with the World Bank Group Environmental, Health, and Safety Guidelines (EHS Guidelines).

2.7.1.8. Water Resources

The Subproject is located within the Konya Closed Basin, where surface water resources do not discharge to the sea and remain within the basin boundaries. The Subproject area lies within the Beyşehir Lake Basin, which represents the most significant surface water system in the region and constitutes a sensitive freshwater environment. Karaali WWTP is located 30 km from the Lake.

Çay Stream, which will serve as the discharge point of the Karaali WWTP, is located within the Beyşehir Lake Basin in the Konya Closed Basin. Due to the semi-arid climatic conditions of the region and the low annual precipitation regime, the stream has a highly seasonal character and remains dry for approximately 10 months of the year. Surface flow generally occurs only for short periods following intense rainfall events or during snowmelt. For most of the year, the streambed is either completely dry or exhibits very limited flow. Given these hydrological characteristics and the closed-basin nature of the receiving environment, strict compliance with sensitive area discharge standards is critical to prevent localized accumulation effects and to protect downstream water quality within the Beyşehir Lake Basin.

In accordance with the official opinion letter obtained from the General Directorate of Water Management under the Ministry of Agriculture and Forestry (see Annex D), the Karaali WWTP is located within the Beyşehir Lake Basin and falls under the Special Environmental Protection Provisions of Lake Beyşehir. The discharge point is situated within a nitrate-sensitive area. Accordingly, the treatment plant design parameters, including total nitrogen (TN) and total phosphorus (TP) concentrations, shall be determined in line with the Urban Wastewater Treatment Regulation and basin-specific provisions. The Subproject has been designed to ensure compliance with sensitive area discharge standards.

Surface water resources in the Subproject area are mainly fed by seasonal precipitation and snowmelt, resulting in an irregular flow regime. Streams in the basin are generally seasonal and may dry up during summer months, while short-duration, high-intensity rainfall events in spring and autumn may cause temporary increases in surface runoff. Due to the closed-basin characteristics and increasing pressure from climate change and agricultural water use, protection of surface water quality is of critical importance (see Table 11).

The treated effluent from the Karaali WWTP will be managed in accordance with national legislation and relevant international guidelines, taking into account the sensitivity of the Beyşehir Lake Basin. The Subproject is expected to contribute positively to surface water quality by preventing the discharge of untreated domestic wastewater into the basin.

Table 11 Main Surface Water Bodies Relevant to the Karaali WWTP

Water Body	Type	Relevance to the Subproject
Beyşehir Lake	Freshwater lake	Main surface water body within the basin; environmentally sensitive receiving environment
Çarşamba Stream	Perennial/seasonal stream	Major hydrological component of the basin; indirectly connected to Lake Beyşehir
Local drainage channels	Seasonal streams	Convey surface runoff from the Subproject area to the basin

2.7.1.9. Natural Hazards (such as flooding, landslides, fire, etc.)

The Project area is located in Karaali Neighborhood of Beyşehir District, Konya Province, within a predominantly rural setting characterized by gently sloping terrain and agricultural land use. Based on available topographical, hydrological, and climatic characteristics of the area, no significant natural hazards that could pose a high risk to the Project have been identified.

Flooding:
The Project area is not located within an officially designated floodplain and is situated at a relatively elevated position compared to Lake Beyşehir and its surrounding low-lying areas. There are no major rivers or permanent surface water bodies passing directly through the Project area. Therefore, the risk of large-scale flooding is considered low. However, localized surface runoff and temporary ponding may occur during periods of intense rainfall, particularly in areas with compacted soils or inadequate drainage. According to statements by KOSKİ officials, the opinion of the General Directorate of State Hydraulic Works (DSİ) regarding the Subproject site has been sought, and the process will be completed before the construction tender is issued. This risk is expected to be manageable through appropriate site drainage and erosion control measures.

Landslides and Soil Instability:
The local topography is characterized by low to moderate slopes, with no steep escarpments or unstable geological formations observed within or near the Project area. The soil structure is generally composed of stable sedimentary materials, and no records of historical landslide events have been identified in the vicinity. Accordingly, the risk of landslides or slope instability is assessed as low.

Seismic Activity:
Beyşehir District is located in a region with moderate seismicity according to national seismic hazard classifications. While earthquakes represent a regional natural hazard, the Project area is not located directly on an active fault line. Standard structural design practices in accordance with national building codes will be sufficient to address seismic risks.

Fire:
The Project area and its surroundings are dominated by agricultural lands and scattered rural vegetation, with limited forested areas in the immediate vicinity. As such, the risk of large-scale forest fires is considered low to moderate. Nevertheless, during dry and hot summer periods, there is a potential risk of grass or stubble fires. This risk can be mitigated through good housekeeping practices, controlled vegetation management, and emergency preparedness measures.

Overall, natural hazards in the Project area are considered to pose a **low risk** to the construction and operation phases of the Project. With the implementation of standard good international industry practices (GIIP) and site-specific mitigation measures, potential impacts related to natural hazards are expected to be negligible.

2.7.2. Biodiversity

This section has been prepared to assess the current status of ecosystems and biodiversity within the Subproject area and its immediate surroundings; to identify flora and fauna components; to determine the presence of endemic, rare, or threatened taxa; and to define the threat categories of identified taxa in accordance with World Bank Environmental and Social Standard 6 (WB ESS6): Biodiversity Conservation and Sustainable Management of Living Natural Resources.

Under ESS6, natural habitats and critical habitats are defined as follows.

Natural habitats are areas composed of viable assemblages of plant and/or animal species of largely native origin, and/or where human activity has not essentially modified an area's primary ecological functions and species composition.

Critical habitats are defined as areas with high biodiversity importance or value that meet one or more of the following criteria:

(a) Habitat of significant importance to Critically Endangered (CR) or Endangered (EN) species, as listed on the IUCN Red List of Threatened Species or under equivalent national approaches;

(b) Habitat of significant importance to endemic or restricted-range species;

(c) Habitat supporting globally or nationally significant concentrations of migratory or congregatory species;

(d) Highly threatened or unique ecosystems; and

(e) Ecological functions or characteristics that are necessary to maintain the viability of the biodiversity values described in (a)–(d).

The objectives of ESS6 are to:

- protect and conserve biodiversity and natural habitats;
- apply the mitigation hierarchy and the precautionary approach in the design and implementation of projects that may affect biodiversity;
- promote the sustainable management of living natural resources; and
- support livelihoods of local communities, including Indigenous Peoples, and inclusive economic development through the adoption of practices that integrate conservation needs with development priorities.

The biodiversity and ecosystem assessment for the Subproject has been carried out within a pre-defined AoI established prior to site-specific field investigations. According to the World Bank ESSs, where a project includes physical elements, aspects, and facilities that may generate impacts, environmental and social risks and impacts shall be identified in the context of the project's AoI. Accordingly, the assessment has not been limited solely to the project footprint but has also encompassed adjacent areas that may be environmentally affected. The term "Subproject area and its immediate surroundings" refers to the primary Area of Influence defined as a 500-m buffer zone surrounding the project area, based on the potential intensity of environmental impacts such as dust, noise, habitat disturbance, and traffic.

Based on field observations conducted by biodiversity specialists and desktop reviews of national biodiversity databases and IUCN resources, the AoI comprises fragmented natural steppe and rangeland habitats, together with areas influenced by human activities. The area exhibits a mosaic of disturbed habitats and is considered to be substantially modified in terms of ecological integrity.

Within the framework of ESS6, the following evaluations apply for criteria (a) to (e):

(a) No habitat of significant importance for Critically Endangered (CR) or Endangered (EN) species has been identified within the AoI. This finding is supported by literature (IUCN Red List, national species databases) and field verification.

(b) No habitat of known significance for endemic or restricted-range species has been observed. The flora within the AoI is predominantly composed of widespread, non-endemic species adapted to regional steppe conditions.

(c) The AoI does not support migration corridors or aggregation areas for migratory or congregatory species, as confirmed by expert field observations and the absence of recorded routes or stopover sites.

(d) The AoI does not contain highly threatened or unique ecosystems; the existing habitat types are common and widely distributed across the region.

(e) No ecological function or feature critical for maintaining the viability of the biodiversity values described under criteria (a)–(d) has been identified within the AoI. These conclusions are supported by field investigations and secondary data sources.

To ensure compliance with ESS6 requirements and to demonstrate the practical application of biodiversity and habitat protection principles, the following measures will be adopted under the Subproject:

- Construction activities will be carried out, where feasible, in already disturbed areas to minimize additional habitat loss.
- Vegetation clearance and excavation works will be limited strictly to necessary areas and will be preceded by site inspections focusing on flora and fauna.
- Dust, noise, and traffic-related impacts will be mitigated through the implementation of appropriate technical and organizational measures.
- Work schedules will be planned to minimize potential disturbance to wildlife.
- Where the use of natural resources is required, activities will be conducted in accordance with applicable regulations and sustainability principles.

In conclusion, although certain parts of the AoI exhibit characteristics of natural habitats, the criteria for critical habitat under ESS6 are not met. The flora and fauna species present within the AoI are predominantly common and well adapted to regional ecosystems. No endemic, rare, or species classified as Critically Endangered (CR) or Endangered (EN) under the IUCN Red List have been identified as having habitat within the project area or the Area of Influence.

2.7.2.1. Legally Protected and Internationally Recognized Areas

A desktop review was conducted to identify the presence of areas designated under national legislation with legal protection status (such as national parks, nature parks, strict nature reserves, wildlife development areas, wetlands, etc.), as well as areas recognized at national and/or international levels (including Ramsar Sites, Important Nature Areas – INAs, Important Bird Areas – IBAs, Key Biodiversity Areas – KBAs, etc.) within the Subproject area and the defined AoI. This assessment was carried out using official databases of relevant public authorities, up-to-date spatial datasets, satellite imagery, and available literature sources.

As a result of the assessments, it was determined that the Subproject area is not located within the boundaries of any core legally protected area designated under national legislation. The nearest legally protected area to the project site is the Beyşehir Lake Wetland Buffer Zone Boundary, located approximately 8.20 km southwest of the Subproject area. The location of the Beyşehir Lake Wetland and its spatial relationship to the Subproject area are presented in Figure 2-10.

Wetland buffer zones are defined as transitional areas intended to protect core wetland ecosystems from external pressures and do not constitute the core wetland ecosystem itself. Based on field surveys and existing condition analyses, it was determined that there is no direct hydrological connection, habitat continuity, or ecological corridor between the Subproject area and Beyşehir Lake Wetland. Existing land use patterns, topographic conditions, and anthropogenic interventions are considered the main factors limiting ecological interaction between the project area and the wetland ecosystem.

With respect to nationally and internationally recognized areas, it was determined that the Subproject area is located within the boundaries of the Sultan Mountains Important Nature Area (INA). The Sultan Mountains INA is a large-scale area of international biodiversity importance, encompassing a variety of habitat types and ecological zones. The location of the Subproject area within the Sultan Mountains INA is illustrated in Figure 2-11.

However, not all areas within the boundaries of the Sultan Mountains INA exhibit the same level of ecological sensitivity or habitat integrity. The section of the INA where the Subproject area is located has been subject to long-term agricultural activities, infrastructure elements, and intensive human use, resulting in a substantially altered, degraded, and modified habitat structure. Field surveys and existing condition analyses did not identify any natural habitat structures, sensitive ecosystem components, original floristic assemblages, or critical fauna use areas that constitute the conservation values of the Sultan Mountains INA within the Subproject area or its immediate surroundings.

Within the Subproject area and the defined Area of Influence, no habitats of significant importance for species classified as Critically Endangered (CR) or Endangered (EN) under the IUCN Red List, no habitats specific to endemic or restricted-range species, no migration corridors, breeding or aggregation areas, or unique ecosystems were identified.

There is no direct habitat continuity or ecological corridor between the Project components (including the facility area, access roads, temporary work areas, and receiving environment components) and the ecologically sensitive core areas of the Beyşehir Lake Wetland or the higher-sensitivity sections of the Sultan Mountains INA. Existing land use patterns, topographic conditions, and anthropogenic pressures constitute the primary limiting factors restricting ecological interaction between the Subproject area and these areas.

In line with the World Bank ESSs, potential indirect impact mechanisms such as dust, noise, traffic, and surface runoff were evaluated. Under existing conditions, these impacts are not expected to result in significant, permanent, or irreversible effects on the ecological integrity of the Beyşehir Lake Wetland or the Sultan Mountains INA. Any potential impacts are anticipated to remain localized and confined to the immediate vicinity of the project area.

In conclusion, although the Subproject area is located within the boundaries of the Sultan Mountains Important Nature Area and is situated at a certain distance from the Beyşehir Lake Wetland Buffer Zone, Karaali WWTP is designed as an advanced biological wastewater treatment system with an additional final disinfection that the collected wastewater will be fully treated and the resulting 2.1 tons/day of sludge is treated (thickened), then reused in agriculture as compost, subject to compliance with national regulations and quality standards. Based on existing environmental conditions, habitat characteristics, and the degree of anthropogenic disturbance, the area does not meet the definition of natural habitat or critical habitat under World Bank ESS6. Accordingly, the Subproject is not expected to result in any significant direct or indirect adverse impacts on legally protected areas or nationally and internationally recognized ecological areas.

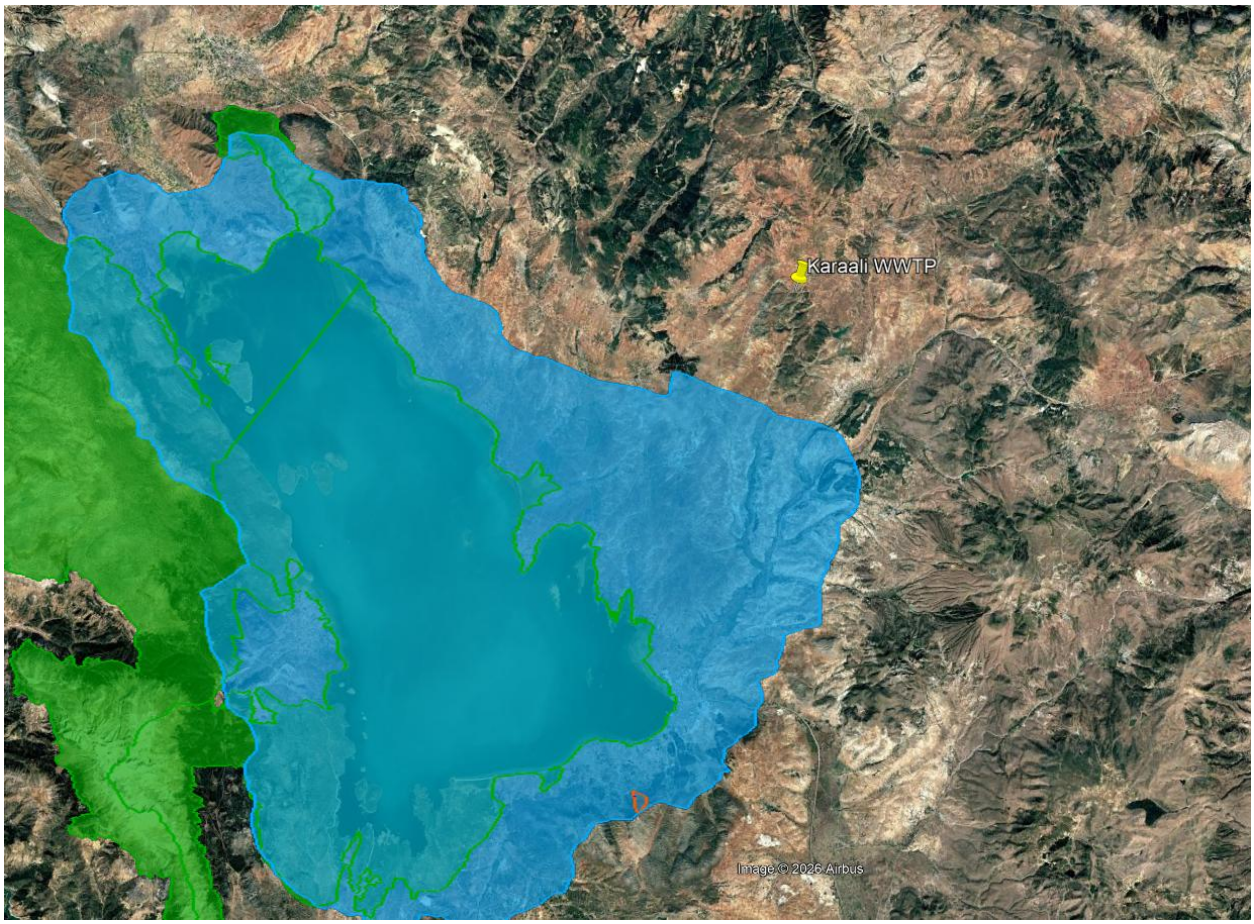


Figure 2-10 Image of the Nearest Legally Protected Area to the Subproject Area

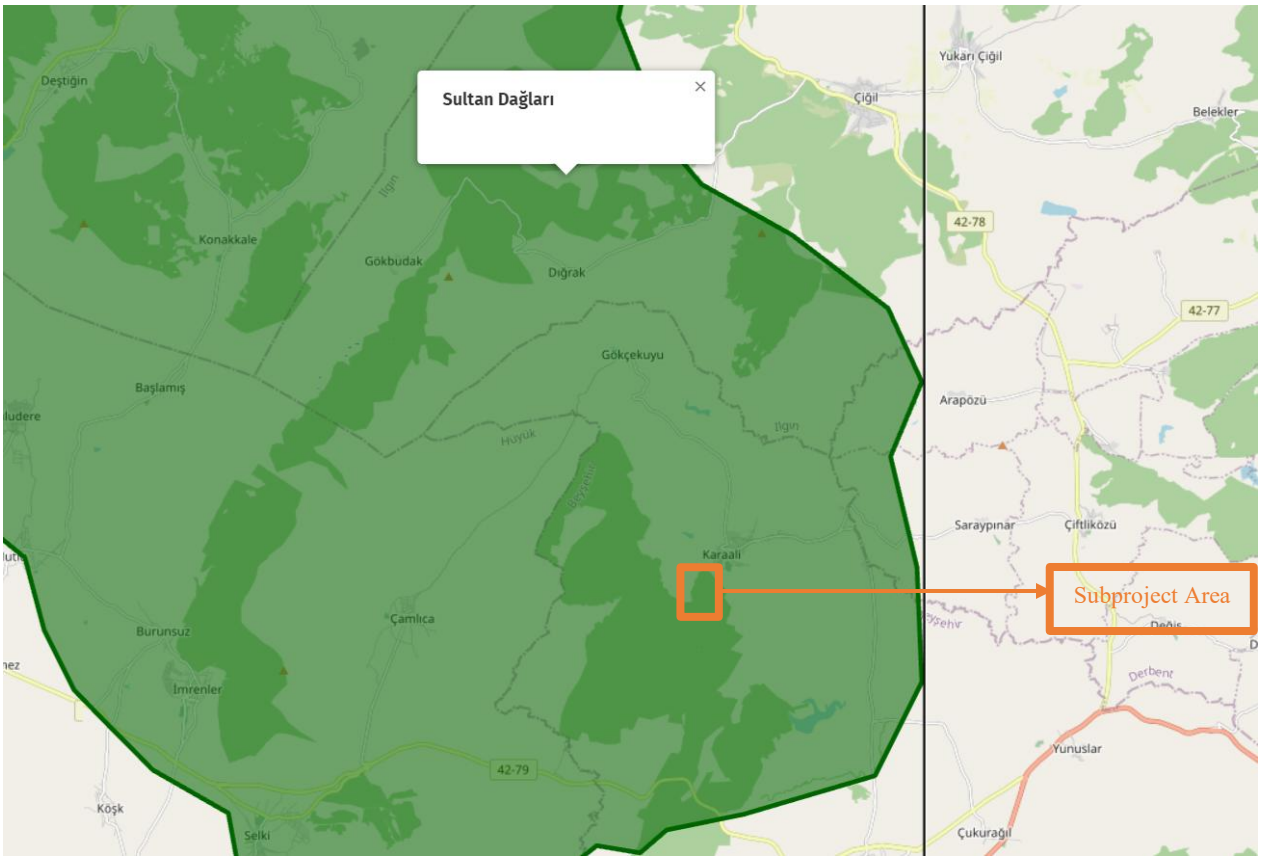


Figure 2-11 Image of the Nearest Internationally and Nationally Recognized Key Biodiversity Area to the Subproject Area

2.7.2.2. Habitats

Based on the field surveys conducted, current condition assessments, and the evaluation of supporting satellite imagery, it has been determined that the Subproject's AoI predominantly consists of habitats subject to anthropogenic pressure, with degraded ecological integrity and a landscape that has largely lost its natural character.

Field observations indicate that the project area and its immediate surroundings exhibit a semi-arid steppe character, locally intersected by surface runoff channels and existing/modified wastewater discharge points, characterized by low vegetation cover, high erosion susceptibility, and significant influence from human activities. Across the area, no ecological corridors, structural diversity, or habitat heterogeneity capable of supporting natural habitat continuity are present.

The main habitat components observed within the AoI are summarized below:

- Open areas and temporary access routes formed or modified as a result of human activities,
- Shallow flow channels that occasionally exhibit surface water accumulation but do not qualify as natural wetlands,
- Degraded steppe patches locally covered by ruderal and sparse herbaceous vegetation,
- Areas exhibiting locally moist conditions due to existing wastewater discharges but lacking natural ecosystem functions.

Based on these characteristics, the habitats within the Area of Influence are classified as "Modified Habitats" in accordance with the World Bank ESS6. No areas meeting the definition of natural habitat or critical habitat, as defined under ESS6, are present within the AoI.

As a result of the assessments, no areas representing a natural forest ecosystem, tree formation, or mature woody vegetation have been identified within the Subproject's AoI. The vegetation observed in the area is predominantly composed of sparse, dwarf, and herbaceous species, while tree-form individuals are either absent or limited to scattered and low-density vegetation elements that do not provide ecological integrity or habitat continuity.

Accordingly, no trees requiring cutting, removal, or transplantation are present within the scope of the Subproject activities. The existing habitat structure neither meets the criteria for natural or critical habitats under ESS6 nor contains woody vegetation that would necessitate tree cutting.

Based on field surveys and literature reviews, it has been determined that the flora and fauna species within the AoI are largely composed of widely distributed, generalist species tolerant to human disturbance. The degraded ecological functionality of the habitats prevents the presence or establishment of sustainable populations of endemic, rare, or threatened species. Therefore, no sensitive habitats or biologically significant species assemblages requiring conservation measures have been identified within the AoI.

Furthermore, the assessments did not identify any highly threatened or unique ecosystems, migration corridors, or breeding or aggregation areas within the AoI. Due to the homogeneous, fragmented, and low ecological value characteristics of the habitat conditions, it is concluded that the area does not possess features requiring additional or special habitat conservation measures under ESS6.

In conclusion, the Subproject's AoI consists of ecologically degraded, low-quality, and modified habitats, and the project activities are not expected to impose any additional pressure on natural or critical habitats. This assessment is consistent with field photographs, expert observations, and secondary data sources.

2.7.2.3. Species

2.7.2.3.1. Flora

Based on the field observations conducted, current condition assessments, and the evaluation of supporting satellite imagery, it has been determined that the Subproject area has been under the influence of human activities for a long period and, as a result, has largely lost its natural floristic structure and exhibits a degraded character. The vegetation observed throughout the area consists of species adapted to semi-arid climatic conditions, with sparse distribution, low vegetation cover, and is predominantly characteristic of disturbed habitats.

The dominant floristic structure within the project area is composed of ruderal, widely distributed, and herbaceous species tolerant to human disturbance. These species are resilient to pressures such as soil degradation, surface erosion, temporary water accumulation, and existing infrastructure activities, and they do not represent high ecological continuity or floristic diversity.

The main plant species identified during the field surveys are presented below:

- *Artemisia vulgaris*
- *Thymus sipyleus*
- *Bromus tectorum*
- *Avena sterilis*
- *Hordeum murinum*
- *Capsella bursa-pastoris*
- *Chenopodium album*
- *Eryngium campestre*
- *Verbascum* spp.
- *Centaurea* spp.

These species are widely distributed across Türkiye, non-endemic, not listed as threatened under the IUCN Red List, and commonly observed in disturbed areas. No dense, multi-layered, or natural plant community structure is present within the project area.

No areas representing a natural forest ecosystem, tree formation, or mature woody vegetation have been identified within the Subproject area or the AoI. Tree-form individuals are either completely absent or limited to sparse and scattered vegetation elements that do not provide ecological integrity or habitat continuity. Therefore, no trees requiring cutting, removal, or transplantation are present within the scope of the Subproject activities.

The existing floristic structure does not meet the criteria for natural habitat or critical habitat as defined under ESS6, and no evidence indicating the presence of endemic, rare, or threatened plant species has been identified. In addition, no sensitive plant communities or special floristic areas requiring conservation measures were observed during the field surveys.

Overall, the Subproject area exhibits a floristic structure characterized by low diversity, degradation, and herbaceous species adapted to human disturbance, and the project activities are not expected to result in significant or irreversible impacts on the vegetation. Accordingly, no additional conservation measures, species relocation, or special mitigation requirements are necessary with respect to flora.

2.7.2.3.2. Fauna

Based on the conducted field surveys, baseline condition analyses, and the evaluation of supporting satellite imagery, no significant fauna presence or active nesting/breeding activity was recorded within the Subproject area and the AoI. The long-term exposure of the area to human activities, the fragmented structure of habitats, and the weak ecological connectivity significantly limit faunal diversity.

During the field investigations, not only direct wildlife observations but also indirect indicators of presence such as hair, feathers, feces, footprints, nest remnants, soil burrows, and similar signs were assessed; through these indicators, the presence of species or their potential habitat use was interpreted within an ecological context. The evaluations indicated that these indicators do not point to a permanent or intensive fauna presence in the area, beyond temporary use or incidental passage.

There are no wooded areas or dense vertical habitat structures within the project area. This condition significantly reduces the suitability of the area, particularly for tree-dependent bird species, species requiring nesting habitats, and habitat-specialist fauna groups. The sparse, low-growing, and herbaceous character of the existing vegetation further limits sheltering and concealment opportunities for fauna.

The soil surface burrows and cavities observed across the area indicate microhabitats that may have been used temporarily by small mammals (e.g., rodents) or certain reptile species for shelter or movement. However, no direct evidence was found indicating that these structures function as active nests, breeding sites, or areas of continuous use. The distribution and density of these burrows do not suggest high population densities or biologically significant fauna use within the area.

The existing/modified aquatic environments and surface water accumulations within the Area of Influence do not possess the characteristics of natural wetlands; however, they may be used on a limited basis as temporary feeding or resting areas by some common and human-tolerant bird species. This use is considered to be irregular and temporary, and it has been concluded that no aquatic habitat with permanent nesting, breeding, or colonization functions exists within the area.

As a result of field observations and literature review, no direct or indirect records were obtained indicating the presence of any protected, endemic, rare, or IUCN Red List listed threatened fauna species within the Subproject area and the AoI. Observed or potentially occurring fauna species are limited to those that are widely distributed across Türkiye, tolerant to human disturbance, and capable of adapting to degraded habitat conditions. This indicates that the observations are consistent with typical urban and semi-rural wildlife (e.g., sparrows, pigeons, and small mammals).

Furthermore, no fauna use areas considered sensitive under ESS6 such as migration corridors, aggregation areas, breeding sites, or nursery areas were identified within the Area of Influence. The homogeneous, fragmented, and low ecological value of the habitat demonstrates that the area does not possess sensitive or critical characteristics in terms of fauna.

In conclusion, the Subproject area is characterized by limited species diversity, temporary and low-intensity fauna use, and degraded habitat conditions, and it is not expected that project activities will result in significant or irreversible impacts on fauna. Therefore, no additional fauna-related conservation measures, species-specific monitoring programs, or special interventions are required.

2.7.2.4. Invasive Alien Species

The assessment of the presence of invasive alien species within the Subproject area and the defined AoI was conducted based on field surveys, national biodiversity databases (relevant records of the Ministry of Agriculture and Forestry), available literature, and supporting desktop analyses. In this context, literature review and data screening were also carried out using the Türkiye Invasive Alien Species Information System (TURİST) operated by the Ministry of Agriculture and Forestry *(https://turist.tarimorman.gov.tr/Map)*.

As a result of the assessments, no direct or indirect evidence indicating the presence of any flora or fauna species classified as Invasive Alien Species (IAS) was identified within the Subproject area or the AoI boundaries. During the field surveys, both live individuals and indirect indicators of presence (such as tracks, nests, remains, etc.) were evaluated, and no signs suggesting permanent or temporary use of the area by invasive species were detected.

Although it is known that some invasive alien species recorded in national databases (particularly fish species associated with aquatic ecosystems) may occur at certain distances from the Subproject area, there is no direct hydrological connection, habitat continuity, or ecological corridor linking these species to the project area. The absence of a natural, permanent aquatic habitat within the Subproject area, together with the temporary nature of existing/modified surface water accumulations, makes the access to or establishment of invasive aquatic species within the area ecologically unlikely.

Within this framework, no direct or indirect interaction, spread risk, or adverse impact mechanism is anticipated between the Subproject activities and invasive alien species. Under the existing conditions, no additional monitoring, control, or management measures related to invasive alien species are required.

2.7.2.5. Ecosystem Services

World Bank Environmental and Social Standard 1 (ESS1) emphasizes the importance of identifying and analyzing biodiversity and ecosystem services within the scope of environmental and social risk and impact assessments. Accordingly, during the biodiversity assessment carried out for the Subproject, ecosystem components, habitat characteristics, species presence, and ecosystem services that could potentially be affected by project activities within the defined AoI were evaluated.

As part of this assessment, ecosystem services within the AoI were analyzed in accordance with the classification summarized under World Bank Environmental and Social Standard 6 (ESS6), which includes provisioning, regulating, cultural, and supporting services. This analysis was supported by field observations, the review of satellite imagery, national biodiversity data sources, and desktop studies based on literature review.

Provisioning Ecosystem Services

As a result of the assessments, no provisioning ecosystem services related to natural resources directly used or economically utilized by local communities (such as fuelwood, drinking and domestic water, fisheries, or medicinal and aromatic plants) were identified within the Area of Influence. The existing land use pattern, degraded habitat characteristics, and low biological productivity of the area are not suitable for the provision of such services.

Regulating Ecosystem Services

No natural systems capable of providing regulating ecosystem services such as flood control, natural water filtration, carbon sequestration, microclimate regulation, or air quality improvement were observed within the Area of Influence. The existing/modified surface water accumulations and aquatic features do not possess natural wetland functions and therefore lack the capacity to deliver regulating services. The topographic structure, hydrological characteristics, and current land use pattern of the area do not support the active provision of regulating ecosystem services.

Cultural Ecosystem Services

No evidence was found indicating that the Area of Influence is used at local or regional scale for recreational, tourism, aesthetic, spiritual, or cultural purposes. The area does not hold significance in terms of cultural ecosystem services with respect to accessibility, landscape value, or current usage patterns.

Supporting Ecosystem Services

Due to the degraded and fragmented nature of habitats, low floristic and faunal diversity, and the lack of continuity in ecological processes, no functional supporting ecosystem services such as pollination, availability of natural breeding or nesting areas, support to food webs, or biological productivity were identified. Field data indicate that the AoI does not possess the ecological capacity required to provide such ecosystem services.

2.7.3. Socio-Economic Environment

2.7.3.1. Demography and Population

Beyşehir District

Beyşehir is one of the central districts of Konya Province, located on the southwestern side of the province and surrounding Lake Beyşehir, which is the largest freshwater lake in Türkiye. The district has a total population of approximately 80,000 people, with a moderate population density compared to provincial averages. Agriculture, fisheries, and livestock breeding are the predominant livelihoods, supported by small-scale trade and tourism activities related to Lake Beyşehir. The demographic profile is characterized by a predominantly rural population, although the district center hosts a growing share of service and commercial activities.

Table 12 Population Data

Location	Female	Male	Total
Karaali Neighbourhood	1144	1183	2327
Beyşehir District	40061	39568	79629
Konya Province	1172944	1157080	2330024

Karaali Neighbourhood, which is the primary settlement within the defined Area of Influence, has a total population of 2,327 people (1,144 female and 1,183 male). Karaali's population has remained broadly stable over recent years with minor fluctuations. The recorded population was 2,318 in 2018, 2,342 in 2019, 2,336 in 2020, 2,313 in 2021, 2,299 in 2022, 2,330 in 2023, and 2,327 in 2024. This trend suggests a relatively stable demographic structure at the settlement level.

Consultations also indicate that Karaali experiences seasonal variation in population, particularly during the summer months when children and youth return to the neighbourhood. This seasonal dynamic is relevant for planning information disclosure and consultation activities, as engagement timing may affect participation levels.

2.7.3.2. Land Ownership Status and Land Use by Affected People

The Subproject site is located on a Treasury-owned cadastral parcel (Parcel No. 257, Block 1) that has been officially allocated (see Annex C) to the Konya Water and Sewerage Administration (KOSKİ) for the construction of the wastewater treatment plant. Within the scope of this initiative, the Karaali Wastewater Treatment Plant (WWTP) Project has been planned by KOSKİ under the framework of Law No. 6360 dated 12/11/2012 in order to address the wastewater management needs of Beyşehir District, Konya Province. The Project will be implemented in Karaali Neighbourhood, Beyşehir District, on a parcel with a total surface area of 4,318.69 m². The entire parcel will be utilized for the construction of the WWTP process units and auxiliary facilities. Accordingly, no private land acquisition is required for the Project site itself.

An existing wastewater collector line is already available to serve the WWTP; therefore, no new collector line will be constructed under the Subproject. The properties of the existing collector line are that it is approximately 1500 meters of 300 mm diameter HDPE corrugated pipes. In addition, in order to convey the treated effluent to the receiving environment, approximately 60 meters of discharge pipeline will be constructed. The designated discharge point has been determined as Çay Stream, and the discharge line will be located immediately adjacent to the Project site.

From a land acquisition perspective, both the WWTP parcel and the area through which the discharge pipeline will pass are publicly owned. The WWTP parcel has been formally allocated to KOSKİ, and the discharge line corridor falls within an existing public road right-of-way. Accordingly, the Project does not require the use of privately owned land, expropriation, negotiated settlement, temporary land occupation, or result in any physical or economic displacement.

Land use patterns in the surrounding area reflect the rural character of Karaali Neighbourhood. Based on site-specific findings, land within and around the Area of Influence (AoI) is mainly used for agricultural production, pasture areas, and livestock-related activities. The settlement structure in the vicinity of the Project site is characterized by dispersed rural land use rather than dense residential development.

Site visits and stakeholder consultations indicate that, provided appropriate dust suppression and other mitigation measures are implemented during the construction phase, agricultural lands and livestock activities are not expected to be adversely affected by the Subproject. No permanent loss of residential land, restriction of access to agricultural plots, or physical displacement of households has been identified within the scope of the Subproject. The Project footprint remains limited to publicly owned land, and all ancillary works are confined to existing infrastructure corridors, thereby minimizing potential environmental and social impacts.

2.7.3.3. Employment and Means of Livelihood

The main means of livelihood for affected people within the Area of Influence of the Subproject are agriculture and livestock breeding, which constitute the primary economic activities at the settlement level. Employment is predominantly household-based and seasonal in nature, reflecting the rural socio-economic structure of Karaali Neighbourhood. Small-scale and informal economic activities support household incomes, particularly during agricultural seasons.

Site-specific findings and stakeholder consultations indicate that the Subproject is not expected to result in permanent loss of income or livelihoods. During the construction phase, potential impacts on livelihoods are anticipated to be temporary and limited in scale. Provided that appropriate mitigation measures are implemented, including dust control and site management practices, agricultural production and livestock-related activities are not expected to be adversely affected.

The Subproject may generate limited short-term employment opportunities during the construction phase.

2.7.3.4. Education and Health Services

Access to education, health, and social services for communities within the Area of Influence of the Subproject is provided through existing facilities located within and around Karaali Neighbourhood. The nearest settlement to the Subproject site is located approximately 1,000 meters away (see Figure 2-12).

Based on site-specific findings, the nearest mosque is located at a distance of approximately 1,200 meters from the Subproject site. The closest Family Health Center is situated approximately 1,600 meters away, while the nearest school is located at a distance of approximately 2,300 meters (see Figure 2-12). These facilities serve the local population and are accessed via existing local road connections.

No education or health facilities are located within the immediate vicinity of the Subproject site, and no direct physical impacts on such services are anticipated. Potential temporary and indirect effects, if any, are expected to be limited in nature.

Figure 2-12 Subproject's Impact Area and Nearest Settlement

2.7.3.5. Infrastructure Services

The settlement located within the Subproject area benefits from basic infrastructure services, including water supply, sewerage systems, electricity distribution, and solid waste management. Water supply and sewerage services are provided by the Konya Water and Sewerage Administration (KOSKİ), while electricity distribution services are provided by MEDAŞ. Solid waste management services are delivered by the responsible municipality. These services are operational and are used by formal residential users and, to a limited extent, by formal commercial users within the Subproject area.

Areas Currently Benefiting from Existing Infrastructure

Based on desk-based studies and field observations conducted within the scope of the ESMP, the settlement located within the Subproject area (Karaali Neighborhood) is currently benefiting from water supply, sewerage, electricity distribution, and solid waste management services. Water supply and sewerage services are provided and operated by KOSKİ, while electricity distribution is

provided by MEDAŞ. Solid waste management services are carried out by the relevant municipality. All services are active and adequately meet the basic needs of the local population under current conditions.

Sewerage infrastructure is present in the Karaali Neighborhood under pre-Subproject conditions and is operated at the neighborhood level. However, the existing sewerage system does not constitute a comprehensive and centralized wastewater collection and treatment system. Under pre-Subproject conditions, wastewater generated within the neighborhood is not collected and treated at a single centralized wastewater treatment facility.

Infrastructure Services to be Provided or Upgraded under the Subproject

Under the Subproject, the existing sewerage infrastructure will be retained, and the sewerage system of Karaali Neighborhood will be connected to a single centralized advanced biological wastewater treatment plant through a collector network. Through this arrangement, the currently fragmented and locally operated sewerage system will be integrated into a centralized and comprehensive wastewater collection and treatment system. This situation will not require any construction work. This will be achieved through the treatment and controlled discharge of sewage water.

Accordingly, the Subproject does not result in the provision of sewerage infrastructure to the neighborhood for the first time. However, the Subproject will enable Karaali Neighborhood to benefit for the first time from a centralized and integrated wastewater treatment service. Water supply, electricity distribution, and solid waste management services will continue to be provided under the existing service arrangements by the responsible institutions.

Users and Income Loss Considerations

Infrastructure services within the Subproject area are primarily used by formal residential users and, to a limited extent, by formal commercial users. Desk-based studies and field observations did not identify any informal users associated with the existing infrastructure services within the Subproject area.

Within the scope of the social environment (baseline) assessment, no individuals, households, or businesses have been identified as being likely to experience temporary or permanent income loss related to existing infrastructure services. The Subproject does not involve activities that would disrupt the use of current infrastructure services or directly affect income-generating activities linked to these services.

Energy Transmission Line

An Energy Transmission Line (ETL) is planned to supply electricity to the Karaali WWTP. According to preliminary information provided by KOSKİ, the line is expected to be approximately 1.6 km in length. The tentative alignment remains subject to final technical confirmation. An indicative alignment of 1.6 km Energy Transmission Line (ETL) and its location is shown in Figure 2-3. Final routing details and any associated land-related considerations will be incorporated into the ESMP before construction.

Associated Facility – Water Supply

A 1.8 km potable water connection line will be constructed to connect the facility to the existing KOSKİ main network. This line will be financed and implemented by KOSKİ.

2.7.3.6. Transportation and Traffic

Transportation within the Area of Influence of the Subproject is primarily based on existing local roads serving Karaali Neighbourhood and surrounding agricultural areas. These roads are mainly used for residential access, agricultural activities, and livestock-related transportation. The Subproject site is accessible via the existing road network, and no new permanent access roads are planned within the scope of the Subproject.

Based on site-specific observations, current traffic volumes in the vicinity of the Subproject site are low and largely limited to local use. During the construction phase, an increase in traffic related to the movement of construction vehicles, equipment, and materials is expected; however, this increase is anticipated to be temporary and limited in scale.

Provided that appropriate traffic management and safety measures are implemented during construction, no long-term or significant adverse impacts on local transportation patterns or road safety are expected.

2.7.3.7. Cultural Heritage (Tangible[1] and Intangible[2])

Tangible Cultural Heritage

No cultural heritage assets are expected to be present, but if such a cultural asset is encountered, the construction works should be stopped by informing the relevant national authorities (Konya Regional Directorate for the Protection of Cultural Assets). The Chance Finds Procedure is prepared (see Annex İ), and the construction works will be implemented according to this procedure.

The closest cultural heritage site to the subproject area is the Beyşehir / Yunuslar Inn, located 10.00 km away. The site is included in the UNESCO World Heritage Tentative List (see Figure 2-13).[3]

Figure 2-13 Closest Cultural Heritage to Subproject Area

Intangible Cultural Heritage

Türkiye is a Party to UNESCO's Convention for the Safeguarding of the Intangible Cultural Heritage, and therefore hosts various elements inscribed on the international lists established under this framework. Konya Province is particularly notable for internationally recognized intangible cultural heritage practices, such as the Mevlevi Sema Ceremonies.

Based on field observations and consultations conducted with local mukhtars during the ESMP preparation process, it was determined that the subproject area of influence does not have a spatial or functional association with locations where intangible cultural heritage elements are practiced, including ritual areas, event spaces, or culturally significant focal points. Due to its nature as a rural infrastructure investment, the project site and associated pipeline routes are not used as venues for the regular conduct of cultural events or practices.

2.7.3.8. Disadvantaged or Vulnerable Individuals or Groups

In accordance with the World Bank Environmental and Social Standards ESS1 and ESS10, disadvantaged or vulnerable individuals and groups are defined as those who, due to their socioeconomic conditions, gender, age, health status, disability, household

[1] According to WBG ESF (2018), tangible cultural heritage includes movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. Tangible cultural heritage may be located in urban or rural settings, and may be above or below land or under the water.

[2] According to WBG ESF (2018), intangible cultural heritage includes practices, representations, expressions, knowledge, skills—as well as the instruments, objects, artifacts and cultural spaces associated therewith— that communities and groups recognize as part of their cultural heritage, as transmitted from generation to generation and constantly recreated by them in response to their environment, their interaction with nature and their history.

[3] https://kulturenvanteri.com

structure, or similar contextual characteristics, may face greater difficulties than the general population in accessing information, participating in stakeholder engagement processes, or benefiting from project-related activities.

Based on desk-based reviews and site-specific assessments carried out within the scope of the Subproject, disadvantaged or vulnerable individuals and groups have been identified within Karaali Neighbourhood, which constitutes the defined Area of Influence. No other settlements fall within the AoI of the Subproject.

The available data indicate that different forms of vulnerability are present within Karaali Neighbourhood. In this context, efforts have been made to identify and, where possible, quantify the vulnerable groups based on available data. Identified groups include low-income households dependent on state or external support mechanisms, female-headed households, elderly individuals aged 65 and above, unemployed individuals, and households with children. While the exact number of persons with disabilities could not be quantified, field observations indicate the presence of individuals who may face physical or social barriers in accessing information and participating in consultation processes.

In this context, the following vulnerable groups have been identified in Karaali Neighbourhood:

- Low-income households dependent on state or external support mechanisms (20 households);
- Female-headed households (10 households);
- Elderly individuals aged 65 and above (5 individuals);
- Unemployed individuals (approximately 100 individuals);
- Households with children;
- Individuals with disabilities (based on information obtained from the Mukhtar, no individuals in this category have been identified; therefore, no quantitative data are available).

In addition, Karaali Neighbourhood experiences seasonal population fluctuations, particularly during the summer months, due to the return of children and young family members. This seasonal dynamic is relevant for stakeholder engagement planning and outreach activities targeting vulnerable groups.

The information presented in this section, including findings obtained from consultations with the Mukhtar, reflects the existing social conditions of the Subproject area and provides a baseline overview of disadvantaged or vulnerable individuals and groups, based on the quantitative and qualitative data summarized in Table 13.

Table 13 Disadvantaged or Vulnerable Individuals or Groups

Neighborhood	Poor Households	Female-Headed Households	Elderly Population (75+)	Unemployed
Karaali	20	10	5	100

3. SUBPROJECT ACTIVITIES

3.1. Construction Phase

3.1.1. Construction Activities

Construction activities will be completed in 12 months. A detailed implementation schedule envisaged for the construction phase activities (including provisional acceptance) is presented in Chapter 6.

Construction phase activities are briefly described below:

- Pre-construction activities:

  Mobilization works will include the establishment of temporary site arrangements, site access organization, setting out/survey works, and preparation of working areas. Site preparation activities will include topsoil stripping, land leveling, excavation and fill works, and compaction activities required for the construction of the WWTP units, internal roads, and general site arrangement. Dust emissions may occur during site preparation, excavation, filling, and compaction works; therefore, regular irrigation by water tankers will be applied to control dust. Topsoil will be stripped to a sufficient depth (minimum 30 cm) before commencement of works and stockpiled appropriately to prevent soil compaction and erosion.

  Asbestos-containing materials (ACM) are not expected to be encountered as the Subproject is planned as a new construction on a designated area; however, if any suspect material is identified during site preparation, work will be stopped in the relevant area, and appropriate assessment and handling procedures will be followed in accordance with national legislation and GIIP.

- Construction activities:

  Construction activities will consist of civil works for the main treatment units, including the inlet structure, drum screen, inlet pumping station, biological phosphorus removal tanks, aeration tanks, final sedimentation tanks, disinfection unit, effluent flow measurement structure, sludge storage tank, and operation building. Mechanical, electrical, and instrumentation works (including SCADA automation, cabling, grounding and lightning protection, fire/gas detection and alarm system, and camera system) will be installed as part of the Subproject.

  Construction-related impacts are expected to be short-term and localized, mainly associated with traffic, noise, vibration, air quality, soil disturbance and contamination, and waste generation.

- Construction machinery and equipment:

  Construction machinery and equipment to be used during the construction phase are presented in Table 14 below. All machinery and equipment will be regularly maintained, and oil/fuel leakages will be prevented through routine inspections and good housekeeping practices.

Table 14 Construction Machinery and Equipment

Equipment Type	Quantity	Remarks
Excavator	1	To be used for excavation and trenching works
Compactor / Roller	1	To be used for soil compaction and backfilling works
JCB (Backhoe Loader)	1	To be used for light excavation and material handling

- Water use and wastewater management:

  Water will be used during construction mainly for dust suppression (irrigation of the site) and general site needs. Dust control will be ensured through regular irrigation by water tankers, especially during excavation, filling, and compaction activities.

  Portable toilets will be provided at construction sites. Wastewater generated at construction sites will be collected in impermeable septic tanks where connection is not possible, and will be transported to the Konya WWTP by vacuum trucks

- Waste and hazardous materials management:

A Temporary Waste Storage Area will be established on site, and wastes will be segregated and stored according to their types. Domestic wastes will be delivered to the Municipality, and packaging wastes and hazardous wastes will be delivered to licensed companies. Hazardous wastes will be stored in designated leak-proof areas. Waste containers will be labeled indicating waste type, waste code, amount, and storage date, and measures will be taken to prevent incompatible wastes from reacting with each other.

During construction, the Regulation on the Control of Excavation Materials, Construction and Demolition Waste will be complied with, and excess excavation materials will be reused where feasible or disposed of at licensed facilities.

Fuel and oils will be used for construction machinery; leakages and spills will be prevented through regular maintenance and inspections. There will be no planned fuel storage on site.

- Supply and use of other resources and materials:

  Construction will require typical civil works materials such as aggregates, concrete, gravel, reinforcement steel, piping and mechanical/electrical components. Excavation and fill works will be carried out for unit foundations, internal roads, and site arrangement. Topsoil will be stripped and stored for later reuse, and excess excavated material will be reused if possible or disposed of at licensed sites.

- Supply of materials and equipment:

  Construction materials and equipment will be supplied through licensed and authorized suppliers in compliance with applicable procurement procedures. Priority will be given to durable and locally sourced materials where feasible to reduce resource use and waste generation.

- Decommissioning of temporary construction facilities

  Upon completion of construction, temporary facilities and work areas (e.g., temporary storage areas, temporary sanitary units, and other auxiliary arrangements) will be dismantled and removed. The site will be reinstated to ensure no residual waste remains, and all wastes generated during dismantling will be managed and disposed of through licensed waste contractors in accordance with the Waste Management requirements defined under the ESMP.

3.1.2. Construction Facilities

Construction facilities to be used during construction activities are listed in Table 15. Information on AFs is separately provided in Section 2.4**.**

Table 15. Construction Facilities

Type	On-site or Off-site	Temporary or Permanent	List of Facilities
Administrative Building	• On-site	• Permanent	• A permanent administrative building will be constructed within the WWTP site for use during the operation phase. This facility will remain after completion of construction works and will serve operational and management purposes.
Temporary Site Facility	• On-site	• Temporary	• A 21 m² container will be installed within the WWTP construction site to be used as a temporary site facility during the construction phase. The container will serve purposes such as site management, coordination, and basic welfare needs, and will be removed upon completion of construction works.

Figure 3-1 presents the layout plan showing only the Subproject area. A general layout plan, in which the discharge point is also indicated, is provided in Annex L.

