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SUSTAINABLE CITIES PROJECT-II

Additional Financing



Republic of Türkiye
Akçakoca Municipality

Akçakoca Bicycle Roads Project

Environmental and Social Management Plan

Final Report

January 2024



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Akçakoca Bicycle Roads Project Environmental and Social Management Plan

Final Report

January 2024

Prepared by ACE Consulting and Engineering Inc.

Client: ILBANK A.Ş.

Project Owner: Akçakoca Municipality

Revision No / Date: 08 / 19.01.2024

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List of Abbreviations

ACCOBAMS	: Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area
µg	: Microgram
ACE	: ACE Consulting and Engineering Inc.
AF	: Additional Financing
AFAD	: Disaster and Emergency Management Presidency
AoI	: Area of Influence
AQI	: Air Quality Index
°C	: Celsius Degree
CİMER	: Presidency Communication Center
CITES	: Convention on International Trade in Endangered Species of Wild Flora and Fauna
cm	: centimeter
CO	: Carbon monoxide
DD	: Data Deficient
dB	: Decibel
dBA	: Decibel A Scale
DIKAB	: Düzce Provincial Solid Waste Association
DSİ	: State Hydraulic Works
E	: Endemic
E&S	: Environmental and Social
EA	: Environmental Assessment
EHS	: Environmental, Health and Safety
EHSS	: Environmental, Health, Safety and Social
EIA	: Environmental Impact Assessment
EMEP	: Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe
EPRP	: Emergency Preparedness and Response Plan
Eptisa	: Eptisa Engineering Services
ESIA	: Environmental and Social Impact Assessment
ESMF	: Environmental and Social Management Framework
ESMP	: Environmental and Social Management Plan
ESMR	: Environmental and Social Monitoring Report
EU	: European Union
FI	: Financial Intermediary



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GBV	· Gender-based Violence
GIIP	· Good International Industry Practice
GRM	· Grievance Redress Mechanism
h	· hour
Hz	· Hertz
IFC	· International Finance Corporation
ILBANK	· ILBANK A.Ş.
IUCN	· International Union for Conservation of Nature
KBA	· Key Biodiversity Areas
km	· kilometer
km/h	· Kilometer per hour
km²	· Square kilometre
KPI	· Key Performance Indicator
L&FS	· Life and Fire Safety
LARAP	· Land Acquisition and Resettlement Action Plan
LARPF	· Land Acquisition and Resettlement Policy Framework
Leq	· Mean Tracheal Sound Energy
LC	· Least Concern
LTIR	· Lost Time Injury Rate
m/s	· Meters per second
m²	· Square meter
MAKK	· Decision of the Central Hunting Commission
MEUCC	· Ministry of Environment, Urbanization and Climate Change
mm/s	· Millimetres per second
MoAF	· Ministry of Agriculture and Forestry
MoTAT	· Mobile Hazardous Waste Delivery System
MSP	· Municipal Services Project
NA	· Not Applicable
NGOs	· Non-Governmental Organizations
NO	· Nitrogen monoxide
NO₂	· Nitrogen dioxide
NO_x	· Nitrogen oxides
NT	· Near Threatened
O₃	· Ozone
OG	· Official Gazette
OHS	· Occupational Health and Safety



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OP	: Operational Policy
PDEUCC	: Provincial Directorate of Environment, Urbanization and Climate Change
PID	: Project Identification Document
PIF	: Project Identification File
PM₁₀	: Particulate matter less than 10 µm
PM_{2.5}	: Particulate matter less than 2.5 µm
PMU	: Project Management Unit
PPE	: Personal Protective Equipment
RAMAQ	: Regulation on Assessment and Management of Air Quality
RAMSAR	: Convention on Wetlands of International Importance, especially as Waterfowl Habitat
RAP	: Resettlement Action Plan
SCP	: Sustainable Cities Project
SEA	: Strategic Environmental Assessment
SEA/SH	: Sexual Exploitation and Abuse and Sexual Harassment
SEDAŞ	: Sakarya Electricity Distribution Corporation
SEP	: Stakeholder Engagement Plan
SO₂	: Sulphur Dioxide
SOP	: Series of Projects
t	: Tone
TEM	: Trans European Motorway
TurkStat	: Turkish Statistical Institute
UNECE	: United Nations Economic Commission for Europe
WB	: World Bank
WBG	: World Bank Group
WHO	: World Health Organization
YİMER	: Foreigners Communication Centre



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Executive Summary

ILBANK A.Ş (ILBANK) is implementing the Sustainable Cities Project (SCP) with technical and financial support from the World Bank (WB) and European Union (EU). The Project assists cities through (a) planning for sustainable infrastructure service needs through more comprehensive and integrated municipal planning; (b) developing capital investment plans linked to urban plans to mobilize long-term financing that is essential in responding to investment priorities, and (c) financing infrastructure service requirements. The objective is to improve the planning capacity of and access to targeted municipal services in participating municipalities and utilities.

The Akçakoca Bicycle Roads Project (the Project) is the development of bicycle roads in Akçakoca District of Düzce Province, Türkiye in the scope of SCP-II Additional Financing (AF). The establishment of bicycle roads consists of two projects components which are "Bicycle Road Construction" and "University Bicycle Road Construction". Within the scope of "Bicycle Road Construction", the designed bicycle road is an asphalt paved 3,015 meters (m) long road with double contraflow lanes and two different routes, which will be parallel to the coastline along the existing Akçakoca residential area. The "University Bicycle Road Construction" is 1,350 m long asphalt paved road and it is also planned as two-way on Doğançılar Village Road and its continuation Atatürk Street. The bicycle routes have been designated by Akçakoca Municipality taking into account their utilization by the townspeople and their integration into the urban transportation system. The designated roads have been arranged based on 2030 Zoning Plan decisions. Within the scope of the "Bicycle Road Construction" Project, two (2) smart bike rental terminals, 20 smart parking spots (10 of which are in each terminal), 20 smart bikes, and 50 single rows angled bike parking spaces will be covered. In the "University Bicycle Road Construction" Project's scope, two (2) bike parks will be located at the route's start/endpoints and nine (9) bikes for each bike park will be provided. There will be also a camp site for the daily needs of construction workers on the left side of "University Bicycle Road" belonging to Akçakoca Municipality. The aim of the Project is not only to contribute to the sustainability of the transportation system but also to establish additional recreational areas for the public.

The project responsible parties are ILBANK as Borrower, WB providing technical and financial support as Lender and Akçakoca Municipality as Sub-borrower/Project Owner of the project. The project area belongs to the Municipality and included in the zoning plan. Furthermore, there are no sensitive areas such as important environmental protection zones, critical natural habitats, natural habitats, etc

This Environmental and Social Management Plan (ESMP) has been prepared by ACE Consulting and Engineering Inc. (ACE) to assess the environmental and social (E&S) impacts/risks of Akçakoca Bicycle Roads Project, in line with the WB Operational Policy (OP) for Environmental Assessment (OP 4.01), Environmental and Social Management Framework (ESMF) of ILBANK for SCP-II AF and Turkish legislation. Presented in this ESMP are the legal framework for environmental and social management; project



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description; environmental and social baseline; environmental and social impacts/risks of the project; mitigation plan; institutional arrangements for the project implementation; monitoring plan, environmental and social monitoring report (ESMR), and the activities for the involvement of the public. A separate Stakeholder Engagement Plan (SEP) is also developed to identify the stakeholders (including local authorities, communities, workers, etc.), including the potentially vulnerable/disadvantaged individuals/groups, outline the sub-projects communication and engagement strategy, introduce tools and measures of engagement, and set out the principles of grievance of the Project.

Potential environmental and social impacts have been identified in terms of:

- Air quality arising from the dust to be generated from excavation, load on trucks and transportation. Exhaust gas emissions will also release from construction equipment and vehicles at the construction site.
- Soil erosion caused by exposure of soil surfaces to rain and wind during site clearing, earth moving, and excavation activities. The mobilization and transport of soil particles may, in turn, result in sedimentation of surface drainage networks.
- Noise and vibration during the Project's construction phase
- Usage of chemicals/hazardous materials having potential impacts on the environment, employees, and locals for the operation phase.
- Traffic-related effects due to construction and operation phases. Traffic density on the access ways to the project lanes is anticipated to increase due to truck movement during the construction phase. There will also be potential adverse impacts on traffic safety during the operation phase with the completion of the bicycle roads since accidents/incidents may occur if proper mitigation measures are not taken.
- Waste generation in terms of excavated earth, municipal solid waste, non-hazardous and hazardous, recyclable and medical wastes.
- Working conditions and worker management where risks related to recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, job assignment, promotion, termination of employment, or termination of employment retirement, and disciplinary practices must be implemented under non-discrimination and equal opportunity conditions.
- Health and safety risks related to the construction and operation phases can cause incidents and accidents originating from the following potential hazards (Physical, ergonomic, chemical, and biological Hazards) that may lead to injuries and threaten workers' health and safety if protective mitigation measures are not taken
- Community health, safety and security issues both during construction and operation phases in terms of noise and vibration, pedestrians, cyclists, traffic, and transportation



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Since the project area, where “Bicycle Road Construction” to be developed, is included in the public domain belonging to the property of Akçakoca Municipality, there will be no land acquisition. Besides, the project will be located in the area, where 1/1000 and 1/5000 zoning plans are available, thus, there is no cadastral road within the project’s scope. On the other hand, some of the areas, where road expansion works to be conducted, are covered with hazelnut fields within the scope of “University Bicycle Road” Project. The income-generating activity is currently ongoing in the relevant field. The road expansion area was defined as roads in the zoning plan in compliance with Article 18 of Zoning Law No. 3194. Accordingly, the land registry of these areas was transferred from the landowners (citizens) to Düzce Municipality at the end of 2021. According to the relevant legislation, no payment was made for these fields during the land registry transfer. The opinion letter dated 28th of December 2021 on implementing Article 18 of Zoning Law No. 3194 was obtained from “The Directorate of Zoning and Urbanization”. An Ex-Post Social Audit is required for the “University Bicycle Road Construction” Project since the income-generating activity is currently conducted on areas covered with hazelnut fields.

This Environmental and Social Management Plan (ESMP) has been developed to manage impact mitigation. The ESMP assesses and identifies the potential environmental and social impacts and risks from the development of the Project and formulates mitigation measures for adverse environmental and social impacts. Management plans have been proposed in the ESMP for mitigation of impacts including:

- Topsoil and Erosion Control Management Plan,
- Chemicals and Hazardous Materials Management Plan,
- Noise and Vibration Management Plan,
- Air Emissions Management Plan,
- Water Resources and Effluent Management Plan,
- Waste Management Plan,
- Transport and Traffic Management Plan,
- Occupational Health and Safety Management Plan,
- Community Health, Safety, and Security Management Plan,
- Human Resources Management Plan and Procedure,
- Emergency Preparedness and Response Plan,
- Stakeholder Engagement Plan (SEP).

This project is exempt from an Environmental Impact Assessment (EIA) study according to the repealed EIA Regulation (Official Gazette (OG) numbered 29186 and dated 25.11.2014). The EIA Exemption Letters were issued by the Provincial Directorate of



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Environment, Urbanization and Climate Change (PDEUCC) based on the repealed EIA Regulation (see Annex 1). These letters are still valid according to the latest EIA Regulation (OG numbered 31907 and dated 29.07.2022) as the conditions for the exemptions have not changed. Moreover, the Project is classified as a **Category B** Project according to the WB OP 4.01.



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1 Introduction

1.1 Overview

The Sustainable Cities Project (SCP) builds on a Municipal Services Project (MSP) and its Additional Financing (MSP-AF), which was implemented between 2005 and 2016, together with ILBANK A.Ş. (ILBANK). ILBANK implements the Program with technical and financial support from the World Bank (WB) and European Union (EU). The program aims to help municipalities: (i) respond to current and increasing demands for urban services; (ii) plan for future infrastructure service needs in a sustainable manner; (iii) mobilize financing to fund priority investments; and (iv) adhere to new spatial planning mandates and infrastructure service requirements. The proposed program is designed as a series of projects (SOP), and includes the following series:

- Sustainable Cities Project 1 (SCP-I),
- Sustainable Cities Project 2 (SCP-II),
- Sustainable Cities Project-II - Additional Financing (SCP-II AF).

The first project in the SOP, SCP I consists of three Components.

- **Component A:** Sustainable City Planning and Management Systems aimed at supporting reforms including policies and legislation that improve sustainable urban development planning including technical assistance support (i) to municipalities/utilities for planning and management and the preparation of feasibility studies, environmental assessments, and engineering designs for municipal subprojects; and (ii) to ILBANK for management of the grant and capacity building
- **Component B:** Municipal Investments, which finance demand-driven municipal investments.
- **Component C:** which finances Project Management of ILBANK.

The second project in the SOP, SCP II consists of two components:

- **Component A:** Municipal Investments; this component was designed to finance demand-driven municipal infrastructure investments. Sectors eligible for investment included public transport, water and wastewater, solid waste management and energy.
- **Component B:** Project Management (financed by ILBANK); this component was designed to finance goods and consultancy services for project management, monitoring and evaluation, outreach, and communication. Municipalities under SCP II also benefitted from Technical Assistance under Component A of SCP I, which



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included the component for Sustainable Cities Planning and Management funded by the EU.

SCP-II AF, includes the same two components as SCP-II. The SCP-II AF will also be very similar to SCP II in terms of nature of the subprojects (investments).

In the scope of SCP-II AF, ILBANK is responsible for identifying eligible sub-borrowers (district municipalities, metropolitan municipalities, or their affiliated utilities) and ensuring that the sub-project eligibility criteria are met. Potential subprojects were identified in the following five different sectors:

- Environmental infrastructure (water and sanitation and waste management).
- Energy efficiency (geothermal heating and drilling).
- Urban mobility (intercity railway line, bicycle road).
- Social infrastructure (kindergarten, center for disabled and elderly people).
- Disaster risk management (firefighting services) are listed within the scope of the terms of references.

Sub-projects should meet a set of eligibility criteria to ensure that all subprojects supported under the project are financially, economically, and technically viable and meet all environmental and social (E&S) requirements. The project's sub-borrowers (district municipalities, metropolitan municipalities, or their affiliated utilities) will have to meet the sub-borrower eligibility criteria and be mutually agreed upon by ILBANK and the WB. ILBANK will work with sub-borrowers to appraise subprojects. The reports and studies of the proposed subprojects will be reviewed and approved by ILBANK and the Strategy and Budget Office of the Presidency in terms of technical, environmental, social, financial, and economic perspectives and accordance with the WB's environmental and social safeguard policies.

1.2 Scope of the Project

The Akçakoca Bicycle Roads Project (the Project) has been proposed by the Akçakoca Municipality as part of the SCP-II AF to serve the Akçakoca District. The establishment of bicycle roads consists of two projects components which are "Bicycle Road Construction" and "University Bicycle Road Construction". The Project is designed for both recreational and transportation purposes to bring a sustainable approach to transportation, which is one of the most basic urban services. The integration of bicycle routes into public transportation will promote the public's use of bicycles rather than other vehicles. ACE Consulting and Engineering (ACE) has been assigned to prepare environmental and social reports for this project. The scope of ACE's assignment is as follows:

- Prepare an Environmental and Social Management Plan (ESMP) associated with the risk assessment and anticipated E&S impacts based on the principles set out in the



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Environmental and Social Management Framework (ESMF) (including Stakeholder Engagement Framework) and Land Acquisition and Resettlement Policy Framework (LARPF) of ILBANK¹. The ESMP aims to cover measures to be taken during construction and operation of the subprojects to avoid, minimize, mitigate, compensate and/or offset the identified adverse impacts, as well as the recommended specific actions, indicators for monitoring and evaluation, institutional responsibilities, reporting arrangements and budget needed to implement these measures covered in the ESMP. Some of the areas where road expansion works to be conducted are covered with hazelnut fields within the scope of “University Bicycle Road Construction” Project. The road expansion area was defined as roads in the zoning plan in compliance with Article 18 of Zoning Law No. 3194. Accordingly, the land registry of these areas was transferred from the landowners (citizens) to Düzce Municipality at the end of 2021. An Ex-Post Audit is required for the “University Bicycle Road Construction” Project since the income-generating activity is currently conducted on areas covered with hazelnut fields.

- Prepare a separate Stakeholder Engagement Plan (SEP) to identify the stakeholders, including the potentially vulnerable/disadvantaged individuals/groups, outline the subprojects communication and engagement strategy, introduce tools and measures of engagement, and set out the principles of grievance regardless of the Project.
- Carry out a Public Consultation Meeting with interested and affected parties and all relevant stakeholders; project affected groups including the vulnerable and disadvantaged individuals/groups and analysis of barriers, challenges, constraints to women’s participation; about the potential environmental and social impacts and risks associated with the subprojects.

1.3 Scope of ESMP

In line with the objective and targets, the ESMP addresses parameters, methods, and criteria to monitor and measure activities and/or conditions. Specific actions are described that Akçakoca Municipality together with the contractor will take in charge to implement the mitigation measures and fulfill the commitments in defined relevant laws, subsequently through allowing and finally through adaptive management in response to monitoring and follow-up. The objective and target of these plans are to avoid, remove, or reduce any adverse E&S impacts/risks to acceptable levels.

The ESMP will cover the activities of the Project, including the activities of the contractors, subcontractors and primary suppliers whom the contractor has control or influence over. The level of detail and complexity of the plans is proportional to the expected impacts and risks of the Project.

¹ <https://www.ilbank.gov.tr/sayfa/surdurulebilir-sehirler-projesi-ii-ek-finansman>



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The ESMP documents the Project's environmental and social risk management strategy. It serves as an "umbrella document" that integrates the findings of all impact studies carried out during land preparation, construction, and operation phases, the plans and other provisions for complying with the requirements of the standards/policies that were triggered as well as country- and site-specific information relevant for the project's management strategy. The ESMP is an integral part of the project proposal.

The ESMP has the following content:

- A brief reference to the legal framework for environmental and social management;
- Project description including log frame and project activities, location, geographic extent of the project, and any characteristics of the area that are of particular interest (e.g., near a protected area, area of cultural or historical interest);
- The E&S baseline of the project area;
- Complete list of identified adverse E&S risks/impacts that specific project activities may cause and their significance;
- Planned mitigation measures to avoid adverse environmental and/or social risks/impacts, minimize them to acceptable levels or compensate them, including responsibilities (staffing) and schedule for implementing the mitigation measures;
- Planned monitoring activities to follow adverse environmental and/or social risks/impacts, and measuring the effectiveness of the mitigation measures, including responsibilities (staffing) and schedule for implementing the monitoring activities;
- Description of the executing entities' capacity to implement the ESMP and their responsibilities; where needed, provide for capacity building measures (to be included in the ESMP budget);
- Activities for the consultation with the project-affected groups and non-governmental organizations (NGOs) during the ESMP process.

This ESMP provides measures intended to be sufficient, feasible, and sustainable for mitigating the impacts. There are instances where a mitigation measure is already conceptualized as an activity in the project's main implementation plan. Such activities are still included in the ESMP along with all other mitigation measures to provide an overall picture of the project's mitigation strategy and to be able to check the list of mitigation measures against the identified impacts.

E&S monitoring provides information on significant E&S issues, especially on the efficiency of measures taken, E&S impacts of the project at the implementation stage of the project. Such information enables the assessment of the success of the efforts that are part of project supervision for the Project Owner and supervision mechanism and allows proper action whenever necessary. Therefore, the ESMP defines the purposes of monitoring, types of monitoring and defines the indicators, thus establishing project measures criteria.



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Regarding the disclosure process of ESMP, the draft ESMP approved by ILBANK and WB has been disclosed and consulted with relevant stakeholders. The inputs/feedback received from the stakeholders during the public consultation meeting have been included in this report and the draft ESMP is finalized.



2 Environmental Policy and Legislation Framework

The national and international regulatory framework and legislation relevant to the Project are presented in this chapter.

2.1 National Framework

2.1.1 National Environmental and Social Legislation

Turkish Environmental Law (No: 2872), which came into force in 1983 (Official Gazette (OG) dated 11.08.1983 and numbered 18132), is Türkiye's primary framework for environmental legislation and is supported by a series of regulations that have been developed in line with national and international initiatives and standards, and some of them have been revised recently to be harmonized with the European Union (EU) Directives in the scope of pre-accession efforts of Türkiye.

Labor, health, and safety issues are collectively ruled by the Labor Law (No. 4857) (OG dated 10.06.2003 and numbered 25134), Occupational Health and Safety Law (Law No. 6331), and associated regulations.

The Law on Right to Access to Information (No. 4982) (OG dated 24.10.2003 and numbered 25269) and Law on the Use of the Right to Petition (No: 3071) (OG dated 10.11.1984 and numbered 18571) are the relevant laws allowing individuals to exercise their right of information and their right to make applications to competent authorities related to their requests and complaints, respectively.

Environmental Impact Assessment Regulation

Article 10 of the Environmental Law sets the framework for the Environmental Impact Assessment (EIA) procedure in Türkiye, indicating that institutions, agencies, and establishments that lead to environmental problems due to their planned activities are obliged to prepare an EIA Report or a Project Information File (PIF). The Environmental Impact Assessment (EIA) Regulation (OG numbered 31907 and dated 29.07.2022) governs the environmental impact assessment of investment projects in Türkiye and is largely in line with the EU Directive on EIA.

Screening

The EIA Regulation classifies projects into two categories

- **Annex I projects.** These are projects that have significant potential impacts and require an EIA. Annex I of the EIA Regulation lists these project types, where project proponents are expected to start the EIA procedure without any other screening process.



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- **Annex II projects.** These are projects that may or may not significantly affect the environment. Annex II of the EIA Regulation lists these project types. Proponents of Annex II projects must submit a Project Identification File (PIF) to the Provincial Directorate of Environment, Urbanization, and Climate Change (PDEUCC). The PIF is prepared following the General Format for PIF provided in Annex IV of the EIA Regulation and contains information on (i) project characteristics; (ii) project site and existing environmental characteristics of the impact area; and (iii) significant environmental impacts of the project during construction and operation phases and measures to be taken. A non-technical summary of the above items is also added to the PIF. Based on the PIF and the Selection and Elimination Criteria specified in Annex IV of the EIA Regulation, PDEUCC determines whether an EIA is necessary or not.

Public Information and Participation Meetings

For projects that require the preparation of an EIA, the Governorate is necessary to inform the public that a project application has been submitted in a specified locality, that the EIA process has begun, and that the public may submit its comments and suggestions to the Governorate or Ministry of Environment, Urbanization and Climate Change (MEUCC). It is essential to make a publication at least 10 days before the Public Information and Participation Meeting with the date, location, and name of the relevant Project. The announcement is made using various internet, bulletin boards, newspapers, and loudspeaker announcements. MEUCC informs the public of the same through the internet.

A formal public information and participation meeting occurs for Annex I projects that are subject to an EIA after the screening process and prior to scoping. The project proponent organizes a “public information and participation meeting” chaired by PDEUCC in a location that affected local groups can access easily. The invitation to the meeting is published in a national and a local newspaper at least 10 days prior to the meeting.

There is no public information and participation meeting required for Annex II projects, which are subject to preliminary environmental impact assessment via a PIF. PDEUCC will inform the public about the decision through announcement in their website.

Scoping

The project proponent presents a project dossier (EIA application file using the EIA outline (Annex III of the EIA Regulation) for Annex I projects) to a commission, which comprises representatives of MEUCC, and relevant organizations identified by MEUCC. A Stakeholder Engagement Plan has to be prepared as an annex to the EIA Application File. Based on the information submitted and the views and suggestions received from the public, the commission determines the scope of the EIA and issues the “project-specific format” for the EIA report to be prepared.



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Review and Approval of the EIA Report

The commission reviews the draft version of the EIA report prepared using the project-specific format issued. A final EIA report, which incorporates the commission's assessments, is then submitted to the MEUCC for the last review. MEUCC gives the decision whether the "EIA is positive," in which case the project proponent may implement the project, or "EIA is negative," in which case the project may not go forward.

Disclosure

The draft EIA report is made available to the public for comments at MEUCC or the Provincial Directorate. After MEUCC's final evaluation of the EIA report, the Governorate announces to the public MEUCC's decision together with its justifications.

Monitoring and Inspection

According to the EIA Regulation, MEUCC monitors and inspects projects assessed as either "EIA not required" or "EIA is positive" based on provisions specified in the PIF or EIA.

This project is **exempt from an EIA study** according to the repealed EIA. The EIA Exemption Letters issued by PDEUCC based on the 2014 regulation are provided in Annex 1. These letters are still valid according to the latest EIA Regulation (OG numbered 31907 and dated 29.07.2022) as the conditions for the exemption have not changed.

The main relevant legislation is listed below but not limited to:

National Legislation on Environment

- Environmental Law No. 2872 (OG numbered 18132 and dated 11.08.1983);
- Environmental Impact Assessment Regulation (OG numbered 31907 and 29.08.2022);
- Regulation on Environmental Permits and Licensing (OG numbered 29115 and dated 10.09.2014);
- Environmental Audit Regulation (OG numbered 27061 and dated 21.11.2008);
- Regulation on Bicycle Roads (OG numbered 30976 and dated 12.12.2019);
- Exhaust Gas Emission Control Regulation (OG numbered 30004 and dated 11.03.2017);
- Regulation on Air Pollution Control Originating from Heating (OG numbered 25699 and dated 13.01.2005);
- Water Pollution Control Regulation (OG numbered 25687 and dated 31.12.2004);
- Waste Management Regulation (OG numbered 29314 and dated 02.04.2015);



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- Regulation on Control of Waste Electrical and Electronic Equipment (OG numbered 28300 and dated 22.05.2012);
- Regulation on the Management of Waste Oils (OG numbered 30985 and dated 21.12.2019);
- Regulation on Control of Waste Vegetable Oils (OG numbered 29378 and dated 6.06.2015);
- Medical Waste Control Regulation; OG Date/Number: 25.01.2017/29959;
- Regulation on the Control of Packaging Wastes (OG numbered 30283 and dated 21.12.2017);
- Regulation on the Control of Waste Battery and Accumulators (OG numbered 25569 and dated 31.08.2004);
- Regulation on the Control of End-of-Life Tires (OG numbered 26357 and dated 25.11.2006);
- Zero Waste Regulation (OG numbered 30829 and dated 12.07.2019);
- Communiqué on Recycling and Recovery of Certain Non-Hazardous Wastes (OG numbered 27967 and dated 17.06.2011);
- Regulation on Control of Excavated Soil, Construction, and Demolition Wastes (OG numbered 25406 and dated 18.03.2004);
- Environmental Noise Control Regulation (OG numbered 32029 and dated 30.11.2022);
- Regulation on Environmental Noise Emission Created by Equipment Used in Open Area (2000/14/A1) (OG numbered 26392 and dated 30.12.2006);
- General Sanitation Law No: 1593 (OG numbered 1489 and dated 06.05.1930);
- Spatial Plans Construction Regulation (OG numbered 26898 and dated 06/06/2008);
- Regulation on Assessment and Management of Air Quality (OG numbered 29030 and dated 14/6/2014);

National Legislation on Health and Safety

- Regulation on Procedures and Principles of Health and Safety Training of Employees (OG numbered 28648 and dated 15.05.2013);
- Regulation on Duties, Authorities, Responsibilities and Training of Occupational Safety Experts (OG numbered 28512 and dated 29.12.2012);
- Regulation on Occupational Health and Safety Services (OG numbered 28512 and dated 29.12.2012);



- Regulation on Use of Personal Protective Equipment in Workplaces (OG numbered 28695 and dated 02.07.2013);
- Regulation on Health and Safety Signs (OG numbered 28762 and dated 11.09.2013);
- Regulation on the Protection of Employees from Noise Related Risks (OG numbered 28721 and dated 28.07.2013),
- Regulation on Protection of Employees from Vibration Risks (OG numbered 28743 and dated 22.08.2013);
- Regulation on Control of Dust (OG numbered 28812 and dated 05.11.2013);
- Regulation on Machinery Safety (OG numbered 27158 and dated 03.03.2009);
- Regulation on Protection of Buildings from Fire (OG numbered 26735 and dated 19.12.2007),
- Occupational Health and Safety Risk Assessment Regulation (OG numbered 28512 and dated 29.12.2012);
- Regulation on Emergencies at Workplaces (OG numbered 28681 and dated 18.6.2013);
- First Aid Regulation (OG numbered 29429 and dated 29.07.2015);
- Regulation On Health And Safety Measures In Working With Asbestos; OG Date/Number: 25.01.2013/28539;
- Regulation On Safety Data Sheet On Harmful Substances And Mixture; OG Date/Number: 13.12.2014/29204;
- Occupational Health And Safety Regulation In Construction Works; OG Date/Number: 05.10.2013/28786;
- Health And Safety Regulations For The Use Of Work Equipment, OG Date/Number: 25.04.2013/28628;
- Regulation on Duties, Authorities, Responsibilities and Trainings of Workplace Physicians and Other Health Personnel: OG Date/Number: 20.07.2013/28713;
- Regulation on Water Intended for Human Consumption OG Date/Number: 17.02.2005/25730

National Legislation on Law on Private Security Services

- Regulation on Implementation of the Law on Private Security Services (OG numbered 25606 and dated 07.10.2004);

National Legislation on Labor Management

- Labor Law No. 4857 (OG numbered 25134 and dated 10.06.2003);



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- Regulation on Sub-Contractors (OG numbered 27010 and dated 27.09.2008);
- Regulation on Occupational Health and Safety in Temporary or Fixed-Term Work; OG Date/Number: 23.08.2013/ 28744;
- Regulation on Working Procedures and Principles of Child and Youth Workers; OG Date/Number: 06.04.2004/25425
- Regulation on the Works Needed to be Worked Maximum Seven and A Half or Fewer Hours Per Day in terms of Health Rules (OG numbered 28709 and dated 16.07.2013);

National Legislation on Stakeholder Engagement and Grievance Redress Mechanism

- Right to Information Law: 4982 (OG numbered 25269 and dated 24.10.2003);
- Regulation on the Principles and Procedures for the Enforcement of the Law on the Right to Information (OG numbered 25445 and dated 27.04.2004);
- Use of the Right to Petition Law: 3071 (OG numbered 18571 and dated 10.11.1984);
- The Law on the Protection of Personal Data (OG numbered 29677 and dated 07.04.2016).

National Legislation on Municipality

- Municipality Law No: 5393; OG Date/Number: 13.07.2005/25874

National Legislation on Traffic

- Highway Traffic Law No. 2918 (OG numbered 18195 and dated 13.10.1983)
- Changes In Highways Traffic Regulations (OG numbered 31925 and 16.08.2022)
- Ministry of Interior Requirements for Traffic Training to Schools

National Legislation on Disaster and Emergency

- Türkiye Building Earthquake Regulation (OG numbered 30364 and dated 18.03.2018)

National Legislation on Land Acquisition and Relevant Legislation.

- Law No. 2942 on Expropriation (OG numbered 18215 and dated 08.11.1983)
- Law No. 3402 on Cadastre (OG numbered 19512 and dated 09.07.1987)
- Law No. 4342 on Pastureland (OG numbered 23272 and dated 28.02.1998)
- Law No. 6831 on Forestry (OG numbered 9402 and dated 08.09.1956)
- Law No. 5403 on Soil Conservation and Land Use (OG numbered 25880 and dated 19.07.2005)



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- Regulation on Administration of Treasury Immovable (OG numbered 26557 and dated 19.06.2007)
- Regulation on Transfer of Ownership of Agricultural Lands (OG numbered 29222 and dated 31.12.2014)
- Regulation on the Conservation, Use and Planning of Agricultural Lands (OG numbered 30265 and dated 09.12.2017)
- Implementation Regulation of Article 16 of the Forest Law (OG numbered 28976 and dated 18.04.2014)
- National Real Estate General Communiqué (OG numbered 31246 and dated 16.09.2020)

2.2 International Framework

The international rules, regulations and conventions pertinent to the Project is given below.

2.2.1 World Bank Operational Policies

OP 4.01 - Environmental Assessment

Project Categories and Screening

Under the WB's Operational Policy for Environmental Assessment (OP 4.01), projects are classified as Category A, B and C according to the level of their likely impact on the environment:

- **Category A.** proposed project is classified as Category A if it is likely to have significant adverse environmental and social impacts (based on its type, location, sensitivity, and scale and the nature and magnitude of its potential environmental impacts/risks). These impacts are generally large-scale, irreversible, sensitive, diverse, cumulative or precedent-setting and may affect an area broader than the sites or facilities financed by the project. For example, Category A projects have one or more of the following attributes: large-scale conversion or degradation of natural habitats; extraction, consumption, or conversion of substantial amounts of forest, mineral and other natural resources; direct discharge of pollutants resulting in degradation of air, water or soil; production, storage, use or disposal of hazardous materials and wastes; measurable changes in the hydrologic cycle; risks associated with the proposed use of pesticides. Indicative examples in the current project context include the construction of a significant new wastewater treatment plant, a new landfill, and rehabilitation of an existing landfill with significant environmental impact
- **Category B.** proposed project is classified as Category B if the potential impacts on the environment and society are typically site-specific, reversible, less adverse than



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those of Category A subprojects and for which mitigatory measures can be designed more readily. Projects in Category B sometimes differ only in scale from Category A projects of the same type. For example, large irrigation and drainage projects are usually categorized as A; however, small-scale projects of the same type may be classified as B. The same can be true for small-scale, relatively clean (gas or light diesel oil-fired) thermal power plants, micro-hydropower plants, and small sanitary landfills. Similarly, projects that finance rehabilitating or maintaining an existing infrastructure may have adverse impacts but are likely to be less significant compared to a Category A project and would be categorized as B. Indicative examples include rehabilitation or construction of water supply and sewerage network, water treatment plants, wastewater treatment plants which does not include an expansion or new building, construction of small-scale water treatment plants, urban transport, and energy efficiency. Although it has not been specified in the OP, Category B projects divide in two within its structure as Low B and High B projects in practice. Category High B projects have more impacts and mitigation measures than Category Low B projects. Yet, the impacts and mitigation measures are not significant enough to be recognized as Category A projects.

- **Category C:** A proposed project is classified as Category C if it is likely to have minimal or no adverse environmental impacts. For example, technical assistance projects in institutional development, computerization, and training fall in Category C.

When a WB-funded project involves a series of subprojects selected and funded by a financial intermediary (FI) using WB loan proceeds, the project is classified as Category FI. In such projects, the Financial Intermediary (FI) screens and organizes the proposed subprojects as Category A, B, or C following the above definitions and ensures that the borrower carries out the corresponding environmental assessment. Since the current project is an FI project, the following discussion will refer to subprojects only.

No clear-cut border values distinguish the categories or, unlike the Turkish EIA Regulation, any ready lists of project types for categorizing projects as A, B, and C; instead, projects are screened on a case-by-case basis. Although the categorization of projects is based on the magnitude of environmental impacts, projects with high-level social risks may also be determinative in categorizing a project.

Scope of Environmental Assessment

For Category A subprojects, the borrower is required to prepare an Environmental and Social Impact Assessment (ESIA), which examines the subproject's potential negative and positive environmental impacts as well as its social impacts, compares them with those of feasible alternatives (including the "without project" situation), and recommends any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental and social performance. Analysis of alternatives is a particularly important feature of an ESIA. ESIA also includes an ESMP which details the measures to be taken



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during the **implementation and operation** of a (sub) project to **eliminate, reduce or offset** adverse environmental and social impacts, the actions needed to **implement these measures** as well as **monitoring indicators and actions and responsibilities**.

The scope of Environmental Assessment (EA) for a Category B subproject may vary from subproject to subproject but is narrower than the ESIA required for Category A. Like Category A ESIA, it examines the subproject's potential negative and positive environmental and social impacts/risks and recommends any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance. If the project is recognized as a Category B, this information may be contained in an ESMP only unless site-specific issues necessitate a site-specific assessment in addition to the ESMP. An example is modest scale building construction on a site in an urban area which would normally require only an ESMP if it is known that there are no E&S issues relating to the site. If it is constructed on a greenfield site, a simple EA would be needed to clarify whether there are any special environmental or social issues. The project could turn into Category A if EA work shows the likelihood of significant damage to natural habitat or cases where a significant amount of land take is required. On the other hand, if the project is recognized as High B, then a partial EA document or partial ESIA is required to satisfy the expected requirements

Public Consultation

For all Category A and B subprojects proposed for WB financing, during the EA process, the borrower consults subproject-affected groups and non-governmental organizations (NGOs) about the subproject's E&S aspects and takes their views into account. The borrower initiates such consultations as early as possible. For Category A projects, consultations with these groups occur at least twice: a) shortly after environmental screening and before the terms of reference for the ESIA are finalized, and (b) once a draft ESIA report is prepared. The borrower provides for the initial consultation a summary of the proposed subproject's objectives, description, and potential impacts related to both E&S issues. For consultation after the draft ESIA report is prepared, the borrower provides a summary of the ESIA's conclusions. For Category B subprojects, at least one consultation is held with affected groups and local NGOs: once the draft EA report (including ESMP) is prepared. The borrower provides a summary of the EA's conclusions.

In addition, the borrower consults with such groups throughout project implementation as necessary to address EA-related issues that affect them.

For meaningful consultations between the borrower and project-affected groups and local NGOs on all Category A and B subprojects proposed for WB financing, the borrower provides relevant material (in local language) on time before consultation and in a form and language that is understandable and accessible to the groups being consulted.



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Review and Approval of the EA

In FI projects, the responsibility to ensure that OP 4.01 requirements are met rests with the FI. The EA process should generally be completed before the FI approves a subproject for a WB loan financing.

Conditionality

In FI projects, the sub-loan agreement between IIBANK and the borrower must include the conditionality for the borrower to implement the ESMP for Category A and B subprojects. The borrower must monitor and ensure that the contractor complies with the provisions of the ESMP. To fulfill its E&S obligation, the borrower may incorporate the ESMP into the procurement documents and contracts for works. Non-compliance may lead to the suspension of WB funding for the subproject.

Disclosure

In addition to the disclosure requirements specified under “Public Consultation” above, for Category A subprojects, the FI/municipality must make the draft EIA report in local language publicly available to subproject-affected groups and local NGOs before the meeting.

When the ESIA of a Category A subproject is finalized, the FI transmits an English copy of the final report to WB, including an English language executive summary. The Bank distributes the executive summary to its executive directors and makes the information available through its external website.

In the case of Category B subprojects, the FI transmits to WB the final English language Category B EIA report, and WB makes it available through its external website.

Implementation

During subproject implementation, the FI reports to WB on (a) compliance with measures agreed with the Bank based on the findings and results of the EA and additional social assessment (if any), including implementation of the ESMP; and (b) the findings of monitoring programs. The Bank bases supervision of the project’s E&S aspects on the findings and recommendations of the EA and social assessment, including measures set out in the legal agreements, any ESMP, and other project documents.

This Project is classified as a **Category B** Project according to the WB OP 4.01

The comparison between the World Bank Environmental Policy and the National Legislation is given in Table 2-1.



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Table 2-1. Comparison between the World Bank Environmental Policy and the National Legislation

Steps	EIA Regulation	World Bank OP 4.01
Screening	The EIA Regulation classifies the proposed projects into two categories: 1. Annex-I Projects: Projects with considerable potential impacts, which require an EIA process and EIA Report. 2. Annex-II Projects: Projects with or without considerable potential impacts on the environment.	Within the scope of WB OP 4.01, the proposed projects are classified into three categories: 1. Category A: A proposed project is classified as Category A, if it is likely to have significant adverse environmental and social impacts (depending on the type, location, sensitivity, and scale of the project and the nature and magnitude of its potential environmental impacts). In general, these impacts are major, irreversible, sensitive, variable, cumulative, precedent, and potentially influential over an area broader than the sites and facilities financed under the project. 2. Category B: A proposed project is classified as Category B if its environmental and social impacts are typically site-specific and structurally irreversible and if its impacts are less adverse than those of Category A subprojects and if mitigatory measures can be designed more readily than for Category A subprojects. The projects classified as Category B sometimes vary from the same type of Category A projects only in terms of their scale. 3. Category C: A proposed project is classified as Category C, if it is likely to have minimal or no adverse environmental impacts. If a project financed by the WB includes a series of sub-projects that are selected by a Financial Intermediary (FI) and financed by the WB loan, the project is classified as Category FI.
Public/ Stakeholder Consultation Meetings	For the projects included in the list of Annex-I, which therefore require the preparation of an EIA report, the public information and participation meeting, whose place and date is decided by the Provincial Directorate, is held not later than 10 days prior to the meeting by disclosing it publicly in local and national newspapers. No public information and participation meeting is held for the projects included in the list of Annex-II.	For all Category A and B subprojects proposed for WB funding, the borrower will consult and consider the views of the project-affected groups and non-governmental organizations regarding the environmental impacts of the subproject during the EA process.
Scope of Environmental Assessment	For the projects in the list of Annex-I, an EIA Application File (EAF) will be prepared in line with the format given in Annex-III to the EIA Regulation. Cumulative environmental impact assessment, stakeholder engagement plan (SEP), environmental and social action plan, environmental monitoring plan, sustainability plan, zero waste plan, traffic	For Category A subprojects, the borrower is responsible for preparing an ESIA report that examines the project's potential negative and positive environmental and social impacts, compares them with those of feasible alternatives, and recommends any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental and social performance.



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Steps	EIA Regulation	World Bank OP 4.01
	<p>management plan, greenhouse gas reduction plan and environmental and social management plan shall be attached to the relevant sections of the EIA Application File. According to the information given in the EAF, a special EIA report format will be prepared based on the views of committee members to be formed by the MoEUCC, and the EIA report will be written in line with this format, and then submitted to the MoEUCC.</p> <p>For the projects in the list of Annex-II, a Project Introduction File (PIF) will be prepared based on the format given in Annex-IV to the EIA Regulation. The prepared report will be submitted to the Provincial Directorate of Environment, Urbanization and Climate Change.</p>	<p>The scope of the environmental and social assessment document for a Category B subproject may vary from subproject to subproject, but it is narrower than that of Category A ESIA. As with the ESIA required for Category A, the borrower will investigate the potential negative and positive environmental and social impacts of the subproject, and will recommend measures required to prevent, minimize, mitigate or compensate for adverse impacts and enhance environmental and social performance. When the project category is identified as B, this information could be included in ESMP, if there are no site-specific problems that require a site-specific assessment process in addition to ESMP.</p>
<p>EA Review and Approval</p>	<p>The Committee will review the draft version of EIA report for the projects in the list of Annex-I. Then, the final EIA report containing the committee's assessments will be submitted to MEUCC for final review.</p> <p>MEUCC will determine whether EIA is positive, an "EIA Positive" decision is rendered, the project will not be continued further.</p> <p>The PIF prepared for the projects in the list of Annex-II will be reviewed by the Provincial Directorate of Environment, Urbanization and Climate Change and the "EIA Required" or "EIA Not Required" decision will be taken accordingly. For the projects for which the "EIA is Required" decision is rendered, the procedure governing the projects in the list of Annex-I will apply.</p>	<p>For projects involving Financial Intermediaries (FI), the financial intermediary is responsible for meeting the requirements in OP 4.01. Normally, the EA process should be completed by the Financial Intermediary before the subproject is approved for funding of WB loan.</p>
<p>Disclosure</p>	<p>The EIA Report for the projects in the list of Annex-I will be made available to the public opinion at the headquarters of MEUCC or provincial directorates. Following MEUCC's final assessment of the EIA report, the Governor's Office will disclose its reasoned decision publicly.</p> <p>For the projects in the list of Annex-II, the final PIF will be disclosed publicly at the Provincial Directorates.</p>	<p>In addition to the points given in the Public Information and Consultation section, the Financial Intermediary will make the draft ESIA report prepared in local language for Category A subprojects available at a public place accessible to project-affected groups and local Non-governmental organizations (NGOs).</p> <p>Upon finalization of a Category A subproject ESIA report, the Financial Intermediary will submit an English copy of the final report to the WB together with the English Executive Summary. The Bank will distribute the executive summary to its executive directors, and discloses it publicly on an external website.</p>

Steps	EIA Regulation	World Bank OP 4.01
		For Category B subprojects, the Financial Intermediary will submit an English copy of the final version of the Category B EA report to the WB and the WB will disclose it publicly on an external website.
Implementation, Monitoring and Inspection	Pursuant to the EIA Regulation, MEUCC will monitor and inspect the projects that are regarded as "EIA Not Required" or "EIA Positive", respectively, according to the provisions provided in PIF or EIA Report. In addition, the project owner should submit monitoring reports to MEUCC, and MEUCC needs to submit these reports to the Governor's Office for announcement to the public.	During subproject implementation, the Financial Intermediary will report to the World Bank on (a) compliance with measures agreed with the Bank on the basis of the findings and results of the EA and additional social assessments, if any, including implementation of ESIA, and (b) the findings of monitoring programs. The Bank will base supervision of the project's environmental aspects on the findings and recommendations of the Environmental Assessment, including the measures outlined in legal agreements, ESMP, and other project documents.