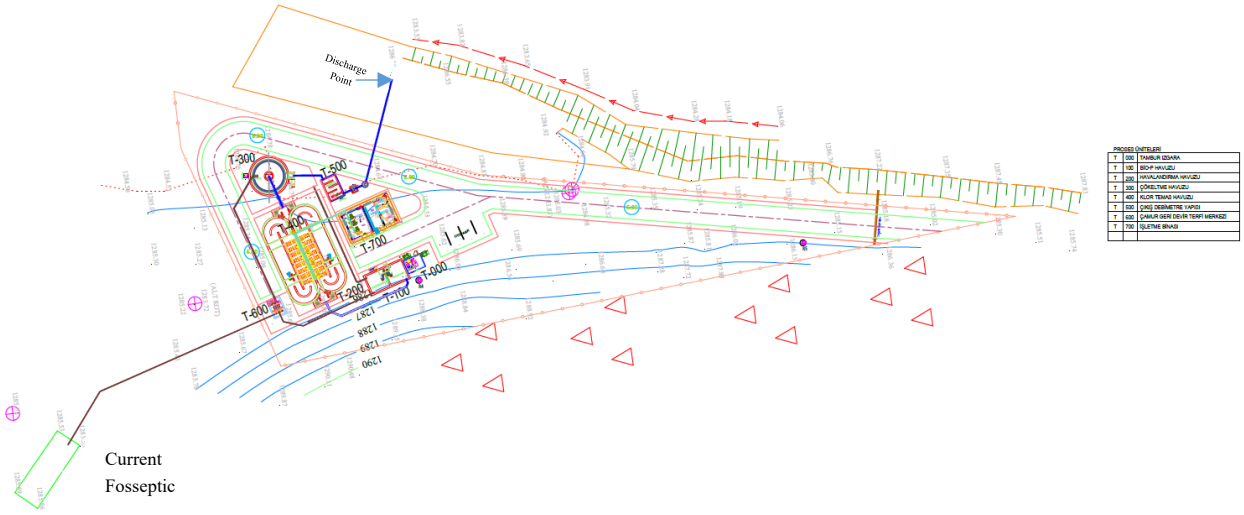


Figure 3-1. Layout Plan of the Subproject

3.2. Operation Phase

3.2.1. Operation Activities

During the operation phase, the Karaali Wastewater Treatment Plant (WWTP) will treat municipal wastewater generated within the Project Subproject service area to meet applicable national discharge standards and protect receiving water bodies. The operation activities include continuous wastewater treatment processes, sludge management, routine maintenance, monitoring, and control activities.

The overall treatment process consists of preliminary treatment, biological treatment, secondary clarification, disinfection, and sludge handling units. Wastewater entering the facility is first subjected to preliminary treatment units such as screening and grit removal, where coarse materials and inorganic solids are removed to protect downstream equipment and improve treatment efficiency. Following preliminary treatment, wastewater is conveyed to the biological treatment units designed to remove organic matter and nutrients through biological processes.

Biological treatment is followed by secondary settling tanks, where treated effluent is separated from biological sludge. The clarified effluent is then conveyed to the disinfection unit (chlorine contact tank) before discharge. The treated effluent quality is designed to comply with the relevant discharge criteria under Turkish legislation.

Approximately 2.1 tons per day of sludge generated during the biological treatment and settling processes is transferred by sludge hauling vehicles owned by KOSKİ to the Beyşehir Wastewater Treatment Plant. Sludge management activities include thickening operations. The sludge will be temporarily stored on site and transported for agricultural reuse as compost, provided that it complies with the applicable national regulations and quality criteria for land application of sludge.

Operational activities also include regular inspection, cleaning, calibration, and maintenance of mechanical, electrical, and instrumentation systems, including pumps, blowers, valves, electrical panels, SCADA automation systems, fire and gas detection systems, and auxiliary units. Preventive maintenance will be conducted to ensure uninterrupted operation and system efficiency.

Influent wastewater characteristics are typical of domestic wastewater generated within the service area, while effluent characteristics are controlled through the treatment processes to ensure compliance with regulatory discharge limits. Sludge characteristics depend on influent load and treatment efficiency and are managed to minimize volume prior to off-site disposal.

Figure 3-2 presents the flow chart of the operation phase activities.

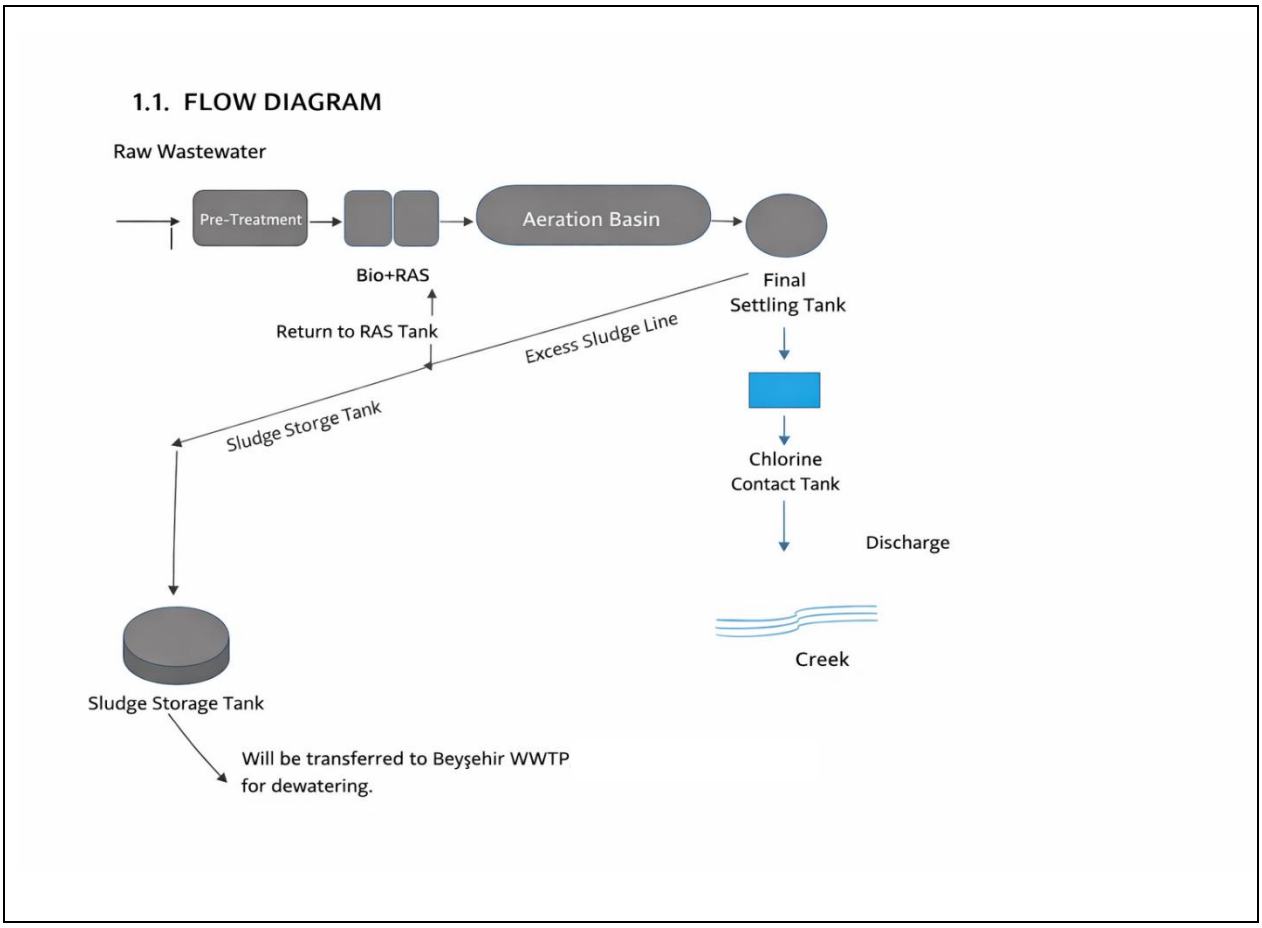


Figure 3-2 Process Flow Chart

3.2.2. Operation Facilities

The Karaali Wastewater Treatment Plant (WWTP) has been designed with the purpose of treating the wastewater generated within its service area and safely discharging the treated effluent into the Beyşehir Lake Basin. The treatment process has been planned based on an advanced biological treatment system that operates according to the principle of Simultaneous Nitrification–Denitrification (SNdN). Within the framework of the plant design, the primary goal is not only the removal of organic matter from the wastewater but also the effective elimination of nitrogen and phosphorus. By achieving this integrated removal of carbon, nitrogen, and phosphorus, the plant is able to meet the stringent discharge standards in a reliable manner, thereby ensuring the protection of the receiving environment.

In the context of selecting the design pollution values, the concentrations were evaluated taking into account regional characteristics, water consumption profile, wastewater generation tendencies, and the analyses conducted.

Based on literature reviews, wastewater analysis results, and project meetings, the concentrations to be used as the basis for the design of the Karaali WWTP are presented in the table below;

Table 16 Design Pollution Values of Karaali Wastewater Treatment Plant

Parameters (mg/L)	Suspended Solid	COD	BOD	Total Nitrogen	Total Phosphorus
Values	300	700	320	100	10

Table 17 Accepted Influent and Effluent Water Quality Criteria and Expected Removal Rates for the Project

Parameter	Inlet (mg/L)	Outlet (mg/L)	Treatment Efficiency (%)
BOD5	320	25	91.67 %
COD	700	125	82.14 %
Suspended Solids	300	60	81.25 %
Total Nitrogen (TN)	100	15	85.00 %
Total Phosphorus (TP)	10	2	80,0 %

Table 18 Karaali WWTP Pollution Load Calculation Table

Parameter	Unit Pollution Load (g/person·day)	Domestic Pollution Load (kg/day)	Total Influent Pollution Load (kg/day)	Concentration (mg/L)	Total Influent Load (ton/year)	Removed Pollution Load (ton/year)	Effluent Pollution Load (ton/year)
BOD_5	39.81	120.00	120.00	300	43.80	40.15	3.65
COD	92.90	280.00	280.00	700	102.20	83.95	18.25
TSS	42.47	128.00	128.00	320	46.72	37.96	8.76
TN	13.27	40.00	40.00	100	14.60	12.41	2.19
TP	1.33	4.00	4.00	10	1.46	1.17	0.29

Screening Unit

At the very entrance of the plant, a screening unit is located in order to remove large-sized solid materials carried with the incoming wastewater. This unit is composed of a coarse screen with a bar spacing of 25 mm and a fine screen with a spacing of 6 mm. The design flow of the plant is 400 m^3/day, while the maximum hydraulic capacity is calculated as 31.3 m^3/hour, and the screens are dimensioned accordingly. Within this unit, large floating or suspended objects are captured, separated from the flow by mechanical cleaning systems, and subsequently removed for appropriate disposal.

Bio-P Tank

The flow coming from the sand and oil traps is directed to the Bio-P anaerobic tanks. These tanks provide an oxygen-free environment suitable for phosphorus-removing bacteria and enable biological phosphorus removal. In the anaerobic environment, microorganisms consume easily biodegradable organic matter and release phosphorus into the wastewater as orthophosphate.

After this stage, the wastewater flows to the aeration tanks. In these tanks, bacteria take up orthophosphate again as polyphosphate and it is removed from the system together with excess sludge. An ORP meter will be installed in the Bio-P tank to monitor the formation of anaerobic conditions.

RAS-DN Tank

The RAS Denitrification tank is the unit where return activated sludge is temporarily retained and mixed under anoxic conditions. In this tank, nitrate and dissolved oxygen within the sludge are reduced.

This process ensures that the organic carbon in the influent wastewater can be used effectively for biological phosphorus removal. The sludge is continuously mixed with submersible mixers to prevent settling and is then transferred to the Bio-P tank.

Biological Treatment Unit

This stage constitutes the most essential part of the plant, as the main biological treatment processes are carried out here. The biological treatment system is composed of anoxic and aerobic tanks. In the anoxic tank, denitrification is achieved by reducing the nitrate content of the recycled wastewater. In the aerobic tank, on the other hand, several important processes take place simultaneously, including the oxidation of organic matter, nitrification, and biological phosphorus removal.

The design flow for this section is 400 m³/day, with a total hydraulic retention time (HRT) of 8 hours. The anoxic and aerobic tank volumes have been designed with a total reactor volume of approximately 800 m³, providing a sludge retention time of approximately 25 days under winter design conditions (12 °C). The mixed liquor suspended solids (MLSS) concentration has been accepted as 3,000 mg/L. Aeration is provided by fine-bubble diffusers that enable efficient oxygen transfer, ensuring that the dissolved oxygen (DO) concentration in the aerobic tank is consistently maintained above 2 mg/L, which is essential for the proper functioning of nitrifying microorganisms. Air required for the fine-bubble diffusers is supplied by a blower system, which has been selected instead of surface aerators in order to achieve higher oxygen transfer efficiency under high influent total nitrogen (TN) concentrations.

Final Sedimentation Tank

Located immediately downstream of the biological treatment units, the final sedimentation tank allows for the separation of activated sludge from the treated wastewater. Based on an average daily flow of 400 m³/day, the surface hydraulic loading rate has been taken as 1.0 m³/m²·h, leading to a required surface area of approximately 50 m². A portion of the settled sludge is returned to the biological tanks to maintain a sufficient biomass concentration, while the excess sludge is directed to the sludge line for further treatment. In the design, the sludge return ratio has been projected as 100–120% of the influent flow, while the excess sludge withdrawal rate is foreseen to be in the range of 1–2%.

Disinfection Unit

This unit has been designed to ensure that the treated wastewater can be discharged safely into the receiving environment without posing a risk to public health or aquatic ecosystems. The design has been based on a peak flow of 752 m³/day. A chlorine dose of 3 mg/L has been calculated, and with a contact time of 30 minutes, a chlorine contact tank with a volume of approximately 15 m³ has been foreseen. As an alternative to chlorination, the use of an ultraviolet (UV) disinfection system has also been evaluated within the project scope.

Sludge Treatment Line

The sludge handling line has been designed to ensure the safe management of excess biological sludge generated during the wastewater treatment process. Sludge production has been calculated based on an approximate dry solids load of 0.7 kg/person·day, corresponding to an estimated daily generation of approximately 2.1 tons of wet sludge. Within the scope of the Project, no sludge thickening or dewatering units are included. The generated biological sludge will be temporarily stored in the sludge tank. The stored sludge will be periodically transported by sludge hauling vehicles owned by KOSKİ to the Beyşehir Wastewater Treatment Plant. At this facility, sludge thickening processes will be carried out, and final disposal or recovery will be managed. Through this approach, safe and controlled sludge management will be ensured without the need for additional on-site sludge treatment units at the Project site.

Beyşehir WWTP, with a design capacity of approximately 11,143 m³/day and operated by KOSKİ, includes sludge treatment units such as aerobic sludge digestion, sludge thickening, and designated sludge storage areas as part of its operational infrastructure.

The following table provides a summary of the main treatment units and their design parameters for the Karaali Wastewater Treatment Plant.

Table 19 Summary Table of Karaali Wastewater Treatment Plant Units

Unit	Purpose	Design Criteria / Parameters
Screen Unit (Drum Screen)	Retention of coarse solids and protection of downstream equipment	Drum screen type; Screen opening: 3,000 micron; Total capacity: 30 m³/h; Number of units: 1
Bio-P Tank	Biological phosphorus removal under anaerobic conditions	Tank volume ≈ 47 m³; Influent wastewater is directly fed to the Bio-P tank; Return activated sludge (RAS) is mixed with influent wastewater in this tank
RAS Denitrification Tank	Return activated sludge is first directed to the RAS Denitrification Tank, where nitrate is removed under anoxic conditions (dissolved oxygen (DO) typically below 0.2–0.5 mg/L), and then transferred to the Bio-P Tank.	Tank volume ≈ 47 m³; Return sludge is first directed to the RAS tank to remove nitrate and then transferred to the Bio-P tank
Aeration Tank	Biological oxidation of organic matter and nitrogen removal	Tank volume ≈ 825 m³; Biomass concentration (MLSS) ≈ 3.75 kg/m³; Aeration provided by diffuser system

Unit	Purpose	Design Criteria / Parameters
Secondary Settling Tank	Separation of activated sludge from treated wastewater	Circular clarifier; Diameter ≈ 8 m; Designed for gravity settling of activated sludge
Disinfection Unit (Chlorine Contact Tank)	Removal of pathogenic microorganisms and hygienic protection of effluent	Chlorination system using sodium hypochlorite; Contact tank designed to ensure adequate disinfection before discharge
Sludge Storage Tank	Temporary storage of excess biological sludge before disposal	Excess sludge stored temporarily and transported off-site for further treatment or disposal

The operational facilities and components of the Subproject will be as follows. The features of these facilities were previously summarized in Table 2. The main operational components of the Karaali WWTP are listed below.

- Inlet works (inlet structure)
- Screening unit (drum screen)
- Biological treatment units (Bio-P and aeration tanks)
- Final settling tank (secondary clarifier)
- Disinfection unit (chlorine contact tank)
- Sludge storage tank
- Auxiliary and supporting facilities (operation/control building, internal roads, and general site arrangement)
- Electrical, mechanical, and automation systems (including SCADA automation, grounding and lightning protection system, fire and gas detection and alarm system, and camera system)

Information on AFs is separately provided in Section 2.4.

3.3. Labor Requirements

The number of workers (at peak) that will work on site during the construction and operation phases of the Subproject is provided in

Table 20.

Table 20. Labor Requirements of the Subproject

Phase	Number of Workers (including contractors and subcontractors)	Planned Accommodation Arrangement
Construction Workers (at peak)	15	Off-site (Hotels if necessary)
Operation Workers (at peak)	5	Off-site (Hotels if necessary)

3.4. Land Acquisition Status

Subproject will be implemented entirely on publicly owned land formally allocated to KOSKİ and within existing public road rights-of-way; therefore, it does not require private land acquisition, expropriation, temporary land occupation, or result in any physical or economic displacement. The land acquisition status of these parcels is summarized in Table 21, while related documentation, including allocation, delivery, and acceptance protocol, is provided in Annex C.

Table 21. Land Acquisition Status for the Subproject

District	Neighborhood/Village	Lot/ Parcel No.	Current Land Ownership (e.g. Applicant Sub-borrower, Private Person, Legal Entity), Treasury, Non-registered, Other)	Type of Parcel (according to the Title Deed) (e.g., Agricultural, Pasture, Raw Soil, etc.)*	Title Deed Area of the Parcel (m^2)	Area to be Acquired and Used by the Subproject (m^2)	Properties before Acquisition (Structures, Houses, Trees, Crops, etc.)	Land Acquisition Method (e.g., Purchase, Lease, Allocation, Easement Rights, etc.)	Status of Land Acquisition
Karaali Wastewater Treatment Plant									
Beyşehir	Karaali neighborhood	257/1	Treasury (State-owned land)	Public land / Raw land (non-residential)	4,318.69	4,318.69	No residential structures, houses, permanent crops, or economic assets identified	Allocation to KOSKİ for public infrastructure use	Completed (Treasury land allocated; no private land acquisition required)
Energy Transmission Line									
-	-	255/32	Treasury	Pasture land / Road	953.678,02	≈ 1,400	Trees	Expropriation	Completed
Potable Water Supply Line									
Beyşehir	Karaali neighborhood	-	Public	Road	-	-	-	Expropriation	Completed

* There are no seasonal shepherds using pastureland within the project area of the Karaali WWTP. Pasture use is predominantly carried out by the residents of Karaali Neighborhood.

3.5. Permitting Status

The status of permits, licenses, and approvals required to be in place before starting construction is presented in Table 22.

Table 22. Status of Permits for the Construction Phase

Permit / License / Approval	Status (In place / Not in place)	Remarks / Notes
EIA Decision	In Place	The Subproject is subject to the Turkish EIA Regulation (Official Gazette No. 31907 dated 29.07.2022). Following the submission made to the Konya Provincial Directorate of Environment, Urbanization and Climate Change (Ref: 2025/D.035), the Project was evaluated under Annex-II of the EIA Regulation. Based on the official letter dated 13.02.2026 and numbered E-47342952-220.03-14914879, the "Karaali Wastewater Treatment Plant (400 m³/day)" Project was assessed and determined to be "Out of Scope", as its design capacity remains below the threshold value specified in Annex-II of the EIA Regulation
Project Approval	Not in place (process ongoing)	The official letter dated 19.12.2025 and numbered E-20824400-220.04.02-117679 has been submitted to the relevant authority. This letter relates to initiating the project approval process and conducting the required permit/evaluation procedures for the Karaali Wastewater Treatment Plant.
Zoning Plan Approval	Not in place (process ongoing)	The official letter dated 27.11.2025 and numbered E-20824400-220.04.02-115784 has been sent to Konya Metropolitan Municipality, Department of Zoning and Urban Planning. The letter requests the institutional opinion regarding zoning status and planning compliance for the Karaali Wastewater Treatment Plant investment. KOSKİ has submitted official applications to the relevant institutions. At the current stage, institutional opinions are being awaited. Construction activities will not commence until the zoning plan is formally approved.
Permit for Non-Agricultural Land Use from Konya Provincial Directorate of Agriculture and Forestry	Not in place (process ongoing)	The official letter dated 19.12.2025 and numbered E-67894191-230.04.02-22579801 has been issued by the Konya Provincial Directorate of Agriculture and Forestry. The letter provides the institutional opinion and outlines the required steps for obtaining the non-agricultural land use permit under Law No. 5403 (including TAD (Tarım Arazileri Değerlendirme ve Bilgilendirme) Portal procedures, alternative site assessment, and obtaining DSİ institutional opinion, etc.). The TAD Portal application has been initiated, and the required institutional opinions are being coordinated. The final non-agricultural land use permit has not yet been issued.
Provincial Directorate of Health Opinion Letter	In place	The "Institutional Opinion" letter dated 31.12.2025 and numbered E-45453077-129-299825943 has been issued by the Provincial Directorate of Health. The letter states that, based on the official letter dated 19.12.2025 and numbered 117679 of KOSKİ General Directorate, Wastewater Treatment Plants Department, the allocated area for the Karaali Advanced Biological Wastewater Treatment Plant was inspected on-site on 29.12.2025 and assessed in terms of environmental and public health. Following the inspection, it was concluded that there is no objection under the relevant institutional legislation.
Opinion Letter of the General Directorate of Nature Conservation and National Parks, 8th Regional Directorate	In place	The application letter dated 19.12.2025 and numbered E-20824400-220.04.02-117644 has been submitted to the relevant institutions. This letter was prepared to obtain the required institutional opinions and formally initiate the permitting processes within the scope of the Karaali Wastewater Treatment Plant investment. The institutional opinion letter dated referenced E-98572095-622.02-22670323 has been received from the 8th Regional Directorate of the General Directorate of Nature Conservation and National Parks (subject: "Wastewater Treatment

Permit / License / Approval	Status (In place / Not in place)	Remarks / Notes
		Plants"). The letter states that there is no objection to the Karaali Advanced Biological Wastewater Treatment Plant Project planned to be constructed in Karaali Neighborhood, Beyşehir District, in accordance with Law No. 2873 on National Parks, Law No. 4915 on Land Hunting, and the Regulation on the Protection of Wetlands. The letter also notes that the final discharge point of the wastewater treatment plants is Beyşehir Lake and emphasizes that compliance with the relevant environmental legislation provisions must be ensured.

4. ESMP MATRIX: RISK AND IMPACTS, MITIGATION AND MONITORING

As the Subproject involves both construction and operation activities, the ESMP comprises two components as follows:

- Construction ESMP Matrix
- Operation ESMP Matrix

The roles and responsibilities for implementing this ESMP are defined in Chapter 5.

Implementation arrangements for the ESMP are outlined in Section 1.5.

The Contractor's E&S management plans and procedures, which support the implementation of the E&S assessment documents, are listed in Section 4.5.

4.1. E&S Risk and Impacts of the Subproject

This section provides a concise, site-specific summary of the anticipated environmental and social risks and impacts of the Karaali Wastewater Treatment Plant (WWTP) Subproject during the construction, defect liability, and operation phases. The assessment is structured in line with the baseline topics presented in Section 2.7 and focuses on the key receptors within and around the Subproject footprint, including nearby settlements and community assets, local access routes, agricultural land use, surface water resources (including the receiving environment), and relevant biodiversity features within the area of influence.

The Köşk WWTP, Karaali WWTP, and Kıreli WWTP projects are located approximately 16 km (Köşk–Karaali), 10 km (Kıreli–Köşk), and 24 km (Kıreli–Karaali) apart in straight-line distance. Each facility is accessible through different transportation routes and does not rely on a shared high-density traffic corridor during construction or operation. Accordingly, potential cumulative environmental, social, and occupational health and safety (OHS) impacts related to heavy vehicle traffic, dust emissions, noise, and road safety are not expected to spatially overlap to a significant extent. Given the physical separation of the sites and their location within different settlement contexts, cumulative social risks associated with workforce mobility and community interaction are anticipated to remain limited.

However, since the treated effluents of all three WWTPs are planned to ultimately discharge into the Beyşehir Lake basin, a cumulative assessment is required in relation to the receiving environment. Considering the current risk of untreated or insufficiently treated domestic wastewater reaching the lake or its tributaries, the implementation of these WWTP investments will significantly reduce organic load, suspended solids, and nutrient loads (particularly nitrogen and phosphorus). In this respect, the simultaneous operation of the facilities is expected to create a cumulative positive environmental impact by improving the water quality of Beyşehir Lake, reducing eutrophication risks, and contributing to the protection of the lake ecosystem. Provided that proper operational standards, regular monitoring, and full compliance with discharge criteria are ensured, the overall long-term cumulative impact of the projects on Beyşehir Lake is expected to be positive.

The main anticipated construction-phase impacts are temporary and localized, primarily related to dust and exhaust emissions, noise, increased traffic and road safety risks, soil disturbance, waste generation, and temporary resource use. During operation, the key potential impacts are associated with treated effluent discharge performance, sludge handling and transport, odor nuisance, and continuous energy and chemical use, while the Subproject is expected to deliver a long-term environmental benefit by improving domestic wastewater treatment in the Beyşehir Lake Basin. Mitigation and monitoring measures are provided separately in the ESMP matrices (Sections 4.2 and 4.3) and are not repeated in this section.

This section outlines the potential E&S impacts and risks that may arise from Subproject activities during the construction and operation phases.

The typical Subproject activities are broadly categorized as follows:

- Construction phase
- Operation phase

General, cross-cutting potential environmental impacts that are anticipated to occur across all aspects of the Subproject are summarized below.

4.1.1. Environmental Risks and Impacts

During the construction and operation phases of the Project, environmental and social impacts caused by project activities may arise. Any potential impacts of the Project during the construction phase would be generally short-term with low to medium magnitude that would be locally significant. These impacts would mostly be related to traffic, noise, vibration, air quality, soil disturbance and contamination, waste management, community health and safety, and labor and working conditions (including occupational health and safety). Operation of the Project might create noise, concentrated wastewater, storage and transportation of chemicals, and soil contamination-related impacts on sensitive receptors, and occupational health and safety risks, which could be considered as significant if not properly managed, particularly during maintenance and repair works. Maintenance and repair work of the Project components might have minor environmental impacts, such as soil contamination and increased levels of noise and waste. These impacts will be local and short-term with low significance.

As presented in Section 2.7.3.4 and illustrated in Figure 2-12, the nearest residential settlement is located approximately 1,000 meters from the Subproject site. In addition, the nearest mosque is approximately 1,200 meters away, the Family Health Center is approximately 1,600 meters away, and the nearest school is located at a distance of approximately 2,300 meters. These residential and social infrastructure elements have been identified as potential sensitive receptors in relation to construction-related dust, noise, and vibration.

As indicated in Section 2.7.3.4 and shown in Figure 2-12, no education or health facilities are located within the immediate vicinity of the Subproject site. Therefore, considering the separation distances and the rural, low-density settlement pattern, potential temporary and indirect impacts related to dust, noise, and vibration are expected to remain limited and manageable through standard construction-phase mitigation measures.

4.1.1.1. Soil Erosion, Loss, and Contamination

It should be noted that the impacts of the pre-construction phase are also assessed in the land preparation and construction phase in the following section.

The total excavation volume for the Subproject is estimated at approximately 3,500 m^3. The total construction footprint area is 475 m^2. Topsoil stripping will be limited to the defined construction footprint; however, no separate stockpiling of topsoil is foreseen. All excavated material will be reused on site for backfilling and site grading purposes where technically feasible. Therefore, no dedicated topsoil storage or off-site disposal of excavated soil is anticipated under the current design.

There will be some minor impacts on the soil environment and land use during the construction of the project. However, these impacts are on the project footprint and are restricted to the construction sites. The potential impacts will consist of:

- Leakage and spill of fuels and oils to be used for the construction machinery and equipment can create soil contamination risk.
- Soil erosion during construction works.
- Soil contamination because of oil or fuel leaks or spillage that may result from incidents and unexpected events.
- Alterations of the natural soil and land structure because of soil stripping, levelling, excavation, and filling activities, work of construction machinery.
- Uncontrolled storage or disposal of solid and/or liquid waste can cause soil pollution.
- Piling of soil along public routes and improper reinstatement of soil to its original position

There will not be a planned fuel storage on-site. For any spill risks, there will be spill kits. As the vegetation on site is very limited and the soil property is stony and rocky, the topsoil clearance and ground leveling works will be limited. No impact is expected during the operation phase of the Project. No vegetation management is foreseen for the operation stage. The site and the works conducted during the construction phase will be monitored and reported regularly, including the vegetation, and in case of any requirement, assessed for the operation phase. In the areas where construction activities are completed on the site, land arrangement works will be carried out. Areas that have been damaged during these activities will be reorganized by reducing them to the appropriate slope. Thus, the excavation gaps that will occur in the topography during the activity will be eliminated. Vegetative soil stored to be used for rehabilitation purposes will be used as top cover in necessary areas.

4.1.1.2. Dust and Exhaust Gases Emission

Construction Phase:

During construction of the Karaali WWTP, temporary and localized air quality impacts are expected due to material handling, earthworks, and the movement of construction equipment within the Subproject area. Fugitive dust emissions may occur during site preparation and civil works, particularly during topsoil stripping, excavation and filling, land leveling, compaction, stockpiling, loading/unloading of materials, and truck movements on unpaved surfaces. In addition, exhaust emissions will be generated from

heavy construction machinery and vehicles operating at the site and along transportation routes. Primary exhaust pollutants may include NO_2, CO, HC, SO_2, and particulate matter (PM).

For a screening-level estimate, the main machinery is expected to include 1 excavator, 1 compactor, and 1 JCB. Assuming 264 working days, and an average active operation time of 6 hours/day per equipment unit, the total engine operating time is estimated at 4,752 equipment-hours. Using typical diesel consumption rates for this type of equipment (excavator ~12 L/h, compactor ~10 L/h, JCB ~8 L/h), total diesel consumption is estimated at approximately 47,520 liters over the construction period. Based on standard diesel combustion factors, this corresponds to approximately 127 tCO_2 of total exhaust emissions (47,520 L × 2.68 kg CO_2/L). For criteria pollutants, and in the absence of confirmed engine tier/standards and detailed activity data, a conservative screening range is assumed for off-road diesel equipment: total NOx on the order of approximately 0.9–1.8 tonnes and total diesel PM on the order of approximately 0.03–0.06 tonnes over the full construction period.

Dust generation is expected to be driven primarily by earthworks and movements on unpaved. In the absence of confirmed haulage/truck numbers and travel distances, a conservative unpaved-road dust estimate is presented for screening purposes assuming combined daily movements of construction machinery and associated vehicles of approximately 5 km/day on unpaved surfaces. Over 264 working days, this corresponds to approximately 1,320 vehicle-km. Using typical screening emission factors for unpaved surface travel, fugitive dust generation is estimated on the order of approximately 0.1–0.3 tonnes of PM10 over the construction period, with the upper end reflecting dry-season conditions and increased traffic intensity.

The impacts are expected to be short-term and confined to the construction footprint and the immediate surroundings, and can be effectively managed through implementation of mitigation measures defined in the ESMP, including regular water spraying for dust suppression, good housekeeping practices (e.g., covering transported materials and minimizing dust generation from stockpiles), and ensuring that construction machinery and vehicles are properly maintained to minimize exhaust emissions.

Operation Phase:

During the operation phase, significant dust emissions are not anticipated as the main wastewater treatment activities will take place within the controlled boundaries of the WWTP. Potential air quality impacts may arise intermittently from vehicle movements, routine maintenance activities, and limited use of standby power equipment, resulting in minor exhaust emissions. Compared to the construction phase, these emissions are expected to be low and localized.

Bio-aerosols and odors are not expected to constitute a dominant air quality issue under normal operation conditions, since wastewater conveyance and handling will occur within designated treatment units. Nevertheless, good operational practices, proper housekeeping, and timely maintenance of the facility and related equipment will minimize any potential nuisance effects and ensure that air quality impacts remain negligible.

4.1.1.3. Odor

Construction Phase:

Odor generation during the construction phase is not expected to have a significant impact, as wastewater treatment processes will not be in operation. However, minor and temporary odor nuisance may occur intermittently due to disturbance of wet soils during excavation works and the collection and transport of domestic wastewater generated at the construction site (e.g., from portable toilets and septic tanks, if used). Any such odors would be localized, short-term, and limited to the immediate vicinity of the work areas and along the transportation routes.

To minimize potential odor nuisance, good housekeeping practices will be implemented, and sanitary facilities will be properly managed. Where domestic wastewater is generated on site, it will be collected in impermeable septic tanks (if connection is not available) and transported by licensed vacuum trucks to the Konya WWTP on time without leakage or uncontrolled discharge. If odor complaints occur, additional control measures will be applied, such as increasing the frequency of wastewater removal, limiting on-site retention time, and avoiding storage of odorous materials in open areas.

Operation Phase:

Odor generation is a potential impact during the operation of the WWTP, mainly associated with the inlet works and preliminary treatment units (e.g., screening and grit removal), biological treatment processes, sludge handling, and temporary storage and transport of sludge. If not adequately managed, odors may cause nuisance to workers within the facility and may potentially affect nearby receptors depending on site-specific conditions and meteorological factors.

Odor impacts will be controlled through appropriate operational measures, including maintaining clean conditions in process areas, preventing accumulation of wastewater and sludge in open areas, and avoiding prolonged retention that may cause septic conditions.

Sludge handling will be managed to minimize odor formation, and sludge will be stored for the shortest possible duration and transported off-site in a timely manner using covered/secure transport arrangements. Routine inspection and maintenance of treatment units will be conducted to ensure proper process performance, and any abnormal odor conditions will be investigated and corrected immediately. In addition, landscaping and tree planting around the facility boundary will be considered as a supplementary buffer measure to reduce potential odor dispersion and provide visual screening. Furthermore, the grievance mechanism will be used to record and respond to any odor-related complaints, and corrective measures will be implemented where needed.

4.1.1.4. Climate Change and Greenhouse Gas (GHG) Emissions

The impacts of the Subproject on climate change are twofold: first, the direct adverse effect caused by greenhouse gas (GHG) emissions generated during construction and operation activities; and second, and more importantly, the Subproject's function as a wastewater treatment plant, which will protect the region's water resources and enhance the region's resilience against the adverse effects of climate change.

Construction Phase:

During the construction phase of the KOSKİ Karaali Wastewater Treatment Plant (WWTP) Construction Subproject, the impact on climate change will result from greenhouse gas (GHG) emissions. The majority of these emissions will stem from the use of construction machinery/equipment and material transportation. The main GHG emitted will be CO_2, originating from the combustion of fossil fuels in internal combustion engines. In addition, relatively small amounts of methane (CH_4) and nitrous oxide (N_2O) will also be released during fuel combustion.

For a screening-level calculation, the construction phase is assumed to last 12 months, with 1 excavator, 1 compactor, and 1 JCB operating on average 6 hours/day. Based on typical diesel consumption rates, the total diesel consumption during construction is estimated at approximately 47,520 liters. Using a standard emission factor of 2.68 kg CO_2 per liter of diesel, total direct CO_2 emissions from on-site machinery are estimated at approximately 127 tonnes of CO_2 over the entire construction period. When minor contributions of CH_4 and N_2O from diesel combustion are included, total construction-phase emissions are estimated at approximately 130–135 tCO_2e. Additional emissions from material transportation are expected but remain limited due to the small scale of the Subproject; these will be refined once final haulage distances and trip numbers are confirmed.

The impact of the Subproject on climate change through GHG emissions has been assessed as a direct, adverse impact. Since the scope is regional and limited to the construction period, the impact is considered short-term. Although the sensitivity of the receptor (the atmosphere) has been assessed as moderate, due to the scale of the Subproject and the limited number of construction machines/equipment to be used, the significance of the impact has been considered low.

During the operation phase, GHG emissions will arise from the energy consumption required to operate the facility (pumps, aerators, etc.) and from methane (CH_4) and nitrous oxide (N_2O) emissions that may occur during the treatment processes. However, since the Subproject will be designed with modern and energy-efficient technologies, the significance of this impact will also remain low.

Operation Phase:

In contrast to the low-level adverse impact caused by GHG emissions, once operational, the Subproject is expected to create a significant indirect positive impact by enhancing the region's resilience against the adverse effects of climate change. Wastewater treatment plants are critical infrastructure that protect water resources from pollution. Extreme weather events caused by climate change (sudden and heavy rainfall, prolonged droughts) place significant pressure on the quality and quantity of water resources.

With the commissioning of the Karaali WWTP Subproject:

- Domestic and industrial wastewater in the region will be treated and discharged into the environment, thereby protecting sensitive water resources such as Lake Beyşehir and groundwater from pollution.
- The damage to aquatic ecosystems caused by increased pollutant concentrations during drought periods and pollutant loads carried by sudden rainfall events will be prevented.
- In this way, the resilience of local water ecosystems and, consequently, of the local population against problems such as water stress resulting from climate change will be strengthened.

In conclusion, the greenhouse gas emissions generated during the land preparation, construction, and operation phases of the KOSKİ Karaali WWTP Subproject are assessed as short-term and low-significance adverse impacts. However, the Subproject's core function—wastewater management—will reduce the pressure of climate change on water resources, thereby creating a long-term, permanent, and highly significant positive impact by strengthening the resilience of the region. Therefore, in the context of climate change, the net impact of the Subproject is considered positive, as it will protect water resources and enhance ecosystem resilience.

4.1.1.5. Environmental Noise

Construction Phase:

During the construction phase, noise impacts are expected due to intensive use of heavy machinery and equipment such as excavators, loaders, dump trucks, compactors/rollers, cranes, concrete mixers/pumps, and generators, as well as vehicle movements and material loading/unloading activities. Noise levels may temporarily increase within and near the Subproject area, potentially causing nuisance to nearby receptors, particularly along access routes and areas where construction activities are concentrated. These impacts are expected to be short-term, localized, and reversible.

For a screening-level noise estimate, the main equipment planned for the Subproject includes 1 excavator, 1 compactor/roller, and 1 JCB. Typical sound power / sound pressure levels for this type of equipment are generally in the range of approximately 80–90 dB(A) at 10 m under normal operating conditions. For a conservative assessment, a source level of 85 dB(A) at 10 m is assumed for each unit. If all three units operate simultaneously, the combined noise level at 10 m is estimated at approximately 90 dB(A). Noise attenuates with distance; assuming spherical spreading only, the estimated combined noise levels are approximately 84 dB(A) at 20 m, 78 dB(A) at 50 m, 70 dB(A) at 100 m, 64 dB(A) at 200 m, 58 dB(A) at 400 m, and approximately 50 dB(A) at 1,000 m. Accordingly, at the nearest settlement, construction noise is expected to be close to typical daytime background levels and is unlikely to cause significant nuisance. Along the unpaved access routes, short-term noise peaks may occur when construction vehicles pass nearby receptors; these impacts will remain intermittent and localized.

Noise impacts will be managed through the implementation of standard mitigation measures, including proper maintenance of machinery to avoid excessive noise, switching off idling equipment when not in use, restricting noisy activities to daytime working hours where feasible, applying traffic management measures to minimize unnecessary vehicle movements, and using warning signs and controlled access to maintain safe distances. Workers exposed to high noise levels will be provided with appropriate personal protective equipment (PPE) and will receive training on noise-related occupational health risks.

Operation Phase:

During the operation phase, noise will mainly be associated with routine operation of mechanical equipment such as pumps, blowers, and other electromechanical units, as well as periodic maintenance activities and occasional vehicle movements within the WWTP site. Operational noise impacts are expected to be lower than the construction phase and generally confined within the WWTP boundaries due to the controlled nature of operational activities.

To minimize operational noise, regular preventive maintenance will be conducted to ensure equipment operates efficiently and without abnormal noise. Where required, engineering controls such as acoustic enclosures, silencers, or vibration isolation measures will be applied for noise-generating equipment. With these measures in place, operational noise impacts are anticipated to be manageable and not result in significant nuisance to off-site receptors.

4.1.1.6. Impacts Associated with Water, Energy, and Raw Materials Use

Construction Phase: During the construction phase, water will be required mainly for dust suppression (irrigation of working areas), concrete works, and general site needs. Raw materials and resources will be consumed for civil works and installation activities, including aggregates, concrete, gravel, reinforcement steel, piping, and other mechanical/electrical components. These resource demands may lead to temporary pressure on local supply chains, increased traffic due to material transport, and indirect environmental impacts associated with the extraction, production, and transportation of construction materials.

Energy use during construction will be mainly related to fuel consumption by heavy machinery and vehicles, and electricity use for temporary site facilities, lighting, and small equipment. Overall impacts are expected to be temporary and manageable, provided that good construction practices are applied

According to TÜİK data, the per capita wastewater generation rate in Türkiye is 210 liters per person per day (l/cap/day). Based on an estimated workforce of 15 personnel during the construction phase, the total domestic wastewater generation is calculated as approximately 3.15 m^3/day. This quantity represents domestic wastewater generated solely from workforce-related activities and will be managed in accordance with the ESMP and national regulations to prevent any uncontrolled discharge to soil or surface water bodies.

Based on TÜİK data indicating a per capita daily water consumption rate of 255 liters per person (l/cap/day), the estimated potable water demand during the construction phase, assuming 15 workers, is approximately 3.825 m^3/day. This water demand corresponds

to domestic use (e.g., sanitation and hygiene) and will be supplied and managed in a controlled manner to avoid unnecessary resource consumption.

Mitigation measures will include minimizing unnecessary water use, applying controlled and efficient dust suppression practices, maintaining machinery to reduce fuel consumption, and optimizing logistics to reduce excessive vehicle trips. Materials will be procured from licensed and authorized suppliers, and excess excavated materials will be reused where feasible to reduce raw material demand and waste generation.

Operation Phase:

During the operation phase, continuous water and energy use will be required for the treatment processes and auxiliary systems. Energy consumption will primarily be associated with electromechanical equipment such as pumps, blowers, mixers, sludge tank, and automation systems. Operational raw material use will mainly involve chemicals required for treatment processes (e.g., disinfectants) and consumables used for routine maintenance.

These resource demands may result in ongoing operating costs and indirect environmental impacts related to electricity generation and chemical supply. However, the Subproject is designed to provide long-term environmental benefits by improving wastewater treatment performance and reducing pollutant loads to receiving environments.

During the operation phase, assuming 5 personnel on site, and based on the same per capita wastewater generation rate of 210 l/cap/day, the total domestic wastewater generation is estimated at approximately 1.05 m³/day. This amount is limited in scale and will be managed through the operational wastewater management arrangements of the facility, ensuring no adverse impact on the receiving environment.

During the operation phase, with 5 personnel on site, the daily potable water demand is estimated at approximately 1.275 m³/day based on the same per capita consumption rate. Given the limited number of operational staff, this demand is not expected to create significant pressure on local water resources and will be managed in line with good resource efficiency practices.

Mitigation measures will focus on efficient operation and preventive maintenance to reduce energy consumption and optimize process performance, good housekeeping and inventory control for chemicals and materials, and implementation of operational monitoring to detect inefficiencies and losses. Procurement and storage of chemicals and consumables will be managed in accordance with applicable regulations and GIIP to prevent spills, minimize waste, and ensure occupational and environmental safety.

4.1.1.7. Waste

Construction Phase:

During the construction phase, various types of waste will be generated as a result of excavation, filling, building, and related activities. These include excavated soil, construction and demolition debris, small quantities of hazardous waste such as oils, lubricants, filters, and chemical containers, as well as domestic solid waste produced by construction workers. If not properly managed, these wastes could lead to multiple environmental and social impacts. Excavated soil and debris could cause soil erosion, water contamination, and changes in the local landscape. Hazardous wastes may pose risks to soil and groundwater quality and potential health hazards to workers and nearby communities. Domestic waste, if left unmanaged, could attract pests, create odors, and negatively affect the visual quality of the area. Collectively, inadequate waste management during construction may also have indirect impacts on local biodiversity, drainage systems, and overall site safety.

According to TÜİK statistics, the per capita municipal solid waste generation rate is 1.09 kg per person per day. Based on 15 personnel during the construction phase, the total domestic solid waste generation is estimated at approximately 16.35 kg/day. This quantity reflects only workforce-related domestic waste and will be segregated and disposed of through the municipal waste management system in line with the Waste Management Plan and national legislation.

The impact resulting from the generation of construction waste is assessed as direct and negative, with short-term duration, localized extent, and low significance, provided that appropriate mitigation measures are implemented.

Mitigation Measures:

- Segregate and stockpile excavated soil and construction debris; reuse or recycle materials where feasible.
- Collect hazardous waste in labeled, impermeable containers; store safely on-site; transfer to licensed disposal facilities.

- Provide sufficient waste bins for domestic waste; ensure regular collection and disposal through municipal waste systems.
- Implement training for workers on proper waste handling practices.
- Conduct periodic monitoring of waste management practices and adjust measures as needed.

Operation Phase:

During the operation phase, the main waste streams will include sewage sludge, screenings, grit, small amounts of hazardous waste (including waste oils, spent chemicals, and contaminated containers), and domestic solid waste generated by plant personnel. Improper handling of these wastes could result in odor nuisance, attraction of vectors, contamination of soil or groundwater, visual impacts, and potential health risks for plant staff and surrounding communities. In addition, sludge and screenings that are not managed properly could affect the efficiency of the treatment process and may contribute to environmental hazards.

During the operation phase, with 5 personnel, the daily domestic solid waste generation is calculated at approximately 5.45 kg/day based on the same TÜİK per capita value. This limited quantity will be managed through regular municipal waste collection services and in compliance with the operational Waste Management Plan.

The impact resulting from the generation of operational waste (including sludge, screenings, grit, and small amounts of hazardous waste) is assessed as direct and negative, with medium-term to long-term duration if unmanaged, localized extent, and low significance, assuming proper waste management practices are in place.

Mitigation Measures:

- Stabilize, store, and safely dispose of sewage sludge in accordance with national standards and recognized good practice.
- Collect screenings and grit in covered containers; dispose of them through authorized facilities.
- Securely store and handle hazardous waste; transfer to licensed contractors.
- Provide sufficient waste bins for domestic waste; ensure regular collection and disposal through municipal waste management systems.
- Train operational staff on safe waste handling and monitoring procedures.
- Periodically review and improve waste management practices to ensure compliance and minimize environmental impacts.

4.1.1.8. Impacts Associated with Asbestos-Containing Materials

Asbestos-containing materials (ACM) are not expected to be encountered as the Subproject is planned as a new construction on a designated area; however, if any suspect material is identified during site preparation, work will be stopped in the relevant area, and appropriate assessment and handling procedures will be followed in accordance with national legislation and GIIP.

4.1.1.9. Biodiversity Risks and Impacts

Construction Phase:

Terrestrial Flora

During the construction phase, the primary impacts on terrestrial flora are expected to involve the loss or disturbance of vegetation and habitat. The project area is characterized by rough vegetation, and no sensitive habitats or flora species have been identified; therefore, major impacts are not anticipated. Impacts from construction activities will mainly be associated with dust emissions, which are considered temporary. Following the completion of construction and with the application of appropriate mitigation measures, the vegetation composition is expected to regenerate over time. In line with the World Bank ESS6 definition of "Natural Habitat," no sensitive habitats or wildlife species are present within the project area. Accordingly, construction-related impacts on the biological environment are regarded as limited, and, if required, mitigation measures will be applied. The overall impact on flora species is considered to be of low significance.

Terrestrial Fauna

As a result of anthropogenic pressures in and around the project site, large mammal species are not utilizing the area for nesting purposes. Moreover, the project site does not overlap with any bird migration routes. Some minor impacts may occur on fauna species due to construction activities, mostly indirect in nature. Disturbance to fauna and traffic-induced mortality may arise during construction. Additionally, dust and noise generated throughout the construction process may cause adverse effects on fauna species. Nevertheless, such impacts can be avoided or minimized through suitable mitigation practices. Therefore, the impact on fauna species is assessed as low in magnitude.

Operation Phase:

The operational activities of the project are not expected to cause adverse effects on terrestrial or aquatic flora and fauna. With the implementation of necessary preventive actions, the natural environment is anticipated to continue functioning as before once construction has been completed. The overall impact of the operational phase on ecology and biodiversity is therefore evaluated as negligible.

4.1.2. Social Risks and Impacts

4.1.2.1. Labor and Working Conditions

Construction Phase:

During the construction phase of the Karaali Wastewater Treatment Plant (WWTP), the workforce will be employed by the Contractor and, where relevant, subcontractors. The estimated workforce is expected to consist primarily of skilled and semi-skilled workers, including civil construction workers, mechanical and electrical technicians, equipment operators, and support staff. The workforce will be predominantly sourced from the regional labor market to the extent feasible, while specialized technical personnel may be mobilized from outside the district.

In line with ESS2 requirements, all workers engaged under the Subproject will be employed based on written contracts clearly defining terms and conditions of employment, including wages, working hours, overtime arrangements, leave entitlements, and social security coverage. All employment practices will comply with the Turkish Labor Law No. 4857 and relevant occupational health and safety legislation (Law No. 6331).

Occupational health and safety (OHS) risks during construction may include excavation works, operation of heavy machinery, lifting operations, electrical works, working at height, confined space entry (if applicable), and traffic-related risks due to material transport. These risks will be managed through the implementation of a site-specific OHS Plan, risk assessments prior to critical activities, toolbox talks, and mandatory use of personal protective equipment (PPE). Workers will receive induction training prior to mobilization and periodic refresher trainings throughout the construction phase.

Training and awareness activities on SEA/SH and communicable diseases (such as HIV/AIDS) will be provided to all workers as part of induction training prior to site mobilization and through regular refresher trainings throughout the construction period. These trainings will aim to raise awareness on acceptable behavior, prevention of SEA/SH risks, transmission routes of communicable diseases, and protective measures.

A Worker Grievance Mechanism prepared under the scope of the SEP will be implemented at the project site level to also cover project workers and will be communicated to all workers in a language they understand. The mechanism will allow workers to raise concerns related to working conditions, OHS, discrimination, harassment, or any other workplace issue without fear of retaliation. Grievances will be recorded, assessed, and resolved within defined timeframes.

The Subproject strictly prohibits child labor and forced labor. The minimum working age will be verified during recruitment processes, and no person under the age of 18 will be employed in hazardous construction activities. Equal opportunity principles will be applied in recruitment and employment practices, and discrimination based on gender, ethnicity, religion, disability, or other protected characteristics will not be permitted.

Given the rural setting of Karaali Neighborhood and the limited project footprint, no significant labor influx is anticipated. However, the Contractor will implement a Code of Conduct for all workers, addressing respectful behavior toward local communities, prevention of gender-based violence (GBV) and sexual harassment (SH), and compliance with community health and safety rules. The Contractor will ensure that all workers are informed about the Code of Conduct, which includes explicit provisions on SEA/SH prevention, respectful interaction with local communities, and a zero-tolerance approach to any form of harassment or exploitation. Training materials will be delivered in a language understood by the workforce, and participation will be documented.

These measures will be implemented as part of the labor and working conditions framework in line with ESS2 requirements and will be monitored throughout the construction phase.

Operation Phase:

During the operation phase, the wastewater treatment plant will be operated by KOSKİ personnel. Existing institutional human resources policies and occupational health and safety procedures of KOSKİ will be applied. No significant labor or working condition risks are anticipated, and routine operation and maintenance activities will be carried out under controlled conditions.

During the operation phase, awareness trainings on SEA/SH and communicable diseases (such as HIV/AIDS) will be provided to all personnel as part of induction processes and on a periodic basis. These trainings will ensure that workers are informed about appropriate behavior, risk prevention, and protective measures.

All personnel will be informed about the Code of Conduct, which will include provisions on SEA/SH prevention, respectful interaction with local communities, and a zero-tolerance approach to misconduct. Implementation and participation will be documented, and these measures will be monitored throughout the operation phase.

4.1.2.2. Occupational Health and Safety (OHS)

As required by Turkish National Law, the World Bank Group Environmental, Health and Safety (EHS) Guidelines, and İLBANK's Environmental and Social Management System (ESMS), all general and sector-specific occupational health and safety (OHS) hazards and risks will be identified, addressed, and managed throughout the construction, operation, and decommissioning phases.

Prior to site mobilization, the Subproject-specific OHS Management Plan, Emergency Preparedness and Response Plan, Traffic Management Plan, and Incident Investigation Reporting Procedure will be prepared and submitted to İLBANK for review and approval.

A subproject-specific risk assessment will be prepared by qualified OHS professionals. An OHS Training Plan will also be prepared in line with national legislation.

Safe Work Procedures and Safe Operation Manuals will be developed for equipment requiring specialized techniques during transportation, installation, and waste disposal.

Unauthorized Access to the site will be prevented through fencing and the presence of security personnel. Adequate safety signage will be installed in accordance with national regulations.

Personal Protective Equipment (PPE) complying with TS/EN standards will be provided to workers together with training on proper use.

Special tasks such as cutting, welding and confined space entry will only be carried out under a permit-to-work system.

Administrative measures such as adjusting working hours will be applied in case of extreme weather conditions.

Adequate first aid equipment will be provided on site and regular emergency drills including firefighting and evacuation will be conducted.

Construction Phase

During the construction phase, occupational health and safety risks mainly arise from construction activities, use of machinery and equipment, excavation works and site traffic. Main hazard sources during the construction phase include:

- Vehicle operations including interaction with local traffic
- Moving machinery and construction equipment
- Electrical hazards from temporary installations
- Exposure to fuels, oils and construction chemicals
- Use of hand tools and power tools
- Lifting and rigging operations
- Working at height
- Compressed vessels and pressurized equipment
- Extreme weather conditions
- Hot works such as cutting, welding and grinding
- Slip, trip and fall hazards
- Ergonomic risks such as manual handling and repetitive movements
- Confined space entry

- Excavation activities and potential collapse hazards
- Poor hygiene and inadequate sanitation conditions
- Exposure to dust and noise

Operation Phase

During the operation phase, OHS risks are mainly related to operation of equipment, maintenance activities and electrical systems.

Special attention will be given to Lock Out Tag Out (LOTO) procedures due to high-voltage equipment used in the facility. Only trained and certified personnel will be allowed to work on high-voltage systems. All occupational incidents will be documented using the standard forms provided in Annex G and Annex H.

Main hazard sources during the operation phase include:

- Electrical hazards and high voltage equipment
- Mechanical hazards from rotating machinery
- Chemical exposure during operation and maintenance
- Confined space entry during maintenance works
- Noise exposure from equipment
- Slip, trip and fall hazards
- Ergonomic risks during maintenance activities

4.1.2.3. Community Health and Safety

Construction Phase:

Community health, safety, and security impacts of the Subproject are expected mainly during the construction phase, particularly due to dust, noise, traffic, and unauthorized access risks. The wastewater treatment plant will be constructed within Karaali Neighborhood (Beyşehir District, Konya Province).

Mitigation measures such as covering trucks, enforcing speed limits, road watering, regular vehicle maintenance, and installation of warning signage will be implemented to minimize construction-related impacts. In addition, awareness activities conducted through the mukhtars will ensure that local communities, including school children commuting daily to Beyşehir, receive timely information on health and safety precautions.

In addition, potential disruptions to water and energy supply during the construction period may result in temporary inconvenience to local communities, including interruptions to daily household activities and local services. Such disruptions will be minimized through advance planning and coordination with relevant service providers. In the event of unavoidable interruptions, affected communities will be informed in advance, and appropriate mitigation measures will be implemented to reduce the duration and associated impacts.Access to active construction areas will be physically restricted through barriers, fencing, and clearly visible warning signs in order to prevent unauthorized entry and reduce community exposure to construction-related hazards.

Operation Phase:

During the operation phase, community health and safety risks are expected to be limited and mainly related to controlled access to the wastewater treatment plant site. Access to the operational facility will remain restricted to authorized personnel only through fencing and controlled entry points.

A Subproject-level Grievance Mechanism (GM) will remain in place during the operation phase to ensure that communities and workers can raise concerns related to health, safety, security, or other operational impacts. Complaints can be submitted through multiple channels (website, hotline, e-mail, etc.), and all grievances will be recorded, assessed, and responded to within defined timelines. Further details of the GM are provided in the Stakeholder Engagement Plan (SEP), ensuring that both primary and secondary Area of Influence residents can raise their concerns.

4.1.2.4. Traffic Safety

Construction Phase:

During the construction phase, traffic safety impacts may arise due to the movement of construction vehicles transporting materials and equipment to and from the site. Potential risks include increased traffic volume on local access roads, interaction between heavy vehicles and local traffic, and temporary disturbance to road users. These impacts are expected to be localized and short-term.

Operation Phase:

During the operation phase, traffic-related impacts are expected to be minimal. The wastewater treatment plant will generate limited operational traffic, mainly related to routine maintenance and sludge transportation. No significant traffic safety risks are anticipated during operation.

4.1.2.5. Pedestrian Safety

Construction Phase:

Pedestrian safety risks may occur during the construction phase due to increased vehicle movements, particularly near access roads used by local residents. These risks are considered manageable through traffic control measures, warning signage, speed limits, and community awareness activities.

Operation Phase:

During the operation phase, pedestrian safety risks are expected to be negligible, as access to the facility will be restricted and routine operational traffic will be limited.

4.1.2.6. Loss of Land and Livelihoods

Construction Phase:

No loss of land or livelihoods is expected during the construction phase. The Subproject is located on a parcel allocated for public use, and construction activities will not affect agricultural lands, income-generating activities, or access to livelihood resources of local communities.

Operation Phase:

During the operation phase, no impacts on land use or livelihoods are anticipated. The operation of the wastewater treatment plant is not expected to restrict existing economic activities or result in permanent land use changes affecting local residents.

4.1.2.7. Disadvantaged and Vulnerable Individuals or Groups

Construction Phase:

Potential temporary impacts on disadvantaged and vulnerable groups, such as elderly persons, women-headed households, children, and persons with disabilities, may arise during the construction phase due to noise, dust, and traffic-related disturbances. These impacts are expected to be limited and mitigated through information sharing, access control, and community engagement activities.

Operation Phase:

During the operation phase, no specific adverse impacts on disadvantaged or vulnerable groups are anticipated. Access to the facility will be controlled, and the operation of the plant is not expected to interfere with daily life or community services.

4.1.2.8. Cultural Heritage

Tangible Cultural Heritage

Construction Phase:

No known tangible cultural heritage assets are located within the Subproject area. However, there is a potential for chance finds during excavation activities. A Chance Finds Procedure (Annex İ) will be implemented to manage any unexpected discoveries in accordance with national legislation.

Operation Phase:

No impacts on tangible cultural heritage are expected during the operation phase, as no ground-disturbing activities will take place.

Intangible Cultural Heritage

Construction Phase:

The Subproject is not expected to affect intangible cultural heritage, including local traditions, practices, or social activities. Construction activities are limited in scope and duration and will not interfere with cultural practices of the local community.

Operation Phase:

No impacts on intangible cultural heritage are anticipated during the operation phase, as the facility will operate within a controlled area without affecting community life or cultural practices.

4.2. Construction ESMP Matrix

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
ESS2 - Labor and Working Conditions					
1	**Risks associated with labor and working conditions**	Subproject construction workers Contractor and subcontractor personnel On-site technical and supervisory staff Other Subproject-related personnel present at the construction site	**General Measures** • Ensure that the Subproject workers are provided with information and documentation that is clear and understandable regarding their terms and conditions of employment. The information and documentation will set out their rights under national labor and employment law (which will include any applicable collective agreements), including their rights related to hours of work, wages, overtime, compensation and benefits, as well as those arising from the requirements of ESS2. • Ensure that information and documentation regarding employees' terms and conditions of employment is provided at the beginning of the working relationship and when any material changes to the terms or conditions of employment occur. • Ensure that the Subproject workers are paid on a regular basis as required by national legislation and the Subproject-specific LMP. • Ensure that the Subproject workers are provided with adequate periods of rest per week, annual holiday and sick, maternity and family leave, as required by national legislation and the Subproject-specific LMP. • Ensure that the decisions relating to the employment or treatment of Subproject workers are not made on the basis of personal characteristics unrelated to inherent job requirements. • Ensure that the employment of Subproject workers is based on the principle of equal opportunity and fair treatment, and there will be no discrimination with respect to any aspects of the employment relationship, such as recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, job assignment, promotion, termination of employment or retirement, or disciplinary practices.	• Contractor • Subcontractors • Project Implementation Unit (PIU) • Social Specialist • OHS Specialist	• Labor Management Plan (LMP) • Contractor Management Plan (CMP) • Occupational Health and Safety Plan • Workers' Grievance Mechanism Procedure • National Labor Legislation

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			• Measures will be taken to prevent employment or engagement of children under the minimum age established in GFC Project's LMP[4]. • Measures will be taken in accordance with the Subproject specific Labor Management Plan to prevent use of forced labor[5] in connection with the Subproject. • Where on-site or off-site accommodation services[6] are provided to Subproject workers, ensure that the relevant requirements of "Workers' Accommodation: Processes and Standards: A guidance Note by IFC and the EBRD (August 2009)" are in place and implemented on the management and quality of accommodation to protect and promote the health, safety, and well-being of the Subproject workers, and to provide access to or provision of services that accommodate their physical, social and cultural needs. **Site-specific Measures** • A Subproject-specific Labor Management Plan (LMP) will be implemented during the construction phase in line with ESS2 and applicable national labor legislation. • All contractors and subcontractors will be contractually required to comply with the provisions of the LMP, including working hours, wages, leave entitlements, non-discrimination, and the prohibition of child and forced labor. • Prior to the commencement of construction activities, all workers will receive site-specific induction training, covering working conditions, occupational health and safety requirements, codes of conduct, and the workers' grievance mechanism.		

[4] According to the Project LMP, workers under the age of 18 will not be engaged by the Project.
[5] Forced labor consists of any work or service not voluntarily performed that is exacted from an individual under threat of force or penalty. Work is on a voluntary basis when it is done with the free and informed consent of a worker. Such consent must exist throughout the employment relationship and the worker must have the possibility to revoke freely given consent. In particular, there can be no "voluntary offer" under threat or other circumstances of restriction or deceit. To assess the authenticity of a free and informed consent, it is necessary to ensure that no external constraint or indirect coercion has been carried out, either by an act of the authorities or by an employer's practice.
[6] Those services might be provided either directly by the Sub-borrower, contractors or by third parties.

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			• A Worker Grievance Mechanism will be established and communicated to all workers, allowing confidential and anonymous submission of grievances without retaliation. • Regular site inspections and supervision will be carried out to monitor compliance with labor and working conditions requirements throughout the construction phase. • A Code of Conduct will be implemented for all workers, including contractors and subcontractors, in line with ESS2 requirements. The Code of Conduct will include explicit provisions on the prevention of Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH), respectful interaction with local communities, and a zero-tolerance approach to any form of harassment, exploitation, or discrimination. • All workers will receive mandatory training and awareness sessions on SEA/SH and communicable diseases (such as HIV/AIDS) as part of induction and periodic refresher trainings. These trainings will address acceptable behavior, reporting mechanisms, prevention measures, and health protection practices. Participation will be documented and monitored throughout the construction phase.		
	OHS – General Hazards	Construction workers Contractor and subcontractor personnel On-site technical and supervisory staff Visitors authorized to enter the construction site	**General Measures** • Develop and implement a Subproject-specific Risk Assessment, OHS Management Plan, Emergency Preparedness and Response Plan addressing emergency events relevant to the construction phase of the Subproject including both construction and camp site. • Ensure that monitoring and record-keeping activities, as well as accident and incident investigation reports, including audit procedures designed to verify and document the effectiveness of occupational hazard prevention and exposure control measures, are retained on file for a minimum of fifteen (15) years. This retention period is established in line with the applicable statute of limitations for retroactive claims under the Turkish Penal Code.Install railing around all process tanks and pits. Require use of a life line and	• Contractor • Subcontractors • OHS Specialist • Project Implementation Unit (PIU)	• Construction workers • Contractor and subcontractor personnel • On-site technical and supervisory staff • Visitors authorized to enter the construction site

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			personal flotation device (PFD) when workers are inside the railing, and ensure rescue buoys and throw bags are readily available. • Use PFDs when working near waterways. • Maintain work areas to minimize slipping and tripping hazards. • Use proper techniques for trenching and shoring; • Implement fire and explosion prevention measures in accordance with internationally accepted standards; • Completely enclose the perimeter of the subproject area to prevent uncontrolled access and ensure that only authorized people are allowed to enter, and ensure the employment of adequate security personnel. • Ensure that the minimum requirements of helmet, reflective vest and safety shoes are fully complied with in the site. • During subproject work, where risks cannot be eliminated or sufficiently reduced by techniques for collective protection or by measures, methods or processes used in the organization of work, ensure that health and safety signs are provided and used in appropriate places in accordance with the regulation on health and safety signs. • Proper security of passageways reserved for construction site workers and visitors must be ensured. • Ensure that site cleanliness and tidiness standards are established and implemented by employees: (i) provision of first aid kits; (ii) provision of trained first aiders; (iii) provision of fire fighting equipment at construction sites and in machinery- in accordance with the national regulations. **Site-specific Measures** • Subproject site access will be provided via the existing local road network connecting Karaali Neighborhood to the nearest district roads. No new permanent access roads will be constructed within the scope of the Subproject. • Construction-related traffic (including delivery of materials, equipment,		

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			and machinery) will be limited to predefined access routes to minimize disturbance to local residents and agricultural activities in and around Karaali Neighborhood. • A site-specific Traffic Management Plan will be implemented during the construction phase, defining vehicle routes, speed limits, pedestrian–vehicle separation measures, and traffic control arrangements at site entrances. • Speed limits (maximum 30 km/h) will be enforced for all construction vehicles on access roads and within the Subproject site. • Warning signage, barriers, and, where necessary, flag persons will be deployed at site access points to ensure the safety of local road users and pedestrians. • Construction vehicle movements will be scheduled, where practicable, to avoid peak local traffic hours and sensitive periods for the local community. • Access to the construction site will be strictly controlled, and unauthorized entry will be prevented through continuous fencing, signage, and security measures. • Emergency access routes will be kept clear at all times to ensure uninterrupted access for emergency services.		
	OHS - Physical Hazards: Confined Spaces	Construction workers involved in confined space works Contractor and subcontractor personnel authorized to enter confined spaces On-site technical and supervisory staff	**General Measures** • Ensure the implementation of engineering measures to eliminate, to the extent possible, the presence and negative character of confined spaces. • Ensure that permanent safety measures are provided for ventilation, monitoring and recovery operations to the extent possible in confined spaces requiring authorization. • Ensure that special Standard Operating Procedures (SOPs) for Confined Space Entries are in place, including work permit system for entry into confined spaces. • Access hatches should accommodate 90% of the worker population with adjustments for tools and protective clothing. The most current ISO and EN standards should be consulted for design specifications	• Contractor • Subcontractors • OHS Specialist • Site Supervisor • Project Implementation Unit (PIU)	• Occupational Health and Safety Management Plan • Confined Space Entry Procedure • Emergency Preparedness and Response Plan • Contractor Management Plan • National OHS Legislation on

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures

			• Implement a confined spaces entry program that is consistent with applicable national requirements and internationally accepted standards. Valves to process tanks should be locked to prevent accidental flooding during maintenance;
			• Before entering a confined space requiring authorization, ensure that the following measures have been implemented:
			  ○ Process or feed lines into the space will be disconnected or drained, and blanked and locked-out.
			  ○ Mechanical equipment in the space will be disconnected, de-energized, locked-out, and braced, as appropriate.
			  ○ Ensure that the measuring instruments are calibrated up to date.
			  ○ If the atmospheric conditions are not met, the confined space will be ventilated until the target safe atmosphere is achieved, or entry is only to be undertaken with appropriate and additional PPE.
			  ○ Control that the employee who will enter the confined space should have a portable gas measuring device on him/her and should leave the area when out-of-limit values occur in gas measurement for some reason.
			• Ensure that safety measures include Self-Contained Breathing Apparatus (SCBA), lifelines and safety lookouts located outside the confined space, with rescue and first aid equipment readily available.
			• Ensure that adequate and appropriate training in confined space hazard control, atmospheric testing, use of required PPE, and availability and integrity of PPE is provided before workers are required to enter a permit-required confined space.
			• Ensure that adequate and appropriate rescue and/or recovery plans and equipment are in place before the worker enters the confined space.
			• Obtain confirmation from the workplace physician that employees entering the confined space are fit to work in the confined space.
					Confined Spaces

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			• Ensure that confined space rescue drills are carried out regularly to enhance preparedness and emergency response effectiveness. **Site-specific Measures** • Occupational health and safety measures will explicitly cover all wastewater treatment plant units present at the Karaali WWTP, including but not limited to biological phosphorus removal (Bio-P) tanks, aeration tanks, secondary settling tanks, and the chlorine contact tank. • Railings, handrails, and protective barriers will be installed around all open tanks, basins, and pits to prevent falls, particularly at Bio-P units, aeration tanks, secondary clarifiers, and the chlorine contact tank. • Safe access platforms, ladders, and walkways will be provided for operation and maintenance activities at all WWTP units. • When working near open water bodies or process tanks, workers will be required to use appropriate personal protective equipment (PPE), including life lines and personal flotation devices (PFDs), where relevant. • Rescue equipment (e.g. life buoys, throw ropes) will be placed at strategic locations near the Bio-P, aeration, secondary settling, and chlorine contact units. • Clear safety signage and hazard warnings will be installed at all WWTP units to inform workers and authorized visitors of potential risks. • Access to WWTP process units will be restricted to trained and authorized personnel only, and site induction training will include unit-specific risks and safe working procedures.		
	OHS - Physical Hazards: Electrical Hazards	Construction workers exposed to electrical works Electricians and authorized technical personnel Contractor and	**General Measures** • Ensure that all energized electrical devices and lines are marked with warning signs • Ensure that the devices are locked (de-charging and leaving open with a controlled locking device) and labeled (warning sign placed on the lock) during service or maintenance.	• Contractor • Subcontractors • Authorized Electrician • OHS Specialist • Site Supervisor • Project Implementation	• Occupational Health and Safety Management Plan • Electrical Safety Procedure • Lockout–Tagout

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
		subcontractor personnel working near energized equipment On-site technical and supervisory staff	• Ensure that all electrical cords, cables, and hand power tools are checked for frayed or exposed cords. Also, ensure that the manufacturer's recommendations for the maximum permitted operating voltage of portable hand tools are followed • Ensure that all electrical equipment used in environments that are or may be wet is double insulated/grounded; use equipment with ground fault interrupter (GFI) protected circuits. • Ensure that power cords and extension cords are protected against damage from traffic by shielding or suspending above traffic areas • Ensure that high-voltage equipment ('electrical hazard') and service rooms where access is controlled or prohibited are properly labeled. • Ensure that "No Approach" zones are established around or under high voltage lines. • Ensure that construction vehicles or other vehicles with rubber tires that come into direct contact with or arc across high-voltage cables are taken out of service for 48 hours. • Ensure that all buried electrical cables are thoroughly identified and marked prior to any excavation work. • Ensure that the lockout-tagout system has a procedure and is implemented on site. • Ensure that the portable electrical panels used in the field are stable, their covers are closed, earthed, insulating rubber mat is used in front of them. • Ensure that there is adequate lighting in the subproject and camp sites and that there are no dark areas that may create a risk of accidents. • Ensure that a Work Permit System has been developed in cases where electricians are required to perform work under live energy. **Site-specific Measures** • All temporary and permanent electrical installations at the construction site will be designed, installed, and maintained by qualified and authorized electricians only.	Unit (PIU)	(LOTO) Procedure • Construction Phase Risk Assessment • Contractor Management Plan • National OHS and Electrical Safety Legislation

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			• A Lockout–Tagout (LOTO) procedure will be implemented and enforced during installation, maintenance, and repair works involving electrical equipment. • Temporary electrical panels and distribution boards used during construction will be clearly labeled, protected against weather conditions, and regularly inspected. • Underground and overhead electrical lines along excavation and construction areas will be identified, marked, and communicated to relevant workers prior to works. • Work permits will be required for live electrical works, and such activities will only be conducted when de-energization is not technically feasible. • Regular inspections will be conducted to ensure the integrity of cables, grounding systems, and electrical equipment throughout the construction phase. • Warning signage and physical barriers will be installed around high-voltage areas to prevent unauthorized access.		
	OHS - Physical Hazards: Fall Protection	Construction workers working at height Contractor and subcontractor personnel involved in elevated works On-site technical and supervisory staff	**General Measures** • Implementation of a fall protection program that includes training in climbing techniques and use of fall protection measures; inspection, maintenance, and replacement of fall protection equipment; and rescue of fall-arrested workers, among others. Before proceeding with any work at height, investigate the feasibility of completing the tasks at ground level and explore engineering solutions. Additionally, ensure that a special Standard Operating Procedure (SOP) for working at height is in place, including a work permit system. Only personnel approved by the occupational physician will be assigned to work at height. • Establishment of criteria for the implementation of 100 percent fall protection in accordance with the definition of "work at height" as specified in the Regulation on Occupational Health and Safety in Construction Works. Work at height shall be considered any work carried out at a level difference where there is a risk of falling and	• Contractor • Subcontractors • OHS Specialist • Site Supervisor • Project Implementation Unit (PIU)	• Occupational Health and Safety Management Plan • Working at Height Procedure • Construction Phase Risk Assessment • Emergency Preparedness and Response Plan • Contractor Management

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			injury. The fall protection system will be selected based on the specific risk assessment prepared for the activity and will be suitable for the structure and required movements, including ascent, descent, and horizontal movement from point to point. Use of safety belts not less than 16 millimeters (mm) (5/8 inch) two-in-one nylon or material of equivalent strength. Rope safety belts will be replaced before signs of aging or fraying of fibers become evident. • Use fall protection equipment when working at heights, prioritizing collective protection methods. Additionally, visually check the reliability of the equipment before each use. • When operating power tools at height, use of a second (backup) safety strap by workers. • Ensure that the scaffolds used on site are installed in accordance with the standards and ‘’Occupational Health and Safety Regulations in Construction Works’’. Prior to commencing any work-at-height activity, the relevant personnel shall undergo health surveillance conducted by the occupational physician, and their fitness for working at height shall be documented in writing. The medical evaluation shall include an assessment of any medical conditions that may create a risk of falling (such as balance disorders, epilepsy, visual impairments, cardiovascular conditions, etc.). This practice shall be implemented in accordance with the provisions of Law No. 6331 on Occupational Health and Safety and the Regulation on the Duties, Authorities, Responsibilities and Training of Occupational Physicians and Other Health Personnel **Site-specific Measures** • All works at height during the construction phase will be carried out in accordance with a site-specific Working at Height Procedure. • Prior to commencement of any work at height, a task-specific risk assessment will be conducted, and appropriate control measures will be defined.		Plan • National OHS Regulations on Working at Height

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			• Collective protection measures (e.g. guardrails, handrails, safety nets) will be prioritized over personal fall arrest systems wherever technically feasible. • Scaffolding, ladders, and access platforms will be installed, inspected, and approved by competent personnel before use and at regular intervals thereafter. • Workers performing tasks at height will receive specific training on fall protection, safe use of equipment, and emergency response procedures. • Weather conditions (e.g. strong wind, rain, icy surfaces) will be monitored, and work at height will be suspended when conditions pose an increased risk of falls. • Designated exclusion zones will be established below working-at-height areas to prevent injuries from falling objects.		
	OHS - Physical Hazards: Rotating and Moving Equipment	Construction workers operating or working near rotating and moving equipment Heavy machinery operators Contractor and subcontractor personnel present in equipment operating areas On-site technical and supervisory staff	**General Measures** • Design machines to eliminate trap hazards and ensure that extremities are kept out of harm's way under normal operating conditions; i.e. availability of emergency stops dedicated to the machine and placed in strategic locations. • If a machine or equipment has an exposed moving part or an exposed pinch point that could endanger the safety of any worker, ensure that the machine or equipment is equipped with and protected by a guard or other device that prevents access to the moving part or pinch point. Guards should be designed and installed in conformance with appropriate machine safety standards, in accordance with the "Machinery Safe Regulation" (2006/42/AT). • Ensure that machinery with exposed or protected moving parts or in which energy can be stored (e.g. compressed air, electrical components) is turned-off, disconnected, isolated and de-energized (Locked Out and Tagged Out) during service or maintenance. • Where possible, ensure that equipment is designed and installed to enable routine servicing, such as lubrication, to be carried out without removing guarding devices or mechanisms	• Contractor • Subcontractors • Equipment Operators • OHS Specialist • Site Supervisor • Project Implementation Unit (PIU)	• Occupational Health and Safety Management Plan • Equipment Operation and Maintenance Procedures • Construction Phase Risk Assessment • Contractor Management Plan • National OHS Legislation

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			Site-specific Measures • All rotating and moving equipment used during construction (e.g. excavators, loaders, compactors, pumps) will be operated only by trained and authorized personnel. • Machinery and equipment will be equipped with appropriate guards, protective covers, and emergency stop mechanisms, which shall not be removed or bypassed. • Equipment inspection and maintenance records will be maintained, and defective equipment will be immediately removed from service. • Clearly defined equipment operating zones and pedestrian exclusion zones will be established and marked on site to prevent collisions and entanglement risks. • Spotters will be assigned where visibility is limited or where simultaneous activities increase the risk of accidents. • Refueling, maintenance, and repair works will be carried out in designated areas and only when equipment is safely shut down.		
	OHS - Physical Hazards: Welding and Hot Works	Construction workers performing welding, cutting, and other hot works Contractor and subcontractor personnel working in proximity to hot works On-site technical and supervisory staff	**General Measures** • Ensure that all personnel involved in or assisting with welding operations are provided with appropriate protective equipment, including eye protection, such as welder's goggles and/or a full-face eye shield, fireproof welder clothing, and non-flammable clothing. Additionally, ensure that workers performing hot work do not wear flammable nylon reflective vests. • If welding or hot cutting is performed outside of established welding work stations, ensure that special hot work and fire prevention precautions and Standard Operating Procedures (SOPs) are in place, including "Hot Work Permits, stand-by fire extinguishers, stand-by fire watch and maintaining fire watch for up to one hour after welding or hot cutting is finished". • Develop specific procedures for hot work on tanks or vessels containing flammable materials.	• Contractor • Subcontractors • OHS Specialist • Site Supervisor • Authorized Welding Personnel • Project Implementation Unit (PIU)	• Occupational Health and Safety Management Plan • Hot Work Permit Procedure • Emergency Preparedness and Response Plan • Construction Phase Risk Assessment • Contractor Management Plan

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			• Ensure that the instructions for the safe use of grinding machines are available and that work is carried out in accordance with the instructions. • Ensure that safe work instructions for the handling, use and storage of pressurized cylinders used in welding work are in place and implemented on site. **Site-specific Measures** • All welding and hot works during construction will be carried out under a Hot Work Permit System, approved by the Site Supervisor and OHS Specialist prior to commencement. • Hot work areas will be identified, controlled, and cleared of flammable materials before works begin. • Fire-fighting equipment (e.g. fire extinguishers suitable for hot works) will be made readily available at all hot work locations. • Welding and cutting activities will only be performed by qualified and authorized personnel using appropriate equipment and personal protective equipment (PPE). • Adequate ventilation will be ensured in enclosed or semi-enclosed areas to prevent the accumulation of fumes and gases. • A designated fire watch will be assigned during hot works and for a defined period after completion of activities, where necessary. • Hot works will be suspended during adverse weather conditions that may increase fire or safety risks.		• National OHS and Fire Safety Legislation
	OHS - Physical Hazards: Industrial Vehicle Driving and Site Traffic	Construction workers exposed to site traffic Operators of industrial vehicles and heavy machinery Contractor and subcontractor personnel	**General Measures** • Ensure that industrial vehicle operators are trained in the safe use of specialized vehicles such as forklifts, including safe loading/unloading, load limits, and that they hold an up to date driving license. • Make sure drivers undergo medical supervision • Ensure that moving equipment with restricted rear visibility is equipped with audible and illuminated back-up alarms	• Contractor • Subcontractors • Vehicle Operators • OHS Specialist • Site Supervisor • Project Implementation Unit (PIU)	• Occupational Health and Safety Management Plan • Site Traffic Management Plan • Construction Phase Risk

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
		working near vehicle routes Authorized site visitors	• Ensure that rights of way, site speed limits, vehicle inspection requirements, operating rules and procedures (e.g. prohibiting operation of forklifts with forks down), and control of traffic patterns or direction are established • Ensure that deliveries and movement of private vehicles are restricted to defined routes and areas, with 'one-way' movement preferred where appropriate so as not to interfere with pedestrian routes. Additionally, ensure that a flagman accompanies vehicle movement. **Site-specific Measures** • A Site Traffic Management Plan will be prepared and implemented for the construction phase, defining internal traffic routes, speed limits, pedestrian walkways, and vehicle–pedestrian separation measures. • Speed limits will be established within the construction site and clearly communicated through signage. • Designated parking, loading, and unloading areas will be identified to prevent congestion and unsafe maneuvers. • Reversing alarms, warning lights, and mirrors will be installed and maintained on construction vehicles where applicable. • Spotters will be assigned for vehicle movements in confined or high-risk areas. • All drivers and equipment operators will receive site-specific traffic safety training prior to commencing works. • Night-time or low-visibility operations will be subject to additional control measures, including adequate lighting.		• Assessment • Contractor Management Plan • National Traffic and OHS Legislation
	OHS - Physical Hazards: Ergonomics, Repetitive Motion, Manual Handling Lifting	Construction workers involved in manual handling and lifting activities Workers performing repetitive or ergonomically demanding tasks	**General Measures** • Ensure that mechanical assists are used to eliminate or reduce the effort required to lift materials, hold tools and work objects, and that more than one person is lifting if weights exceed thresholds • Ensure that tools are selected and designed that reduce force requirements and holding times and improve postures. Do not use	• Contractor • Subcontractors • OHS Specialist • Site Supervisor • Project Implementation Unit (PIU)	• Occupational Health and Safety Management Plan • Ergonomics and Manual Handling

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
		Contractor and subcontractor personnel exposed to musculoskeletal risks	handmade tools, and remove them from the site to ensure safety and compliance with proper standards. • Ensure that user-adjustable workstations are provided • Ensure that rest and stretch breaks are incorporated into work processes and job rotation is in place • Ensure quality control and maintenance programs are in place that reduce unnecessary forces and effort • Ensure that additional special circumstances, such as left-handed people, are considered **Site-specific Measures** • Manual handling and lifting tasks will be assessed on a task-specific basis, and ergonomic risks will be identified prior to commencement of works. • Where feasible, mechanical lifting aids (e.g. hoists, forklifts, trolleys) will be used to reduce manual handling requirements. • Loads will be planned, sized, and handled to minimize strain, and team lifting will be applied for heavy or awkward loads. • Workers will receive training on safe lifting techniques, posture, and ergonomics as part of site induction and toolbox talks. • Job rotation and adequate rest breaks will be implemented for tasks involving repetitive motion or prolonged physical exertion. • Workstations and work methods will be adjusted, where practicable, to reduce awkward postures and repetitive movements.		Procedure • Construction Phase Risk Assessment • Contractor Management Plan • National OHS Legislation
	OHS - Chemical Hazards	Construction workers handling chemicals (e.g. fuels, solvents, lubricants, paints) Contractor and subcontractor personnel exposed to chemical substances	**General Measures** • Ensure that the hazardous substance is replaced with a less hazardous substitute • Ensure that engineering and administrative control measures are in place to prevent or minimize the release of hazardous substances into the working environment, keeping the exposure level below internationally established or recognized limits	• Contractor • Subcontractors • OHS Specialist • Site Supervisor • Project Implementation Unit (PIU)	• Occupational Health and Safety Management Plan • Chemical Management / Hazardous Substances Procedure

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
		Workers involved in refueling, maintenance, and storage activities On-site technical and supervisory staff	• Ensure that the number of workers exposed or likely to be exposed is minimal. • Ensure that chemical hazards are communicated to workers through labeling and marking according to nationally and internationally recognized requirements and standards, including International Chemical Safety Cards (ICSC), Material Safety Data Sheets (SDSs) or equivalent. Any means of written communication will be in an easily understood language and be readily available to exposed workers and first-aid personnel • Ensure that workers are provided with hazard communication and training to prepare them to recognize and respond to chemical hazards in the workplace. Programs should include aspects of hazard identification, safe operating and materials handling procedures, safe work practices, basic emergency procedures, and special hazards unique to their jobs. • Ensure that permitted maintenance activities such as hot work or confined space entries are defined and implemented • Ensure that appropriate PPE (including, footwear, masks, protective clothing, goggles and self-contained breathing apparatus, in appropriate areas). Provide training on its proper use (such as self-contained breathing apparatus) and its maintenance. • Ensure that employees are trained in the use of available information (such as SDSs), safe working practices and proper use of PPE • Prohibit eating, smoking, and drinking except in designated areas; • In case of intervention with asbestos-containing materials, ensure that work is carried out in accordance with the ‘Regulation on Health and Safety Measures in Working with Asbestos’’ **Site-specific Measures** • Chemicals used during construction will be inventoried, and Safety Data Sheets (SDS/MSDS) will be available on site in an accessible location.		• Spill Prevention and Response Procedure • Waste Management Procedure (Construction Phase) • Construction Phase Risk Assessment • Contractor Management Plan • National OHS and Hazardous Substances Legislation

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			• Chemical storage areas will be designated and managed to prevent spills, including secondary containment, appropriate labeling, and restricted access. • Workers handling chemicals will receive site-specific training on safe handling, PPE requirements, spill response, and first aid measures. • Refueling and chemical transfer activities will be conducted in controlled areas using appropriate equipment to minimize spill and exposure risks. • A spill response procedure will be implemented, and spill kits will be maintained at relevant locations on site. • Empty containers and chemical waste will be managed in accordance with national requirements and applicable waste management procedures.		
	OHS – Excavation Works	Construction workers involved in excavation and trenching activities Contractor and subcontractor personnel working in or near excavations Heavy machinery operators On-site technical and supervisory staff	**General Measures** • Ensure that special Standard Operating Procedures (SOPs) for Excavation Works is in place, including work permit system for the excavation works at the site. Check that the excavation works are carried out in a way to meet the 'Regulation on Occupational Health and Safety in Construction Works'. • Ensure that workers have safe access to the excavation trenches and that the necessary sloping, shoring and terracing methods are in place to prevent cave-in hazards that the work area, the excavation pit perimeter is enclosed with physical barriers • In the case of the operation of construction machinery, check that workers are at a sufficient distance from the working area of the machine, they are not located under suspended loads **Site-specific Measures** • All excavation works will be carried out in accordance with a site-specific Excavation and Trenching Procedure prepared prior to commencement.	• Contractor • Subcontractors • OHS Specialist • Site Supervisor • Excavation Works Supervisor • Project Implementation Unit (PIU)	• Occupational Health and Safety Management Plan • Excavation and Trenching Procedure • Construction Phase Risk Assessment • Emergency Preparedness and Response Plan • Contractor Management Plan • National OHS and Excavation Regulations

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			• A task-specific risk assessment will be conducted before excavation activities, considering soil conditions, depth, groundwater, nearby structures, and utilities. • Excavations and trenches will be properly shored, sloped, or benched to prevent collapse, in line with national regulations and good international practice. • Underground utilities (e.g. electricity, water, telecommunications) will be identified, marked, and verified before excavation works begin. • Safe access and egress (e.g. ladders, ramps) will be provided for all excavations exceeding safe depth limits. • Excavation areas will be clearly barricaded and signposted, and unauthorized access will be prevented at all times. • Daily inspections of excavations will be carried out by competent personnel, particularly after heavy rain or other events that may affect stability.		
	Risks associated with management of employee grievances	Construction workers Contractor and subcontractor personnel On-site technical and supervisory staff	• Develop and implement a Subproject-specific Labor Management Plan, including grievance mechanism for Subproject employees (covering all direct and contracted workers) to raise workplace concerns during the construction phase. • Ensure that all direct and contracted workers are informed of the grievance mechanisms at the time of recruitment and the measures put in place to protect them against any reprisal for its use. • Ensure that measures are put in place to make the grievance mechanism easily accessible to all Subproject employees.	• Contractor • Subcontractors • Social Specialist • OHS Specialist • Project Implementation Unit (PIU)	• Labor Management Plan (LMP) • Workers' Grievance Mechanism Procedure • Contractor Management Plan (CMP) • Occupational Health and Safety Management Plan • National Labor Legislation

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
ESS3 - Resource Efficiency and Pollution Prevention and Management					
	Energy Use, Water Use and Raw Material Use	Natural Resources (Water, Fuel, Raw Materials)	**General Measures** • Ensure implementation of technically and financially feasible measures for improving efficient consumption of energy, water and raw materials. • Minimize unnecessary water use for dust suppression and general site needs. **Site-specific Measures** • Construction machinery will be regularly maintained to optimize fuel consumption and reduce exhaust emissions. • Materials (aggregates, concrete, piping) will be procured from licensed local suppliers to reduce transport distances and carbon footprint. • During operation, energy efficiency will be maintained via SCADA automation and Variable Frequency Drives (VFDs) on pumps/blowers. • Excavated soil will be reused for backfilling where technically feasible to minimize raw material extraction.	• Contractor • Site Manager • Project Implementation Unit (PIU)	• Environmental and Social Management Plan (ESMP) • Waste Management Plan
	Soil disturbance and erosion	Soil quality within Subproject footprint, Nearby agricultural lands	**General Measures** • Minimizing disturbance to vegetation and soils. • Reducing or preventing erosion by scheduling to avoid heavy rainfall periods. • Limiting access road gradients. **Site-specific Measures** • Vehicles and machinery will only operate on designated access routes (existing dirt tracks and D350 highway) to prevent soil compaction on agricultural lands. • Construction activities will be strictly confined to the defined project boundaries (Block 216, Parcel 32) to prevent encroachment into the Beyşehir Lake Wetland Buffer Zone. • Drip trays and absorbent kits (spill kits) will be available on-site for immediate response to accidental fuel/oil spills. • No fuel storage will be established on-site; refueling will be done by mobile tankers in controlled areas.	• Contractor • Environmental Specialist • PIU	• Soil Management Plan • Spill Prevention and Response Procedure • Construction Method Statement

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
	Impacts on topsoil	Vegetative soil layer	**General Measures** • Store topsoil for future site rehabilitation activities. • Maintain soil integrity in readiness for future use. **Site-specific Measures** • Topsoil stripping will be limited to the construction footprint and stored in designated areas with proper slopes to prevent erosion. • Vegetative soil stored to be used for rehabilitation purposes will be used as top cover in necessary areas during landscaping. • Topsoil piles will be kept separate from subsoil and construction debris to prevent contamination.	• Contractor • Environmental Specialist • PIU	• Soil Management Plan • ESMP
	Emissions to air during construction	Residents of Karaali Neighborhood, Agricultural crops, Construction workers	**General Measures** • Use of dust control methods (water suppression) for open storage piles and unpaved roads. • Use of water suppression for control of loose materials. **Site-specific Measures** • Regular water spraying will be applied to the construction site and access roads. • Speed limit of 30 km/h will be enforced for construction vehicles on site and unpaved access roads to minimize dust. • Trucks transporting loose materials (soil, debris) will be covered with tarpaulins. • Construction machinery will be switched off when not in use (no idling) to reduce exhaust emissions (NOx, PM, SO2). • Demolition of the existing reinforced concrete structure will be carried out with specific dust suppression measures.	• Contractor • Site Supervisor • PIU	• Air Quality Management Plan • Traffic Management Plan
	Generation of non-hazardous and hazardous waste during construction	Soil, Groundwater, Visual Landscape	**General Measures** • Establish waste management hierarchy (reduce, reuse, recycle, dispose). • Segregate waste at source. • Ensure that waste is classified and labeled according to waste codes. **Site-specific Measures**	• Contractor • Environmental Specialist • PIU	• Waste Management Plan •

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			• A Temporary Waste Storage Area will be established on the WWTP site with designated bins for hazardous, non-hazardous, and recyclable wastes. • Excavated Soil: Excess soil not used for backfilling will be transported to permitted dump sites authorized by the Municipality. • Hazardous Waste: Waste oils, filters, and contaminated packaging will be stored in leak-proof containers on impermeable ground and collected by licensed disposal firms. • Domestic Waste: Solid waste from workers will be collected in bins and disposed of via the municipal waste collection system.		
	Wastewater generation (such domestic wastewater, wastewater from construction sites, etc.)	Surface water, Groundwater	**General Measures** • Prevent discharge of untreated wastewater. • Ensure that waste minimization is carried out. **Site-specific Measures** • Construction Phase: Portable toilets will be provided for workers. Wastewater will be collected in impermeable septic tanks and transported by vacuum trucks to the Konya WWTP or nearest authorized facility. • Operation Phase: Treated effluent will be discharged to the Çay Stream via an approximately 60 m discharge line, in compliance with the Urban Wastewater Treatment Regulation and EU Directive 91/271/EEC. • No direct discharge of construction wastewater (e.g., concrete wash water) to the soil or creek bed is permitted; concrete trucks will be washed in designated impermeable areas.	• Contractor • Operator (KOSKİ) • PIU	• Wastewater Management Plan • Water Pollution Control Regulation Compliance
	Release of hazardous materials in the event of accidents during construction	Soil, Workers, Surface water	**General Measures** • Prevent uncontrolled releases of hazardous materials. • Identify the types and the quantities of hazardous substances. **Site-specific Measures** • No permanent fuel storage on site during construction; mobile refueling only.	• Contractor • OHS Specialist • Operator (KOSKİ)	• Hazardous Material Management Plan • Emergency Preparedness and Response Plan

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			• During operation, chemicals such as chlorine for the disinfection unit will be stored in a dedicated, secure, and well-ventilated chemical storage building with secondary containment. • Safety Data Sheets (SDS) for all chemicals (e.g., fuels, oils, chlorine) will be readily available on site. • Emergency spill kits will be placed near chemical handling areas and on construction vehicles.		
	Noise and vibration generation during construction	Residents of Karaali Neighborhood, Fauna in the vicinity	**General Measures** • Manage the potential impact of noise, selecting equipment with lower sound power levels. • Plan activities so that noisiest activities are undertaken during periods that will result in least disturbance. **Site-specific Measures** • Construction activities will be restricted to daytime hours (07:00 – 19:00). • Construction machinery (excavators, loaders) will be modern and well-maintained to meet noise emission standards. • High-noise activities (e.g., demolition of the existing structure) will be scheduled to minimize disturbance and communicated to the nearby community via the Mukhtar. • During operation, pumps and blowers will be housed in acoustic enclosures if necessary to prevent noise nuisance to the nearest receptors.	• Contractor • PIU	• Noise Management Plan • Stakeholder Engagement Plan (SEP)
ESS4 – Community Health and Safety					
	Risks posed to the public while accessing Subproject facilities (such as physical trauma associated with failure of structures, burns and smoke	Local communities and beneficiaries within the administrative boundaries of Karaali Neighborhood Road users and visitors accessing areas adjacent to construction sites	**General Measures** • Design and construct the structural elements of the Subproject in accordance with national legal requirements, the EHSGs and other GIIP, taking into consideration safety risks to third parties and affected communities. • Ensure that the structural elements of the Subproject are designed and constructed by competent professionals, and certified or approved by competent authorities or professionals.	• Administration / Employer • Design Engineers • Contractor • Site Supervisor • Project Implementation Unit (PIU)	• Environmental and Social Management Plan (ESMP) • Approved Design and Engineering Documents • Geotechnical Investigation

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
	inhalation from fire, injuries suffered as a consequence of falls or contact with heavy equipment, etc.)	Workers of nearby facilities and land users in the vicinity of construction activities	• Ensure that the structural design takes into account climate change considerations, as appropriate. • Ensure incorporation of siting and safety engineering criteria to prevent failures due to natural risks posed by earthquakes, tsunamis, wind, flooding, landslides and fire. • Ensure design the Subproject structures in accordance with engineering and design criteria mandated by site-specific risks, including but not limited to seismic activity, slope stability, wind loading, and other dynamic loads. • Ensure application of nationally regulated or internationally recognized buildings codes to ensure structures are designed and constructed in accordance with sound architectural and engineering practice, including aspects of fire prevention and response. • Ensure that the engineers and architects responsible for designing and constructing facilities, building, plants and other structures certify the applicability and appropriateness of structure criteria employed. **Site-specific Measures** • All structural elements of the Subproject will be designed and constructed in accordance with Türkiye's seismic design requirements, taking into account the site's seismicity and applicable national earthquake regulations. • Geotechnical investigations will be conducted for foundations, large excavation areas, and embankments to determine soil characteristics and appropriate design parameters. • Where required, retaining structures, slope stabilization measures, and soil improvement techniques will be incorporated into the design to ensure structural stability during construction and operation. • Temporary and permanent structures will be designed to safely withstand construction loads, equipment loads, and dynamic forces, including seismic effects where applicable.		Reports • National Seismic and Building Codes • Technical Specifications adopted by the Administration

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			• Climate-related design considerations (e.g. intense rainfall, surface runoff, flooding risk) will be integrated into drainage and structural design to prevent instability and erosion during construction. • Design documents and calculations will be prepared, reviewed, and approved by qualified and authorized engineers, and construction will be supervised to ensure compliance with approved designs.		