Source: ILBANK "Sustainable Cities Project – II Additional Financing Environmental and Social Management Framework", April 2019

OP 4.04 – Natural Habitats

Subprojects that have a significant impact on a recognized critical habitat or ecosystem will be identified as ineligible and the key issue in the ESIA will be the identification of alternatives to the subproject in terms of size and scope. If the subproject's likely impact on natural habitats is not significant or the impact is not on critical habitats, then the priority is to solve the situation through re-siting. If that is not possible, the appropriate mitigation measures will be acknowledged for the related circumstance.

This Project does not trigger OP 4.04 – Natural Habitats (see Table 2-2 and Section 4.1.13).

OP 4.11 – Physical Cultural Resources

As the initial stage of baseline studies, literature and surficial studies will be performed. Depending on these studies, the potential impact on these sources and related mitigation measures are assessed in EA/ESIA. However, buried assets (i.e., graves or mounds) may not be determined during baseline studies due to the nature of physical, cultural resources. The principal issue is twofold: (i) "chance finds" identification of during construction and (ii) potential impact of the project on known cultural values. Turkish laws, notably Law on the Protection of Cultural and Natural Assets No. 2863 (OG numbered 18113 and dated 21.07.1983) (revised through the amendment issued on OG numbered 25535 and dated 27.07.2004) and practices meet the WB requirements. The Regulation on Research, Drillings and Excavations concerning the Cultural and Natural Assets, published in the OG numbered 18485 and dated 10.08.1994, defines the procedures and obligations concerning the cultural and natural assets found out during construction. The municipalities are responsible for the application of the said law and regulation. As part of the regular reporting, the municipalities will inform ILBANK of the historical and cultural findings, if any, and the actions are taken.



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ILBANK is responsible for avoiding or mitigating impacts on the physical or cultural resources of the financed projects. Therefore, ILBANK will not proceed with sub-project funding until all requirements of the Turkish legislation are met.

This Project does not trigger OP 4.11 – Physical Cultural Resources (see Table 2-2 and Section 4.2.7).

OP 4.12 – Involuntary Resettlement

ILBANK has prepared a Land Acquisition and Resettlement Policy Framework (LARPF), which meets the requirements of the Bank’s OP 4.12 during cases of land take. Some of the subprojects may require additional land to be acquired for construction. In such cases, municipalities will try to avoid land take by considering alternative lands, which may belong to the municipality itself or any other public lands that may be transferred to the municipality for the Project. Additionally, existing roads and infrastructure lines will be made use of where applicable to avoid taking land in linear sub-project components. When the land take is inevitable, Project design will ensure that minimum land take is realized. In cases where there is a need to acquire additional land, a Land Acquisition and Resettlement Action Plan (LARAP) will be prepared by the borrowing municipality according to the LARPF prepared for the Project. Every sub-project that will require the acquisition of land shall have an individual LARAP that will be approved by ILBANK and cleared by the WB before construction.

This Project triggers OP 4.12 – Involuntary Resettlement related with the road expansion works to be conducted within the scope of “University Bicycle Road Construction” as some of the expansion area is presently covered with hazelnut fields. Detailed information in this respect is provided in Section 3.2.

OP 4.37 – Safety of Dams

Any sub-project which results in triggering of the policy will not be eligible for financing under SCP.

This Project does not trigger OP 4.37 – Safety of Dams conditions (see Table 2-2 and Section 4.1.3).

OP 7.50 – Projects on International Waterways

ILBANK is responsible for ensuring that the projects financed are located/depending on national waterways only. The waterways identified as NOT an international waterway (do not trigger OP 7.50) in Türkiye are as follows: Susurluk, North Aegean, Gediz, Kuçuk Menderes, Büyük Menderes, Western Mediterranean, Antalya, Sakarya, Western Black Sea, Yeşilirmak, Kızılırmak, Konya Kapalı, Eastern Mediterranean, Seyhan, Ceyhan, Eastern Black Sea, Burdur, Afyon, Central Anatolia, and Van. This policy applies to hydroelectric, irrigation, flood control, navigation, drainage, water and sewerage, industrial, and similar



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projects that involve the use or potential pollution of international waterways and any sub-project that triggers OP 7.50 will not be eligible for Bank financing.

In that respect, this Project is not located in an international waterway and thus does not trigger OP 7.50 - Projects on International Waterways.

Table 2-2. WB Operational Policies Triggered by the Project

Operational Policy	Triggered	Notes
OP 4.01 - Environmental Assessment	Yes	The construction activities are expected to cause environmental and social risks/impacts and the operation phase is expected to have positive social impacts.
OP 4.04 - Natural Habitats	No	The Project is neither located in critical and/or natural habitats, environmental protection zones nor sensitive areas.
OP 4.09 - Pest Management	No	There will be no activities that require pest management.
OP 4.10 - Indigenous Peoples	No	This policy does not apply as there are no people in Türkiye meeting the criteria in OP 4.10 for indigenous.
OP 4.11 - Physical Cultural Resources	No	There are no physical cultural resources in the project area. A Chance Finds Procedure given in Annex 10 will be implemented during construction.
OP 4.12 - Involuntary Resettlement	Yes	An Ex-Post audit is required for the "University Bicycle Road Construction" Project since some road expansion areas are covered with hazelnut fields expropriated by the Municipality from individuals where income-generating activity is currently conducted. Apart from that, the rest of the Project area will be constructed by the side of the current roads or pavements owned by Akçakoca Municipality.
OP 4.36 - Forests	No	The Project has no impacts on forest areas since it will be built in an urban setting.
OP 4.37 - Safety of Dams	No	No dam or dam-like structure will be constructed nor will the project rely on the performance of an existing dam or a dam under construction within the scope of the Project.
OP 7.50 - Projects on International Waterways	No	The project is not located on any international waterway and does not have hydroelectric, irrigation, flood control, navigation, drainage, water and sewerage, industrial, and similar project components that involve the use or potential pollution of international waterways.
OP 7.60 - Projects in Disputed Areas	No	The Project is not located within any disputed area.

2.2.2 World Bank Group General Environmental, Health and Safety Guidelines

The World Bank Group (WBG) Environmental, Health and Safety (EHS) Guidelines are technical reference documents with general and industry-specific examples of Good International Industry Practice (GIIP). If Turkish regulations differ from the levels and measures stated in these guidelines, the most stringent requirement /standards will apply to the Project for all E&S standards. The General EHS Guidelines are organized as follows:

1. Environmental

1.1 Air Emissions and Ambient Air Quality



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- 1.2 Energy Conservation
- 1.3 Wastewater and Ambient Water Quality
- 1.4 Water Conservation
- 1.5 Hazardous Materials Management
- 1.6 Waste Management
- 1.7 Noise
- 1.8 Contaminated Land
2. Occupational Health and Safety
 - 2.1 General Facility Design and Operation
 - 2.2 Communication and Training
 - 2.3 Physical Hazards
 - 2.4 Chemical Hazards
 - 2.5 Biological Hazards
 - 2.6 Radiological Hazards
 - 2.7 Personal Protective Equipment (PPE)
 - 2.8 Special Hazard Environments
 - 2.9 Monitoring
3. Community Health and Safety
 - 3.1 Water Quality and Availability
 - 3.2 Structural Safety of Project Infrastructure
 - 3.3 Life and Fire Safety (L&FS)
 - 3.4 Traffic Safety
 - 3.5 Transport of Hazardous Materials
 - 3.6 Disease Prevention
 - 3.7 Emergency Preparedness and Response
4. Construction and Decommissioning
 - 4.1 Environment
 - 4.2 Occupational Health & Safety
 - 4.3 Community Health & Safety

Moreover, WB Good Practice Note on Addressing Sexual Exploitation and Abuse and Sexual Harassment (SEA/SH), and WB 2010 Access to Information Policy are other specific guides.

2.2.3 European Union Environment Policy

EU environment policy rests on principles of precaution, prevention, and rectifying pollution at source, and the “polluter pays” principle. The precautionary principle is a risk management tool invoked when there is scientific uncertainty about a suspected risk to community and occupational health or the environment emanating from a certain action or policy. For instance, should doubts arise about the potentially harmful effects of a product, and should — following an objective scientific evaluation — uncertainty persist, instructions may be given to stop the distribution of the product or to remove it from the market. Such measures must be non-discriminatory and proportionate and reviewed once more scientific information is available. The “polluter pays” principle is implemented by the Environmental Liability Directive, which aims to prevent or otherwise remedy environmental damage to



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protected species or natural habitats, water, and soil. Operators of certain occupational activities, such as the transport of dangerous substances, or activities that imply discharge into waters, have to take preventive measures in case of an imminent threat to the environment. If damage has already occurred, they are obliged to take the appropriate measures to remedy it and pay for the costs. The directive's scope has been broadened three times to include the management of extractive waste, the operation of geological storage sites, and the safety of offshore oil and gas operations, respectively.

Certain projects that are likely to have significant effects on the environment, e.g., constructing a motorway or an airport, are subject to an EIA. Equally, a range of public plans and programs (e.g., land use, transport, energy, waste or agriculture) are subject to a similar strategic environmental assessment process (SEA). Here, environmental considerations are already integrated at the planning phase, and possible consequences are considered before a project is approved or authorized to ensure a high level of environmental protection. In both cases, consultation with the public is a central aspect. This goes back to the Aarhus Convention, a multilateral environmental agreement under the auspices of the United Nations Economic Commission for Europe (UNECE), which entered into force in 2001 and to which the EU and all its Member States are parties. It guarantees three rights to the public: public participation in environmental decision-making, access to environmental information held by public authorities (e.g., on the state of the environment or of community and occupational health were affected by the former), and the right of access to justice where the other two rights have been disregarded. Monitoring is crucial — both state of the environment and the level of implementation of EU environmental law

2.2.4 International Conventions and Agreements related to Environment to which Türkiye is a Party

- International Convention for the Protection of Birds, Paris 1959 (OG dated 17.12.1966, and numbered 12480)
- Convention for the Establishment of the European and Mediterranean Plant Protection Organization (Amended), Paris 1951 (Türkiye, OG dated 01.07.1965 and numbered 12037)
- European Cultural Convention 19.12.1954 (OG dated 17.6.1957, and numbered 9635)
- Convention on the Protection of the World Cultural and Natural Heritage, Paris 1972 (OG dated 14.2.1983, and numbered 17959)
- Convention for the Conservation of European Wildlife and Natural Habitats, Bern 1979 (OG dated 20.2.1984, and numbered 18318)
- Convention for the Protection of the Mediterranean Sea against Pollution, Barcelona 1976 (OG dated 12.6.1981, and numbered 17368)



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- **Convention on Long-range Transboundary Air Pollution, Geneva 1979 (OG dated 23.3.1983, and numbered 17996)**
- **Additional Protocol on Long-term Financing of the Co-operative Program for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP), 1979, to the Convention on Long-range Transboundary Air Pollution, Geneva 1984, (OG dated 23.7.1985, and numbered 18820)**
- **Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol on Substances Depleting the Ozone Layer, (OG dated 8-9.9.1990, and numbered 20629)**
- **Convention on Biological Diversity, Rio de Janeiro, 5.6.1992 (OG dated 27.12.1996 and numbered 22860)**
- **Convention on Wetlands of International Importance, especially as Waterfowl Habitat (RAMSAR), (OG dated 17.5.1994, and numbered 21937)**
- **CITES Convention on International Trade in Endangered Species of Wild Flora and Fauna, (OG dated 20.06.1996)**
- **Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS), 2001 (OG dated 04.04.2017 and numbered 30028)**
- **European Landscape Convention (Florence, 2000) (OG dated 27.07.2003 and numbered 25181)**
- **Convention on the Protection of the Black Sea Against Pollution, Bucharest 1992, (OG dated 14.12.1993 and numbered 21788)**



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3 Project Description

This chapter provides the information on the project location and characteristics, which were collected from the Project Identification Document (PID) prepared by Eptisa Engineering Services [1]. The categorization of the Project as per national and international requirements is included at the end of the chapter.

3.1 Project Location

The Project is planned to be implemented in the Akçakoca District of Düzce Province in Türkiye. While the western lane of the “Bicycle Road Construction” Project to be developed in the district center passes through Osmaniye and Yalı Neighbourhoods, the eastern lane of which is within the boundaries of Yalı, Cumhuriyet, Yukarı, and Hacı Yusufklar Neighborhoods. The route of “University Bicycle Road Construction” is located in Osmaniye and Yalı Neighbourhoods in addition to Doğançılar Village.

There are no sensitive areas such as important environmental protection zones, critical natural habitats, natural habitats, area of cultural or historical interest in and/or around the Area of Influence.

3.2 Project Characteristics

The bicycle routes have been designated by Akçakoca Municipality, taking into account their utilization by the townspeople and their integration into the urban transportation system. The designated roads have been developed based on 2030 Zoning Plan decisions.

The project responsible parties are ILBANK implementing the Project as Borrower, WB and EC providing technical and financial support as Lenders and Akçakoca Municipality which is the Sub-borrower of the project in the scope of SCP-II AF.

Bicycle Road Construction

These projects mainly aim to decrease the usage of private vehicles by promoting active mobility and improving the district’s transportation system. Within the scope of the Project, the designed bicycle road length is 3,015 meters (m) with double contraflow lanes and two different routes which will be parallel to the coastline along the public domain. The western route is 1,564 m and the eastern route is 1,451 m. The lane to the west on İstanbul Street will start from Değirmenağzı 15 Temmuz Demokrasi Şehitler Park and terminated in the area planned to be a square which are the beginnings of İnönü Street and the trade corridor as developed in the 2030 Zoning Plan. For this purpose, two-way access between the bus stop in the square and the routes will be installed. There are green areas, tourism facility, social reinforcement areas (Education, health, religious, cultural and administrative facilities, indoor and outdoor facilities, built by the public or private sector to meet the cultural, social and recreational needs of the individual and society and to increase the quality of life with a



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healthy environment. It is the general name given to sports facilities and open and green areas (such as parks, playgrounds, squares, recreation areas) and intensely populated residential areas on the western route. The lane to the east on Atatürk Street will be on a corridor with trade units within the recreational area and terminated in the tourism facility area [1] (see Figure 3-1).



Figure 3-1. Satellite View of the Project Site (Bicycle Road Construction)

The project location photographs are provided in Annex 2 of this report. The residential, recreational, and commercial areas as sensitive receptors traversed by the lane to the west and east are given in Table 3-1.

Table 3-1. Residential, Recreational and Commercial Areas along the “Bicycle Road Construction” Project Lanes

Area Category	Western Lane	Eastern Lane
Residential	Osmaniye Neighbourhood, and Yalı Neighbourhood	Yalı Neighborhood, Cumhuriyet Neighborhood, and Hacı Yusufklar Neighborhood
Recreational	Osman Gülen Play Garden, Kumpir Beach, Kamelya Garden, Akçakoca Meydan, Merkez Mosque.	Değirmenteği 15 Temmuz Demokrasi Şehitler Park
Commercial	Aydın Bife (stall), Aydın Tekel (group shop), taxi stand, Undankale (bakery), Yılmaz'ın Yeri Balık Lokantası (restaurant), Nes Café, Kuzine Restaurant Akçakoca, Akçakoca Dondurma (ice cream)	Ak Resort Hotel, Lider Hınlı Yıkama (carpet washing company), Kordon Cafe, Esentepe Cafe, Cafe Altıyazi, Şok Market (grocery), Barış Market (grocery), Akçakoca



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Area Category	Western Lane	Eastern Lane
	shop), Kalve & Reuğr Cafe, Balıçe Café Lounge, Şok Market (grocery), Akçakoca Kahvecisi (coffeehouse), Çınar Çiğ Köfte (raw meatball seller), Öz Adana Kebap 5 (restaurant), Mengen Sofrası Kebap 14 (restaurant), İstikbal (furniture shop), Lal Hookah (café), Rocca Café Lounge, Madalyalı Dondurma (ice cream shop), Çapa (restaurant), Terrass Akçakoca (hotel), Çınar Büfe (staff), Kamelya (restaurant), Café Cappuccino, and Gülez Ailesi Çay Bahçesi (tea garden).	Hansı Balık Lokantası (restaurant), Akaför Membran Sistemleri San ve Tic. A.Ş. (membrane systems sales company), Bekçiöğlü Petrol İnşaat San ve Tic. A.Ş. (petrol station), Oses Çiğ Köfte (meatball seller), Asya Ekmekçilik (bakery), Korkmaz Öğrenci Konaklama Tesisi (dormitory), and Diaphall Düğün Sarayı (wedding hall)

Two smart bike rental terminals, 20 smart parking spots (10 of which are in each terminal), 20 smart bikes, and 50 single rows angled bike parking spaces will be covered within the scope of the “Bicycle Road Construction” Project. A mobile application where data about the locations of the stations, the number of bicycles in the stations, and the empty parking spaces can be shared will also be developed. Besides, 13 bicycle carrier apparatus will be installed on existing and planned buses to promote routes and integrate bicycle use into the current transportation system [1].

University Bicycle Road Construction

The main aim of this project is to provide easy access to the district center while decreasing the usage of private vehicles with the promotion of active mobility and contributing to the improvement of the transportation system in the district. The length of the Project route is 1,350 m with a width of 2.4 m, and it is also planned as the two-way road on one side of the Doğançılar Village Road and its continuation Atatürk Street. There are a residential area, student’s dormitory, hazelnut processing facility, and entertainment center around the university and university campus along the route. Hazelnut fields are located on both sides of the route [1] (see Figure 3-2).



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Figure 3-2. Satellite View of the Project Site (University Bicycle Road Construction)

The sensitive receptors, along with the Project according to their categories, are given in Table 3-1.

Table 3-2. Sensitive Receptors along the “University Bicycle Road Construction” Project Lane

Category	Receptor
Residential	Osmaniye Neighbourhood, Yalı Neighbourhood and Doğanlar Village
Recreational	Fedai Karabıyık Park
Commercial	Evvel Zamanı Café-Restaurant, Alper Hazelnut Processing Facility, Café Özlem, Şampiyon Kokoreç (Restaurant)
Educational	Akçakoca Vocational School

Within this project’s scope, two bike parks will be located at the route’s start/endpoints, and nine (9) bikes for each bike park will be provided. Additionally, 41 garbage cans, 14 recycling dustbins, 40 wooden benches, and 171 lighting elements will be covered in the Project. The route on which the speed limit shall be 50 kilometers per hour (km/h) will be equipped with 18 warning signs accordingly. Besides, 13 bicycle carrier apparatus will be installed on existing buses to promote bicycles and integrate bicycle use into the existing transportation system [1].

The technical specifications for the design of the Project are as follows:

- A segregated bike path floor will be built at the level of the carriageway or pavement or at least 10 cm above the carriageway and below the pedestrian pavement level if it is at least 5 cm below the pavement. In areas where the bicycle path is at the same level as the vehicle road, a safety distance of at least 75 cm will be left from the lane



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line on the far right of the vehicle road, and painting will be done with a 20 cm wide, 45° angled lines at one (1)-meter intervals. In the middle of the safety distance, 110 cm high delineators will be placed at one (1)-meter intervals along the road. In road sections where parking can be done along the road, the distances will be at least 100 cm. As an alternative to this application, the vehicle and bicycle path can be separated by a median of at least 60 cm in width and 10 cm in height along the road

- Bicycle paths are planned as a holistic network that connects settlements, transportation points, sports facilities, and heavily used public and private service areas with other modes of transportation to meet the transportation needs safely.
- During the planning process of bicycle paths, the most suitable route for cycling is preferred in the topography. The bike path network is planned in such a way as to ensure that the cyclist can go from a starting point to the destination without interruption, based on the continuity of the road, divided by the intersections, zoning parcels and landscape elements to a minimum extent. Bicycle paths cannot be planned to pass through tunnels established for vehicle roads.
- The bicycle path network is planned in such a way as to ensure that cyclists can be seen clearly by vehicles and pedestrians when crossing motor vehicle roads and considering the priorities of the right of way determined in the Highway Traffic Law No. 2918 published in the OG numbered 18195 and dated 18/10/1983
- Bicycle lanes and bicycle parking stations are shown in the implementation zoning plan and, if any, in the transportation master plan and urban design project following the Spatial Plans Construction Regulation published in the OG dated 14/6/2014 and numbered 29030. Bicycle parking stations are planned in such a way that they are associated with bicycle path networks and in numbers to meet the need.
- It is obligatory to include reserved bicycle paths and bicycle parking stations in the new zoning plans for unplanned areas. In places with a zoning plan, except for shared bicycle paths, bicycle lanes and bicycle tracks, bicycle paths cannot be established without a change in the implementation zoning plan. It is obligatory to allocate space in the zoning plan for separated bicycle paths, bicycle highways, bicycle bridges and tunnels. In the revisions of the zoning plan, bicycle paths and bicycle parking stations reserved throughout the plan are included by the provisions of the Bicycle Roads Regulation published in the OG numbered 30976 and dated 12.12.2019.

Based on the information provided by the Akçakoca Municipality, auxiliary facilities will be used during the construction phase, such as temporary worksites, construction components, storage areas, etc., within the designated Project area. For these auxiliary facilities, the parking lot of the Akçakoca Municipality on the western part of the 'Bicycle Road' is planned to be used by the Contractor during construction phase (see Figure 3-3 and Figure 3-4). There will be a single contractor for the construction of "Bicycle Road" and



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“University Bicycle Road”. The number of permanent workers to be employed during construction phase of the Project is 15-20. There will be also a camp site for the daily needs of construction workers on the left side of “University Bicycle Road” in “Osmaniye Neighbourhood Block No. 96 Parcel No. 39” belonging to the Akçakoca Municipality. The title deed of the land is provided in Annex 3 of this document. The expropriation of this area was made in 2003 and there was no activity in the area before and after 2003. The land is vacant. The Sub-borrower will also be responsible for the annual inspections and maintenance works (regular maintenance and updating of the bicycle parks, bicycle-sharing systems, bicycle road, mobile application) during the operation phase. In this respect, staff including civil engineers, mechanical engineers, landscape architects, electrical technicians and operators, survey engineers, and technicians will be employed. The estimated number of personnel to be employed during operation phase is 5-10.



Figure 3-3. Bicycle Road Parking Lot and Storage Area



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Figure 3-4. University Bicycle Road Storage Area

The Project schedule has not been determined yet. Initially, the tender documents need to be prepared for the Project by Akçakoca Municipality with the support of ILBANK. During tender phase, the exact Project schedule will be decided by Akçakoca Municipality. The predicted project progress timing is as follows:

- Three (3) months for design review and revisions (by consultant),
- Three (3) months for bid preparation, bidding and bid evaluation,
- Twelve (12) months for contract signing and construction,
- Twelve (12) months is foreseen for the Defect Reporting Period.

This project was exempt from an EIA study according to the repealed EIA Regulation (Official Gazette numbered 29186 and dated 25.11.2014). The EIA Exemption Letters issued by PDEUC are provided in Annex I. In the sequel, the new EIA Regulation has become into force by being published in the Official Gazette dated 29.07.2022 and numbered 31907. Nevertheless, the Exemption Letter is still valid as the conditions for the exemption have not change, which means, the activity is still not listed in Annex I or Annex II lists of the regulation. The project is also classified as a Category B Project according to the WB OP 4.01.

Following opinions were also received from relevant public institutions for the “University Bicycle Road Construction” Project (see Annex-4):

- It is stated in the opinion letter received from the “4th Regional Directorate of Highways” dated 17th November 2021 that there is another planned project (Melenagzi-Akçakoca State Highway) along the bicycle route and which is in the



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approval stage by the relevant authority. The letter does not object to the project provided that the underpass project at Km: 16+036 of new project route is considered at the relevant section within the scope of the Project activities.

- According to the opinion letter obtained from the “5th Regional Directorate of the General Directorate of State Hydraulic Works (DSİ)” dated 8th December 2021, the authority requires the Sub-borrower to submit a “Stream Improvement Project” on the bicycle route between Km: 0+960.00 and Km: 1+140.00, where Haciz Stream passes close to the bicycle route, for approval and fulfill the upstream/downstream conditions of Haciz Stream

The area, where the “Bicycle Road Construction” Project will be developed is in the public domain and included in the zoning plan. Therefore, no land requirement is of concern for this part of the Project.

On the other hand, road expansion works will be conducted within the scope of “University Bicycle Road Construction” and some of the expansion area is within existing hazelnut fields owned by 10 individuals. Not all the area of these hazelnut fields were expropriated, but only a certain part of them. The property area coinciding with the bike path is given in Table 3-3. The cost of the hazelnut trees coinciding with the bicycle road route has been resolved by netting, on the condition of harvesting for one more season. Therefore, the income-generating activity is currently ongoing in the relevant field. Reconciliation for the trees that no longer exist within the former parcel borders because of the change of the parcel borders takes place in two ways:

1. The new parcel owner can buy the trees from the former owner.
2. If a former parcel owner demands so, the trees can be removed without any damage, moved to the requested area and planted with the support of the municipality.

Table 3-3. Property Area Coinciding with the Bike Path

Neighborhood	Block	Parcel	Cadaster Parcel Area (m ²)	Property area coinciding with the bike path (m ²)
Osmaniye/Doğancılar	96	21	1008	226.56
Osmaniye/Doğancılar	99	1	4467	121.146
Osmaniye/Doğancılar	99	3	4185	375.25
Osmaniye/Doğancılar	106	1	7088.1	82.56
Osmaniye/Doğancılar	106	2	6550	18.82
Osmaniye/Doğancılar	106	3	7989.76	233.43
Osmaniye/Doğancılar	109	1	1462.08	356.54
Osmaniye/Doğancılar	109	2	4533.32	131.14

The road expansion area was defined as roads in the zoning plan in compliance with Article 18 of Zoning Law No. 3194. According to the first paragraph of Article 18 of the Zoning



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Law No. 3194, Municipalities and Governorates are authorized within municipal and adjacent area borders through municipal board decisions and outside these borders through special provincial administration decisions, respectively, to amalgamate the plots and lands, whether having buildings or not, with each other, road surpluses, places belonging to government entities, or places belonging to municipalities divide them again into blocks or parcels in accordance with zoning plans and distribute them to the right holders individually, jointly or on the basis of condominium ownership without seeking the consent of the owners or other right holders and to register them ex officio. Despite the fact that Article 18 is implemented ex officio without the consent of citizens, Akçakoca municipality completed the work in agreement with all citizens. The implementation of Article 18, consisting of 3 stages in total, was concluded in 2 years. Approximately 1 year of this period (due to the ban on meeting because of the pandemic) covers the meetings and presentations made for the purpose of consultation with the owners and receiving their demands. During the land acquisition, which was completed by taking the opinions of all the owners, first of all some information meetings were held on the nature of the Plot and Land work to be carried out in accordance with Article 18 of the Zoning Law No. 3194, its purpose, and the gains as a result of its implementation.

As a result of the negotiations with the landowners in 2020 and 2021, the land registry of these areas was transferred to Düzce Municipality at the end of 2021. According to the relevant legislation, no payment was made for these fields during the land registry transfer. However, although the area of land belonging to individuals has decreased with the expropriation, the market value of the land has increased as the region has become suitable for construction as a result of the new parceling work. The opinion letter dated 28th December 2021 on implementing Article 18 of Zoning Law No 3194 was obtained from “The Directorate of Zoning and Urbanization” (see Annex-4) An Ex-Post Audit is required for the “University Bicycle Road Construction” Project since the income-generating activity is currently conducted on areas covered with hazelnut fields.

A separate Stakeholder Engagement Plan (SEP) will also be developed to identify the stakeholders (including local authorities, communities, workers, etc.), including the potentially vulnerable/disadvantaged individuals/groups, outline the sub-projects communication and engagement strategy, introduce tools and measures of engagement, and set out the principles of grievance of the Project.



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4 Environmental and Social Baseline

This chapter briefly summarizes the existing environmental and social baseline conditions within the Project's Area of Influence (AoI). WB OP 4.01 defines AoI as the area likely to be affected by the project, including all its ancillary aspects and unplanned developments induced by the project. Thus, the AoI, which is valid for all environmental and social impacts, is defined as follows and shown in Figure 4-1 and Figure 4-2:

- The major areas, facilities, and communities potentially to be affected by the Project are listed below.
 - Project area covering the existing roads,
 - Auxiliary facilities (parking lot and storage areas),
 - Residential, recreational, commercial and educational areas along the Project routes (see Table 3-1 and Table 3-2),
 - Hazelnut trees located on the road expansion area of "University Bicycle Construction" Project,
 - Waste disposal areas/facilities to be used during the construction and operation phases of the Project.
- Based on the information provided by the Sub-borrower, there are no ancillary facilities as part of the Project, no concrete batching plant will be installed, and ready-mix concrete will be used.

The baseline data collection was mainly conducted through desktop studies. It was presented initially for the Düzce Province and subsequently for the Akçakoca District when the data was available and pertinent to the Project development. In addition, a face-to-face briefing meeting was conducted with Akçakoca Municipality on 18th August 2021, and a site reconnaissance visit was conducted on the same date together with an Akçakoca Municipality representative. Phone interviews were also conducted at different times (26.02.2023, 27.12.2022, 06.11.2023 and 09.11.2023) with the headman of Hacı Yusufklar, Osmaniye, Yukarı, Yalı and Cumhuriyet neighborhoods and Doğanclar village, where the Project will be realized. The headmen were informed about the project and the information about social baseline of the neighborhood was discussed.



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Figure 4-1. Neighbourhoods Where the Major Communities Potentially to be affected by the Bicycle Road Project and the Project's Area of Influence



Figure 4-2. Neighbourhoods Where the Major Communities Potentially to be affected by the University Bicycle Road Construction Project and the Project's Area of Influence



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4.1 Environmental Baseline

4.1.1 Geography

Düzce Province

Düzce Province is located at the western Black Sea Region. It was formerly a district within the Bolu Province. It was established as a province on December 9, 1999, after the major earthquakes of August 17 in Gölçük District and November 12, 1999, in Düzce Province [2]. The location of Düzce Province is given in Figure 4-3.



Figure 4-3. Düzce Province Location [3]

The province has 395,679 inhabitants (as of the end of 2020) in an area of 2,492 square kilometer (km²). The population density is 158.8 inhabitants/km². Düzce Province is divided into 8 districts as shown in Figure 4-4 as Akçakoca, Çilimli, Cumayeri, Düzce (Central District), Gölyaka, Gümüşova, Kaynaşlı and Yığılca [4]. The Project will be developed in the Akçakoca District.



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Figure 4-4. Districts of Düzce Province [5]

Düzce Province has a 28 km long coastline in the Black Sea in the north (see Figure 4-5). The territory of the Province consists of areas surrounded by mountains, except for the coastal part. There are Akçakoca Mountains in the northern part, Bolu Mountains in the eastern part, and Elmacık Mountains in the southern part. Düzce Plain located in the middle of the Province is important in agricultural activities [2].



Figure 4-5. Satellite View of Düzce Province

Akçakoca District

The Akçakoca District boundaries are shown in Figure 4-6. It is the westernmost part of the Western Black Sea geographical region and the only seaside district of Düzce Province with



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a 28 km coastline. Akçakoca District is traversed by the Trans European Motorway (TEM), 270 km from Ankara Province and 243 km from Istanbul Province. Akçakoca District is 37 km from the center of Düzce Province [2].

The district has a population of 39,229 for the year 2020, with 27,245 people living in urban areas and 11,984 in rural areas [6]. Today's population is doubled in the summer months due to tourism activities and cottage owners [1].

The total surface area of the district is 463 km² and approximately 40% of the total land consists of forest areas and hazelnut groves [2].



Figure 4-6. Map of Akçakoca District

While the western lane of the “Bicycle Road Construction” Project passes through Osmaniye and Yalı neighborhoods, and the eastern lane of which is within the boundaries of Yalı, Cumhuriyet, Yukarı and Hacı Yusufklar neighborhoods. The route of “University Bicycle Road Construction” is located in Osmaniye and Yalı neighborhoods in addition to Doğancılar Village.

4.1.2 Topography and Geology

Düzce Plain forming the mid-section of the Düzce basin, presents a low inclined topography toward the southwest (toward Lake Eftani). The drainage network, which has developed based on the morphology of the basin, has northeast-southwest and east-west flows. Küçük Melen River and Asarsuyu Creek drain the surface waters of the basin into Lake Eftani whereas Büyük Melen River subsequently discharges the waters of Lake Eftani to the Black Sea with South-North flowing direction. The hydrologic and morphologic features in the



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basin are the results of the intense tectonic activity that controls the basic structure and overall slope of the plain. The geological map of the Düzce Basin and its surroundings is given in Figure 4-7 [7].

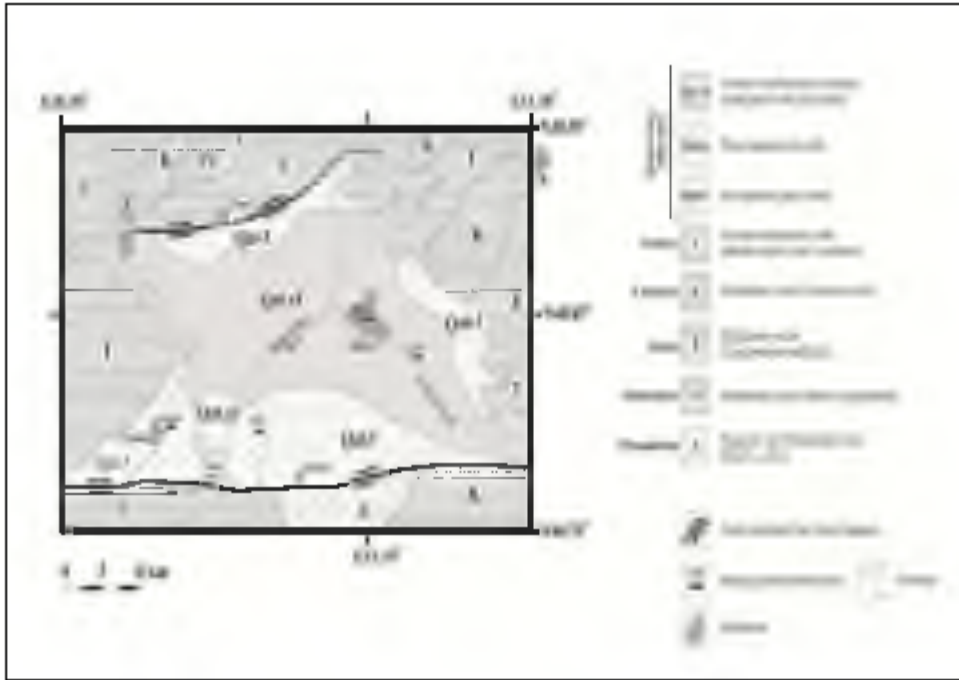


Figure 4-7. Geological Map of Düzce Basin and Surroundings

The base rocks of the region consist of a group of Precambrian Magmatic and Metamorphic rocks (Z). Schists and granitic rocks are the base rocks on which there is a thick sedimentary sequence. The sequence starts with the Ordovician sedimentary rocks composed of arkose and conglomerate (O). Alternating Triassic sandstone and conglomerate rocks (TR) overlay the Ordovician rocks outcrop in the east of the basin. Cretaceous limestone-marl intercalations (K) on the Triassic rocks are widely observed in the region. Tertiary volcano-sedimentary rocks (T) with flysch character in some places deposited on the Cretaceous rocks. The volcano-sedimentary unit is composed of intercalated basalt-andesite, marl, and sandstone lithologies. Basalts and andesites are the dominant lithologies in the southwestern part of the region. The youngest unit is the alluvium deposited in the basin. The thickness and lithologic variation of the alluvium depend on the tectonic setting that directly affects the morphology and basin geometry. Alluvial fan deposits (Qal-f) on the north and south slopes of the mountains, channel and flood plain deposits (Qal-cf) in the impact areas of Küçük Melen and Büyük Melen Rivers and Asarsuyu Creek, and lacustrine-playa deposits (Qal-p) around Lake Eftani were deposited under the effects of tectonic forces. Alluvial fan deposits consist of gravel-sand, channel and flood plain deposits containing sand-gravel with clay lenses and lacustrine-playa deposits are composed of clay-silt type sediments [7].

The Akçakoca District is formed mainly of mountains and hills. The landform is formed by structural formation phase and these are folded Mesozoic and lower tertiary on the coast,



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also folded crystalline Palaeozoic-Mesozoic and horizontal upper tertiary in the south (see Figure 4-6) [1]. The rocks that impact the landform are sandstone, conglomerate, and flysch formations parallel to the coast and schist and gneiss towards the south.



Figure 4-8. 1/100,000 scaled Geomorphological Map of the Akçakoca District [1]

While the valley bottom of the creeks is alluvium in the district, hillsides represent silica formation. Sandy and pebbly layers formed during three different geological periods exist on the upper parts of the hills. Schists and crystalline schists consisting of eastern and southern, Palaeozoic and tertiary terrain cover the environment in the district. Melting and erosion of limestone and rocks formed large and small caves. The district ground consists of calcareous rocks [1].

4.1.3 Hydrology and Hydrogeology

Surface Waters

The main rivers in Düzce Province are the Küçük Melen, Asar Water, Uğur Suyu Stream, Aksu Creek and Büyük Melen Stream. All the streams located in the area outside the coastal part of Akçakoca District of Düzce Province belong to the Melen Basin, or Efteni Basin, which is a sub-basin of the Western Black Sea basin. Melen Çayı Collection Basin constitutes the Büyük Melen Project basin, which provides drinking water to Istanbul Province. Except for the Akçakoca District, the entire province is within the Büyük Melen Project Basin [2]. The streams passing through the city center are either covered and taken into the pipes, or the water is evacuated by taking them into concrete channels [8].



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The main lakes in Düzce Province are Efteni Lake, Kuru Lake, Topuk Plateau Pond, Karagöl, Yayla Lake, Salık Lake and Sülüklü Lake [2]. There are no lakes within the Project Area.

There is only one dam in Düzce Province, namely Hasanlar Dam, which is located on Kuçuk Melen near Yığılca District and was completed in 1992 [2]. There are no dams within the Project Area.

The groundwater resources were used for drinking water supply until 1994 in the Düzce Province. The Uğur Suyu Stream's surface water resource was commissioned in 1994 and started to meet the province's water needs. The Stream is located 9-10 km southwest of the Province. The stream water taken from Düzce Province is conveyed to the drinking water treatment plant in Beyköy by gravity via a transmission line of approximately 6.5 km. For the chemical treatment, aluminum sulfate solution is dosed in the raw water to improve the properties, sulphuric acid against microorganisms present in the water, and chlorine for disinfection. After being chemically treated at the treatment plant, the water is fed into the city water supply network. The total network length is 830 km [2].

Haciz Stream passes close on the bicycle route between Km: 0+960.00 and Km: 1-140.00. According to the opinion letter obtained from "5th Regional Directorate of the General Directorate of DSI" dated 8th December 2021, the authority requires the Sub-borrower to submit a "Stream Improvement Project" for approval and fulfill the upstream/downstream conditions of Haciz Stream (see Figure 4-9).



Figure 4-9. Representation of Haciz Stream Passing Close On the University Bicycle Route



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Groundwater

The important aquifer unit in the Düzce basin is the alluviums extending along the rivers and Düzce plain alluvium. The amount of groundwater used in the province in 2018 is 20,000 tons/year. Considering the Büyük Melen Basin in Düzce Plain, the groundwater level is between 0.5 and 5 m in the upper unconfined aquifer, and it is artesian in the confined aquifer below [2].

In Akçakoca-Kocaali Basin, however, there are not an adequate number of wells to establish the groundwater level distribution. Since the basin topography is rather undulated, it is estimated that there may be large variations in groundwater levels depending on the quota and hydrogeological conditions. The groundwater level in the valley alluvium is between 0.5 and 5 m [2].

4.1.4 Seismicity

Düzce Basin is structured as a graben-like basin, formed by the activities of the North Anatolian Fault. The active Gölyaka-Eftani-Beyköy Fault bounds the basin in the south and the Çilimli-Konuralp Fault in the north. These faults are part of the south and north segments of the North Anatolian Fault and they are the main elements shaping the morphology of the region [7]. The North Anatolian Fault is one of Türkiye's most important active faults. Starting from the Karlıova Region in the east, it traverses the northern half of Türkiye in the east-west direction. This fault is observed in a narrow zone consisting of single fractures until the Bolu Region, forks in the west of Bolu (Dokurcun valley) Region and extends towards the Marmara Sea by dividing into two main branches. In Sakarya-Düzce Region, Hendek and Düzce faults also join the North Anatolian Fault system, and the width of the fault zone reaches 40 km [9].

According to the Seismicity Map of Türkiye published by Disaster and Emergency Management Presidency (AFAD), which came into effect on January 1, 2019, the Düzce Region is a high-risk earthquake region. The seismicity map of Türkiye is given in Figure 4-10.



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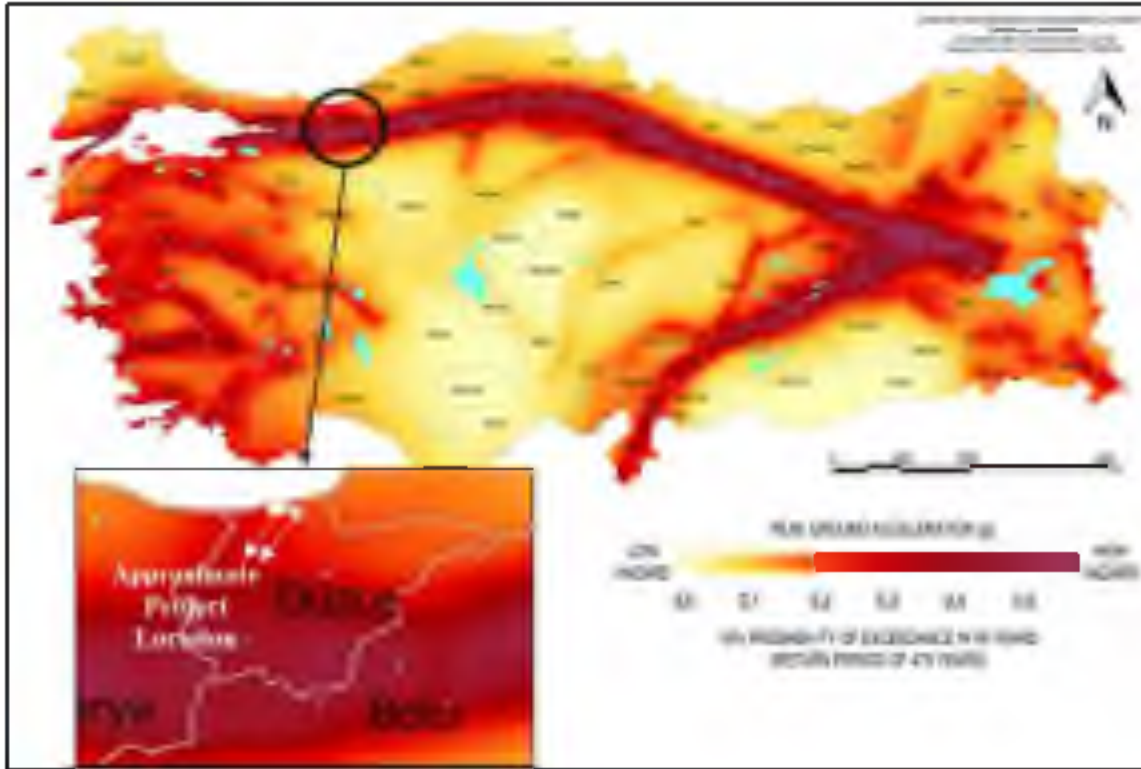


Figure 4-10. Seismicity Map of Türkiye and Closer View of Düzce Province [10]

4.1.5 Climatic Conditions and Meteorology

The Köppen-Trewartha climate classification defines six main climate groups. According to Trewartha, climate groups A, C, D, E and F are the main thermal regions. The sixth group is the dry climate zone that intersects with other climate types except the B, F arctic climate. Düzce Province has a humid subtropical climate (Cfa) under the Köppen climate classification and an oceanic climate (Do) under the Trewartha climate classification. It experiences chilly, snowy winters and warm summers [11].

According to Long Term Meteorological Data the General Directorate of Meteorology for the years between 1959 and 2020 collected at the measurement stations located in Düzce Province (Akçakoca Lighthouse, Gölyaka, Düzce, Akçakoca, Yığılca Cumayeri, Yığılca-Yoğunpelit Village, Gölyaka-Kardüz Plateau, Çilimli, Kaynaşlı and Gümüşova), the annual average temperature is measured as 13.2 Degree Celcius ($^{\circ}\text{C}$) while the coldest month is January (3.7°C), and the hottest month is July (22.6°C). Abundant precipitation is observed in winter and autumn, while the driest season is summer. The average amount of annual precipitation is 817.7 millimeter (mm). The annual average humidity is 77.5%. The number of days with snowfall is six (6), and the duration of snow on the ground is five (5) days. The frost event is observed for 44 days. The fog event occurs 23 days a year, abundantly in November (eight (8) days) [12]. Further climate data is given in Table 4-1.