	Traffic and road safety risks during construction (such as traffic related injuries and fatalities due to traffic accidents, collisions, etc.)	Local communities and beneficiaries
		
		Road users (drivers, pedestrians, cyclists)
		
		Nearby businesses and service users
		
		Construction workers exposed to traffic movements
			General Measures
			• Manage the potential impact of increase in traffic, coordination with emergency responders to ensure that appropriate first aid is provided in the event of accidents
			• Ensure use of locally sourced materials, whenever possible, to minimize transport distances. Locating associated facilities such as worker camps close to Subproject sites and arranging worker bus transport to minimizing external traffic
			• Ensure employing safe traffic control measures, including road signs and flag persons to warn of dangerous conditions
			• Develop Subproject-specific SEP will be implemented to address any construction transport/traffic related grievance and plan/take corrective actions in line with the Grievance Mechanisms, where necessary. As part of SEP, local communities will be informed about the construction sites, traffic restrictions to be applied for health and safety purposes and duration of such restrictions.
			• Ensure the best transport safety practices are adapted across all aspects of Subproject operations with the goal of preventing traffic accidents and minimizing injuries suffered by Subproject personnel and the public. These measures include:
			  ○ Emphasizing safety aspects among drivers
			  ○ Improving driving skills and requiring licensing of drivers
			  ○ Adopting limits for trip duration and arranging driver rosters to avoid overtiredness
			  ○ Avoiding dangerous routes and times of day to reduce the risk of accidents
				• Contractor
				• Traffic Safety Officer / Site Supervisor
				• Project Implementation Unit (PIU)
					• Traffic Management Plan (Construction Phase)
					• Stakeholder Engagement Plan (SEP)
					• Environmental and Social Management Plan (ESMP)
					• National Traffic and Road Safety Regulations

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			○ Use of speed control devices (governors) on trucks, and remote monitoring of driver actions • Scheduling of traffic will be undertaken to avoid the peak hours on the local road network wherever practicable (e.g. early in the morning with the daylight). Scheduling information and planned traffic disruptions will be communicated well in advance to all related parties including authorities, local communities and nearby businesses • When installing or repairing mains adjacent to roadways, implement procedures and traffic controls, such as: ○ Establishment of work zones so as to separate workers from traffic and from equipment as much as possible ○ Reduction of allowed vehicle speeds in work zones; ○ Use of high-visibility safety apparel for workers in the vicinity of traffic ○ For night work, provision of proper illumination for the work space, while controlling glare so as not to blind workers and passing motorists • Locate all underground utilities before digging. **Site-specific Measures** • A Construction Phase Traffic Management Plan will be prepared and implemented, defining haul routes, speed limits, work zones, pedestrian crossings, and traffic control measures. • Construction traffic will be scheduled, where feasible, to avoid peak hours on local roads and minimize disturbance to local communities. • Temporary traffic signage, warning lights, barriers, and flag persons will be deployed at all locations where construction activities interface with public roads. • Safe pedestrian access will be maintained at all times, including temporary walkways and controlled crossings where required.		

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			• Local communities and road users will be informed in advance about traffic diversions, temporary closures, and changes in access through communication channels defined in the SEP. • Coordination will be maintained with relevant local authorities to manage traffic safety and emergency access during construction activities.		
	Pedestrian safety risks during construction (e.g. serious injury from collisions with moving vehicles, etc.)	Residents of Karaali Neighborhood (project beneficiaries) Pedestrians and road users in nearby settlements with potential indirect interaction during construction (including Çavuş and Göçeri Neighborhoods) Pedestrians, cyclists, and drivers using existing public roads and local access roads intersecting with or adjacent to the construction areas, including roads along the collector line routes and access roads to the wastewater treatment plant site Vulnerable road users, including children, elderly individuals, and persons with reduced mobility Visitors and service users accessing areas adjacent to construction sites	**General Measures** • Minimize pedestrian interaction with construction vehicles and routes. • Provision of safe corridors along the construction areas for pedestrians and bicyclists during construction. • Installation and maintenance of speed control and traffic calming devices at pedestrian crossing areas during construction. • Ensure collaboration with local communities and responsible authorities to improve signage, visibility and overall safety of roads, particularly along stretches located near schools or other locations where children may be present. Collaborating with local communities on education about traffic and pedestrian safety (e.g. school education campaigns). • Installation and maintenance of all signs, signals, markings, and other devices used to regulate traffic, specifically those related to pedestrian facilities or bikeways during construction. **Site-specific Measures** • Pedestrian routes in the vicinity of construction areas will be identified, clearly marked, and physically separated from construction vehicle routes wherever feasible. • Temporary pedestrian crossings, walkways, and safe corridors will be established where existing pedestrian routes are disrupted by construction activities.	• Contractor • Traffic Safety Officer / Site Supervisor • Project Implementation Unit (PIU) • Social Specialist	• Traffic Management Plan (Construction Phase) • Stakeholder Engagement Plan (SEP) • Environmental and Social Management Plan (ESMP) • National Traffic and Road Safety Regulations

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			• Construction vehicle movements will be restricted near pedestrian areas, and speed limits will be enforced at all locations with pedestrian interaction. • Flag persons and warning signage will be deployed at interfaces between construction traffic and pedestrian movements, particularly near access points and road crossings. • Adequate lighting will be provided in pedestrian areas affected by construction works, especially during early morning or evening hours. • Local communities will be informed in advance about changes in pedestrian access, temporary restrictions, and safety measures through communication channels defined in the SEP. • Pedestrian safety measures will be reviewed and updated as construction progresses and site conditions change.		
	Risks and impacts on communities due to potential emergency events during construction (unanticipated incidents, arising from both natural and man-made hazards, typically in the form of fire, explosions, leaks or spills, which may occur for a variety of different reasons, including failure to implement operating procedures that are	Residents of Karaali Neighborhood (project beneficiaries) Residents of nearby settlements with potential indirect interaction during construction (including Çavuş and Göçeri Neighborhoods) Pedestrians and road users using public roads and access roads adjacent to construction areas Nearby land users and service users located in the vicinity of construction	**General Measures** • Develop and implement a Subproject-specific Emergency Preparedness and Response Plan addressing emergency events relevant to the construction phase of the Subproject. • **Site-specific Measures** • A construction-phase Emergency Preparedness and Response Plan (EPRP) will be implemented, covering site-specific emergency scenarios such as fire, traffic accidents, spills, extreme weather events, and structural incidents. • Emergency contact information (including local emergency services) and response procedures will be clearly displayed at visible locations within construction sites. • Emergency access routes will be identified and kept clear at all times to ensure access for emergency vehicles. • Construction workers will receive site-specific emergency response training, including evacuation procedures and first response actions.	• Contractor • OHS Specialist • Site Supervisor • Project Implementation Unit (PIU)	• Emergency Preparedness and Response Plan (Construction Phase) • Occupational Health and Safety Management Plan • Traffic Management Plan (Construction Phase) • Stakeholder Engagement Plan (SEP)

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
	designed to prevent their occurrence, extreme weather or lack of early warning, traffic accidents, structural failures, etc.).	activities Construction workers and authorized site visitors (with potential interface with surrounding communities)	• Emergency drills (e.g. fire and evacuation drills) will be conducted periodically during the construction phase. • Coordination will be maintained with local authorities and emergency services to ensure effective response in the event of an emergency affecting surrounding communities. • Information on emergency procedures and potential construction-related risks will be communicated to nearby communities in line with the SEP, where relevant.		• Environmental and Social Management Plan (ESMP)
	Risks posed by these security arrangements to those within and outside the Subproject site during construction	Construction workers and authorized site personnel Residents of Karaali Neighborhood (project beneficiaries) Pedestrians and road users using public roads and access roads adjacent to the construction sites Nearby land users and visitors in the vicinity of construction activities	**General Measures** • Ensure that the risks posed by the security arrangements to those within and outside the Subproject site are assessed when direct or contracted workers are retained to provide security to safeguard Subproject-related personnel and properties. • Ensure that security arrangements of the Subproject are guided by the principles of proportionality and GIIP, and by applicable national legislation, in relation to hiring, rules of conduct, training, equipping, and monitoring of such security workers. • Ensure that the use of force by direct or contracted workers is not sanctioned in providing security except when used for preventive and defensive purposes in proportion to the nature and extent of the threat. • Ensure that (i) reasonable inquiries are made to verify that the direct or contracted workers retained within the scope of the Subproject to provide security are not implicated in past abuses; (ii) security personnel are trained adequately (or determine that they are properly trained) in the use of force (and where applicable, firearms), and appropriate conduct toward workers and affected communities; and (iii) security personnel are required to act within the applicable national legislation and any requirements set out in Project's ESCP and Subproject's ESAP. • Ensure that all allegations of unlawful or abusive acts of security personnel are reviewed, necessary actions are taken by appropriate	• Contractor • Project Implementation Unit (PIU) • Social Specialist • Site Supervisor	• Environmental and Social Management Plan (ESMP) • Stakeholder Engagement Plan (SEP) • Project Grievance Mechanism Procedure • Contractor Management Plan (CMP)

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			parties to prevent recurrence and, where necessary, unlawful and abusive acts are reported to the relevant authorities. **Site-specific Measures** • Security services, where required during construction, will be limited in scope and proportionate to the actual security risks of the Subproject. • Security personnel will be instructed to restrict access only to construction areas, without interfering with public access outside the site boundaries. • Clear rules of conduct will be communicated to security personnel, emphasizing respectful engagement with local communities and avoidance of any form of intimidation or harassment. • Security personnel will be informed about the Project Grievance Mechanism, and any complaints related to security arrangements will be recorded and addressed through established grievance channels. • Coordination will be maintained between the Contractor, PIU, and local authorities, where necessary, to manage security-related issues during construction. • Security arrangements will be periodically reviewed to ensure continued relevance and to prevent unnecessary interaction with surrounding communities.		
ESS5 – Land Acquisition, Restrictions on Land Use and Involuntary Resettlement					
	Economic displacement	Not applicable. No formal or informal land users, agricultural users, or business operators are subject to economic displacement under the Subproject.	**Site-specific Measures** • The Subproject does not result in economic displacement, loss of income, or restriction of access to land or livelihood resources. • All construction activities will be carried out within existing public land and existing infrastructure corridors, and no livelihood sources will be affected. • In the unlikely event that unanticipated impacts on livelihoods occur, the situation will be assessed in line with ESS5 requirements, and appropriate mitigation measures will be defined in consultation with affected parties.	• Project Implementation Unit (PIU) • Contractor • Social Specialist	• Environmental and Social Management Plan (ESMP) • Stakeholder Engagement Plan (SEP)

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
	Physical displacement	Not applicable. No formal or informal owners, tenants, or residents are subject to physical displacement under the Subproject.	**Site-specific Measures** • The Subproject does not involve physical displacement, relocation of households, or loss of residential structures. • No private residential properties or assets will be affected during construction. • Should any unforeseen land acquisition or displacement need arise, the Subproject will comply with ESS5, and preparation of a RAP or LRP will be initiated as required.	• Project Implementation Unit (PIU) • Contractor • Social Specialist	• Environmental and Social Management Plan (ESMP) • Stakeholder Engagement Plan (SEP)
	Grievance management	Project-affected persons or stakeholders who may raise concerns related to land use, access	• Ensure that a grievance mechanism for the Subproject is in place, in accordance with ESS10 and İLBANK ESMS as early as possible in project development to address specific concerns about compensation, relocation or livelihood restoration measures raised by displaced persons (or others) in a timely fashion. Where possible, such grievance mechanisms will utilize existing formal or informal grievance mechanisms suitable for project purposes, supplemented as needed with Subproject-specific arrangements designed to resolve disputes in an impartial manner.	• Project Implementation Unit (PIU) • Social Specialist • Grievance Mechanism Contact Person (GMCP)	• Stakeholder Engagement Plan (SEP) • Project Grievance Mechanism Procedure • Environmental and Social Management Plan (ESMP)
ESS6 – Biodiversity Conservation and Sustainable Management of Living Natural Resources					
	Impacts on habitats	Modified habitat (agricultural and ruderal vegetation) within the Karaali WWTP site, Karaali Neighborhood, Beyşehir District	**General Measures** • Minimize the project footprint to the extent possible. • Avoid unnecessary disturbance to adjacent areas. **Site-specific Measures** • Construction activities will be strictly confined to the defined Karaali WWTP site boundaries. • No encroachment into surrounding agricultural lands will be allowed. • Dust suppression (regular watering) will be applied to protect surrounding vegetation.	• Contractor Environmental Specialist • PIU	ESMP Construction Method Statement

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
	Impacts on flora species	Common herbaceous vegetation typical to the region (ruderal and agricultural species)	**General Measures** • Conduct pre-construction site inspections. **Site-specific Measures** • No trees or woody vegetation are present on the project site; therefore, no tree cutting or transplantation is required. • Dust control measures will be implemented to prevent deposition on vegetation. • Landscaping during operation will use native, non-invasive plant species adapted to local conditions.	• Contractor Environmental Specialist • PIU	ESMP
	Impacts on fauna species	Small mammals, birds, reptiles potentially present in disturbed habitats within and around the Karaali WWTP site	**General Measures** • Prohibit hunting, poaching, and wildlife disturbance by workers. **Site-specific Measures** • Pre-construction and pre-activity visual checks will be conducted to identify fauna presence. • If protected species are encountered, works will be halted and relevant authorities will be informed. • Speed limits (max. 30 km/h) will be enforced within the site to prevent vehicle–wildlife collisions. • Waste will be stored in closed containers to avoid attracting wildlife.	• Contractor Environmental Specialist • PIU	Waste Management Plan
	Invasive alien species	Local ecosystems	**General Measures** • Monitor for potential introduction of invasive species. **Site-specific Measures** • No invasive alien species have been identified on the site. • Landscaping and rehabilitation works will strictly use native and non-invasive plant species.	• Contractor • PIU	
	Impacts on aquatic biodiversity	Çay Stream and Beyşehir Lake Basin	**General Measures** • Prevent pollution of surface waters. **Site-specific Measures** • Treated effluent will be discharged to Çay Stream in compliance with the Urban Wastewater Treatment Regulation (SKKY) and EU Directive	• Operator (KOSKİ) • PIU	ESMP Effluent Monitoring Plan

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			91/271/EEC. • No untreated wastewater discharge will be allowed. • Regular monitoring of effluent quality will be carried out during operation.		
	Impacts on ecosystem services	Regulating ecosystem services (water quality of the Beyşehir Lake Basin)	**General Measures** • Apply mitigation hierarchy to minimize impacts. **Site-specific Measures** • The project site currently provides limited ecosystem services due to its modified condition. • **Positive impact:** Operation of the Karaali WWTP will improve water quality in the Beyşehir Lake Basin by reducing nutrient and organic pollution loads.	• Operator (KOSKİ) • PIU	ESMP
	Cumulative impacts	Beyşehir Lake Basin	**General Measures** • Ensure compliance with basin-level water quality objectives. **Site-specific Measures** • The WWTP will contribute positively to cumulative impacts by reducing untreated wastewater discharges from Karaali Neighborhood.	• Operator (KOSKİ) • PIU	ESMP Basin Management Plans (if applicable)
ESS8 – Cultural Heritage					
	Impacts on intangible cultural heritage	Local communities residing within the administrative boundaries of Karaali Neighborhood Nearby settlements with potential indirect interaction during construction	**Site-specific Measures** • Construction activities will be planned and implemented to avoid interference with local cultural practices, traditions, and social activities, where applicable. • Stakeholder engagement activities carried out in line with the SEP will consider local sensitivities and community practices. • Any concerns raised by communities regarding potential impacts on intangible cultural heritage will be addressed through the Project Grievance Mechanism.	• Project Implementation Unit (PIU) • Social Specialist • Contractor	• Stakeholder Engagement Plan (SEP) • Environmental and Social Management Plan (ESMP) • Project Grievance Mechanism Procedure
	Chance finds	Chance Finds to be encountered	**General Measures**	• Contractor	• Chance Finds Procedure

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			• Implement the Subproject-specific Chance Finds Procedure (presented in Annex İ) if previously unknown cultural heritage is encountered during Subproject activities. • Include the Subproject-specific Chance Finds Procedure in all contracts relating to construction of the Subproject, including excavations, demolition, movement of earth, or other changes in the physical environment. • Ensure that the Subproject personnel are trained on the Subproject-specific Chance Finds Procedure. **Site-specific Measures** • Please see the Subproject-specific Chance Finds Procedure (presented in Annex İ) • In the event that any archaeological, historical, or cultural remains are discovered during construction, all works in the vicinity of the find will be immediately suspended. • The Subproject-specific Chance Finds Procedure, will be implemented without delay. • Relevant authorities will be notified, and construction activities will resume only after clearance is obtained from the competent authority. • All contractors and subcontractors will be trained on the Chance Finds Procedure prior to commencement of construction works.	• Project Implementation Unit (PIU) • Environmental and Social Specialists	• Cultural Heritage Management Plan (CHMP) • Environmental and Social Management Plan (ESMP)
ESS10 – Stakeholder Engagement and Information Disclosure					
	Risks associated with stakeholder engagement	Please refer to SEP for the list of Subproject stakeholders	• Implement the Subproject-specific Stakeholder Engagement Plan (SEP) during the construction phase. • Disclose Subproject information in line with the SEP to allow stakeholders to understand the risks and impacts of the Subproject , and potential opportunities.	• Project Implementation Unit (PIU) • Social Specialist • Contractor (for construction-phase stakeholder engagement activities)	• Stakeholder Engagement Plan (SEP)

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
	Risks associated with grievance management	Please refer to SEP for the list of Subproject stakeholders	• Implement the Subproject-specific Grievance Mechanism developed as part of the SEP. • This Grievance Mechanism is also applicable to the Contractor. KOSKİ is responsible for ensuring its implementation and operation by the Contractor.	• Project Implementation Unit (PIU) • Social Specialist • Grievance Mechanism Contact Person (GMCP) • Contractor (for construction-related grievances)	• Stakeholder Engagement Plan (SEP) • Project Grievance Mechanism Procedure
	Risks associated with insufficient information disclosure on construction activities	Residents of Karaali Neighborhood (project beneficiaries), nearby settlements with potential indirect interaction during construction local authorities, and other interested stakeholders.	• Provide timely and accurate information to stakeholders regarding construction schedules, duration of works, traffic arrangements, and temporary disturbances (e.g. noise, dust, access restrictions), in line with the SEP. • Announce planned construction activities and changes in advance through appropriate communication channels defined in the SEP. • Ensure that information disclosed during the construction phase is consistent with the project description and impact assessment findings presented in the ESMP and SEP.	• Project Implementation Unit (PIU) • Social Specialist • Contractor	• Stakeholder Engagement Plan (SEP) • Environmental and Social Management Plan (ESMP)

4.3. Operation ESMP Matrix

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
ESS2 – Labor and Working Conditions					
	Risks associated with labor and working conditions	Sub-borrower's operation and maintenance (O&M) personnel O&M contractors and subcontractors	**General Measures** • Develop and implement a Subproject-specific Labor Management Plan for the operation phase. • Ensure that the Subproject workers are provided with information and documentation that is clear and understandable regarding their terms and conditions of employment. The information and documentation will set out their rights under national labor and employment law (which will include any applicable collective agreements), including their rights related to hours of work, wages, overtime, compensation and benefits, as well as those arising from the requirements of ESS2. • Ensure that information and documentation regarding employees' terms and conditions of employment is provided at the beginning of the working relationship and when any material changes to the terms or conditions of employment occur. • Ensure that the Subproject workers are paid on a regular basis as required by national legislation and the Subproject-specific LMP. • Ensure that the Subproject workers are provided with adequate periods of rest per week, annual holiday and sick, maternity and family leave, as required by national legislation and the Subproject-specific LMP. • Ensure that the decisions relating to the employment or treatment of Subproject workers are not made on the basis of personal characteristics unrelated to inherent job requirements. • Ensure that the employment of Subproject workers is based on the principle of equal opportunity and fair treatment, and there will be no discrimination with respect to any aspects of the employment relationship, such as recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, job assignment, promotion, termination of employment or retirement, or disciplinary practices.	Sub-borrower / Facility Operator Operation and Maintenance (O&M) Management OHS Specialist	Labor Management Plan (Operation Phase) Occupational Health and Safety Management Plan Emergency Preparedness and Response Plan Worker Grievance Mechanism Procedure

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
			• Measures will be taken to prevent employment or engagement of children under the minimum age established in GFC Project's LMP[7]. • Measures will be taken in accordance with the Subproject specific Labor Management Plan to prevent use of forced labor[8] in connection with the Subproject. • Where on-site or off-site accommodation services[9] are provided to Subproject workers, ensure that the relevant requirements of "Workers' Accommodation: Processes and Standards: A guidance Note by IFC and the EBRD (August 2009)" are in place and implemented on the management and quality of accommodation to protect and promote the health, safety, and well-being of the Subproject workers, and to provide access to or provision of services that accommodate their physical, social and cultural needs. **Site-specific Measures** • The operation phase will be carried out by permanent or shift-based O&M personnel, and no on-site or off-site worker accommodation will be provided under the Subproject. • All operation personnel will commute daily and will not reside within the facility or in employer-provided housing. • Employment conditions, working hours, overtime, and rest periods will be managed in accordance with national labor legislation and ESS2 requirements. • Occupational health and safety risks specific to wastewater treatment plant operation (e.g. confined spaces, chemical handling, electrical systems) will be managed through the Operation Phase OHS Management Plan. • A Worker Grievance Mechanism applicable to the operation phase will remain in place to allow workers to raise concerns confidentially and without retaliation. • No child labor or forced labor will be employed during the operation phase.		

[7] According to the Project LMP, workers under the age of 18 will not be engaged by the Project.
[8] Forced labor consists of any work or service not voluntarily performed that is exacted from an individual under threat of force or penalty. Work is on a voluntary basis when it is done with the free and informed consent of a worker. Such consent must exist throughout the employment relationship and the worker must have the possibility to revoke freely given consent. In particular, there can be no "voluntary offer" under threat or other circumstances of restriction or deceit. To assess the authenticity of a free and informed consent, it is necessary to ensure that no external constraint or indirect coercion has been carried out, either by an act of the authorities or by an employer's practice.
[9] Those services might be provided either directly by the Sub-borrower, contractors or by third parties.

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
			• A Code of Conduct will be implemented for all operational staff, including provisions on respectful behavior, prevention of Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH), and a zero-tolerance approach to harassment, exploitation, and discrimination. • All personnel will receive periodic training and awareness sessions on SEA/SH and communicable diseases (such as HIV/AIDS). These trainings will cover acceptable conduct, prevention measures, reporting mechanisms, and health protection practices. Participation will be documented and monitored throughout the operation phase.		
	OHS – General Hazards	Operation and Maintenance (O&M) personnel Operation-phase contractors and subcontractors Technical, administrative and support staff working within the facility	**General Measures** • Develop and implement a Subproject-specific Operational Risk Assessment, OHS Management Plan, Emergency Preparedness and Response Plan addressing emergency events relevant to the operation phase of the Subproject. • Ensure that monitoring and record-keeping activities and accident and incident investigation reports, including audit procedures designed to verify and record the effectiveness of the prevention and control of exposure to occupational hazards, are kept on file for at least five years. • Ensure railing around all process tanks and pits are available.. Require use of a life line and personal flotation device (PFD) when workers are inside the railing, and ensure rescue buoys and throw bags are readily available. • Use PFDs when working near waterways. • Maintain work areas to minimize slipping and tripping hazards. • Implement fire and explosion prevention measures in accordance with "Regulation on the Fire Protection of Buildings". • Ensure that the minimum requirements of work clothes and safety shoes are fully complied with in the site. • During the operation, where risks cannot be eliminated or sufficiently reduced by techniques for collective protection or by measures, methods or processes used in the organization of work, ensure that health and safety signs are provided and used in appropriate places in accordance with the regulation on health and safety signs.	• Employer • Employer's Representative • Contractor • Subcontractors • Project Implementation Unit (PIU) • Social Specialist • Occupational Health and Safety (OHS) Specialist • Occupational Physician	• Occupational Health and Safety Management Plan • Confined Space Entry Procedure • Risk Assessment • Emergency Preparedness and Response Plan • Contractor Management Plan • National Occupational Health and Safety Legislation

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
			• Ensure that site cleanliness and tidiness standards are established and implemented by employees **Site-specific Measures** • Prior to the commencement of the operation phase, a site-specific Operational Occupational Health and Safety (OHS) Risk Assessment will be conducted covering all facility activities and will be updated as needed when changes occur. • Regular OHS briefings and toolbox talks will be conducted during the operation phase to address site-specific operational risks. • Access control will be implemented throughout the facility, and unauthorized entry into process areas and other high-risk zones will be prevented. • Regular site inspections will be carried out to verify the proper use and condition of guardrails, lifelines, and personal flotation devices when working around process tanks, pits, and water-adjacent areas. • Slipping, tripping, and falling hazards within operational areas will be monitored through routine inspections, and identified issues will be addressed through corrective actions. • Fire-fighting equipment, emergency exits, and assembly points will be clearly marked on site, and periodic fire and emergency drills will be conducted. • Compliance with work clothing and safety footwear requirements will be monitored, and corrective measures will be taken where non-compliance is observed. • Occupational health and safety signage will be regularly inspected and maintained, and damaged or missing signs will be replaced as necessary. • All accidents, near-miss incidents, and hazardous situations occurring during the operation phase will be recorded, investigated, and addressed through corrective and preventive actions, with responsibilities assigned and actions tracked to closure. All OHS activities will be implemented under the supervision of qualified OHS personnel, and records of inspections, incidents, and corrective actions will be maintained.		

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
	OHS - Physical Hazards: Electrical Hazards	Operation and Maintenance (O&M) personnel Operation-phase contractors and subcontractors Technical, administrative and support staff working within the facility	**General Measures** • All energized electrical equipment and lines will be clearly marked with appropriate warning signs. • During maintenance, repair, or servicing activities, all electrical equipment will be de-energized, lockout–tagout (LOTO) will be applied, and warning tags will be placed on the locks. • All electrical cables, extension cords, and portable electrical equipment will be regularly inspected for wear, damage, or exposed conductors. Compliance with the manufacturer's specified maximum operating voltage for portable equipment will be ensured. • All electrical equipment used in wet or damp environments will be grounded or double insulated and protected by residual current devices (RCDs). • Power and extension cords will be protected against damage caused by vehicle and pedestrian traffic by shielding or suspending them above traffic areas. • High-voltage equipment and electrical rooms with restricted or prohibited access will be properly labeled and identified with warning signage. • "No Approach" zones will be established around and beneath high-voltage lines. • Rubber-tired vehicles that come into direct contact with or create an electrical arc with high-voltage lines will be taken out of service until the necessary inspections are completed. • All buried electrical cables will be identified and marked prior to maintenance, repair, or excavation activities. • Written procedures for the Lockout–Tagout (LOTO) system will be in place and effectively implemented on site. • Portable electrical panels used on site will be stable and secure, their covers will be kept closed, they will be properly grounded, and insulating rubber mats will be placed in front of them. • Adequate lighting will be provided throughout the facility and camp areas, and no dark areas that may pose an accident risk will be allowed.	• Employer • Employer's Representative • Contractor • Subcontractors • Project Implementation Unit (PIU) • Social Specialist • Occupational Health and Safety (OHS) Specialist • Occupational Physician	• Occupational Health and Safety Management Plan • Confined Space Entry Procedure • Risk Assessment • Emergency Preparedness and Response Plan • Contractor Management Plan • National Occupational Health and Safety Legislation

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
			• A Work Permit System will be implemented for activities where working under live energy is unavoidable. **Site-specific Measures** • All temporary and permanent electrical installations within the facility will be operated, maintained, and repaired only by qualified and authorized electrical personnel. • The Lockout–Tagout (LOTO) procedure will be applied and its effectiveness will be monitored during maintenance, repair, and troubleshooting activities involving electrical equipment. • Electrical panels and distribution boards used during the operation phase will be clearly labeled, protected against environmental conditions, and inspected periodically. • The locations of all underground and overhead electrical lines throughout the facility will be recorded and communicated to relevant personnel prior to maintenance activities. • Live electrical works will only be carried out where de-energization is not technically feasible and strictly within the scope of the Work Permit System. • Work permits for live electrical works will be issued, approved, monitored, and formally closed by authorized personnel, and all records will be retained on site. • Regular inspections will be conducted during the operation period to verify the integrity of cables, grounding systems, and electrical equipment. • Any non-compliances identified during electrical inspections will be documented, and corrective and preventive actions will be implemented within defined timeframes and tracked until closure. • Warning signage and physical barriers will be installed and maintained in areas with high-voltage equipment to prevent unauthorized access. Site-specific emergency response procedures covering electrical incidents, including electric shock and arc flash events, will be developed and integrated into the Emergency Preparedness and Response Plan.		

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
	OHS – Physical Hazards: Elevated and Overhead Work	Operation and Maintenance (O&M) personnel Operation-phase contractors and subcontractors Technical, administrative and support staff working within the facility	**General Measures** • Barricade the area around which elevated work is taking place to prevent unauthorized access. • Avoid working under personnel on elevated structures. • Rate and properly maintain hoisting and lifting equipment, and train the operators in their use. • Maintain the elevating platforms and operate them according to established safety procedures including use of fall protection measures (e.g. railings). • Ensure implementation of equipment movement protocols (e.g. movement only when the lift is in a retracted position), repair by qualified individuals, and installation of locks to avoid unauthorized use by untrained individuals. • Use the ladders according to pre-established safety procedures for proper placement, climbing, standing, as well as the use of extensions. • Ensure that the SOP has been prepared for ‘’Elevated and Overhead Work’’ that only trained personnel approved by the workplace physician carry out these activities in accordance with the related instructions. **Site-specific Measures** • Prior to commencing elevated and overhead works, a site-specific risk assessment will be conducted, and appropriate control measures will be defined. • Areas where elevated and overhead works are carried out will be identified in advance and secured with barriers, warning signage, and physical controls to prevent unauthorized access. • Simultaneous work below elevated work areas will be avoided where possible; where unavoidable, exclusion zones will be established to protect against falling objects. • Hoisting, lifting, and elevating equipment (such as cranes and mobile elevating work platforms) will be operated only by trained and authorized personnel, and inspection and maintenance records will be maintained on site.	• Employer • Employer’s Representative • Contractor • Subcontractors • Project Implementation Unit (PIU) • Social Specialist • Occupational Health and Safety (OHS) Specialist • Occupational Physician	• Occupational Health and Safety Management Plan • Confined Space Entry Procedure • Risk Assessment • Emergency Preparedness and Response Plan • Contractor Management Plan • National Occupational Health and Safety Legislation

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
			• Elevating platforms and similar equipment will be operated in accordance with manufacturer instructions and site procedures, with regular checks to ensure the proper use of guardrails and fall protection systems. • Ladders, access platforms, and temporary working surfaces will be inspected prior to use, and only equipment in safe condition will be permitted for work. • Elevated and overhead works will be carried out only by trained and authorized workers, whose fitness for such work has been approved by the occupational physician. • Site-specific emergency and rescue procedures for elevated and overhead work will be developed, communicated to workers, and tested where necessary through drills. • Weather conditions (such as strong winds or rain) will be monitored, and elevated and overhead works will be suspended when conditions pose safety risks.		
	OHS – Physical Hazards: Fall Protection	Operation and Maintenance (O&M) personnel Operation-phase contractors and subcontractors Technical, administrative and support staff working within the facility	**General Measures** • Implementation of a fall protection program that includes training in climbing techniques and use of fall protection measures; inspection, maintenance, and replacement of fall protection equipment; and rescue of fall-arrested workers, among others. • Criteria for the use of 100% fall protection will be defined based on the results of site- and task-specific risk assessments for all activities involving a risk of falling, regardless of height. Fall protection systems will be designed and implemented in accordance with the nature of the work to be performed, the potential fall distance, the characteristics of the structure, and the required movements (including climbing, descending, horizontal and vertical movement, and transitions between points). • Use of safety belts not less than 16 millimeters (mm) (5/8 inch) two-in-one nylon or material of equivalent strength. Rope safety belts will be replaced before signs of aging or fraying of fibers become evident. • Use PFDs when working near waterways. • When operating power tools at height, use of a second (backup) safety strap by workers.	• Employer • Employer's Representative • Contractor • Subcontractors • Project Implementation Unit (PIU) • Social Specialist • Occupational Health and Safety (OHS) Specialist • Occupational Physician	• Occupational Health and Safety Management Plan • Confined Space Entry Procedure • Risk Assessment • Emergency Preparedness and Response Plan • Contractor Management Plan • National Occupational Health and Safety Legislation

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
			• For work at height, ensure that collective safety measures are in place in the area of operation (such as safe guardrails, fall arrest platforms, barriers, covers, scaffolds, safety nets or airbags). • Make sure that the SOP has been prepared for ‘’Working at Height’’ that only trained personnel approved by the workplace physician carry out these activities in accordance with the related instructions. • Check that the platforms and leaders to be used comply with the standards and periodic maintenance is up to date. **Site-specific Measures** • Prior to commencing any work at height, site supervisors will verify that the task-specific risk assessment and the Working at Height SOP are in place and communicated to workers. • Designated working-at-height areas will be clearly identified on site and monitored to ensure that barriers, guardrails, and warning signage are correctly installed and maintained. • Scaffolds, platforms, ladders, and access systems used for work at height will be visually inspected on a regular basis by competent personnel, and their conformity with applicable standards and maintenance status will be verified on site. • Site observations will be conducted to confirm that workers use personal fall protection equipment correctly and continuously, including safety harnesses, lifelines, and backup safety straps when operating power tools at height. • When work is carried out near water bodies, site observations will ensure that personal flotation devices (PFDs) are worn as required and that rescue equipment is available and in good condition. • Simultaneous work below working-at-height areas will be monitored and avoided where possible; where unavoidable, exclusion zones will be established and controlled to protect against falling objects. • Weather conditions affecting work at height will be observed on site, and works will be suspended when conditions such as strong wind, rain, or icy surfaces pose increased fall risks.		

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
			• Any non-compliances identified during site observations will be recorded, corrective and preventive actions will be defined, and implementation will be followed up until closure.		
	OHS – Chemical Hazards	Operation and Maintenance (O&M) personnel Operation-phase contractors and subcontractors Technical, administrative and support staff working within the facility	**General Measures** • Implement a training program for operators who work with chlorine and ammonia regarding safe handling practices and emergency response procedures. • Provide appropriate personal protective equipment (including, for example, self-contained breathing apparatus) and training on its proper use and maintenance. • Prepare escape plans from areas where there might be a chlorine or ammonia emission. • Ensure that safety showers and eye wash stations are installed near the chlorine and ammonia equipment and other areas where hazardous chemicals are stored or used. • Limit wastes entering the sewer system to those that can be effectively treated in the wastewater treatment facility and reduce the amount of air-strippable hazardous compounds entering the system by controlling industrial discharges (e.g., by permit or similar system). Analyze incoming raw wastewater to identify hazardous constituents. • Ventilate enclosed processing areas and ventilate equipment, such as pump stations, prior to maintenance. • Use personal gas detection equipment while working in a wastewater facility. • Continuously monitor air quality in work areas for hazardous conditions (e.g. explosive atmosphere, oxygen deficiency). • Periodically sample air quality in work areas for hazardous chemicals. If needed to meet applicable occupational health national requirements or internationally accepted standards, install engineering controls to limit worker exposure, for example collection and treatment of off-gases from air stripping. • Rotate personnel among the various treatment plant operations to reduce inhalation of air-stripped chemicals, aerosols, and other potentially hazardous materials.	• Employer • Employer's Representative • Contractor • Subcontractors • Project Implementation Unit (PIU) • Social Specialist • Occupational Health and Safety (OHS) Specialist • Occupational Physician	• Occupational Health and Safety Management Plan • Confined Space Entry Procedure • Risk Assessment • Emergency Preparedness and Response Plan • Contractor Management Plan • National Occupational Health and Safety Legislation

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
			• Consider use of drip irrigation of treated wastewater, which minimizes worker exposure and the amount of water needed. Avoid use of spray irrigation of treated wastewater, if possible. • Provide field workers with personal protective equipment, such as rubber gloves and waterproof shoes. • Provide worker health monitoring, including regular physical examinations. • Control vectors and intermediate hosts. • Make sure that the SOP for 'Working with Hazardous Chemicals' has been prepared and that the applications in the site are fulfilled according to this SOP. • Check that the MSDSs of hazardous chemicals are ready and easily accessible and that the relevant personnel have received MSDS training. • In case of intervention with asbestos-containing materials, ensure that work is carried out in accordance with the 'Regulation on Health and Safety Measures in Working with Asbestos'' **Site-specific Measures** • Areas where chlorine, ammonia, or other hazardous chemicals are used will be clearly identified on site and access will be controlled. • Proper use of personal protective equipment in chemical handling, storage, and dosing areas will be verified through regular site observations. • The availability and functionality of personal gas detection devices will be checked during site inspections. • Ventilation systems and pre-maintenance ventilation practices will be monitored through site observations. • Accessibility and functionality of safety showers, eye wash stations, and emergency escape routes will be verified during routine site inspections. • Any chemical spills, gas releases, or exposure incidents will be recorded, investigated, and addressed through corrective and preventive actions tracked to closure.		

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
			• Compliance with SOPs and MSDS requirements will be monitored through site inspections and observations.		
	OHS – Pathogens and vectors	Operation and Maintenance (O&M) personnel Operation-phase contractors and subcontractors Technical, administrative and support staff working within the facility	**General Measures** • Include in safety training program for workers, safe handling and personal hygiene practices to minimize exposure to pathogens and vectors. • Use vacuum trucks or tugs for removal of fecal sludge instead of manual methods. • Provide and require use of suitable personal protective clothing and equipment to prevent contact with wastewater (e.g., rubber gloves, aprons, boots, etc.). Especially provide prompt medical attention and cover any skin trauma such as cuts and abrasions to prevent infection and use protective clothing and goggles to prevent contact with spray and splashes. • Provide areas for workers to shower and change clothes before leaving work and provide laundry service for work clothes. This practice also helps to minimize chemical exposure. • Encourage workers at wastewater facilities to wash hands frequently. • Provide worker immunization (e.g. for Hepatitis B and tetanus) and health monitoring, including regular physical examinations. • Reduce aerosol formation and distribution, for example by: • Planting trees around the aeration basin to shield the area from wind and to capture the droplets and particles • Using diffused aeration rather than mechanical aeration and using finer bubbles for aeration • Reducing aeration rate, if possible • Use of floating covers on the mixed liquor of the aeration basin • Suppression of droplets just above the surface, (e.g. by installing a screen or mesh above the basin); • Collection of droplets (e.g. by sedimentation, scrubber, electrostatic precipitator, or fabric filter) • Disinfection of airborne particles (e.g., by using ultraviolet lights)	• Employer • Employer's Representative • Contractor • Subcontractors • Project Implementation Unit (PIU) • Social Specialist • Occupational Health and Safety (OHS) Specialist • Occupational Physician	• Occupational Health and Safety Management Plan • Confined Space Entry Procedure • Risk Assessment • Emergency Preparedness and Response Plan • Contractor Management Plan • National Occupational Health and Safety Legislation

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
			• Use of submerged effluent collector (such as pipes with orifices) rather than weirs • Avoid handling screenings by hand to prevent needle stick injuries; • Maintain good housekeeping in sewage processing and storage areas; • Advise individuals with asthma, diabetes, or suppressed immune systems not to work at wastewater treatment facilities, especially composting facilities, facility because of their greater risk of infection. • Provide access to safe drinking water and sanitation (including hand washing) facilities; • Control vectors and intermediate hosts. **Site-specific Measures** • Areas with potential direct contact with wastewater will be clearly identified on site, and the use of appropriate personal protective equipment will be verified through regular site observations. • Compliance with personal hygiene practices, including hand washing and use of shower and changing facilities, will be monitored through site inspections. • Proper condition and correct use of PPE such as gloves, boots, aprons, and eye protection will be checked during site observations. • Control measures implemented in areas with high aerosol generation potential (such as aeration basins) will be monitored to verify their effectiveness. • Site observations will be carried out to identify the presence of vectors (such as rodents, insects, or pests), and vector control measures will be implemented where necessary. • Any worker health incidents, infections, or near-miss events related to pathogen exposure will be recorded, investigated, and addressed through corrective and preventive actions tracked to closure. Housekeeping, sanitation, and waste handling practices will be monitored through routine site inspections to ensure continued effectiveness.		
	OHS-Noise	Operation and Maintenance	**General Measures**	• Employer • Employer's	• Occupational Health and Safety

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
		(O&M) personnel Operation-phase contractors and subcontractors Technical, administrative and support staff working within the facility	• Ensure use of personal hearing protection by personnel exposed to noise from vehicular traffic and maintenance vehicles • Implement work rotation programs to reduce cumulative exposure to noise • Ensure that the SOP for hearing protection is in place and that employees are using personal protective equipment in accordance with the relevant instructions. • Ensure that the areas requiring the use of personal protective equipment in the operation area are identified and that the necessary warning signs are placed • In areas with high noise levels, ensure that engineering measures are taken to reduce the level to an acceptable level **Site-specific Measures** • Areas and equipment with high noise levels will be identified on site, and regular site observations will be conducted to verify the implementation of noise control measures. • Proper and continuous use of personal hearing protection equipment (such as earplugs or earmuffs) by workers exposed to noise will be monitored through site inspections. • The effectiveness of work rotation arrangements implemented to reduce cumulative noise exposure will be checked during site observations. • Noise-related complaints, near-miss incidents, or health concerns reported by workers will be recorded, investigated, and addressed through corrective and preventive actions. • Engineering noise control measures (such as equipment maintenance, acoustic insulation, enclosures, or barriers) will be monitored on site to verify their effectiveness and improved where necessary. • The visibility and adequacy of warning signage in areas requiring hearing protection will be regularly inspected and maintained.	Representative • Contractor • Subcontractors • Project Implementation Unit (PIU) • Social Specialist • Occupational Health and Safety (OHS) Specialist • Occupational Physician	Management Plan • Confined Space Entry Procedure • Risk Assessment • Emergency Preparedness and Response Plan • Contractor Management Plan • National Occupational Health and Safety Legislation
	Risks associated with management of employee grievances	Sub-borrower's operation and maintenance (O&M) personnel	• Develop and implement a Subproject-specific Labor Management Plan, including grievance mechanism for Subproject employees (covering all direct and contracted workers) to raise workplace concerns during the operation phase.	Sub-borrower / Facility Operator	• Labor Management Plan (Operation

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
		O&M contractors and subcontractors	• Ensure that all direct and contracted workers are informed of the grievance mechanisms at the time of recruitment and the measures put in place to protect them against any reprisal for its use. • Ensure that measures are put in place to make the grievance mechanism easily accessible to all Subproject employees. • A Worker Grievance Mechanism specific to the operation phase will be maintained and implemented in line with ESS2. • Grievances may be submitted confidentially and, where requested, anonymously. • All grievances will be recorded, tracked, and addressed within defined timelines, and outcomes will be communicated to the complainant. • Grievance records will be periodically reviewed by facility management to identify recurring issues and corrective actions.	O&M Management Social Specialist	Phase) • Worker Grievance Mechanism Procedure
ESS3 – Resource Efficiency and Pollution Prevention and Management					
	Energy Use, Water Use and Raw Material Use	Natural Resources (Water, Energy)	**General Measures** • Apply good international industry practice to improve energy and resource efficiency in WWTP operation. • Optimize operation of electromechanical equipment to avoid unnecessary energy consumption. • Monitor resource consumption and implement corrective actions where inefficiencies are identified. **Site-specific Measures** • Aeration will be provided by **blower-based fine bubble diffusers**, allowing efficient oxygen transfer under high influent total nitrogen conditions. • **SCADA automation system** will continuously monitor flow rates, dissolved oxygen levels and process parameters, enabling optimized control of **blowers and pumps**. • Variable Frequency Drives (VFDs) will be used on suitable **blowers and pumps** to adjust energy consumption based on actual process demand. • Chemical consumption (e.g. sodium hypochlorite) will be minimized through automated dosing systems. • No treated effluent reuse or solar energy systems are included in the Karaali WWTP design.	• KOSKİ (Operator) • Plant Manager	• Environmental and Social Management Plan (ESMP) • Operation and Maintenance Plan

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
	Emissions to air during operation	Residents of Karaali Neighborhood, WWTP Staff	**General Measures** • Cover emission points (e.g., aeration basins, sludge thickeners) and vent emissions to control systems as needed. • Where necessary, consider alternate aeration technologies or process configurations to reduce volatilization. **Site-specific Measures** • Aeration tanks will be operated using **blower-based diffused aeration**, ensuring sufficient dissolved oxygen levels for nitrification and preventing anaerobic conditions. • Excess biological sludge will be stored only in the **sludge storage tank** for limited durations prior to off-site transfer. • No sludge thickening or dewatering units are present on-site; therefore, odour sources related to these processes do not exist at Karaali WWTP. • Regular operational monitoring will be carried out to prevent hydrogen sulfide (H_2S) formation.	• KOSKİ (Operator) • Environmental Specialist	• Air Quality Management Plan • Sludge Management Plan
	Generation of non-hazardous and hazardous waste during operation	Soil, Groundwater, Visual Landscape	**General Measures** • Apply waste hierarchy principles (reduce, reuse, recycle, dispose). • Segregate wastes at source and store them safely until disposal. • Transfer wastes only to licensed facilities in accordance with national legislation. **Site-specific Measures** • Screenings and grit will be collected in sealed containers and disposed of at licensed facilities authorized by the **relevant municipal authorities (Beyşehir)**. • **Excess biological sludge** will be temporarily stored in the sludge storage tank and periodically transported by KOSKİ vehicles to **BeyşehirWWTP** for thickening, dewatering and final disposal. • Waste oils, used filters and chemical containers will be stored on impermeable surfaces and transferred to licensed hazardous waste contractors. • Domestic waste generated by operational staff will be managed through the municipal waste collection system.	• KOSKİ (Operator) • Environmental Specialist	• Waste Management Plan • Sludge Management Plan • Hazardous Waste Management Procedure
	Generation of wastewater and	Receiving Body: Çay Stream	**General Measures** • Ensure compliance with national wastewater discharge standards and sensitive area	• KOSKİ (Operator) • Plant	• Wastewater Management Plan

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
	efficiency of wastewater treatment systems		requirements. • Monitor influent and effluent quality regularly. **Site-specific Measures** • Karaali WWTP is designed as an advanced biological treatment plant with nitrogen and phosphorus removal to protect the Beyşehir Lake Basin. • Treated effluent will be discharged to Çay Stream via the project-specific discharge line constructed in accordance with approved design drawings. • Effluent quality (BOD_5, COD, TN, TP) will be monitored through regular sampling and laboratory analysis. • Standby power supply will ensure continuous operation of critical units (blowers, pumps) during power outages.	Manager • Laboratory Technicians	• Operation and Maintenance Manual • Water Pollution Control Regulation Compliance
	Stormwater runoff, contaminated with oil and grease, metals, particulate matter, deicing salts, and other pollutants released by vehicles on road, leading to pollution of water resources	Surface Water, Soil	**General Measures** • Separate stormwater from wastewater treatment processes. • Prevent uncontrolled runoff into treatment units. **Site-specific Measures** • Surface drainage systems will divert clean stormwater away from process tanks and operational areas. • Stormwater from internal site roads and paved areas (where present) will be managed through appropriate drainage channels. • No sludge drying beds exist at Karaali WWTP; therefore, stormwater interaction with sludge processing areas is not applicable.	• KOSKİ (Operator) • Maintenance Team	• Environmental and Social Management Plan (ESMP)
	Release of hazardous materials in the event of accidents during operation	Workers, Soil, Air	**General Measures** • Store chemicals safely and minimize quantities kept on-site. • Ensure availability of MSDS and emergency response equipment. **Site-specific Measures** • Disinfection will be carried out using **sodium hypochlorite** only. • Chemicals will be stored in a dedicated, ventilated area with secondary containment. • MSDS will be available in Turkish at points of use. • Spill kits will be provided near chemical storage and dosing areas. • Gas chlorination and ammonia systems are not used at Karaali WWTP.	• KOSKİ (Operator) • OHS Specialist	• Hazardous Material Management Plan • Emergency Preparedness and Response Plan
	Noise and vibration	Residents of	**General Measures**	• KOSKİ	• Noise Management

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
	generation during operation	Karaali Neighborhood, Fauna in the vicinity	• Select and operate equipment to minimize noise and vibration. • Maintain equipment regularly to prevent abnormal noise levels. **Site-specific Measures** • Blowers, pumps and rotating equipment will be properly maintained and, where necessary, housed in enclosed spaces. • Operational noise will comply with the Regulation on Assessment and Management of Environmental Noise. • Periodic noise measurements will be conducted at the facility boundary and nearest sensitive receptors.	(Operator) • PIU	Plan • Stakeholder Engagement Plan (SEP)
ESS4 - Community Health and Safety					
	Risks posed to the public while accessing Subproject facilities (such as physical trauma associated with failure of structures, burns and smoke inhalation from fire, injuries suffered as a consequence of falls or contact with heavy equipment, etc.)	Residents of Karaali Neighborhood (project beneficiaries) Visitors and service users accessing the wastewater treatment plant area Nearby land users and road users in the vicinity of the facility	**General Measures** • Operate and decommission the structural elements of the Subproject in accordance with national legal requirements, the EHSGs and other GIIP, taking into consideration safety risks to third parties and affected communities. **Site-specific Measures** • The wastewater treatment plant will be operated and maintained by qualified and trained personnel in accordance with approved design and operational criteria. • Routine structural inspections and preventive maintenance will be conducted for buildings, tanks, mechanical units, and other fixed structures to ensure continued structural integrity. • Access to operational areas will be controlled and restricted to authorized personnel only. • Safety signage, barriers, and guardrails will be maintained in areas where there is a risk of falls, contact with equipment, or other physical hazards. • Emergency shutdown procedures and safe access routes will be maintained to protect both workers and third parties.	Facility Operator / Sub-borrower Operation and Maintenance (O&M) Management OHS Specialist	Operation and Maintenance Manual Occupational Health and Safety Management Plan Emergency Preparedness and Response Plan Environmental and Social Management Plan (ESMP)
	Risks and impacts on communities due to potential emergency events during operation	Operation and Maintenance (O&M) personnel	**General Measures** • An Emergency Preparedness and Response Plan will be prepared, implemented, and kept up to date in coordination with local communities and local emergency response services (fire brigade, ambulance services, law enforcement, etc.), in order	Employer Employer's	National Legislation