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Table 4-1. Long Term Meteorological Data of Düzce Province (1959–2020) [12]

Parameter	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Highest temperature °C	24.5	26.9	32.2	34.7	39.5	39.0	42.4	42.0	38.7	38.2	30.2	29.2	42.4
Average highest temperature °C	8.7	11.2	14.3	19.3	23.9	27.5	29.7	30.0	26.5	21.5	15.9	10.3	19.9
Average daily temperature °C	4.1	5.5	8.2	12.3	17.0	20.8	23.1	23.2	19.3	14.8	9.5	5.6	13.6
Average lowest temperature °C	0.8	1.5	3.7	7.1	11.5	15.2	17.4	17.8	13.9	10.3	5.3	2.3	8.9
Lowest temperature °C	-20.5	-17.3	-13.6	-3.0	0.4	6.6	8.8	7.6	4.5	-1.2	-6.8	-16.5	-20.5
Average of total monthly precipitation amount mm	87.1	70.7	77.1	60.6	61.5	76.7	39.3	51.1	52.7	82.8	67.6	95.7	822.9
Average number of rainy days	15.00	14.47	14.33	12.60	12.70	10.57	6.70	6.17	8.90	12.00	11.60	16.07	141.1
Average number of monthly sunny hours	58.9	84.8	117.8	162.0	210.8	246.0	272.8	254.2	195.0	136.4	87.0	52.7	1,878.4
Average number of daily sunny hours	1.9	3.0	.8	5.4	6.8	8.2	8.8	8.2	6.5	4.4	2.9	1.7	5.1

4.1.6 Natural Hazards

Due to the steeply sloped surrounding rocks of the Düzce Basin and the nearly-flat topography of the Düzce plain, an alluvial fan has formed in almost all the basin edges. Streams in the basin, on the other hand, have highly twisted and meandering channels. The low elevation difference between the mean bed slopes of the outer parts of the streams and the alluvial fans and the Efteni Lake causes the stream beds to remain very shallow. These drainage features create a significant flood risk for the Düzce basin [13].

The heavy rain that started on 17 July 2019 and continued on 18 July 2019 in Düzce Province caused flooding and affected the Akçakoca District to a damaging extent. According to the damage status study of Düzce PDEUCC after the flood, 36 houses were demolished, 23 houses were severely damaged and a landslide risk was determined for 61 residences in the district. The streams in the city center pass through the pipes and the water is difficultly drained in the concrete channels with insufficient section. As a result of the increase in stream flow due to rainwater, it could not be flow into the sea easily and the shops and roads in the center were flooded [8].

Figure 4-11 shows that 29 flood events occurred in Düzce Province from 1950 to 2019. Throughout the district, there are areas with significant flood risk due to the topography. Especially because of excessive precipitation, the probability of flood events is high. Flood area boundaries have been determined around four streams/canals passing through the city center, as shown in Figure 4-12. Both road project are close to the projected stream 100-500 year flood boundaries but are not within the flood zone



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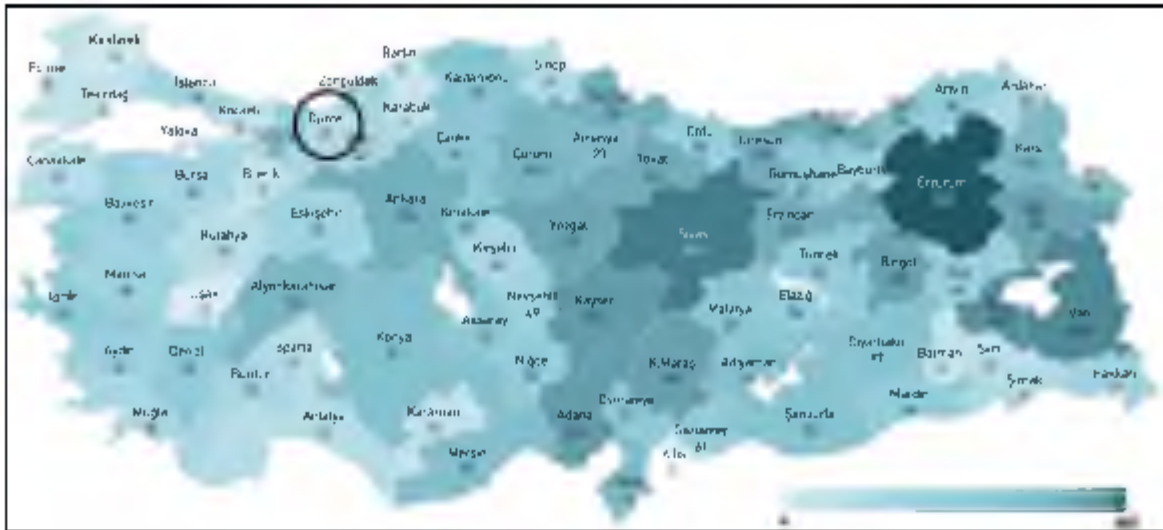


Figure 4-11. Number of Flooding Events between 1950 and 2019



Figure 4-12. Streams and Flooding Zones in the Akçakoca District

Mass movements are common around the Düzce Basin due to its abundant rainy climate and its geological-geomorphological structure. It has been determined that the majority of the dislocations from the mass movements occurred during the heavy rains in May 1998. Around the basin; Yazlık Creek, where Düzce-Akçakoca Highway passes, in the north, and Büyük Melen Stream valley in the north of Cumayeri District are the areas where landslides are most intense. The second region where landslides are concentrated is the skirts of Almacık Mountain, which borders the south of the basin [13]. The Project is not located in the landslide area



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4.1.7 Land Use and Ownership

In the Akçakoca District, public lands are scattered throughout the city. The properties with a large surface area are treasury and official institution lands. Of the total public property (70.85 hectares), 26.48% is owned by the treasury and 20.69% is public institution owned areas. Municipal property is 13.66 hectares. This is followed by areas allocated to the Ministry of National Education with 9.13 hectares and pastures with an area of 5.92 hectares. Forest areas have the least ownership rate of 0.27% in the city. [14]

The area where the “Bicycle Road Construction” Project will be developed is in the areas owned by individuals. On the other hand, some areas where road expansion works will be conducted are covered with hazelnut fields within the scope of the “University Bicycle Road” Project. Not all of these hazelnut fields were expropriated, but only a certain part of them. The property area coinciding with the bike path is given in Table 3-3. The cost of the hazelnut trees coinciding with the bicycle road route has been resolved by netting, on the condition of harvesting 1 more season. Therefore, the income-generating activity is currently operated in the relevant field. Reconciliation for the trees that no longer exist within the former parcel borders because of the change of the parcel borders takes place in two ways:

- 1-The new parcel owner can buy the trees from the former owner.
- 2-If a former parcel owner demands so, the trees can be removed without any damage, moved to the requested area and planted with the support of the municipality.

The road expansion area was defined as roads in the zoning plan in compliance with Article 18 of Zoning Law No. 3194.

According to the first paragraph of Article 18 of the Zoning Law No. 3194, Municipalities and Governorates are authorized within municipal and adjacent area borders through municipal board decisions and outside these borders through special provincial administration decisions, respectively, to amalgamate the plots and lands, whether having buildings or not, with each other, road surpluses, places belonging to government entities, or places belonging to municipalities divide them again into blocks or parcels in accordance with zoning plans and distribute them to the right holders individually, jointly or on the basis of condominium ownership without seeking the consent of the owners or other right holders and to register them ex officio. Despite the fact that Article 18 is implemented ex officio without the consent of citizens, Akçakoca municipality completed the work in agreement with all our citizens. The implementation of Article 18, consisting of 3 stages in total, was concluded in 2 years. Approximately 1 year of this period (due to the ban on meeting because of the pandemic) covers the meetings and presentations made for the purpose of consultation with the owners and receiving their demands. During the land acquisition, which was completed by taking the opinions of all the owners, first of all some information meetings were held on the nature of the Plot and Land work to be carried out in accordance with



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Article 18 of the Zoning Law No 3194, its purpose, and the gains as a result of its implementation

As a result of the negotiations with the landowners in 2020 and 2021, the land registry of these areas was transferred to Akçakoca Municipality at the end of 2021. According to the relevant legislation, no payment was made for these fields from individuals during the land registry transfer. However, although the area of land belonging to individuals has decreased with the expropriation, the market value of the land has increased as the region has become suitable for construction as a result of the new parceling work. The opinion letter dated 28th December 2021 on implementing Article 18 of Zoning Law No 3194 was obtained from “The Directorate of Zoning and Urbanization”

4.1.8 Soil Quality

Düzce Plain is a depression plain located in the center of Düzce Province. The Limeless Brown Forest soils observed in the mountainous areas around the plain are the most common soil group within the province’s borders. These soils are generally deciduous in winter and spread in broad-leaved forests. The Red Yellow Podzolic soils on the Black Sea coast are another soil group with a wide distribution area dominated by the Black Sea climate, and they spread from the coastal area to the Düzce Plain. Alluvial soils, suitable for agriculture, are present in almost all of Düzce Plain. On the other hand, Brown Forest and Grey Brown Podzolic soils are observed in east and north-east, respectively. Additionally, hydromorphic and colluvial soils in thin strips are also found in places in the province (see Figure 4-13) [15]. In the Project area, red yellow podzolic soils and colluvial soils are found according to Figure 4-13



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Figure 4-13. Distribution of Large Soil Groups in Düzce Province [15]

The area and distribution of Land Use Capability classes are other factors impacting the distribution of land use /land cover. The areas included in the first four Land Use Capability classes are suitable for cultivated agriculture. In contrast, those covered in the last four (4) classes are not suitable for cultivated agriculture. Fifth, sixth, and seventh-class lands are not suitable for agriculture but could be evaluated for cultivation at different times. Lands turn into eighth-class useless lands due to erosion and bedrock coming to the surface and of, which should be used as pasture and forest [15].

Additionally, these lands positively contribute to the natural environment and can be evaluated for different activities, i.e., tourism and sports. Considering the land use capability of Düzce Province, while 21% of the land is suitable for cultivated agriculture, 79% consists of areas not suitable for which. Most of the productive lands in cultivated agriculture in Düzce Province exist in the Düzce Plain and its close surroundings. The lands located in high and sloping fields around the Düzce Plain are not suitable for cultivated agriculture (see Figure 4-14) [15].

In the Project area, class IV land, which means the land is suitable for cultivated agriculture are found.



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Figure 4-14. Land Capability Class Map of Düzce Province [15]

Brown forest and alluvial soils exist in the Akçakoca District. Forests also consist of yellow and red soils. The character of soil in the district is clay-loam. The soil structure is composed of 78-89% organic fracture, which is moderately and slightly acidic. The lime composition of soils is low and its salinity varies between 35 and 44%. The soil structure is poor in terms of potassium and phosphorus compositions [1].

The area where the "Bicycle Road Construction" Project will be developed is in the public domain and land use capability is reserved as an urban setting. On the other hand, some areas where road expansion works of the "University Bicycle Road" Project will be conducted are covered with hazelnut fields. This area falls in the Red Yellow Podzolic soil in the Fourth Land Use Capability class which is suitable for cultivated agriculture.

Activity Preliminary Information Form applications submitted to PDEUCC within the scope of "Regulation on Control of Soil Pollution and Point Source Contaminated Sites" are being evaluated and the relevant inspections are ongoing by the authority. In this respect, there are 193 suspicious areas and 16 areas requiring follow-up and there is no contaminated area within the province's borders [2]. There is no investigation study on soil quality specifically for the Project area.



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4.1.9 Air Quality

The air quality measurement results for the period 05.12 2018-06.01 2019 was obtained from the air quality measurement vehicle belonging to the MEUCC located in Akçakoca District (and approximately 500 m away from the western lane of the "Bicycle Road Construction" Project). The temporal variation of the measurement results and its relationship with meteorological factors were evaluated by the by the "North Central Anatolia Clean Air Central Directorate" in "Düzce Province Akçakoca District Mobile Vehicle Air Quality Analysis Report" [16]. According to the results of the report, the following was identified:

- During the measurement period, dust concentrations do not exceed the daily limit value,
- Although the effect of warming is dominant due to the winter period, the concentrations of all air emissions Sulphur Dioxide, Particulate matter less than 10 µm, Nitrogen oxides, Nitrogen dioxide, Carbon monoxide and Ozone (SO₂, PM10, NO_x, NO, NO₂, CO and O₃) remain below the limit values, and the air quality in the index is good at a rate of 95%,
- There are winds with a speed of 10-12 meter per second (m/s) in wind speeds, especially in southerly winds, and the pollution may have been swept away,
- When the pollution roses are examined, the Air Quality Index (AQI) according to the limit value is generally at the "Good" low frequency and "Medium" limit in almost all directional winds.

4.1.10 Waste Management

Düzce Provincial Solid Waste Association (DİKAB) was established between Düzce Province Municipalities with the Council of Ministers Decision dated 27.12.2002 and numbered 2002/5116, to find solutions to environmental problems that cause environmental pollution and negatively affect public health in Düzce Province. The Akçakoca Municipality is also a member of the union. A licensed landfill facility operated by the Düzce Municipality is currently used by Akçakoca Municipality to manage municipal wastes. The landfill facility has all the relevant environmental licenses and permits for operation and operates in compliance with relevant legislation. This Düzce landfill will be used during all phases of the Project.

As of 01.10.2018, the Zero Waste Project has been implemented in the Province, starting from the Governor's Office. Then wastes have been collected separately in all Public Institutions and sent to recycling/disposal [2].

One disposal site is available within the province boundaries to dispose of excavation soil wastes [2]. The number of waste treatment facilities in Düzce Province as of 2020 is shown in Table 4-2.



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Table 4-2. Number of waste treatment facilities in Düzce Province as of 2020 [2]

Sanitary Landfill	1
Licensed Packaging Waste Collection, Separation and Recovery Facilities	27
Hazardous Waste Recovery Facilities	4
Waste Oil Recovery Facilities	-
Waste Vegetable Oil Recovery Facilities	-
Waste Battery and Accumulator Recovery Facilities	1
End-of-Life Tire Recovery Facilities	-
Medical Waste Sterilization Facilities	1
Non-Hazardous Waste Recovery Facilities	39
Waste Electrical and Electronic Goods Processing Plants	1
Mine Waste Disposal Facilities	-

4.1.11 Noise

While Düzce Municipality evaluates the complaints from the Province's center, the complaints outside the adjacent areas and in the districts are handled by the Düzce PDEUCC. The PDEUCC received several complaints in 2020 due to industrial activities [2]. No complaint is received on potential impacts of the Project activities on noise generation.

4.1.12 Flora and Fauna

Flora

Türkiye's phytogeographic regions are Euro-Siberian (Euxine) Floristic Area, Mediterranean Floristic Area and Irano-Turanian Floristic Area. These regions are explained below [35]:

Euro-Siberian (Euxine) Floristic Area: This area is divided into two sub-regions as Euxine provens and Hirkanian provens. The area in the west close to the Black Sea is called the Euxine provens, and the area in the east, which is dominant in the northern Iran and Talish regions, is called the Hirkanian provens. The Euro-Siberian area is represented by the Euxine provens in Türkiye. This area covers all northern Anatolia and runs to the western part of the Caucasus. A broad-leaved forest formation, in which conifers are also mixed, spreads in the higher parts of Euxine provens.

Mediterranean Floristic Area: This area is represented in Türkiye by the "East Mediterranean Provens", which is considered to extend from the eastern half of Italy to Lebanon, and covers all the southern Anatolian coasts, reaching from the western Anatolian coast to the Gallipoli Peninsula in the south of Thrace. Plant life in these areas continues for a significant part of the year without any major interruption. Dry forests and maquis elements, which are prominent representatives of the Mediterranean climate, spread.

Irano-Turanian Floristic Area: The Iran – Turan flora area in Türkiye is surrounded by the European – Siberian Floristic Area from the north and the Mediterranean Floristic area in



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the west and south. It includes the Central Anatolian plateaus and the Eastern Anatolian plateaus. Naturally, these surrounding mountain chains determined the boundaries and climate of this area. This area is characterized with steppe, mountain steppe and semi-desert in Iran and Central Asia.

Düzce Province is under the Euro-Siberian (Euxine) Floristic Area, Mediterranean Floristic Area and Irano-Turanian Floristic Area spreading in the northwest Black Sea region. The province is in the transition zone of Euxine (Mid-West Black Sea) and Xero-Euxine (Arid Western Black Sea) Floristic Areas. Samandere Valley starts from the Beyköy-Uğur Village in the southeast of Düzce Province and stretches to Lake Abant and the Abant Mountains. The effect of the Mid-West Black Sea sub-floristic area (Sub-Euxine) of the Euro-Siberian Floristic Area is observed in the high places of Abant Mountains (1,600 m) facing northwest, in the Samandere Valley and along the streams. The effect of the Mediterranean Floristic Area is locally observed in the front valley formed by Uğur Suyu Stream located between Beyköy-Uğur Village-Derdin and the northern part of Düzce Province. Irano-Turanian Floristic area is observed in the Central Anatolian section of Düzce, which is under the effect of steppe climate; transition areas to the Xero-Euxine Floristic Area in the south; the high parts of the Sinekli and Sakarcı Plateaus; and the areas of the Abant Mountains (1,500-1,600 m) where subalpine vegetation is found. All these floristic areas are located at the intersection and transition points of the front Uğur Suyu Valley, which is in the Şimşirlik Locality of Uğur Village and the Samandere Valley extending to Abant Lake due to their geographical location and geomorphological structure. The vegetation types in stream, relic maquis, forest, subalpine, and rock, and the rare plant habitats within these vegetation types are spread [17].

Studies conducted by the Düzce University for Düzce Province in 2019 revealed the presence of 102 families, 471 genera, 1200 species, and subspecies taxa. Of the total number of families, 6% fern, 3% Gymnospermae, and 91% Angiospermae families, and the total number of genera, 1.6% were ferns, 1% were Gymnospermae, and 97.4% were Angiospermae. Fern constitutes 1%, Gymnospermae 0.5%, and Angiospermae 98.5% of the total number of species and subspecies taxa. According to the conducted studies [17]:

- Most of the plants have a very wide distribution area. Secondly, the presence of plants belonging to the Euro-Siberian Floristic Area is quite common. Besides, plants belonging to the Mediterranean and Irano-Turanian Floristic Areas are also grown.
- The families with the most genera in Düzce Province are as follows: Asteraceae (12.3%), Poaceae (8.2%), Brassicaceae (6.2%), Apiaceae (5.3%), Fabaceae (5%, 1), Lamiaceae (4.9%), Rosaceae (3.8%), Caryophyllaceae (3.6%), Orchidaceae (2.5%), Boraginaceae (2.3%), and other families (54%)
- The families containing the most species and subspecies taxa are Asteraceae (12.75%), Fabaceae (9.1%), Poaceae (6.8%), Lamiaceae (6.3%), Brassicaceae (4.2%), Caryophyllaceae (3.9%), Rosaceae (3.8%), Apiaceae (3.4%), Orchidaceae (2.5%), Boraginaceae (2.4%) and other families (44%, 85)



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- The genera containing the most species and subspecies taxa are *Trifolium* (2.3%), *Euphorbia* (1.3%), *Vicia* (1.3%), *Veronica* (1.25%), *Carex* (1%), *Medicago* (1.16%), *Ranunculus* (1.08%), *Lathyrus* (1%), *Ornithogalum* (1%), *Anthemis* (0.9%), *Salvia* (0.9%) and other genera (86.65%).

The centers in Düzce Province where local endangered endemic plants are observed, are as follows [17]:

- Valley slopes in the Scots pine (*Pinus sylvestris*) forests facing south of the valley formed by Aksu and Emeksiz streams at Elmacık Mountains,
- Rocky and clear areas in Horoz Kaya Locality between Toptepe and Güzel Creek Waterfall,
- Efendi Lake,
- Rocky areas around Hasanlar Dam,
- Cumayeri District, Dokuz Değirmen Village,
- Melenağzı Dune Fields,
- Samandere Valley Uğur Village-Şimşirlik Locality.

None of these localities are located in or vicinity of the project area and/or AoI.

Most of the Akçakoca District is covered by deciduous forest where dominant flora species namely *Fagus orientalis* (beech), *Carpinus betulus* (hornbeam), *Castanea sativa* (chestnut), *Quercus sp.* (oak) and *Rhododendron ponticum* (rhododendron) exist. *Corylus sp.* (hazelnut) which is the most significant crop to the economy of the district is also commonly cultivated by the local people [31].

The general vegetation of the Akçakoca district was determined by site-based studies conducted between 2001-2003 by Koca and Yıldırım (2008). Since the district is entirely within the Euro-Siberian plant geography, 159 species with Euro-Siberian elements were detected with a ratio of 28.2%. In addition, since the district is partially under the influence of the Mediterranean climate, 66 species with Mediterranean elements such as *Myrtus communis* (myrtle), *Laurus nobilis* (laurel), *Erica arborea* (heather) and *Arbutus unedo* (arbutus), which are called maquis, were detected in the second place with a rate of 11.7%. In addition to these, four (4) species with Iranian-Turanian element were detected with a rate of 0.7%, while 335 species with multi-regional or unknown regions were detected with a rate of 59.4% [36].

According to the P.H. Davis's Grid System which is developed for identification of flora species in Türkiye, Akçakoca District is located in the A3 square. In this respect, the flora species potentially to exist in the Akçakoca District and their categorizations based on the International Union for Conservation of Nature's (IUCN) Red List of Threatened Species and Bern Convention in addition to their endemism status is given in Annex 5 [37].



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According to the list in Annex 5, there are 14 endemic species, four (4) species under Annex I of Bern Convention, one (1) near threatened species, and 248 species under least concern in the Akçakoca district. However, there is no flora species categorized as “Endemic” or “NT” in the Project area as these are built-up areas.

Fauna

Rich vegetation, land structure, streams, and suitable climate create a favorable environment for wildlife in Düzce Province. However, systematic inventory studies that determine species, population and habitats have not been carried out [18]. According to the survey related to the bird species living in the Lake Efteni carried out by Keten et al., 129 species were identified in the lake area [19].

Birds such as the cormorant, wild duck, wild goose, flamingo, swan, waterfowl, Eurasian coot are present in the area, and partridge, dove, quail, freckle, bustard, crane, woodcock, pigeon, hawk, and eagle are frequently observed. In addition, fish species such as trout, carp, coral, and silverfish are present in Lake Efteni. Terrestrial animals such as bear, lynx, wild boar, deer, roe deer, wolf, marten, fox, badger, rabbit, skunk, weasel, beaver, and squirrel are found in forest areas [19].

The main wild animal species found in the Akçakoca Region are as follows: Yellowbird, woodcock, quail, duck, goose, swan, turtledove, scallop, grouse, starling, rabbit, jackal, fox, pig, bear, marten, beaver (around streams). Fish species that are permanently caught on the coasts of Akçakoca are as follows: horse mackerel, whiting, bream, cigarette, mullet, garfish, weasel, reef, oiler, silverfish, swallow, small shark, stingray, scorpionfish and sting-fish [18].

None of these fauna species exist in or vicinity of the Project area.

The fauna species potentially exist in the Akçakoca District and their categorizations based on the IUCN Red List of Threatened Species and Bern Convention in addition to their endemism status is given in Annex 5. The statuses of relevant species with respect to national legislation i.e. species under protection by the Ministry of Agriculture and Forestry (MoAF) and Decision of the Central Hunting Commission (MAKK) are also indicated in the lists [37]. According to the list in Annex 5, there are 38 species under Annex II of Bern Convention, 32 species under Annex III of Bern Convention, and 61 species under MoAF in the Akçakoca district. However, none of the fauna species categorized as “VU” or “NT” in Annex 5 exist in the project area or AoI.

4.1.13 Protected Areas

Bicycle Road Construction and University Bicycle Road Construction Projects, do not intersect with natural protected areas, archaeological protected areas and urban protected areas in the city. There are 4 Nature Parks and 3 Natural Conservation Areas within the borders of Düzce Province [2]:



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- Guzeldere Waterfall Nature Park,
- Kurugol Nature Park,
- Aydımpınar Waterfalls Nature Park,
- Geyiklibel Canyon Nature Park,
- Demircionü Natural Conservation Area,
- Fakılı Cave Region Natural Conservation Area, and
- Akçakoca West Natural Conservation Area.

Online databases of MEUCC and Google Earth kmz files of the MoAF have been utilized to identify the protected sites in the vicinity of the Project area, which are under protection by the national legislation. In this respect, among the protected areas in Düzce Province; Demircionü, Fakılı Cave, and Akçakoca West Natural Conservation Areas are within the borders of the Akçakoca District.

Demircionü Natural Conservation is 430 ha and it was registered on April 12, 1994. Beech, hornbeam, chestnut, oak species forming partly pure and partly mixed stands in the area designated as a nature conservation area is an example of optimum distribution areas with undisturbed natural features and also shows a forest ecosystem character with rich sub-flora and fauna potential [17]. It is at the 10th km of the Akçakoca-Ereğli Highway from Akçakoca and the Düzce-Zonguldak provincial border. The area is located approximately 10 km from the nearest locations of the Project lanes.

Fakılı Cave Region Natural Protected Area and Akçakoca West Natural Protected Area located in the district have been registered as “Qualified Natural Conservation Area-Sustainable Conservation and Controlled Use Area” and “Natural Site-Qualified Natural Conservation Area”, respectively with the approval letters of the MEUCC dated 10.05.2019 and 29.04.2021. [20; 21; 22]. Fakılı Cave Region Natural Protected Area is located approximately 3 km from the nearest location of project lanes.

Based on the database and kmz files, the nearest protected sites to the Project area include the following information shown in Figure 4-15.



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Figure 4-15. Nearest Legally Protected Sites to the Project area

Akçakoca West Natural Protected Area is approximately 200 meters from the “Bicycle Road Construction” Project and which is more than 3 km from “University Bicycle Road Construction” Project (see *Figure 4-16* and *Figure 4-17*).



Figure 4-16. Protected Areas and “Bicycle Road Construction” Project Location



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Figure 4-17. Protected Areas and “University Bicycle Road Construction” Project Location

There is no Special Environmental Protection Area within the provincial borders. Besides, there is no internationally recognized areas of high biodiversity value (such as World Heritage Natural Sites, Biosphere Reserves, Ramsar Wetlands of International Importance, Key Biodiversity Areas (KBA), Important Bird Areas, and Alliance for Zero Extinction Sites) within the AoI.

4.1.14 Landscape

When the urban and rural uses within the Akçakoca District are considered, the distinctive landscape emerges as a rural agricultural landscape. On the other hand, Akçakoca urban area is a coastal city. In addition, its historical and natural features in the city contain many protected areas and resource values. It is seen that the district stands out mainly in terms of “tourism” potential. Moreover, it is observed that the urban transformation process and practices, which have become a frequently used tool in shaping the physical space in the country’s policy, started in the district center [23].

4.2 Social Baseline

4.2.1 Population

The population of Akçakoca is 39,229 residents, 27,245 of which is in the district center and the rest of the population lives in villages based on the TurkStat data dated 2020. This population consists of 19,321 (57.55 %) men and 19,908 (42.44%) women. In terms of the annual growth rate of population, the district has the highest population with 9.91% [6]. The district consists of 51 administrative units, 8 neighborhoods and 43 villages. It is the most



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developed and largest district of Düzce [24]. As a result of the population projections made for the district, the planning population of the city in 2030 has been accepted as 55,000 people [14].

The Project area is in the Yah, Cumhuriyet, Yukarı, Hacı Yusufklar, and Osmaniye Neighborhoods of Akçakoca District. The population distribution based on gender in these neighborhoods is shown in Table 4-3. The population going to be served by the project (users of the bicycle roads) is approximately 5000 users yearly. The population living within Aol of project is 17,857 inhabitants.

Table 4-3. Populations Based on Gender in Yah, Cumhuriyet, Yukarı, Hacı Yusufklar and Osmaniye Neighborhoods

Neighborhood	Female	Male	Total
Yah	1,525	1,761	3,286
Cumhuriyet	1,578	822	756
Yukarı	828	416	412
Hacı Yusufklar	3,852	1,987	1,865
Osmaniye	5,621	5,334	11,538
Doğançılar Village	116	124	240

There are also vulnerable/disadvantaged individuals/groups in the neighborhoods. The list of these groups in the neighborhoods is given in Table 4-4. Social services, district governorship, and mukhtars look after these groups if they apply to these institutions. These groups need financial aid, supplies, and shelter.

Table 4-4. Vulnerable / Disadvantaged Individuals / Groups in Yah, Cumhuriyet, Yukarı, Hacı Yusufklar and Osmaniye Neighborhoods

Neighborhood	Type of Vulnerable/Disadvantaged Individual/Group					
	People who live with the assistance of others	People with low or no income	Elderly people over 70 years of age	Female headed households	Physically handicapped people	Mentally handicapped people
Yah	10 people	250 people	100 people	20 households	30 people	15 people
Cumhuriyet	-	150 people	1 people	2 households	1 people	-
Yukarı	30 people	60 people	30 people	3 households	2 people	3 people
Hacı Yusufklar	30 people	30 people	6 people	2 households	5 people	1 people
Osmaniye	40 households	150 households	2,000 people	20 households	40 households	50 households
Doğançılar	3 people	5 people	-	3 households	1 people	-

4.2.2 Livelihood

The agricultural land that can be cultivated in Akçakoca District is 228,965 decares. The livelihood of Akçakoca District, where Türkiye's best quality hazelnuts are produced, is largely based on hazelnut farming. The hazelnut production is made on a total area of 153,000 decares in the district. Compared to the population, Akçakoca District has the highest production capacity in hazelnut production in the Black Sea Region. While the return



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of hazelnut production may have been sufficient for families in the past, the expansion of families and the partition of hazelnut fields over time causes the income from hazelnuts to be insufficient. Annual hazelnut production in the district is between 17,000 and 36,000 tons. [25; 32]

Because the district is poor in terms of lowland and grassland, cattle farming has not made much progress. Due to this reason, people who have turned to different pursuits have made considerable progress in poultry. One of the main livelihoods in the district is beekeeping. Chestnut honey produced in Akçakoca District is among the few kinds of honey in the world. Fishing also contributes to the economy of Akçakoca District. The most abundant species are acorn and anchovy which are shipped to the surrounding provinces and districts [25].

There are also many large and small industrial establishments in the district. 3 metal pipe factories exist in the district; Ümran Pipe, Çınar Pipe and MMZ Onur Pipe. Of these, Ümran Pipe is Türkiye's largest pipe factory with a closed area of 104,000 square meter (m²) and a capacity of 350,000 tons/year. Also, Çınar Pipe, and MMZ Onur Pipe are the factories that contribute greatly to the economy. Pipes produced in the district are also exported abroad [26].

Tourism in Akçakoca started in 1950s. Akçakoca District is a preferred tourism region due to its nature and coastline. It is a favorite tourist city for all seasons with its natural protected areas, closeness to big cities such as Ankara and Istanbul, and its climate. There are blue flag beaches such as Akçakoca, Genoese Castle Beach, Akevler Beach, Çuhallı Beach, which has a coastline of 35 km. The prominent attractions of Akçakoca District are as following [27;28]:

- Aktaş Waterfall,
- Fakilli Cave,
- Genoese Castle,
- Kurugöl Canyon,
- Cumayanı Picnic and Recreation Area,
- Akkaya Village Picnic and Recreation Area.

4.2.3 Employment

Çınar Pipe, MMZ Onur Pipe and Ağır Rolling are the factories that contribute greatly to the economy with their production capacities and the personnel they employ. In addition, two (2) textile factories employ 250 people. The district has 416 active members of the Chamber of Commerce and Industry, 994 of the Chamber of Tradesmen and Craftsmen, 171 of the Chamber of Iron and Metal Craftsmen, 338 of the Chamber of Drivers and 7,000 active members of the Chamber of Agriculture [26].



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4.2.4 Education

The literacy rate in Akçakoca District is 96.5% of the people, and this rate is above the Düzce Province and Türkiye in general. There are 18 primary schools in the district, eight (8) of which are in the center and 10 in the villages. In terms of secondary education: a high school (1969), a Commerce Vocational and Anatolian Trade Vocational High School (1978), an Anatolian-Technical - Technical High School and Industrial Vocational High School (1981), a Girls Vocational High School (1986), an Imam Hatip High School (1993), an Anatolian Hotel Management and Tourism Vocational High School (2001), an Anatolian High School (2002), an Anatolian Teacher High School (2007) and a Practical Girls' Art School (1967) within the Vocational High School for Girls exist at the center of the district. The number of schools with kindergartens is 20. There are a total of 378 classrooms in the district, with 259 classrooms in primary education and 119 classrooms in secondary education. In the district, there is also a five (5)-year Tourism and Hotel Management School affiliated to Düzce University and a two (2)-year Vocational School [26;29].

4.2.5 Health

Within the "Regulation on the Family Medicine Pilot Practice" framework published in the OG dated 6 July 2005 and numbered 25867, the Family Medicine system has been adopted in the district since November 2005, and 12 Family Medicine Units and 1 Community Health Center Medicine have been established. The district's State Hospital was established on a land of 18336 m² in 2001, and the building settlement area is 4859 m². The hospital, which has a capacity of 100 beds, still provides 2nd level health services with 50 beds. 112 Emergency Service was also established in 2001 within the body of State Hospital. In addition, Emergency Service is provided in Akçakoca-Sapak area. There are four (4) health centers (two (2) in the center and two (2) in the villages) and four (4) health houses in the villages. In addition to the current health organization, there are still six (6) self-employed dentists and 10 pharmacies operating in the district [26].

4.2.6 Public Utilities

As afore-mentioned, Uğur Suyu Stream surface water resource, which was activated in 1994, has started to meet the water of the Düzce province since that year [2].

In Akçakoca District, there is a 46 km long sewerage network built by İL BANK. In addition to this, there is an average of 55 km of sewer lines, together with the other lines which were constructed subsequently. It is under operation separately from rain water. Approximately 3-4% of the settlement in the district has a sewerage network. Septic tanks are used in areas where there is no sewer line. The sewerage system serves 97% of the population of Akçakoca Municipality and which ends with the Akçakoca Central Wastewater Treatment Plant [2]. The WWTP operation environmental permit was not renewed since the facility did not have a Continuous Wastewater Monitoring System infrastructure in place. Presently the Municipality has applied for a temporary operation document which is a prelude for the environmental permit renewal process. The Municipality has indicated that monthly testing



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of treated effluent is being performed and the treated wastewater is in line with the regulatory discharge parameters

Sakarya Electricity Distribution Corporation (SEDAŞ) provides electrical energy in the Düzce Province [30]. Energy Transmission Lines pass through the south of the district [14].

With the Local Environment Board Decision dated 13.07.2017 and numbered 2017/12, taking into account the meteorological data and topographic structure of the province, in order to protect human health against the damages of air pollution caused by heating in the winter period, the use of natural gas for heating purposes in the places where natural gas comes from is encouraged/also recommended it has been decided to make current systems compatible with natural gas in a short time [17].

4.2.7 Cultural Heritage

Since Akçakoca District is an ancient settlement, there are many ancient artifacts in the district. The most important historical monuments are the Genoese Castle (see Figure 4-18) in the west of the city [14] which is approximately 900 m distant from the “Bicycle Road Construction” project location and more than four (4) km from the “University Bicycle Road Construction” project location.



Figure 4-18. Project Location and Genoese Castle



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4.2.8 Traffic

As of July 2019, there are 111,026 motor vehicles registered to traffic in Düzce [2].

Akçakoca District is 243 km from Istanbul and 275 km from Ankara. For transportation, it is possible to reach Düzce Province using the highway from both directions. The divided road between the greenery provides the 38 km distance from the province to the district as double round trips [26].

There is a distinct road stratification in Akçakoca District. The streets and boulevards that connect the Kocaeli-Ereğli highway with the city centre in the city are determined as the first-degree transportation axis. Akçakoca-Karasu road, which separates from Kocaeli-Ereğli highway over Sarma Stream and connects with the city centre and passes as Istanbul Street, is one of the first-degree transportation axes that form the backbone of the transportation axis in the city. Istanbul Street continues along the coast by merging with İşgören Street near the Orhan Stream in the city centre and joins with Atatürk Street at the junction point in front of the Akçakoca Mufti. Atatürk Street turns south at Çuhallı Çarşı Mosque and connects to the Kocaeli-Ereğli highway in front of the prison. This transportation axis, which leaves the highway and draws a ring in the city, is the first-degree transportation axis in the city. Istanbul Street and its continuation Atatürk Street are the most important transportation axis of the city in terms of both vehicular and pedestrian traffic. All of the main boulevards and avenues and most of the streets in the Akçakoca are made of asphalt material. Apart from asphalt, dirt roads are predominant in the city walls and agricultural areas where settlement is sparse. Apart from these roads, hardwood roads in urban areas are also quite common. There is also the use of stabilized roads in addition to the use of asphalt, parquet and dirt roads. 39.62% of the roads in the study area are asphalt pavement, 23.51% soil, 49.40% parquet and 6.57% stabilized pavement. Narrow streets and avenues are dominant in the city center [14].



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5 Environmental and Social Impacts

In this chapter, the anticipated E&S impacts/risks of the project on the area of influence (AoI) are presented. The defined AoI is valid for all environmental and social impacts. WB OP 4.01 defines AoI as the area likely to be affected by the project, including all its ancillary aspects and unplanned developments induced by the project. Thus, the AoI, which is valid for all environmental and social impacts, is defined as follows and shown in Figure 5-1 and Figure 5-2.

- The major areas, facilities, and communities potentially to be affected by the Project are listed below:
 - Project area covering the existing roads.
 - Auxiliary facilities (parking lot and storage areas).
 - Residential, recreational, commercial and educational areas along the Project routes (see Table 3-1 and Table 3-2).
 - Hazelnut trees located on the road expansion area of “University Bicycle Construction” Project.
 - Waste disposal areas/facilities to be used during the construction and operation phases of the Project.
- Based on the information provided by the Sub-borrower, there are no ancillary facilities as part of the Project; no concrete batching plant will be installed, and ready-mix concrete will be used.



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Figure 5-1. Neighbourhoods Where the Major Communities Potentially to be affected by the Bicycle Road Project and the Project's Area of Influence



Figure 5-2. Neighbourhoods Where the Major Communities Potentially to be affected by the University Bicycle Road Construction Project and the Project's Area of Influence



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5.1 Environmental Impacts and Risks

5.1.1 Air Quality

The construction phase activities will be carried out in two steps. The first step is earthworks, and it covers the land arrangement/preparation activities of the project area. The significant pollutant of the construction phase will be the dust to be generated from excavation, load on trucks and transportation. Exhaust gas emissions will also release from construction equipment and vehicles at the construction site.

The second step of the construction phase is bicycle road construction. In this step, the movement of construction equipment such as cement mixers, trucks, backhoes, road roller, etc. will cause dust and exhaust gas emissions, which have potential negative impacts on the sensitive receiving environment and the communities in the vicinity. The bicycle road will be covered in asphalt. In particular, SO_x, NO_x, volatile organic carbon, CO gas emissions will occur during hot asphalt casting process.

It is expected that the impacts will be minor and temporary during construction phase based on the project specifications.

Regarding the ambient air quality, national and international limit values for dust emission relevant to the project are given in Table 5-1.

Table 5-1. National and International Limit Values for Dust Emission

Parameter	Average Duration	Regulation on Assessment and Management of Air Quality (RAMAQ) ($\mu\text{g}/\text{m}^3$)	WRG General EHS Guidelines ($\mu\text{g}/\text{m}^3$)	EU Directive ($\mu\text{g}/\text{m}^3$)
PM ₁₀	Daily (24 hours)	50 (Not exceeded more than 35 times a year)	50	50
	Annual	40	20	40
PM _{2.5}	Daily (24 hours)	-	25	25
	Annual	-	10	

The dust generated during the construction phase will be temporary and can be mitigated by taking measures stated in the Mitigation Plan in Chapter 6. If any grievance regarding dust generation is received, dust monitoring will be conducted to assess whether the measured result exceeds the limits. In case the measured emission levels exceed the limits, additional measures addressed in the Mitigation Plan in Chapter 6 will need to be taken.

No impact on air quality is expected during the operation phase with the completion of the bicycle roads. During the operation phase the maintenance work will mainly encompass:

- repair loose drain covers and potholes



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- sweep debris
- repair worn markings/coloured surfacing
- repair / replace damaged / lost signs
- repair surface damage (extent will be small and unlikely to cause emissions, noise and community related environmental impacts)
- maintain lighting, furniture, structures

A good guidance for bicycle roads maintenance works is given in Maintenance minimization for walking and cycling facilities (August 2020, <https://bicycleinfrastructuremanuals.com/manuals5/Queensland-Government-Department-of-Transport-and-Main-Roads-Maintenance-Minimisation-for-Walking-and-Cycling-Facilities-2020.pdf>)

5.1.2 Soil Quality

During the construction activities, topsoil shall be stripped about 25 cm.

Potential negative impact on soil quality can be originated from the absence of chemicals and hazardous materials management of which to be used during the construction phase of the project such as maintenance oil. Besides, these chemicals and hazardous materials can be used during the maintenance works to be conducted during the operation phase of the project.

During the construction phase, soil erosion may be caused by exposure of soil surfaces to rain and wind during site clearing, earth moving, and excavation activities. The mobilization and transport of soil particles may, in turn, result in sedimentation of surface drainage networks, which may result in impacts to the quality of natural water systems and ultimately the biological systems that use these water bodies.

The above-mentioned impacts can be easily managed and mitigated by implementation of the mitigation measures identified in Chapter 6.

5.1.3 Noise and Vibration

The construction equipment and vehicles will generate noise and vibration during the Project's construction phase. Noise and vibration generated during the construction phase will be temporary and can be mitigated by taking measures stated in the Mitigation Plan in Chapter 6.

All construction works will need to be planned in line with the provisions of the Environmental Noise Control Regulation. The environmental noise limit values for different sources provided in Table 1 of Annex-2 in Environmental Noise Control Regulation are given in Table 5-2.



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Table 5-2. Environmental Noise Limit Values for Different Sources

Source	Measured Parameter	Environmental Noise Level		
		Daytime	Evening	Night
Industrial facilities, transportation sources	LA ₉₅ (5min)	65 dB	60 dB	55 dB
Businesses that broadcast music	LA _{eq,60s} (1h)	60 dB	55 dB	50 dB
Workplaces	LA ₉₅ (5min)	Background + 5 dB		Background + 3 dB
In case of multiple workplaces	LA ₉₅ (5min)	Background + 7 dB		Background + 5 dB
All sources	LC _{max}	100 dB		

The allowed time zones for construction site activities carried out in the open air and causing environmental noise are 10:00-22:00 as per the Environmental Noise Control Regulation. Nevertheless, the construction works will be conducted between 10:00 a.m (i.e. the allowed start time for construction activities as per the Environmental Noise Control Regulation) and 19:00 pm (i.e. the end of the daytime period as per the Environmental Noise Control Regulation). Noise limit values for WBG General EHS Guideline considering the receptors in the residential, institutional, educational, industrial, and commercial areas are given in Table 5-3 below:

Table 5-3. WBG General EHS Guideline Noise Limit Values

Type of the Receptor	WBG General EHS Guideline Periods	
	Daytime (07.00-22.00)	Night-time (22.00-07.00)
Residential	55	45
Institutional, educational		
Industrial	70	70
Commercial		

Additionally, noise impacts should not exceed the levels presented in the WBG General EHS Guidelines (Table 1.7.1), or result in a maximum increase in background levels of 3 decible (dB) at the nearest receptor location off-site.

The limit values for environmental vibration considering sensitive receptors are addressed in Table 5 of the Environmental Noise Control Regulation and provided in Table 5-4 below.



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Table 5-4. Maximum Permissible Values of Ground Vibrations to be created by Constructions and Construction Machinery outside the Nearest Most Sensitive and Sensitive Usage Area (frequency bands between 1 Hertz (Hz) and 80 Hz)

Area Category	Maximum Permissible Value (millimeter/sec (mm/s))	
	Continuous Vibration	Intermittent Vibration
Residential	5	10
Commercial	15	30
Historical and Natural Buildings	2	5

In case any grievance regarding noise and vibration generation is received, monitoring will be conducted to control whether the measured result exceeds the limits or not.

No impact is expected during the operation phase with the completion of the bicycle roads based on the maintenance works discussed in Section 5.1.1.

5.1.4 Water Sources and Wastewater

There will be a camp site for the daily needs of workers on the left side of “University Bicycle Road”.

The need for potable water and drinking water for the daily needs of workers during the construction phase will be provided from the municipal water line and as bottled water, respectively in compliance with the requirements of the “Regulation on Water Intended for Human Consumption” and “Public Health Law”.

The amount of water to be used for dust suppression will be monitored in m³ and will be provided with water tankers.

Domestic wastewater originating from the camp site shall be connected to the sewage network and transferred to the Akçakoca Municipality Treatment Facility that has sufficient capacity and environmental permit and operates in compliance with relevant legislation. Therefore, no adverse impact on water sources is expected during the construction phase of the project. Besides, as long as all hazardous materials shall be stored in designated areas having secondary containment and handled with care by authorized staff to prevent potential spills, no surface water contamination is expected during project activities due to surface runoff. All construction activities will be performed in compliance with “Water Pollution Control Regulation” during the construction activities.

The mitigation measures for potential impacts on water sources are included in Chapter 6 of this plan.

No impact is expected during the operation phase with the completion of the bicycle roads based on the maintenance works discussed in Section 5.1.1 as there will be no generation of wastewater at the places where maintenance will be provided



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5.1.5 Waste Management

Waste generation is expected as follows:

- Topsoil shall be stripped about 25 cm during construction and stored separately for landscaping activities. Excavation wastes will also be generated during earthworks conducted at the land preparation phase. The topsoil that will be removed by the Contractor will be delivered to the Akçakoca Akçakoca Municipality Parks and Gardens Directorate for use for their activities.
- Municipal solid waste (non-hazardous) is expected to be generated during the construction and operation phases.
- Hazardous waste is also expected to be generated during the construction phase, mainly from construction materials for installing bicycle roads, i.e., waste oil and dyes. Hazardous waste generation is also expected during the operation phase due to maintenance work conducted along the bicycle roads.
- Recyclable waste during both construction and operation phases originates mainly from packaging materials.
- The protective equipment, such as masks, gloves, etc., shall be considered medical waste.

The mitigation measures against the potential impacts of the waste are provided in Chapter 6 of this plan.

5.1.6 Land use

The Project area where “Bicycle Road Construction” is to be developed is included in the public domain land belonging to the property of Akçakoca Municipality. Since it is located in the urban area, there will be no impact on rural areas, i.e., agricultural, pasture and/or forest lands.

Road expansion works will be conducted within “University Bicycle Road Construction.” Some of the expansion areas are covered with hazelnut fields. The road expansion area was defined as roads in the zoning plan in compliance with Article 18 of Zoning Law No. 3194 (see discussion in Section 5.2.8).

The mitigation measures against potential impacts of project activities on the land use are provided in Chapter 6 of this plan.

5.1.7 Landscape

During the planning process of bicycle paths, the most suitable route for cycling is preferred in the topography. The bike path network is planned in such a way as to ensure that the cyclist can go from a starting point to the destination without interruption, based on the continuity of the road, divided by the intersections, zoning parcels, and landscape elements



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to a minimum extent. Bicycle paths cannot be planned to pass through tunnels established for vehicle roads. Therefore, no adverse impact on the landscape is expected during the operation phase of the project. The potential adverse impacts on the landscape during the construction phase are temporary and shall be minimized with good housekeeping practices.

5.1.8 Protected Areas

The project area is not located within any natural habitat or protection zone. There is no protected and/or highly sensitive species and no significant impact is expected on biodiversity values including these species or protected areas due to project area being in an urbanized region. The Demirciönü and Fakılı Cave Region Natural Protected Areas are far away from the nearest project location and located outside of the Aol. The Akçakoca West Natural Protected Area is close to the project area; however, adverse impact is not expected if the mitigation measures and monitoring requirements addressed in Chapter 6 and Chapter 7 of this document are implemented effectively.

5.1.9 Natural Hazards

A large part of Akçakoca District is in the 1st degree earthquake zone. However, impacts are not expected due to the nature of the project.

The “Flood Management Plan of Western Black Sea Basin” dated July 2019 has been published by MoAF (General Directorate of Water Management) in order to identify and evaluate the flood risks in the Western Black Sea Basin and to reduce the negative effects of floods on human health, environment, cultural heritage and economic activities [38]. Mitigation measures for which Akçakoca Municipality is responsible are addressed in the plan. Although there is flood risk in the province, any adverse impact due to a potential flood event within the project scope is not expected as long as this plan is implemented by Akçakoca Municipality.

5.1.10 Chemicals and Hazardous Materials Management

Chemicals such as maintenance oils shall be used to maintain vehicles and other machinery equipment during the construction and operation phases. Acrylic/epoxy paint will also be applied to the bicycle roads. Therefore, hazardous wastes such as waste oils and material/packaging contaminated with acrylic/epoxy paint can be generated during the Project construction and operation phases.

Hazardous material, i.e., fuel oil can be used from vehicles and other machinery equipment used during the construction phase.

Construction activities may pose the potential for accidental release/leakages of petroleum-based products, such as lubricants, hydraulic fluids, or fuels during their storage, transfer, or use in equipment. During the operation phase, soil and water can be contaminated due to spilling or leaking of hazardous materials used during maintenance activities.



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These above-mentioned impacts can be easily managed and mitigated by implementation of the mitigation measures identified in Chapter 6 of this Plan

5.2 Social Impacts

The population living within Aol of project is 17,857 inhabitants. In addition, the population going to be served by the project (users of the bicycle roads) is approximately 5000 users yearly.

5.2.1 Traffic

Traffic density on the access ways to the project lanes is anticipated to increase due to truck movement during the construction phase and potential road closures. Akçakoca Municipality will notify the headman's office in the Aol, two (2) days before any possible temporary road closure during project activities. This traffic ingestion due to increased traffic along the existing roads will be temporary and only limited to during the project's construction phase. Typically, the municipalities will develop and implement traffic management plan in case of temporary road closures.

Another potential impact is injuries suffered by project personnel and the public due to traffic accidents. The mitigation measures addressed in Chapter 6 of this document will eliminate these potential impacts if implemented effectively.

There will also be potential adverse impacts on traffic safety during the operation phase with the completion of the bicycle roads since accidents/incidents may occur if proper mitigation measures are not taken. However, these impacts on traffic safety can be easily managed and mitigated by the implementation of the mitigation measures identified in Chapter 6 of this Plan

5.2.2 Working Conditions and Worker Management

There will be workers who will be directly engaged by the Sub-borrower (direct workers), potentially workers employed through third parties to perform work related to core business processes of the project, as well as workers engaged by the Sub-borrower's primary suppliers (supply chain workers). Workers have rights under national labor and employment law and any applicable collective agreements, including the rights related to work hours, wages, overtime, compensation, and benefits upon beginning the working relationship and when any material changes occur. As above-mentioned, for workers, there will be camp site for daily needs of construction workers on the left side of "University Bicycle Road" for which the Sub-borrower will put in place and implement policies on the quality and management of the basic services.

Potential adverse impacts of project activities on workers in terms of working conditions and worker management are as follows:



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- Recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, job assignment, promotion, termination of employment, or termination of employment retirement, and disciplinary practices must be implemented under non-discrimination and equal opportunity conditions. However, these may be adversely affected by potential unequal opportunity and unfair treatment.
- There may be a risk of employing migrant workers who are not engaged on substantially equivalent terms and conditions with the non-migrant workers carrying out similar work
- There may be a risk of employing children (under 18) since they are economically exploitative during the project activities. There may be underage employees who work in a manner that interferes with their education and/or their health. Physical, mental, spiritual, moral, or social development may be affected adversely due to work.
- Women employees may be more vulnerable to harassment, intimidation, and exploitation

A staff including civil engineers, mechanical engineers, landscape architects, electrical technicians and operators, survey engineers and technicians will be employed by the Akçakoca Municipality during the operation phase for annual inspections and maintenance works of the Project. Thus, the above-mentioned potential impacts related to working conditions and worker management will also be in question during the operation phase of the Project.

5.2.3 Occupational Health and Safety

Construction works can cause incidents and accidents originating from the following potential hazards that may lead to injuries and threaten workers' health and safety if protective mitigation measures are not taken:

- Physical Hazards: Electrical, vibration, noise, dust, welding/hot work, trip-slip-fall, rotating and moving equipment, moving machinery, usage of tools, vehicle driving and site traffic, struck by object, eye hazard, electricity, fire risks etc.
- Ergonomic Hazards: Manual handling operations, repetitive motions, overexertion,
- Chemical Hazards: Handling of chemicals and hazardous materials,
- Biological Hazards: The spread of infectious diseases, particularly COVID-19 and its variants.

Dust emissions and noise/vibration generation due to construction activities may also affect workers' health adversely. Besides, the spread of infectious diseases among the workers, particularly COVID-19 and its variants, is another potential adverse impact on OHS. This impact can also result in increased pressure on healthcare infrastructure. Thus, Akçakoca Municipality must provide a safe and healthy work environment.



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The Municipality will also be responsible for the annual inspections and maintenance works (regular maintenance and updating of the bicycle parks, bicycle-sharing systems, bicycle road, mobile application) during the project's operation phase. In this respect, a staff including civil engineers, mechanical engineers, landscape architects, electrical technicians and operators, survey engineers, and technicians will be employed. Thus, Akçakoca Municipality must provide a safe and healthy work environment for the relevant staff during operation phase as well since above-mentioned potential accidents may threaten the health and safety of workers.

The mitigation measures against potential impacts of project activities on worker health and safety is provided in Chapter 6 of this plan. Moreover, Occupational Health and Safety (OHS) risks and impacts should also be managed and mitigated by OHS Management Plan and Risk Assessment (including Emergency Plans) to be prepared by the Contractor during the construction phase and by the Project Owner during the operation phase.

5.2.4 Community Health, Safety and Security

The impacts that may pose a risk to community health, safety and security are considered under the following topics for the project:

- Dust and noise,
- Infectious diseases, i.e., COVID-19 and its variants,
- Traffic accidents (Traffic safety),
- Infrastructure and machine/equipment safety,
- Gender-based Violence (GBV) and Sexual Abuse and Harassment (SEA/SH).

There may be potential adverse impacts on pedestrians and cyclists' safety, health, and security during the operation phase with the completion of the bicycle roads since accidents/incidents may occur. The following measures will be taken during the operation phase for the safety of the bicycle roads.

- Regular checks/control and maintenance of bicycle roads (including warning signs, delineators, etc.) will be performed and immediate repair will be undertaken as needed.
- Loose maintenance hole covers and potholes will be repaired.
- Lighting deficiencies will be eliminated.
- Traffic sensors will be maintained.
- Drainage channels and gutters will be cleaned.
- The rubbish from the vehicle road will be removed.
- Worn and erased marks will be repaired.



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- Winter road maintenance will be done.
- The green area between the bicycle path and the vehicle road will be regularly maintained so that it does not obstruct the view.

The potential risks and impacts to the community will need to be managed appropriately during the project's construction and operation phases through the measures addressed in the Mitigation Plan in Chapter 6.

During construction and operation phases, there will be “disadvantaged/vulnerable individuals/groups”, which may be more likely to be adversely affected by the project impacts and/or more limited than others in their ability to take advantage of a project's benefits. Such individual/group is also more likely to be excluded from/unable to participate fully in the mainstream consultation process and may require specific measures and assistance

5.2.5 *Employment*

Personnel will be hired during the construction and operation phases of the project. Local workforce and recruitment options shall be considered initially. Therefore, labor influx is not anticipated

5.2.6 *Access to Services*

Infrastructure such as gas, electricity, telecommunication, etc., is prone to damages during the project's construction phase.

No impact is expected during the operation phase with the completion of the bicycle roads.

5.2.7 *Cultural Assets*

Since earthworks covering land arrangement activities of the project area will be conducted as a first step within the project's scope, there is a probability of coming across cultural assets during this step of the construction phase. However, since deep excavation will not be carried out during road construction and only at certain routes there will be road expansion works, it is not likely to find historical artifacts. The mitigations for possible impacts on cultural assets are defined in Chapter 6. Nevertheless, for any findings, a chance-find procedure will be in place (Annex 10) during construction, in which communication with the relevant authorities will be addressed, and the legislation will be applied.

No impact is expected during the operation phase with the completion of the bicycle roads.

5.2.8 *Land Acquisition*

Since the Project area where “Bicycle Road Construction” to be developed is included in the public domain belonging to the property of Akçakoca Municipality, there will be no land



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acquisition in this Project. Besides, the project will be located in the area where 1/1000 and 1/5000 zoning plans are available thus, there is no cadastral road within the project's scope.

On the other hand, some of the areas where road expansion works to be conducted are covered with hazelnut fields within the scope of "University Bicycle Road" Project. Not all of these hazelnut fields were expropriated, but only a certain part of them. The property area coinciding with the bike path is given in Table 3-3. The cost of the hazelnut trees coinciding with the bicycle road route has been resolved by netting, on the condition of harvesting 1 more season. Therefore, the income-generating activity is currently ongoing in the relevant field. Reconciliation for the trees that no longer exist within the former parcel borders because of the change of the parcel borders takes place in 2 ways:

- 1-The new parcel owner can buy the trees from the former owner.
- 2-If a former parcel owner demands so, the trees can be removed without any damage, moved to the requested area and planted with the support of the municipality.

The road expansion area was defined as roads in the zoning plan in compliance with Article 18 of Zoning Law No. 3194. According to the first paragraph of Article 18 of the Zoning Law No. 3194, Municipalities and Governorates are authorized within municipal and adjacent area borders through municipal board decisions and outside these borders through special provincial administration decisions, respectively, to amalgamate the plots and lands, whether having buildings or not, with each other, road surpluses, places belonging to government entities, or places belonging to municipalities divide them again into blocks or parcels in accordance with zoning plans and distribute them to the right holders individually, jointly or on the basis of condominium ownership without seeking the consent of the owners or other right holders and to register them ex officio. Despite the fact that Article 18 is implemented ex officio without the consent of citizens, Akçakoca municipality completed the work in agreement with all our citizens. The implementation of Article 18, consisting of 3 stages in total, was concluded in 2 years. Approximately 1 year of this period (due to the ban on meeting because of the pandemic) covers the meetings and presentations made for the purpose of consultation with the owners and receiving their demands. During the land acquisition, which was completed by taking the opinions of all the owners, first of all some information meetings were held on the nature of the Plot and Land work to be carried out in accordance with Article 18 of the Zoning Law No. 3194, its purpose, and the gains as a result of its implementation.

As a result of the negotiations with the landowners in 2020 and 2021, the land registry of parts of eight hazelnut fields was transferred to Akçakoca Municipality at the end of 2021. According to the relevant legislation, no payment was made for these fields during the land registry transfer. However, although the area of land belonging to individuals has decreased with the expropriation, the market value of the land has increased as the region has become suitable for construction as a result of the new parceling work. The opinion letter dated 28th December 2021 on implementing Article 18 of Zoning Law No 3194 was obtained from



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“The Directorate of Zoning and Urbanization”. In this respect, an Ex-post Audit Report is required for the “University Bicycle Road Construction” Project since the income-generating activity is currently conducted in the areas covered with hazelnut fields.

During the implementation of Article 18 of Zoning Law No 3194, the cadastral technical service was outsourced by Akçakoca Municipality. For the better understanding the land acquisition process within the project scope, the Supervision Consultant conducted a phone call with the outsource survey engineer who is responsible of progressing the implementation process of the relevant law on 26th April 2021. In this respect, the land acquisition process has been conducted as following:

- The land acquisition process was carried out to the satisfaction of the landowners
- The total number of landowners is 10 and a set of meetings with the participation of all landowners were organized
- The parceling plans were prepared and sent to the General Directorate of Land Registry and Cadastre. Düzce Cadastre Directorate checked and approved the plans and sent them to Düzce Land Registry Directorate. After the Land Registry Directorate checked all the steps of the transactions made pursuant to Article 18, new title deeds were issued and registration procedures were completed.
- Based on the parceling plans, the “Development Readjustment Share” has been cut equally from all the landowners by declaring them beforehand. As a result, the land areas and the land categories have changed from “field or garden” to “land”.
- No objections were received from the landowners during the land acquisition process. Before the land acquisition process, presentations about the land acquisition process to be done were made at the meetings and they were given research time. The landowners consulted with the relevant institutions, such as lawyers, municipalities, etc. during this time period. Although the land acquisition process normally takes 8 months, it was completed in a period of approximately two (2) years within the scope of this Project
- The cutting process of trees has been completed. Necessary equipment support was provided to the landowners who requested the removal of trees.

After the approval of the ESMP and SEP reports, the owners of the areas whose expropriation has been completed will be interviewed. The information obtained after these interviews will be recorded and given under the relevant headings in the reports. The information to be collected in the interviews and the matters to be considered about confidentiality are given in Chapter 9.5

5.2.9 Livelihood

No impact is expected on livelihoods during the construction and operation phases of “Bicycle Road Construction” Project. However, some areas where road expansion works to



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be conducted are covered with hazelnut fields within the “University Bicycle Road” Project. Not all of these hazelnut fields owned by 10 individuals were expropriated, but only a certain part of them. The cost of the hazelnut trees coinciding with the bicycle road route has been resolved by netting, on the condition of harvesting 1 more season. Before, the income-generating activity is currently conducted in the relevant field. In this respect, an Ex-Post Audit is required for the “University Bicycle Road Construction” Project since the income-generating activity is currently conducted on the areas covered with hazelnut fields.



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6 Mitigation Plan

This section includes mitigation plans developed for E&S impacts/risks of pre-construction, construction and operation phases of the Project. During the implementation of the mitigation plans, the most stringent among the national legislation and WB standards and also the most up-to-date legislation will be complied with.

6.1 Mitigation Plan for the Pre-Construction and Construction Phases

The mitigation plan for the pre-construction and construction phases of the Project is presented in Table 6-1 and Table 6-2 below.

Table 6-1. Mitigation Plan for the Pre-Construction Phase

PRE-CONSTRUCTION PHASE						
Physical Environment						
Issue	Potential Impact	Type of Impact (Direct and/or Indirect)	Impact Significance (Low, Medium, High, Extremely High)	Mitigation Measures	Cost	Responsible Party
Waste Management	Wastes	Direct and indirect	Medium	<ul style="list-style-type: none"> Prepare "Waste Management Plan." Train employees on waste management issues. Contract with licensed companies for recycling/disposal of wastes. 	To be covered within the project budget	Contractor
				<ul style="list-style-type: none"> Connect wastewater discharge originating from the construction area to the sewage network. 		Contractor Akçuköce Municipality
Chemicals and Hazardous Materials Management	Chemicals and hazardous materials	Direct and indirect	Medium	<ul style="list-style-type: none"> Prepare "Chemicals and Hazardous Materials Management Plan" Train employees on chemical and hazardous material management. 	To be covered within the project budget	Contractor



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PRE-CONSTRUCTION PHASE						
Noise & Vibration	Noise & Vibration Levels	Direct	Medium	<ul style="list-style-type: none"> Prepare "Noise & Vibration Management Plan". Train employees on noise mitigation measures. 	To be covered within the project budget	Contractor
Air Quality	Dust and exhaust gases	Direct	Medium	<ul style="list-style-type: none"> Prepare "Air Emissions Management Plan". Train employees on air emission management including dust suppression measures. 	To be covered within the project budget	Contractor
Land use	Management of excavation materials	Direct	Medium	<ul style="list-style-type: none"> Prepare "Topsoil Management Plan". Train employees on the relevant plan. 	To be covered within the project budget	Contractor
	Road expansion works to be conducted on area covered with hazelnut trees	Direct	Medium	<ul style="list-style-type: none"> An Ex-Post Audit shall be prepared and implemented for "University Bicycle Road Construction" Project since income-generating activity is currently conducted on areas covered with hazelnut fields. 	To be covered within the project budget	Akçakoca Municipality
Soil Quality	Soil erosion	Direct	Low	<ul style="list-style-type: none"> Make plans to avoid activities during periods of heavy rainfall as much as possible. Prepare and implement "Erosion Control Procedure". Train employees on the relevant procedure. 	To be covered within the project budget	Contractor
Water Sources	Bicycle route between Km: 0+960.00 and Km: 1+140.00 passing close to Hacı Stream	Indirect	Low	<ul style="list-style-type: none"> Since Hacı Stream passes close to the bicycle route between Km: 0+960.00 and Km: 1+140.00, a "Stream Improvement Project" shall be submitted to 5th Regional Directorate of the DSİ for approval. The upstream/downstream conditions of the Hacı Stream shall be improved as necessary. 	To be covered within the project budget	Akçakoca Municipality
Socio-Economic Environment						
Community Health & Safety and Security	Transportation, pedestrian and traffic safety	Direct	High	<ul style="list-style-type: none"> Prepare "Community Health & Safety and Security Management Plan" including traffic management issues. Train employees on the relevant plan. 	To be covered within the project budget	Contractor
Community Health & Safety and Security	Flood risk	Indirect	Medium	<ul style="list-style-type: none"> Ensure that the "Flood Management Plan of Western Black Sea Basin" dated July 2019 and published by MoAF (General Directorate of Water Management) including 	To be covered within the project budget	Akçakoca Municipality



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PRE-CONSTRUCTION PHASE						
				rehabilitation works for Hacı, Orhan and Sarma Streets is implemented.		
Access to Services	Existing infrastructure	Direct	Medium	<ul style="list-style-type: none"> Inform the relevant institutions (gas, electricity, telecommunication, fuel lines, etc.) before commencing the construction works and obtain necessary permits to avoid damage to the other structures Prepare "Community Health & Safety and Security Management Plan". Train employees on the relevant plan 	To be covered within the project budget	Contractor
Cultural Assets	Cultural heritage	Direct	Low	<ul style="list-style-type: none"> Share the Chance Find Procedure given in Annex 11 with potential contractors as part of the bidding documents from employees and contractors on the chance find procedure 	To be covered within the project budget	Akçakoca Municipality
Community Health & Safety and Security	Project Affected Group	Direct	High	<ul style="list-style-type: none"> Disclose ESMP on the various communication platforms, i.e., municipality website and neighborhoods' headmen offices, to get public suggestions and comments Prepare disclosure documents (Posters, brochures, leaflets, vb.) regarding the project, including the construction schedule. Hold information and consultation meetings with the local communities regarding the project components and activities. Ensure that vulnerable/disadvantaged individual/groups have participated fully in the mainstream consultation process A grievance management system shall be in place that shall enable the community to raise concerns including confidentiality in the case of GBV/SEA related complaints. Keep Grievance Register. Prepare "Stakeholder Engagement Plan (SEP)" including External Grievance Redress Mechanism (GRM) Train employees on the SEP and GRM 	To be covered within the project budget	Akçakoca Municipality
Employment	Local labour	Direct	Low	<ul style="list-style-type: none"> Prioritize local workforce and recruitment options as much as possible Prepare "Human Resources Management Plan and Procedures," including "Internal GRM" 	To be covered within the project budget	Contractor



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PRE-CONSTRUCTION PHASE						
				<ul style="list-style-type: none"> Train employees on human resources policy together with the internal GRM Compliance with the code of conduct rules, including GBV and SEA/SJJ, which are included in the training to be provided, shall be in the contract articles of the personnel 		
Labour and Working Conditions						
Labour and Working Conditions	OHS	Direct	High	<ul style="list-style-type: none"> Prefer people with appropriate education/training in the work area they shall be recruited for as per "Regulation on Procedures and Principles of Health and Safety Training of Employees" Inform workers about job descriptions, responsibilities, relationships with the local community and risks about OHS before the commencement of works. Issue a written contract for the workers with a job description, information about work hours, wages and their rights and obligations Have a full-time Occupational Health and Safety Expert as per "Regulation on Duties, Authorities, Responsibilities and Training of Occupational Safety Experts" with relevant certification and experience in charge of occupational health and safety and s/he shall ensure, control and monitor the site OHS implementations. Ensure that workers are equipped with all required PPE (helmet, safety belt, safety outfit, goggles, mask, steel cap, boots, gloves, etc.) for OHS as per "Regulation on Use of Personal Protective Equipment in Workplaces". Ensure that the following documentation is prepared by contractor(s) <ul style="list-style-type: none"> - Site specific OHS Management Plan and Procedures (including the issues regarding camp area). - Risk Assessment Reports are prepared for all works to be carried out and necessary measures shall be taken to avoid these risks as per "OHS Risk Assessment Regulation" 	To be covered within the project budget	Contractor



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PRE-CONSTRUCTION PHASE						
				<ul style="list-style-type: none"> - "Emergency Plans" are prepared for a possible accident as per "Regulation on Emergencies at Workplaces" and "First Aid Regulation". Emergency teams shall be built and pieces of training/drills shall be carried out in line with the emergency scenarios. • Both the Risk assessment and Emergency Preparedness and Response Plans will take into consider the COVID-19 risks and other communicable disease risks, as relevant. • Project and site-specific OHS Management Plan based on construction site OHS risk assessment and that will also cover measures to address COVID-19 and/or any other pandemic/communicable disease risk, which will be in line with the WB OHS guidelines (both general and sector specific) should be developed before the commencement of works and implemented on site. 		
Labour and Working Conditions	Labour management	Direct	High	<ul style="list-style-type: none"> • Prepare "Human Resources Management Plan and Procedures" including "Internal GRM" • Workers to be issued written contracts with job description, working hours, wages, code and conduct, rights and duties and other relevant information • Train employees on human resources policy together with the internal GRM. • Compliance with the code of conduct rules, including GBV and SEA/SII, which are included in the training to be provided, shall be in the contract articles of the personnel 	To be covered within the project budget	Contractor



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Table 6-2. Mitigation Plan for the Construction Phase

CONSTRUCTION PHASE						
Issue	Potential Impact	Type of Impact (Direct and/or Indirect)	Impact Significance (Low, Medium, High, Extremely High)	Mitigation Measures	Cost	Responsible Party
Physical Environment						
Waste Management	Wastes	Direct and indirect	Medium	<ul style="list-style-type: none"> Undertake measures for minimum waste generation i.e. training personnel to raise awareness and manage in accordance with waste management hierarchy (prevent, reduce, reuse, recycle, recover, dispose). Conduct the temporary storage of all non-hazardous wastes and excavated materials generated due to construction works at the designated temporary storage areas without harming the environment and by defining the waste categories (recyclable, hazardous, inert, non-hazardous, etc.) in line with the "Waste Management Regulation", "Regulation on Control of Excavated Soil, Construction, and Demolition Wastes" and WBG General EHS Guidelines Environmental (Waste Management) criteria. Excavated soil will be temporarily stored by opened route areas and if not used for any other purposes will be sent to licensed excavation waste storage site. If other materials are referred as excavation materials, please explain for clarification. Recyclable waste, non-recyclable waste and hazardous waste shall be separated. There will be bins to collect recyclable wastes. These wastes will be collected by the Ferizli and Soğutlu Municipalities and disposed at the licensed companies. Hazardous waste, generated in all the Project phases shall be collected separately in covered and impermeable containers depending on their characteristics and types and shall be transferred to a licensed disposal facility via licensed waste transportation companies following the "Waste Management Regulation". In this respect, the mitigation measures for temporary storage area with impermeable 	To be covered within the project budget	Contractor



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CONSTRUCTION PHASE						
Issue	Potential Impact	Type of Impact (Direct and/or Indirect)	Impact Significance (Low, Medium, High, Extremely High)	Mitigation Measures	Cost	Responsible Party
				<p>ground/floor, a suitable drainage system, insulated from rainfall, roof), spill containment system, spill kits, appropriate ventilation and firefighting equipment). Listed below shall be taken:</p> <ul style="list-style-type: none"> - Wastes shall be stored temporarily stored in a manner that they do not react with each other - Hazardous and non-hazardous waste storage areas shall be segregated also the waste code, the amount of waste stored and the date of storage shall be defined on the stored wastes. - Except for medical wastes, hazardous wastes shall be stored in the temporary storage area for a maximum of six (6) months and non-hazardous wastes for a maximum of one (1) year. - If it is produced one thousand kilograms or more of hazardous waste per month, a temporary storage permit shall be obtained from the PDI, DCC, Dangerous Goods and Hazardous Waste Compulsory Liability Insurance shall be taken out for hazardous waste temporary storage area/containers. <p>Recyclable waste will be segregated, collected and disposed in line the requirements of the Waste Management Regulation (CG numbered 29314 and dated 02.04.2015) and relevant recycling requiring waste regulations (i.e. Regulation on the Control of Waste Battery and Accumulators (CG numbered 25569 and dated 31.08.2004)</p> <ul style="list-style-type: none"> • Personal protective equipment (PPE) shall be considered medical wastes and stored and disposed of separately from other wastes as per the "Medical Waste Control 		



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CONSTRUCTION PHASE						
Issue	Potential Impact	Type of Impact (Direct and/or Indirect)	Impact Significance (Low, Medium, High, Extremely High)	Mitigation Measures	Cost	Responsible Party
				<p>Regulation” and guides published by the Ministry of Health.</p> <ul style="list-style-type: none"> Akçakoca Municipality shall collect the municipal solid waste stored in containers and disposed to a licensed facility. A licensed landfill facility operated by the Düzce Municipality is currently used by Akçakoca Municipality to manage municipal wastes. The Düzce landfill will be used during the phases of the Project. Waste generation, storage, and disposal records shall be kept. Training to the employees regarding waste management practices to raise awareness on waste reduction shall be provided. Excavation wastes shall be re-used for backfilling purposes as much as possible, and recovery and other re-use options will be considered as appropriate. Excess excavation wastes shall be transported and disposed of separately following “Regulation on Control of Excavated Soil, Construction, and Demolition Wastes” and WBG General EHS Guidelines Environmental (Waste Management). The project shall make use of existing license excavation waste storage sites in the district and transportation of such waste will be provided by licensed transport vehicles. Incineration or burying of waste by any means and/or dumping to nearby water resources will not be allowed. Other special wastes such as batteries, waste vegetable oil, waste tires, etc. will be stored separately at the construction site, transported by licensed transport vehicles to licensed waste collector companies. “Waste Management Plan” shall be implemented. 		
Chemicals and Hazardous	Chemicals and hazardous materials	Direct and indirect	Medium	<ul style="list-style-type: none"> To prevent potential spills, all hazardous materials shall be stored in designated areas with secondary containment. 	To be covered within the project budget	Contractor



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CONSTRUCTION PHASE						
Issue	Potential Impact	Type of Impact (Direct and/or Indirect)	Impact Significance (Low, Medium, High, Extremely High)	Mitigation Measures	Cost	Responsible Party
Materials Management				<p>and handled by authorized staff. Leak-proof containers labeled with information on their composition, properties, and handling information shall be used for temporary storage to avoid spillage and leaching.</p> <ul style="list-style-type: none"> The conditions of the vehicles and other machinery equipment to be used during the works shall be regularly reviewed/checked The actions to be taken in an emergency and assigned to emergency teams shall be defined. Appropriate cleaning equipment for spills and accidents shall be procured and maintained at the site, and cleaning teams shall be transferred to use the equipment Temporary storage of waste oils and other hazardous wastes shall comply with the "Regulation on the Management of Waste Oils" in addition to "Waste Management Regulation" and disposed to the licensed facilities (recycling, recovery or final disposal) according to the related regulations Fuel oil shall not be stored at the construction site as informed by the Sub-borrower. The refueling operations of the work vehicles shall be conducted at the authorized services Employees shall be trained on the management of chemicals and hazardous materials "Chemicals and Hazardous Materials Management Plan" shall be implemented 		
Noise & Vibration	Noise & Vibration Levels	Direct	Medium	<ul style="list-style-type: none"> All construction works shall be planned and conducted in line with the Environmental Noise Control Regulation provisions to minimize potential noise impacts on the nearby communities Construction equipment shall not be operated simultaneously 	To be covered within the project budget	Contractor



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CONSTRUCTION PHASE						
Issue	Potential Impact	Type of Impact (Direct and/or Indirect)	Impact Significance (Low, Medium, High, Extremely High)	Mitigation Measures	Cost	Responsible Party
				<ul style="list-style-type: none"> Working hours shall be limited between 10:00 a.m (i.e. the allowed start time for construction activities as per the Environmental Noise Control Regulation) and 19:00 pm (i.e. the end of the day time period as per the Environmental Noise Control Regulation) to minimize the impact. A schedule and/or other restrictions shall be defined for the works carried out. Regular maintenance of equipment and vehicles to be used in excavation, construction will be performed. The residents of nearby settlements shall be informed about the time of construction activities by Akşaisova Municipality. Compliance shall be ensured with the (daytime) 55 dBA limit value (WHO General EHS Guidelines Environmental Noise) for continuous worksite noise at the vicinity of the project site and sensitive receptors, such as schools, houses, health centers, etc. Regular maintenance of the construction equipment and vehicles shall be performed. Employees shall be trained in noise mitigation measures and reducing noise generation. Drivers of trucks and vehicles shall adhere to defined speed limits and be warned against creating unnecessary noise by using horns. Noise screen will be used where these limit values are exceeded around the work area. Project GRM shall be implemented. Noise measurements shall be conducted accordingly if any grievance regarding noise generation is received from the nearest receptors. If measured levels are above previously mentioned limit values, mitigation measures here shall need to be enhanced in this respect, i.e., 		



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CONSTRUCTION PHASE						
Issue	Potential Impact	Type of Impact (Direct and/or Indirect)	Impact Significance (Low, Medium, High, Extremely High)	Mitigation Measures	Cost	Responsible Party
				<p>selecting equipment with lower sound power levels, installing acoustic barriers/vibration isolation for mechanical equipment, limiting the hours of operation for specific pieces of equipment or operations, etc</p> <ul style="list-style-type: none"> • "Noise & Vibration Management Plan" shall be implemented 		
Air Quality	Dust emissions	Direct	Medium	<ul style="list-style-type: none"> • Compliance shall be ensured with the air emission limit values addressed in "Regulation on Assessment and Management of Air Quality" and WHO General FHS Guidelines (Environmental Air Emissions and Ambient Air Quality) • The trucks that transport materials shall be covered to decrease dust emission. • The road will be wetted as needed to settle dust during transfer works. • Excess material shall be removed and the work site shall be cleaned after completing works. • Use of wind shield and barriers, protective covers or curtains for the areas where most of the dust is formed • The top of excavated material temporarily stored will be wetted to prevent dust formation. • Loading/unloading and excavation/backfilling will be carried out with care and without scattering, as appropriate. • Transportation routes will be determined considering the densely populated areas (i.e. densely populated areas will be avoided as much as possible) Speed limitation shall be followed strictly • New and well-maintained vehicles shall be used to control the gas emissions generated within the activity's scope. • The construction equipment and vehicles need to be regularly checked, and the maintenance of appropriate 	To be covered within the project budget	Contractor



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CONSTRUCTION PHASE						
Issue	Potential Impact	Type of Impact (Direct and/or Indirect)	Impact Significance (Low, Medium, High, Extremely High)	Mitigation Measures	Cost	Responsible Party
				<p>equipment shall be performed to reduce exhaust emissions.</p> <ul style="list-style-type: none"> • Project GRM shall be implemented • Employees shall be trained in the management of air emissions. • "Air Emissions Management Plan" shall be implemented • It will be ensured that every vehicle used for transportation during construction has a 'Motor Vehicles Exhaust Emission Measuring Stamp' and it has not been expired • Dust measurements shall be conducted according to any grievance regarding dust generation is received from the nearest receptors. If measured levels are above background levels, mitigation measures here shall need to be enhanced in this respect i.e. increasing wet suppression/watering activities, applying non-toxic chemicals, further reducing speed/traffic if deemed necessary, considering both national and WHO/EHS Guidelines limit values 		
	Exhaust gases	Direct	Medium	<ul style="list-style-type: none"> • Compliance shall be ensured with the air emission limit values addressed in Regulation on Control of Exhaust Gas Emissions (RCLEP, "RAMAQ") and WHO General EHS Guidelines Environmental Air Emissions and Ambient Air Quality. • The construction equipment and vehicles need to be regularly checked, and the maintenance of appropriate equipment shall be performed to reduce exhaust emissions • New and well-maintained vehicles shall be used to control the gas emissions generated within the activity's scope. 	To be covered within the project budget	Contractor



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CONSTRUCTION PHASE						
Issue	Potential Impact	Type of Impact (Direct and/or Indirect)	Impact Significance (Low, Medium, High, Extremely High)	Mitigation Measures	Cost	Responsible Party
				<ul style="list-style-type: none"> • Unnecessary use of machinery and equipment causing emissions shall be prevented • It will be ensured that every vehicle used for transportation during construction has a valid 'Motor Vehicles Exhaust Emission Measuring Stamp'. • Project GRM shall be implemented. • Employees shall be trained in the management of air emissions. • "Air Emissions Management Plan" shall be implemented 		
Land use	Management of excavation materials	Direct	Medium	<ul style="list-style-type: none"> • Topsoil shall be stripped about 25 cm during construction and stored separately for landscaping activities. • The areas where the vegetation is required to be removed will be minimized. • The topsoil that will be removed by the Contractor will be delivered to the Akçakoca Municipality Parks and Gardens Directorate for use for their activities. • Stripped topsoil stored for landscaping activities within the area for a short time shall be covered with canvas or plastic material to avoid erosion or washouts. The topsoil that will be removed by the Contractor will be delivered to the Akçakoca Akçakoca Municipality Parks and Gardens Directorate for use for their activities • "Waste Management Plan" and "Topsoil Management Plan" shall be implemented. 	To be covered within the project budget	Contractor
Soil Quality	Soil erosion	Direct	Low	<ul style="list-style-type: none"> • Activities during periods of heavy rainfall shall be avoided to the extent possible. • Clean/Storm water flow shall be separated or diverted • Adequate road drainage based on road width, surface material, compaction, and maintenance shall be ensured • "Erosion Control Procedure" shall be implemented. 	To be covered within the project budget	Contractor



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CONSTRUCTION PHASE						
Issue	Potential Impact	Type of Impact (Direct and/or Indirect)	Impact Significance (Low, Medium, High, Extremely High)	Mitigation Measures	Cost	Responsible Party
Water Sources and Wastewater	Water use and wastewater generation	Direct	Low	<ul style="list-style-type: none"> The wastewater shall be connected to the nearby municipal wastewater collection line and will ultimately be treated at Akşıkoca Wastewater Treatment Plant that has sufficient capacity and environmental permit and operates in compliance with relevant legislation. All construction activities will be performed in compliance with Water Pollution Control Regulation The drinking water and potable water shall be provided as bottled water and from the municipal water line, respectively, in compliance with the Regulation on Water Intended for Human Consumption requirements. Surface runoff due to dust suppression activities will be prevented. The amount of water to be used for dust suppression will be monitored in m³ Hazardous materials and wastes shall be stored in designated areas with secondary containment and handled with care by authorized staff to prevent potential spills, thereby contaminating water sources due to surface runoff 	To be covered within the project budget	Contractor
Biological Environment						
Landscape	Visibility	Direct	Low	<ul style="list-style-type: none"> Good housekeeping at the construction areas shall be implemented. 	To be covered within the project budget	Contractor
Socio-Economic Environment						
Community Health & Safety and Security	Transportation safety	Direct	High	<ul style="list-style-type: none"> Place visible warning and informative signs on the construction areas as per "Regulation on Health and Safety Signs" Limit working hours in a manner not to disturb local community and perform construction works during the daytime (7.00 AM and 7.00 PM) in compliance with the Environmental Noise Control Regulation. 	To be covered within the project budget	Contractor



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CONSTRUCTION PHASE						
Issue	Potential Impact	Type of Impact (Direct and/or Indirect)	Impact Significance (Low, Medium, High, Extremely High)	Mitigation Measures	Cost	Responsible Party
				<ul style="list-style-type: none"> The residents shall be informed about the works to be executed at least one week in advance by Akçakoca Municipality Identify alternative roads for material transportation not to cause any problems in the streets used by the local public during working hours. Take measures to avoid trespassing animals (such as cats, dogs, etc.) from the excavation area Conform to speed limits. Inform the drivers who work during construction and work machine operators about safe driving During the transportation activities, the existing roads shall be tried not to be damaged and compensate the cost in the event of any damage Implement a "Community Health & Safety and Security Management Plan," including traffic management issues 		
Community Health & Safety and Security	Pedestrian safety	Direct	High	<ul style="list-style-type: none"> Perimeter safety of the worksite shall be established to restrict unauthorized access to the construction site, and audio and flashing warning signs shall be installed to sustain safety and security. Measures (fences, warning signs, etc.) shall be taken to prevent unauthorized access to the construction areas to minimize potential adverse impacts on the community. Build temporary pedestrian walks or walkways for safety in compliance with the requirements for the passage of individuals with physical challenges and other vulnerable/disadvantaged individuals/groups, such as pregnant, elderly, and children. If a trench needed to be left open for night, sufficient illumination of the area will be ensured, necessary signs will be placed and the area will be enclosed with barriers. 	To be covered within the project budget	Contractor



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CONSTRUCTION PHASE						
Issue	Potential Impact	Type of Impact (Direct and/or Indirect)	Impact Significance (Low, Medium, High, Extremely High)	Mitigation Measures	Cost	Responsible Party
				<ul style="list-style-type: none"> Implement a "Community Health & Safety and Security Management Plan" including traffic management issues. 		
Community Health & Safety and Security	Traffic safety	Direct	High	<ul style="list-style-type: none"> Take safety measures for the traffic flow in line with the approved traffic circulation projects and install warning signs as per "Highway Traffic Law". When road closures or traffic diversions are necessary, official permits will be obtained from relevant authorities and advance notification will be provided to local people to be affected thereof. Inform drivers about the alternative passage routes. Time traffic flows to avoid periods of heavy traffic along main access roads Equip all heavy goods vehicles with audible reversing alarms. Provide appropriate supervision through the contractor to control the flow of traffic when machinery needs to crossroads Provide training on safe driving techniques to the drivers. Check driver licenses. Ensure that speed limits are in a place where necessary Adhere to defined speed limits. Implement good practices to avoid overtiredness i.e., adapting limits for trip duration and arranging driver rosters. Ensure that vehicle maintenance is regularly conducted and manufacturer-approved parts are used against equipment malfunction or premature failure 	To be covered within the project budget	Contractor



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CONSTRUCTION PHASE						
Issue	Potential Impact	Type of Impact (Direct and/or Indirect)	Impact Significance (Low, Medium, High, Extremely High)	Mitigation Measures	Cost	Responsible Party
				<ul style="list-style-type: none"> Ensure that the Emergency Preparedness and Response Plan (EPRP) includes traffic-related emergencies. Implement "Community Health & Safety and Security Management Plan" including traffic management issues. 		
Community Health & Safety and Security	Safety of bicycle routes	Direct	High	<ul style="list-style-type: none"> Create traffic/warning signs and markings and signaling systems on the bicycle path networks, which are compatible with the transportation systems in the entire province to ensure safety. Maintenance holes and potholes will be installed. Sufficient lighting will be made. Traffic sensors will be installed. Drainage channels and gutters will be installed. The green area between the bicycle path and the vehicle road will be maintained so that it does not obstruct the view. Ensure that no obstacle remains on the bicycle paths and no obstacles are found up to at least 3 m from the ground level of the bicycle path. Trim the tree branches that overflow on bicycle paths. Place the signs on the bike paths in the necessary places in a number that shall not endanger the cyclist. 	To be covered within the project budget	Contractor
Community Health & Safety and Security	Flood risk	Indirect	Medium	<ul style="list-style-type: none"> Ensure that the "Flood Management Plan of Western Black Sea Basin" dated July 2019 and published by MoAF (General Directorate of Water Management) including rehabilitation works for Hacıoğlu, Orhan and Sarıma Streams is implemented. 	To be covered within the project budget	Akçakoca Municipality
Access to Services	Existing infrastructure	Direct	Medium	<ul style="list-style-type: none"> Ensure that all necessary permits are in place to avoid any damage to the other structures. Implement "Community Health & Safety and Security Management Plan". 	To be covered within the project budget	Akçakoca Municipality Contractor



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CONSTRUCTION PHASE						
Issue	Potential Impact	Type of Impact (Direct and/or Indirect)	Impact Significance (Low, Medium, High, Extremely High)	Mitigation Measures	Cost	Responsible Party
Cultural Assets	Cultural heritage	Direct	Low	<ul style="list-style-type: none"> In case of findings, stop all activities, secure the site and contact related authorities to find historic artifacts and materials with cultural or historical value Organize all necessary measures to protect the related area. Stop all activities until an official instruction is received For any findings, the "Chance Finds Procedure" in Annex 10 will be in place and implemented, in which communication with the relevant authorities and application of the "Law on the Protection of Cultural and Natural Assets" are addressed Train employees on the chance find procedure. 	To be covered within the project budget	Contractor
Community Health & Safety and Security	Project Affected Group	Direct	High	<ul style="list-style-type: none"> Disclose ESMP on the platforms, i.e., municipality website and neighborhood headman's offices to be able to get public suggestions and comments. Prepare disclosure documents (Posters, brochures, leaflets, etc.) regarding the project, including the construction schedule. Hold information and consultation meetings with the local communities regarding the project components and activities before construction. Inform the public regularly about the latest traffic arrangements and construction schedule Ensure that vulnerable/disadvantaged individuals/groups participate fully in the mainstream consultation process A grievance redress mechanism shall be in place that shall enable the community to raise concerns during the construction phase of the project Implement "Stakeholder Engagement Plan" External GRM within the scope of SEP shall be implemented. 	To be covered within the project budget	Akçakoca Municipality



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CONSTRUCTION PHASE						
Issue	Potential Impact	Type of Impact (Direct and/or Indirect)	Impact Significance (Low, Medium, High, Extremely High)	Mitigation Measures	Cost	Responsible Party
Employment	Local labour	Direct	Low	<ul style="list-style-type: none"> Local workforce and recruitment options shall be considered as much as possible Implement "Human Resources Management Plan and Procedures" including "Internal GRM". Employees shall be trained on critical issues, human resources policy and the internal GRM. Internal GRM shall be implemented. 	To be covered within the project budget	Contractor
Labour and Working Conditions						
Labour and Working Conditions	OHS	Direct	High	<ul style="list-style-type: none"> Follow all regulations, procedures and principles published regarding OHS as part of OHS Law throughout the construction phase. Prefer people with appropriate education/training regarding the work area that they shall be recruited for as per "Regulation on Procedures and Principles of Health and Safety: Training of Employees" Inform workers about job descriptions, responsibilities, relationships with the local community and risks about OHS before commencement of works. Have a full-time Occupational Health and Safety Expert as per "Regulation on Duties, Authorities, Responsibilities and Training of Occupational Safety Experts" with relevant certification and experience in charge of occupational health and safety and s/he shall ensure, control and monitor the site OHS implementations Provide a safe and healthy work environment for the employees. Ensure that workers are equipped with all required PPE (helmet, safety belt, safety outfit, goggles, mask, steel cap boots, gloves, etc.) for OHS as per "Regulation on Use of Personal Protective Equipment in Workplaces". 	To be covered within the project budget	Contractor



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CONSTRUCTION PHASE						
Issue	Potential Impact	Type of Impact (Direct and/or Indirect)	Impact Significance (Low, Medium, High, Extremely High)	Mitigation Measures	Cost	Responsible Party
				<ul style="list-style-type: none"> Provide equipment that meets international standards in terms of performance and safety. Provide orientation and periodical training to the personnel on OHS issues as per "Regulation on Procedures and Principles of Health and Safety Training of Employees" and record all provided training. Inform all personnel about the required safety rules, risks, and related regulations to be followed at the construction site throughout the construction period. Workers shall be issued a written contract with a job description, information about work hours, wages and their rights and obligations. Develop and implement permit-to-work system and follow work procedures. The permit to work system will include hot works (welding/hot work), energy isolation (electricity), fire risks (working at height (trip-slip-fall) and potential confined space. Job specific hazards will be required as needed to be developed for space rotating and moving equipment, moving machinery. Carry out loading and unloading activities together with the dedicated and competent persons to oversee the activity (flagman, banksman, rigger etc.) Ensure that areas, where excavation work is carried out, shall not be accessible other than the authorized personnel. The following documentation shall be implemented: <ul style="list-style-type: none"> Site-specific OHS Management Plan and Procedures (including issues regarding camp area). Risk Assessment Reports are prepared for all works to be carried out and necessary measures shall be taken to avoid these risks as per "OHS Risk Assessment Regulation". 		