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
	(unanticipated incidents, arising from both natural and man-made hazards, typically in the form of fire, explosions, leaks or spills, which may occur for a variety of different reasons, including failure to implement operating procedures that are designed to prevent their occurrence, extreme weather or lack of early warning, traffic accidents, structural failures, etc.).	Operation-phase contractors and subcontractors Technical, administrative and support staff working within the facility	to ensure timely first aid response in the event of accidents and effective hazardous materials response in case of leaks or spills. The plan will cover all relevant risks, including earthquakes, and will be developed in accordance with the "Regulation on Emergencies in Workplaces." • Emergency scenarios that may occur during the operation phase, including fire, explosion, leaks/spills, natural hazards, and other emergency events, will be identified considering facility activities, equipment used, hazardous materials, environmental conditions, and nearby settlements. • The emergency organization structure, including roles, responsibilities, and internal and external communication chains, will be clearly defined and documented. • Regular training will be provided to facility personnel as well as contractor and subcontractor workers on emergency procedures, evacuation methods, first aid, and initial on-site response actions. • Emergency drills covering scenarios such as fire, leaks/spills, explosions, and evacuation will be conducted periodically in line with applicable legislation and the Emergency Preparedness and Response Plan. • Emergency equipment (fire extinguishers, fire detection and alarm systems, first aid equipment, spill response kits, etc.) will be provided in adequate quantities, kept easily accessible, and regularly inspected to ensure they remain in operational condition. • Coordination mechanisms will be established with local emergency services, relevant contact information will be kept up to date, and arrangements will be in place to ensure rapid response when required. • Necessary measures will be taken to protect the health and safety of workers, visitors, and potentially affected local communities during emergency situations. • All emergency incidents, near-miss events, and emergency drill outcomes will be recorded, reviewed, and followed by the implementation of corrective and preventive actions. **Site-specific Measures**	Representative Occupational Health and Safety Specialist Occupational Physician	

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
			• Site-specific emergency risks will be identified based on the facility location, surrounding settlements, sensitive receptors, and environmental characteristics, and these risks will be integrated into the Emergency Preparedness and Response Plan. • Site-specific evacuation routes, emergency exits, and assembly points will be defined, clearly marked, and always kept accessible. • Site-specific emergency response and spill control procedures will be developed for areas where hazardous materials are stored, handled, or transported. • Secondary containment systems, barriers, and appropriate response equipment will be provided to minimize potential impacts of leaks and spills on the environment and local communities. • Automatic fire detection, warning, and suppression systems will be installed in high fire-risk areas and maintained in active and operational condition throughout the operation phase. • Site-specific response, evacuation, and business continuity procedures will be developed for natural hazards such as earthquakes, extreme weather events, and flooding. • Communication and notification methods will be defined for informing local communities in the event of on-site or off-site emergencies originating from the facility. Site-specific emergency response teams will be established, and their competence will be maintained through regular training and drills.		
ESS5 - Land Acquisition, Restrictions on Land Use and Involuntary Resettlement					
	Land acquisition, restrictions on land use, and involuntary resettlement impacts related to the operation of the Subproject.	Not applicable. No individuals, households, land users, or businesses are affected by economic or physical displacement during the operation phase of	• The operation phase of the Subproject does not involve land acquisition, restrictions on land use, economic displacement, or physical displacement. • All operational activities will be carried out within the existing Subproject footprint and legally owned public land, as established during the construction phase. • No additional land take, access restriction, or livelihood impact is anticipated during operation. • In the event of any unforeseen land-related impacts, the Subproject will comply with ESS5 requirements, and appropriate mitigation measures, including preparation of a Land Resettlement Plan (LRP) or Resettlement Action Plan (RAP), will be initiated as necessary, with reference to the	Sub-borrower Project Implementation Unit (PIU) Social Specialist	Environmental and Social Management Plan (ESMP) Stakeholder Engagement Plan Project Grievance Mechanism Procedure

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
		the Subproject.	Construction ESMP.		ESMP
ESS6 - Biodiversity Conservation and Sustainable Management of Living Natural Resources					
	Impacts on habitats and flora (Vegetation Management)	Modified Habitat within the **Beyşehir Lake Wetland Buffer Zone**, Local Flora	**General Measures** • Avoid unnecessary disturbance to existing vegetation within and around the facility boundary. • Prefer mechanical and manual vegetation control methods instead of chemical control. • Prevent the introduction and spread of invasive alien plant species. • Use native plant species compatible with the local ecosystem for landscaping purposes. **Site-specific Measures** • **Ecological Landscaping:** Landscaping works within the Karaali WWTP site will be carried out using **local, non-invasive plant species** adapted to the natural vegetation of the Beyşehir Lake Basin. • **Herbicide Restriction:** Due to the ecological sensitivity of the Beyşehir Lake Basin, **chemical herbicides will not be used** within the facility; vegetation control will be limited to mechanical methods such as mowing. • **Site Boundary Control:** All operational activities and vehicle movements will be strictly confined within the fenced WWTP boundary to prevent disturbance to surrounding agricultural lands and semi-natural habitats. • **Maintenance Practices:** Vegetation management activities will be scheduled to avoid sensitive periods for local flora where practicable.	• KOSKİ (Operator) • Plant Manager	• Biodiversity Management Plan • Vegetation Management Plan • Operation Manual
	Impacts on aquatic life (Effluent Discharge)	Aquatic ecosystems of **Çay Stream** and the **Beyşehir Lake Basin** (final receiving environment – sensitive area)	**General Measures** • Ensure that treated effluent quality complies with national regulations and sensitive area discharge standards. • Prevent accidental releases of untreated or partially treated wastewater. • Implement regular monitoring of wastewater quality prior to discharge. **Site-specific Measures** • Nutrient Control: The Karaali WWTP is designed with advanced biological treatment including nitrogen and phosphorus removal, minimizing the risk of eutrophication in the	• KOSKİ (Operator) • Environmental Specialist	• Wastewater Management Plan • Water Pollution Control Regulation Complianc

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
			Beyşehir Lake Basin. • Discharge Control: Treated effluent will be discharged to Çay Stream through the designated discharge infrastructure in accordance with approved design and permitting conditions. • Monitoring: Effluent quality (BOD_5, COD, Total Nitrogen, Total Phosphorus) will be regularly monitored to ensure continuous compliance with "Sensitive Area" criteria. • Sludge and Screening Management: Screenings and excess sludge will be stored in closed containers/tanks to prevent runoff or leachate from reaching surface waters and adversely affecting aquatic life.		
	Impacts on fauna species (Wildlife Interaction)	Local fauna (small mammals, reptiles such as *Testudo graeca*, birds)	**General Measures** • Minimize disturbance to wildlife during operation of the facility. • Prevent attraction of wildlife to operational areas through proper waste management. **Site-specific Measures** • **Fencing:** The WWTP perimeter fence will be maintained to prevent entry of large mammals and grazing livestock into operational areas and open process units. • **Waste Control:** Domestic waste, screenings and other organic materials will be stored in sealed, leak-proof containers to avoid attracting scavengers or pests. • **Wildlife Protection Rules:** Hunting, capturing, feeding or intentional disturbance of wildlife by facility personnel is strictly prohibited within the Karaali WWTP site. • **Lighting Management:** External lighting will be designed to be directional and limited to operational needs only, reducing disturbance to nocturnal fauna and birds in the surrounding rural area. • **Awareness:** Operational staff will be informed about basic biodiversity protection principles relevant to the Karaali site.	• KOSKİ (Operator) • Site Security	• Biodiversity Management Plan • Waste Management Plan
ESS8 - Cultural Heritage					
	No impacts are anticipated during the operation phase of the Subproject.	Not applicable.	• The operation of the Subproject will comply with all applicable requirements set by the national cultural heritage authorities. • No operational activities will be carried out outside the existing Subproject footprint that could affect known or unknown cultural heritage assets. • In the unlikely event that any cultural heritage issue arises during operation, the relevant authorities will be informed and appropriate measures will be taken in line	Not applicable.	Not applicable.

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
			with national legislation.		
ESS10 - Stakeholder Engagement and Information Disclosure					
	Risks associated with stakeholder engagement and information disclosure during the operation phase of the Subproject.	Residents of Karaali Neighborhood (project beneficiaries) Nearby settlements with potential indirect interaction during operation Relevant local authorities and public institutions Other interested or affected stakeholders identified in the SEP	• Implement the Stakeholder Engagement Plan (SEP) during the operation phase, proportionate to the scale and nature of operational activities. • Continue information disclosure to stakeholders regarding operational activities, environmental performance, and monitoring results, where relevant. • Maintain the Project Grievance Mechanism to allow stakeholders to submit complaints or feedback related to operational impacts. • Ensure that stakeholder engagement and grievance handling during operation are conducted in a transparent, accessible, and timely manner.	Sub-borrower Project Implementation Unit (PIU)	Stakeholder Engagement Plan (SEP) Project Grievance Mechanism Procedure Environmental and Social Management Plan (ESMP)

4.4. Monitoring and Reporting

The Sub-borrower will internally monitor the E&S performance of the Subproject and submit Periodic Monitoring Reports to İLBANK, in accordance with the requirements outlined in the sub-financing agreement at Monthly and Quarterly intervals. The reports for each monitoring period will include the following information:

- Up-to-date information on the Subproject and progress with Subproject implementation (e.g., status of construction, Subproject timeline, etc.),
- Status of compliance with legal requirements (e.g., Subproject permitting status, status and outcomes of audits conducted by national authorities, fines imposed by national authorities if any, etc.)
- Details of how the requirements of the IFI standards (e.g. WB ESSs) are being met based on compliance with Subproject-level Environmental and Social Action Plans (ESAPs),
- Incident and accident reports and statistics,
- Current Subproject-level E&S organization and capacity (including information on capacity building and training),
- Progress with Subproject level stakeholder engagement activities and management of grievances, and
- Records on E&S non-conformities identified and the general status of Corrective Action Plan implementation at the Subproject level (in case of non-conformities).

Key performance indicators (KPIs) of this ESMP will be monitored, verified, and evaluated within the scope of the Subproject monitoring stage. The KPIs for both construction and operation phases of the Subproject are presented in Table 23.

Table 23. Key Performance Indicators for Both Construction and Operation Phases of the Subproject

Monitoring Focus	KPI
Documentation	
Following the ESMP Project, specific plans will be developed and put in place.	Full compliance with the Subproject's ESMP
Air Quality	
Air Quality incidents	Minimization and continued improvement in the number of reported air quality-related incidents.
Non-Compliance with air quality standards	Zero grievances per year
Community grievances	Minimization and continued improvement in the number of air quality-related community grievances
Violation of the speed limit	Minimization and continued improvement in the number of reported violations of the speed limit
Noise	
Noise and Vibration incidents	Minimize and continue improvement in the number of reported noise and vibration-related incidents.
Non-Compliance with Project standards	Zero Non-Compliance Reports (NCRs) per year
Number of noise-related community grievances	Zero grievances per year
Community grievances	Minimization and continued improvement in the number of noise-related community grievances
Water / Wastewater	
Spill incident	Minimization and continued improvement in the number of reported water quality-related incidents.
Non-Compliance with Subproject standards	Zero NCRs per year
Wastewater collection system	Zero grievances per year
Groundwater levels of the community/private wells	No significant adverse impact
Water quality analyses	Meeting set national and international water quality standards for surface and groundwater impacted and/or near the Subproject

Monitoring Focus	KPI
Documentation	
Flood incidents	No infrastructure damage and damage to loads/humans
Wastewater and Water loss records in the network	Sustainable low wastewater and water loss records
Waste	
Waste Generation	Minimization of total waste generated Decrease in the ratio of hazardous waste generated to total waste (by contamination + by generation)
Waste Disposal	Increase in the ratio of recovered/reused/recycled waste to total waste generated
Soil Quality	
Spill incident	Minimization and continued improvement in the number of the reported soil quality related incidents
Non-Compliance with Subproject standards	Zero NCRs per year
Soil quality accidents	Zero accident per year
Number of soil-related community grievances	Zero grievances per year
Traffic	
Number of non-compliances against the mitigation controls identified in Traffic Management Plan	Decreasing number/ continuous improvement in number of reported non-compliances
Number of drivers found to be exceeding speed limits or driving unsafely	Zero exceedance per year
Number of road traffic accidents involving: Accidental injuries and deaths, Spillages (such as cargo or fuel), Wildlife-vehicle collisions.	Zero accidents per year
Number of traffic-related grievances	Zero grievances per year
Health, Safety and Environment	
% of scheduled HSE Inspection	>90
% of attendance at HSE meetings	>90
% of closing of NCRs	100
Reporting safe observations	100%
Reporting unsafe observations	100%
Reporting near misses	100%
Reporting number of incidents	100%
Reporting number of accidents	100%
Reporting day-loss	100%
% of Toolbox attending	>90
% of Risk Assessment compliance	>90
% of Legal Requirements compliance	100%
Results of scheduled audits	>85
HSE training carried out to training matrix > 90% of all training to matrix	>90
% of attendance at scheduled trainings	>90
Engagement in the HSE program by individual managers and supervisors	>90
Engagement in the HSE program by contractors	>90
Labor and Working Conditions	

Monitoring Focus	KPI
Documentation	
Number of worker grievances closed out within the target timeframe	100% compliance with labor laws and regulations Zero unresolved health and safety incidents within the target timeframe 100% availability of required PPE 90% or higher worker satisfaction rate
Community Health and Safety	
Number of communicable and non-communicable diseases and injuries.	Negative Trend/No significant increase in communicable and non-communicable disease and injury rates per 1,000 residents per annum.
Number of community health safety & security grievances from local communities as recorded in the grievance management system.	Decreasing number/ continuous improvement in the number of grievances
Number of reported community health & safety incidents	Zero incidents per year
Number of reported air quality or noise incidents	Zero incidents per year
Direct and indirect threats posed by construction activities against traffic and pedestrians	Zero number of drivers found to be exceeding speed limits or driving unsafely Zero accidental injuries and deaths, Zero traffic-related grievances
Access to the Construction Site - Security Fence/ Protection Tape	Zero Number of unauthorized accesses to the Subproject area
Trainings	
Training records	Training on ESMP and SEP documents. Providing all trainings (including GM, GBV, SEA/SH) to all employees. 100% of scheduled training sessions conducted 80% or higher participant satisfaction rate Zero participants without completion certificates, if applicable
Disclosure	
Grievance Records, Disclosure meeting participant records, ESMP, SEP, and GM will be disclosed at the Project website in two languages (English and Turkish).	All grievances closed out within the target timeframe, ESMP, Project-specific SEP, and GM will be prepared and disclosed at the Project website.
Vulnerable groups	
Incidents, Grievances, Toolbox talks and trainings, Information/ disclosure	All grievances were closed out within the target timeframe Sufficient information provided to the VGs
Grievance mechanism	
Grievance Records, GM disclosure	All grievances were closed out within the target timeframe GM disclosure to the PAPs, stakeholders GM disclosure at the Subproject website
Cultural Heritage	
Existence of a Chance Find	Zero Grievance Records

Table 24. Construction Environmental and Social Monitoring Table

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Reference / Threshold Level	Responsibility for Monitoring	Monitoring / KPIs	Cost
C-01	Air Quality – Dust	PM_{10}, visible dust, complaints	WWTP site, excavation areas, haul roads, nearest receptors (Karaali Neighbourhood)	Visual inspection + portable PM meter + grievance review	Daily visual / Weekly measurement	RAQAM + WBG EHS ($PM_{10} \leq 50$ µg/m³ – 24h)	Contractor EHS Officer / KOSKİ PIU	No visible dust plume, complaints = 0, watering applied	Included
C-02	Air Emissions – Machinery	Exhaust emissions, black smoke	Construction site	Visual inspection, equipment maintenance logs	Weekly	National emission standards	Contractor	Equipment with valid maintenance = 100%	Included
C-03	Noise	LAeq (dBA)	Site boundary & nearest houses (Karaali)	Sound level meter	Monthly + complaint-based	ÇGDYY + WBG EHS (≤55 dBA day)	Contractor / Supervision Consultant	Compliance rate %, complaints	Included
C-04	Vibration	Vibration levels during heavy works	Sensitive receptors (if any)	Portable vibration meter (if required)	As needed	National standards	Contractor	No structural damage or complaints	Included
C-05	Surface Water Protection	Turbidity, sediment runoff	Drainage channels, discharge routes to Çay Stream	Visual inspection	Weekly & after rainfall	No visible sediment discharge	Contractor	Silt traps installed, erosion controlled	Included
C-06	Wastewater (Domestic)	Septic tank condition, leakage	Worker sanitary facilities	Visual inspection	Weekly	No discharge to environment	Contractor	Zero illegal discharge	Included
C-07	Soil Management	Erosion, spills, compaction	Entire construction site	Visual inspection	Weekly	GIIP	Contractor	Erosion controls installed	Included
C-08	Hazardous Materials	Fuel/chemical storage, MSDS	Storage areas	Checklist inspection	Weekly	WBG EHS Guidelines	Contractor	Bunded storage, spill kits = 100%	Included
C-09	Spill Control	Spill incidents, response time	Entire site	Incident log review	Continuous	Zero uncontrolled spill	Contractor	# spills, response < 24h	Included
C-10	Solid Waste	Waste segregation, records	Waste storage areas	Inspection + manifests	Weekly	Waste Management Regulation	Contractor	Segregation rate %, manifests complete	Included
C-11	Hazardous Waste	Labeling, temporary storage	Hazardous waste area	Inspection	Weekly	Hazardous Waste Regulation	Contractor	Licensed disposal = 100%	Included
C-12	Excavation Waste	Disposal location & permits	Haul routes, disposal sites	Documentation review	Per load	Licensed disposal sites only	Contractor	Disposal receipts available	Included
C-13	Construction Debris	Proper collection & removal	Construction site	Visual inspection	Weekly	No open dumping	Contractor	Illegal dumping = 0	Included
C-14	Traffic Safety	Vehicle speed, signage	Site access roads, Karaali–Beyşehir roads	Inspection + speed checks	Daily	Traffic Management Plan	Contractor	Speed compliance %, incidents	Included
C-15	Community Safety	Barricades, warning signs	Site perimeter, trenches	Visual inspection	Daily	GIIP	Contractor	100% secured areas	Included
C-16	Occupational Health & Safety	OHS monitoring (site inspections, high-risk activities, incident reporting and corrective actions)	Entire site	Site audits	Daily	ESS2 + OHS Law No.6331	Contractor HSE Manager	PPE compliance %, toolbox talks	Included
C-17	Accidents / Incidents	LTIs, near misses	Construction site	Incident reporting system	Continuous	Zero fatality	Contractor / KOSKİ	LTIFR, near-miss reporting	Included
C-18	Working Conditions	Contracts, working hours	Site HR records	Document review	Monthly	Labor Law + ESS2	Contractor	Compliance rate %	Included
C-19	Training	OHS & E&S trainings	Site office	Attendance logs	Monthly	ESMP Training Plan	Contractor	# staff trained	Included
C-20	Biodiversity	Flora/fauna disturbance	Site boundary	Visual survey	Monthly	ESS6	Contractor	Disturbed area minimized	Included
C-21	Cultural Heritage	Chance finds	Excavation areas	Monitoring + procedure check	Continuous	Chance Finds Procedure	Contractor	Finds properly reported	Included
C-22	Grievance Mechanism	Complaints received/resolved	Karaali community	GM log review	Monthly	ESS10	KOSKİ / Contractor	Resolution ≤ 15 days	Included

C-23	Stakeholder Engagement	Information disclosure	Karaali settlements	Meeting records	Quarterly	SEP	KOSKİ	# meetings held	Included
C-24	Camp Management	Sanitation, hygiene	Worker camp (if any)	Inspection	Weekly	WBG EHS	Contractor	Cleanliness compliance	Included
C-25	Emergency Preparedness	Drills, equipment readiness	Construction site	Drill records + checklist	Quarterly	Emergency Response Plan	Contractor	≥2 drills/year	Included
C-26	Energy Use	Fuel consumption	Construction site	Log review	Monthly	Resource efficiency	Contractor	Fuel/activity ratio	Included
C-27	Housekeeping	Site tidiness	Entire site	Daily inspection	Daily	GIIP	Contractor	Clean site score	Included
C-28	Documentation	ESMP compliance	Site office	Internal audit	Monthly	ESMP	Supervision Consultant	% actions closed	Included

Table 25. Operation Environmental and Social Monitoring Table

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Reference / Threshold Level	Responsibility for Monitoring	Monitoring / KPIs	Cost
O-01	Influent Wastewater Quality	BOD_5, COD, TSS, TN, TP, flow rate	Inlet chamber	Composite sampling + lab analysis	Monthly	Design influent values	WWTP Operator / Accredited Lab	Data completeness = 100%	Included
O-02	Effluent Quality – Compliance	BOD_5, COD, TSS, TN, TP	Final effluent (before discharge)	Sampling + accredited lab	Monthly	SKKY + Sensitive Area limits (TN ≤15, TP ≤2 mg/L)	KOSKİ / Accredited Lab	Compliance rate = 100%	Included
O-03	Receiving Water Protection	Visual pollution, color, odor	Discharge point to Çay Stream	Visual inspection	Weekly	No visible impact	WWTP Operator	No visible pollution	Included
O-04	Hydraulic Performance	Daily flow, peak flow	Flow measurement structure	Online flow meter (SCADA)	Continuous	Design capacity (400 m^3/day)	WWTP Operator	No hydraulic overload	Included
O-05	Aeration System Performance	DO (mg/L), blower operation	Aeration tanks	Online DO probes + SCADA	Continuous	DO ≥ 2 mg/L	WWTP Operator	Stable DO profile	Included
O-06	Energy Consumption	Electricity use (kWh)	Blowers, pumps, panels	SCADA + energy meters	Monthly	Energy efficiency targets	KOSKİ	kWh/m^3 treated	Included
O-07	Odor Management	Odor complaints, H_2S presence	Plant boundary	Visual + grievance log	Monthly / complaint-based	No nuisance	WWTP Operator	Complaints = 0	Included
O-08	Sludge Quantity	Excess sludge volume	Sludge storage tank	Volume measurement	Monthly	Design sludge production	WWTP Operator	Stable sludge generation	Included
O-09	Sludge Management	Storage condition, transfer records	Sludge storage tank	Inspection + transport manifests	Monthly	No on-site disposal	KOSKİ	Licensed transfer = 100%	Included
O-10	Solid Waste	Screenings quantity, storage	Screenings container	Visual inspection + records	Weekly	Waste Management Regulation	WWTP Operator	Proper containment	Included
O-11	Hazardous Waste	Waste oil, chemical containers	Temporary hazardous storage	Inspection + manifests	Monthly	HW Regulation	KOSKİ	Licensed disposal = 100%	Included
O-12	Chemical Management	Hypochlorite storage, MSDS	Chemical storage room	Checklist inspection	Weekly	WBG EHS + national regs	WWTP Operator	Bunded storage intact	Included
O-13	Chlorination Safety	Residual chlorine (mg/L)	Contact tank outlet	Online / grab sampling	Daily	Residual Cl ≈ 0.5 mg/L	WWTP Operator	Safe disinfection	Included
O-14	Noise – Operation	LAeq (dBA)	Facility boundary	Sound level meter	Semi-annually	ÇGDYY limits	KOSKİ	≤ regulatory limits	Included
O-15	Occupational Health & Safety	PPE use, incidents	Entire facility	Site inspections	Daily	ESS2 + OHS Law	Facility Manager / OHS	PPE compliance %	Included
O-16	Confined Space Safety	Permit compliance	Tanks, manholes	Permit review	Per entry	Confined Space SOP	OHS Specialist	Zero unauthorized entry	Included
O-17	Fire & Emergency Preparedness	Equipment readiness, drills	Facility	Checklist + drill reports	Quarterly	ERP	KOSKİ / OHS	≥1 drill/year	Included
O-18	Vector & Pest Control	Presence of pests	Facility & sludge areas	Visual inspection	Monthly	No infestation	WWTP Operator	Pest-free site	Included
O-19	Biodiversity Protection	Vegetation condition	Facility boundary	Visual survey	Semi-annually	ESS6	KOSKİ	No habitat disturbance	Included
O-20	Traffic & Access Safety	Vehicle movements	Facility entrance	Visual inspection	Daily	Traffic rules	Facility Operator	No accidents	Included
O-21	Structural Integrity	Tanks, walkways, railings	All structures	Inspection checklist	Quarterly	Design standards	Facility Manager	100% safe access	Included
O-22	Grievance Mechanism	Complaints received/resolved	Karaali community	GM log review	Monthly	ESS10	KOSKİ	Resolution ≤15 days	Included
O-23	Stakeholder Engagement	Information disclosure	Karaali	Records review	Annually	SEP	KOSKİ	Engagement records	Included
O-24	Documentation & Reporting	Monitoring records	WWTP office	Internal audit	Quarterly	ESMP	KOSKİ / PIU	Records complete	Included

4.5. List of Associated Plans and Procedures

The E&S management plans and procedures to be prepared by Contractor/s are listed in Table 26.

Table 26. Plans and Procedures associated

Management Plans or Procedures	Relevant Subproject Phase (Construction only, Operation only, both Construction and Defect Liability Period (DLP)
Contractor's Environmental and Social Management Plan (C-ESMP)	Construction and Operation
OHS Management Plan	Construction and Operation
Emergency Preparedness and Response Plan	Construction and Operation
Traffic Management Plan	Construction and Operation
Waste Management Plan	Construction and Operation
Wastewater Management Plan	Construction and Operation
Sludge Management Plan	Construction and Operation
Air Quality Management Plan	Construction and Operation
Noise Management Plan	Construction and Operation
Stakeholder Engagement Plan	Construction and Operation
Labor Management Plan	Construction and Operation
Soil Management Plan	Construction and Operation
Community Health and Safety Management Plan	Construction and Operation
Risk Assessment	Construction and Operation
Chance Finds Procedure	Construction

The plans/procedures will be reviewed and revised in the event of any major change and/or at least every 6 months.

4.6. Management of Change

The Sub-borrower shall notify İLBANK of any material changes to the Subproject (including those resulting from the activities of the Sub-borrower and/or contractor) using İLBANK's Change Notification Form template (see Annex J).

Such changes may include, *inter alia*, the following:

- Administrative/ organizational structure changes at the decision-making level
- Changes in assigned environmental, social and/or OHS staff
- Legislative changes impacting Subproject implementation (e.g. new permitting processes).
- Design changes (e.g. any changes in the Subproject description, footprint such as new temporary or permanent sites/facilities – on-site or off-site, changes in number of workforce involved, changes in on-site/off-site worker accommodation arrangements).
- Schedule changes
- Changes related to E&S issues (e.g. new biodiversity features or cultural heritage assets identified, additional resettlement need, etc.)
- Changes in the contractor or construction supervision consultants at any phase of the Subproject that require: (i) clarification of E&S commitments and roles and responsibilities with the new contractor or supervision consulting firm, and (ii) reorganization and redelivery of E&S training to the staff of the new contractor or supervision consulting firm

5. CAPACITY DEVELOPMENT AND TRAINING

5.1. Organizational Capacity

The organizational structure of the PIU to be established by the Sub-borrower is presented in Figure 5-1. The PIU will include qualified staff and resources to the satisfaction of İLBANK.

NAME - SURNAME	TITLE	DEPARTMENT	ROLE IN THE PROJECT IMPLEMENTATION UNIT
Mehmet METİN	Head of Wastewater Treatment Facilities Department – Mechanical Engineer (M.Sc.)	Department of Wastewater Treatment Facilities	Project Management
Muhammed CEYLAN	Branch Manager of Wastewater Treatment Facilities Project and Construction – Electrical & Electronics Engineer	Department of Wastewater Treatment Facilities	Project Assistant Management
Mahmut ACAR	Civil Engineer	Department of Wastewater Treatment Facilities	Technical Specialist – Construction Works
İbrahim SİYİRDİCİ	Environmental Engineer	Department of Wastewater Treatment Facilities	Technical Specialist – Process Works
Fatih KOÇ	Mechanical Engineer	Department of Wastewater Treatment Facilities	Technical Specialist – Mechanical Works
Dursun GÜZEL	Electrical & Electronics Engineer	Department of Wastewater Treatment Facilities	Technical Specialist – Electrical Works
Muhammet Nurullah DEĞİRMENCİ	Civil Engineer (M.Sc.)	Department of Wastewater Treatment Facilities	Technical Specialist – Construction Works
Çağrı ŞAHİN	Branch Manager of Wastewater Treatment Facilities – Environmental Engineer	Department of Wastewater Treatment Facilities	Technical Specialist – Environmental and Social Monitoring & Evaluation
Mehmet Ali KAHVECİ	Officer	Department of Investment and Construction	Procurement Specialist – Tendering and Procurement
Banu EKİNCİ	Officer	Department of Financial Services	Finance Specialist – Financial Affairs
İlyas MURAT	OHS Specialist (Class A)	Occupational Health and Safety Unit	Technical Specialist – OHS

Figure 5-1. Organization Structure – Project Implementation Unit (PIU)

The Sub-borrower will maintain the PIU by ensuring that there is qualified staff assigned and serving on duty throughout the sub-financing agreement lifecycle.

At minimum, the E&S team at the Sub-borrower PIU will include the following personnel, who shall support the management and monitoring of Subproject E&S risks and impacts and ensure full compliance with the ESMP and other relevant E&S instruments:

- **Environmental Specialist(s):** to address environmental risks and impacts identified under the Environmental and Social Assessment (ESA) reports, such as Environmental and Social Impact Assessment (ESIA), Environmental and Social Management Plan (ESMP), etc.
- **Social Expert/ Grievance Mechanism (GM) Focal Point:** to address social risks and impacts identified under the ESA reports, land acquisition, and labor issues, including stakeholder engagement and grievance redress; and
- **Occupational Health and Safety (OHS) Specialist(s)** to address OHS risks and impacts identified under the ESA reports.

If the necessary staff is not available within their own organizational structure, the Sub-borrower will obtain support/consultancy services from outside.

Contractors

The Sub-borrower will require the awarded contractors to establish and maintain throughout the contract duration an organizational structure with qualified staff and resources.

This will be achieved through assigning the following personnel within the contractor's organization:

- Environmental Specialist(s)
- Social Specialist(s) who will also act as the GM Focal Point
- Occupational Health and Safety (OHS) Specialist(s)

If the necessary staff is not available within their own organizational structure, contractors will obtain third-party support/ consultancy services.

5.2. Roles and Responsibilities

The roles and E&S-related responsibilities of the Sub-borrower and other key parties are described in Table 27.

Table 27. Roles and E&S-related Responsibilities of Key Parties associated with ESMP Implementation

Party	Role	Key Responsibilities
Sub-borrower		
KOSKI	Sub-borrower Management	• Hold ultimate responsibility for the E&S performance of the Subproject to the satisfaction of the İLBANK, including the performance of Subproject contractors throughout the sub-financing agreement lifecycle. • Establish Project Implementation Unit (PIU) following the execution of sub-financing agreements to carry out operational and administrative tasks to oversee the implementation of the E&S instruments and monitoring progress; allocate resources for the recruitment of in-house environmental, social, and OHS staff under the PIU • Ensure that ESMP, SEP, and other E&S management plans and procedures required by İLBANK are prepared within the timeframes agreed with İLBANK and allocate adequate financial and human resources – either from the Sub-borrower's own resources or from the Subproject loan and implement. • Cooperate with the İLBANK representatives to discuss and agree on the ESAP and other E&S covenants for incorporation into sub-financing agreements to be executed between the İLBANK and the sub-borrower (with support from RD E&S team as necessary) • Ensure that EHSS requirements of İLBANK are incorporated into relevant contractor tender and agreement documents to be prepared in collaboration with the construction supervision consultant • Hold and use the authority and responsibility to stop any Subproject-related work activity if it poses an imminent danger to health, safety, or the environment. • Allocate resources to ensure monitoring of Subproject E&S performance and reporting to İLBANK at IFI standards in line with the sub-financing agreement conditions • Facilitate monitoring visits and audits by İLBANK and their consultants • Notify the İLBANK DG of any significant E&S incident or accident within a maximum of **24 hours** of the accident/incident; contractually require the supervision consultants and/or contractors to promptly report such incidents and accidents (timeframe to be defined by İLBANK) • Prepare and submit a detailed E&S Incident Investigation Form, supplemented by an RCA to be conducted pursuant to GIIPs, to İLBANK within **15 days** of the

Party	Role	Key Responsibilities
		accident/incident date for significant accidents or incidents (in line with the template presented in the E&S Supervision, Monitoring and Reporting Procedure). The investigation will be supplemented by a Root Cause Analysis (RCA).
	E&S Team - Environmental staff - Social staff - OHS staff	• Participate in the training to be organized by İLBANK as part of the İLBANK ESMS Training Procedure implementation • Ensure that satisfactory ESMP, SEP, and, as required, other E&S assessment documentation required by İLBANK is prepared by qualified independent specialists and submitted to İLBANK for appraisal and credit decision-making for High and Substantial risk Subproject, as well as for Moderate risk Subproject, where the sub-borrower has limited E&S capabilities, coordinate commissioning independent third-party specialists (such as external E&S consultancy companies, individual consultants) to carry out the E&S assessment and prepare the E&S documentation required for İLBANK's appraisal and credit decision-making processes • Provide İLBANK with relevant, adequate information to undertake the E&S due diligence in accordance with the ESMS (e.g., duly completed sub-borrower questionnaire and supporting documentation to be requested by İLBANK in accordance with the E&S Screening and Risk Classification and ESDD procedures) • Support the sub-borrower management as required in the review and evaluation of ESAP and other E&S covenants for incorporation into sub-financing agreements to be executed between the İLBANK and the sub-borrower • Ensure compliance of Subproject operations (including contractor activities on site) with national legislation and E&S requirements of the lending IFIs as included in the sub-financing agreements, ESAP, and Subproject-specific E&S documentation (such as ESMP, SEP, and other E&S management plans and procedures required by İLBANK) • Undertake monitoring of Subproject E&S performance and reporting to İLBANK at IFI standards in line with the sub-financing agreement conditions • Ensure implementation of corrective actions in case of E&S non-compliances in coordination and agreement with İLBANK DG and RD E&S teams over reasonable timeframes • Coordinate the construction supervision consultants, contractors, and/or external E&S consultants for the collection of the monitoring data and compilation of or providing input to periodic monitoring reports as necessary and appropriate • Allow İLBANK representatives (including individual consultants) to access Subproject facilities and records.
Construction Supervision Consultants	Management and E&S staff	Carry out the following tasks on behalf of the sub-borrowers: • Participate in the training sessions to be organized by sub-borrowers in line with the requirements of İLBANK ESMS Training Procedure • Supervise the construction works of contractors on-site, including implementation of Subproject-specific E&S requirements (requirements stemming from ESMP, SEP, and other E&S management plans and procedures required by İLBANK as applicable) by contractors daily • Ensure sufficient E&S capacity for implementation of E&S requirements as set out in the sub-financing agreements between the sub-borrower and İLBANK • Support the sub-borrowers for the supervision and review of E&S management documentation prepared by construction contractors and submit them to the sub-borrowers upon finalization • Review monthly self-monitoring reports prepared by the construction contractors for early identification of E&S issues and/or non-compliances and submit them to municipalities/municipal utilities upon finalization • Identify E&S non-compliances on site and enforce construction contractors to undertake corrective actions within defined and agreed timeframes • Support the sub-borrowers (as requested) in the preparation of periodic E&S monitoring reports to be submitted to İLBANK in line with the İLBANK E&S Supervision, Monitoring and Reporting Procedure

Party	Role	Key Responsibilities
		• Notify the sub-borrower of any significant E&S incident or accident that has taken place in Subproject-related operations within **24 hours**.
Construction Contractor	Management and E&S staff	• Ensure sufficient E&S capacity for implementation of E&S requirements as set out in the construction contracts • Participate in the training sessions to be organized by sub-borrowers in line with the requirements of İLBANK ESMS Training Procedure • Prepare Subproject-specific E&S management plans and procedures before the start of construction works as required by the construction contracts • Comply with the requirements of national legislation and implement the E&S requirements as set out in the sub-financing agreements (executed between İLBANK and the sub-borrowers) and construction contracts • Submit periodic (in frequencies to be set by ESAP) E&S self-monitoring reports to the municipalities/municipal utilities through construction supervision consultants ("*müşavir*") – in line with the format provided by İLBANK. • Fill in monthly occupational health and safety (OHS) forms – reviewed by construction supervision consultants. • Implement corrective actions in case of E&S non-compliances under the supervision of the sub-borrower's construction supervision consultant • Promptly notify the sub-borrower of any significant E&S incident or accident that has taken place in Subproject-related operations within **24 hours**.

5.3. Capacity Building and Training

Sub-borrower staff (trained by İLBANK) will deliver E&S training to contractors. The training contents are summarized in Table 28. The Sub-borrower will identify specific training programs to be conducted in line with these modules and submit this to İLBANK before commencement of works.

The Sub-borrower will ensure that E&S training programs are extended to subcontractors by contractors in the event of their involvement in Subproject implementation.

Table 28. Training Components for Training of Contractor Staff

Module	Training Name	Training Duration	Key Training Content
Module 1	İLBANK E&S Requirements	1 hour	- Overview of İLBANK E&S requirements: o İLBANK E&S Policy (including but not limited to the guiding principles on human rights, labor rights and working conditions, community health, safety and well-being, cultural heritage, gender equality, etc.) o External Communications (including stakeholder engagement, grievance management, etc.) o Monitoring, Review, and Reporting o Labor Management, Contractor Management - İLBANK Code of Conduct
Module 2	Subproject-level E&S Requirements for contractors as per sub-financing agreement conditions	3 hours	- Subproject specific requirements: o E&S covenants included in sub-loan agreements o Subproject ESAP requirements o Subproject-level E&S assessment and management documentation (such as ESMP, SEP, and other E&S management plans and procedures as applicable); o Emergency Preparedness and Response Plan, including a training program for emergency responders, including drills at regular intervals; o Specific training (such as driver training in case of involvement of vehicles or fleets of vehicles in Subproject-operations, training of security forces in the use of force (and where applicable, firearms), and appropriate conduct toward workers and affected communities, etc.). - Implementation of Labor Management Plan.

6. IMPLEMENTATION SCHEDULE AND COST ESTIMATES

6.1. Implementation Schedule

The duration of the construction and operation phase activities is listed in Table 29.

Table 29. Duration of Activities

Phase	Remarks/ Notes
Construction Duration	12 months
Defect Liability Period	12 months

6.2. Cost Estimates

Under this heading, expenditure items for the implementation of the ESMP are presented. Moreover, the estimated cost breakdown for the Subproject is presented in Table 30.

- Environmental, Social, Occupational Health and Safety Experts,
- Monitoring Activities,
- Revisions in site-specific ESMP and SEP,
- Social, Environmental, and OHS Trainings, Awareness, Information Dissemination,
- Capacity building,
- Implementation of SEP and ESMPs' measures.

Table 30 ESMP Cost Breakdown for Implementation and Monitoring.

Budget Item	Estimated Cost
Construction Phase	
Environmental Expert	Key staff (*)
Social Expert	Key staff (*)
OHS Expert	Key staff (*)
Monitoring (Measurements and laboratory analyses)	Included in the contractor's budget (**)
Financial Experts	No extra cost (***)
Technical Experts	No extra cost (***)
Operation Phase	
Monitoring (Measurements and laboratory analyses)	Included in the operation budget of KOSKİ (**)
Financial Experts	No extra cost (***)
Technical Experts	No extra cost (***)

(*) Recruitments of specialists shall be financed under the budget of supervision consultancy services. Relevant cost estimates are taken into account at the initial stage of the consultant selection. The contractors are obliged to hire environmental, social, and OHS experts for the implementation and monitoring of ESMP within the scope and price of their bids

(**) The laboratory and testing obligations and relevant reporting responsibility will be included within the works contract, during the construction period and the defect liability period. Later, for the operation stage, this responsibility will be transferred to KOSKİ.

(***) Since KOSKİ's permanent staff will be appointed to these positions, there will be no extra cost to the Subproject budget.

List of Annexes

Annex A – List of the Individuals/Organizations that Prepared or Contributed to the ESMP

Name of the Individual/ Organization	Company/ Institution	Profession/ Expertise
Pelin Deniz YOĞURTÇU	POSEİDON	Project Manager / Environmental Engineer
Fikret VAROL	POSEİDON	Project Engineer / Environmental Engineer
İrem AĞAÇCIOĞLU	POSEİDON	Project Engineer / Environmental Engineer
Ceyda TERZİ	POSEİDON	Project Engineer / Environmental Engineer
Yavuz HİMMETOĞLU	POSEİDON	Project Engineer / Environmental Engineer
Mustafa KARAGÖZ	POSEİDON	OHS Expert / Environmental Engineer
Gözde YURTTAŞ	POSEİDON	Biodiversity Expert
Merve YILDIRIM	POSEİDON	Sociologist
Ali Can CAN	POSEİDON	Sociologist

Annex B – Coordinates of Subproject Facilities

Unit	Coordinates (WGS84 in decimals)	
	Y	X
Karaali WWTP	37.939167	31.814167
	37.937778	31.814167
	37.937500	31.813611
	37.937500	31.813611
	37.938056	31.813889
Discharge Point	37.561579	31.484848

Annex C – Allocation, Delivery, and Acceptance Protocol

T.C
BEYŞEHİR KAYMAKAMLIĞI
Milli Emlak Şefliği

TAHSİSLİ TAŞINMAZ TESLİM VE TESELLÜM TUTANAĞI

TAŞINMAZIN			
Taşınmaz No	42080107753	Cinsi	Ham Toprak
Fiili Durumu		Yüzölçümü (m²)	4.318,69
İli	Konya	Hazine Hissesi	1.00/1.00
İlçesi	Beyşehir	Tapu Tarihi	25.04.2007
Mahallesi / Köyü	Karaali	Pafta	
Caddesi / Sokağı	/	Ada	257
Yöresi	Sürütler Köprüsü	Parsel	1 /

TAHSİS İLE İLGİLİ BİLGİLER		
Tahsis Edilecek Olan İdare	Konya Su ve Kanalizasyon İdaresi Genel Müdürlüğü (KOSKİ)	
Tahsis Amacı	Atık su arıtma tesisi yapılmak üzere	
Tahsis Süresi / Yüzölçümü	Ön tahsis (2 yıl)	4.318,69
Yasal Dayanak	1 Nolu Cumhurbaşkanlığı Kararnamesinin 101. Maddesinin birinci fıkrasının (ç) bendi ile 5018 Sayılı Kamu Mali Yönetimi ve Kontrol Kanununun 47.maddesi gereğince	
Tahsis Yetkisi	Genel Müdürlük	
Tahsis Tarih ve No	28.02.2025	11892753
Genel Müd. Dosya No	3121-151473	

ÜZERİNDE BULUNAN MUHDESATIN
Cinsi: Nevi: Miktarı:

Yukarıda özellikleri yazılı taşınmaz tahsis amacında kullanılmak üzere ve tahsis amacı kalmadığında idaremize iade edilmek üzere aşağıda adı, soyadı ve görev ünvanı yazılı bulunan şahsa teslim edildiğine dair iş bu tutanak birlikte tanzim ve imza altına alındı.14.03.2025

TESLİM EDEN	TESLİM ALAN
Abdülkadir DOKUR Milli Emlak Uzmanı	Kemal DENİZER Tekniker

NOT: Söz konusu taşınmazın, Sağlık İl Müdürlüğü ile Tarım ve Orman İl Müdürlüğünün olumlu görüşlerinin alınması, ticari amaçla kullanılmaması, üçüncü kişilere ticari ya da gayri ticari amaçla kullandırılmaması/devredilmemesi, tahsisli idarenin ilgili mevzuatları ile belirlenen ve alınması zorunlu olan gelirler dışında her ne ad altında olursa olsun herhangi bir ücret alınmayarak kamunun bedelsiz olarak faydalanmasına açık tutulması, tahsisli idare tarafından tahsis amacına uygun kullanım nedeniyle ticari amaca yönelik ünitelerin söz konusu ve zorunlu olması durumunda isc Hazine Taşınmazlarının İdaresi Hakkında Yönetmeliğin 67,70 ve 73/A maddelerine göre işlem yapılması,2872 Sayılı Çevre Kanunu ve bu Kanuna bağlı olarak çıkartılan mevzuat hükümlerine uyulması, tesisin yapımı ve kullanımı sırasında 08.01.2006 tarihli ve 26047 Sayılı Resmi Gazetede yayımlanan Kentsel Atıksu Arıtımı Yönetmeliği hükümlerine riayet edilmesi kaydıyla tahsisi yapılmış olup, tahsis süresi içerisinde tahsis amacına yönelik olarak yatırım projesinin hazırlanması, yatırım programına alınması ve tesis / bina inşaatına başlanması gerekmektedir. Teslim alan idarenin; tahsisli taşınmazı işgal ve tecavüzlere karşı korumak için her türlü tedbiri alması, işgal ve tecavüz halinde idari ve adli yollara başvurması ve durumu derhal Çevre, Şehircilik ve İklim Değişikliği İl Müdürlüğüne (Milli Emlak Dairesi Başkanlığı) ilçelerde Kaymakamlığa (Milli Emlak Şefliği) bildirmesi ve tahsisli taşınmazlarla ilgili olarak harcamalara katılma payı dahil her türlü gideri ödemesi gereklidir.

Annex D – Existing Permitting Documentation

EIA and Project Approval Application

T.C.
KONYA VALİLİĞİ
Çevre, Şehircilik ve İklim Değişikliği İl Müdürlüğü

Sayı : E-47342952-220.03-14914879
Konu : ÇED Kapsam Dışı

KONYA SU VE KANALİZASYON İDARESİ GENEL MÜDÜRLÜĞÜNE

İlgi : a) 13/02/2026 tarihli ve 121604 sayılı yazınız.
b) 16/02/2026 tarihli ve 230098 referans no'lu başvuru.

İlgi (a) başvurunuz ilgi (b) referans numarası ile çevrimiçi ÇED Süreci Yönetim sistemine kayıt edilmiş olup, başvurunuzun incelenmesi neticesinde; İlimiz Beyşehir İlçesi Karaali Mahallesi 257 Ada 1 Parsel numaralı sahada Konya Su ve Kanalizasyon İdaresi Genel Müdürlüğü tarafından gerçekleştirilmesi planlanan "Karaali Atıksu Arıtma Tesisi (400 metreküp/gün)" projesi, 29/07/2022 tarihli ve 31907 sayılı Resmi Gazete'de yayımlanarak yürürlüğe giren Çevresel Etki Değerlendirmesi (ÇED) Yönetmeliği Ek-2 Listesi 51. maddesinde belirtilen (30.000 metreküp/gün ve üzeri) eşik değerin altında kaldığından kapsam dışı olarak değerlendirilmiştir.

Bununla birlikte planlanan yatırım ile ilgili olarak 2872 sayılı Çevre Kanunu ile bu Kanuna istinaden çıkarılan Yönetmeliklerin ilgili hükümlerine uyulması, mer'i mevzuat uyarınca ilgili kurum/kuruluşlardan gerekli izinlerin alınması, ekolojik dengenin bozulmaması, çevrenin korunması ve geliştirilmesine yönelik tedbirlere riayet edilmesi ve projede yapılacak yönetmeliğe tabi değişiklikler öncesinde Bakanlığımıza veya İl Müdürlüğümüze başvurulması hususunda,

Bilgilerinizi ve gereğini rica ederim.

Ülkü SERTKAN AYDIN
Vali a.
İl Müdür Yardımcısı V.

Bu belge, güvenli elektronik imza ile imzalanmıştır.
Doğrulama Kodu: 0B913C77-B8DA-4A3B-80D9-D67EF6A4A41A Doğrulama Adresi: https://www.turkiye.gov.tr

Horozluhan Mahallesi Ankara Caddesi 145/2 Selçuklu/ KONYA
Tel :(332)2239000 Faks:(332)2239313
e-Posta:konya@csb.gov.tr https://konya.csb.gov.tr
KEP Adresi : konyacevrevesehircilik@hs01.kep.tr
Bilgi için:Mehmet KIYICI
Mühendis
Telefon No:(332) 223 93 27

arbiotek
ÇEVRE ÇÖZÜMLERİ

Tarih : 11.12.2025
Sayı : 2025/D.036
Konu : Karaali AAT Proje Onay Süreci

KONYA SU VE KANALİZASYON İDARESİ GENEL MÜDÜRLÜĞÜ'NE

KOSKİ Genel Müdürlüğü ile Arbiotek Çevre Çözümleri Ltd.Şti arasında 03.12.2025 tarihinde sözleşmesi imzalanan 2025/1857484 ihale numaralı **"KARAALİ ATIKSU ARITMA TESİSİ UYGULAMA PROJELERİ HAZIRLANMASI İŞİ"** kapsamında Atıksu Arıtma Tesisi Proje Onayı ve Çevresel Etki Değerlendirme sürecinde gerekli olan İl Müdürlüğü Yerinde İnceleme Formu (EK-2) düzenlenmesi hususu 11.12.2025 tarihli ve 2025/D.035 sayılı yazımız ile Konya Çevre, Şehircilik ve İklim Değişikliği İl Müdürlüğü'ne bildirilmiştir.

Saygılarımızla.