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CONSTRUCTION PHASE						
Issue	Potential Impact	Type of Impact (Direct and/or Indirect)	Impact Significance (Low, Medium, High, Extremely High)	Mitigation Measures	Cost	Responsible Party
				<ul style="list-style-type: none"> - "Emergency Preparedness and Response Plans" are prepared for a possible accident as per "Regulation on Emergencies at Workplaces" and "First Aid Regulation". Emergency teams shall be built and training/drills shall be carried out in line with the emergency scenarios. • Provide appropriate signposting of the sites and then inform the workers of key rules and regulations to follow. • Provide toolbox talks to the employees including the code of conduct indicating the possible risks regarding the worksite and works to be carried out. These will include regular trainings to workers on COVID-19 symptoms, how to be protected and what to do when symptoms appear • Areas where excavation work is to be carried out will not be accessible other than the authorized personnel. • The loading and unloading activities shall be carried out together with the persons to oversee the personnel to carry out the activity • Record all accidents and incidents (fatalities, lost time incidents, any significant events including spills, fire, pandemic outbreak or infectious diseases, social unrest, etc.) • The Contractor will immediately notify Akşakoca Municipality in case of any significant environmental (including OHS) or social events (e.g., fatalities, loss of time incidents, environmental spills, etc.), and Akşakoca Municipality will inform IIBANK and WB about the incident within three business days. A report on the root causes of the incident and the corrective actions to be taken will be submitted to IIBANK and WB within 30 days. 		



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CONSTRUCTION PHASE						
Issue	Potential Impact	Type of Impact (Direct and/or Indirect)	Impact Significance (Low, Medium, High, Extremely High)	Mitigation Measures	Cost	Responsible Party
				<ul style="list-style-type: none"> Ensure that the following mitigation measures are in place due to particularly COVID-19 and its variants outbreak: <ul style="list-style-type: none"> - Following Guidance, directives and recommendations of Ministry of Health, Ministry of Family and Social Services, Ministry of Labour and Social Security, WHO and the WFH - Providing surveillance and active screening and treatment of workers. - Conducting training for employees on prevention from COVID-19 and its variants. - Immunizing workers to improve health and guard against infection Getting medical clearance is required for return to work for all employees diagnosed with COVID-19 and its variants. - Conducting track and trace investigation following COVID-19 and its variants' control program • Areas where smoking is prohibited will be determined • Construction areas will be fenced/surrounded with appropriate materials and necessary security measures will be taken that no one will be allowed to enter the construction areas except the workers/staff. • Project owner will ensure that all OHS measures are taken by the Contractor and enforce necessary actions/sanctions in case lack of these measures on sites 		



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CONSTRUCTION PHASE						
Issue	Potential Impact	Type of Impact (Direct and/or Indirect)	Impact Significance (Low, Medium, High, Extremely High)	Mitigation Measures	Cost	Responsible Party
Labour and Working Conditions	Labour management	Direct	High	<ul style="list-style-type: none"> Follow all regulations, procedures and principles published regarding labor and working conditions as part of Labor Law throughout the construction phase Train employees on human resources policy together with the internal GRM. Workers to be issued written contracts with job description, working hours, wages, code and conduct rights and duties and other relevant information. Ensure employees work in a fair-treated work environment with no discrimination and offer equal opportunities for all personnel employed. Ensure that child labor is not employed during the project's construction phase. Implement "Human Resources Management Plan and Procedures," including "Internal GRM" Compliance with the code of conduct rules, including CIBV and SEA/SII, which are included in the training to be provided, shall be in the contract articles of the personnel. Ensure that all workers have easy access to GRM and can raise their grievances/concerns/demands without facing the risk of retaliation. Ensure that informative material about grievance mechanism and the grievance boxes/forms is placed in working areas that are visible and accessible to workers. Ensure that Contractor has assigned a GRM focal point to receive/record the grievances and take necessary actions. 	To be covered within the project budget	Contractor



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6.2 Mitigation Plan for the Operation Phase

The mitigation plan for the operation phase of the Project is presented in Table 6-3 below. During the implementation of the mitigation plan, the most stringent among the national legislation and WB standards and also the most up-to-date legislation will be complied with.

Table 6-3. Mitigation Plan for the Operation Phase

OPERATION PHASE						
Issue	Potential Impact	Type of Impact (Direct and/or Indirect)	Impact Significance (Low, Medium, High, Extremely High)	Mitigation Measures	Cost	Responsible Party
Physical Environment						
Chemicals and Hazardous Materials Management	Environmental contamination due to spills/leakages	Direct and indirect	Medium	<ul style="list-style-type: none"> Prevent spills during maintenance works conducted with chemicals/hazardous materials, in accordance with "Chemicals and Hazardous Materials Management Plan" For the storage of hazardous materials: <ul style="list-style-type: none"> Maintain up to date Safety Data Sheets (SDS) on each chemical Prepare an inventory of hazardous materials in both English and Turkish Make PPE available for relevant personnel Train relevant personnel Keep hazardous materials at designated areas as specified on MSDSs. For the spill prevention: <ul style="list-style-type: none"> Ensure clean up measures can be taken in case of an oil spill using a spill kit for eventual disposal by the licensed handler Use drip tray during maintenance etc 	To be covered within the project budget by the Akçakoca Municipality	Akçakoca Municipality



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OPERATION PHASE						
Issue	Potential Impact	Type of Impact (Direct and/or Indirect)	Impact Significance (Low, Medium, High, Extremely High)	Mitigation Measures	Cost	Responsible Party
Waste Management	Waste generation	Direct and indirect	Medium	<ul style="list-style-type: none"> - Conduct the maintenance/repair operations of the work vehicles at the authorized services • Prepare and implement "Chemicals and Hazardous Materials Management Plan". • Undertake measures for minimum waste generation, i.e., training personnel to raise awareness and manage in accordance with waste management hierarchy (prevent, reduce, reuse, recycle, recover, dispose). • Prepare and implement "Waste Management Plan" • Train workers for waste management practices and to raise awareness on waste reduction shall be provided. • The Akçakoca Municipality shall collect the municipal solid waste. • Recyclable waste, non-recyclable waste and hazardous waste shall be separated. There will be bins to collect recyclable wastes. These wastes will be collected by the Municipality and disposed at the licensed companies. Hazardous waste, generated in all Project phases shall be collected separately in covered and impermeable containers depending on their characteristics and types and shall be transferred to a licensed disposal facility via licensed waste transportation companies following the "Waste Management Regulation". Recyclable waste will be managed by contracting licensed contractors. • Temporary waste storage areas will be developed as needed. These areas will be constructed and operated in line with the waste management regulations. • Waste generation, storage, and disposal records shall be kept. 	To be covered within the project budget by the Akçakoca Municipality	Akçakoca Municipality



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OPERATION PHASE						
Issue	Potential Impact	Type of Impact (Direct and/or Indirect)	Impact Significance (Low, Medium, High, Extremely High)	Mitigation Measures	Cost	Responsible Party
Water Resources	Wastewater generation	Direct and indirect	Medium	<ul style="list-style-type: none"> Domestic wastewater will be connected to the nearby sewerage network, but if it is not possible, it will be collected in a sealed septic tank and collect the accumulated wastewater at certain intervals with a vacuum truck and disposed to the sewer system or the city's Wastewater Treatment Plant entrance line at certain time intervals with licensed vacuum trucks. Use portable toilets for the needs of workers if needed during maintenance and repair works in densely populated urban areas. 	To be covered within the project budget by the Akçakoca Municipality	Akçakoca Municipality
Socio-Economic Environment						
Community Health & Safety and Security	Traffic safety	Direct	High	<ul style="list-style-type: none"> Place necessary warning signs at visible points on roads to raise awareness of drivers for bicycle riders Place signs such as the "compulsory bicycle path" sign and "motor vehicles cannot enter" and "passing and parking is prohibited" on the pedestrian sidewalk where necessary to prevent other vehicles from entering or parking on the bicycle path Place speed limits warning signs on roads Place warning signs at the intersection entrances of bicycle paths Leave a safety distance of at least 75 cm from the rightmost lane line of the vehicle road. Place 110 cm high delineators at 1m intervals in the middle of the safety distance. Apply a separator with a median of at least 60 cm width and 10 cm height along the road between the vehicle road and the bicycle path Ensure that the longitudinal slope does not exceed 5% 	To be covered within the project budget by the Akçakoca Municipality	Akçakoca Municipality



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Issue	Potential Impact	Type of Impact (Direct and/or Indirect)	Impact Significance (Low, Medium, High, Extremely High)	Mitigation Measures	Cost	Responsible Party
				<ul style="list-style-type: none"> The transverse slope of the bicycle paths to be built at the level of the vehicle road shall be in accordance with the rainwater drainage direction and the slope of the vehicle road Traffic signs to be used in residential areas shall be placed outside the sidewalk if possible. However, the distance of the sign from the road shall not exceed 4.00 meters. Traffic light systems, warning, and direction signs for cyclists shall be positioned on the floor and/or edge of the bike paths at a level that the cyclist can easily see, provided that the net height between the bike path floor and the lower edge of the plate is not less than 220 cm Danger and prohibited ground markings shall be indicated at the start and end of the bike path, right and left turns. After intersections with other roads and streets, these signs and signs shall be repeated on the bike path If bicycle lanes are established by the relevant administration on pedestrianized streets, signs shall be placed at street entrances stating that the maximum speed of cyclists cannot exceed 10 km/h. Locate traffic lines in accordance with 'Bicycle Road Regulation' Lighting at bicycle roads shall be done in accordance with 'Bicycle Road Regulation' Take necessary precautions against icing in autumn and winter. 		
	Pedestrian safety	Direct	High	<ul style="list-style-type: none"> Place necessary warning signs at visible points. Divide pedestrian roads and bicycle roads via delineators 	To be covered within the project budget by the	Akşıkoca Municipality



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OPERATION PHASE						
Issue	Potential Impact	Type of Impact (Direct and/or Indirect)	Impact Significance (Low, Medium, High, Extremely High)	Mitigation Measures	Cost	Responsible Party
				<ul style="list-style-type: none"> Reserve pedestrian crossings at necessary points Place speed limiters in places where it is decided that they shall endanger pedestrian safety on bicycle paths. Establish policies for the enforcement of bicycle traffic rules If bicycle lanes are established on pedestrianized streets, place signs at street entrances stating that the maximum speed of cyclists cannot exceed 10 km/h. 	Akçakoca Municipality	
	Safety of cyclists	Direct	High	<ul style="list-style-type: none"> Create traffic signs and markings and signaling systems on the bicycle path networks, which are compatible with the transportation systems in the entire province to ensure safety. Encourage cyclists to take a "safe cycling course". Establish necessary traffic rules for cyclists and inform drivers about these rules. Ensure that no obstacle is placed on the bicycle paths and no obstacles are found up to at least 3 m from the ground level of the bicycle path. Trim the tree branches that overflow on bicycle paths. In case the bicycle paths are closed for reasons such as maintenance and repair, place a warning sign at least 20 m in front of the place where this work shall be done, and show an alternative direction. Construct tube passages or panels on bicycle paths to protect cyclists from windy, snowy, rainy, and similar climatic conditions. Place the signs on the bike paths in the necessary places in a number that shall not endanger the cyclist. 	To be covered within the project budget by the Akçakoca Municipality	Akçakoca Municipality



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OPERATION PHASE						
Issue	Potential Impact	Type of Impact (Direct and/or Indirect)	Impact Significance (Low, Medium, High, Extremely High)	Mitigation Measures	Cost	Responsible Party
				<ul style="list-style-type: none"> Ensure those bicycle paths cannot be used by motor vehicles, except for the cases where there is a connection from the vehicle road such as parking lot, garage and site entrance and used for a short time Place necessary warnings and posters or publicity boards to ensure that bicycle paths are used by cyclists and to raise awareness for motor vehicle drivers. For water drainage and similar purposes, use gratings that shall not allow bicycle wheels to enter the gap sections. Apply Highway Traffic Law No. 2918 and the changes in the law in 2022 and the provisions of the relevant legislation in matters related to bicycle use and fines. Bicycle waiting areas at signalized intersections shall be built to ensure the safety of cyclists during the red light and to avoid the queue of motor vehicles in a way that can be seen by other road users. Illuminate the bicycle paths by projecting at least in accordance with the values in Annex-3 Table-5 of Bicycle Road Regulation for night safety and driving comfort and in a way that no light shall reflect on the face of the cyclist. In addition, renewable energy shall be used in the lighting of bicycle roads according to Bicycle Road Regulation. Request training in schools to include safety measures 		
	Safety of bicycle roads	Direct	High	<ul style="list-style-type: none"> Perform regular checks/control and maintenance of bicycle roads (including warning signs, delineators, etc.) and immediate repair to be undertaken as needed Loose maintenance hole covers and potholes should be repaired 	To be covered within the project budget by the Akçakoca Municipality	Akçakoca Municipality



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Issue	Potential Impact	Type of Impact (Direct and/or Indirect)	Impact Significance (Low, Medium, High, Extremely High)	Mitigation Measures	Cost	Responsible Party
				<ul style="list-style-type: none"> Lighting deficiencies shall be eliminated. Traffic sensors shall be maintained. Drainage channels and gutters shall be cleaned. The rubbish from the vehicle road shall be removed. Worn and erased marks shall be repaired. Winter road maintenance shall be done. The green area between the bicycle path and the vehicle road shall be regularly maintained so that it does not obstruct the view. 		
	Flood risk	Indirect	Medium	<ul style="list-style-type: none"> Ensure that the "Flood Management Plan of Western Black Sea Basin" dated July 2019 and published by MoAF (General Directorate of Water Management) including rehabilitation works for Hacız. Orhan and Sarma Streams is implemented. 	To be covered within the project budget by the Akçakoca Municipality	Akçakoca Municipality
	Stakeholder engagement	Direct	Low	<ul style="list-style-type: none"> Develop a GRM for the community. Publicize GRM, including information on contact details of responsible staff to handle grievances. Conduct meetings open to the public to present the project's information and receive feedback from citizens. Conduct meetings where local people can easily access and ensure that people with special needs can participate. Open the meetings to all citizens. Announce the meetings to reach people interested in the Project via the Municipality website and neighborhood headman's offices. Announcement materials are as follows: <ul style="list-style-type: none"> Project details and information. Visuals of the project. Project location. 	To be covered within the project budget by the Akçakoca Municipality	Akçakoca Municipality



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Issue	Potential Impact	Type of Impact (Direct and/or Indirect)	Impact Significance (Low, Medium, High, Extremely High)	Mitigation Measures	Cost	Responsible Party
				Project-related documents: ESMP and SEP <ul style="list-style-type: none"> Develop social network link addresses that allow information sharing regarding the project - Facebook, Twitter, LinkedIn, etc. Keep Grievance Register. Implement "SEP" External GRM to be included within the scope of SEP shall be implemented. 		
	Future problems i.e. potential conflicts with the project	Direct	Low	For the continuous improvement of the project, an advisory board which will be responsible to provide advice to the management shall be established <ul style="list-style-type: none"> Review and interpret transport policies and plans from the perspective of pedestrians and cyclists, and recommend actions. Be a part of developing the plan as well as solving future problems. Develop solutions and suggestions for solving potential conflicts and supporting several projects, such as field surveys and safety training programs 	To be covered within the project budget by the Akçakoca Municipality	Akçakoca Municipality, Advisory Board
Labour and Working Conditions	OHS	Direct	High	<ul style="list-style-type: none"> Follow all regulations, procedures and principles published regarding OHS as part of OHS Law Prefer people with appropriate education/training regarding the work area that they shall be recruited for as per "Regulation on Procedures and Principles of Health and Safety Training of Employees". Inform workers about job descriptions, responsibilities, relationships with the local community and risks about OHS An adequate OHS organizational structure, as defined in relevant legislation, will be defined and the required number of OHS officers/experts should be appointed 	To be covered within the project budget by the Akçakoca Municipality	Akçakoca Municipality



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OPERATION PHASE						
Issue	Potential Impact	Type of Impact (Direct and/or Indirect)	Impact Significance (Low, Medium, High, Extremely High)	Mitigation Measures	Cost	Responsible Party
				<ul style="list-style-type: none"> Provide a safe and healthy work environment for the employees and keep records of all trainings provided. Ensure that workers of the maintenance and repair works are equipped with all required PPE (helmet, safety belt, safety outfit, goggles, mask, steel cap boots, gloves, etc.) for OHS as per "Regulation on Use of Personal Protective Equipment in Workplaces". Provide orientation and periodical training to the personnel on OHS issues as per "Regulation on Procedures and Principles of Health and Safety Training of Employees" and record all provided training. Inform all personnel about the required safety rules, risks, and related regulations to be followed regarding operational activities. Ensure that the following documentation is implemented by the Aşkaleköy Municipality workers responsible for the operation phase: <ul style="list-style-type: none"> Site-specific OHS Management Plan and Procedures. Risk Assessment Reports are prepared for all works to be carried out and necessary measures shall be taken to avoid these risks as per "OHS Risk Assessment Regulation". "Emergency Preparedness and Response Plans" are prepared for a possible accident as per "Regulation on Emergencies at Workplaces" and "First Aid Regulation". Emergency teams shall be built and training/drills shall be carried out in line with the emergency scenarios. Provide toolbox talks to the employees indicating the possible risks regarding the worksite and works to be carried out. 		



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OPERATION PHASE						
Issue	Potential Impact	Type of Impact (Direct and/or Indirect)	Impact Significance (Low, Medium, High, Extremely High)	Mitigation Measures	Cost	Responsible Party
				<ul style="list-style-type: none"> Record all accidents and incidents (fatalities, lost time incidents, any significant events including spills, fire, pandemic outbreak or infectious diseases, social unrest, etc.); In case of any significant environmental (including OHS) or social events (e.g., fatalities, environmental spills, etc.), Akçakoca Municipality will inform ILBANK and WB about the incident within three business days. A report on the root causes of the incident and the corrective actions to be taken will be submitted to ILBANK and WB within 30 days. Follow all the guidance, directives and recommendations of Ministry of Health, Ministry of Family and Social Services, Ministry of Labour and Social Security, WHO and the WB and implement all relevant necessary measures, both for occupational health and safety of employees and for workplaces, in case of an outbreak of any other pandemic/communicable disease including COVID-19. Ensure that the following mitigation measures are in place due to particularly COVID-19 and its variants' outbreak: <ul style="list-style-type: none"> - Providing surveillance and active screening and treatment of workers; - Conducting training for employees on prevention from COVID-19 and its variants; - Immunizing workers to improve health and guard against infection; - Getting medical clearance is required for return to work for all employees diagnosed with COVID-19 and its variants; - Conducting track and trace investigation following COVID-19 and its variants' control program. 		



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OPERATION PHASE						
Issue	Potential Impact	Type of Impact (Direct and/or Indirect)	Impact Significance (Low, Medium, High, Extremely High)	Mitigation Measures	Cost	Responsible Party
Labour and Working Conditions	Labour management	Direct	Low	<ul style="list-style-type: none"> Follow all regulations, procedures and principles published regarding labor and working conditions as part of Labor Law. Train employees on human resources policy together with the internal GRM. Workers to be issued written contracts with job description, working hours, wages, code and conduct, rights and duties and other relevant information Ensure employees work in a fair-treated work environment with no discrimination and offer equal opportunities for all personnel employed. Implement "Human Resources Management Plan and Procedures" including "Internal GRM". Compliance with the code of conduct rules, including GIBV and SFA/SIL, which are included in the training to be provided, shall be in the contract articles of the personnel 	To be covered within the project budget by the Akçakoca Municipality	Akçakoca Municipality



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7 Monitoring Plan

Akçakoca Municipality will monitor the E&S impacts of the project activities regularly against Environmental, Social and Occupational/Community Health and Safety Key Performance Indicators (KPIs) clarified considering relevant national legislation, the WB WB OPs, EHS Guidelines and good international industry practice. Monitoring procedures and subsequent reporting in an appropriate format to be developed in this respect will be clarified and conducted by the Akçakoca Municipality. Moreover, during the implementation of the monitoring plans, the most stringent among the national legislation, requirement and WB standards and also the most up-to-date legislation will be complied with.

7.1 Monitoring Plan for the Pre-Construction and Construction Phases

The monitoring plan for the pre-construction and construction phases of the Project is presented in Table 7-1 and Table 7-2 below.

Table 7-1. Monitoring Plan for the Pre-Construction Phase

PRE-CONSTRUCTION PHASE									
Issue	Monitoring Location	Timing / Frequency of Monitoring	Parameters Monitored	Monitoring Method	Target/ threshold values	Legal Requirements for monitoring	Key Performance Indicators	Cost	Responsible Party
Permitting	Project Camp Area	Before commencement of works	Permits issues regarding the project	A permit register	Comply with the Environmental Law and Relevant Regulations	Environmental Law and Relevant Regulations	Completed permitting processes	To be covered within the project budget	Akçakoca Municipality, Contractor
Preparation of L&S Management Components	Responsible parties- Contractors and Municipality	Before commencement of works	Hired Personnel E&S components (safety management plans, procedure s, training of employees work	Review of Management Plans	Preparation for Construction Activities	Environmental Law and Relevant Regulations and ESMP requirements	Hired Personnel and E&S components	To be covered within the project budget	Akçakoca Municipality, Contractor



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PRE-CONSTRUCTION PHASE									
Issue	Monitoring Location	Timing / Frequency of Monitoring	Parameters Monitored	Monitoring Method	Target/ threshold values	Legal Requirements for monitoring	Key Performance Indicators	Cost	Responsible Party
			etc. OHS measures (scaffolding, PPE, etc.), etc)						
Physical Environment									
Soil Quality (preliminary assessment)	Project area	Before the commencement of works	Alterations in the land structure because of excavation works and debris collection (erosion)	Completion of preliminary assessments and identification of site-specific erosion control, landscaping and reinstatement measures	Comply with the WBGI General EHS Guidelines: Construction and Decommissioning and Decommissioning by ensuring erosion control measures	WBGI General EHS Guidelines, Construction and Decommissioning	Identification of measures for controlling erosion during construction	To be covered within the project budget	Asyıkoca Municipality, Contractor
Socio-Economic Environment									
Community Health & Safety and Security	Haçiz, Orhan and Sarma Streams	Before the commencement of works	Rehabilitation works	Observation	Implementation of mitigation measures addressed in the "Flood Management Plan of Western Black Sea Basin" dated July 2019 and published by MoAF (General Directorate of Water Management) according to the timetable included in the plan	The "Flood Management Plan of Western Black Sea Basin" dated July 2019 and published by MoAF (General Directorate of Water Management)	Reduction of the negative effects of floods on human health, environment, cultural heritage and economic activities	To be covered within the project budget	Asyıkoca Municipality



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PRE-CONSTRUCTION PHASE									
Issue	Monitoring Location	Timing / Frequency of Monitoring	Parameters Monitored	Monitoring Method	Target/ threshold values	Legal Requirements for monitoring	Key Performance Indicators	Cost	Responsible Party
Cultural Assets	Project Area	Before the commencement of works	Identification of the management of cultural heritage	Training of employees and workers on the Chance Find Procedure	Comply with Law No. 2863 protecting archaeological and cultural heritage Chance Find Procedure	Law No. 2863 on the Protection of Cultural and Natural Assets WB OP Physical Cultural Resources	Chance Finds Procedure and training records in place	To be covered within the project budget	Contractor
Labour and Working Conditions									
Labor and Working Conditions (OHS)	Project Area	Before the commencement of works	Identification of OHS requirements	Preparation of an OHS Management Plan, maintain all required PPFs	Comply with the OHS Law and regulations	OHS Law and regulations WBG General EHS Guidelines OHS	OHS Management Plan and PPFs in place	To be covered within the project budget	Contractor
Labor and Working Conditions (Labor management)	Project Area	Before the commencement of works	Identification of labor management practices	Preparation of Human Resources Management Plan and Procedures, training of employees and workers on the Procedure	Comply with Labor Law and regulations	Labor Law and regulations	Human Resources Management Plan and training records in place	To be covered within the project budget	Contractor



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Table 7-2. Monitoring Plan for the Construction Phase

CONSTRUCTION PHASE									
Issue	Monitoring Location	Timing / Frequency of Monitoring	Parameters Monitored	Monitoring Method	Target/ threshold values	Legal Requirements for monitoring	Key Performance Indicators	Cost	Responsible Party
Physical Environment									
Soil Quality	Project construction area	Daily	Soil stripping, excavation and backfilling activities and topsoil storage	Visual inspection	Comply with the WBG General EHS Guidelines Construction and Decommissioning by protecting topsoil	WBG General EHS Guidelines Construction and Decommissioning	Preserved topsoil	To be covered within the project budget	Contractor
	Project area	During heavy rainy weather	Taken measures during pre-construction i.e. site-specific erosion control, sediment control, landscaping and reinstatement	Visual inspection	Comply with the WBG General EHS Guidelines Construction and Decommissioning by controlling erosion	WBG General EHS Guidelines Construction and Decommissioning	Controlled erosion	To be covered within the project budget	Contractor
	Project area and nearest access roads	During summer time with high temperature	Wind erosion	Observations and records on water spraying against dust	Comply with the WBG General EHS Guidelines Construction and Decommissioning by preventing wind erosion	WBG General EHS Guidelines Construction and Decommissioning	Suppressed dust emission	To be covered within the project budget	Contractor
	Relayed areas with the stored topsoil and/or revegetated areas	Delivery to the Akçakoca Municipality Parks and Gardens Directorate for use for their activities	Relayed topsoil and/or revegetation	Visual inspection	Comply with the WBG General EHS Guidelines Construction and Decommissioning by preventing soil erosion and landscape	WBG General EHS Guidelines Construction and Decommissioning	Controlled soil erosion Protected landscape	To be covered within the project budget	Contractor Akçakoca Municipality



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CONSTRUCTION PHASE									
Issue	Monitoring Location	Timing / Frequency of Monitoring	Parameters Monitored	Monitoring Method	Target/ threshold values	Legal Requirements for monitoring	Key Performance Indicators	Cost	Responsible Party
Air quality	Sensitive receptors	In case of any grievance During excavation works Daily	Dust emission	Dust measurement (via an authorized environmental laboratory) Visually (based on the irritation in the respiratory system)	Comply with the legal limits addressed in the RAMAQ World Health Organization (WHO) Ambient Air Quality Guidelines	WBG General EHS Guidelines Environmental (Air Emissions and Ambient Air Quality) WBG EHS Guidelines Community Health and Safety WBG EHS Guidelines Construction and Decommissioning RAMAQ	Air emission levels complied with the national and international limits	To be covered within the project budget	Contractor
	Project area	During construction Monthly	Exhaust emissions	Maintenance and inspection documents of vehicles shall be checked The exhaust gas emission measurement documents shall be checked	Comply with the legal limits addressed in the RCIAP, Regulation on Control of Exhaust Gas Emissions	RCIAP and Regulation on Control of Exhaust Gas Emissions	Air emission levels complied with the national limits	To be covered within the project budget	Contractor
Waste Management and Pollution Prevention	Project area	Continuously Daily	Waste generation (including excavation waste soil)	Visual inspection regarding proper collection and temporary storage of wastes and records kept regarding their coordinated recycle disposal via licensed firms	Comply with the Waste Management Regulation and relevant regulations on waste and WBG General EHS Guidelines Environmental (Waste Management)	WBG General EHS Guidelines Environmental (Waste Management) Waste Management Regulation and relevant regulations on waste	Wastes properly temporarily stored and delivered to recycle disposal Protected environment, OHS and community health	To be covered within the project budget	Contractor



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CONSTRUCTION PHASE									
Issue	Monitoring Location	Timing / Frequency of Monitoring	Parameters Monitored	Monitoring Method	Target/ threshold values	Legal Requirements for monitoring	Key Performance Indicators	Cost	Responsible Party
	Project area	Each waste delivery operation	Hazardous & non-hazardous waste amounts	Mobile Hazardous Waste Delivery System (M3, V1) records Assumptions for (non-hazardous)	Comply with the WBG General EHS Guidelines Environmental (Waste Management), Waste Management Regulation and relevant regulations on waste	WBG General EHS Guidelines Environmental (Waste Management) Waste Management Regulation and relevant regulations on waste	Waste minimization as much as possible	To be covered within the project budget	Contractor
Surface Water Quality	Ak Hacı Stream	Once a month	Parameters specified in Regulation on Surface Water Quality	Water analysis done by licensed laboratory	Comply with the Regulation on Surface Water Quality	Surface Water Quality Regulation	Water quality parameters complied with the national limits	To be covered within the project budget	Contractor
Noise and vibration	Sensitive receptors	In case of any grievance	Noise & vibration levels	24-hour noise measurements handheld device (via an authorized environmental laboratory)	Comply with the legal limits addressed in the Environmental Noise Control Regulation WBG General EHS Guidelines Noise Level Guidelines WBG General EHS Guidelines Environmental (Noise Management)	WBG General EHS Guidelines Environmental (Noise Management), Environmental Noise Control Regulation	Noise emission levels complied with the national and international limits	To be covered within the project budget	Contractor
Management of chemicals and hazardous materials	Below and around the storage or usage locations for the materials. Non	Daily	Chemicals and hazardous materials such as fuel oil	Visual inspections (any leakages, etc.) Site inspections (i.e. storage conditions)	Comply with the WBG General EHS Guidelines Environmental (Hazardous Material	WBG EHS Guidelines Environment Hazardous Materials Management	Non-contaminated environment	To be covered within the project budget	Contractor



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CONSTRUCTION PHASE									
Issue	Monitoring Location	Timing / Frequency of Monitoring	Parameters Monitored	Monitoring Method	Target/ threshold values	Legal Requirements for monitoring	Key Performance Indicators	Cost	Responsible Party
	the vehicles and around the vehicles		maintenance oil antifreeze, etc.	handling operations) and document control (i.e. MSDSs, training records)	Management Regulation on Safety Data Sheets on Hazardous Materials and Mixtures	Regulation on Safety Data Sheets on Hazardous Materials and Mixtures			
Spills/Leakages	Project Area	In the event of incident	Environmental incidents	Incident logs	Comply with the WBGLIJS Guidelines Environment Hazardous Materials Management	WBGLIJS Guidelines Environment Hazardous Materials Management	Zero incident	To be covered within the project budget	Contractor
Enforcement Actions by Regulatory Authorities	Project area	In the event of environmental prosecution - regulatory non-compliance	Environmental prosecutions - regulatory non-compliances	Enforcement records (audit reports, etc.)	Comply with the Environmental Law and regulations	Not Applicable (N/A)	Zero prosecution	Akşirvan Municipality Contractor	Contractor
Socio-Economic Environment									
Community Health & Safety and Security	Hacı/ Urban and Sarma Streams	Continuously	Rehabilitation works	Observation	Implementation of mitigation measures addressed in the "Flood Management Plan of Western Black Sea Basin" dated July 2019 and published by MoAF (General Directorate of Water Management) according to the timetable included in the plan.	The "Flood Management Plan of Western Black Sea Basin" dated July 2019 and published by MoAF (General Directorate of Water Management)	Reduction of the negative effects of floods on human health, environment, cultural heritage and economic activities	To be covered within the project budget	Akşirvan Municipality
Cultural heritage	Project area and its vicinity	Continuously Daily	Finding historical artifacts and other materials that	To be monitored during the activities, visually.	Comply with the Physical Cultural Resources (OP 4.11)	Physical Cultural Resources (OP 4.11)	Protection of any material having a	To be covered within the	Contractor



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CONSTRUCTION PHASE									
Issue	Monitoring Location	Timing / Frequency of Monitoring	Parameters Monitored	Monitoring Method	Target/ threshold values	Legal Requirements for monitoring	Key Performance Indicators	Cost	Responsible Party
			have historical values	records kept during the construction period	and Law No. 2863 on the by protecting archaeological and cultural heritage Chance Find Procedure	Law No. 2863 on the Protection of Cultural and Natural Assets	historical value which is found Information to General Directorate of Cultural Assets and Museums	project budget	
Traffic and Transportation	All drivers	Records maintained and up to date Once every six months	Driver and vehicle competency	Checking employment (driver licenses) and vehicle maintenance records Timing of traffic flows to avoid periods of heavy traffic Check audible reversing alarms Training records Check driving licenses Periodically check velocity of vehicles Check placement of speed limits Training records	Comply with the Highway Traffic Law (No. 2918) and WBG General EHS Guidelines Community Health and Safety by ensuring traffic safety	Highway Traffic Law (No. 2918) and WBG General EHS Guidelines Community Health and Safety	Safe traffic and transportation conditions	To be covered within the project budget	Contractor
Pedestrian safety	Project area	Daily	Monitoring of safety conditions at the site, fencing of construction areas, audio and flash warning	Visual control of the signs	Comply with the Highway Traffic Law (No. 2918) and WBG General EHS Guidelines Community Health and Safety by	Highway Traffic Law (No. 2918) and WBG General EHS Guidelines Community Health and Safety	Safe pedestrian transportation conditions	To be covered within the project budget	Contractor



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CONSTRUCTION PHASE									
Issue	Monitoring Location	Timing / Frequency of Monitoring	Parameters Monitored	Monitoring Method	Target/ threshold values	Legal Requirements for monitoring	Key Performance Indicators	Cost	Responsible Party
			signs as necessary		ensuring traffic safety				
Community Health & Safety and Security	Project area and its vicinity	In the event of a grievance suggestion	External grievances	GIRM (see Section 8.2)	Comply with the WBG I.LHS Guidelines Community Health and Safety, Right to Information Law 4982, Regulation on the Principles and Procedures for The Enforcement of the Law on the Right to Information and Use of the Right to Petition Law 3071 by conducting effective communication with nearby communities and other stakeholders with addressing their concerns.	Right to Information Law 4982, Regulation on the Principles and Procedures for The Enforcement of the Law on the Right to Information and Use of the Right to Petition Law 3071 OHS Law and regulations WBG I.LHS Guidelines Community Health and Safety	Number and nature of grievances and percentage of closed grievances	To be covered within the project budget	Akgöksen Municipality
	A location where an incident, accident or near miss occurs due to project activities	In the event of an incident (accidents and near misses)	Incidents, accidents and near misses	Incident/accident and near miss logs, accident types and if necessary Lost Time Injury Rates (LTIR)	To prevent further incidents, accidents and near misses	NA	Zero incident and near miss	No cost	Contractor, Akgöksen Municipality
Labour and Working Conditions									
OHS	Project area	In the event of a prosecution/regulatory non-compliance	Health and Safety prosecutions - non regulatory compliance	Prosecutions, audit reports etc.	Comply with the OHS Law and regulations	OHS Law and regulations	Zero prosecution/regulatory non-compliance	To be covered within the	Contractor



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CONSTRUCTION PHASE									
Issue	Monitoring Location	Timing / Frequency of Monitoring	Parameters Monitored	Monitoring Method	Target/ threshold values	Legal Requirements for monitoring	Key Performance Indicators	Cost	Responsible Party
								project budget	
	Project area and places where workers exist related to work	In the event of an incident (accidents and near misses)	Incidents, accidents and near misses	Incident accident and near miss logs, accident types and if necessary LIR	Comply with the WBG EHS Guidelines Occupational Health and Safety WBG EHS Guidelines Community Health and Safety OHS Law by preventing further incidents	WBG EHS Guidelines Occupational Health and Safety WBG EHS Guidelines Community Health and Safety OHS Law and regulations	Zero incident, accidents and near miss	To be covered within the project budget	Contractor
	Project area	Daily	Site OHS implementations (safe conditions on the construction sites, risk analysis and procedures, EPRP, toolbox talks and trainings, etc.)	Site observations and check records i.e. periodic health screening records of personnel, risk assessments, PPE delivery forms, training and toolbox records drill records, etc	Comply with the OHS Law and regulations WBG General EHS Guidelines OHS WBG EHS Guidelines Community Health and Safety by taking corrective actions to prevent incidents	WBG EHS Guidelines OHS WBG EHS Guidelines Community Health and Safety OHS Law and regulations	Number and nature and percentage of closed corrective actions	To be covered within the project budget	Contractor
	Project area	Weekly	Internal grievances	Project Specific Grievance Redress Mechanism	Comply with the Right to Information Law, 4982. Regulation on the Principles and Procedures for The Enforcement of the	Right to Information Law, 4982. Regulation on the Principles and Procedures for The Enforcement of the Law on the Right to Information, and Use of the Right to Petition Law, 3071	Number and nature of grievances and percentage of closed grievances	To be covered within the project budget	Contractor



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CONSTRUCTION PHASE									
Issue	Monitoring Location	Timing / Frequency of Monitoring	Parameters Monitored	Monitoring Method	Target/ threshold values	Legal Requirements for monitoring	Key Performance Indicators	Cost	Responsible Party
					Law on the Right to Information and Use of the Right to Petition Law, 3071 by conducting effective communication with employees with addressing their concerns				
Working Conditions and Worker Management	Project area	Weekly	Internal grievances	Project Specific Grievance Redress Mechanism	Comply with the Right to Information Law, 4982; Regulation on the Principles and Procedures for The Enforcement of the Law on the Right to Information and Use of the Right to Petition Law, 3071 by conducting effective communication with employees with addressing their concerns.	Right to Information Law, 4982; Regulation on the Principles and Procedures for The Enforcement of the Law on the Right to Information and Use of the Right to Petition Law, 3071	Number and nature of grievances and percentage of closed grievances	To be covered within the project budget	Contractor



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7.2 Monitoring Plan for the Operation Phase

The monitoring plan for the operation phase of the Project is presented in Table 7-3 below.