Sefa TURGUT
Çevre Yüksek Mühendisi

EK:
1- 11.12.2025 tarihli ve 2025/D.035 sayılı Konya Çevre, Şehircilik ve İklim Değişikliği İl Müdürlüğü yazımız

0 (332) 262 00 20
0 (555) 966 22 16
bilgi@arbiotek.com
www.arbiotek.com
www.bilgehannas.com
Merkez : Selçuk Üniversitesi Teknoloji Geliştirme Bölgesi Akademi Mah. Gürbulut Sok. No:67 Selçuklu/KONYA
Şube: Beyhekim Mah. Gürbulut Sok. No:47/A Selçuklu/KONYA

Gönderici	arbiotek@hs01.kep.tr
Alıcı(lar)	konyacevrevesehircilik@hs01.kep.tr (+)
Konu	Karaali AAT Proje Onay Süreci
Tarih	11/12/2025 10:45:49
KEP Id	<9661.1718677709.134172.1765439149575.6955b170-d665-11f0-9f04-396a394eddc7.pttkepmail@hs01.kep.tr>
Mesaj Id	<9661.1718677709.134172.1765439149575.6955b170-d665-11f0-9f04-396a394eddc7.pttkepmail@hs01.kep.tr>
Boyut	~1.35 MB

Tarih : 11.12.2025

Sayı : 2025/D.035

Konu : Karaali AAT Proje Onay Süreci

ÇEVRE, ŞEHİRCİLİK VE İKLİM DEĞİŞİKLİĞİ İL MÜDÜRLÜĞÜNE

KONYA

KOSKİ Genel Müdürlüğü ile Arbiotek Çevre Çözümleri Ltd.Şti arasında 03.12.2025 tarihinde sözleşmesi imzalanan 2025/1857484 ihale numaralı "**KARAALİ ATIKSU ARITMA TESİSİ UYGULAMA PROJELERİ HAZIRLANMASI İŞİ**" kapsamında Atıksu Arıtma Tesisi Proje Onayı ve Çevresel Etki Değerlendirme süreci başlatılmış bulunmaktadır. Gerekli olan İl Müdürlüğü Yerinde İnceleme Formu (EK-2) düzenlenmesini hususunda gereğini arz ederim.

Saygılarımızla.

Sefa TURGUT

Çevre Yüksek Mühendisi

Ekler

ARBİOTEK-KARAALİ AAT PROJE ONAY SÜRECİ.pdf	1,35 MB
smime.p7s (İmza)	3,04 KB

Deliller

konyacevrevesehircilik@hs01.kep.tr

(Kabul Delili) 2025-12-11 10:47:09

(Teslim Edildi) 2025-12-11 10:58:31

Provincial Directorate of Health Opinion Letter

T.C.
KONYA SU VE KANALİZASYON İDARESİ GENEL MÜDÜRLÜĞÜ
Arıtma Tesisleri Dairesi Başkanlığı

Sayı : E-20824400-220.04.02-117679 19.12.2025
Konu : Karaali Atıksu Arıtma Tesisi Hk.

DAĞITIM YERLERİNE

Genel Müdürlüğümüzce, Beyşehir İlçesi Karaali Mahallesi 257 ada 1 parsel numaralı alanda yapılması planlanan Karaali İleri Biyolojik Atıksu Arıtma Tesisi'ne ait uygulama projeleri ile fizibilite raporları, etüt çalışmaları ve çevresel–sosyal dokümanların hazırlanmasına yönelik çalışmalar devam etmektedir.

Karaali Atıksu Arıtma Tesisi için tahsis edilen alanla ilgili olarak, ekte sunulan tahsis belgesinde İl Sağlık Müdürlüğü ile Tarım ve Orman İl Müdürlüğünün görüşlerinin alınması talep edilmektedir.

Bu kapsamda, söz konusu Atıksu Arıtma Tesisi hakkında kurum görüşünüzün bildirilmesini rica ederim.

Ahmet DEMİR
Genel Müdür

Ekler :
1 - Karaali AAT Bilgi
2 - Tahsis Belgesi

Dağıtım:
Konya İl Sağlık Müdürlüğüne
Konya İl Tarım ve Orman Müdürlüğüne

Bu belge, güvenli elektronik imza ile imzalanmıştır.
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Adres: İhsaniye Mah. Kazım Karabekir Cd. No:56 42060 Selçuklu / Konya
Telefon No: (332)221 61 00 Faks No: (332)235 46 34
e-Posta: bilgi@koski.gov.tr İnternet Adresi: https://www.koski.gov.tr
Kep Adresi: koski@hs03.kep.tr
Bilgi için: İbrahim SIYIRDICI
Mühendis
Telefon No: -

1/1

KONYA HALK BAŞKAN YARDIMCISI 2
KONYA ÇEVRE SAĞLIĞI BİRİMİ
31.12.2025 10:24:40 E-45453077-129-299825943

299825943

T.C.
KONYA VALİLİĞİ
İl Sağlık Müdürlüğü

2025 AİLE YILI

Sayı : E-45453077-129-299825943 31.12.2025
Konu : Kurum Görüşü

KONYA BÜYÜKŞEHİR BELEDİYE BAŞKANLIĞINA
KOSKİ Genel Müdürlüğü
(Arıtma Tesisleri Daire Başkanlığı)

İlgi : 19.12.2025 tarihli ve E-20824400-220.04.02-117679 sayılı yazınız.

İlimiz, Beyşehir İlçesi Karaali Mahallesi 257 ada, 1 parsel numaralı alanda yapılması planlanan Karaali İleri Biyolojik Atıksu Arıtma Tesisi ile ilgili, Müdürlüğümüz personellerince düzenlenen rapor yazımız ekinde gönderilmiştir.

Bilgi ve gereğini arz ederim.

Dr. Hasan ÇİFTCİ
Müdür a.
Başkan

Ek: Rapor (1 Sayfa)

Horozluhan Mh. Abdül Basri Sk. No:4 Selçuklu / KONYA 42000
Telefon No: 03323104000
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Çevre Sağ. Tekn.
Telefon No: 3323104000/4205 - 4205

T.C
KONYA VALİLİĞİ
İl Sağlık Müdürlüğü

RAPOR

Konya Su Kanalizasyon İdaresi Genel Müdürlüğü, Arıtma Tesisleri Daire Başkanlığının 19.12.2025 tarih ve 117679 sayılı yazısına istinaden, İlimiz, Beyşehir İlçesi Karaali Mah. 57 ada 1 parsel numaralı yerde yapılması planlanan, Karaali İleri Biyolojik Atıksu Arıtma Tesisi için tahsis edilen alanın, Müdürlüğümüz personellerince 29.12.2025 tarihinde mahallinde yapılan inceleme neticesinde;

Söz konusu alanın, Karaali Mahallesine yaklaşık 1,5 km mesafede, etrafının dağlık ve ormanlık arazisi olduğu tespit edilmiştir.

Yapılması planlanan İleri Biyolojik Atıksu Arıtma tesis alanı, çevre ve toplum sağlığı açısından değerlendirilmiş olup, Kurumumuz mevzuatları açısından herhangi bir sakıncası bulunmamaktadır.

Süleyman KALE
Çevre Sağ. Teknisyeni

Büşra KIRBIYIK
Çevre Müh.

Zoning Status Letter

T.C.
KONYA SU VE KANALİZASYON İDARESİ GENEL MÜDÜRLÜĞÜ
Arıtma Tesisleri Dairesi Başkanlığı

Sayı : E-20824400-220.04.02-115784 27.11.2025
Konu : İmar Durumu Hk.

KONYA BÜYÜKŞEHİR BELEDİYE BAŞKANLIĞI
İMAR VE ŞEHİRCİLİK DAİRESİ BAŞKANLIĞINA

Finansmanı Dünya Bankası tarafından sağlanan ve İlbank tarafından yürütülmekte olan Yeşil ve Geleceğin Şehirleri Projesi (GFC) kapsamında finanse edilmesi planlanan Kıreli Atıksu Arıtma Tesisi, Köşk Atıksu Arıtma Tesisi, Karaali Atıksu Arıtma Tesisi için fizibilite raporları etüt çalışmaları ile çevre ve sosyal dökümanların hazırlık çalışmaları devam etmektedir.

İller Bankasına sunulmak üzere ekli listede bilgileri verilen tesislerin yapılacağı taşınmazların imar planı içerisinde kalıp kalmadığının ve imar açısından sakınca olup olmadığı hakkındaki görüşünüzün bildirilmesini arz ederim.

Ahmet DEMİR
Genel Müdür

Ek : Parsel Listesi

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T.C.
KONYA SU VE KANALİZASYON İDARESİ GENEL MÜDÜRLÜĞÜ
Arıtma Tesisleri Dairesi Başkanlığı

Sayı : E-20824400-220.04.02-117644 19.12.2025
Konu : Atıksu Arıtma Tesisleri Hk.

DAĞITIM YERLERİNE

Mülga Çevre ve Orman Bakanlığı tarafından 2008 yılında hazırlanan Beyşehir Gölü Havza Koruma Eylem Planı, Çevre, Şehircilik ve İklim Değişikliği Bakanlığı Atıksu Arıtımı Eylem Planı ile 08.01.2006 tarih ve 26047 sayılı Resmî Gazete'de yayımlanarak yürürlüğe giren Kentsel Atıksu Arıtımı Yönetmeliği, 2872 sayılı Çevre Kanunu ve 31.12.2004 tarih ve 25687 sayılı Resmî Gazete'de yayımlanan Su Kirliliği Kontrolü Yönetmeliği hükümleri doğrultusunda hazırlanan ve 04.07.2017 tarih ve 309 sayılı karar ile Tarım ve Orman Bakanlığı tarafından onaylanan Beyşehir Gölü Özel Hükümleri kapsamında; yerleşim yerlerine ait atıksuların toplanması, arıtılması ve deşarjından kaynaklanabilecek olumsuz çevresel etkilerin önlenmesi amacıyla, bölgede atıksu arıtma tesisi bulunmayan yerleşim yerlerine atıksu arıtma tesisleri kurulması planlanmıştır.

Beyşehir Gölü; sahip olduğu doğal, ekolojik ve biyolojik değerler nedeniyle, 05.02.2021 tarih ve 239489 sayılı Çevre, Şehircilik ve İklim Değişikliği Bakanlığı oluru ile "Doğal Sit – Nitelikli Doğal Koruma Alanı" ve "Doğal Sit – Sürdürülebilir Koruma ve Kontrollü Kullanım Alanı" olarak koruma altına alınmıştır. Bu çerçevede, yapılması planlanan atıksu arıtma tesisleri büyük önem arz etmektedir.

Bu kapsamda; finansmanı Dünya Bankası tarafından sağlanan ve İlbank A.Ş. tarafından yürütülmekte olan Yeşil ve Geleceğin Şehirleri Projesi (GFC) ile finanse edilmesi planlanan;

- Beyşehir İlçesi Karaali Mahallesi kaynaklı atıksuların arıtılması amacıyla Karaali İleri Biyolojik Atıksu Arıtma Tesisi,
- Hüyük İlçesi Kıreli, Çavuş, İlmen Tolca, Pınarbaşı, Değirmenaltı ve Göçeri Mahalleleri kaynaklı atıksuların arıtılması amacıyla Kıreli İleri Biyolojik Atıksu Arıtma Tesisi,
- Hüyük İlçesi Köşk, Selki, İmrenler ve Burunsuz Mahalleleri kaynaklı atıksuların arıtılması amacıyla Köşk İleri Biyolojik Atıksu Arıtma Tesisi

projelerine ilişkin fizibilite raporları, etüt çalışmaları ile çevresel ve sosyal dokümanların hazırlık çalışmaları devam etmektedir.

Bu doğrultuda, İller Bankasına sunulmak üzere kurum görüşünüzün bildirilmesini arz ederim.

Ahmet DEMİR
Genel Müdür

Ekler :
1 - Beyşehir Gölü Arıtmalar

Bu belge, güvenli elektronik imza ile imzalanmıştır.
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T.C.
TARIM VE ORMAN BAKANLIĞI
Doğa Koruma ve Milli Parklar Genel Müdürlüğü
8. Bölge Müdürlüğü

2025 AİLE YILI

Sayı : E-98572095-622.02-22670323
Konu : Atıksu Arıtma Tesisleri Hk.

KONYA SU VE KANALİZASYON İDARESİ GENEL MÜDÜRLÜĞÜNE
(Arıtma Tesisleri Dairesi Başkanlığı)

İlgi : 19.12.2025 tarihli ve E-20824400-220.04.02-117644 sayılı yazınız.

İlgi yazı gereği; Finansmanı Dünya Bankası tarafından sağlanan ve İlbank A.Ş. tarafından yürütülmekte olan Yeşil ve Geleceğin Şehirleri Projesi (GFC) ile finanse edilmesi planlanan;

- Beyşehir İlçesi, Karaali Mahallesi kaynaklı atıksuların arıtılması amacıyla Karaali İleri Biyolojik Atıksu Arıtma Tesisi,
- Hüyük İlçesi Kıreli, Çavuş, İlmen Tolca, Pınarbaşı, Değirmenaltı ve Göçeri Mahalleleri kaynaklı atıksuların arıtılması amacıyla Kıreli İleri Biyolojik Atıksu Arıtma Tesisi,
- Hüyük İlçesi Köşk, Selki, İmrenler ve Burunsuz Mahalleleri kaynaklı atıksuların arıtılması amacıyla Köşk İleri Biyolojik Atıksu Arıtma Tesisi projelerine ilişkin fizibilite raporları, etüt çalışmaları ile çevresel ve sosyal dokümanların hazırlık çalışmaları kapsamında Bölge Müdürlüğümüz görüşü talep edilmektedir.

Bölge Müdürlüğümüz tarafından yapılan inceleme neticesinde; Atıksu Arıtma Tesislerinin tamamının nihai deşarj noktasının Beyşehir Gölü olduğu görülmüştür.

Beyşehir Gölü Milli Parkı Uzun Devreli Gelişme Revizyon Planının 4.3.19 maddesinde *"Beyşehir Gölü'nü besleyen kaynakların akışları değiştirilemez, kanal içine alınamaz, arıtılmadan atık su deşarjı yapılamaz."* hükmü, 4.3.28.7-iii. maddesinde *"Mevcut kullanımların atıksuları için biyolojik atık su arıtma sistemi veya doğal atıksu arıtma tesisi kurulması zorunludur. Atıksu arıtma tesisi olmayan yerlerde atıksular en yakın atıksu arıtma tesisine taşınmalıdır."* hükmü ve 4.3.34 maddesinde *"Beyşehir Gölü'nde ve gölü besleyen su kaynaklarında kirlilik yükünün azaltılması esastır. Bu amaçla, göldeki ötrofikasyon kontrolü için Beyşehir Gölü Havzası Özel Hükümleri Ek-1'de yer alan deşarj standartlarının sağlanması ve devamlılığı gereklidir. Belirli periyotlarla, DSİ 4. Bölge Müdürlüğü'nce gölden ve gölü besleyen kaynaklardan su örnekleri alınarak analizlerinin yapılması ve raporlanarak Doğa Koruma ve Milli Parklar Genel Müdürlüğü'ne gönderilmesi zorunludur. Kirlilik yükünün arttığının tespit edilmesi halinde ilgili Kurumlarla gerekli önlemler alınacaktır."* hükmü bulunmakta, 04.04.2014 tarih ve 28962 sayılı (Değişik: RG-23/10/2019-30927) Resmi Gazete'de yayımlanan Sulak Alanların Korunması Yönetmeliği'nin "Atık su deşarjı" başlıklı 15. Maddesinde ***"Sulak alanlara ve sulak alanları besleyen tüm sulara veya sisteme bağlantılı kuru derelere hiçbir surette arıtılmamış evsel ve endüstriyel atık sular verilemez. Atık su deşarjı ile ilgili olarak, 31/12/2004 tarihli ve 25687 sayılı Resmî Gazete'de yayımlanan Su Kirliliği Kontrolü Yönetmeliği, su ürünleri istihsal sahalarında ise 10/3/1995 tarihli ve 22223 sayılı Resmî Gazete'de yayımlanan Su Ürünleri Yönetmeliği hükümleri uygulanır."*** hükmü yer almaktadır.

Bilgi için:Mehmet ÖZDEMİR
Şube Müdürü

Beyşehir İlçesi Karaali İleri Biyolojik Atıksu Arıtma Tesisi, Hüyük İlçesi Kıreli İleri Biyolojik Atıksu Arıtma Tesisi ile Hüyük İlçesi Köşk İleri Biyolojik Atıksu Arıtma Tesisi projelerinin yapılmasında; 2873 sayılı Milli Parklar Kanunu, 4915 sayılı Kara Avcılığı Kanunu ve Sulak Alanların Korunması Yönetmeliği kapsamında sakınca bulunmamaktadır.

Ancak Hüyük İlçesi Kıreli İleri Biyolojik Atıksu Arıtma Tesisi ve Hüyük İlçesi, Köşk İleri Biyolojik Atıksu Arıtma Tesisi projelerinin; Beyşehir Gölü Sulak Alanı Tampon Bölgesi sınırları içerisinde kalması nedeniyle, Sulak Alanların Korunması Yönetmeliğine göre, **"Kentsel ve/veya evsel nitelikli atık su arıtma tesisleri"** Ek-2 faaliyetleri kapsamında olup, söz konusu projeler için faaliyete başlama esnasında Sulak Alan Faaliyet İzin Belgesi alınabilmesi için Konya Doğa Koruma ve Milli Parklar Müdürlüğümüze müracaat edilmesi hususunu bilgilerinize arz ederim

Orhan ÇATALÇAM
Bölge Müdürü V.

Letter on Marginal Agricultural Land

T.C.
KONYA SU VE KANALİZASYON İDARESİ GENEL MÜDÜRLÜĞÜ
Arıtma Tesisleri Dairesi Başkanlığı

Sayı : E-20824400-220.04.02-115374 19.11.2025
Konu : Tarım Marjinal Raporu Hk.

PLAN PROJE DAİRESİ BAŞKANLIĞINA

Finansmanı Dünya Bankası tarafından sağlanan ve İlbank tarafından yürütülmekte olan Yeşil ve Geleceğin Şehirleri Projesi (GFC) kapsamında yapımı planlanan **Kıreli Atıksu Arıtma Tesisi, Köşk Atıksu Arıtma Tesisi, Karaali Atıksu Arıtma Tesisi** için fizibilite raporları, etüt çalışmaları ile çevresel ve sosyal dokümanların hazırlık çalışmaları devam etmektedir.

İller Bankasına sunulmak üzere, **5403 Sayılı Toprak Koruma ve Arazi Kullanımı Kanunu** kapsamında ekli listede belirtilen parseller için **"Tarım Marjinal Raporlarına"** ihtiyaç duyulmaktadır.

Bahse konu raporların temin edilerek Daire Başkanlığımıza iletilmesi hususunda gereğini rica ederim.

Murat ERDOĞAN
Genel Müdür a.
Genel Müdür Yardımcısı

Ek : Parsel Listesi

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Konya Provincial Directorate of Agriculture and Forestry Opinion Letter

T.C.
KONYA SU VE KANALİZASYON İDARESİ GENEL MÜDÜRLÜĞÜ
Arıtma Tesisleri Dairesi Başkanlığı

Sayı : E-20824400-220.04.02-117679 19.12.2025
Konu : Karaali Atıksu Arıtma Tesisi Hk.

DAĞITIM YERLERİNE

Genel Müdürlüğümüzce, Beyşehir İlçesi Karaali Mahallesi 257 ada 1 parsel numaralı alanda yapılması planlanan Karaali İleri Biyolojik Atıksu Arıtma Tesisi'ne ait uygulama projeleri ile fizibilite raporları, etüt çalışmaları ve çevresel–sosyal dokümanların hazırlanmasına yönelik çalışmalar devam etmektedir.

Karaali Atıksu Arıtma Tesisi için tahsis edilen alanla ilgili olarak, ekte sunulan tahsis belgesinde İl Sağlık Müdürlüğü ile Tarım ve Orman İl Müdürlüğünün görüşlerinin alınması talep edilmektedir.

Bu kapsamda, söz konusu Atıksu Arıtma Tesisi hakkında kurum görüşünüzün bildirilmesini rica ederim.

Ahmet DEMİR
Genel Müdür

Ekler :
1 - Karaali AAT Bilgi
2 - Tahsis Belgesi

Dağıtım:
Konya İl Sağlık Müdürlüğüne
Konya İl Tarım ve Orman Müdürlüğüne

Bu belge, güvenli elektronik imza ile imzalanmıştır.
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T.C.
KONYA VALİLİĞİ
İl Tarım ve Orman Müdürlüğü

2025 AİLE YILI

Sayı : E-67894191-230.04.02-22579801
Konu : Karaali Atıksu Arıtma Tesisi Hk.

KONYA SU VE KANALİZASYON İDARESİ GENEL MÜDÜRLÜĞÜ
(Arıtma Tesisleri Dairesi Başkanlığı)

İlgi : 19.12.2025 tarihli ve E-20824400-220.04.02-117679 sayılı yazınız.

Konya ili, Beyşehir İlçesi Karaali Mahallesi 257 ada 1 parsel numaralı alanda yapılması planlanan Karaali İleri Biyolojik Atıksu Arıtma Tesisi için tahsis talep edilmekte olup;5403 sayılı kanun kapsamında kurum görüşümüz sorulmaktadır.

İlgili yazınız incelenmiş olup; İl Müdürlüğümüz'den daha önce 5403 sayılı Toprak Koruma Kanunu Kapsamında bir izin yazısı almış iseniz tarafımıza beyanı, eğer izin alınmadı ise başvurunun değerlendirilebilmesi için İmar yapmaya yetkili kurum ve kuruluşlar tarafından TAD PORTAL sistemine girişi yapılarak, Alternatif alan görüşü ve DSİ Kurum görüşünün alınarak İl Müdürlüğümüze gönderilmesi gerekmektedir.

Gereğini arz ederim.

Duran SEÇEN
İl Müdürü

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Telefon No:(332) 322 34 60-1183

Opinion Letter of the General Directorate of Water Management

T.C.
TARIM VE ORMAN BAKANLIĞI
Su Yönetimi Genel Müdürlüğü

Sayı : E-51398780-251.03.01-23508698
Konu : Beyşehir Gölü Arıtma Tesisleri

KONYA SU VE KANALİZASYON İDARESİ GENEL MÜDÜRLÜĞÜ
(Arıtma Tesisleri Dairesi Başkanlığı)

İlgi : E-20824400-220.04.02-117644 sayılı yazınız.

İlgi yazı ile, Mülga Çevreve Orman Bakanlığı tarafından 2008 yılında hazırlanan Beyşehir Gölü Havza Koruma Eylem Planı, Çevre, Şehircilik ve İklim Değişikliği Bakanlığı Atıksu Arıtımı Eylem Planı ile 08.01.2006 tarih ve 26047 sayılı Resmî Gazete'de yayımlanarak yürürlüğe giren Kentsel Atıksu Arıtımı Yönetmeliği, 2872 sayılı Çevre Kanunu ve 31.12.2004 tarih ve 25687 sayılı Resmî Gazete'de yayımlanan Su Kirliliği Kontrolü Yönetmeliği hükümleri doğrultusunda hazırlanan ve 04.07.2017 tarih ve 309 sayılı karar ile Tarım ve Orman Bakanlığı tarafından onaylanan Beyşehir Gölü Özel Hükümleri kapsamında; yerleşim yerlerine ait atıksuların toplanması, arıtılması ve deşarjından kaynaklanabilecek olumsuz çevresel etkilerin önlenmesi amacıyla, bölgede atıksu arıtma tesisi bulunmayan yerleşim yerlerine atıksu arıtma tesisleri kurulması planlandığından bahsedilmekte olup, atıksu arıtma tesisi yapılması planlanan ve yazı ekinde bilgileri iletilen taşınmazlar için, İller Bankasına sunulmak üzere Genel Müdürlüğümüz görüşü talep edilmektedir.

İlgi yazı, Genel Müdürlüğümüz görev, yetki ve sorumlulukları kapsamında tetkik edilmiş olup, görüş sorulan alanlarının, 28.10.2017 tarihli ve 30224 sayılı Resmî Gazete'de yayımlanarak yürürlüğe giren "İçme-Kullanma Suyu Havzalarının Korunmasına Dair Yönetmelik" kapsamında, Konya iline içme-kullanma suyu temin edilen Beyşehir Gölü havzasında yer aldığı tespit edilmiştir.

Söz konusu havzada hali hazırda 2017 yılında yürürlüğe giren Beyşehir Gölü Havzası Özel Hükümleri geçerlidir. Mezkûr koruma planı/özel hükümler kapsamında görüş sorulan alanlar Uzak Mesafeli (1000 m-Havza Sınırı) koruma alanında kalmaktadır.

Söz konusu talebe ilişkin Genel Müdürlüğümüz görüşleri aşağıda yer almaktadır;

1-) Beyşehir Gölü Havzası Özel Hükümleri hükümlerinin söz konusu koruma alanında yer alan faaliyete ilişkin kısmı kapsamında:

Madde 15: "Arıtılmış atıksuların deşarjının yapılacağı alıcı ortamlar üzerinde, yapılacak teknik etütlerle uygunluğu tespit edilmesi durumunda 'yapay sulak alan veya benzeri sistemler' yapılabilir."

Madde 19: "Evsel atıksu arıtma tesisi deşarj sularının sulama mevsiminde yeniden kullanımı, ilgili mevzuata uyulması şartı ile Göl Yeşil Kuşaklama Alanı, Göl Koruma Alanı, organik tarım

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Mühendis

uygulanabilecek alanlar dışındaki alanlarda kullanmak şartıyla ilgili kurumlar tarafından teşvik edilecektir."

Madde 20: "Havzadaki yerleşimlerden kaynaklanan evsel nitelikli atıksular için EK-1, Tablo 1 ve Tablo 2'de verilen deşarj standartları ve endüstriyel nitelikli atıksular için ise EK-1 Tablo 3'ten Tablo 9'a kadar (Tablo-9 dâhil) verilen deşarj standartları uygulanacaktır. Tekstil sektörünün atıksularını EK-1 Tablo 5'de verilen standartlara uygun şekilde arıtması ve Beyşehir kanalizasyon şebekesine deşarjı zorunludur. Havza genelinde izin verilen sanayilere ait liste EK 2 Tablo 1'de verilmiştir." hükümleri yer almaktadır.

İlaveten, 2560 sayılı Kanun kapsamında, su, kanalizasyon (atıksu), derelerin ıslahı ve yağmur suyunun uzaklaştırılması hususunda her türlü hizmeti yürütmek, bunlar için gerekli tesisleri kurmak, kurdurmak, işletmek ve işlettirmek; içme suyu temin edilen kaynakların kullanılmış sularla ve endüstri artıkları ile kirletilmesini, bu kaynaklarda suların kaybına veya azalmasına yol açacak tesis kurulmasını ve bu tür faaliyetlerde bulunulmasını önlemek, bu konuda her türlü teknik, idari ve hukuki tedbiri almak, büyükşehir belediyesi su ve kanalizasyon idarelerinin görevleri arasında sayılmaktadır.

Mezkûr Kanun uyarınca, Beyşehir Gölü Havzasında yapılacak her türlü faaliyet ve yapılaşmanın koruma planına ilave olarak diğer mer'i mevzuat hükümleri, havzadaki mevcut planlar ve arazi kullanımı, jeolojik ve hidrojeolojik durum, coğrafi koşullar, oluşacak kirlilik yükü, mevcut altyapı durumu, içme suyu kaynağının miktar ve kalitesine etkisi gibi hususlar da dikkate alınarak içme suyunu temin eden idareler ve ilgili kurumlarca yerinde tetkiki ile değerlendirilmesi ve faaliyete ilişkin alınması gereken tedbirlerin ortaya konması önem arz etmektedir.

Bu çerçevede, yerleşim yerlerine ait atıksuların toplanması, arıtılması ve deşarjından kaynaklanabilecek olumsuz çevresel etkilerin önlenmesi amacıyla, bölgede atıksu arıtma tesisi bulunmayan yerleşim yerlerine atıksu arıtma tesisleri kurulması için üzerine atıksu arıtma tesisi yapılması planlanan taşınmazlar hakkındaki değerlendirmenin, 2560 sayılı Kanun uyarınca tarafınızca yapılması gerekmektedir.

2-) Söz konusu Atıksu Arıtma tesislerinin konumlarına (Kıreli AAT) ve nihai deşarj noktalarına (Beyşehir Gölü) bakıldığında nitrata hassas alanda yer aldığı tespit edilmiştir. Bu kapsamda Kentsel Atıksu Arıtımı Yönetmeliği'nde yer alan "Tablo 2" değerleri referans alınarak arıtma tesisleri planlanmalı ve KOSKİ tarafından gönderilen bilgi notunda da bu şekilde tasarlandığı belirtilmektedir.

Söz konusu bilgi notunda Kıreli ve Köşk Atıksu Arıtma Tesisleri için nüfus çalışması da yapılarak ilgili yönetmelikteki Tablo 2'den eşdeğer nüfusa göre seçilen tasarım parametreleri verilmektedir. Ancak Karaali Atıksu Arıtma Tesisi tasarım parametrelerinde nüfus verisinin yer almaması nedeni ile hangi tasarım parametresinin seçildiği anlaşılamamaktadır. Eşdeğer Nüfus aralığına göre TN ve TP parametreleri tasarım konsantrasyonlarının belirlenmesi gerekmektedir. Nitrata hassas alanlar yazı ekinde ki "Ek-1" de gösterilmiştir.

3-) Söz konusu proje alanları Konya Kapalı Havzasında kalmaktadır. Konya Kapalı Havzası Nehir Havza Yönetim Planı kapsamında mahalleler bazında atıksu arıtma tesisleri tedbirleri önerilmiştir.

Beştepe Mah. Alparslan Türkeş Cad. No:71 Yenimahalle/ANKARA
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Bilgi için:İlker YILDIRIM
Mühendis

Sorumlu kurum olarak da KOSKİ olarak belirlenmiştir. Aşağıda söz konusu belirlenen tedbirler ayrı ayrı yer almaktadır. Tedbirlerin tarafımızca takip edilebilmesi için Ulusal Su Bilgi Sistemi (USBS) üzerinden proje çalışmalarının her aşamasında bilgilendirme girişlerinin yapılması önem arz etmektedir.

Konya Kapalı Havzası kapsamında belirlenen tedbirler:

1.Uygun arıtma ile KIRELİ AAT'nin inşası (Kıreli AAT Projesi kapsamındadır)
2.Uygun arıtma ile ÇAVUŞ AAT'nin inşası (Kıreli AAT Projesi kapsamındadır)
3.Uygun arıtma ile PINARBAŞI AAT'nin inşası (Kıreli AAT Projesi kapsamındadır)
4.Uygun arıtma ile İLMEN AAT'nin inşası (Kıreli AAT Projesi kapsamındadır)
5.Uygun arıtma ile KÖŞK AAT'nin inşası (Köşk AAT Projesi kapsamındadır.)
6.Uygun arıtma ile BURUNSUZ AAT'nin inşası (Köşk AAT Projesi kapsamındadır.)
7.Uygun arıtma ile İMRENLER AAT'nin inşası (Köşk AAT Projesi kapsamındadır.)
8.Uygun arıtma ile SELKİ AAT'nin inşası (Köşk AAT Projesi kapsamındadır.)
9. İkincil Arıtma ile Karaali AAT (Karaali AAT Projesi kapsamındadır.)

4-) İlaveten, söz konusu talep için Çevre, Şehircilik ve İklim Değişikliği Bakanlığı'ndan görüş alınması gerekmektedir.

Bilgilerini ve gereğini rica ederim.

Afire SEVER
Bakan a.
Genel Müdür

Ek: Nitrata Hassas Alanlar (1 Sayfa)

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Mühendis

Request Letter for Institutional Opinions for Zoning (Development Planning) – Kıreli, Köşk and Karaali Wastewater Treatment Plant

T.C.
KONYA BÜYÜKŞEHİR BELEDİYE BAŞKANLIĞI
İmar ve Şehircilik Dairesi Başkanlığı

Sayı : E-89646320-045.01-419469 15.01.2026
Konu : Atıksu Arıtma Tesisi Amaçlı İmar Planına Esas Kurum Görüşü hk.

DAĞITIM YERLERİNE

Finansmanı Dünya Bankası tarafından sağlanan ve İller Bankası A.Ş. tarafından yürütülmekte olan ***Yeşil ve Geleceğin Şehirleri Projesi (GFC)*** kapsamında yapımı planlanan **Kıreli Atıksu Arıtma Tesisi**, **Köşk Atıksu Arıtma Tesisi** ve **Karaali Atıksu Arıtma Tesisi**'ne ilişkin bu amaçla yapılacak olan imar planlarına esas olacak şekilde mer'i mevzuatınız kapsamında kurum görüşünüzün 3194 sayılı İmar Kanunu'nun 8'inci maddesinin (e) bendi uyarınca 30 (otuz) gün içinde bildirilmesi ve söz konusu alanlar ile ilgili planlama çalışmalarına altlık oluşturacak bilgi ve belgelerin varsa sayısal ortamda, yoksa ozalit-fotokopi şeklinde basılı suretlerinin gönderilmesi hususunda;

Gereğini bilgilerinize rica ederim.

Ahmet Furkan KUŞDEMİR
Başkan a.
Genel Sekreter Yardımcısı

Ekler :
1 - Dağıtım Listesi (15 Birim)
2 - Taşınmaz bilgileri

Bu belge, güvenli elektronik imza ile imzalanmıştır.
Doğrulama Kodu: 7156ebee-60d0-4072-bfdc-eb97f5c9236e Doğrulama Linki: https://www.turkiye.gov.tr/icisleri-belediye-ebys

Adres: Büyük Ihsaniye Mah. Kazım Karabekir Cd. No:56, 42060 Selçuklu/ Konya
Telefon No: 4445542 Faks No: (332)211 15 76
e-Posta: imarisleri@konya.bel.tr İnternet Adresi: https://www.konya.bel.tr
Kep Adresi: konyabuyuksehirbelediyesi@hs03.kep.tr
Bilgi için: Kamil GULMEZ
Şehir Plancısı
Telefon No: -

DAĞITIM LİSTESİ

Gereği:

Konya İl Tarım ve Orman Müdürlüğü
Dsi 4. Bölge Müdürlüğü
Karayolları 3. Bölge Müdürlüğü
Konya Kültür Varlıklarını Koruma Bölge Kurulu Müdürlüğü
Konya Çevre, Şehircilik ve İklim Değişikliği İl Müdürlüğü
Konya Orman Bölge Müdürlüğü
Doğa Koruma ve Milli Parklar 8. Bölge Müdürlüğü
Teiaş 9. Bölge Müdürlüğü
MERAM ELEKTRİK DAĞITIM ANONİM ŞİRKETİ
Konya Su ve Kanalizasyon İdaresi Genel Müdürlüğü
Boru Hatları İle Petrol Taşıma Anonim Şirketi Genel Müdürlüğü
Maden Tetkik ve Arama Orta Anadolu Iı. Bölge Müdürlüğü
Maden ve Petrol İşleri Genel Müdürlüğü
Konya Yatırım İzleme ve Koordinasyon Başkanlığı
Konya İl Afet ve Acil Durum Müdürlüğü

Bilgi:

Annex E – Site Photographs

Photo No: 01 **Date: 20 August 2025** **Location: Planned Discharge Point** **Details/Notes: Planned Discharge Point**	
Photo No: 02 **Date: 20 August 2025** **Location: Project Area and the Existing Wastewater Discharge Point** **Details/Notes:**	
Photo No: 03 **Date: 20 August 2025** **Location: Project Area** **Details/Notes:**	
Photo No: 04 **Date: :13 November 2025** **Location: Project Area**	

Details/Notes:		

Annex F – Baseline Measurements

Site-specific baseline environmental measurements could not be conducted at the Karaali WWTP site at the time of ESMP preparation. Therefore, no direct baseline measurement results are presented in this annex.

In line with İLBANK and World Bank requirements, site-specific baseline measurements, including air quality measurements if required, shall be conducted by the Contractor prior to and during the construction phase. The results of such measurements will be documented and reported as part of the construction-phase monitoring activities.

Until site-specific measurements become available, relevant baseline information and assessment approaches referenced from comparable projects within the same basin have been used for impact evaluation purposes.

Annex G – E&S Incident Notification Form Template

1) Incident Details		
Date of Incident: [*Please indicate*]	**Time of Incident:** [*Please indicate*]	
Location of the Incident:	[*Please indicate*]	
Full Name of Sub-borrower:	[*Please indicate*]	
Date Reported to İLBANK: [*Please indicate*]	**Reported to İLBANK by**: [*Please indicate]*	**Notification Type**: [*Please indicate; e-mail/phone call/media notice/other]*
Date Reported to WB: [*Please indicate*]	**Reported to WB by**: [*Please indicate]*	**Notification Type**: [*Please indicate; e-mail/phone call/media notice/other]*
Full Name of the Contractor of the Subproject:	[*Please indicate]*	
Full Name of the Sub-contractor involved in the incident:	[*Please indicate]*	

2) Type of incident (please check all that apply)[10]	
☐ Fatality	☐ Acts of violence/protest
☐ Lost time injury	☐ Unexpected impacts on heritage resources
☐ Displacement without due process	☐ Unexpected impacts on biodiversity resources
☐ Child labor	☐ Environmental pollution incident
☐ Forced labor	☐ Dam failure
☐ Disease outbreaks	☐ Other

3) Description/Narrative of Incident

For example:

I. *What is the incident?* [*Please briefly describe*]

II. *What were the conditions or circumstances under which the incident occurred (if known)?* [*Please briefly describe*]

III. *Are the basic facts of the incident clear and uncontested, or are there conflicting versions? What are those versions?* [*Please briefly describe*]

IV. *Is the incident still ongoing or is it contained?* [*Please briefly describe*]

V. *Have any relevant authorities been informed?* [*Please briefly describe*]

4) Actions taken to contain the incident

Short Description of Action	Responsible Party	Expected Date	Status

[10] See Appendix 2 for definitions.

For incidents involving a Contractor:

Name of Contractor:
Have the works been suspended? Yes ☐ No ☐
Note: Please attach a copy of the instruction suspending the works

5) What support has been provided to affected people

[*Please briefly describe*]

APPENDICES

Appendix 1: Supporting documents

[Note: Please mark the relevant documents available at this stage and submit them attached to the report]:

☐ Copy of the social security registration records of the victims and involved persons
☐ Copy of the instruction suspending the works
☐ Statement of victims
☐ Statement of witnesses
☐ Copies of notifications done to the relevant authorities
☐ Copies of legal investigation reports of relevant authorities
☐ Copies of E&S training records of the affected and involved persons
☐ Copies of OHS training records of the affected and involved persons
☐ Photographs related to the incident
☐ Others

Appendix 2: Incident Types

The following are incident types to be reported using the environmental and social (E&S) incident response process:

Fatality: Death of a person(s) that occurs within one year of an accident/incident, including from occupational disease/illness (e.g., from exposure to chemicals/toxins).

Lost Time Injury: Injury or occupational disease/illness (e.g., from exposure to chemicals/toxins) that results in a worker requiring 3 or more days off work, or an injury or release of substance (e.g., chemicals/toxins) that results in a member of the community needing medical treatment.

Acts of Violence/Protest: Any intentional use of physical force, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, deprivation to workers or project beneficiaries, or negatively affects the safe operation of a project worksite.

Disease Outbreaks: The occurrence of a disease in excess of normal expectancy of number of cases. Disease may be communicable or may be the result of unknown etiology.

Displacement Without Due Process: The permanent or temporary displacement against the will of individuals, families, and/or communities from the homes and/or land which they occupy without the provision of, and access to, appropriate forms of legal and other protection and/or in a manner that does not comply with an approved resettlement action plan.

Child Labor: An incident of child labor occurs: (i) when a child under the age of 14 (or a higher age for employment specified by national law) is employed or engaged in connection with a project, and/or (ii) when a child over the minimum age specified in (i) and under the age of 18 is employed or engaged in connection with a project in a manner that is likely to be hazardous or interfere with the child's education or be harmful to the child's health or physical, mental, spiritual, moral or social development.

Forced Labor: An incident of forced labor occurs when any work or service not voluntarily performed is exacted from an individual under threat of force or penalty in connection with a project, including any kind of involuntary or compulsory labor, such as indentured labor, bonded labor, or similar labor-contracting arrangements. This also includes incidents when trafficked persons are employed in connection with a project.

Unexpected Impacts on heritage resources: An impact that occurs to a legally protected and/or internationally recognized area of cultural heritage or archaeological value, including world heritage sites or nationally protected areas not foreseen or predicted as part of project design or the environmental or social assessment.

Unexpected impacts on biodiversity resources: An impact that occurs to a legally protected and/or internationally recognized area of high biodiversity value, to a Critical Habitat, or to a Critically Endangered or Endangered species (as listed in IUCN Red List of threatened species or equivalent national approaches) that was not foreseen or predicted as part of the project design or the environmental and social assessment. This includes poaching or trafficking of Critically Endangered or Endangered species.

Environmental pollution incident: Exceedances of emission standards to land, water, or air (e.g., from chemicals/toxins) that have persisted for more than 24 hours or have resulted in harm to the environment.

Dam failure: A sudden, rapid, and uncontrolled release of impounded water or material through overtopping or breakthrough of dam structures.

Other: Any other incident or accident that may have a significant adverse effect on the environment, the affected communities, the public, or the workers, irrespective of whether harm had occurred on that occasion. Any repeated non-compliance or recurrent minor incidents which suggest systematic failures that the task team deems needing the attention of Bank management.

Annex H – E&S Incident Investigation Form Template

1) Investigation Findings

For example:

I. *where and when the incident took place,*
II. *who was involved, and how many people/households were affected,*
III. *what happened and what conditions and actions influenced the incident,*
IV. *what were the expected working procedures and were they followed,*
V. *did the organization or arrangement of the work influence the incident,*
VI. *were there adequate training/competent persons for the job, and was necessary and suitable equipment available,*
VII. *what were the underlying causes; where there any absent risk control measures or any system failures.*

2) Corrective Actions from the investigation to be implemented (to be fully described in Corrective Action Plan)

Action	Responsible Party	Expected Date

3a) Fatality/Lost Time Injury Information

Fatality ☐ **Lost time injury** ☐

Immediate cause of fatality/injury for worker or member of the public (please check all that apply) [11]**:**

☐ Caught in or between objects
☐ Struck by falling objects
☐ Stepping on, striking against, or struck by objects
☐ Drowning
☐ Chemical, biochemical, material exposure
☐ Falls, trips, slips
☐ Fire & explosion
☐ Electrocution
☐ Homicide
☐ Medical Issue
☐ Suicide
☐ Project Vehicle Work Travel
☐ Non-project Vehicle Work Travel
☐ Project Vehicle Commuting
☐ Non-project Vehicle Commuting
☐ Vehicle Traffic Accident (Members of Public Only)
☐ Other

Name	Age/ Date of Birth	Nationality	Gender	Date of Fatality/ Injury	Cause of Fatality/ Injury	Affected Party (Employee/ Public)
			☐ Female ☐ Male			☐ Sub-borrower employee ☐ Contractor employee ☐ Sub-contractor employee ☐ Public

[11] See Appendix 1 for definitions

3b) Financial Support/Compensation Types (to be fully described in Corrective Action Plan template – template is given in Appendix 3)

☐ No Compensation Required
☐ Workman's Compensation/National Insurance
☐ Contractor Direct
☐ Contractor Insurance
☐ Other
☐ Court Determined Judicial Process

Name	Compensation Type	Compensation Amount (TRY)	Responsible Party

4) Supplementary Narrative

Appendix 1: Definition of fatality/injury immediate causes

1. **Caught in or between objects:** caught in an object; caught between a stationary object and moving object; caught between moving objects (except flying or falling objects).
2. Struck by falling objects: slides and cave-ins (earth, rocks, stones, snow, etc.); collapse (buildings, walls, scaffolds, ladders, etc.); struck by falling objects during handling; struck by falling objects.
3. Stepping on, striking against, or struck by objects: stepping on objects; striking against stationary objects (except impacts due to a previous fall); Striking against moving objects; Struck by moving objects (including flying fragments and particles) excluding falling objects.
4. Drowning: respiratory impartment from submersion/emersion in liquid.
5. Chemical, biochemical, material exposure: exposure to or contact with harmful substances or radiations.
6. Falls, trips, slips: falls of persons from heights (e.g., trees, buildings, scaffolds, ladders, etc.) and into depths (e.g., wells, ditches, excavations, holes, etc.) or falls of persons on the same level.
7. Fire & explosion: exposure to or contact with fires or explosions.
8. Electrocution: exposure to or contact with electric current.
9. Homicide: a killing of one human being by another.
10. Medical Issue: a bodily disorder or chronic disease.
11. Suicide: the act or an instance of taking, or attempting to take, one's own life voluntarily and intentionally.
12. Others: any other cause that resulted in a fatality or injury to workers or members of the public.

Vehicle Traffic
13. Project Vehicle Work Travel: traffic accidents in which project workers, using project vehicles, are involved during working hours and which occur in the course of paid work.
14. Non-project Vehicle Work Travel: traffic accidents in which project workers, using non-project vehicles, are involved during working hours and which occur in the course of paid work.
15. Project Vehicle Commuting: traffic accidents in which project workers, using project vehicles, are involved while travelling to (i) the worker's principal or secondary residence; (ii) the place where the worker usually takes his or her meals; or (iii) the place where he or she usually receives his or her remuneration.
16. Non-project Vehicle Commuting: traffic accidents in which project workers, using non-project vehicles, are involved while travelling to (i) the worker's principal or secondary residence; (ii) the place where the worker usually takes his or her meals; or (iii) the place where he or she usually receives his or her remuneration.
17. Vehicle Traffic Accident (Members of Public Only): traffic accidents in which non-project workers/members of the public are involved in an accident while travelling for any purpose.

Appendix 2: Supporting documents

[Note: Please mark the relevant documents available and submit them attached to the report]:

☐ Copy of the social security registration records of the victims and involved persons

☐ Copy of the instruction suspending the works

☐ Statement of victims

☐ Statement of witnesses

☐ Copies of notifications done to the relevant authorities

☐ Copies of legal investigation reports of relevant authorities

☐ Copies of E&S training records of the affected and involved persons

☐ Copies of OHS training records of the affected and involved persons (such as basic OHS training, induction training, visitors training, job-specific training, refreshment training, etc.)

☐ Photographs related to the incident

☐ Health examination records of the affected and involved employees

☐ Copies of Personal Protective Equipment delivery forms (signed copies)

☐ Root Cause Analysis completed for the incident

☐ Information/documentation related to any judicial process

☐ Others

Appendix 3: Corrective Action Plan template

Action No:	Brief Description of E&S non-compliance	Corrective Action	Financial and Human Resources Required	Responsible Party	Due Date for Completion of Corrective Action	Indicators for Successful Completion of Corrective Action	Status of Corrective Action

Annex İ – Chance Finds Procedure

1. INTRODUCTION

This Chance Finds Procedure is a Subproject-specific procedure that will be followed in the Subproject if previously unknown cultural heritage is encountered during Subproject activities.

It will be included in all contracts relating to the construction of the Subproject, including excavations, demolition, movement of earth, flooding, or other changes in the physical environment.

1.1. SCOPE

This Procedure sets out how chance finds associated with the Subproject will be managed. The procedure includes a requirement to notify relevant authorities of found objects or sites by cultural heritage experts; to fence-off the area of finds or sites to avoid further disturbance; to conduct an assessment of found objects or sites by cultural heritage experts; to identify and implement actions consistent with the requirements of national legislation and WB ESS8; and to train Subproject personnel and Subproject workers on chance find procedures.

1.2. DEFINITIONS

Chance Find	According to WB ESS8, a chance find is archaeological material encountered unexpectedly during Project/Subproject construction or operation. Most often, chance finds occur during the construction phase of a Project/Subproject. Such finds include, for example, the discovery of a single artifact, an artifact indicating the presence of a buried archaeological site, human remains, fossilized plant or animal remains or animal tracks, or a natural object or soil feature that appears to indicate the presence of archaeological material.
Museum(s)	Konya Museum Directorate Address:Sahipata Mh. Cahipata Cd. NO:95 Meram / KONYA Tel: 0 332 351 89 58 E-mail: konyamuzesi@ktb.gov.tr
Regional Board(s) for the Conservation of Cultural Heritage	Konya Regional Board for the Conservation of Cultural Heritage Address: Şems-i Tebrizi Mahallesi, Mevlana Cad. Hükümet Meydanı 1. Vakıf İşhanı Kat:2 No:33/201 Karatay/KONYA Tel : 0332 350 93 19 Fax : 0332 352 03 08 Web:https://korumakurullari.ktb.gov.tr/TR-89464/konya-kultur-varliklarini-koruma-bolge-kurulu-mudurlugu.html E-mail: konyakurul@ktb.gov.tr

1.3. REFERENCES

- Law on the Conservation of Cultural and Natural Assets (Law No: 2863, 1983)
- Principal Decision No. 658 on Archaeological Sites, Conservation and Utilization Conditions

2. ROLES AND RESPONSIBILITIES

The roles and responsibilities of the Subproject parties associated with the implementation of this Procedure are described in Table 31.

The Sub-borrower will ensure that all Subproject personnel (including direct or contracted workers) involved in site works are trained by qualified staff on this Subproject-specific Chance Finds Procedure and its implementation upon recruitment .

Table 31 Roles and Responsibilities associated with Chance Finds Procedure Implementation

Party	Role	Responsibilities
Sub-borrower		
KOSKI	Sub-borrower Management	• KOSKİ management is responsible for overall oversight of the implementation of the Chance Finds Procedure during the Subproject. This includes ensuring institutional commitment, allocation of resources, coordination with relevant authorities when required, and ensuring compliance with national legislation and World Bank requirements.
	E&S Team - Environmental staff - Social staff - OHS staff	• **Environmental Staff** Responsible for ensuring that the Chance Finds Procedure is integrated into construction activities, monitoring contractor compliance, reporting chance find incidents to İLBANK and relevant authorities, and coordinating technical actions required following a chance find. • **Social Staff** Responsible for coordinating communication with local stakeholders and authorities in case of chance finds, supporting awareness and training activities, and ensuring that social considerations related to cultural heritage are properly addressed. • **OHS Staff** Responsible for ensuring that construction activities are safely suspended in the event of a chance find, implementing site safety measures, and coordinating worker access restrictions until clearance is obtained from the competent authorities.
Construction Supervision Consultants	Management and E&S staff	Carry out the following tasks on behalf of the sub-borrowers: • Controlling whether contractors receive training in accordance with this procedure through KPIs,
Construction Contractor	Management and E&S staff	• Complying with the requirements and standards of this Chance Find Procedure, • Fulfilling the works under the contract, • Completing the Subproject awareness and competency training before commencement of work, • Complying with the requirements of this Procedure and ESMP.