Table 7-3. Monitoring Plan for the Operation Phase

OPERATION PHASE									
Issue	Monitoring Location	Timing / Frequency of Monitoring	Parameters Monitored	Monitoring Method	Target/ threshold values	Legal Requirements for monitoring	Key Performance Indicators	Cost	Responsible Party
Physical Environment									
Soil quality	Project area and closed settlements	During heavy rainy weather	Taken measures during pre-construction i.e. site-specific erosion control, sediment control, landscaping and reinstatement	Visual inspection	Comply with the WBG General EHS Guidelines Construction and Decommissioning by controlling erosion	WBG General EHS Guidelines Construction and Decommissioning	Controlled erosion	To be covered within the project budget	Akyaka Municipality
	Vegetation clearing areas	Continuously	Vegetation clearing	Visual inspection	Comply with the WBG General EHS Guidelines Construction and Decommissioning by preventing soil erosion and landscape	WBG General EHS Guidelines Construction and Decommissioning	Controlled soil erosion Protected landscape	To be covered within the project budget	Akyaka Municipality
	Revegetated areas	Annually	Revegetation	Visual inspection	Comply with the WBG General EHS Guidelines Construction and Decommissioning by preventing soil erosion and landscape	WBG General EHS Guidelines Construction and Decommissioning	Controlled soil erosion Protected landscape	To be covered within the project budget	Akyaka Municipality
Waste Management and Pollution Prevention	Along the project bicycle lanes	Continuously Daily	Waste generation	Visual inspection regarding proper collection and temporary storage of wastes and their coordinated recycle	Comply with the Waste Management Regulation and relevant regulations on waste and WBG	Waste Management Regulation and relevant regulations on waste	Wastes properly temporarily stored and delivered to	To be covered as part of the Project Budget.	Akyaka Municipality



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OPERATION PHASE									
Issue	Monitoring Location	Timing / Frequency of Monitoring	Parameters Monitored	Monitoring Method	Target/ threshold values	Legal Requirements for monitoring	Key Performance Indicators	Cost	Responsible Party
				disposal via licensed firms	General EHS Guidelines by preserving the environment, OHS and protect community health	WRC General EHS Guidelines	recycle disposal		
	Along the project bicycle lanes	Each waste delivery operation	Waste amount Waste Disposal Agreements Protocols	MET/CC/MoE/AT records Assumptions (for non-hazardous waste)	Comply with the General EHS Guidelines Environmental (Waste Management) Waste Management Regulation and relevant regulations on waste	General EHS Guidelines, Environmental (Waste Management) Waste Management Regulation and relevant regulations on waste	Waste minimization as much as possible	To be covered as part of the Project Budget	Akyaka Municipality
	Along the project bicycle lanes	Annually	Waste	MET/CC waste declaration system	Comply with the Waste Management Regulation by delivering waste to the licensed recycle disposal companies	“Waste Management Regulation”	Submitted declaration form	To be covered as part of the Project Budget	Akyaka Municipality
Management of chemicals and hazardous materials	Along the project bicycle lanes and chemical and hazardous materials storage areas	On occasion	Storage and handling operations of chemicals hazardous materials	Site inspections (i.e. storage conditions, handling operations); and document control (i.e. MSDS, training records)	Comply with WRC General EHS Guidelines Environmental (Hazardous Material Management) and Regulation on Safety Data Sheets on Hazardous Materials and Mixtures	WRC EHS Guidelines; Environment Hazardous Materials Management Regulation on Safety Data Sheets on Hazardous Materials and Mixtures	Non-contaminated environment	To be covered as part of the Project Budget	Akyaka Municipality



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OPERATION PHASE									
Issue	Monitoring Location	Timing / Frequency of Monitoring	Parameters Monitored	Monitoring Method	Target/ threshold values	Legal Requirements for monitoring	Key Performance Indicators	Cost	Responsible Party
Water Quality	At the maintenance activity area	Prior to and during maintenance/repair works at these locations (if any)	Parameters specified in relevant regulations	Water analysis done by licensed laboratory	Comply with the relevant regulation	Surface Water Quality Regulation or Regulation on Monitoring Surface and Ground Water	Water quality parameters complied with the national limits	To be covered within the project budget	Akşakoca Municipality
Socio-Economic Environment									
Community Health & Safety and Security	Bağcı, Örtün and Sarımsık Streams	Continuously	Rehabilitation works	Observation	Implementation of mitigation measures addressed in the "Flood Management Plan of Western Black Sea Basin" dated July 2019 and published by MoM (General Directorate of Water Management) according to the timetable included in the plan	The "Flood Management Plan of Western Black Sea Basin" dated July 2019 and published by MoM (General Directorate of Water Management)	Reduction of the negative effects of floods on human health, environment, cultural heritage and economic activities	To be covered within the project budget	Akşakoca Municipality
Traffic and transportation	A location that is subject to the relevant grievance	In the event of a grievance	Transportation safety	Visual observations and on-site inspection	Comply with the Highway Traffic Law (No. 2918), Bicycle Road Regulation, and WBG General EHS Guidelines. Community Health and Safety by ensuring traffic safety	Highway Traffic Law (No. 2918), Bicycle Road Regulation, and WBG General EHS Guidelines. Community Health and Safety	Safe traffic and transportation conditions	To be covered as part of the Project Budget.	Akşakoca Municipality
	Bicycle roads together with the pedestrian and traffic	Periodically (once a week is suggested) and in the event of complaints	Pedestrians and traffic safety	On-site inspection	Comply with the Highway Traffic Law and Bicycle Road Regulation	Highway Traffic Law Bicycle Road Regulation	Safe bicycle roads together with the pedestrian and	To be covered as part of the	Akşakoca Municipality



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OPERATION PHASE									
Issue	Monitoring Location	Timing / Frequency of Monitoring	Parameters Monitored	Monitoring Method	Target/ threshold values	Legal Requirements for monitoring	Key Performance Indicators	Cost	Responsible Party
	roads along the bicycle lanes						traffic roads along the bicycle lanes	Project Budget	
Community health and safety	Location where the incident and near misses occurs due to project activities	In the event of incident (accidents and near misses)	Incidents, accidents and near misses	Incident, accident and near miss logs, accident types and if necessary FIR	To prevent further incidents, accidents and near misses	NA	Zero incident and near misses	To be covered as part of the Project Budget.	Akşıkoca Municipality
	Along the project bicycle lanes	In the event of a grievance suggestion	External grievances	GRI	Comply with the Right to Information Law 4982; Changes In Highways Traffic Regulations Ministry of Interior Traffic Training requirement to schools Regulation on the Principles and Procedures for The Enforcement of the Law on the Right to Information, and Use of the Right to Petition Law 3071 OHIS Law and regulations WBG EHS Guidelines Community Health and Safety by conducting effective communication with nearby communities and other	Right to Information Law 4982; Regulation on the Principles and Procedures for The Enforcement of the Law on the Right to Information and Use of the Right to Petition Law 3071 OHIS Law and regulations WBG EHS Guidelines; Community Health and Safety	Number and nature of grievances and percentage of closed grievances	To be covered as part of the Project Budget	Akşıkoca Municipality



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OPERATION PHASE									
Issue	Monitoring Location	Timing / Frequency of Monitoring	Parameters Monitored	Monitoring Method	Target/ threshold values	Legal Requirements for monitoring	Key Performance Indicators	Cost	Responsible Party
					stakeholders with addressing their concerns				
Labor and Working Conditions									
OHS	Project area	In the event of a prosecution regulatory non-compliance	Health and Safety prosecutions - non regulatory compliance	Prosecutions, audit reports, etc.	Comply with the OHS Law and regulations	OHS Law and regulations	Zero prosecution regulatory non-compliance	To be covered within the project budget	Akşakoca Municipality
	Project area and places where workers exist related to work	In the event of an incident (accidents and near misses)	Incidents, accidents and near misses	Incident accident and near miss logs, accident types and if necessary JIR	Comply with the WBG EHS Guidelines Occupational Health and Safety WBG EHS Guidelines: Community Health and Safety OHS Law by preventing further incidents	WBG EHS Guidelines: Occupational Health and Safety WBG EHS Guidelines: Community Health and Safety OHS Law and regulations	Zero incident	To be covered within the project budget	Akşakoca Municipality
	Project area	Daily	Site OHS implementations (safe conditions, risk analysis and procedures, EHRP, trainings, etc.)	Site observations and check records (i.e. periodic health screening records of personnel, risk assessments, PPE delivery forms, training records, etc)	Comply with the OHS Law and regulations WBG General EHS Guidelines, OHS WBG EHS Guidelines Community Health and Safety by taking corrective actions to prevent incidents.	OHS Law and regulations WBG General EHS Guidelines: OHS WBG EHS Guidelines Community Health and Safety	Number and nature and percentage of closed corrective actions	To be covered within the project budget	Akşakoca Municipality



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OPERATION PHASE									
Issue	Monitoring Location	Timing / Frequency of Monitoring	Parameters Monitored	Monitoring Method	Target/ threshold values	Legal Requirements for monitoring	Key Performance Indicators	Cost	Responsible Party
Working Conditions and Worker Management	Project area	In the event of a grievance suggestion	Internal grievances	GIRMI (see Section 8.2)	Comply with the Right to Information Law - 4982, Regulation on the Principles and Procedures for The Enforcement of the Law on the Right to Information, and Use of the Right to Petition Law - 3071 by conducting effective communication with employees with addressing their concerns	Right to Information Law, 4982, Regulation on the Principles and Procedures for The Enforcement of the Law on the Right to Information, and Use of the Right to Petition Law, 3071	Number and nature of grievances and percentage of closed grievances	To be covered within the project budget	Akşakoca Municipality



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8 Institutional Arrangements

The responsible parties of the project, which put forward the project, are the Project Management Unit (PMU) of İL.BANK acting as a financial intermediary as Borrower, WB, and EU providing technical and financial support as Lenders, Akçakoca Municipality, which is the Project Owner, in other words, the Sub-borrower of the project, Supervision Consultant, who will be selected by a tender process to be opened by Akçakoca Municipality and approved by İL.BANK, assisting Akçakoca Municipality, the Contractor to be awarded for the project activities and also the E&S Consultant, the ACE Consulting and Engineering Inc., who is responsible for preparing the E&S impact and risk assessment study reports.

Akçakoca Municipality (Main Beneficiary Institution/Sub-borrower/Project Owner) and its General Responsibilities

The general responsibilities of Akçakoca Municipality are as follows:

- Provide health and social aid, including public hygiene,
- Enable public works covering the construction of urban roads, bridges, and similar infrastructure defined in the development plan, and land expropriations for the construction work,
- Provide culture and training activities,
- Maintain welfare of people including public health and sanitation installation practices as well as agriculture and economy,

Main duties of Akçakoca Municipality Technical Works:

- Responsible for construction and operation of the required infrastructure and upper structure in principle.
- Responsible for getting required permits, including pre-construction, during construction, and post-construction permits.
- Responsible for the construction, operation, and maintenance of buildings, roads, and urban wastewater infrastructure within their service areas

In addition to the general responsibilities mentioned above, Akçakoca Municipality is responsible for managing the E&S risks and impacts originating from the project during the construction and operation phases. Akçakoca Municipality will ensure adequate resources are distributed on an ongoing basis to meet the requirements of ESMP and that the personnel responsible for accomplishing tasks and needs of the system are capable through training and experience. Akçakoca Municipality does not have the capacity to ensure ESMP implementation. Therefore, they will work with supervision consultant during the phases of the Project.



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During the tender stage for the construction phase, which will be carried out according to the Public Procurement Authority Legislation and will follow the legal requirements of the WB, Akçakoca Municipality will include the ESMP in the tendering documents and ensure that the Contractor is aware of and complies with the E&S commitments made. Reflecting any revisions made by the Contractor on the relevant project documents, informing ILBANK about the process, and conducting the necessary consultation process about implemented and approved changes are among the duties of Akçakoca Municipality.

The Municipality is also responsible for ensuring the organization of the public consultation meeting to receive the opinions of the possible affected communities, together with the Supervision Consultant. A GRM will be structured and applied.

The other roles and responsibilities of Akçakoca Municipality are as follows.

- Disclose the ESMP and SEP documents on the Municipality website and at neighborhood headman's offices before the commencement of construction activities;
- Provide technical and data support during the supervision of Contractors and the preparation of technical and financial feasibility reports regarding projects;
- Supervise works realized by consultants during the project activities in line with the ESMP;
- If ILBANK identifies any problem in the implementation of ESMP, agree on the measures that must be taken to solve the subject issues;
- Check both the technical and administrative progress of contract packages and the implementation of the points provided in ESMP and SEP on site together with Environmental, Social and OHS Experts (at least one E&S Expert and one OHS Expert);
- Establish, implement, and monitor GRM for ESMP in coordination with ILBANK:
 - Provide appropriate procedures to effectively solve the problems of the affected people on time and without causing any unjust suffering,
 - Take special measures to provide equal access for vulnerable/disadvantaged individuals/groups (e.g., senior citizens, disabled, etc.) to grievance resolving mechanisms,
 - Exert all necessary efforts to announce the project's GRM for affected people and settlement(s) and other interested stakeholders through all types of disclosure and consultation meetings throughout the project duration
- Review of the Environmental and Social Monitoring Reports (ESMRs) to be submitted by contractors monthly, introduce them to ILBANK quarterly after being reviewed, in addition to on-site inspections.



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ILBANK (Borrower)

ILBANK is the related institution of MEUCC. The Bank has two core functions, namely, (i) support infrastructure development at the local level through technical assistance, grants, and loans, (ii) transfer central tax revenues to local authorities.

Municipalities are the stakeholders of ILBANK. ILBANK plans to build and finance water supply, sewage networks, water and wastewater treatment plants, solid waste management systems, geothermal applications, and building constructions needed by municipalities. ILBANK will ensure the execution of the following specifically for this project:

- Auditing the Project Owner's performance regarding compliance with the provisions set out in the ESMP during the project activities:
- Guide public consultation and announcement requirements, as well as Akçakoca Municipality's project documents in compliance with WB requirements,
- Guide Akçakoca Municipality officials about WB OPs (documents and procedures) on environmental assessment, physical cultural resources, land acquisition and involuntary resettlement, natural habitats, forests, and international waterways,
- Reviewing and re-submission of the relevant documents for the approval of WB after the necessary revisions are made, if any of the approved project documents require modification, and follow up consultation and publication of the approved documents by Akçakoca Municipality on time,
- Monitoring E&S issues included in the mitigation plan through the experts assigned by ILBANK. Potential negative E&S impacts and risk are planned to be prevented or mitigated during the project activities. E&S Monitoring System will include but not limited the following:
 - General Environment
 - Air Emissions
 - Noise
 - Waste
 - Grievance
 - Health and Safety (Occupational and Community)
- Regularly supervise during the project activities to ensure proper implementation of ESMP. If any problem is identified in the implementation of ESMP, inform Akçakoca Municipality accordingly and agree on the measures that must be taken to solve the subject issues,
- Review quarterly ESMRs prepared by Akçakoca Municipality and submission of ESMRs to WB once every six months after reviewing.



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- Preparation and submission of Project Progress Reports to WB once every six (6) months
- Review documents related to the E&S assessment of the project, provide comments to consultants and approve these documents and procedures by the requirements of the WB safeguards,
- Document the performance, recommendations, and additional steps to be taken as part of the overall project inspection to be monitored and inspected by Akçakoca Municipality to implement ESMP requirements,
- Performing an overall quality assurance function that the EA documents prepared meet WB requirements.
- Understand the positions and views of the relevant groups and local E&S experts on the E&S aspects of the project actions and, if necessary, meet with them during site visits,
- Facilitate coordination and communication with the WB's monitoring missions on project implementation's E&S safety measures.

World Bank

WB will approve the use of the loan obtained from the Bank as part of the relevant work and compliance of the Tenders and Contracts with the WB tender, contract documents, and procedures. The transactions to be made will be checked by the Bank in specific periods. Moreover, WB will audit the Project Owner's compliance with the provisions set out in the ESMP managed by the Project Owner during the project activities via the Project Progress Reports and ESMRs to be submitted by ILBANK every six months. The WB project team will visit project sites to conduct its own monitoring at certain intervals or when necessary. To bring any other problems to WB's attention, they can also present reports whenever necessary at shorter intervals.

E&S Consultant

ACE, who prepared the ESMP and the SEP for the Project, is the E&S Consultant and will provide necessary information to the Project Owner and take part in organizing the stakeholder consultation (ESMP) introduction meeting to be held for the public and Non-Governmental Organizations (NGOs) and finalizing the ESMP and this SEP as per the concerns/opinions of the stakeholders of the Project

Supervision Consultant

The roles and responsibilities of the Supervision Consultant, to be selected by tender process to be opened by Akçakoca Municipality and approved by ILBANK, are as follows;

- Guide public consultations and announcement requirements, as well as the project documents of Akçakoca Municipality in compliance with WB requirements;



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- If the consultation process coincides with the COVID-19 pandemic period, monitoring and auditing the consultation process to ensure that it is managed with additional measures in line with the government's restrictions valid for the relevant period. According to the "Interim Advice for IFC Clients on Safe Stakeholder Engagement in The Context of COVID-19"² published by the IFC on May 15, 2020. In this respect, stakeholder engagement activities will be carried out through safe and effective channels, considering the relevant national and local regulations as well as the health-related recommendations and guidelines of national and international health authorities due to the COVID-19 outbreak;
- Guide Akçakoca Municipality officials about WB operational policies (documents and procedures) on environmental assessment, physical cultural resources, land acquisition and involuntary resettlement, natural habitats, forests, and international waterways;
- Monitor GRM and the complaints to Akçakoca Municipality;
- Inspect and monitor the Contractor's activities on site on a daily basis, Supervision Consultant will have the authority to ensure all E&S (including OHS) measures are duly taken by the contractor on site and may stop the construction works and/or issue fine to the contractor, etc. in case of non-compliances;
- Prepare quarterly ESMRs based on site observations, including non-compliances and relevant corrective actions taken and submit these reports to Akçakoca Municipality.

The Supervision Consultant will have the authority to ensure all E&S (including OHS) measures are duly taken by the Contractor on site and may stop the construction works and/or issue fine to the Contractor, etc. in case of non-compliances To fulfill the roles as mentioned above and responsibilities, the Supervision Consultant will appoint the personnel given below at the construction site full-time during the construction phase:

The **Contract Manager** will be responsible for inspecting the Subcontractor to ensure that the recommendations and requirements given in the Project disclosure package (ESMP and SEP) are fulfilled. The Contract Manager will be responsible for continuously supervising and monitoring processes and actions undertaken by the Contractor and identifying the measures to deal with any areas of non-conformity. This includes periodic audits, inspections and/or on-site checks of project areas or worksites and/or records and reports compiled by the Contractor.

The **Environmental and Social Expert** will be responsible for supervising the implementation of all environmental and social mitigation measures provided in the Project disclosure package and reporting to the Contract Manager regularly. Besides, the Expert will

²https://www.ifc.org/wps/wcm/connect/30258731-0e7d-4cb2-863c-a6fb4c6d0d95/Tip+Sheet_Interim+Advice_StakeholderEngagement_COVID19_May2020.pdf?MOD=AJPERE&S&CVID=n9s.b9a



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be responsible for supervising the implementation of ESMP and SEP. The expert is expected to be a graduate of a university or similar institution in relevant disciplines (a master's degree would be an asset) and fluent in English and Turkish (both written and spoken).

The **Occupational Health and Safety Expert** shall be responsible for supervising the OHS issues at the site and will have the National General Certificate of Occupational Health and Safety (OHS) or equivalent Graduation from a university or a similar institution in the relevant discipline would be an asset.

Contractor

The roles and responsibilities of the Contractor are as follows:

- Implement and comply with all the conditions and rules mentioned in the ESMP document, which is a part of the contract document on-site and at the technical office and revise it with Akçakoca Municipality if required;
- Provide necessary training to the staff, who will work during the construction phase;
- Manage GRMs and regularly report the complaints to Akçakoca Municipality;
- Regularly monitor the project activities and drafting monthly ESMRs based on-site observations, including non-compliances and submitting those reports to Akçakoca Municipality every month;
- Ensure compliance with project standards and obtain relevant permits and licenses;
- Notify Akçakoca Municipality immediately in case of any significant environmental (including OHS) or social events (e.g., fatalities, loss of time incidents, environmental spills, etc.) and Akçakoca Municipality will inform ILBANK and WB about the incident in three (3) business days. A report on the root causes of the incident and the corrective actions to be taken will be submitted to ILBANK and WB within 30 business days;
- Develop and implement Human Resource Management Procedure including working conditions, fair treatment, non-discrimination (especially gender), equal opportunity, vulnerable/disadvantaged workers, sexual exploitation and abuse and sexual harassment (SEA/SH), gender-based violence (GBV), prevention of child labour and forced labour issues under the project's Labour and Employment Policy for the construction phase;
- Ensure other agreements regarding the implementation of the requirements of ESMP and SEP and other E&S protection measures are signed;
- Ensure healthy and safe working conditions for all employees.

To fulfill the roles as mentioned above and responsibilities, the Contractor at least will appoint at site the personnel given below.



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- A full-time Environmental and a Social Expert will be responsible for ensuring and supervising the implementation of all E&S mitigation measures provided in the Project disclosure package at site and reporting to the Contractor management regularly. Besides, the Expert will be responsible for supervising the implementation of ESMP and SEP. The expert is expected to be a graduate of a university or similar institution in relevant disciplines (a master's degree would be an asset) and fluent in English and Turkish (both written and spoken).
- A full-time Occupational Health and Safety Expert will be responsible for supervising the OHS issues at the site and be certified for recognized international safety competency, such as the National General Certificate of Occupational Health and Safety or equivalent. Graduation from a university or a similar institution in the relevant discipline would be an asset.

Table 8-1 summarizes roles and responsibilities of the Project parties.

Table 8-1. Summary of the Roles and Responsibilities in the Project

Project Party	CONTRACTOR	Akçakoca Municipality	ILBANK
Financial Roles	-	Beneficiary	Financial Instrument
Application Process	Construction of request-based applications	Provision of request-based applications	Review and analysis of the applications to be submitted to WB
Preparation Process	Implementation of the laws, regulations, and other related policies brought by WB through ILBANK and Akçakoca Municipality and required to be complied with	Implementation of the laws, regulations, and other related policies brought by WB through ILBANK and required to be complied with	Establish coordination among the selected municipalities to ensure compliance with all the rules and regulations throughout the project Forming an internal working structure for the investment options
Number of Personnel	Assigning an environmental and social expert and an occupational health and safety expert and also approximately 50 employees during the construction phase	Assigning a social expert and an environmental expert	Determination of the team structure
Roles in the Project	Construction of the Project, Preparing ESMRs and establishing GRM	Preparing ESMP, consultation, and publication of the document, establishing GRM, and announcing it to the stakeholder	Main responsible for the monitoring of ESMP and the GRM
Reporting	Carry out the construction phase in accordance with the tender conditions determined by SASKI	Put all the project construction works and consultancy services on the tender as part of the previously determined rules	Supervise and monitor all the processes to ensure that all the E&S operational policies of WB are properly implemented



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Submission periods for ESMRs, Project Progress Reports and Grievance Register according to each project party is provided in Figure 8-1, while the organigram presenting the roles and responsibilities of the project parties regarding ESMP implementation, monitoring and reporting is given in Figure 8-2.

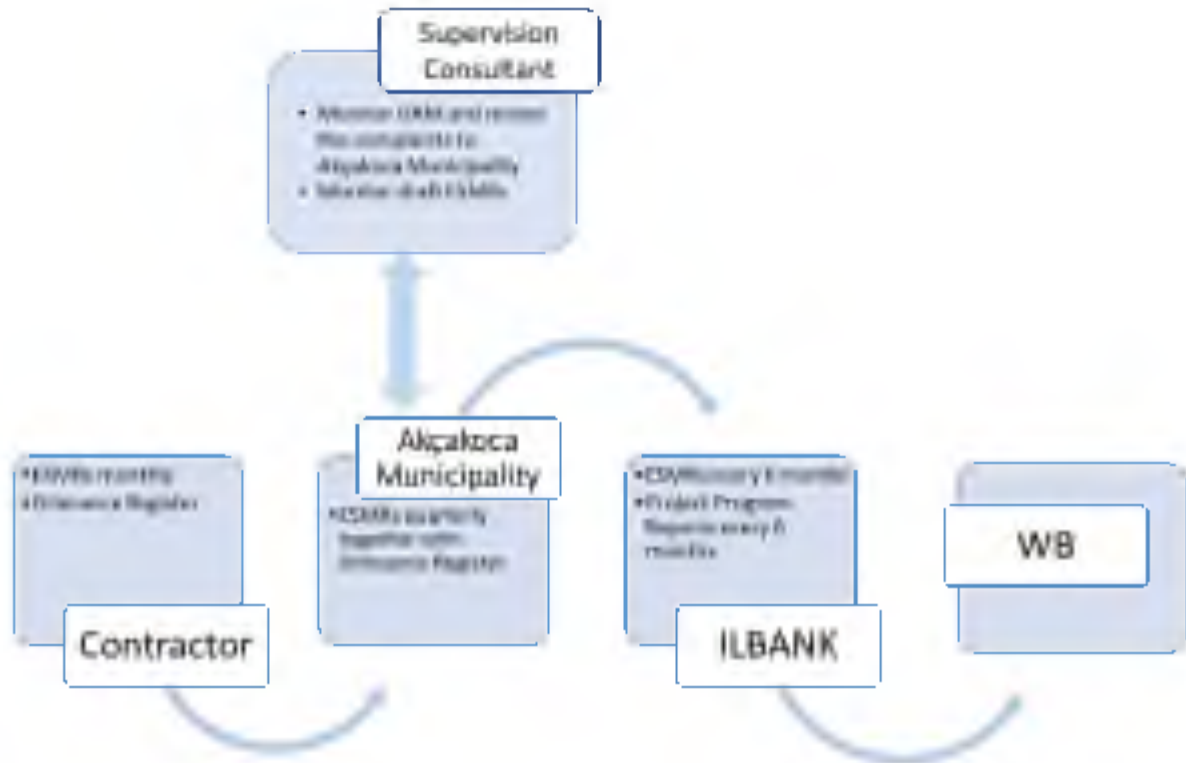


Figure 8-1 . Submissions Periods for ESMR, Project Progress Report and Grievance Register during ESMP Implementation



Figure 8-2. Organigram presenting Roles and Responsibilities of Project Parties for ESMP Implementation, Monitoring and Reporting

8.1 Training

The Sub-borrower will implement a training and awareness program covering ESMP expectations and commitments. ACE will organize, together with the Sub-borrower, a workshop for this training by the scope of work in its current contract. As a minimum requirement, this program will be implemented as training for employees and contractors responsible for the implementation of ESMP. The Sub-borrower will provide training to employees and subcontractors before the construction phase. The training will last at least two days and be organized twice a year. Depending on the level of responsibility for implementing ESMP, further training programs may need to be implemented.

Necessary training will be given to the workers before the recruitment process. Compliance with the code of conduct rules, including GBV, SEA/SII, which are included in the training to be provided, will be in the contract articles of the personnel. The contract will clearly state the sanctions for non-compliance with the code of conduct. A Code of Conduct will be provided to each worker during the recruitment phase and signed by the worker as part of their work contract.

Measurement and evaluation should be carried out at the end of the training given to the personnel. This is intended to enhance the personnel's competency. According to the review



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results, the training program can be modified, trainers can be replaced or training can be repeated, if needed, upon determining whether the training is effective.

The training program/modules will address a range of issues, including but not limited to:

- Purpose and content of ESMP regarding the Project activities,
- Requirements in all management plans/procedures and monitoring activities to be performed within the scope of this plan,
- Understanding of the sensitive F&S receptors within the project area and its vicinity, and
- Awareness-raising about the potential risk and impacts of the project activities,
- GRM developed within the scope of the project for the public,
- GRM developed within the scope of the project for the project personnel,
- Community health and safety risks and measures,
- OHS, first aid, emergency preparedness and response,
- COVID-19 related measures and protection measures,
- Code of conduct and clothing,
- Communication with the local community,
- Code of conduct training, including GBV, SEA/SH,
- Traffic and road safety principles, and
- Training aiming at the sorting, storage, and environmental planning of waste.

The Sub-borrower will ensure that all personnel responsible for implementing this ESMP are competent in education, training, and experience. All personnel will be provided with E&S training appropriate to their scope of activity and level of responsibility.

8.2 Grievance Redress Mechanism (GRM)

The purpose of the GRM is foremost to give access to a problem-solving procedure to project affected groups, including affected communities and project workers. Grievances can indicate growing stakeholder concerns and escalate if not identified and resolved. Identifying and responding to grievances supports the development of positive relationships between Project workers, local communities, and other stakeholders.

The structured GRM will ensure that grievances associated with the Project are addressed through a transparent and impartial process. From the early stages of the project lifecycle, the grievance procedure will continue to be disclosed to the public through individual or group meetings, printed materials, notice boards. Employees will be provided training on internal GRM.



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All municipalities have adopted a 'White Desk' system to have feedback from citizens. While the White Desk system is not regarded as a GRM, it is recognized as a general grievance system adopted by municipalities within their organizations. Currently, the Sub borrower handles public grievances and views through the White Desk system managed by Akçakoca Municipality. This municipal unit is established to receive grievances and requests from local citizens and intended to produce possible solutions within the municipality for reported concerns.

For this reason, the White Desk system will be maintained as the primary GRM for this project.

At the meetings with stakeholders who are the project's beneficiaries such as headmen of the project's neighborhoods, it was learned that the stakeholders know the 'White Desk' system and use this communication channel. In addition, they remarked that they would prefer it as the communication channel for this Project. However, a central system will be established by the Akçakoca Municipality that is integrated to the White Desk system in order to effectively monitor the grievances regarding the Project. There will be a common GRM system under this Project for Akçakoca Municipality, subcontractors, workers/employees.

The Contractor will inform the GRM of the direct and subcontracted employees and stakeholders, explaining the channels for internal communication and raising grievances. The workers will be informed of the mechanism and procedures at the time of hire in their local language. As a best practice, options for anonymous grievance redress mechanisms will be established to encourage concerns to be raised freely. A detailed procedure to explain the use of suggestion and grievance boxes to the employees and the Akçakoca Municipality will be developed. There will be a designated person within the Contractor management that will collect the grievances and submit them to the Akçakoca Municipality. Internal grievances will be assessed by the Contractor management and remedial actions will be implemented. Remedial measures for external grievances will be developed and submitted to the municipality for review and then implemented.

In addition to the White Desk channel, an officer from the Akçakoca Municipality will be appointed to transfer to the central system all grievances and suggestions that are communicated to the Akçakoca Municipality and personally left in grievance boxes in the Akçakoca Municipality building, conveyed by stakeholders who want to communicate based on the project documentation, conveyed by the personnel during the project activities, and communicated to subcontractors and inserted in a petition. The said officer will be responsible for recording and following up on each grievance and/or suggestion until resolved. The White Desk officers and the officer appointed by the Akçakoca Municipality will be available for contact constantly and ensure that grievances are recorded and followed up in a central system.



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Stakeholders will be able to communicate their grievances and views via the channels presented below:

- Akçakoca Municipality Website (<https://www.akcakoca.bel.tr/>): The municipality website enables citizens to communicate electronically with public relations specialists. Citizens can further communicate their requests in-person to resolve any issues quickly.
- Contact Details of Akçakoca Municipality GRM Officer to be assigned (i.e., Name-Last Name, E-mail, and Phone),
- Call Centre 153 (Alo 153) The White Desk system is reachable via call centre (Alo 153), website, or personal application. Alo 153 call centre aims to provide higher quality assistance and faster solutions to citizens with the help of the White Desk solution team. For each opinion/grievance, a tracking number shall be assigned, which allows the status of the opinion/grievance to be followed up.
- Contact Number of Contractor GRM Officer to be assigned,
- Akçakoca Municipality Address for Petition Service (Yalı Mah. İnönü Cad. No: 45 Akçakoca / DÜZCE),
- Grievance Form and Grievance Close-Out Form (see sample for Annex-6 and Annex 7) provided for grievance and request boxes to be installed in the Municipal building,
- Grievance/notice boxes to be installed by the Contractor at the project site during the project activities.

In case stakeholders fail to reach a satisfactory solution through the channels provided above, they will be able to reach ILBANK's communication channels listed below, the Presidency Communication Center (CİMER), the Foreigners Communication Centre (YİMER), and the relevant legal institutions.

ILBANK's Communication Channels:

- ILBANK Website (<https://www.ilbank.gov.tr/form/bilgiedinmeuluslararası>)
- ILBANK Contact number for Complaints, Wishes, Suggestions 0 312 508 7979
- ILBANK E-mail (bilgiuidb@ilbank.gov.tr)
- ILBANK Address for Petition Service (ILBANK International Relations Department, GRM Team - Emniyet Mahallesi Hipodrom Caddesi No:9/21 Yenimahalle/ANKARA)

CİMER:

- CİMER Website (www.cimer.gov.tr)
- CİMER Call Centre (150)



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- **ÇİMER Phone Number:** 190 312 525 55 55 - **Fax Number:** +90 312 473 64 94
- **Mail addressed to the Republic of Türkiye, Directorate of Communications**
- **Individual applications at the community relations desks at governorates, ministries, and district governorates**

YİMER has been providing a centralized complaint system for foreigners:

- **YİMER Website** (www.yimer.gov.tr)
- **YİMER Call Centre** (157)
- **YİMER Phone Number:** +90 312 5157 11 22 - **Fax Number:** +90 312 920 06 09
- **Mail addressed to the Republic of Türkiye, Directorate of Communications**
- **Individual applications at the Republic of Türkiye General Directorate of Migration Management**

Certain complaints warrant urgent action, and the regular GRM procedure may be inappropriate or too slow to prevent an issue from escalating. In the case of complaints alleging serious harm or risk of harm, and/or serious rights violations, the GRM's standard operating procedures will call for a fast-track response, whether by the GRM or by immediate referral to another office or organization and immediate notification to the complainant of that referral. A separate fast-tracked GRM, including guidance on the circumstances under which it should be employed, can help ensure that high-priority complaints are dealt with on time.

Applicants, whose complaints could not be resolved through existing GRM or whose complaints contain sensitive issues can always apply to the relevant legal institutions. Relevant Legal Institutions: Relevant Institutions can be summarized as, but are not limited to, follows:

- Civil Courts of First Instance,
- Administrative Court,
- Commercial Courts of First Instance,
- Labor Courts, and
- Ombudsman (<https://ebasvuru.ombudsman.gov.tr/>)

Relevant legal process will be monitored through GRM.

In case stakeholders fail to reach a solution for sensitive grievances (SEA/SH and GBV in the workplace or potential child abuse in project areas) by applicable means, they will be able to seek the help of ILBANK in line with ILBANK's sensitive grievances policies.

- **ILBANK Website** (<https://www.ilbank.gov.tr/form/bilgiedinmeuluslararasi>)
- **ILBANK E-mail** (etikuidb@ilbank.gov.tr)



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- **II.BANK Address for Petition Service (II.BANK International Relations Department, GRM Team - Emniyet Mahallesi Hipodrom Caddesi No 9/21 Yenimahalle/ANKARA**

During the project activities, the GRM described above will continue to be driven by stakeholders' views, making this procedure accessible to all affected stakeholders. Requests that require urgent remedy and/or support will be responded to and given support within the same day. All outstanding grievances/requests will be recorded within two business days, reviewed, assessed within ten business days, and concluded no later than 15 business days. Corrective actions will be taken to resolve the grievance.

The uptake, flow and processing of complaints are represented in the Figure 8-3 below:



Figure 8-3. Uptake, Flow and Processing of Complaints

GRM flow charts explanation for public and project personnel are provided in Table 8-2 and Table 8-3, respectively:

Table 8-2. Grievance Redress Mechanism Flow Chart for Public

Grievance Redress Process	Requirement/Action	Responsible Officer/Team
Submission of a complaint	Receiving the grievance by any communication channel explained above (At this point, if the grievance is a sensitive complaint involving child abuse, SLA/SLL immediate action will be taken within 48 hours after receiving the complaint.)	Akçakoca Municipality Supervision consultant
Registration of complaint	Registering/recording through making an entry in the grievance register table (see Annex-8 for a sample) (filling of the Grievance Form (see Annex-5 for a sample). All the complaints will be registered to the Municipality record into a central database within two (2) days, and feedback will be given to the complainant. If the complainant requests that this complaint be treated anonymously, this complaint will be recorded anonymously, and the request will be met.	Akçakoca Municipality Supervision consultant



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Grievance Redress Process	Requirement/Action	Responsible Officer/Team
Evaluation of a complaint	Evaluate the complaints within 10 working days and determine whether the complaint meets the admissibility criteria. If the complaint is not valid, provide a relevant explanation to the complainant.	Akçakoca Municipality Supervision consultant
Responding complaints	Grievance will be assessed by the Akçakoca Municipality. The affected community representatives will be consulted depending on the type of grievance. If needed, the grievance will be examined on-site. Response/redress of grievance will be communicated to the petitioner via telephone or email, whichever is preferred. If it cannot be resolved, the complainant will have the right to apply to H.BANK or the Court of First Instance, depending on the grievance.	Akçakoca Municipality Supervision consultant
Grievance closure	Grievances are closed within 15 Business Days as of date of application unless an alternative agreement is made with the Complainant and filling of the Grievance Close Out Form (see Annex-7). Note that if complaints are not closed within 15 Business Days, the extenuating circumstances are documented and reported. It should be noted that the action is taken, and the result of this anonymously recorded grievance should be shared on the Akçakoca Municipality website, so that anonymous complainants are informed about their complaint and the results.	Akçakoca Municipality Supervision consultant
If a complaint cannot be resolved	GRM procedure is monitored by H.BANK. This is as follows: -Lodging of grievance will be confirmed. -Grievance will be assessed by the municipality and H.BANK will be informed. -Response / redress of grievance will be communicated to petitioner by the municipality. H.BANK will monitor the municipality to run the GRM smoothly. The response time in this level is thirty (30) days. -If cannot be resolved, petitioner will be referred to Court of First Instance.	Akçakoca Municipality Supervision consultant
Reporting	Ensure that all process conducted in compliance with Grievance process by responsible department. The grievances will be analyzed at regular intervals to analyze the frequency of different types of complaints, who most frequently lodge complaints, and how complaints have been resolved. Such analysis may, for example, reflect that there are far more complaints in relation to specific contractors, or that certain works results in comparatively many complaints, etc. Report the results to management.	Akçakoca Municipality Supervision consultant

Table 8-3 Grievance Redress Mechanism Flow Chart for Project Personnel

Grievance Redress Process	Requirement/Action	Responsible Officer/Team
Submission of a complaint	Receiving the grievance by any communication channel explained above. (At this point, if the grievance is a sensitive complaint involving child abuse, S/VAEH, Contractor Officer will be contacted immediately and immediate action will be taken within 18 hours after receiving the complaint.)	Contractor Supervision consultant
Registration of complaint	Registering/recording through making an entry in the grievance register table filling of the Grievance Form to be developed by the Contractor. All the complaints will be internally registered and subsequently registered to the Municipality record via the Contractor Officer within two (2) days, and feedback will be given to the complainant.	Contractor Supervision consultant



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Grievance Redress Process	Requirement/Action	Responsible Officer/Team
	If the complainant requests that this complaint be treated anonymously, this complaint will be recorded anonymously, and the request will be met	
Evaluation of a complaint	Evaluate the complaints within ten (10) working days and determine whether the complaint meets the admissibility criteria. If the complaint is not valid, provide a relevant explanation to the complainant.	Contractor Supervision consultant
Responding complaints	The grievance will be assessed by the Contractor and Contractor Officer and as needed, Akçakoca Municipality. The affected community representatives, such as from local NGOs and/or mukhtars will be consulted depending on the type of grievance. If needed, the grievance will be examined on-site. Response/redress of grievance will be communicated to the petitioner via telephone or email. If it cannot be resolved, the complainant will have the right to apply to ILBANK depending on the grievance.	Contractor Supervision consultant
Grievance closure	Grievances are closed within 15 Business Days as of date of application unless an alternative agreement is made with the Complainant. Note that if complaints are not closed within 15 business days, the extenuating circumstances are documented and reported to the Contractor Officer	Contractor Supervision consultant
If a complaint cannot be resolved	GRM procedure is monitored by ILBANK. This is as follows -Lodging of grievances will be confirmed Grievance will be assessed by the municipality and ILBANK will be informed -Response/redress of grievance will be communicated to the petitioner by the municipality. ILBANK will monitor the municipality to run the GRM smoothly. The response time at this level is 30 days -If it cannot be resolved, the petitioner will be referred to the Court of Just Instance	Contractor Supervision consultant
Reporting	Ensure that all processes are conducted in compliance with the Grievance process by the Contractor responsible department Contractor Officer The grievances will be analyzed at regular intervals to analyze the frequency of different types of complaints, who most frequently lodges complaints, and how complaints have been resolved. Such analysis may, for example, reflect that there are far more complaints in relation to specific contractors, or that certain works result in comparatively many complaints, etc. Report the results to management	Contractor Supervision consultant

The grievances are currently categorized by the White Desk system when the grievance is received. If urgent support is required, White Desk officers offer solutions by immediately contacting the relevant departments. The officer will adopt the same approach to be assigned by the Municipality.

In cases where a long-term program is required for a satisfactory resolution, this will be discussed in detail in the registration file for specific grievances. The complainant will be informed about the new schedule for resolving the grievance.

Both the officers managing the White Desk system and the officer appointed by the Municipality to record grievances in a central system will be trained and become knowledgeable about the guidelines prepared by the WB to prevent SEA/SH cases for the



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projects financed under construction works³. Grievances of GBV, SEA/SH can result in a culture of silence due to negative reactions from the community. To avoid this, the complainant will be assured confidentiality when raising grievances involving these issues about the project. In addition, the authorities handling the grievances should address such issues confidently and by an unbiased approach.

The Akçakoca Municipality will submit reports on its E&S performances in the periods agreed with İLBANK, along with a summary of the grievances and how they are resolved. Besides, Grievance Register will be provided to İLBANK during quarterly monitoring studies. Further details will be given in the SEP.

³<https://fbdocs.worldbank.org/en/doc/741681582580194727-0290022020/original/ESFGoodPracticeNotconGBVInMajorCivilWorks2.pdf>



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9 Stakeholder Engagement

A stakeholder is defined as any individual, organization, or group potentially affected by the Project or who has an interest in the Project and its impacts. The objective of stakeholder identification is to establish which stakeholders may be directly or indirectly affected – either positively or negatively - (“affected parties”) or have an interest in the Project (“other interested parties”).

A SEP is prepared for this project to identify project stakeholders (including local authorities, communities, workers, etc.) and establish engagement methods for the future of the Project. Efforts must be made to identify disadvantaged /vulnerable stakeholders who may be differentially or disproportionately affected by the Project or who may have difficulty participating in the engagement and development processes. Stakeholder identification is also an ongoing process and shall require regular review and update. Further details are given in the SEP.

This will be under the responsibility of a person from the Public Relations Unit, who will be assigned for the implementation of SEP by the Sub-borrower or under the responsibility of a specifically designated person with the qualifications required to perform the task.

The Sub-borrower has ultimate responsibility for the implementation of this SEP. During the construction and operational phases, the Sub-borrower will keep the information below up-to-date and accessible by providing information on the development of and practices under the Project. The information will include:

- Key Project phases and schedules (e.g., obtaining permits, starting the project activities, construction schedule, etc.),
- Any disruption related to the project (e.g., Road closures, access, and infrastructure disruptions) as discussed in the ESMP and reflected in the SEP and GRM,
- Important consultations/meetings with potential consequences that may affect the community and local people . (see Annex 9 for a sample consultation form; Annex 10 for a sample Grievance Form),
- Relevant parts of the ESMP, GRM, sub-management plans are implemented and
- EHS performance (e.g., Information about accidents, monitoring results).

The Consultation Form used during the stakeholder engagement process is provided as Annex-9 of this plan.

9.1 Announcements during the Project Activities

The Sub-borrower will notify the headman's office in the Aol two (2) days before any possible temporary road closure during project activities. Similarly, the Sub-borrower will inform the affected local people of the future works in the Municipal building and/or on the notice platforms two (2) days in advance.



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Likewise, businesses, schools and/or hospitals potentially affected by project activities will be notified of the works two days in advance. Activities will be driven by the feedback received from stakeholders so that businesses and/or services are not disrupted.

9.2 Further Stakeholder Engagement Activities

For all Category A and B subprojects proposed for the WB financing, the Borrower consults project affected groups and local NGOs about the project's environmental aspects and takes their views into account during the EA process. The borrower initiates such consultations as early as possible. For Category B subprojects, at least one consultation with affected groups and other relevant/affected stakeholders is anticipated after the draft ESMP is completed. This consultation will include, but is not necessarily limited to, the following topics anticipated.

- Objective of the Project.
- Social, environmental, and ecological impacts that are determined to occur upon the Project.
- Impacts and the mitigation or enhancement measures that are being implemented.
- Roles and responsibilities.
- Monitoring and management measures, and
- Information on the GRM for the Project.

Apart from that, the Sub-borrower will be responsible for engagement with stakeholders as an ongoing process throughout the life of the Project. Identifying and responding to grievances supports the development of positive relationships between projects, communities, and other stakeholders. Grievances can indicate growing stakeholder concerns (real and perceived) and can escalate if not identified and resolved.

Internal and external stakeholders will share their opinions and grievances via a range of options such as the Sub-borrower's website, letters, and face-to-face meetings to implement the SEP.

The GRM will be advertised and announced to stakeholders in an easily accessible language and form, to know the process, know they have the right to submit a grievance and understand how the mechanism will work and how their grievance will be addressed. In most cases, a grievance or complaint will be submitted by a stakeholder or resident by phone, in writing, or by speaking with one of the company's grievances officers. Further information on the Sub-borrower's GRM is presented in Section 8.

9.3 Disclosure of Information and Stakeholder Engagement during the COVID-19 Process

The unprecedented nature of the COVID-19 Pandemic process implies that all elements of Project activities, including stakeholder engagement, may be affected. Given the compulsory



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restrictions and social distancing measures associated with COVID-19, alternative approaches to stakeholder engagement emerged in the short term.

In efforts to disseminate information, the Sub-borrower will try to communicate reliable and accurate information to all stakeholders by ensuring that the information is in a form and language that is easily understandable and culturally appropriate.

It is recommended to use the following tools to interact with stakeholders during the pandemic period if they are not limited to.

- Brochures
- E-mail
- Notice boards intended for the public
- Phone interviews and messaging
- Sub-borrower's website

Additionally, changes in the operations of the Sub-borrower, which are caused by COVID-19 and which may have an impact on the public, will be reported accordingly. These include, but are not limited to.

- Changes in the project resulting from COVID-19
- Changes in the presentation of social development programs
- Changes in employment, procurement from local businesses, etc.
- Changes in timeframes to solve public grievances
- New or modified public awareness communication campaigns on COVID-19, which are coordinated with relevant authorities and based on the information from recognized sources such as the WHO, "Guidance to COVID-19 Outbreak Management and Working" published by Ministry of Health of Türkiye and "Interim Advice for IFC Clients on Safe Stakeholder Engagement in the Context of COVID-19" published by IFC.

Lastly, the Project will consider the new approaches shown in Table 9-1 to engage during COVID-19 effectively

Table 9-1. Alternative Information Disclosure and Stakeholder Engagement Measures during the COVID-19 Restrictions

Stakeholder Groups	Topics	Frequency	Methods and Materials	Lead and Supporting Responsibility
Government / Authorities <ul style="list-style-type: none"> • Düzce PİDE LCC 	<ul style="list-style-type: none"> • Updates on project activities and progress • Local procurement and employment data • Updates on social distancing 	When necessary	Teleconference Virtual meetings Written up-to-date information Project Owner's website	Sub-borrower



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9.4 Consultation Meetings with the Municipality and Site Visits during Preparation of the ESMP

The project area was visited on August 18, 2021 by ACE Experts. A meeting was conducted with the representatives from the Akçakoca Municipality. The representatives were informed about ACE's job description, and which data will be asked from the Municipality. ACE gave a detailed explanation of how the process will be conducted and what kind of studies will be performed. The work done by this time was requested. It was asked whether all documents shared with the Design Consultant (Eptisa Engineering Services) could be also provided to ACE. It was told that a Municipality representative was appointed as a focal point for ESMP studies. It was asked whether the zoning status of the project area, whether there is any settlement on the bicycle line, and whether there is an area to be expropriated. The Municipality stated that the Project area (Bicycle Road Construction) is the Municipality's land, that no expropriation is required, and that there is no residential area along the bike path line. After the meeting, a site visit was performed accompanied by the representative. Agreed actions are given below;

- Obtaining the EIA Exemption Letter,
- Providing project kmz to ACE,
- Providing the data to the ACE team which were shared with the Design Consultant,
- Providing correspondences from related institutions such as Regional Directorate of Highways,
- Providing Mobile Station Air Quality Measurement Report.

The photographs of the project area taken during the site visit are provided in the Annex 2 of this document. The Project data provided to ACE consists of:

- 1/25.000 Environmental Plan,
- 1/5000 Master Development Plan and Report,
- 1/1000 Implementation Zoning Plan,
- Bike Path Design Plan,
- Estimated cost

9.5 Preliminary Public/Stakeholder Consultation Activities

A stakeholder consultation meeting was conducted on 9th of January 2024 after the submission of the draft ESMP of the Project to İLBANK/WB and its approval. Minutes of meeting and other information related to the meeting are presented in Annex 11. Information given in Annex 11 is also included as an annex to the SEP.



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Bilgilerinize ve gereğini rica ederim.