3. CHANCE FINDS PROCEDURE

The following step-by-step procedure will be followed if previously unknown cultural heritage is encountered during Subproject activities.

Step 1 – Immediate actions following the discovery of a Chance Find

1) All works in the survey area shall cease.

2) Transitional buffer zones shall be established around the chance find area.

3) Site management and the Museum Archaeologist shall be contacted immediately.

4) The chance find site shall be adequately secured by markings, signposts, and banners, etc.

5) Protection of the chance find site shall not be transported, lifted or damaged further.

Step 2 – Registration

1) Chance Find Notification Form Section A shall be filled in by the relevant Subproject representative (such as environmental or social staff – to be designated by the Contractor upon appointment) and a copy shall be forwarded to the Contractor's management and the Sub-borrower in **24 hours** of the discovery.

2) Completed Chance Find Notification Form Section A s shall be forwarded by the Contractor's management to the Sub-borrower in **48 hours** of the discovery.

Step 3 – Communication with Local Authorities

1) The director of the respective museum shall be notified by the relevant Subproject representative regarding the chance find.

Step 4 – Museum Assessment and Decision

1) The Museum officials evaluate the significance of the discovery and determines the required actions:

a) Site/Chance Find is of **No Significance**:

- The Museum officials declare the site or find as **insignificant.**
- Records are maintained and chance finds procedure is closed.
- No further action is required. Construction activities may resume.

b) Site/Chance Find is **Significant**:

- The Museum officials declare the site or find as **significant**.
- The Museum officials decide on further action and notify the relevant Subproject representative.
- The Subproject representative communicates with the Sub-borrower and relevant Subproject parties to coordinate actions.

Step 5 – Site Survey

1) The Subproject's site workers are notified by relevant Subproject representative regarding the decision and instructions of the relevant Museum Directorate.

2) The Museum officials determine the significance level of the site/chance find following a site survey.

a) Sites/chance finds of **minor** significance:

- The Museum officials declare the site or find as of minor significance.
- The relevant Subproject representative notifies the Contractor's management.
- The Contractor's management notify the Sub-borrower.
- Records are maintained by the relevant Subproject representative and chance finds procedure is closed.
- No further action is required. Construction activities may resume.

b) Sites/chance finds of **moderate** significance:

- The Museum officials declare the site or find as of moderate significance and determine the actions to be implemented.
- The relevant Subproject representative notifies the Contractor's management.
- The Contractor's management notify the Sub-borrower.
- The actions determined by the Museum Directorate are implemented by the Subproject:

    - Subproject management shall provide an archaeological task force under the leadership of the Museum officials. The task force shall be composed of qualified archaeologists as well as other specialists and workers.
    - The actions required by the Museum Directorate such as the test pit, salvage excavation or remote sensory surveys, shall be completed under the instructions and supervision of the Museum officials.
    - Upon completion of the required actions, the team shall report to the Museum Directorate.
    - Museum Directorate forwards the findings of the survey to the relevant Regional Board.
    - The Regional Board shall officially verify the completion actions and notifies the Subproject management accordingly.
- Records are maintained by the relevant Subproject representative and chance finds procedure is closed.
- No further action is required. Construction activities may resume.

c) Sites/chance finds of **high** significance:

- The Museum officials declare the site or find as of high significance and determine the actions to be implemented.
- The relevant Subproject representative notifies the Contractor's management.
- The Contractor's management notify the Sub-borrower.
- The actions determined by the Museum Directorate are implemented by the Subproject:
    - Subproject management shall provide an archaeological task force under the leadership of the Museum officials. The task force shall be composed of qualified archaeologists as well as other specialists and workers.
    - The actions required by the Museum Directorate such as the test pit, salvage excavation or remote sensory surveys, shall be completed under the instructions and supervision of the Museum officials.
    - Upon completion of the required actions, the team shall report to the Museum Directorate.
    - Museum Directorate forwards the findings of the survey to the relevant Regional Board.
    - The Regional Board shall officially verify the completion actions and notifies the Subproject management accordingly.
    - As required, the site shall be registered and placed under protection as per Turkish legislation in accordance with the Law on the Conservation of Cultural and Natural Assets (Law No: 2863, 1983).

If human remains are discovered, the entire Subproject team shall be immediately notified by the Subproject management.

The Subproject management shall also immediately notify the Sub-borrower.

All activities in the area shall cease, and the site shall be secured until further instructions are provided by relevant authorities.

4. MONITORING AND REPORTING

The Contractor's and construction supervision consultant's E&S staff shall conduct advance pre-construction surveys and monitoring of all ground disturbing activities, especially in the locations with a high likelihood of cultural heritage.

Detailed information on chance finds discovered during the Subproject implementation, if any, shall be included by the Sub-borrower in the Periodic Monitoring Reports to be submitted to İLBANK, in accordance with the requirements outlined in the sub-financing agreement.

The Subproject representative shall retain copies of all documentation related to the chance find.

All actions and decisions taken by the cultural heritage authorities shall be clearly recorded and stored in the Subproject's E&S database.

5. REPORTING TEMPLATES

5.1. CHANCE FINDS NOTIFICATION FORM

PART A *BÖLÜM A*		
Date: *Tarih*		**Form No:** *Form No*
Sub-borrower: *Alt borçlu*		**Subproject:** *Alt Proje*
Construction Supervision Consultant: *Müşavir Firma*		**Contractor:** *Yüklenici*
Subproject Location *Alt Proje Sahası*	**District**: *İlçe*	**Neighborhood/Village**: *Mahalle/Köy*
Name of person reporting chance find: *Şans bulgusunu rapor eden kişinin ismi*		
IMMEDIATE ACTIONS *ACİL ÖNLEMLER*		
Was work stopped in the immediate vicinity of the chance find? *Şans bulgusunun tam çevresinde iş durduruldu mu?*	☐ Yes *Evet*	☐ No *Hayır*
Was a buffer zone created to protect the chance find? *Şans bulguyu korumak için tampon bölge oluşturuldu mu?*	☐ Yes *Evet*	☐ No *Hayır*
Contractor's management representatives (e.g. Project/Site Manager) contacted? *Yüklenici yönetim temsilcileri (ör. Proje/Saha Müdürü) ile irtibata geçildi mi?*	☐ Yes *Evet*	☐ No *Hayır*
Supervision Consultant's E&S team contacted? *Müşavir firma Ç&S ekibi ile irtibata geçildi mi?*	☐ Yes *Evet*	☐ No *Hayır*
Sub-borrower contacted? *Alt borçlu ile irtibata geçildi mi?*	☐ Yes *Evet*	☐ No *Hayır*
CHANCE FIND DETAILS *ŞANS BULGU AYRINTILARI*		
GPS coordinates *GPS koordinatları*	**Photo record** *Fotoğraf kaydı* ☐ Yes ☐ No *Evet Hayır* Other records ☐ Yes ☐ No *Diğer kayıtlar Evet Hayır* Specify (drawings, HD quality videos, etc.): *Belirtin (çizimler, HD kalite videolar, vb.)*	
Description of chance find: *Tesadüfi buluntunun tanımı*		
Description of site/finding and other specifications of site/finding: (e.g. surface sediment type, ground surface visibility, distance to closest watercourse, etc.) *Sahanın / bulgunun ve saha/bulgunun diğer özelliklerinin tanımı: (örn. Yüzey sediman türü, yüzey zemin görünürlüğü, en yakın suyoluna olan mesafe, vb.)*		

PART B *BÖLÜM B*		
NOTIFICATION OF MUSEUM DIRECTORATE OFFICIALS *MÜZE MÜDÜRLÜĞÜ YETKİLİLERİNE BİLDİRİM*		
Subproject representative contacted relevant Museum Directorate? *Alt proje temsilcisi müze müdürlüğü ile irtibata geçti mi?*	☐ Yes *Evet*	☐ No *Hayır*
Date of notification: *Bildirim tarihi*		
Name of Museum Directorate: *Müze müdürlüğünün adı*		
Name of the relevant Museum official: *Müze Müdürlüğü yetkilisinin adı*		
Contact number of the official: *Yetkilinin iletişim numarası*		
DECISION OF MUSEUM DIRECTORATE ARCHAEOLOGIST *MÜZE MÜDÜRLÜĞÜ ARKELOĞUNUN KARARI*		
Date of site visit: *Saha ziyaret tarihi:*		
☐ **Site/Finding of <u>no</u> significance –** Construction to proceed with no further action – End of chance find procedure *Önemsiz Saha – Bulgu - daha fazla araştırma yapılmadan inşaat devam edilebilir – Şans bulgu prosedürün sonu.* Date of notice to resume work: *İşe devam etme tarihinin bildirisi*	☐ **Site/Finding of <u>significance</u> –** Further actions required *Önemli Saha – Bulgu - Ek araştırma gerekmektedir* Please Fill out Part C *Lütfen Bölüm C'yi doldurun.*	
Name of Museum directorate official: *Müze müdürlüğü yetkilisinin ismi* **Contact information:** *İletişim numarası*		
Contractor's management representatives (e.g. Project/Site Manager) contacted? *Yüklenici yönetim temsilcileri (ör. Proje/Saha Müdürü) ile irtibata geçildi mi?*	☐ Yes *Evet*	☐ No *Hayır*
Supervision Consultant's E&S team contacted? *Müşavir firma Ç&S ekibi ile irtibata geçildi mi?*	☐ Yes *Evet*	☐ No *Hayır*
Sub-borrower contacted? *Alt borçlu ile irtibata geçildi mi?*	☐ Yes *Evet*	☐ No *Hayır*
PART C – FURTHER FIELD INVESTIGATION *BÖLÜM C – İLAVE SAHA ARAŞTIRMALARI*		
☐Site/Finding of **minor** significance *Az önem taşıyan saha/bulgu*	☐Site/Finding of **moderate** significance *Orta derecede önemli saha/bulgu*	☐Site/Finding of **high** significance *Çok önemli saha/bulgu*
Describe additional actions required to be implemented: *İlave aksiyonların tanımı*		
PART D – IMPLEMENTATION OF ACTIONS AND RESUMPTION OF WORKS *BÖLÜM D – AKSİYONLARIN TAMAMLANMASI VE İŞE DEVAM*		

Date of actions started: *Aksiyonların başlangıç tarihi:* **Date of actions completed:** *Aksiyonların tamamlanma tarihi:*	**Date of notice from the cultural heritage authorities to resume work:** *Otorilerden alınan işe devam izni tarihi:*

5.2. CHANCE FINDS LOG

Date of Chance Find Discovery	Brief Description of the Chance Find	Notification of Subproject Parties/ Representatives	Notification of Relevant Authorities	Actions Required by the Authorities	Status of Actions (open or losed	Other Remarks

Annex J – Change Notification Form

Change Notification Form	
Subproject Name	
Subproject Location	
Subproject Phase	☐ Pre-construction
	☐ Construction
	☐ Operation
Name of the Institution Notifying the Change	
Date	
Category of the Change *(please select all that apply)*	☐ Legislative Change
	☐ Design Change
	☐ Schedule Change due to E&S factors
	☐ Project Schedule Changes due to technical, financial, legal or administrative factors
	☐ Changes due to E&S issues encountered at Subproject implementation
	☐ Contractor or Construction Supervision Consultant Change
	☐ Other *(please specify below)*
Detailed Description of the Change(s)	
Documents Submitted with Change Notification Form	
Name of the Staff Notifying the Change	
Position of the Staff Notifying the Change	
Signature	

Annex K - A Summary Of The National Legislation And International Standards Applicable

The National Legislation and International Legislation applicable to the management of environmental, social, health and safety aspects of the proposed Project has been identified under this section.

Institutional and Legal Framework in Türkiye

In Turkiye, institutional framework consists of central and local administrations. Turkiye is structured by provinces according to economical and geographical conditions. Each province is managed by local administrations consisting of municipalities, villages/neighborhoods. Representatives of the administrative structure of municipalities and villages/neighborhoods are mayors and mukhtar, respectively. Ministries, which are central administrative units, provide services to local areas through their local branches including provincial organizations affiliated to governor and district organizations affiliated to district governors.

Environmental impacts, permits, management and inspection of the project is under the scope of authority of MoEUCC, Ministry of Agriculture and Forestry, Ministry of Culture and Tourism, Ministry of Labor and Social Security and Ministry of Health. MoEUCC is the key authority regulating policies and procedures related to conservation and protection of natural environment, management of natural resources and settlements by its general directorates. Those principally related to the Project are given as follows:

- General Directorate of Environmental Impact Assessment, Permit, and Inspection
- General Directorate of Environmental Management
- General Directorate of Protection of Natural Assets
- General Directorate of Infrastructure and Urban Transformation Services
- General Directorate of Land Registry and Cadastral

Provincial, regional and district level administrations are the provincial organizations of ministries and related institutions. The Project is within the scope of Konya Metropolitan Municipality, Konya Provincial Directorate of Environment, Urbanization and Climate Change, Beyşehir District Directorate of Agriculture and Forestry, Konya Provincial Directorate of Agriculture and Forestry, Konya Regional Directorate for the Protection of Cultural Assets, State Hydraulic Works (DSİ) 4th Regional Directorate, Beyşehir Municipality, Beyşehir District Health Directorate, and Konya Regional Directorate of Highways. Relevant neighborhood administrations have been associated as local administrations for the Project.

National Legislation on Environmental, Social, Labor and Health and Safety:

The National Legislation applicable to the management of environmental, social, health and safety aspects of the proposed Project has been identified under this section.

The Environmental Law No: 2872 published in the Official Gazette No. 18132 dated 11.08.1983 and later revised in the Official Gazette No. 28661 and dated 29.05.2013 (Law No. 6486) constitutes the basic legal framework of the environmental legislation in Türkiye and is largely in line with the EU Directive on EIA.

This law is supported by numerous regulations. Article 10 of Environmental Law forms the main framework of the Environmental Impact Assessment (EIA Regulation) published in the Official Gazette No. 31907 dated 29.07.2022. As per the EIA Regulation, the projects that are listed in its Annex-I are subject to a full EIA process and those projects have to receive an “EIA Positive” certificate to proceed with investments. The projects that are listed in Annex-II of the Regulation are subject to a shorter process where the project proponents are required to submit a Project Information File (PIF) to the MoEUCC. MoEUCC gives its “EIA is Necessary” or “EIA is not necessary” decision regarding the project.

Unless the decision that “EIA is Positive” or “EIA is not Required” is made in accordance with the EIA Regulation for the project’s activities, incentive, approval, permit, building license and use permit for such projects cannot be granted, and no investment can be started or tendered for the project. However, this does not preclude applying for the processing of such incentives, approvals, permits, and licenses. As part of the European Union membership process, Türkiye has carried out a variety of organizational and legislative reforms. With these reforms, environmental legislation and environmental protection instruments have been harmonized with international standards. The activities and liabilities to be carried out within the scope of the Project must adhere to the provisions of the relevant Turkish legislation.

According to the provisions of the Environmental Impact Assessment (EIA) Regulation published in the Official Gazette dated 29 July 2022, No. 31907, preliminary assessments indicate that the Subproject may fall outside the scope of the Regulation. However, an official "out-of-scope" application for the project has not yet been submitted, and there is currently no decision letter issued by the competent authorities.

In addition to Environmental Law No: 2872, several associated laws are complementary regarding the protection and sustainability of the environment as well as the protection of health and safety rights of people. Those laws which would be applicable to the proposed Project are listed below:

- Environmental Law No. 2872 (OG No:18132, dated 11.08.1983)
- Expropriation Law No. 2942 (OG No:18215, dated 08.11.1983)
- Forestry Law No. 6831 (OG No:9402, dated 08.09.1956)
- National Parks Law No. 2873 (OG No:18132, dated 11.08.1983)
- Conservation of Cultural and Natural Assets Law No. 2863 (OG No:18113, dated 23.07.1983, and revised through the amendment issued on 27.07.2004)
- Highways Traffic Law No. 2918 (OG No:18195, dated 13.10.1983)
- Soil Conservation and Land Use Law No. 5403 (OG No:25880, dated 19.07.2005)
- Terrestrial Hunting Law No. 4915 (OG No:25165, dated 11.07.2003)
- Animal Protection Law No. 5199 (OG No:25509, dated 01.07.2004)
- Labor Law No. 4857 (OG No:25134, dated 10.06.2003)
- Occupational Health and Safety Law No. 6331 (OG No:28339, dated 30.06.2012)
- Social Insurance and General Health Insurance Law (OG No:26200 dated: 16.06.2006)

The regulations developed under the Environmental Law aim to specify and identify the procedures and principles of the management of environmental aspects. Under the relevant laws, several regulations or communiques are summarized in Table 32:

Table 32 Regulations and/or Communiques regarding Environmental, Social, Labor, Health and Safety Aspects

Regulations / Communiques	OG Number	OG Date	Relevance/Implication for the Project
Environmental Permit and Licenses			
Regulation on Environmental Impact Assessment	31907	29.07.2022	Scoping the Project and evaluating impacts during pre-construction, construction, and operation phases of the project.
Regulation on Environmental Permits and Licensing	29115	10.09.2014	Determination of required environmental permits and licenses at all phases of the Project.
Regulation on Environmental Auditing	27061	21.11.2008	Environmental audits performed by either Project Owner or governmental authorities during construction and operation stages.
Regulation on the Implementation of the Law Concerning Private Security Services	25606	07.10.2004	During the construction phase for camp site security (in case of any) and during the operation phase for safety purposes for reservoirs (in case of any planning).
Air Quality Control and Greenhouse Gas (GHG) Emissions			
Air Quality Assessment and Management Regulation	26898	06.06.2008	Emissions during operation stage.
Industrial Air Pollution Control Regulation	27277	03.07.2009	During the construction phase, dust emissions.
Regulation on the Control of Odor Causing Emissions	28712	19.07.2013	Possible odorous emissions generated during operation stage.
Exhaust Gas Emission Control Regulation	30004	11.03.2017	Operation of Project vehicles, machinery, and equipment at all phases of the Project.
Regulation on the Control of Air Pollution from Heating	25699	13.01.2005	Heating of the operational buildings during operation phase.
Biodiversity Conservation and Protection of Nature			
Regulation on the Protection of Wetlands	25818	17.05.2005	Measures to be taken for wetland protection near to the Project area during the planning phase of the Project.
Law on Natural Parks	18132	11.08.1983	Measures to be taken for natural parks protection near to the Project area during the planning phase of the Project.
Regulation on Protection of Wildlife and Wildlife Development Area	259637	08.11.2004	Measures to be taken for wildlife protection near to the Project area during the planning phase of the Project.

Regulations / Communiques	OG Number	OG Date	Relevance/Implication for the Project
Regulation on Biological Agents	28678	15.06.2013	The regulation governs the management of occupational health risks from exposure to biological agents (pathogens, bacteria, viruses) present in raw wastewater. It is essential for protecting worker health during the operation and maintenance phases.
Chemicals and Other Dangerous Substances			
Regulation on Classification, Labelling, and Package of the Materials and Mixtures	28848	11.12.2013	Taking measures for chemicals and mixtures to be used during construction and operation phases.
Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals	30105	23.06.2017	Determination of chemicals to be used during the operation phase.
Regulation on Persistent Organic Pollutants	30595	14.11.2018	Determination of chemicals to be used during the operation phase.
Regulation on the Control of Polychlorinated Biphenyls (PCBs) and Polychlorinated Terphenyls (PCTs)	26739	27.12.2007	Usage of transformers, capacitors, electrical equipment including voltage regulators, switches, oil used in motors, old electrical devices or appliances containing PCB capacitors, fluorescent light ballasts during the operational phase.
Noise			
Environmental Noise Control Regulation	32029	30.11.2022	Determination of noise emissions and measures to be taken at construction and operation phases.
Regulation on the Environmental Noise Emissions Caused by Equipment Used Outdoors	26392	30.12.2006	Regulating the noise levels caused by noise sources within the Project site at the construction and operation phases.
Regulation on the Protection of Employees from Risks About Noise	28721	28.07.2013	Minimum requirements to protect workers from the health and safety risks that may arise from exposure to noise, especially hearing-related risks during the construction phase.
Soil and Land Use			
Regulation on the Control of Soil Pollution and Lands	27605	08.06.2010	Determination of risks of soil contamination at construction and operation phases.

Regulations / Communiques	OG Number	OG Date	Relevance/Implication for the Project
Contaminated by Point Sources			
Regulation on Control of Excavated Soil, Construction and Demolition Wastes	25406	18.03.2004	Management of excavated soil and construction and demolition wastes at the source.
Regulation on Protection, Use, and Planning of Agricultural Lands	30265	09.12.2017	Management of change in the land use during the planning phase of the Project.
Waste			
Regulation on Waste Management	29314	02.04.2015	Management of waste from generation to disposal without harming the environment and human health during construction and operation phases.
Zero Waste Regulation	30829	12.07.2019	General principles regarding the establishment, development, monitoring, financing, recording and certification of the zero waste management system in line with sustainable development goals during construction and operation phases.
Regulation on Packaging Waste Control	30283	27.12.2017	Preventing the formation of packaging waste, reducing the amount of unavoidable packaging waste to be disposed of using reuse, recycling and recovery methods in construction and operation phases.
Regulation on Waste Oil Management	30985	21.12.2019	Waste oils included in the definition of waste oil and the management, recovery, disposal of these wastes, precautions to be taken and notifications to be made
Regulation on Medical Waste Control	29959	25.01.2017	Collection of medical waste in the places where it is produced, temporary storage, transportation to the medical waste processing facilities and disposal
Regulation on Control of Waste Electrical and Electronic Equipment	28300	22.05.2012	Management of electrical and electronic equipment wastes during construction and operation phases.
Regulation on Control of Waste Batteries and Accumulators	25569	31.08.2004	Establishment of a collection system and management for the

Regulations / Communiques	OG Number	OG Date	Relevance/Implication for the Project
			recovery or final disposal of waste batteries and accumulators.
Regulation on Control of End-of-life Tires	26357	25.11.2006	Establishing a collection and management system for ensuring the necessary regulations and standards in the management of end-of-life tires during the construction and operation phases.
Water and Wastewater			
Regulation on Management of Surface Water Quality	28483	30.11.2012	Regulating discharge of treated effluent and monitoring of water quality at receiving body during operation phase.
Regulation on the Monitoring of Surface Waters and Groundwater	28910	11.02.2014	Monitoring of water quality at receiving body during operation phase.
Regulation on Water Pollution Control	25687	31.12.2004	Discharge of treated effluent during operation phase of the Project.
Regulation on the Protection of Ground Waters against Pollution and Deterioration	28257	07.04.2012	Protection of groundwater sources against pollution during construction and operation phases.
Regulation on the Control of Pollution Caused by Hazardous Substances in and around Water Environment	26005	26.11.2005	Management of hazardous substances during construction and operation phases.
Regulation on Water Intended for Human Consumption	25730	17.02.2005	Management of drinking water supplied during construction and operation stages.
Regulation on Quality and Treatment of Potable Water to be Supplied	30823	06.07.2019	Determination and monitoring of quality of water to be supplied during the operation phase.
Regulation on Wastewater Collection and Remote Systems	29940	06.01.2017	Procedures and principles regarding the planning, design and project design, construction and operation of wastewater collection and removal systems.
Regulation on Control of Water Loss in Water Supply and Distribution Systems	28994	08.05.2014	Procedures and principles regarding the duties and responsibilities of water administration for reducing water losses in water supply, storage, transmission, distribution and consumption.

Regulations / Communiques	OG Number	OG Date	Relevance/Implication for the Project
Regulation on the Procedures and Principles to Be Followed in the Determination of Wastewater Infrastructure and Domestic Solid Waste Disposal Plant	27742	27.10.2010	Establishment, maintenance, repair, operation, closure and monitoring of wastewater infrastructure facilities, determination of full cost-based tariffs that can cover all services, adjustment and implementation of wastewater infrastructure management by metropolitan municipalities and municipalities
Structural Safety			
Regulation on Structures to be Built in Natural Disaster Areas	26582	14.07.2007	Management of construction works within the scope of the Project.
Regulation on Building Constructions in Earthquake Zones	26454	06.03.2007	Management of construction works within the scope of the Project.
Regulation on Building Earthquake of Turkiye	30364	18.03.2018	Measures to be taken for the design and construction works under the impact of earthquakes and the evaluation of the performance of existing buildings under the impact of earthquakes.
Regulation on the Protection of Buildings from Fire	26735	19.12.2007	Measures to be taken for fire protection during construction and operation phases.
Traffic			
Regulation on the Road Transportation of Hazardous Goods	28801	24.10.2013	Hazardous goods to be transported during construction and operation phase.
Regulation on Highway Traffic	23053	18.07.1997	Regulating speed limits of vehicles and machinery used during construction and operation phases.
Regulation on Traffic Signs	18789	19.06.1985	Regulating the traffic signs to be used during the construction and operation phases

Regulations / Communiques	OG Number	OG Date	Relevance/Implication for the Project
Health and Safety and Labor			
Regulation on Emergency Situations in Workplaces	28681	18.06.2013	Preparation of emergency plans, prevention, protection, evacuation, firefighting, first aid and similar studies in workplaces.
Regulation on duties and responsibilities of OHS Specialists	28512	29.12.2012	Defines roles and responsibilities of OHS specialists
Regulation on duties and responsibilities of Occupational Physicians and other medical personnel	28713	20.07.2013	Defines roles and responsibilities of Occupational physicians and the medial personnel
Regulation on Health and Safety at Construction Works	28786	05.10.2013	Measures to be taken during construction phase.
Regulation on Health and Safety Conditions Regarding Use of Work Equipment	28628	25.04.2013	Measures to be taken during construction phase related to use of equipment.
Regulation on Health and Safety Precautions Regarding Working with Chemicals	28733	12.08.2013	Measures to be taken during construction and operation phase related to use of chemicals.
Regulation on Protection of Employees from the Hazards of Explosive Environments	28633	30.04.2013	It regulates the procedures and principles regarding the precautions to be taken in order to protect the employees from the dangers of explosive atmospheres that may occur in the workplaces in terms of health and safety.
Regulation on Health and Safety Regarding Temporary and Time-Limited Works	28744	23.08.2013	Protection of employees with a temporary or fixed-term employment contract at the same level as other employees in the workplace in terms of health and safety.
Regulation on Health and Safety Signs	28762	11.09.2013	Measures to be taken during construction and operation phases.
Regulation on Management of Dust	289812	05.11.2013	Measures to be taken to combat dust in terms of occupational health and safety to prevent the risks that may arise from dust in the workplaces and to ensure that the workers are protected from the effects of dust.

Regulations / Communiques	OG Number	OG Date	Relevance/Implication for the Project
Law on Occupational Health and Safety (6331)	28339	20.06.2012	Health and safety measures to be taken during construction and operation stages.
Regulation on Personal Protective Equipment	30761	01.05.2019	Measures to be taken during construction and operation phases to ensure the health and safety of employees.
Regulation on Protection of Workers from Risks Created by Noise	28721	28.07.2013	Measures to be taken during construction and operation phases to ensure the health and safety of employees.
Regulation on Risk Assessment for Occupational Health and Safety	28512	29.12.2012	Determination of occupational health and safety risks occurring during construction and operation phases.
Regulation on Sub-contractors	27010	27.09.2008	Management of contactors/sub-contractors during construction and operation phases.
Regulation on Use of Personal Protective Equipment in Workplaces	28695	02.07.2013	Measures to be taken during construction and operation phases to ensure the health and safety of employees.
Regulation on Vocational Training of the Employees Working in Dangerous and Highly Dangerous Workplaces	28706	13.07.2013	Measures to be taken during construction and operation phases to ensure the health and safety of employees.
Regulation on the Procedures and Principles of Employee Health and Safety Training	28648	15.05.2013	Measures to be taken during construction and operation phases to ensure the health and safety of employees.
Regulation on High Current Electrical Facilities	24246	30.11.2000	Covers measures regarding the safe installation, construction, operation and maintenance of high current electrical facilities.
Regulation on Manual Handling	28717	24.07.2013	Defines the safe procedures for safe handling of goods and equipment using manual manpower.
Regulation on Health and Safety at Construction Works	28786	05.10.2013	Specifies requirements for high-risk activities, critically including work in confined spaces. WWTPs have numerous confined spaces (wells, tanks, pipelines) with lethal atmospheric hazards (H_2S, CH_4, O_2 deficiency). This regulation mandates safe entry

Regulations / Communiques	OG Number	OG Date	Relevance/Implication for the Project
			procedures, including gas measurement, permit-to-work systems, and rescue plans.
Cultural Heritage			
Law on Protection of Cultural and Natural Assets	18113	23.07.1983	During chance finds at the construction phase, determination of measures to be taken.
Regulation on Researches, Drillings and Excavations in relation to the Cultural and Natural Assets	18485	10.08.1984	Defining the procedures and obligations concerning the cultural and natural assets found out during construction.

International Standards and World Bank Environmental and Social Standards:

GFC is subject to İLBANK ESMS. Thus, WB's environmental and social assessment procedures and Turkish legislation, and key gaps and ways to close these gaps are presented in the ESMS. Under the ESMS, the processes of WB ESS and Turkish EIA Regulation are separately discussed in terms of screening, environmental assessment, public consultation, scoping, review of environmental and social impact assessment, disclosure, monitoring and inspection. The Turkish EIA procedures are, with some exceptions, in line with the WB's ESSs. The primary exceptions are in project categorization, scope of environmental and social assessment, and public consultation. In cases where the Turkish legislation differ from the ESSs, the more stringent one will be applied to the project implementation.

Gaps between WB ESSs and Turkish Environmental and Social Legislation, and actions taken in this ESMP (having Moderate E&S risks) to fill those gaps are summarized in the Table 33 below:

Table 33 Key Gaps Between WB ESSs And Turkish E&S Legislation

WB Environmental and Social Standards (ESS)	Gaps	Actions taken to fill gaps
ESS1: Assessment and Management of Environmental and Social Risks and Impacts	The social impact assessment is not fully integrated into the Turkish EIA, resulting in a lack of assessment of the project that triggered the social impacts, including impacts on the disadvantaged or vulnerable and impacts on gender-related issues,	With this ESMP prepared for the Project, the social impacts as well as the environmental impacts of the Project were evaluated and the gap was filled. Depending on the level of risks/impacts to be identified on a case-by-case basis, sub-management plans (e.g. OHS management, Traffic Management, etc.) is addressed to be developed as part of the ESMP.

WB Environmental and Social Standards (ESS)	Gaps	Actions taken to fill gaps
ESS2: Labor and Working Conditions	In general, Turkish national laws and regulations regarding labor and working conditions meet the requirements of ESS2. The worker grievance mechanism is a key gap between national legislative requirement and ESS2. According to the Turkish national labor and working conditions legislation, there are no specific requirements regarding the grievance mechanism allowing workers to lodge their grievances with the employer.	A SEP has been prepared under the project and the grievance mechanism is defined in this plan. In accordance with the prepared SEP, the channels through which stakeholders can submit their grievances are explained.
ESS3: Resource Efficiency and Pollution Prevention and Management	Most of the relevant national legislation regarding laws and regulations is in line with EU directives. There is not a big gap between ESS3 and legal requirements. The absence of GHG forecasts for the configuration and operation phases is defined as the main gap.	In cases where the Turkish requirements differ from the levels and measures presented in the WB EHSGs, the more stringent one will be applied in the project specifications.
ESS4: Community Health and Safety	In general, there is no gap in terms of policy level. On the other hand, project-level management of certain risks such as labor influx, sexual exploitation, abuse and sexual harassment are key gaps of ESS4.	In this ESMP prepared for the Project, labor influx, sexual exploitation, abuse and sexual harassment issues were determined as an impact and mitigation measures and monitoring methods were included in these impacts.
ESS5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Turkish legislation on land acquisition mainly corresponds to the requirements stipulated by ESS5.	As there will be no expropriation within the scope of the Project, ESS5 will not be triggered.
ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	There is no gap in terms of policy level. On the other hand, in some cases, level of the considerations of not legally protected sensitive ecological areas such as Key Biodiversity Areas in local EIA Process are not sustain the requirements stipulated by ESS6. Furthermore, management and monitoring of potential impacts, mitigation measures and residual impacts are not detailed in general.	Assessments were conducted in compliance to ESS6. The management, mitigation measures and monitoring of potential impacts on sensitive ecological areas are detailed within the ESMP.
ESS10: Stakeholder	Effective and transparent stakeholder engagement is a key gap for the ESS 10 requirement. In this context, a Stakeholder Engagement Plan is required	Within the scope of the Project, a Stakeholder

WB Environmental and Social Standards (ESS)	Gaps	Actions taken to fill gaps
Engagement and Information Disclosure	to identify the different stakeholders (project affected parties and other interested parties, including the disadvantaged or vulnerable). Stakeholder engagement should be an ongoing process.	Engagement Plan have been prepared, which includes the subjects of stakeholder engagement activities and grievance mechanism. Vulnerable/disadvantaged groups and individuals have been identified in the SEP prepared under the project and disclosure and stakeholder engagement activities on the channels through which these groups and individuals can submit their grievances have been included.

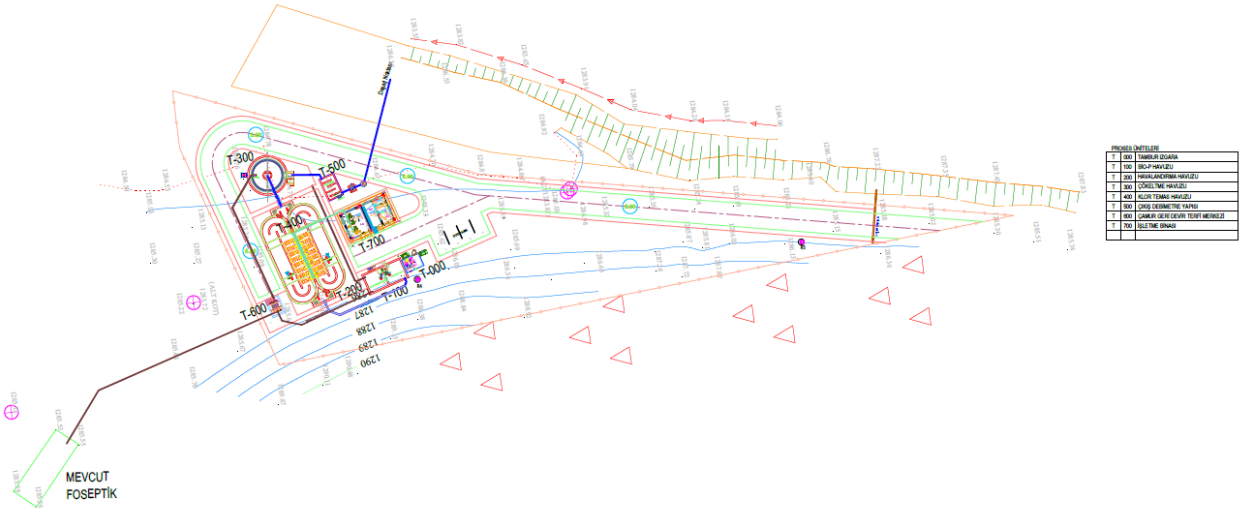
International Agreements and Conventions:

The international agreements, and conventions, that Türkiye ratified, are provided as in below:

- Paris Agreement (2021),
- UN Framework Convention on Climate Change (UNFCCC) (2004),
- Rio Declaration on Environment and Development and Statement on Forest Principles (1992),
- Convention on Biological Diversity (Rio Convention) (1992),
- Paris Convention on the Protection of the World Cultural and Natural Heritage (1975),
- Barcelona Convention on the Protection of the Mediterranean Sea Against Pollution (1976),
- The Convention for the Protection of Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) (1981),
- Bern Convention on Protection of Europe's Wildlife and Living Environment (1982),
- Vienna Convention for the Protection of the Ozone Layer (1988),
- Montreal Protocol on Substances Depleting the Ozone Layer (1990),
- Convention on Wetlands of International Importance, Especially as Waterfowl Habitat (1994),
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (1996),
- UN Convention to Combat Desertification (1998),
- United Nations Europe Economic Commission Convention on Transboundary Effects of Industrial Accidents (2000),
- Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus Convention) (2001),
- Stockholm Convention on Persistent Organic Pollutant (2010),
- Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention) (1972),
- Mediterranean Sea Protocol Concerning Specially Protected Areas and Biodiversity (1988), including related protocols,
- International Labor Organization (ILO) Convention on Forced Labor (1930),
- ILO Convention on Freedom of Association and Protection of the Right to Organize (1948),
- ILO Convention on Right to Organize and Collective Bargaining (1949),
- ILO Convention on Equal Remuneration (1951),
- ILO Convention on Abolition of Forced Labor (1957),
- ILO Convention on Discrimination (Employment and Occupation) (1958),
- ILO Convention on Worst Forms of Child Labor (1999).

The Project will comply with both national legislation and international standards. In case those differ, the most stringent requirement will be met. Moreover, the up-to-date legislation will be followed.

Annex L – General Layout Plan of Karaali WWTP



Annex M Minutes of Stakeholder Consultation Meeting

S

KARAALI WASTEWATER TREATMENT PLANT CONSTRUCTION PROJECT

MINUTES of STAKEHOLDER CONSULTATION MEETING

Revision : Rev00

Submission : April 2026

This document has been prepared by POSEİDON by Environmental Social Consultancy Engineering Trade Ltd. Company.

Table of Contents

1. STAKEHOLDER CONSULTATION MEETING

The Karaali Wastewater Treatment Plant Construction Project, to be implemented by Konya Water and Sewerage Administration (KOSKİ), will be financed by the World Bank (WB) under the Green and Future Cities Project (GFC) through İller Bankası A.Ş. (İLBANK), acting as the Financial Intermediary (FI). The Project contributes to Türkiye's climate commitments, including its net zero emission target for 2053 and the objectives set under the Paris Agreement, by supporting climate-resilient and sustainable urban infrastructure investments.

The Environmental and Social Management Plan (ESMP) and Stakeholder Engagement Plan (SEP) have been prepared by POSEİDON Environmental Social Consultancy Trade Ltd. Co. (POSEİDON) in accordance with İLBANK's Environmental and Social Management System (ESMS), the World Bank Environmental and Social Framework (ESF), including applicable Environmental and Social Standards (ESSs), World Bank Group (WBG) General and sector-specific Environment, Health and Safety (EHS) Guidelines, and the applicable national legislation in Türkiye. İLBANK's ESMS, effective as of 24 December 2023, ensures the systematic identification, assessment, management, monitoring, and reporting of environmental and social risks and impacts throughout the Project lifecycle.

Within the scope of İLBANK's ESMS and the World Bank ESF, the Project has been classified as Moderate Risk, considering its type, scale, location, and potential environmental and social impacts. Accordingly, a site-specific ESMP has been developed to define mitigation measures, monitoring requirements, and institutional responsibilities for all phases of the Project, including pre-construction, land preparation, construction, and operation.

The Project is located in Konya Province, Beyşehir District, Karaali Neighborhood (Block 257, Parcel No. 1), and aims to improve wastewater management through advanced biological treatment processes. The implementation of the Project is expected to generate significant positive environmental and social impacts. In particular, it will contribute to the protection of Lake Beyşehir by improving water quality, reducing eutrophication risks, safeguarding biodiversity, and supporting the sustainable management of water resources. These outcomes will enhance ecosystem resilience while also contributing to the protection of groundwater resources.

In addition to these studies, stakeholder engagement activities have been carried out in line with the SEP prepared for the Project. Stakeholder consultations were conducted in a structured manner to ensure effective participation of affected communities and relevant institutions. Prior to consultation meetings, information disclosure activities were undertaken, including direct communication with neighborhood mukhtars and distribution of informational materials to inform stakeholders about the Project and engagement process.

During the stakeholder engagement process, participants were informed about the scope and objectives of the Project, the planned treatment processes, and the potential environmental and social impacts along with the proposed mitigation measures. Key issues raised by stakeholders included concerns related to wastewater management practices, potential odor and hygiene impacts, access arrangements, and expectations regarding improved environmental conditions.

Project representatives emphasized that the Project is designed in line with national legislation and international standards, including the World Bank ESF, to minimize both temporary and long-term impacts. It was also highlighted that environmental and social risks are being systematically assessed and managed through the ESMP.

Furthermore, a Project-specific grievance mechanism has been established to enable stakeholders to submit complaints, feedback, and suggestions throughout the Project lifecycle. Stakeholders can access this mechanism through multiple channels, including telephone, email, and written applications. All grievances will be recorded, assessed, and addressed in a timely and transparent manner in line with international good practice.

This document reflects the outcomes of the stakeholder engagement process, including the issues raised by stakeholders and the responses provided by Project representatives, and forms an integral part of the Project's environmental and social management framework.

The SCM was conducted by Ali Can Can (Sociologist) and Ceyda Terzi (Environmental Engineer) from POSEİDON. During the presentation, general information about the subproject was provided along with detailed explanations on the ESMP and SEP. In addition, the environmental and social risks associated with the Project, proposed mitigation measures, and the grievance mechanism were presented.

1.1. Question & Answer Session

In this section, the opinions, requests, and questions raised by participants during the Stakeholder Consultation Meeting, along with the responses provided, are presented below.

Question 1:

Karaali Acting Mukhtar (M.G.):

When will the subproject be implemented?

Answer 1:

KOSKİ Branch Manager (M.C.):

The procurement processes are being carried out under international financing, and the preparation of tender documents is currently ongoing. According to the planned schedule, it is aimed to initiate the tender process in August, complete it by the end of the year, and finalize the implementation within approximately one year thereafter.

Question 2:

Participant (E.A.):

Is it possible that the subproject may negatively affect fish?

Answer 2:

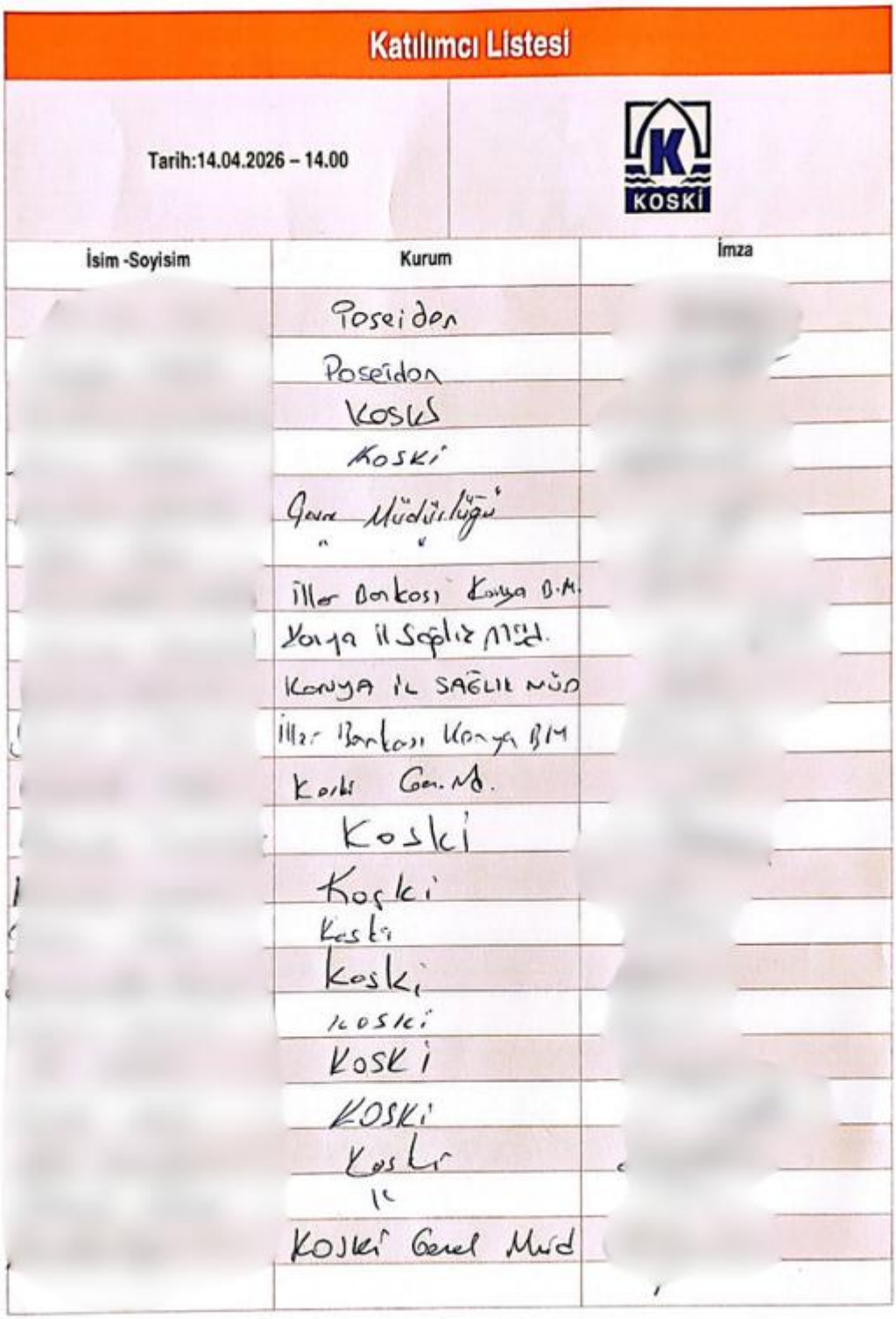
KOSKİ Branch Manager (M.C.):

Currently, there is no wastewater treatment plant in place. Following the implementation of the Project, wastewater will be treated prior to discharge. Therefore, no negative impact is expected; on the contrary, positive impacts are anticipated.

Information Note

A total of 24 participants attended the SCM. Among the participants, 3 were female. In addition, a total of 3 participants attended from Karaali Neighborhood, including one acting mukhtar representative.

2. Participants List



Katılımcı Listesi

Tarih:14.04.2026 – 14.00

KOSKİ

İsim -Soyisim	Kurum	İmza
	Poseidon	
	Poseidon	
	Koski	
	Koski	
	Genel Müdürlüğü	
	İller Bankası Konya B.M.	
	Konya İl Sağlık Müd.	
	Konya İL SAĞLIK MÜD	
	İller Bankası Konya BM	
	Koski Gen. Md.	
	Koski	
	Koski	
	Koski	
	Koski	
	Koski	
	KOSKİ	
	Koski	
	İL	
	Koski Genel Mud	

Katılımcı Listesi

Tarih:14.04.2026 – 14.00

KOSKİ

İsim -Soyisim	Kurum	İmza
	Karaali Mah.	
	Karaali Mah.	
	Karaali Mah.	

3. Stakeholder Consultation Meeting (SCM) Announcements: Screenshots of Documents Published on the Official KOSKİ Website, Local and National Newspaper Announcements, and Informational Brochures Distributed During the Meeting

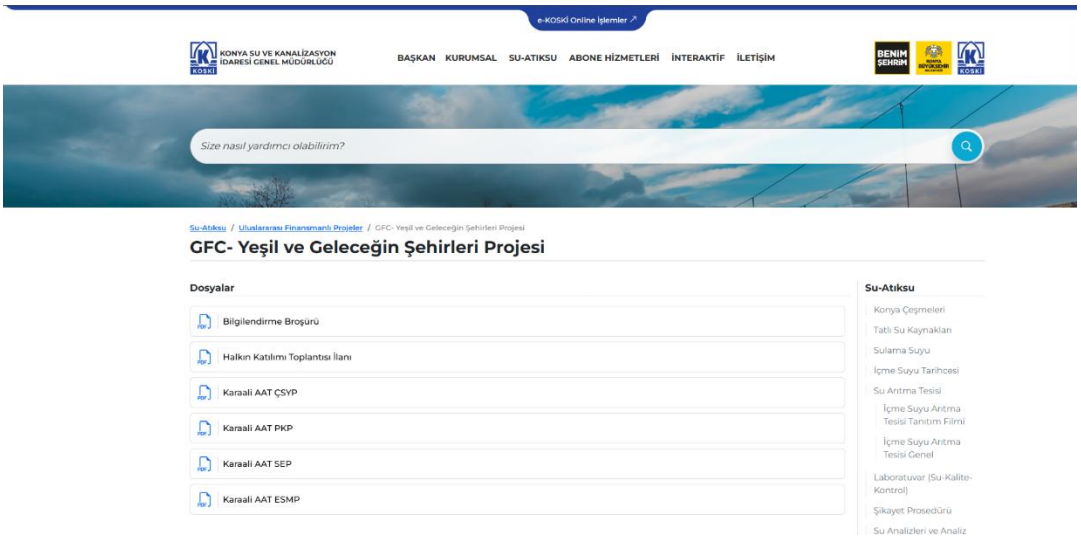


Figure 2 Screenshot of the Document Published on the Official KOSKİ Website – I

Website Link: https://www.koski.gov.tr/sayfa/gfc-yesil-ve-gelecegin-sehirleri-projesi

Announcement of Local and National Newspapers:

National Newspaper

GÜNDEM — MİLLİ GAZETE — 4 NİSAN 2026 CUMARTESİ — TASARIM: HALİL ESER — 03

JASAT EKİPLERİNCE AYDINLATILDI

Jandarma Suç Araştırma Timi (JASAT) ekipleri, Antalya'nın Korkuteli ilçesinde 2011 yılında işlenen Havva Yıldırım cinayetini aydınlattı. Güncel DNA incelemeleriyle kimliği belirlenen şüpheli S.K, düzenlenen operasyonla yakalanarak tutuklandı.