Gurbiz SALTAŞ

Vali a.

Yah Yardımcısı.

Ek: Çevre Düzen Planı Görüşü

Bu belge, güvenli elektronik imza ile sunulmuştur.

Doğrulama Kodu: CFC79A15-5D3A-44XC-BBF9-AB0D5817B4CF

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Kısmi Yetkili Üst Yönetici





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For University Bicycle Road Construction



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

Sayı : E-96738833-220.03-2138382
Konu : Bisiklet ve Yaya Yolu Projesi

AKÇAKOCA BELEDİYE BAŞKANLIĞINA

İlgi : a) 04/11/2021 tarihli ve 150419 Referans No'lu Başvuru
b) 26.10.2021 tarihli ve E-2069332 sayılı Çevre Düzeni Planı Görüşü.

İlgi (a) başvuruya istinaden İlimiz Akçakoca İlçesi Osmanlıye Mahallesi Üniversite Yolu (98-96, 105-106, 647-648 ada arası yollar) mevkiinde Akçakoca Belediye Başkanlığı tarafından yapılması planlanan "Bisiklet ve Yaya Yolu " projesi, 25/11/2014 tarih ve 29186 sayılı Resmî Gazete'de yayımlanarak yürürlüğe giren **ÇED Yönetmeliği Listelerinde yer almadığından kapsam dışı olarak değerlendirilmiştir.**

İlgi (b) görüşte; "söz konusu alanlar, Akçakoca Belediyesi sınırları içerisinde ve onaylı Uygulama İmar Planında sınırları içerisinde yer almaktadır. 1/ 25.000 Ölçekli Düzce Merkez İlçesi ve Yakın Çevresi Çevre Düzeni Planı Plan Hükümlerinin "5.38 maddesindeMelen Havzası sınırları içerisinde kalan alanlarda İSKİ İçmesuyu Havzaları Yönetmeliği, dışında kalan alanlarda ise Su Kirliliği Kontrolü Yönetmeliği," denilmektedir. Ayrıca, 1/25.000 Ölçekli Akçakoca Çevre Düzeni Planı Plan hükümleri geçerlidir Hükümlerinin "V.30. maddesinde Bu plan sınırları içerisinde ihtiyaç olması halinde güvenlik, sağlık, eğitim v.b. sosyal donatı alanları, belediye hizmet alanları, büyük kentsel yeşil alanlar, kent veya bölge/havza bölününe yönelik her türlü atık bertaraf tesisleri ve bunlarla entegre geri kazanım tesisleri, arıtma tesisleri, sosyal ve teknik alt yapı, karayolu, demiryolu, denizyolu, havaalanı, baraj, yenilenebilir enerji üretim alanları, enerji iletimi ve doğalgaz depolamasına ilişkin imar planları; bu planın koruma, gelişme ve planlama ilkelerine, ilgili kurum ve kuruluşların görüşlerine uyularak ilgili idaresince yapılır ve onaylanır. Kullanımlardan ÇED Yönetmeliği kapsamında kalanlar için "Çevresel Etki Değerlendirmesi Olumlu" veya "Çevresel Etki Değerlendirmesi Gerekli Değildir" kararının bulunması, ÇED Yönetmeliği kapsamı dışında olanlar için ise ilgili kurum ve kuruluşların uygun görüşü olması kaydı ile hazırlanacak olan imar planları çevre düzeni planı değişikliğine gerek olmaksızın ilgili idaresince hazırlanır ve onaylanır. Onaylanan planlar sayısal ortamda veri tabanına işlenmek üzere," denilmektedir. Bakanlığa gönderilir. Söz konusu tesisler/tesis alanları amaç dışı kullanılamazlar Buna göre, söz konusu parselin alt ölçekli planı mevcut olduğundan ve alt ölçekli planların uygulayıcısı ilgili idaresi olduğundan, yukarıda belirtilen tüm hususlara, anılan plan hükümlerine, Çevre Düzeni Planının ilgili hükümlerine, Su Kirliliği Kontrolü Yönetmeliğinin ilgili hükümlerine uyularak ve **konu ile ilgili kurum ve kuruluşların uygun görüşleri alınarak, konu ile ilgili gerekli değerlendiriminin Akçakoca Belediyesince yapılması gerekmektedir** " denilmektedir.

Bu doğrultuda planlanan yatırım ile ilgili olarak ilgi (b) Çevre Düzeni Planı Görüşü ekte gönderilmekte olup; **Çevre Düzeni Planının ilgili hükümlerine uyulması**, ve 5491 sayılı kanunla değişik 2872 sayılı Çevre Kanunu ile bu Kanuna istinaden çıkarılan Yönetmeliklerin ilgili hükümlerine uyulması ve diğer mer'î mevzuat çerçevesinde öngörülen gerekli izinlerin alınması, ekolojik dengenin

Bu belge güvenli elektronik imza ile imzalanmıştır.
Değişimle Kodu: 1E33A02E-6705-4C22-9C71-F3566CDF61C9
Hükümet Konakı Binası F - Blok Kat: 1 Merkez / DÜZCE
Tel No: (0380) 524 58 27 - (0380) 524 58 28 Faks No: (0380) 524 16 21
e-posta: duzce@tcmb.gov.tr İm: https://duzce.tcb.gov.tr
Doğrulama Adresi: https://www.turkiye.gov.tr
Büğü İcra Ayağı ERDOĞAN
Mühürü



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bozulmamasına, çevrenin korunmasına ve geliştirilmesine yönelik tedbirlere riayet edilmesini
gerektirmektedir.

Bilgilerinize ve gereğini rica ederim

Gürbüz SALTIŞ
Vali a.
Vali Yardımcısı

Ek: İlgili (b) görüş

Bu belge güvenli elektronik imza ile onaylanmıştır.
Doküman Kodu: FE13A02E-6705-4C22-9C71-E1546CDF81C9 Doğrulama Adresi: <https://www.turkiye.gov.tr>
Hüsnümen Köksalçık Başkan F - Blok Kat: 1 Merkez DÖZCE Bilgi İşlem. Ayyık ERDOĞAN
Tel No: (0180) 124 18 27 - (0180) 524 18 28 Faks No: (0180) 524 18 21 Mühür
e-posta: duzce@cab.gov.tr - <https://www.cab.gov.tr/>



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ANNEX-2 Site Photographs



Osman Gülen Park- Atatürk Avenue



The project is co-funded by the European Union, the Republic of Turkey and the World Bank.
Bu proje Avrupa Birliği, Türkiye Cumhuriyeti ve Dünya Bankası tarafından ortaklaşa finanse edilmektedir.



Osman Gülen Park Walking Trail- Atatürk Avenue



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Merkez Mosque Region



The project is co-funded by the European Union, the Republic of Turkey and the World Bank.
Bu proje Avrupa Birliği, Türkiye Cumhuriyeti ve Dünya Bankası tarafından ortaklaşa finanse edilmektedir.



General View of Atatürk Avenue



The project is co-funded by the European Union, the Republic of Turkey and the World Bank.
Bu proje Avrupa Birliği, Türkiye Cumhuriyeti ve Dünya Bankası tarafından ortaklaşa finanse edilmektedir.



General View of Atatürk Avenue



The project is co-funded by the European Union, the Republic of Turkey and the World Bank.
Bu proje Avrupa Birliği, Türkiye Cumhuriyeti ve Dünya Bankası tarafından ortaklaşa finanse edilmektedir.



General View of Atatürk Avenue



The project is co-funded by the European Union, the Republic of Turkey and the World Bank.
Bu proje Avrupa Birliği, Türkiye Cumhuriyeti ve Dünya Bankası tarafından ortaklaşa finanse edilmiştir.



General View of Ak Resort Hotel



The project is co-funded by the European Union, the Republic of Turkey and the World Bank.
Bu proje Avrupa Birliği, Türkiye Cumhuriyeti ve Dünya Bankası tarafından ortaklaşa finanse edilmiştir.



General View of Istanbul Avenue



The project is co-funded by the European Union, the Republic of Turkey and the World Bank.
Bu proje Avrupa Birliği, Türkiye Cumhuriyeti ve Dünya Bankası tarafından ortaklaşa finanse edilmektedir.



General View İstanbul Avenue



The project is co-funded by the European Union, the Republic of Turkey and the World Bank.
Bu proje Avrupa Birliği, Türkiye Cumhuriyeti ve Dünya Bankası tarafından ortaklaşa finanse edilmektedir.



General View Istanbul Avenue



The project is co-funded by the European Union, the Republic of Turkey and the World Bank.
Bu proje Avrupa Birliği, Türkiye Cumhuriyeti ve Dünya Bankası tarafından ortaklaşa finanse edilmektedir.



General View Istanbul Avenue



The project is co-funded by the European Union, the Republic of Turkey and the World Bank.
Bu proje Avrupa Birliği, Türkiye Cumhuriyeti ve Dünya Bankası tarafından ortaklaşa finanse edilmektedir.



General View Istanbul Avenue



The project is co-funded by the European Union, the Republic of Turkey and the World Bank.
Bu proje Avrupa Birliği, Türkiye Cumhuriyeti ve Dünya Bankası tarafından ortaklaşa finanse edilmektedir.



End of the Bicycle Route



This project is co-funded by the European Union, the Republic of Turkey and the World Bank
Bu Proje Avrupa Birliđi, Türkiye Cumhuriyeti ve Dünya Bankası ortaklıđın ortaklıđına finansmanlanmaktadır

ANNEX-3 Title Deed

BU BELGE TOPLAM 2 SAYFADAN OLUŞMAKTADIR BİLGİ AMAÇLIDIR.

Tarih: 20-7-2022-16:05



Tapu Kaydı (Aktif Malikler için Detaylı - ŞBI var)

TAPU KAYIT BİLGİSİ

Zemin Tipi	Aralas Ormaz	Ada/Parsel:	96/39
Taşınmaz Kimlik No	41574117	AT Yüzölçümü(m2)	3852.74
İl/ilçe	DÜZCE/AKÇAKOCA	Bağımsız Bölüm Nitelik	
Kurum Adı	Akçakoca	Bağımsız Bölüm Brüt Yüzölçümü	
Mahalle/Koy Adı	OSMANIYE Mah.	Bağımsız Bölüm Net Yüzölçümü	
Mevki	DUZCE CADDESİ	Blok/Kat/Giriş/BBNc	
Cilt/Sayfa No	25/2435	Arsa Payı/Payda:	
Kayıt Durumu	Aktif	Arala Taşınmaz Nitelik:	FINDIK BAHÇESİ

MULKIYET BİLGİLERİ

(Hisse) Sistem No	Malik	El Birliği No	Hisse Payı/Payda	Metrekare	Toplam Metrekare	Edinme Sebebi/Tarih/Yerliye	Terkin Sebebi/Tarih/Yerliye
112981580	(SN:2851488) AKÇAKOCA BELEDİYESİ YKN:0190003263	-	1/1	3852.74	3852.74	Kamulaştırma 10-12-2000 1550	-

MULKIYETE AIT ŞERH BEYAN İRTIFAK BİLGİLERİ

ŞB/	Açıklama	Kısmi Malik (Hisse) Adı	Malik/Tehtar	Tesis Kurum Tarih Yerliye	Terkin Sebebi
-----	----------	-------------------------	--------------	---------------------------	---------------

1 / 2



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Bu Proje Avrupa Birliđi, Türkiye Cumhuriyeti ve Dünya Bankası ortaklıđında ortaklar tarafından finanse ađamaktadır

Serhi	Soyad	Tarih	Yevmiye
Karınu Haciz : DÜZCE SGK İL MÜDÜRLÜĞÜNE nın 11/07/2012 tarihli 2012/64 sayılı Haciz Yazısı sayılı yazıları ile. Borç : 8.400.000 TL (Alacaklı : 0)	AKÇAKOĞA BELEDİYESİ VKN	Akçakoca 18-07-2012 11:22 - 3760	

Bu belgeyi ak llı telefonunuzdan karekod tarama programları ile aşıđ daki barkodu taratarak veya Web Tapu anasayfasından (<https://webtapu.tkgm.gov.tr> adresinden) IVxvEAF_q5 kodunu Online işlemler alanına yazarak dođrulayabilirsiniz





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ANNEX-4 Opinion Letters

4th Regional Directorate of Highways



T.C.
KARAYOLLARI GENEL MÜDÜRLÜĐÜ
4. Bölge Müdürlüđü



Sayı: E 53712862- 622 01 / 631131
Konu: Bisiklet Yolu Görüşü hk

17.11.2021

BELEDİYELER
İLÇE BELEDİYELERİNE
(Akçakoca Belediye Başkanlığı)

- İlgi: a) 26/10/2021 tarihli ve 35482436-622 01/1012869 sayılı yazı
b) 01/11/2021 tarihli ve 95386480-755 01/1019987 sayılı yazı
c) 11/11/2021 tarihli ve 96989113-752 99/1040172 sayılı yazı
ç) 12/11/2021 tarihli ve 53712862-622.01/626518 sayılı yazımız.
d) 15/11/2021 tarihli ve 95386480-755.01/1045767 sayılı yazı.

İlgi (a) yazı ekinde gönderilen Düzce İli Akçakoca İlçesinde yapılmak istenilen Bisiklet Yolu hakkındaki proje, ilgili birimlerimiz tarafından incelenmiş ve konu hakkındaki görüşümüz ilgi (ç) yazımızla bildirilmiştir.

Ancak konu ile ilgili tekrar değerlendirme yapılmış olup, bahse konu bisiklet yolunun bir kesiminde " Melenazğı - Akçakoca Devlet Yolu " projesi bulunmakta ve proje Karayolları Genel Müdürlüğünde onay aşamasındadır. İlgili kesimde yeni proje güzergahındaki Km: 16+036' daki alt geçit projesi dikkate alınması şartı ile bisiklet yolu yapılmasında kurumumuzca sakınca bulunmamaktadır.

Bilgilerini ve gereğini rica ederim.

Mehmet Yaşar GÖKTEPE
Bölge Müdürü n.
Bölge Müdür Yardımcısı

DAĞITIM:
Geređi:
BELEDİYELER
İLÇE BELEDİYELERİ
Akçakoca Belediye Başkanlığı

Bilgi
41. Şube Şefliği Bolu

"Bu belge, g0*cell ile tarayarak izlenebilir (matruksuzdur)." /

Belge Doğrulama Kodu: "Türkiye78A4888"	Belge Doğrulama Adresi: "bilgi@www.turkiye.gov.tr/bgm-ebly"
Zulmede Harım Mah. 43116 Cad. No 19-06110 Altındađ ANKARA	Bilgi için: İbrahim ŞENEL Yol. Bilgi ve Ortam Müdürlüğü 312 3506000
Telefon No: 312 3506000	Faks: 312 3106074
Telefon: 312 3506000	Telefon: 312 3506000
İnternet Adresi: www.bgm.gov.tr	KEP: kgm4belge@bilgi.gov.tr
İlgili Birim: Tezülât ve Bilgi Müdürlüğü	e-posta: bilgi@bilgi.gov.tr



1/1



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T.C.
AKÇAKOCA BELEDİYE BAŞKANLIĞI
Fen İşleri Müdürlüğü

Sayı : E-25314376 - 622.02 - 423 - 3728
Konu : Bisiklet Yolu Görüşü İtk.

18.10.2021

KARAYOLLARI 41. ŞUBE MÜDÜRLÜĞÜNE
Bahçelievler Hürriyet Cad. No:16
14100 MERKEZ/BOLU

Düzce ili Akcakoca ilçesinde projesi ekte sunulmak üzere belediyemiz tarafından " Bisiklet Yolu Projesi" yapılması planlanmaktadır. Projenin yapımı ile ilgili kurumunuz tarafından herhangi bir sakınca bulunup bulunmadığının tarafımıza bildirilmesi hususunda, Gereğini arz ederim.

Şenol YAZGAN
Belediye Başkanı
Belediye Başkan Yardımcısı

Ek : 1- Proje CD (1 Ad)

18.10.2021 Fen İşleri Müdürü : Y.EFE

"Bu belge güvenli elektronik imza ile onaylanmıştır"

Belge Doğrulama Kodu: 215011-NDQ0MzINTMxMQ== Belge Doğrulama Adresi: <http://belgebilgi.akcakoca.bel.tr/checkbox.html?checkbox=1&checkbox2=1&checkbox3=1&checkbox4=1&checkbox5=1&checkbox6=1&checkbox7=1&checkbox8=1&checkbox9=1&checkbox10=1&checkbox11=1&checkbox12=1&checkbox13=1&checkbox14=1&checkbox15=1&checkbox16=1&checkbox17=1&checkbox18=1&checkbox19=1&checkbox20=1&checkbox21=1&checkbox22=1&checkbox23=1&checkbox24=1&checkbox25=1&checkbox26=1&checkbox27=1&checkbox28=1&checkbox29=1&checkbox30=1&checkbox31=1&checkbox32=1&checkbox33=1&checkbox34=1&checkbox35=1&checkbox36=1&checkbox37=1&checkbox38=1&checkbox39=1&checkbox40=1&checkbox41=1&checkbox42=1&checkbox43=1&checkbox44=1&checkbox45=1&checkbox46=1&checkbox47=1&checkbox48=1&checkbox49=1&checkbox50=1&checkbox51=1&checkbox52=1&checkbox53=1&checkbox54=1&checkbox55=1&checkbox56=1&checkbox57=1&checkbox58=1&checkbox59=1&checkbox60=1&checkbox61=1&checkbox62=1&checkbox63=1&checkbox64=1&checkbox65=1&checkbox66=1&checkbox67=1&checkbox68=1&checkbox69=1&checkbox70=1&checkbox71=1&checkbox72=1&checkbox73=1&checkbox74=1&checkbox75=1&checkbox76=1&checkbox77=1&checkbox78=1&checkbox79=1&checkbox80=1&checkbox81=1&checkbox82=1&checkbox83=1&checkbox84=1&checkbox85=1&checkbox86=1&checkbox87=1&checkbox88=1&checkbox89=1&checkbox90=1&checkbox91=1&checkbox92=1&checkbox93=1&checkbox94=1&checkbox95=1&checkbox96=1&checkbox97=1&checkbox98=1&checkbox99=1&checkbox100=1>

Yah. Mith. İnanç Cad. No 48 PK- 81650 Akcakoca-DÜZCE
Telefon No: 0(380)-611 41 10 Faks No: 0(380)-611 36 55
iletisim@akcakoca.bel.tr İnternet Adresi: www.akcakoca.bel.tr
Key Adresi: akcakoca.belediyesi@tut01.ksp.tr

Bilgi için : YASİN EFE
Fen İşleri Müdürü
Telefon No: 1907
EBYS Erişim No: 215011





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5th Regional Directorate of the General Directorate of State Hydraulic Works (DSİ)



T.C.
TARIM VE ORMAN BAKANLIđI
Devlet Su İşleri Genel Müdürlüğü
5. Bölge Müdürlüğü
55. Şube Müdürlüğü



Sayı : E-98305166-6.22 02-1828666

08.12.2021

Konu : Bisiklet Yolu Görüşü Ek

AKÇAKOCA BELEDİYE BAŞKANLIđINA

İlgi : a) 18.10.2021 tarihli ve 3730 sayılı yazı
b) Bölge Müdürlüğümüzle 08.12.2021 tarihli ve 1762797 sayılı yazısı

İlgi a) yazınızda özetle; Düzce il Akçakoca ilçesinde Akçakoca Belediyesi tarafından " Bisiklet Yolu Projesi" yapılması planlandığı belirtilmiş olup proje ile ilgili kurumunuz tarafından herhangi bir sakınca bulunup bulunmadığının tarafınıza bildirilmesi talep edilmektedir.

Bahse konu talep ile ilgili Bölge Müdürlüğümüz görüşü ilgi b) yazınız ile bildirilmiştir.
Gereğini bilgilerinize arz ederim.

Deniz YILDIZ
Şube Müdürü

Ek: İlgili Yazı Ekler.

[Bu belge, güvenli elektronik imza ile onaylanmıştır.](#)

Doğrulama Kodu: F452B466-763D-46CD-A4BE-F5A62BF46817 Doğrulama Adresi: <https://www.muhave.gov.tr/devlet-su-isleri-ebys>
Adres: Yemimahalle Etkinler Sokakı No:2 01030 Düzce

Bilgi için Selva GÖK
Mühürü:





Ministry of Agriculture, Republic of Turkey
T.C. Tarım ve Orman Bakanlığı



T.C.
TARIM VE ORMAN BAKANLIĞI
Devlet Su İşleri Genel Müdürlüğü
Bölge Müdürlüğü

Sayı : E-19580170-677/02-1767/97

Konu : Görüş ve Teklifler

04.11.2021

DSİ 55. ŞUBE MÜDÜRLÜĞÜ- DÜZCEYE

İli : a) Akçakoca Belediye Başkanlığına 18.10.2021 tarih ve 3730 sayılı yazısı.
b) Dsi 55 Şube Müdürlüğü- Düzce (Etüd ve Plan Başmühendisi) nin 04.11.2021 tarihli ve E-58305166-622.02-1717896 sayılı yazısı.

İli (a) yazıda; Düzce ili, Akçakoca ilçesinde Akçakoca Belediye Başkanlığı tarafından "Bisiklet yolu" yapılacağı belirtilmiş olup, Kuruluşumuz görüşü talep edilmektedir.

Yeninde yapılan inceleme neticesinde; Düzce İli, Akçakoca İlçesinde "Bisiklet Yolu Projesi" güzergahında vola paralel olarak devam eden Hacı Dere su bulunmakta olup, Hacı Deresinin ilaib kısmında idaremizce yapılmış herhangi bir taşkın tesisi bulunmamaktadır. Yapılması planlanan bisiklet yolu projesinin Km: 0+960.00 ile Km: 1+140.00 arasındaki kısmı Hacı Deresine paraleldir. Dere ile vol arası kot farkı yer yer 5 metredir. Planlanan bisiklet yolu, dere ile ulaşım yolu açısındandır. Ancak bisiklet yolu ile Hacı Deresinin vakarı geçtiği Km: 0+960.00 ile Km: 1+140.00 arasındaki güzergahta Dere Islah projesi yapılması ve idaremizce onayına sunulması gerekmektedir. Ayrıca Hacı Dere menba ve anaşap kısmını sağlanması gerekmektedir. Bisiklet yolu projesinin Km: 0+960.00 ile Km: 1+140.00' ler dışında kalan kısmında Kuruluşumuz açısından bir sakınca görülmektedir. Bölge Müdürlüğümüz görüşünün ilgili Kuruma bildirilmesi hususunda;

Gereğini rica ederim.

Sadeddin CEYLAN
Bölge Mükte Yardımcısı

Ek-

- 1 - Harita
- 2 - Google görünüşü
- 3 - Google görünüşü
- 4 - Fotoğraflar
- 5 - Bisiklet yolu KMZ
- 6 - İzinat Düzeyi KMZ

Doğrulama Kodu: 42E53FC1-1816-44C7-4C43-587D481D12C9
Adres: Mustafa Kemal Mah. 21501 Cad. A Blok No:24 06520 Çankaya-ANKARA
Telefon No : Etiler/Beşiktaş No

Bölge Müdürlüğü T.C. DSİ
T.C. DSİ





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ANNEX-5 Lists of Flora & Fauna Potentially to Exist In Akçakoca District

Flora Species

Turkish Name	Scientific Name	IUCN	BERN	Endemism
Yastık zarıfe	<i>Acer campestre</i>	Least Concern (LC)	-	-
Ova akçağacı	<i>Acer campestre subsp. campestre</i>	-	-	-
Kurpotu	<i>Achillea pannonica</i>	-	-	-
Baldırıkara	<i>Adiantum capillus-veneris</i>	LC	-	-
Göktaşkesen	<i>Aegonychon purpurocaeruleum</i>	-	-	-
Fitikotu	<i>Agrimonia eupatoria subsp. eupatoria</i>	-	-	-
Koca tavusotu	<i>Agrostis gigantea</i>	-	-	-
Tavusotu	<i>Agrostis stolonifera</i>	I.C	-	-
İnce saçotu	<i>Aira caryophyllea</i>	-	-	-
Tül çiçeği	<i>Aira elegantissima subsp. elegantissima</i>	-	-	-
Mayasilotu	<i>Ajuga chamaepitys</i>	-	-	-
Dalımaya sil	<i>Ajuga chamaepitys subsp. palaestina</i>	-	-	-
Dağmaya silı	<i>Ajuga orientalis</i>	-	-	-
Meryemsacı	<i>Ajuga reptans</i>	-	-	-
Kurbağakaşığı	<i>Alisma lanceolatum</i>	LC	-	-
Çoban düdüğü	<i>Alisma plantago-aquatica</i>	I.C	-	-
Sarımsak hardalı	<i>Alliaria petiolata</i>	-	-	-
Benli soğan	<i>Allium guttatum subsp. guttatum</i>	-	-	-
Sürüsalkım	<i>Allium paniculatum subsp. paniculatum</i>	I.C	-	-
Deli pırasa	<i>Allium scorodoprasum subsp. rotundum</i>	-	-	-
Sirno	<i>Allium vineale</i>	LC	-	-
Kızılağaç	<i>Allium glutinosa subsp. glutinosa</i>	-	-	-
Tarla tilkıkuyruğu	<i>Alopecurus myosuroides subsp. myosuroides</i>	-	-	-
Gülhannaz	<i>Althaea cammarina</i>	-	-	-
Gulhatmi	<i>Althaea hirsuta</i>	-	-	-
Deli hatmi	<i>Althaea officinalis</i>	I.C	-	-
Kömüş mancan	<i>Amaranthus albus</i>	-	-	-
Hoşkuran	<i>Amaranthus blitum</i>	-	-	-
Horozibiği	<i>Amaranthus eruentis</i>	-	-	-
Tilkıkuyruğu	<i>Amaranthus retroflexus</i>	-	-	-
Hiltan	<i>Anem. visnaga</i>	I.C	-	-
Sivrisalep	<i>Anacamptis pyramidalis</i>	LC	-	-
Farekulağı	<i>Anagallis arvensis var. arvensis</i>	-	-	-
Bağırsakotu	<i>Anagallis foemina</i>	-	-	-



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Turkish Name	Scientific Name	IUCN	BERN	Endemism
Fatlıbaba	<i>Anchusa hybrida</i>	-	-	-
Duvarmohutu	<i>Andrachne telephioides</i>	-	-	-
Kekire	<i>Angelica sylvestris</i>	LC	-	-
Hozan çiçeği	<i>Anthemis cotula</i>	-	-	-
Kokuotu	<i>Anthoxanthum odoratum subsp. odoratum</i>	-	-	-
Deligim	<i>Anthriscus caucalis</i>	-	-	-
Aslanağızı	<i>Antirrhinum majus subsp. majus</i>	-	-	-
İpek çımı	<i>Apera spica-venti</i>	-	-	-
Fenotu	<i>Arabis thaliana</i>	-	-	-
Temrentere	<i>Arabis sagittata</i>	-	-	-
Kocayemiş	<i>Arbutus unedo</i>	LC	-	-
Tarla kumotu	<i>Avenaria serpyllifolia</i>	-	-	-
Acı colluk	<i>Argyrolobum hiebersteinii</i>	-	-	-
Lohusaotu	<i>Aristolochia clematitis</i>	-	-	-
Gangırdak	<i>Aristolochia pontica</i>	-	-	-
Laz yavşanı	<i>Artemisia verlotiorum</i>	-	-	-
Kaba yavşan	<i>Artemisia vulgaris</i>	I.C	-	-
Nivik	<i>Arun. hygrophilum subsp. euxinum</i>	-	-	Endemic (E)
Yılan yarpuzu	<i>Arun. mckelii</i>	-	-	-
Tilkişen	<i>Asparagus acutifolius</i>	I.C	-	-
Papazsakalı	<i>Asparagus aphyllus subsp. orientalis</i>	-	-	-
Sarı çiriş	<i>Asphodeline lutea</i>	-	-	-
Kara saçakotu	<i>Asplenium adnigrum-nigrum</i>	I.C	-	-
Dalakotu	<i>Asplenium ceterach</i>	I.C	-	-
Kalkan eğreltisi	<i>Asplenium onopteris</i>	LC	-	-
Geyikdili	<i>Asplenium scolopendrium</i>	LC	-	-
Saçakotu	<i>Asplenium trichomanes</i>	I.C	-	-
Dikenotu	<i>Asteriscus spinosus</i>	-	-	-
Tavşanekmeği	<i>Ayyemenia limonifolium subsp. limonifolium</i>	-	-	-
Hayat süpürgesi	<i>Atriplex hastata</i>	-	-	-
Unluca	<i>Atriplex tatarica var. tatarica</i>	-	-	-
Güzelay ratotu	<i>Atropa belladonna</i>	-	-	-
Narin yulaf	<i>Avena barbata subsp. barbata</i>	LC	-	-
Delı yulaf	<i>Avena fatua var. fatua</i>	-	-	-
Yulaf	<i>Avena sativa</i>	-	-	-
Nicarotu	<i>Barbarea vulgaris subsp. vulgaris</i>	-	-	-
Karaballıbaba	<i>Bartsia trixago</i>	-	-	-
Koyungözü	<i>Bellis perennis</i>	-	-	-
Su keteni	<i>Bidens tripartita</i>	I.C	-	-
Asfaltotu	<i>Bituminaria bituminosa</i>	-	-	-
Delıştra	<i>Blackstonia perfoliata subsp. perfoliata</i>	-	-	-



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Turkish Name	Scientific Name	IUCN	BERN	Endemism
Tarak eğreltisi	<i>Blechnum spicant</i>	LC	-	-
Sakalotu	<i>Bohrriochloa ischaemum</i>	-	-	-
Tüylü kılcan	<i>Brachypodium pinnatum</i>	-	-	-
Koru kılcan	<i>Brachypodium sylvaticum</i>	-	-	-
Kuşyüreği	<i>Briza maxima</i>	-	-	-
Zembilotu	<i>Briza media</i>	-	-	-
Küçükzembil	<i>Briza minor</i>	-	-	-
Başakotu	<i>Bromus hordeaceus subsp. hordeaceus</i>	-	-	-
Kum kılcanı	<i>Bromus hordeaceus subsp. thominii</i>	-	-	-
İyecotu	<i>Bromus japonicus subsp. japonicus</i>	-	-	-
Kırmızı brom	<i>Bromus madriensis</i>	-	-	-
Kirpikli damıye	<i>Bromus squarrosus</i>	-	-	-
Sağır ilemi	<i>Bromus sterilis</i>	-	-	-
Kır bromu	<i>Bromus tectorum</i>	-	-	-
Bataklığülü	<i>Butomus umbellatus</i>	LC	-	-
Şimşir	<i>Buxus sempervirens subsp. sempervirens</i>	I.C.	-	-
Portakal nergisi	<i>Calendula arvensis</i>	-	-	-
Top hardal	<i>Calepina irregularis</i>	-	-	-
Göl dilbersaçı	<i>Callitriche stagnalis</i>	LC	-	-
Çit sarmaşığı	<i>Calystegia sepium subsp. sepium</i>	-	-	-
Bürük	<i>Calystegia silvatica</i>	-	-	-
Yumak çanı	<i>Campanula glomerata subsp. hispida</i>	-	-	-
Çançeçeği	<i>Campanula lactiflora subsp. latifolia</i>	-	-	-
Memek	<i>Campanula lyrata subsp. lyrata</i>	-	-	-
Zarif çingirak	<i>Campanula persicifolia subsp. persicifolia</i>	-	-	-
Sıdkılı çançeçeği	<i>Campanula rapunculus</i>	-	-	-
Çobançantası	<i>Capsella bursa-pastoris</i>	LC	-	-
Dişlikök	<i>Cardamine bulbifera</i>	-	-	-
Kıllı kodiin	<i>Cardamine hirsuta</i>	-	-	-
Hanım gömleği	<i>Cardamine quinquefolia</i>	-	-	-
Siyri kangal	<i>Carduus acutoides</i>	-	-	-
Kerbeş	<i>Carduus nutans subsp. leucophyllus</i>	-	-	-
Eşek soymacı	<i>Carduus pycnocephalus subsp. albidus</i>	-	-	-
Kurusaz	<i>Carex cupressina</i>	LC	-	-
Ayak otu	<i>Carex divisa</i>	I.C.	-	-
Dalsapama	<i>Carex filiformis</i>	-	-	-
Sert ayakotu	<i>Carex groletti</i>	-	-	-
Kaba ayakotu	<i>Carex halleriana</i>	-	-	-
Tüylü çayır sazı	<i>Carex hirta</i>	LC	-	-
Çengelsazı	<i>Carex muricata</i>	I.C.	-	-
Salkım ayakotu	<i>Carex pallescens</i>	-	-	-



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Turkish Name	Scientific Name	IUCN	BERN	Endemism
Salkımsapama	<i>Carex pendula</i>	LC	-	-
Üçsazotu	<i>Carex pseudocyperus</i>	LC	-	-
Merasazi	<i>Carex sylvatica subsp. sylvatica</i>	-	-	-
Kuzeyotu	<i>Carpestium abrotanoides</i>	-	-	-
Yedi kuzeyotu	<i>Carpestium cernuum</i>	-	-	-
Gürgen	<i>Carpinus betulus</i>	LC	-	-
Karakız dıkeni	<i>Carthamus glaucus subsp. glaucus</i>	-	-	-
Sandıken	<i>Carthamus lanatus</i>	-	-	-
Kestane	<i>Castanea sativa</i>	I.C	-	-
Çitlenbik	<i>Cichus australis</i>	LC	-	-
Yalçın çançiçeği	<i>Centaurea caelestrapa subsp. caelestrapa</i>	-	-	-
Deligozdiken	<i>Centaurea iberica</i>	-	-	-
Kiyos düğmesi	<i>Centaurea kilica</i>	-	-	E
Rize serçebaşı	<i>Centaurea salicifolia subsp. salicifolia</i>	-	-	-
Alakötürüm	<i>Centaurea urvillei subsp. urvillei</i>	-	-	-
Kırmızı kantaron	<i>Centaureum erythraea subsp. erythraea</i>	I.C	-	-
Tukulotu	<i>Centaureum erythraea subsp. turcicum</i>	-	-	-
Pembe tukul	<i>Centaureum pulchellum</i>	LC	-	-
Mahmuz çiçeği	<i>Centranthus longiflorus subsp. longiflorus</i>	-	-	-
Ormankuşçuğu	<i>Cephalanthera damascanum</i>	LC	-	-
Çançiçeği	<i>Cephalanthera rubra</i>	LC	-	-
Tarla pelemiri	<i>Cephalanthera transsylvanica</i>	-	-	-
Geç şek boynuzotu	<i>Cerastium brachypetalum subsp. roeseri</i>	-	-	-
Mızrak boynuzotu	<i>Cerastium dubium</i>	-	-	-
Koru boynuzotu	<i>Cerastium fontanum subsp. vulgare</i>	-	-	-
Boynuzotu	<i>Cerastium glomeratum</i>	-	-	-
Eğri boynuzotu	<i>Cerastium pumilum subsp. pumilum</i>	-	-	-
Kiraz	<i>Cerasus avium</i>	I.C	-	-
Kınalı su boynuzu	<i>Ceratophyllum demersum</i>	I.C	-	-
Ergüsan	<i>Cercis siliquastrum subsp. siliquastrum</i>	LC	-	-
Kırlangıçotu	<i>Chelidonium majus</i>	LC	-	-
Telçe	<i>Chenopodium album subsp. album</i>	-	-	-
Kızılacak	<i>Chenopodium botrys</i>	-	-	-
Hindiba	<i>Cichorium intybus</i>	LC	-	-
Babrik	<i>Cionura erecta</i>	-	-	-
Kankurutan	<i>Cireaea huetiana</i>	-	-	-
Köy göçüren	<i>Cirsium arvense</i>	-	-	-
Eşek çalısı	<i>Cirsium ereticum subsp. ereticum</i>	-	-	-
Vişne kangalı	<i>Cirsium hypoleucum</i>	-	-	-
Yaygın kangal	<i>Cirsium vulgare</i>	-	-	-
Laden	<i>Cistus creticus</i>	-	-	-



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Turkish Name	Scientific Name	IUCN	BERN	Endemism
Kartlı	<i>Cistus salviifolius</i>	-	-	-
Akasma	<i>Clematis vitalba</i>	-	-	-
Yabani oğulotu	<i>Clinopodium menthifolium subsp. ascendens</i>	-	-	-
Yabani oğulotu	<i>Clinopodium menthifolium subsp. menthifolium</i>	-	-	-
Sümüklü fesleğen	<i>Clinopodium nepeta subsp. glaucochlosum</i>	-	-	-
Yabani fesleğen	<i>Clinopodium vulgare</i>	-	-	-
Yabani fesleğen	<i>Clinopodium vulgare subsp. vulgare</i>	-	-	-
Morçişek	<i>Consolida orientalis</i>	-	-	-
Tarla sarmaşığı	<i>Convolvulus arvensis</i>	-	-	-
Çadırçiçeği	<i>Convolvulus cantabrica</i>	-	-	-
Selviotu	<i>Coryza canadensis</i>	-	-	-
Kızılcık	<i>Cornus mas</i>	LC	-	-
Kiren	<i>Cornus sanguinea</i>	-	-	-
Kansığiren	<i>Cornus sanguinea subsp. australis</i>	-	-	-
Kiren	<i>Cornus sanguinea subsp. sanguinea</i>	-	-	-
Akrep burçağı	<i>Coromilla scorpioides</i>	-	-	-
Çayır kazgagası	<i>Corydalis cava</i>	-	-	-
Fındık	<i>Corylus avellana var. avellana</i>	-	-	-
Çiçekçi papatyası	<i>Cota coelopoda var. banysaei</i>	-	-	-
Boşacı papatyası	<i>Cota tinctoria var. discoides</i>	-	-	-
Boşacı papatyası	<i>Cota tinctoria var. tinctoria</i>	-	-	-
Boşacı sumacı	<i>Cotinus coggygria</i>	LC	-	-
Kocakarı armudu	<i>Crataegus microphylla subsp. microphylla</i>	-	-	-
Yemişen	<i>Crataegus monogyna var. monogyna</i>	-	-	-
Kömüş dikeni	<i>Crataegus pentagyna</i>	LC	-	-
Kızılcık	<i>Crataegus rhipidophylla var. rhipidophylla</i>	LC	-	-
Sakarkanak	<i>Crepis foetida subsp. rhoeadifolia</i>	-	-	-
Zarif kıskısı	<i>Crepis pulchra subsp. pulchra</i>	-	-	-
Yabani kıskısı	<i>Crepis sancta</i>	-	-	-
Kılçıklı kıskısı	<i>Crepis setosa</i>	-	-	-
Ardıç kıskısı	<i>Crepis smyrnaea</i>	-	-	-
Kese kıskısı	<i>Crepis vesicaria</i>	-	-	-
Yer çiğdemi	<i>Crocus flavus</i>	-	-	-
Sarılıkotu	<i>Crucjata laevipes</i>	-	-	-
Gelindöndüren	<i>Crupina eripinastrum</i>	-	-	-
Kafir saçı	<i>Cuscuta campestris</i>	-	-	-
Eftimon	<i>Cuscuta epithymum subsp. kotschyi</i>	-	-	-
Bostanbozan	<i>Cuscuta europaea</i>	-	-	-
Gökbaş	<i>Cyanus depressus</i>	-	-	-
Domuz ağırşacı	<i>Cyclamen coum subsp. caucasicum</i>	-	ANNEX-I	-



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Turkish Name	Scientific Name	IUCN	BERN	Endemism
Yersomunu	<i>Cyclamen coum subsp. coum</i>	LC	ANNEX-I	-
Nakkaşotu	<i>Cymbalaria longipes</i>	-	-	-
Köpekdişi	<i>Cynodon dactylon var. villosus</i>	-	-	-
Pisik tetiği	<i>Cynoglossum creticum</i>	-	-	-
Tarakotu	<i>Cynosurus cristatus</i>	-	-	-
Top tarakotu	<i>Cynosurus echinatus</i>	-	-	-
Abdulaziz	<i>Cyperus esculentus</i>	LC	-	-
Maydanözbacı	<i>Cyperus fuscus</i>	LC	-	-
Topalak	<i>Cyperus rotundus</i>	LC	-	-
İnekmemesi	<i>Cytisus hypocistis subsp. orientalis</i>	-	-	-
Yer narı	<i>Cytisus ruber</i>	-	-	-
Keçi tırnağı	<i>Cytisus hirsutus</i>	-	-	-
Killi domuzayrığı	<i>Dactylis glomerata</i>	-	-	-
Domuzayrığı	<i>Dactylis glomerata subsp. glomerata</i>	-	-	-
Killi domuzayrığı	<i>Dactylis glomerata subsp. hispanica</i>	-	-	-
Sırmağı	<i>Daphne pontica subsp. pontica</i>	-	-	-
Renkotu	<i>Datisca cannabina</i>	-	-	-
Boru çiçeği	<i>Datura stramonium</i>	-	-	-
Yabani havuç	<i>Daucus carota</i>	LC	-	-
Benekli havuç	<i>Daucus giatatus</i>	DD	-	-
Dendefirışotu	<i>Danienus litoralis</i>	LC	-	-
Güçlü karanfil	<i>Dianthus armeria subsp. armeria</i>	-	-	-
Al karanfil	<i>Dianthus cibrarius</i>	-	-	E
Deve karanfili	<i>Dianthus giganteus</i>	-	-	-
Ankovanı	<i>Digitalis ferruginea subsp. ferruginea</i>	-	-	-
Yüksükotu	<i>Digitalis lamareckii</i>	-	-	E
Kızıl çatalotu	<i>Digitaria sanguinalis</i>	-	-	-
Dolanbaç	<i>Dioscorea communis</i>	LC	-	-
Küçük meyveli	<i>Diospyros lotus</i>	LC	-	-
Fesçitarığı	<i>Dipsacus laciniatus</i>	-	-	-
Kaplanotu	<i>Doronicum orientale</i>	-	-	-
Ak kaplanotu	<i>Dorycnium graecum</i>	-	-	-
Kıllı kaplanotu	<i>Dorycnium hirsutum</i>	-	-	-
Kaplanotu	<i>Dorycnium pentaphyllum subsp. anatolicum</i>	-	-	-
Zehirli yonca	<i>Dorycnium pentaphyllum subsp. herbaceum</i>	-	-	-
Ak dolama	<i>Draba muralis</i>	-	-	-
Çiçeriotu	<i>Draba verna</i>	-	-	-
Darıcan	<i>Echinochloa crus-galli</i>	LC	-	-
Papaz kulpağı	<i>Echinops microcephalus</i>	-	-	-
Kurtkuy ruğu	<i>Echium italicum</i>	-	-	-
Engerek otu	<i>Echium vulgare subsp. vulgare</i>	-	-	-



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Turkish Name	Scientific Name	IUCN	BERN	Endemism
Çiğirgan	<i>Eleoagnis rhomboides</i>	LC	-	-
Delisaz	<i>Eleocharis palustris</i>	LC	-	-
Putacotu	<i>Elymus elongatus subsp. elongatus</i>	-	-	-
Hasan Hüseyin çiçeği	<i>Epilobium hirsutum</i>	LC	-	-
İraz yakıotu	<i>Epilobium parviflorum</i>	I.C	-	-
Ezberyakası	<i>Epilobium tetragonum subsp. tetragonum</i>	-	-	-
Tekeotu	<i>Epimedium pubigerum</i>	-	-	-
Bindallıçiçeği	<i>Epipactis helleborine subsp. helleborine</i>	LC	-	-
Atkuyruğu	<i>Equisetum arvense</i>	I.C	-	-
Kırk kilitotu	<i>Equisetum giganteum</i>	LC	-	-
Kırkbacak	<i>Equisetum palustre</i>	LC	-	-
Deredoruk	<i>Equisetum telmateia</i>	I.C	-	-
Funda	<i>Frica arborea</i>	I.C	-	-
Leylek gagası	<i>Frodium acule</i>	-	-	-
İğnelik	<i>Frodium cicutarium subsp. cicutarium</i>	-	-	-
Dönbaba	<i>Frodium malacoides</i>	-	-	-
Kırsenet	<i>Fryngium campestre</i>	-	-	-
Göz dikenli	<i>Fryngium creticum</i>	-	-	-
Çatal zarife	<i>Frysimum repandum</i>	-	-	-
Koyunpıtrağı	<i>Fuqetorium cannabinum</i>	-	-	-
Zerana	<i>Euphorbia amygdaloides subsp. amygdaloides</i>	-	-	-
Güdük sütleğeni	<i>Euphorbia exigua subsp. exigua</i>	-	-	-
Feribanotu	<i>Euphorbia helioscopia subsp. helioscopia</i>	-	-	-
Su sütleğeni	<i>Euphorbia palustris</i>	LC	-	-
Kıyı sütleğeni	<i>Euphorbia peplus</i>	-	-	-
Bahçe sütleğeni	<i>Euphorbia peplus var. peplus</i>	-	-	-
Tasmaotu	<i>Euphorbia seguieriana</i>	-	-	-
Fkin sütleğeni	<i>Euphorbia seguieriana subsp. nicotiana</i>	-	-	-
Tasmaotu	<i>Euphorbia seguieriana subsp. seguieriana</i>	-	-	-
Hemşin sütleğeni	<i>Euphorbia squamosa</i>	-	-	-
Katı sütleğeni	<i>Euphorbia stricta</i>	-	-	-
Göz otu	<i>Euphrasia pectinata</i>	-	-	-
Kayın	<i>Fagus orientalis</i>	I.C	-	-
Günlükotu	<i>Ferulago confusa</i>	-	-	-
Sarı çakşır	<i>Ferulago thurkeana</i>	-	-	E
Çalı yumağı	<i>Festuca drymeja</i>	-	-	-
İncir	<i>Ficus carica subsp. carica</i>	I.C	-	-
Delik keçeotu	<i>Filago erioccephala</i>	-	-	-
Çaymelikesi	<i>Filipendula vulgaris</i>	LC	-	-
Burut ağacı	<i>Frangula dodonaei subsp. dodonaei</i>	-	-	-
Anadolu dişbudağı	<i>Fraxinus angustifolia subsp. oxycarpa</i>	-	-	-