EDİNİLEN bilgiye göre, Antalya İl Jandarma Komutanlığı Asayiş Şube Müdürlüğü JASAT ve Korkuteli İlçe Jandarma Komutanlığı ekipleri, 11 Eylül 2011'de Ulucak Mahallesi'nde elleri ve ağzı bağlı şekilde boğularak öldürüldüğü belirlenen Havva Yıldırım dosyasında, maktulde bulunan ve şüpheliye ait olduğu değerlendirilen DNA örneklerini güncel teknolojiyle tekrar incelemeye aldı. Bu kapsamda, 9 şüpheliden alınan DNA örnekleri ile maktulden alınan örnekler karşılaştırıldı. Yapılan laboratuvar incelemeleri sonucunda, şüpheli S.K'den alınan biyolojik örneklerin Havva Yıldırım'dan alınan dokuyla tam uyum sağladığı tespit edildi. JASAT ekiplerinin çalışmaları sonucunda katil zanlısı S.K, 30 Mart'ta düzenlenen operasyonla yakalandı. Adli makamlara sevk edilen S.K, tutuklanarak cezaevine gönderildi. AA

AFRİKA'DAN GELEN ÇÖL TOZU SONUCU,

ALANYA'DA GÖKYÜZÜ TURUNCUYA DÖNDÜ!

ANTALYA'NIN Alanya ilçesinde gökyüzü Afrika'dan gelen çöl tozu nedeniyle turuncuya büründü. Güneyden esen kuvvetli rüzgâr Afrika'dan gelen çöl tozunu beraberinde taşıdı. Alanya ilçe merkezi ve mahallelerde çöl tozu nedeniyle gökyüzü turuncu renge kaplandı. Dün sabah saatlerinde ilçe genelinde etkili olan toz taşınımı, gece saatlerinde görülen yağış ve fırtınayla birleşerek çamur yağışına dönüştü. Park halindeki araçlar, balkonlar ve açık alanlardaki yüzeylerin camurla kaplandığı görüldü. AA

GERİ DÖNÜŞÜM TESİSİ GÖRÜNÜMLÜ FABRİKADA

Kaçak sigara üretmişler!

ADANA'DA geri dönüşüm tesisi görünümlü fabrikada kaçak sigara üreten 15 şüpheliden 2'si tutuklandı. Operasyonda kaçak 24 milyon 707 bin 500 makaron ve 3 ton tütün ele geçirildi. İl Emniyet Müdürlüğü Kaçakçılık ve Organize Suçlarla Mücadele (KOM) Şube Müdürlüğü ekipleri, merkez Seyhan ilçesi Yenidam Mahallesi'nde geri dönüşüm tesisi görünümlü bir fabrikada kaçak sigara üretildiğini belirledi. Ekipler, operasyon düzenledikleri fabrikada kaçak 20 milyon 707 bini tütün doldurulmuş, 24 milyon 707 bin 500 makaron (filtresiz sigara kâğıdı), 3 ton tütün ve 150 rulo sigara kâğıdı ele geçirdi. Fabrikadaki 2 sigara üretim makinesi ile kompresör ve forklifte de el konuldu. Ekipler, kaçak sigara üretimiyle ilgili 15 şüpheliyi gözaltına aldı. Öte yandan, şüphelilerin, fabrikada birden fazla İran ve Hint uyruklu kişileri de işçi olarak çalıştırdıkları öğrenildi. Emniyetteki işlemlerin ardından adliyeye sevk edilen zanlılardan 2'si çıkarıldıkları hâkimlikçe tutuklandı, diğerleri yurt dışına çıkış yasağı ve konutu terk etmeme şeklindeki adli kontrol şartıyla salıverildi. AA

MİNİBÜSTE UYUŞTURUCU, SÜRÜCÜYE TUTUKLAMA!

ADANA'DA 8 kilo 250 gram sentetik uyuşturucu ele geçirilen minibüsün sürücüsü tutuklandı. İl Emniyet Müdürlüğü Narkotik Suçlarla Mücadele Şubesi ekipleri, uyuşturucu bulunduğu belirlenen bir minibüsü takibe alarak merkez Seyhan ilçesinde durdurdu. Narkotik dedektör köpeğinin tepki verdiği araçta yapılan incelemede, bir posette 8 kilo 250 gram sentetik uyuşturucu, bir miktar kokain ve 90 uyuşturucu etkili hap bulundu. Bunun üzerine sürücü M.Ç. (26) gözaltına alındı. Emniyetteki işlemlerin ardından adliyeye sevk edilen zanlı, çıkarıldığı hâkimlikçe tutuklandı. Bu arada, araçta narkotik dedektör köpeğiyle arama yapılması ve uyuşturucunun bulunması polis kamerasınca kaydedildi. AA

KENDİLERİNİ POLİS VE SAVCI OLARAK TANITIP

DOLANDIRICILIK YAPAN 3 ZANLI TUTUKLANDI

TUNCELİ'DE kendilerini polis ve savcı olarak tanıtarak bir kişiyi 2 milyon lira dolandıran 3 şüpheli tutuklandı. Valilikten yapılan açıklamaya göre, İl Jandarma Komutanlığı ekipleri, kendilerini polis ve savcı olarak tanıtıp, adının terör soruşturmasına karıştığını söyleyerek kentte yaşayan bir kişiyi dolandıran şüphelilere yönelik çalışma yaptı. Ekipler, bu kapsamda Mardin, Bursa ve Mersin'de belirledikleri adreslere düzenledikleri eş zamanlı operasyonda 3 şüpheliyi gözaltına aldı, dijital materyallere el koydu. Tuncelİ'ye getirilen şüpheliler, jandarmadaki işlemlerinin ardından sevk edildikleri adliyede çıkarıldıkları hâkimlikçe tutuklandı. Zanlıların mağdurdan aldıkları paraları önce kendi hesaplarına aktardıkları, sonra farklı hesaplara ve kripto para piyasasına yönlendirdikleri, muteakiben nakit çekim yaparak altın ve buna benzer kıymetli metaller aldıkları tespit edildi. AA

ADIYAMAN'DA ZİNCİRLEME KAZADA 5 KİŞİ YARALANDI

ADIYAMAN'IN Besni ilçesinde 3 aracın karıştığı zincirleme trafik kazasında 5 kişi yaralandı. M.A.C. idaresindeki 16 BGK 103 plakalı minibüs, E.E. idaresindeki 45 HA 3030 plakalı minibüs ve A.T. idaresindeki 02 ACU 862 plakalı meyve yüklü tırla Adıyaman-Gölbaşı kara yolu Besni yol ayrımında çarpıştı. Kazada sürücüler ve araçlardaki 2 kişi yaralandı. Yaralılar ambulanslarla Besni Devlet Hastanesine kaldırıldı. Öte yandan, meyve yüklü tırın yola devrilmesi sonucu meyveler yola savruldu. AA

T.C. SUSURLUK BELEDİYE BAŞKANLIĞI İHALE İLANI

SATIŞ İHALESİ

1-İdarenin

a) Adresi	: Susurluk Belediye Başkanlığı BALIKESİR
b) Telefon ve faks numarası	: 0266 865 1910 – 0266 865 2906

2-İhale konusu işin

Sıra No	Mahalle / Mevkii	Kullanım Amacı	Ada	Parsel	Alan (m²)	Satış	Muhammen Bedel (TL)	Geçici teminat %3 (TL)	İhale Tarihi	İhale Saati
1	Kepekler Mahallesi	Arazi	0	46	83.300	Satış	42.000.000,00	1.500.000,00 TL	22.04.2026	11:00
2	Kepekler Mahallesi	Arazi	0	48	45.550	Satış	23.000.000,00	1.000.000,00 TL	22.04.2026	11:15

3-İhalenin

a) Yapılacağı yer	: Susurluk Belediyesi Encümen Salonu.
b) Usulü	: 2886 Sayılı Kanunun 35.(a) Md.(arttırma) Kapalı Teklif Usulü

4- İhaleye katılmak için istenen belgeler:
4.1. Gerçek kişiler için ikametgâh ilmühaberi,
4.2. Gerçek kişiler için Nüfus Cüzdan Sureti,
4.3. Belediyeden alınacak olan Taahhütname ve Yer Görme Belgesi,
4.4. Belediyeye borcu olmadığını gösterir belediyeden alınacak Borcu Yoktur Belgesi,
4.5. İhale dokümanı alındı makbuzu,
4.6. Geçici Teminat makbuzu,
4.7. Vekâleten katılıyorsa noter tasdikli vekâletname,
4.8. Ticaret ve Sanayi Odası veya Esnaf Sanatkarlar Odası siciline kayıtlı olduğunu gösterir belge,
4.8.1. Gerçek kişi olması halinde, ilgisine göre Ticaret ve Sanayi Odası veya Esnaf ve Sanatkarlar Siciline kayıtlı olduğunu gösterir ihalenin yapıldığı yıl içinde alınmış belge
4.8.2. Tüzel kişi olması halinde tüzel kişiliğinin idare merkezinin bulunduğu yer Mahkemesinden veya siciline kayıtlı bulunduğu Ticaret ve Sanayi Odasında veya benzeri makamda ihalenin yapıldığı yıl içinde alınmış tüzel kişiliğinin siciline kayıtlı olduğuna dair belge
4.9. İmza sirkülerinin verilmesi
4.9.1. Tüzel kişi olması halinde tüzel kişiliğin noter tastikli imza sirküleri
4.10. İsteklilerin ortak girişim olması halinde, ihale dosyası eklerindeki örneğine uygun olarak İş Ortaklığı Beyannamesi ile ortaklarca imzalanan ortaklık sözleşmesini vermesi (ihale üzerinde kaldığı takdirde noter tasdikli ortaklık sözleşmesini şahsen veya vekil tayin edecekleri kişiler vasıtasıyla imzalarlar.)
4.11. 667 Sayılı Kanun Hükmünde kararnamenin 8.maddesi hükmü kapsamında yer alan gerçek kişiler ihaleye katılamazlar.
5- İstekliler, şartnamede yazılı belgeleri eksiksiz vermek zorundadır. Belgeleri eksik olanlar ihaleye katılamazlar.
6- Satışı yapılacak taşınmazın ihale bedeli peşin olarak alınacaktır.
7- İhale dokümanı Susurluk Belediyesi Emlak ve İstimlak Müdürlüğü adresinde görülebilir ve 5.000,00.-TL (beşbintürk-Lirası) karşılığı idareden temin edilebilir. İhaleye teklif verecek olanların ihale dokümanını satın almaları zorunludur.
8- Teklifler, 20/04/2026 Salı günü saat 16:00'a kadar Susurluk Belediye Başkanlığı Emlak ve İstimlak Müdürlüğü adresine verilebileceği gibi, iadeli taahhütlü posta vasıtasıyla da gönderilebilir.
9- Belediye Encümeninin oluşturduğu İhale Komisyonu, 2886 sayılı Kanunun 29. maddesi gereğince ihaleyi yapıp yapmamakta serbesttir.

İlan Olunur.

Resmi ilanlar www.ilan.gov.tr'de. www.bik.gov.tr-Basın: 2439132

KONYA SU VE KANALİZASYON İDARESİ (KOSKİ) PAYDAŞ KATILIM PLANI HALKIN KATILIMI TOPLANTISI İLANI

"Yeşil ve Geleceğin Şehirleri Projesi - GFC" kapsamında Dünya Bankası tarafından finanse edilecek olan "Karaali Atıksu Arıtma Tesisi İnşaatı İşi" için Paydaş Katılım Planı toplantısı yapılması planlanmaktadır. Söz konusu alt proje için aşağıda belirtilen tarih ve saatte halkı bilgilendirmek, görüş ve önerilerini almak için "Halkın Katılımı Toplantısı" yapılacaktır.

Alt proje kapsamında çevresel ve sosyal etkiler oluşabileceğinden, bu etkilerin yönetimi amacıyla alt proje'ye özel Çevresel ve Sosyal Yönetim Planı (ÇSYP) ile Paydaş Katılım Planı (PKP) hazırlanmıştır. Söz konusu planlar, KOSKİ'nin internet sitesinde kamuoyunun [TB1]erişimine sunulmuştur

Halkımıza saygı ile duyurulur.

Toplantı Tarihi	: 14.04.2026- Salı Günü
Toplantı Saati	: 14.00
Toplantı Yeri	: Beyşehir İçme Suyu Arıtma Tesisi Eğitim Binası Toplantı Salonu
Adres	: Hacıakıf Mahallesi, 40368. Sokak, No:6 Beyşehir/KONYA
Proje İletişim Bilgileri:	
Adres	: KOSKİ Genel Müdürlüğü İhsaniye Mh. Kazım Karabekir Cd. No :56 42060 Selçuklu/Konya
Telefon	: 0 332 221 61 00/7251
Faks	: 0 332 235 46 34
İletişim	: https://www.koski.gov.tr/koski/iletisim
E mail	: ekoski@koski.gov.tr - bilgi@koski.gov.tr
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GAZETE KONYAM

4 NİSAN 2026

Mevsim geçişiyle hastalıklar artıyor

Çocuk Sağlığı ve Hastalıkları Uzmanı Uzm. Dr. Esra Kilim, mevsim geçişlerinde çocuklarda bağışıklık sisteminin daha hassas hale geldiğine dikkat çekerek aileleri uyardı. Uzm. Dr. Esra Kilim, bu dönemde çocuklarda en sık üst solunum yolu enfeksiyonları, grip, soğuk algınlığı ve alerjik rahatsızlıkların görüldüğünü belirterek, "Özellikle okul çağındaki çocukların kapalı ortamlarda daha fazla zaman geçirmesi, hastalıkların yayılımını arturabiliyor" dedi. Bağışıklık sisteminin güçlü tutulmasının önemine değinen Kilim, "Dengeli ve sağlıklı beslenme, yeterli uyku ve hijyen kurallarına dikkat edilmesi çocukları hastalıklardan korumada büyük rol oynar. Özellikle el hijyeni ihmal edilmemelidir" ifadelerini kullandı.

Mevsim geçişlerinde kıyafet seçiminin de önemli olduğuna dikkat çeken Kilim, sabah ve akşam saatlerindeki serinliğe karşı çocukların katmanlı giydirilmesi gerektiğini belirtti. Uzm. Dr. Esra Kilim, uzun süren ateş, öksürük, hırıltılık gibi belirtiler görüldüğünde vakit kaybetmeden bir sağlık kuruluşuna başvurulması gerektiğini vurgulayarak, erken müdahalenin hastalıkların daha kolay atlatılmasını sağladığını ifade etti. Medical Point Gaziantep Hastanesi Çocuk Sağlığı ve Hastalıkları Uzmanı Uzm. Dr. Esra Kilim, mevsim geçişlerinde alınacak basit önlemlerle çocukların sağlığının korunabileceğini belirterek, ailelerin bu dönemde daha dikkatli ve bilinçli hareket etmesi gerektiğini hatırlattı. •İHA

Akıllı radyoterapi hayat kurtaracak

Kanser tedavisinde gelişen teknolojiyle birlikte radyoterapi yöntemleri her geçen gün daha hassas ve etkili hale geliyor. Uzmanlar, akıllı radyoterapi sayesinde tümörün milimetrik hassasiyetle hedef alınabildiğini ve sağlıklı dokuların büyük ölçüde korunabildiğini belirtiyor. Radyasyon Onkolojisi Uzmanı Prof. Dr. Evrim Metcalfe ise "Gelişen teknolojiler sayesinde tedavi süreçleri daha konforlu geçebiliyor, yan etkiler ise önemli ölçüde azaltılabiliyor" dedi. Kanser tedavisinde teknolojik gelişmeler, radyoterapi uygulamalarında önemli bir dönüşümü beraberinde getirdi. Gelişmiş görüntüleme ve planlama sistemleri sayesinde radyoterapi tedavileri artık çok daha hassas ve hedefe yönelik uygulanabiliyor. Kanser tedavisinde her hastanın durumunun farklı olduğunu belirten Prof. Dr. Metcalfe, "Tedavi planları kişiye özel olarak oluşturuluyor. •İHA

Akciğer kanserinde ölüm oranı korkutuyor

Göğüs Hastalıkları Uzmanı Dr. Murat Kıyık, akciğer kanserine ilişkin açıklamalar yaptı. Hastalığın görülme sıklığı ve ölüm oranlarının ürkütücü boyutta olduğunu ifade eden Kıyık, dünya genelinde her yıl yaklaşık 2 buçuk milyon akciğer kanseri vakası görüldüğünü, bunların 1 milyon 800 bininin ölümle sonuçlandığını belirtti

Akciğer Sağlığı ve Yoğun Bakım Derneği (ASYOD) tarafından düzenlenen 11. Uluslararası Katılımlı Akciğer Sağlığı Kongresi kapsamında Antalya'da bulunan Göğüs Hastalıkları Uzmanı Dr. Murat Kıyık, akciğer kanserine ilişkin açıklamalar yaptı. Hastalığın görülme sıklığı ve ölüm oranlarının ürkütücü boyutta olduğunu ifade eden Kıyık, dünya genelinde her yıl yaklaşık 2 buçuk milyon akciğer kanseri vakası görüldüğünü, bunların 1 milyon 800 bininin ölümle sonuçlandığını belirtti. Türkiye'de ise yılda 50 bin yeni akciğer kanseri vakasının tespit edildiğini, bunların 35 bininin hayatını kaybettiğini kaydetti.

AKCİĞER KANSERİ ÖLÜM SIRASINDA BİRİNCİ SIRADA

Akciğer kanserinin tüm dünyada ve Türkiye'de kanserler arasında ölüm sırasında ilk sırada bulunduğunu dile getiren Kıyık, taramanın temel amacının hastalığı oluşmadan önlemek ve erken evrede yakalamak olduğunu söyledi. Kıyık, "Dünyada yılda iki buçuk milyon akciğer kanseri görülüyor ve maalesef bunların 1 milyon 800 bin kişisi hayatını kaybediyor. Türkiye'ye gelecek olursak yılda 50 bin yeni akciğer kanseri görülüyor ve bunların 35 binisi hayatını kaybediyor. Akciğer kanseri maalesef tüm dünyada ve Türkiye'de kanserler içerisinde ölüm sırasında birinci sırada yer alıyor" ifadelerini kullandı. Bir yanda koruyucu hekimliğin, diğer yanda tedavi edici hekimliğin bulunduğunu hatırlatan Kıyık, akciğer kanseri taramasının koruyucu hekimlik açısından önemli bir adım olduğuna dikkat çekti.

RİSK GRUBUNU ANLATTI

Tarama yapılacak grupların belirli kriterlere göre seçildiğini belirten Kıyık, "Biz hekimler akciğer kanserinde taramayı şu amaçla yapıyoruz. Bir koruyucu hekimlik var, bir de tedavi edici hekimlik var. Koruyucu önlemlerden bir tanesi de kişi akciğer kanseri olmasın diye akciğer kanseri taraması yapılmasıdır. Risk gruplarını önce belirliyoruz. Yaklaşık olarak 20 yıl günde bir paket sigara içmiş bir insan 50 ila 77 yaş arasındaysa, akciğer kanserinin en fazla görülme yaşları bu yaş grupları oluyor" dedi. Bu yaş grubunda yer alan ve uzun süre sigara kullanan kişilere düşük doz bilgisayarlı tomografi önerildiğini söyleyen Kıyık, bunun hem radyasyon maruziyetini azalttığını hem de kanser vakalarının başlangıç aşamasında tespit edilmesine imkan sağladığını kaydetti. Kıyık, "Bu yaş grubunda sigara içen insanlara düşük doz bilgisayarlı tomografi çektiriyoruz. Yani hem radyasyonundan korumuş oluyoruz hem de akciğer kanseri varsa bir başlangıç halinde yakalayıp onu bertaraf etmek istiyoruz. Hem de ikinci bir uyarı da o hastamızla, sigara içen kişiyle yüz yüze geldiğimiz zaman şunu anlatıyoruz; içtiğiniz sigara risk doğuruyor, sizi bunun için tanıyoruz. Belki onu sigarayı bırakması için de yardımcı bir gerekçe olmuş oluyor" diye konuştu.

100 KİŞİDEN 4'ÜNE ERKEN EVREDE TEŞHİS KONUYOR

Tarama programlarının yalnızca kanseri değil, sigaranın yol açtığı diğer akciğer hastalıklarını da ortaya çıkarabildiğine işaret eden Kıyık, erken tanının çok yönlü fayda sağladığını söyledi. Kıyık, "Bu tarama yapıldığında 100 kişiden 4 kişiye erken evrede akciğer kanseri teşhisi koyuyor. Ayrıca başka bir akciğer hastalığı varsa, kanser dışında onları da ortaya çıkarılmış oluyor. Kişi başlangıç aşamasında bir enfeksiyonla karşı karşıya olabilir. İçtiği sigarayla maruz kaldığı başka bir hastalık, KOAH, interstisyel akciğer hastalığı gibi diğer hastalıklar da oluşuyor olabilir. Bunlar da önlenmiş oluyor" dedi.

'ARABALARINI BAKIMA GÖTÜRDÜKLERİ GİBİ KENDİLERİ DE GELSİNLER'

Tarama sisteminin yaygınlaşmasının önemine değinen Kıyık, sigara kullanan vatandaşların sağlık kontrollerini ihmal etmemesi gerektiğini söyledi. Kıyık, "Artık Avrupa'da ve Amerika'da olan akciğer kanseri taramasının bizde de rutin olarak başlaması gerekiyor. Ama diyelim ki şu anda yok, bizim uyarımız sigara içen insanlara bir, sigarayı bırakmaları; iki, eğer sigara içiyorlarsa, bu yaş grubundaysalar, 50-77 yaş arasındaysalar, 20 yıldır sigara içmişlerse nasıl arabalarını yılda bir yahut da 10 bin kilometre, 15 bin kilometrede bir bakıma götürüyorlarsa, kendileri de buyursunlar gelsinler. Zaten devletimizin de sigara bırakma polikliniği hizmeti var. Hem o hizmeti almış olurlar hem de kendi sağlıkları için bir taramadan geçmiş olurlar" ifadelerini kullandı.

GENÇ YAŞTA SİGARAYA BAŞLAYANLAR İÇİN AYRI UYARI

Türkiye'nin genç yaşta sigaraya başlama oranında öne çıkan ülkeler arasında bulunduğunu belirten Dr. Murat Kıyık, Rusya, Sırbistan ve Macaristan gibi ülkelerde de benzer bir tablo görüldüğünü söyledi. Sigaraya ne kadar erken başlanırsa riskin o kadar arttığını vurgulayan Kıyık, tarama yaş aralığının ortalama veriler üzerinden belirlendiğini ancak daha genç yaşta sigaraya başlayanların da ciddi risk altında olduğunu ifade etti. Kıyık, "Bütün dünyada bazı ülkelerde, özellikle bizim Türkiye, genç yaşta sigaraya başlama konusunda hemen hemen birinci sırada geliyor. Bizim gibi ülkeler var; Rusya, Sırbistan, Macaristan gibi ülkelerde de erken yaşta sigaraya başlama söz konusu. Onun için ne kadar erken başlanıyorsa sigaraya, riski o kadar artıyor. Aslında biz 50-77 diyoruz ama bunlar ortalama yaşlar. Kişi 15 yaşında bir paket sigara içmeye başlamışsa, 20 yaşında 35 yaşına gelmiş oluyor. Aynı riski o da taşıyor aslında" dedi.

'14 YAŞINDA BAŞLAMIŞTI, 34 YAŞINDA KAYBETTİK'

Genç yaşta sigaraya başlamanın ne kadar ağır sonuçlar doğurabileceğine ilişkin örnek de paylaşan Kıyık, çok genç akciğer kanseri hastalarıyla karşılaşıldarını söyledi. Kıyık, "Tarama grubu olarak 50-77 yaş arası grubu söylemiş isek de erken yaşta sigaraya başlayanlar dikkatli olmalı. Çünkü bizim çok genç akciğer kanser hastalarımız var. Hatta öyle ki, bir hastamın oğlu akciğer kanseriydi. Baba hala yaşıyor. Oğlunu 34 yaşında kaybettik. 14 yaşında sigaraya başlamıştı. Maalesef 3 yıl yaşadıktan sonra kaybettik" ifadelerine yer verdi.

'PULMONER EMBOLİ SESSİZ ÖLÜME YOL AÇABİLİYOR'

Göğüs Hastalıkları Uzmanı Prof. Dr. Nuri Tutar da akciğer damarına pıhtı atmasının, tıpatıp adıyla pulmoner embolinin, çoğu zaman kalp krizi ile karıştırılabilen ve ani ölümlere yol açabilen ciddi bir tablo olduğuna dikkat çekti. Pulmoner embolide en kritik noktanın hastalıktan şüphelenmek olduğunu vurgulayan Tutar, göğüs ağrısı, öksürük, balgam, ateş ve kanlı balgam gibi belirtilerle ortaya çıkabilen tabloların hayati risk taşadığını söyledi. Prof. Dr. Tutar, "Akciğer damarına pıhtı atması özellikle sessiz ölüme yol açan bir durumdur. Aslında bilmediğimiz durumlarda, herkes kalp krizi geçirdiğini hissederken bunun sebebi pulmoner emboli olabilir. Aynı şekilde göğüs ağrısı yapar ve göğüs ağrısı sonucunda da hastalarda öksürük, balgam, ateş ve kanlı balgamla bize gelebilir. Göğüs ağrısının sebebi, akciğer damarına pıhtı atmasından kaynaklanabilir" dedi. Yakın zamanda üniversitede yaşanan bir vakayı örnek gösteren Prof. Dr. Tutar, pulmoner embolinin sinsi ve ölümcül seyredebildiğini anlattı. Tutar, "Çok yakın zamanda bizim üniversitemizde bir onkolojun eşi göğüs ağrısıyla karkla yaşlarda acile başvurdu ve kalp krizi şüphesiyle hemen anjiyo yapıldı. Ancak akciğer damarına pıhtı atmışa ve hasta kaybedildi" ifadelerini kullandı.

İKİ SAAT MOLA ÖNERİSİ

Özellikle uzun yolculuk yapanların, hareketsiz kalanların ve doğum kontrol hapı kullanan kadınların risk altında olduğuna işaret eden Tutar, korunma açısından basit ama etkili önlemlerin ihmal edilmemesi gerektiğini söyledi. Tutar, "Doğal olarak özellikle uzun yolculuklarda iki saatte bir mola vermek gerekir. Doğum kontrol hapı kullanan kadınlar da risk altındadır. Bu açıdan dikkat edilmesi gerekir" dedi. •İHA

Uzmanlardan sahra tozu uyarısı

Göğüs Hastalıkları Uzmanı Dr. Mustafa Faysal Baysal, sahra tozlarının yalnızca solunum yollarını değil, aynı zamanda alerjik bünyeye sahip bireyleri de olumsuz etkilediğini söyledi. Bölgeyi etkisi altına alan sahra çöl tozları, yüksek oranda ince partikül madde içerdiğinden başta solunum yolları olmak üzere sağlık açısından tehdit oluşturuyor. Medline Adana Hastanesi Göğüs Hastalıkları Uzmanı Dr. Mustafa Faysal Baysal, özellikle risk altında yer alan bireylerin çöl tozlarının etkili olduğu günlerde dikkatli olması gerektiğini belirterek uyarı ve önerilerde bulundu.

'SOLUNUM YOLLARI RİSK ALTINDA'

Dr. Baysal, çöl tozlarının yüksek oranda ince partikül madde (PM10 ve PM2.5) içerdiğinden solunum yollarına doğrudan etki ettiğini ifade ederek, "Bu durum ise nefes darlığı, öksürük ve boğazda tahriş gibi şikâyetlere yol açabiliyor. Astım ve KOAH hastalarında ise atak sıklığında artış gözlemlenebiliyor. Bu nedenle özellikle kronik solunum hastalığı bulunan kişilerin dış ortamda uzun süre kalmaması gerekiyor. Sahra tozları yalnızca solunum yollarını değil, aynı zamanda alerjik bünyeye sahip bireyleri de olumsuz etkiliyor. Burun akıntısı, hapşırma, gözlerde kaşıntı ve sulanma gibi belirtiler bu dönemde daha sık görülüyor. Alerjik rinit ve göz alerjisi olan kişilerin maske kullanımı ve hijyen kurallarına dikkat etmesi önem taşıyor" dedi.

KALP VE DAMAR SAĞLIĞINA DİKKAT!

Havadaki ince partiküllerin yalnızca akciğerleri değil, dolaşım sistemini de etkileyebildiğini kaydeden Baysal, "Bu partiküller, kana karışarak kalp ritim bozuklukları ve tansiyon yükselmesi gibi istenmeyen sorunlara neden olabiliyor. Özellikle yaşlı bireyler ve kalp hastalarının bu süreçte tedbirli davranmaları ve kendilerini korumaları gerekiyor" diye konuştu. Göğüs Hastalıkları Uzmanı Dr. Baysal, bu dönemde korunmak için yapılabilecekleri ise şöyle sıraladı: "Mümkün olduğunca kapalı alanlarda kalın. Dışarı çıkmanız gerekiyorsa maske kullanın. Bol su tüketerek metabolizmanızı destekleyin. Gözlerinizi korumak için temas ve ovuşturmadan kaçının" diye konuştu. • İHA

Announcement Brochure of Project

Çevresel ve Sosyal Etkileri Azaltma Önlemleri ve İzleme

Proje kapsamında Paydaş Katılım Planı (PKP) ve Çevresel ve Sosyal Yönetim Planı (ÇSYP) hazırlanmıştır. Bu planlar doğrultusunda, inşaat ve işletme aşamalarında ortaya çıkabilecek çevresel ve sosyal etkilerin önlenmesine ve azaltılmasına yönelik tüm tedbirler detaylı olarak tanımlanmıştır.

PKP kapsamında paydaşlarla etkin iletişim ve katılım süreçleri yürütülürken, ÇSYP kapsamında ise toz, gürültü, atık yönetimi, trafik güvenliği, toplum sağlığı ve güvenliği ile iş sağlığı ve güvenliği gibi konulara ilişkin azaltım önlemleri belirlenmiştir ve uygulanacaktır.

Söz konusu planlar, proje süresince KOSKİ ve yüklenici tarafından düzenli olarak izlenecek ve ilgili gerekliliklere uyum bağımsız denetimler ile kontrol edilecektir.

Paydaş Katılımı ve Şikâyet Mekanizması

Projeye ilişkin bilgi paylaşımı için bir Paydaş Katılımı Planı hazırlanmış, halkın görüş, öneri ve şikâyetlerini iletebileceği bir Şikâyet Mekanizması kurulmuştur. Başvurular hızlı ve özenli şekilde değerlendirilir. Bu mekanizmanın uygulanmasından KOSKİ sorumludur. Broşürdeki iletişim kanalları dilek, şikayet ve önerileri iletmek için kullanılabilir.

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KARAALİ ATIKSU ARITMA TESİSİ İNŞAATI PROJESİ

KOSKİ GENEL MÜDÜRLÜĞÜ

BİLGİLENDİRME BROŞÜRÜ

Tarih, Yer ve Saat: 14 Nisan 14.00,
Beyşehir İçme Suyu Arıtma Tesisi
Eğitim Binası Toplantı Salonu
Adres: Hacıakif Mahallesi, 40368.
Sokak, No:6 Beyşehir/KONYA

KOSKİ WORLD BANK İLBANK TÜRKİYENİN YAPICI GÜCÜ POSEIDON

Alt Proje Tanıtımı

Karaali Atıksu Arıtma Tesisi İnşaat Projesi, Dünya Bankası tarafından finanse edilen Yeşil ve Geleceğin Şehirleri Projesi kapsamında, finansal aracı olarak görev yapan İller Bankası A.Ş. koordinasyonunda Konya Su ve Kanalizasyon İdaresi (KOSKİ) tarafından yürütülmektedir. Alt proje, Konya İli, Beyşehir İlçesi, Karaali Mahallesi'nde numaralı parselde, KOSKİ'ye resmi olarak tahsis edilmiş 257 ada, 1 numaralı parsel üzerinde yer almaktadır.

Proje kapsamında:

- Günlük 400 m³ kapasiteli ileri biyolojik atıksu arıtma tesisi inşa edilecektir.
- Mevcut atıksu kolektör sistemi arıtma tesisine entegre edilecektir.
- Tesis bağlantısı için yaklaşık 60 metre uzunluğunda bağlantı hattı inşa edilecektir.
- Tesisin enerji ihtiyacını karşılamak amacıyla yaklaşık 1,6 km uzunluğunda Enerji Nakil Hattı (ENH) kurulacaktır.

Alt Proje Finansmanı

Yeşil ve Geleceğin Şehirleri Projesi (GFC) kapsamında finanse edilen alt proje, Dünya Bankası (DB) kredisi ve İller Bankası A.Ş aracılığı ile KOSKİ tarafından yürütülecektir.

Yeşil ve Geleceğin Şehirleri Projesi (GFC), iklim değişikliğine dayanıklı ve sürdürülebilir kentsel gelişimi teşvik etmeyi amaçlayan stratejik bir girişimdir.

Projenin Amacı ve Faydaları

Projenin temel amacı:

- Karaali Mahallesi'nde oluşan evsel atıksuların etkin şekilde toplanması ve arıtılması
- Alıcı ortam olan Çay Deresi ve dolaylı olarak Beyşehir Gölü'nün su kalitesinin korunması
- Halk sağlığının korunması ve çevresel risklerin azaltılması
- Yeraltı ve yüzey su kaynaklarının kirlenmesinin önlenmesi

Beklenen faydalar:

- Kontrolsüz atıksu deşarjının ortadan kaldırılması
- Su kaynaklarının korunması ve ekosistem üzerindeki baskının azaltılması
- Koku, hijyen ve çevresel kirlilik sorunlarının azaltılması
- Bölgedeki yaşam kalitesinin iyileştirilmesi
- Uzun vadeli çevresel sürdürülebilirliğe katkı sağlanması

Çevresel ve Sosyal Etkiler

İnşaat sürecinde geçici etkiler oluşabilir:

Olası Çevresel Etkiler

- Kazı ve hafriyat faaliyetlerinden kaynaklı toz oluşumu
- İnşaat ekipmanlarından kaynaklı gürültü
- Hafriyat ve inşaat atıkları oluşumu
- Yağ/yakıt sızıntısı riskleri
- Geçici trafik yoğunluğu
- Üst toprağın sıyrılması ve geçici arazi bozulması

Olası Sosyal Etkiler

- Yerel yollarda kısa süreli ulaşım aksamaları
- İnşaat sürecinde geçici yaşam kalitesi etkileri
- Toplum sağlığı ve güvenliği açısından riskler
- Alt Proje alanına yetkisiz giriş riski

Bu etkileri yönetebilmek üzere alt proje özelinde Çevresel ve Sosyal Yönetim Planı (ÇSYP) ve Paydaş Katılım Planları (PKP) hazırlanmıştır.

Alt Proje kapsamında hazırlanan ÇSYP ve PKP KOSKİ resmi internet sitesinde yayınlanacaktır.

https://www.koski.gov.tr/sayfa/gfc-yesil-ve-gelecegin-sehirleri-projesi

4. SCM Presentation

The Presentation Made by the POSEİDON

PROJENİN ÖZELLİKLERİ

- İşletme aşamasında tesis, KOSKİ tarafından işletilecek olup mevcut kurumsal yapı kapsamında faaliyet gösterecek, ihtiyaç duyulması halinde ilave teknik personel temin edilebilecektir
- Şantiye ofisleri ve geçici yapılar kurulacak olan AAT sahasında, ayrı parsel üzerinde KOSKİ'nin arazisinde kurulacaktır.
- Proje faaliyetleri ağırlıklı olarak belirlenen tesis alanı içerisinde gerçekleştirilecek olup çevresel ve sosyal etkilerin sınırlandırılması hedeflenmektedir.
- Proje kapsamında ilave arazi edinimi ve fiziksel veya ekonomik yerinden edilme öngörülmemektedir
- Hafriyat malzemesinin uygun olan kısmı saha içi dolgu ve tesviye çalışmalarında yeniden kullanılacak, ihtiyaç fazlası malzeme ilgili mevzuata uygun olarak yetkili döküm sahalarına taşınacaktır.
- Oluşacak arıtma çamuru, düzenli olarak alınarak KOSKİ tarafından işletilen uygun bertaraf/işleme tesislerine taşınacaktır.
- Proje sahasına erişim mevcut yerel ulaşım yolları üzerinden sağlanacaktır.

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ÇEVRESEL VE SOSYAL ÇALIŞMALARIN KAPSAMI

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ÇEVRESEL VE SOSYAL ÇALIŞMALARIN KAPSAMI

Etki Kaynağı Faaliyetler / Durumlar

- İnşaat faaliyetleri (kazı, betonarme, montaj)
- Hafriyat oluşumu ve taşınması: Araç ve ekipman kullanımı
- Toz ve gürültü oluşumu
- İnşaat kaynaklı trafik artışı
- İşgücü mobilizasyonu
- Üst toprağın sıyrılması
- Geçici şantiye faaliyetleri

İlgili Çevresel ve Sosyal Unsurlar

- Toprak Ortamı
- Su Kaynakları
- Hava Kalitesi ve Gürültü
- Atık Yönetimi
- Biyoçeşitlilik
- Trafik
- İş Gücü ve Çalışma Koşulları
- Sosyo-Ekonomik Çevre

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9

TOPRAK ORTAMI

Olası Etkiler

- Kazı çalışmaları sırasında üst toprağın sıyrılması
- İnşaat faaliyetleri nedeniyle geçici toprak bozulması
- Hafriyat taşınması sırasında dökülme riski
- Makine ve ekipmanlardan kaynaklı yağ/yakıt sızıntısı riski

Alınacak Önlemler

- Çalışmalar yalnızca belirlenen inşaat alanı ile sınırlandırılacaktır.
- Sıyrılan üst toprak ayrı depolanacak ve peyzajda yeniden kullanılacaktır.
- Hafriyat malzemesi uygun şekilde taşınacak; araç kasaları kapalı olacaktır.
- Ekipmanlar düzenli kontrol edilecek; yağ/yakıt sızıntılarına karşı önlem alınacaktır.
- Olası dökülmelerde kirlenen alan derhal temizlenecek ve iyileştirme yapılacaktır.

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SU KAYNAKLARI

Olası Etkiler

- İnşaat sürecinde su kullanımı ve şantiye kaynaklı evsel atıksu oluşumu
- Makine ve ekipmanlardan kaynaklanabilecek yağ ve yakıt sızıntısı riski
- Hafriyat ve malzeme taşınması sırasında yüzeysel akışla kirletici taşınımı riski
- İnşaat faaliyetleri nedeniyle yüzey ve yeraltı sularında geçici kirlenme riski

Alınacak Önlemler

- Şantiye kaynaklı evsel atıksular mevcut AAT sistemine yönlendirilecektir.
- Kimyasal ve yakıt depolama alanları sızdırmaz ve kontrollü alanlarda kurulacaktır.
- Makine ve ekipmanların bakım ve kontrolleri düzenli olarak yapılacaktır.
- Araç ve ekipman yıkama suları kontrollü şekilde toplanacak ve uygun şekilde bertaraf edilecektir.
- Şantiyede sızıntı müdahale ekipmanları bulundurulacaktır.
- Çalışmalar sırasında yüzey akışını kontrol edecek geçici drenaj önlemleri uygulanacaktır.

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HAVA KALİTESİ VE GÜRÜLTÜ

Olası Etkiler

- İnşaat faaliyetlerinden kaynaklı toz oluşumu
- Kazı ve hafriyat taşınması sırasında geçici partikül artışı
- İnşaat ekipmanlarından kaynaklı geçici gürültü artışı
- Ağır vasıta hareketine bağlı yerel gürültü ve titreşim etkisi

Alınacak Önlemler

- İnşaat sahası ve yollar toz oluşumuna karşı düzenli olarak sulanacaktır.
- Hafriyat taşınırken araç kasaları kapalı olacaktır.
- Araç ve ekipmanların periyodik bakımı yapılacaktır.
- Gürültü seviyesi düşük ekipman tercih edilecektir.
- Çalışmalar mümkün olduğunca gündüz saatlerinde gerçekleştirilecektir.
- Gerektiğinde hassas alıcılar için gürültü bilgilendirmesi yapılacaktır.
- Hız limitleri uygulanarak araç kaynaklı toz ve gürültü azaltılacaktır.

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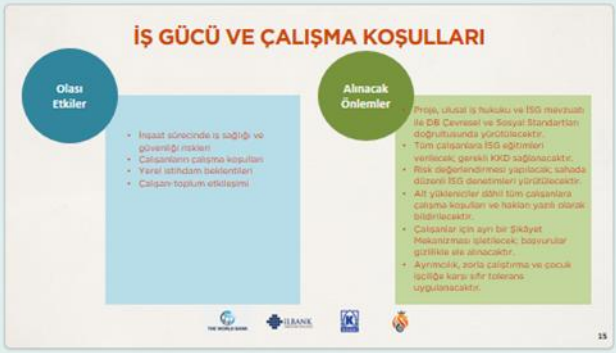

16

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18

PAYDAŞ KATILIMININ TEMEL HEDEFLERİ

- Proje boyunca doğrudan ve dolaylı etkilenecek paydaşları belirlemek ve düzenli olarak bilgilendirmek
- İnşaat ve işletme sürecinde ortaya çıkabilecek çevresel ve sosyal etkiler hakkında zamanında ve anlaşılır bilgi sağlamak
- Paydaş görüş, öneri ve endişelerini kayıt altına alarak proje uygulamasında dikkate almak
- Şeffaf, erişilebilir ve sürekli bir iletişim süreci yürütmek
- Halk ve çalışanlar için erişilebilir bir şikayet mekanizması oluşturmak ve etkin şekilde işletmek

19

PAYDAŞ KATEGORİLERİ

20

PAYDAŞ KATILIMI: SÜRECE NASIL DAHİL OLABİLİRSİNİZ?

21

PAYDAŞ KATILIMI: SÜRECE NASIL DAHİL OLABİLİRSİNİZ?

- Web sitesi: https://www.koski.gov.tr
- E-posta: bilgi@koski.gov.tr
- Telefon numarası: +90 332 432 04 32
- Alo Hattı: Alo 185
- Faks: 0332 205 7650
- Resmi yazışma / Dilekçe adresi: İhsaniye Mh. Kazım Karabekir Cd. No :56 42060 Selçuklu/Konya

22

PAYDAŞ KATILIMI: SÜRECE NASIL DAHİL OLABİLİRSİNİZ?

23

24

25

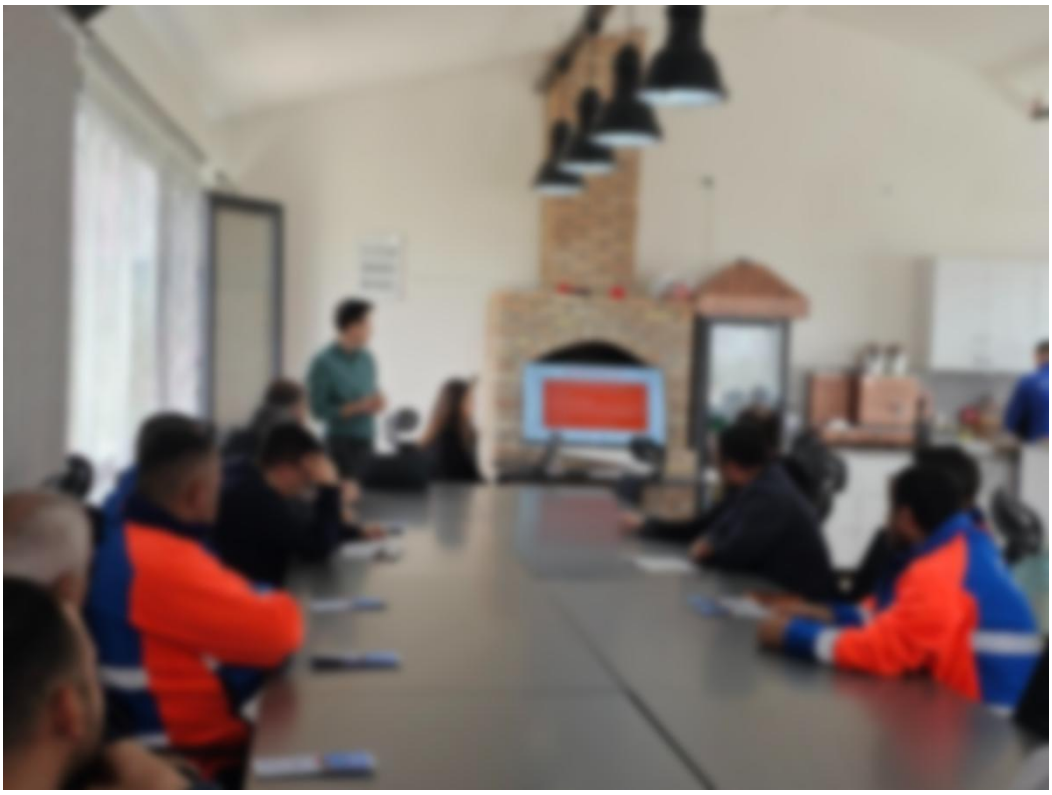
Karaali Atıksu Arıtma Tesisi İnşaatı Projesi

KATILIMINIZ VE İLGİNİZ İÇİN TEŞEKKÜR EDERİZ.
SORULAR, YORUMLAR VE GÖRÜŞLER

Dinlediğiniz için teşekkürler!

POSEİDON

5. Photographs From SCM



6. KOSKİ SCM Announcement Brochures Distribution Photos

T.C.
KONYA SU VE KANALİZASYON İDARESİ GENEL MÜDÜRLÜĞÜ
Arıtma Tesisleri Dairesi Başkanlığı

Sayı : E-20824400-220.04.02-126173
Konu : Paydaş Katılım Toplantısı Hk.

DAĞITIM YERLERİNE

"Yeşil ve Geleceğin Şehirleri Projesi - GFC" kapsamında Dünya Bankası tarafından finanse edilecek olan "Karaali Atıksu Arıtma Tesisi İnşaatı İşi " için Paydaş Katılım Planı toplantısı yapılması planlanmaktadır. Alt proje için aşağıda belirtilen tarih ve saatte halkı bilgilendirmek, görüş ve önerilerini almak için "Halkın Katılımı Toplantısı" yapılacaktır.

Alt proje kapsamında çevresel ve sosyal etkiler oluşabileceğinden, bu etkilerin yönetimi amacıyla alt proje'ye özel Çevresel ve Sosyal Yönetim Planı (ÇSYP) ile Paydaş Katılım Planı (PKP) hazırlanmıştır. Söz konusu planlar, KOSKİ'nin internet sitesinde kamuoyunun erişimine sunulmuştur.

Sözkonusu toplantıya katılımının sağlanması hususunda gereğini arz ederim.

Toplantı Tarihi: 14.04.2026- Salı Günü
Toplantı Saati: 14.00
Toplantı Yeri: Beyşehir İçme Suyu Arıtma Tesisi Eğitim Binası Toplantı Salonu
Adres: Hacıakif Mahallesi, 40368. Sokak, No:6 Beyşehir/KONYA
Dokümanların Yayımlandığı Bağlantı Adresi: https://www.koski.gov.tr/sayfa/gfc-yesil-ve-gelecegin-sehirleri-projesi

Ahmet DEMİR
Genel Müdür

Dağıtım:
Konya İl Milli Eğitim Müdürlüğüne
Beyşehir İlçe Milli Eğitim Müdürlüğüne
Konya Çevre, Şehircilik ve İklim Değişikliği İl Müdürlüğüne
İller Bankası Konya Bölge Müdürlüğüne
Dsi 4. Bölge Müdürlüğüne

Bu belge, güvenli elektronik imza ile imzalanmıştır.
Doğrulama Kodu: 94af1ec6-91bf-4c57-828d-db86aa5fd3ac Doğrulama Linki: https://www.turkiye.gov.tr/icisleri-belediye-ebys

Adres: İhsaniye Mah. Kazım Karabekir Cd. No:56 42060 Selçuklu / Konya
Telefon No: (332)221 61 00 Faks No: (332)235 46 34
e-Posta: bilgi@koski.gov.tr İnternet Adresi: https://www.koski.gov.tr
Kep Adresi: koski@hs03.kep.tr
Bilgi için: İbrahim SİYİRDİCİ
Mühendis
Telefon No: -

Konya İl Tarım ve Orman Müdürlüğüne
Konya İl Sağlık Müdürlüğüne
Beyşehir Kaymakamlığına
Beyşehir İlçe Tarım ve Orman Müdürlüğüne
Beyşehir Belediye Başkanlığına
Konya Büyükşehir Belediye Başkanlığına

Within the scope of SCM announcement activities, an official invitation letter was issued by KOSKİ to ensure the participation of relevant public institutions in the Stakeholder Consultation Meeting. In this context, the following institutions were formally invited to attend the SCM:

Konya Provincial Directorate of National Education

Beyşehir District Directorate of National Education

Konya Provincial Directorate of Environment, Urbanization and Climate Change

İLBANK Konya Regional Directorate

State Hydraulic Works (DSİ) 4th Regional Directorate

Konya Provincial Directorate of Agriculture and Forestry

Konya Provincial Directorate of Health

Beyşehir District Governorship

Beyşehir District Directorate of Agriculture and Forestry

Beyşehir Municipality

Konya Metropolitan Municipality

These invitations were issued to facilitate institutional coordination, ensure information sharing, and support inclusive stakeholder engagement in line with the Project's environmental and social requirements.