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Turkish Name	Scientific Name	IUCN	BERN	Endemism
Eğri lâle	<i>Fritillaria pontica</i>	LC	-	-
Şahtere	<i>Fumaria officinalis subsp. officinalis</i>	LC	-	-
Boğazkardeleni	<i>Gialanthus plicatus subsp. plicatus</i>	LC	-	-
Keçisedefi	<i>Galega officinalis</i>	LC	-	-
Gur iplikçik	<i>Galium album subsp. pycnotrichum</i>	-	-	-
Çobansüzgeci	<i>Galium aparine</i>	LC	-	-
Çalıplıkçığı	<i>Galium fissurense</i>	-	-	E
Çalı iplikçığı	<i>Galium lycense</i>	-	-	-
Su iplikçığı	<i>Galium palustre</i>	I.C	-	-
Gök iplikçik	<i>Galium paschale</i>	-	-	-
Boyalık	<i>Galium verum subsp. verum</i>	LC	-	-
Kırtıl çalısı	<i>Genista carinalis</i>	-	-	-
Boydacı katırtırnağı	<i>Genista tinctoria</i>	-	-	-
Yaramerhemi	<i>Geranium asphodeloides subsp. asphodeloides</i>	-	-	-
Güvercin itir	<i>Geranium columbinum</i>	-	-	-
Dilimli itir	<i>Geranium dissectum</i>	-	-	-
Dakkaotu	<i>Geranium lucidum</i>	-	-	-
Yumuşak itir	<i>Geranium molle</i>	-	-	-
Ebedön	<i>Geranium purpureum</i>	-	-	-
Gelinçarşafı	<i>Geranium pyrenaicum</i>	-	-	-
Dağ itiri	<i>Geranium robertianum</i>	-	-	-
Helilok	<i>Geranium rotundifolium</i>	-	-	-
Meryemotu	<i>Gerium urbanum</i>	LC	-	-
Gavur haşhaşı	<i>Gilicium leiocarpum</i>	-	-	-
Meyan	<i>Glycyrrhiza glabra</i>	I.C	-	-
Kara sarmaşığı	<i>Hedera colchica</i>	-	-	-
Duv ar sarmaşığı	<i>Hedera helix</i>	LC	-	-
Akrepotu	<i>Heliotropium europaeum</i>	-	-	-
Çöplence	<i>Helleborus orientalis</i>	-	-	-
Devesil	<i>Heracleum sphondylium subsp. ternatum</i>	-	-	-
Delı yaran	<i>Herniaria hirsuta</i>	-	-	-
Kabuyaran	<i>Herniaria incana</i>	-	-	-
Kırk şahinotu	<i>Hieracium vagum</i>	-	-	-
Atnalı	<i>Hippocrepis unisiliquosa subsp. unisiliquosa</i>	-	-	-
Nadas turpu	<i>Hirschfeldia incana</i>	-	-	-
Kadıfootu	<i>Holcus lanatus</i>	-	-	-
Odlun arpası	<i>Hordeolymus europaeus</i>	-	-	-
Boneuk arpa	<i>Hordeum bulbosum</i>	I.C	-	-
Mandakulağı	<i>Hylotelephium telephium</i>	-	-	-
Koşunkıran	<i>Hypericum calycinum</i>	-	-	-



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Turkish Name	Scientific Name	IUCN	BERN	Endemism
Binbirdelikotu	<i>Hypericum perforatum</i>	-	-	-
Kantaron	<i>Hypericum perforatum</i>	LC	-	-
Çizgili kantaron	<i>Hypericum tetrapterum</i>	-	-	-
İşilgan	<i>Ilex colchica</i>	-	-	-
Kaya yolotu	<i>Inula aschersoniana</i>	-	-	-
Gölge andızotu	<i>Inula conyzae</i>	-	-	-
Ekim andızotu	<i>Inula germanica</i>	-	-	-
Deli sariot	<i>Inula graveolens</i>	-	-	-
Su andızotu	<i>Inula salicina</i>	-	-	-
Sümenit	<i>Inula viscosa</i>	-	-	-
Aksüsen	<i>Iris albicans</i>	-	-	-
Batak süseni	<i>Iris pseudacornis</i>	I.C	-	-
Boruk	<i>Jasminum fruticans</i>	-	-	-
Ceviz	<i>Juglans regia</i>	LC	-	-
Camuşotu	<i>Juncus articulatus subsp. articulatus</i>	LC	-	-
Kamır	<i>Juncus bufonius</i>	I.C	-	-
Hasır sazı	<i>Juncus conglomeratus</i>	LC	-	-
Kofa	<i>Juncus effusus</i>	LC	-	-
Sazak	<i>Juncus inflexus subsp. inflexus</i>	LC	-	-
Peygamberkılıcı	<i>Juncus maritimus</i>	LC	-	-
Çayır kofası	<i>Juncus thomasi</i>	-	-	-
Katran ardıcı	<i>Juniperus oxycedrus subsp. oxycedrus</i>	LC	-	-
Kafalı kuşdili	<i>Jurinea ulpigena</i>	-	-	E
Geyik göbeği	<i>Jurinea consanguinea</i>	-	-	-
Yabarı göbeği	<i>Jurinea mollis</i>	-	-	-
Kas otu	<i>Jurinea pontica</i>	-	-	E
Has eşekkulacağı	<i>Knautia degenii</i>	-	-	-
Götürötu	<i>Knautia integrifolia var. bidens</i>	-	-	-
Deli marul	<i>Lactuca saligna</i>	I.C	-	-
Eşekhelvası	<i>Lactuca serriola</i>	LC	-	-
Baltutan	<i>Lamium amplexicaule</i>	-	-	-
Meşe balıcağı	<i>Lamium galicobdolon subsp. montanum</i>	-	-	-
Mis balıcağı	<i>Lamium moschatum subsp. interanthum</i>	-	-	-
Ballıbaba	<i>Lamium purpureum var. aznavouren</i>	-	-	E
Ballıbaba	<i>Lamium purpureum var. purpureum</i>	-	-	-
Şehrek	<i>Lapsana communis subsp. intermedia var. intermedia</i>	-	-	-
Kefe kimyonu	<i>Laser trilobum</i>	-	-	-
Saçlı enguban	<i>Laserpitium hispidum</i>	-	-	-
Gizhot	<i>Lathraea squamaria</i>	-	-	-
San burçak	<i>Lathyrus aphaca var. biflorus</i>	-	-	-
Korunürdümüğü	<i>Lathyrus aureus</i>	I.C	-	-



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Turkish Name	Scientific Name	IUCN	BERN	Endemism
Colban	<i>Lathyrus cicera</i>	LC	-	-
Kaba mürdümük	<i>Lathyrus hirsutus</i>	LC	-	-
Delir burçak	<i>Lathyrus laxiflorus subsp. laxiflorus</i>	LC	-	-
Çimen burçak	<i>Lathyrus missolia</i>	LC	-	-
Yılan gıcılı	<i>Lathyrus pratensis</i>	LC	-	-
Kaya mürdümüğü	<i>Lathyrus saxatilis</i>	LC	-	-
Kara yemiş	<i>Leurocerasus officinalis</i>	LC	-	-
Defne	<i>Laurus nobilis</i>	LC	-	-
Sarıcauk	<i>Levatera punctata</i>	-	-	-
Eğri kadınay nası	<i>Legousia falcata</i>	-	-	-
Hoş kadınay nası	<i>Legousia speculum-veneris</i>	-	-	-
Sumereimeği	<i>Lemna minor</i>	LC	-	-
Oklu gıllikazer	<i>Leontodon hispidus subsp. hostilis</i>	-	-	-
Yumrulu aslandışi	<i>Leontodon tuberosus</i>	-	-	-
Horozcuk	<i>Lepidium campestre</i>	LC	-	-
Filtre	<i>Lepidium virginicum</i>	-	-	-
Ay papatya	<i>Leucanthemum vulgare</i>	-	-	-
Göl soğanı	<i>Leucopum aestivum</i>	LC	-	-
Kurtbağrı	<i>Ligustrum vulgare</i>	-	-	-
Sultan zambağı	<i>Lilium martagon</i>	LC	-	-
Som nevr uzotu	<i>Linaria genistifolia subsp. genistifolia</i>	-	-	-
Delir keten	<i>Linum bienne</i>	-	-	-
Koru keteni	<i>Linum corymbulosum</i>	-	-	-
Yaban keteni	<i>Linum nodiflorum</i>	-	-	-
Orlak keteni	<i>Linum trigynum</i>	-	-	-
Taşkesen	<i>Lithospermum arvense</i>	-	-	-
Çim	<i>Lolium perenne</i>	LC	-	-
Sert çim	<i>Lolium rigidum var. rigidum</i>	LC	-	-
Kurtluot	<i>Lotus angustissimus</i>	-	-	-
Gazal boynuzu	<i>Lotus corniculatus</i>	LC	-	-
Gazalboynuzu	<i>Lotus corniculatus var. corniculatus</i>	LC	-	-
Gazal boynuzu	<i>Lotus corniculatus var. tenuifolius</i>	-	-	-
Gevşek luzul	<i>Luzula forsteri</i>	LC	-	-
Kırk luzul	<i>Luzula multiflora subsp. multiflora</i>	-	-	-
Çayır luzulu	<i>Luzula pallescens</i>	-	-	-
Kurtayağı	<i>Lycopus europaeus</i>	LC	-	-
Yer kargaotu	<i>Lysimachia nummularia</i>	LC	-	-
Hilal kargaotu	<i>Lysimachia verticillaris</i>	-	-	-
Kargaotu	<i>Lysimachia vulgaris</i>	LC	-	-
Sivri aklarotu	<i>Lythrum junceum</i>	LC	-	-
Aklarotu	<i>Lythrum maritimum</i>	-	-	-



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Turkish Name	Scientific Name	IUCN	BERN	Endemism
Hevhulma	<i>Lythrum salicaria</i>	LC	-	-
Çobançöresi	<i>Malva neglecta</i>	LC	-	-
Ebegümezi	<i>Malva sylvestris</i>	LC	-	-
Alman papatyası	<i>Matricaria chamomilla</i> var. <i>recutita</i>	-	-	-
Benli yonca	<i>Medicago arabica</i>	I.C	-	-
Kart yonca	<i>Medicago falcata</i>	Data Deficient (DD)	-	-
Bitçikotu	<i>Medicago lupulina</i>	I.C	-	-
Günük	<i>Medicago minima</i> var. <i>minima</i>	-	-	-
Paralık	<i>Medicago orbicularis</i>	LC	-	-
Kırkyonca	<i>Medicago polymorpha</i> var. <i>polymorpha</i>	-	-	-
Kırkyonca	<i>Medicago polymorpha</i> var. <i>vulgaris</i>	I.C	-	-
Yonca	<i>Medicago rigidula</i>	LC	-	-
Kaba yonca	<i>Medicago rigidula</i> var. <i>rigidula</i>	LC	-	-
Karayonca	<i>Medicago sativa</i> subsp. <i>sativa</i>	I.C	-	-
Ak taşyoncası	<i>Melilotus albus</i>	I.C	-	-
Kokulu yonca	<i>Melilotus officinalis</i>	LC	-	-
Oğulotu	<i>Melissa officinalis</i> subsp. <i>officinalis</i>	LC	-	-
Su nanesi	<i>Mentha aquatica</i>	I.C	-	-
Kıvırcık nane	<i>Mentha spicata</i> subsp. <i>condensata</i>	-	-	-
Eşek nanesi	<i>Mentha spicata</i> subsp. <i>spicata</i>	LC	-	-
Parşen	<i>Mercurialis annua</i>	-	-	-
Muşmula	<i>Mespilus germanica</i>	LC	-	-
Giyile	<i>Microthlaspi perfoliatum</i>	-	-	-
Asi balıkağzı	<i>Misopates orontium</i>	-	-	-
Dördüz otu	<i>Moenchia mantica</i>	-	-	-
Gavurbaşı	<i>Muscari armeniacum</i>	-	-	-
Morbaş	<i>Muscari comosum</i>	-	-	-
Arapüzümü	<i>Muscari neglectum</i>	-	-	-
Kardeş boncuğu	<i>Myosotis arvensis</i> subsp. <i>arvensis</i>	-	-	-
Hutlut gözü	<i>Myosotis laxa</i> subsp. <i>caespitosa</i>	-	-	-
Laz kuşgözü	<i>Myosotis lazica</i>	Near Threatened (NT)	-	-
Taş boncukotu	<i>Myosotis lithospermifolia</i>	-	-	-
Kuş gözü	<i>Myosotis ramosissima</i>	-	-	-
Yitik unutmabeni	<i>Myosotis stricta</i>	-	-	-
Mersin	<i>Myrtus communis</i> subsp. <i>communis</i>	LC	-	-
Su teresi	<i>Nasturtium officinale</i>	I.C	-	-
Göçmen hardal	<i>Neslia paniculata</i> subsp. <i>thracica</i>	-	-	-
Şam çörekotu	<i>Nigella damascena</i>	-	-	-



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Turkish Name	Scientific Name	IUCN	BERN	Endemism
Sarı nilüfer	<i>Nuphar lutea</i>	LC	-	-
Beyaz nilüfer	<i>Nymphaea alba</i>	LC	-	-
Deli maydanoz	<i>Oenanthe pimpinelloides</i>	LC	-	-
Demirdelen	<i>Orontis spatosa subsp. leiosperma</i>	-	-	-
Amasya şinearı	<i>Orosma bornmuelleri</i>	-	-	E
Yamaç emeği	<i>Orosma roussaei</i>	-	-	-
Emzik otu	<i>Orosma taurica var. taurica</i>	-	-	-
Arı salebi	<i>Ophrys aptera</i>	LC	-	-
Kedikulağı	<i>Ophrys mammosa subsp. mammosa</i>	LC	-	-
Tavşan salebi	<i>Ophrys sphegodes</i>	LC	-	E
Dildamak	<i>Orehis anatolica</i>	LC	-	-
Pirinççiçeği	<i>Orehis coriophora subsp. coriophora</i>	LC	-	-
Salep sümbülü	<i>Orehis laxiflora subsp. laxiflora</i>	LC	-	-
Çayır salebi	<i>Orehis palustris</i>	LC	-	-
Salep püskülü	<i>Orehis simia</i>	LC	-	-
Katranalacası	<i>Orehis tridentata</i>	LC	-	-
Kuş zenciri	<i>Origanum vulgare</i>	LC	-	-
Kara mercan	<i>Origanum vulgare subsp. hirtum</i>	-	-	-
İstanbul kekığı	<i>Origanum vulgare subsp. viridulum</i>	-	-	-
Kara kırıkk	<i>Origanum vulgare subsp. vulgare</i>	LC	-	-
Ak yıldız	<i>Ornithogalum alpiogenum</i>	-	-	E
Göze sasal	<i>Ornithogalum comatum</i>	-	-	-
Kırpı sasal	<i>Ornithogalum fimbriatum</i>	-	-	-
Dağ ak yıldızı	<i>Ornithogalum montanum</i>	-	-	-
Akbaldır	<i>Ornithogalum narbonneense</i>	-	-	-
Bayır yıldızı	<i>Ornithogalum orthophyllum</i>	-	-	-
Eşek susamı	<i>Ornithogalum pyrenaicum</i>	-	-	-
Sakareca	<i>Ornithogalum sigmaideum</i>	-	-	-
Salkım sakareca	<i>Ornithogalum sphaerocarpon</i>	-	-	-
Sunbala	<i>Ornithogalum umbellatum</i>	-	-	-
Engin yıldız	<i>Ornithogalum wiedemannii</i>	-	-	-
Kuş ayuğu	<i>Ornithopus compressus</i>	-	-	-
Kokulu süpürgeotu	<i>Orobanche caryophyllacea</i>	-	-	-
Deli yergöbeği	<i>Orobanche cermia</i>	-	-	-
Gös otu	<i>Orobanche minor</i>	-	-	-
Veremotu	<i>Orobanche nana</i>	-	-	-
Kazıkotu	<i>Orobanche oxyloba</i>	-	-	-
Narin canavarotu	<i>Orobanche ramosa</i>	-	-	-
Firek	<i>Oxyria carpinifolia</i>	LC	-	-
Morçak	<i>Oxyris alba</i>	-	-	-
Ekşi yonca	<i>Oxalis acetosella</i>	-	-	-



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Sarı ekşiyonea	<i>Oxalis corniculata</i>	-	-	-
Karaçalı	<i>Palurus spina-christi</i>	-	-	-
Köpekyâğı	<i>Papaver dubium</i>	-	-	-
Zemberlik	<i>Papaver gracile</i>	-	-	-
Gelincik	<i>Papaver rhoeas</i>	I.C	-	-
Üçdilolu	<i>Parnassia latifolia subsp. latifolia</i>	-	-	-
Duyar fesleğeni	<i>Parietaria judaica</i>	-	-	-
Yalan dârsı	<i>Paspalum distichum</i>	LC	-	-
Şeker havucu	<i>Pastinaca sativa subsp. urens</i>	-	-	-
Çarıplerurganı	<i>Periploca graeca var. graeca</i>	-	-	-
Kabalak	<i>Petasites hybridus</i>	LC	-	-
Zarkaranfil	<i>Petrorhagia dubia</i>	-	-	-
Şimal zarçiçeği	<i>Petrorhagia saxifraga</i>	-	-	-
Topuzlu kanyaş	<i>Phalaris paradoxa</i>	LC	-	-
Akçakesme	<i>Phillyrea latifolia</i>	LC	-	-
Kumul itkuyruğu	<i>Phleum bertolonii</i>	-	-	-
Meşe itkuyruğu	<i>Phleum exaratum subsp. exaratum</i>	-	-	-
Tel itkuyruğu	<i>Phleum subulatum subsp. subulatum</i>	-	-	-
Kamış	<i>Phragmites australis</i>	LC	-	-
Güvey feneri	<i>Physalis alkekengi</i>	LC	-	-
Şekereiboyası	<i>Phytolacca americana</i>	-	-	-
Daz tımakotu	<i>Pilosella piloselloides subsp. hungarica</i>	-	-	-
Kulak tımakotu	<i>Pilosella x anrioides</i>	-	-	-
Çöğre	<i>Pistacia palaestina</i>	-	-	-
Ateşy aprağı	<i>Plantago afra</i>	I.C	-	-
Boğaotu	<i>Plantago coronopus subsp. coronopus</i>	-	-	-
Kırkdamarotu	<i>Plantago lagopus</i>	-	-	-
Sinirotu	<i>Plantago major subsp. major</i>	I.C	-	-
Guguk salebi	<i>Platanthera bifolia</i>	I.C	-	-
Çarpık salep	<i>Platanthera chlorantha</i>	LC	-	-
Dar salkımotu	<i>Poa angustifolia</i>	LC	-	-
Salkımotu	<i>Poa annua</i>	I.C	-	-
Yumrulu salkım	<i>Poa bulbosa</i>	-	-	-
Çayır salkımotu	<i>Poa pratensis</i>	LC	-	-
Kaba salkımotu	<i>Poa trivialis</i>	-	-	-
Yılan yoneası	<i>Polygala anatolica</i>	-	-	-
Sütotu	<i>Polygala supina</i>	-	-	-
Köy otu	<i>Polygonum aviculare</i>	LC	-	-
Tırşon	<i>Polygonum lapathifolium</i>	LC	-	-
Söğütotu	<i>Polygonum persicaria</i>	I.C	-	-
Kızıl pilinç	<i>Polystichum seuferum</i>	LC	-	-



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Turkish Name	Scientific Name	IUCN	BERN	Endemism
Kavak	<i>Populus alba</i>	LC	-	-
Akkavak	<i>Populus alba var. alba</i>	LC	-	-
Titrek kavak	<i>Populus tremula subsp. tremula</i>	LC	-	-
Suotu	<i>Potamogeton natans</i>	LC	-	-
Yıldız parmakotu	<i>Potentilla astracantha subsp. astracantha</i>	-	-	-
Sivri parmakotu	<i>Potentilla calabra</i>	-	-	-
Eğri parmakotu	<i>Potentilla inclinata</i>	-	-	-
Cüce parmakotu	<i>Potentilla micrantha</i>	-	-	-
Su parmakotu	<i>Potentilla recta</i>	-	-	-
Reşatnotu	<i>Potentilla reptans</i>	-	-	-
Evvelbahar çiçeği	<i>Prunella acutis subsp. rubra</i>	-	-	-
Bodur fesleğen	<i>Prunella laciniata</i>	-	-	-
Gelinciklemeotu	<i>Prunella vulgaris</i>	LC	-	-
Yunus eriği	<i>Prunus divaricata var. divaricata</i>	-	-	-
Çakal eriği	<i>Prunus spinosa</i>	LC	-	-
Frik	<i>Prunus x domestica</i>	-	-	-
Eğrelti	<i>Pteridium aquilinum</i>	LC	-	-
Kaba tuzçimi	<i>Puccinellia gigantica</i>	-	-	-
Yaraotu	<i>Pulicaria dysenterica subsp. dysenterica</i>	-	-	-
Ak yaraotu	<i>Pulicaria vulgaris</i>	LC	-	-
Sarıberdi	<i>Pyrus flavidus var. flavidus</i>	LC	-	-
Ateş dikeni	<i>Pyracantha coccinea</i>	-	-	-
Bey armudu	<i>Pyrus communis subsp. caucasica</i>	-	-	-
Bey armudu	<i>Pyrus communis subsp. communis</i>	-	-	-
Ahlat	<i>Pyrus elaeagnifolia subsp. elaeagnifolia</i>	-	-	-
Saçlı meşe	<i>Quercus cerris</i>	LC	-	-
Macar meşesi	<i>Quercus frainetto</i>	LC	-	-
Istiranea meşesi	<i>Quercus hartwissiana</i>	DD	-	-
Prnal meşesi	<i>Quercus ilex</i>	LC	-	-
Sapsız meşe	<i>Quercus petraea</i>	LC	-	-
Ballık meşesi	<i>Quercus petraea subsp. ibetica</i>	-	-	-
Tüylü meşe	<i>Quercus pubescens subsp. pubescens</i>	LC	-	-
Saplı meşe	<i>Quercus robur subsp. robur</i>	LC	-	-
Mustafaçiçeği	<i>Ranunculus arvensis</i>	-	-	-
Kâğıthane çiçeği	<i>Ranunculus constantinopolitanus</i>	-	-	-
Arpacısalıbi	<i>Ranunculus ficaria subsp. ficariaformis</i>	-	-	-
Narin yağçiçeği	<i>Ranunculus gracilis</i>	-	-	-
Kutsaldefne	<i>Ranunculus muricatus</i>	-	-	-
Çiçeğözer	<i>Ranunculus neapolitanus</i>	-	-	-
Çamur yağötu	<i>Ranunculus ophioglossifolius</i>	LC	-	-
Koyunüçgülü	<i>Ranunculus paludosus</i>	-	-	-



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Turkish Name	Scientific Name	IUCN	BERN	Endemism
Tiktakdana	<i>Ranunculus repens</i>	LC	-	-
Batak düğünçiçeği	<i>Ranunculus sceleratus</i>	LC	-	-
Eşek turpu	<i>Raphanus raphanistrum</i>	LC	-	-
Kedi turpu	<i>Rapistrum rugosum</i>	-	-	-
Muhabetçiçeği	<i>Reseda lutea</i>	-	-	-
Çatlakçanak	<i>Rhagadiolus stellatus</i>	-	-	-
Kumar	<i>Rhododendron ponticum</i>	-	-	-
Fil burnu	<i>Rhynchocorys elephas subsp. elephas</i>	-	-	-
Hindy ağı	<i>Ricinus communis</i>	-	-	-
Çakandura	<i>Rorippa sylvestris subsp. sylvestris</i>	LC	-	-
Kuşburnu	<i>Rosa canina</i>	LC	-	-
Gagaotu	<i>Rostraria cristata var. glabriflora</i>	-	-	-
Yabani kökboya	<i>Rubia peregrina</i>	-	-	-
Çobankösteği	<i>Rubus canescens var. canescens</i>	-	-	-
Tüntürük	<i>Rubus hirtus</i>	-	-	-
Böğürtlen	<i>Rubus saxatilis</i>	-	-	-
Kuzukulağı	<i>Rumex acetosella</i>	LC	-	-
Ekşikulak	<i>Rumex conglomeratus</i>	LC	-	-
Labada	<i>Rumex crispus</i>	LC	-	-
Kökükızıl	<i>Rumex obtusifolius subsp. subalpinus</i>	-	-	-
Tosbağakulağı	<i>Rumex palustris</i>	LC	-	-
Ekşilik	<i>Rumex pulcher</i>	LC	-	-
Tavşanmemesi	<i>Ruscus aculeatus</i>	LC	-	-
Atdili	<i>Ruscus hypoglossum</i>	I.C	-	-
Suoku	<i>Sagittaria sagittifolia</i>	I.C	-	-
Aksöğüt	<i>Salix alba</i>	LC	-	-
Ak söğüt	<i>Salix alba subsp. alba</i>	LC	-	-
Keçi söğüdü	<i>Salix caprea</i>	I.C	-	-
Kum döngesi	<i>Salsola tragus</i>	-	-	-
Ekin şalbası	<i>Salvia amplexicaulis</i>	-	-	-
Dolma yaprağı	<i>Salvia forskahlei</i>	-	-	-
Çanak şalbası	<i>Salvia pinnata</i>	-	-	-
Paskulak	<i>Salvia selarea</i>	LC	-	-
Şalba	<i>Salvia tomentosa</i>	LC	-	-
Elmakiği	<i>Salvia verbenaca</i>	-	-	-
Dadrak	<i>Salvia verticillata subsp. verticillata</i>	-	-	-
Fatmanaotu	<i>Salvia virgata</i>	-	-	-
Zarif şalba	<i>Salvia viridis</i>	-	-	-
Ağaç mürver	<i>Sambucus nigra</i>	LC	-	-
Sanikel	<i>Sanicula europaea</i>	I.C	-	-
Çibriska	<i>Satureja hortensis</i>	DD	-	-



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Turkish Name	Scientific Name	IUCN	BERN	Endemism
Sarı taşkıran	<i>Saxifraga cymbalaria</i>	-	-	-
Benli taşkıran	<i>Saxifraga rotundifolia</i>	-	-	-
Mor uyuzotu	<i>Scabiosa utropurpurea</i>	-	-	-
Sarı uyuzotu	<i>Scabiosa columbaria</i>	-	-	-
Sarı uyuzotu	<i>Scabiosa columbaria</i> subsp. <i>columbaria</i> var <i>columbaria</i>	-	-	-
Sarı uyuzotu	<i>Scabiosa columbaria</i> subsp. <i>ochroleuca</i> var. <i>wehiana</i>	-	-	-
Zühretarağı	<i>Scandix pecten-veneris</i>	-	-	-
Kanton	<i>Schenkia spicata</i>	-	-	-
Göl semercotu	<i>Schoenoplectus litoralis</i> subsp. <i>litoralis</i>	LC	-	-
Orman sümbülü	<i>Scilla bifolia</i>	LC	-	-
Boncuk sümbülü	<i>Scilla bithynica</i>	-	-	-
Şevketibostan	<i>Scolymus hispanicus</i> subsp. <i>hispanicus</i>	-	-	-
İt sıraçaotu	<i>Scrophularia canina</i> subsp. <i>bicolor</i>	-	-	-
Elköpürten	<i>Scrophularia scapoletii</i> var. <i>scapoletii</i>	-	-	-
Sukesereotu	<i>Scrophularia umbrosa</i>	LC	-	-
Akkaside	<i>Scutellaria albida</i>	-	-	-
Akkaside	<i>Scutellaria albida</i> subsp. <i>albida</i>	-	-	-
Su kasidesi	<i>Scutellaria galericulata</i>	LC	-	-
Çavdar	<i>Secale cereale</i> var. <i>cereale</i>	NA	-	-
Kanca köriği	<i>Securigera securidaca</i>	-	-	-
Çobankavurgası	<i>Sedum album</i>	-	-	-
Koy unömece	<i>Sedum pallidum</i>	-	-	-
Tarla kanaryaotu	<i>Senecio aquaticus</i> subsp. <i>erraticus</i>	-	-	-
kanaryaotu	<i>Senecio vernalis</i>	-	-	-
Taşakırlotu	<i>Senecio vulgaris</i>	-	-	-
Ak bozkıyumağı	<i>Sesleria alba</i>	LC	-	-
Sıçansaçı	<i>Setaria glauca</i>	-	-	-
Amavut danısı	<i>Setaria verticillata</i> var. <i>ambigua</i>	-	-	-
Yeşil sıçansaçı	<i>Setaria viridis</i>	-	-	-
Gökörenotu	<i>Sherardia arvensis</i>	-	-	-
Karaçay	<i>Sideritis montana</i> subsp. <i>montana</i>	-	-	-
Kanlıbasıra otu	<i>Silene compacta</i>	-	-	-
Sivri nakıl	<i>Silene conica</i>	-	-	-
Salkım nakıl	<i>Silene dichotoma</i> subsp. <i>racemosa</i>	-	-	-
Serçeçiçeği	<i>Silene gallica</i>	-	-	-
Ecibücü	<i>Silene vulgaris</i>	LC	-	-
Ecibücü	<i>Silene vulgaris</i> var. <i>macrocarpa</i>	-	-	-
Ecibücü	<i>Silene vulgaris</i> var. <i>vulgaris</i>	LC	-	-
Dev edikeni	<i>Silybum marianum</i> subsp. <i>marianum</i>	LC	-	-



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Turkish Name	Scientific Name	IUCN	BERN	Endemism
Ergelen otu	<i>Sisymbrium altissimum</i>	-	-	-
Ergelen hardalı	<i>Sisymbrium officinale</i>	LC	-	-
Tarla bülbülü	<i>Sisymbrium orientale</i>	-	-	-
Dikemece	<i>Smilax excelsa</i>	-	-	-
Fecavlusu	<i>Solanum decipiens</i>	-	-	-
Sofur	<i>Solanum dulcamara</i>	LC	-	-
Altınbaşak çiçeği	<i>Solidago virgaurea subsp. virgaurea</i>	-	-	-
Gevirtlek	<i>Sonchus asper subsp. glaucescens</i>	-	-	-
Kuzugövreği	<i>Sonchus oleraceus</i>	-	-	-
Acımeyan	<i>Sophora alopecuroides var. alopecuroides</i>	-	-	-
Çelepen	<i>Sophora janthina</i>	-	-	-
Ekim süpürgesi	<i>Sorghum halepense var. halepense</i>	-	-	-
Katırtunağı	<i>Spartium junceum</i>	-	-	-
Remilotu	<i>Spergularia rubra</i>	-	-	-
İnce salebi	<i>Spiranthes spiralis</i>	LC	-	-
Hacıosman otu	<i>Stachys annua subsp. annua var. lycanica</i>	-	-	-
Boz karabaş	<i>Stachys byzantina</i>	-	-	-
Yağlıkara	<i>Stachys cretica subsp. anatolica</i>	-	-	E
Kıl karabaş	<i>Stachys spidiota</i>	-	-	-
Ham ısırgan	<i>Stachys sylvatica</i>	-	-	-
Kestere	<i>Stachys thurkei</i>	-	-	-
Ağızlık çalısı	<i>Staphylea pinnata</i>	LC	-	-
Urgançık	<i>Stellaria holostea</i>	-	-	-
Kuşotu	<i>Stellaria media</i>	LC	-	-
Ayıfunduğu	<i>Styrax officinalis</i>	LC	-	-
Gezik	<i>Tamarix tetrandra</i>	LC	-	-
Beyaz papatya	<i>Tanacetum parthenium</i>	LC	-	-
Dişlek pireotu	<i>Tanacetum poterifolium</i>	-	-	-
Karaağaç	<i>Taraxacum minimum</i>	-	-	-
Kısımahmut	<i>Teucrium chamaedrys</i>	LC	-	-
Kısımahmut	<i>Teucrium chamaedrys subsp. chamaedrys</i>	LC	-	-
İspir sıcakotu	<i>Teucrium chamaedrys subsp. sypriense</i>	-	-	-
Acıyaşan	<i>Teucrium polium</i>	-	-	-
Çayır sedefi	<i>Thalictrum lucidum</i>	-	-	-
Ekim dağarcığı	<i>Thlaspi arvense</i>	-	-	-
Aş kekiği	<i>Thymus longicaulis subsp. longicaulis</i>	-	-	-
Dereikotu	<i>Torilis arvensis subsp. arvensis</i>	-	-	-
Şeytanhavucu	<i>Torilis arvensis subsp. neglecta</i>	-	-	-
Mor dereikotu	<i>Torilis arvensis subsp. purpurea</i>	-	-	-
Boneklu dereikotu	<i>Torilis nodosa</i>	-	-	-
Kaldirik	<i>Trachystemon orientalis</i>	-	-	-



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Turkish Name	Scientific Name	IUCN	BERN	Endemism
Helevan	<i>Tragopogon porrifolius</i> subsp. <i>longirostris</i>	-	-	-
Sarı salsifin	<i>Tragopogon pratensis</i> subsp. <i>orientalis</i>	-	-	-
Su kestanesi	<i>Trapa natans</i>	LC	ANNEX-I	-
Nefel	<i>Trifolium angustifolium</i>	I.C	-	-
Üç gül	<i>Trifolium arvense</i>	LC	-	-
Tavşanayağı	<i>Trifolium arvense</i> var. <i>arvense</i>	LC	-	-
Üçgül	<i>Trifolium campestre</i>	-	-	-
Çilek üçgülü	<i>Trifolium fragiferum</i> var. <i>pulchellum</i>	-	-	-
Yumak yonca	<i>Trifolium globosum</i>	-	-	-
Deli yonca	<i>Trifolium hirtum</i>	-	-	-
Melez üçgül	<i>Trifolium hybridum</i> var. <i>hybridum</i>	I.C	-	-
Köse yonca	<i>Trifolium medium</i> var. <i>erivocalycinum</i>	-	-	-
Yel üçgülü	<i>Trifolium nigrescens</i> subsp. <i>petricavii</i>	-	-	-
Çayır yoncası	<i>Trifolium phleoides</i>	-	-	-
Çayır üçgülü	<i>Trifolium pratense</i>	I.C	-	-
Çayır üçgülü	<i>Trifolium pratense</i> var. <i>pratense</i>	LC	-	-
Çayır üçgülü	<i>Trifolium pratense</i> var. <i>sativum</i>	-	-	-
Anadolu üçgülü	<i>Trifolium resupinatum</i> var. <i>resupinatum</i>	LC	-	-
Hıyar dücüğü	<i>Trifolium scabrum</i>	I.C	-	-
Deli dirfil	<i>Trifolium uniflorum</i> subsp. <i>uniflorum</i>	LC	-	-
Ekmeklik buğday	<i>Triticum aestivum</i>	-	-	-
Öksürükotu	<i>Tussilago farfara</i>	LC	-	-
Saz	<i>Typha angustifolia</i>	I.C	-	-
Şeytanmumu	<i>Typha domingensis</i>	LC	-	-
Cil	<i>Typha latifolia</i>	LC	-	-
Dağ karaağacı	<i>Ulmus glabra</i>	DD	-	-
Hereai karaağaç	<i>Ulmus laevis</i>	DD	-	-
Ova karaağacı	<i>Ulmus minor</i>	DD	-	-
Acıyemlik	<i>Uraspermum picroides</i>	-	-	-
Durgun sumiğferi	<i>Utricularia australis</i>	I.C	-	-
Likarba	<i>Vaccinium arctostaphylos</i>	DD	ANNEX-I	-
Koca sığırkuyruğu	<i>Verbascum bithyemicum</i>	-	-	E
Tutan sığırkuyruğu	<i>Verbascum blattaria</i>	-	-	-
Yünlü sığırkuyruğu	<i>Verbascum lasianthum</i>	-	-	-
Arsız sığırkuyruğu	<i>Verbascum pyramidatum</i>	-	-	-
Sülün sığırkuyruğu	<i>Verbascum xanthophoeniceum</i>	-	-	-
Mine çiçeği	<i>Verbena officinalis</i>	LC	-	-
Sügedemesi	<i>Veronica anagallis-aquatica</i>	LC	-	-
Ekin mavışı	<i>Veronica arvensis</i>	-	-	-
Mavişot	<i>Veronica hecubunga</i>	LC	-	-



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Turkish Name	Scientific Name	IUCN	BERN	Endemism
Canean	<i>Veronica chamaedrys</i>	-	-	-
Venüsçiçeği	<i>Veronica cymbalaria</i>	-	-	-
Tel mayış	<i>Veronica filiformis</i>	-	-	-
Bahamavısı	<i>Veronica hederifolia</i>	-	-	-
Devesabunu	<i>Veronica miltifida</i>	-	-	-
Tarak mayışı	<i>Veronica pectinata</i> var. <i>pectinata</i>	-	-	-
Cırcamuk	<i>Veronica persica</i>	-	-	-
Güzel nane	<i>Veronica serpyllifolia</i>	LC	-	-
Diri fiğ	<i>Vicia cassubica</i>	LC	-	-
Yabani fiğ	<i>Vicia cracca</i>	-	-	-
Gülçine	<i>Vicia cracca</i> subsp. <i>cracca</i>	LC	-	-
Kuş fiği	<i>Vicia cracca</i> subsp. <i>gerardii</i>	-	-	-
Meşe fiği	<i>Vicia cracca</i> subsp. <i>stemophylla</i>	-	-	-
Ege baklası	<i>Vicia cuspidata</i>	LC	-	-
Çamfiği	<i>Vicia lathyroides</i>	LC	-	-
San bakla	<i>Vicia hutea</i> var. <i>hirta</i>	-	-	-
Telbakla	<i>Vicia meyeri</i>	-	-	-
Ekin fiği	<i>Vicia sativa</i> subsp. <i>mesa</i> var. <i>cordata</i>	-	-	-
Ekin fiği	<i>Vicia sativa</i> subsp. <i>nigra</i> var. <i>nigra</i>	LC	-	-
Eşek gürtlü	<i>Vicia sativa</i> subsp. <i>nigra</i> var. <i>segetalis</i>	LC	-	-
Kırk bakla	<i>Vicia tetrasperma</i>	-	-	-
Pervane çiçeği	<i>Vicia major</i> subsp. <i>hirsuta</i>	-	-	-
Meşe menekşesi	<i>Viola alba</i> subsp. <i>delphinardii</i>	-	-	-
Yabani menekşe	<i>Viola kitalbeliana</i>	-	-	-
Kokulu menekşe	<i>Viola odorata</i>	LC	-	-
Çayır menekşesi	<i>Viola sicheana</i>	-	-	-
Hercai menekşe	<i>Viola tricolor</i>	LC	-	-
Kum kirpikliçimi	<i>Vulpia fasciculata</i>	-	-	-
Arsız kirpikliçim	<i>Vulpia myuros</i>	-	-	-
Pıtrak	<i>Xanthium spinosum</i>	-	-	-
Deli kağıtçiçeği	<i>Xeranthemum cylindraceum</i>	-	-	-

Fauna Species (Amphibians)

Turkish Name	Scientific Name	IUCN	BERN	Endemism
Sigilli Kurbağa	<i>Bufo bufo</i>	LC	ANNEX-III	-
Ağaç Kurbağası	<i>Hyla orientalis</i>	LC	ANNEX-II	-
Şeritli Karadeniz Semenderi	<i>Ommatotriton ophryticus</i>	NT	ANNEX-III	-
Ova Kurbağası	<i>Pelophylax ridibundus</i>	LC	ANNEX-III	-

Fauna Species (Reptiles)



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Turkish Name	Scientific Name	IUCN	BERN	Endemism	MoAF
Yılan kertenkele	<i>Anguis fragilis</i>	LC	ANNEX-III	-	+
Avusturya yılanı	<i>Coronella austriaca</i>	LC	ANNEX-II	-	+
Trabzon kertenkelesi	<i>Darevskia rudis</i>	LC	ANNEX-III	-	+
Hazer yılanı	<i>Dolichophis caspius</i>	LC	ANNEX-III	-	+
Benekli Kaplumbağa	<i>Emys orbicularis</i>	NT	ANNEX-II	-	+
Yeşil kertenkele	<i>Lacerta viridis</i>	LC	ANNEX-II	-	+
Çizgili Kaplumbağa	<i>Mauremys rivulata</i>	LC	ANNEX-III	-	+
Şeritli engerek	<i>Montivipera saxatima</i>	LC	ANNEX-II	-	+
Yarı sucul yılan	<i>Natrix natrix</i>	LC	ANNEX-III	-	+
Su yılanı	<i>Natrix tessellata</i>	LC	ANNEX-II	-	+
Duvar kertenkelesi	<i>Podarcis muralis</i>	LC	ANNEX-II	-	+
Oluklu kertenkele	<i>Pseudopus apodus</i>	LC	ANNEX-II	-	+
Tosbağa	<i>Testudo graeca</i>	Vulnerable (VU)	ANNEX-II	-	+
Fskulap yılanı	<i>Zamenis longissimus</i>	LC	ANNEX-II	-	+

Fauna Species (Mammals)

Turkish Name	Scientific Name	IUCN	BERN	MoAF	Endemism	MAKK
Sanboyunlu Ormanfareсі	<i>Apodemus flavicollis</i>	LC	-	-	-	-
Dağ Fareсі	<i>Apodemus sylvaticus</i>	LC	-	-	-	-
Çakal	<i>Canis aureus</i>	LC	-	-	-	ANNEX-2
Karaca	<i>Capreolus capreolus</i>	LC	ANNEX-III	+	-	-
Küçük Beyazdıřlı Böcekçil	<i>Crocidura suaveolens</i>	LC	ANNEX-III	+	-	-
Kirpi	<i>Erinaceus concolor</i>	LC	-	+	-	-
Yaban Kedısı	<i>Felis silvestris</i>	LC	ANNEX-II	+	-	-
Yabani Tavřan	<i>Lepus europaeus</i>	LC	ANNEX-III	-	-	ANNEX-2
Susamuru	<i>Lutra lutra</i>	NT	ANNEX-II	+	-	-
Kaya Sansarı	<i>Martes foina</i>	LC	ANNEX-III	-	-	ANNEX-1
Porsuk	<i>Meles meles</i>	LC	ANNEX-III	-	-	ANNEX-1
Ev faresi	<i>Mus domesticus</i>	LC	-	-	-	-
Gelincik	<i>Mustela mivalis</i>	LC	ANNEX-III	-	-	ANNEX-1



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Fauna Species (Birds)

Turkish Name	Scientific Name	Turkish Name	Scientific Name	IUCN	BERN	MoAF
Atmaca	<i>Accipiter nisus</i>	LC	ANNEX-III	1	-	-
Saz Kamışçını	<i>Acrocephalus scirpaceus</i>	LC	ANNEX-III	+	-	-
Dere düdükçünü	<i>Actitis hypoleucos</i>	LC	ANNEX-II	+	-	-
Uzunkuynuklu baştankara	<i>Aegithalos caedatus</i>	LC	ANNEX-III	+	-	-
Hüthüt Toygarı	<i>Alaemon alaudipes</i>	LC	ANNEX-III	1	-	-
Ebabil	<i>Apus apus</i>	LC	ANNEX-III	+	-	-
Ak Karınlı Ebabil	<i>Apus melba</i>	LC	ANNEX-II	+	-	-
Büyük akbalıkkıçıl	<i>Ardea alba</i>	LC	ANNEX-II	+	-	-
Küçük balıkkıçıl	<i>Ardea cinerea</i>	LC	ANNEX-III	-	-	ANNEX-1
Kukumay	<i>Athene noctua</i>	LC	ANNEX-II	1	-	-
Puhu	<i>Bubo bubo</i>	LC	ANNEX-II	+	-	-
Şahin	<i>Buteo buteo</i>	LC	ANNEX-III	+	-	-
Kızıl şahin	<i>Buteo rufinus</i>	LC	ANNEX-III	1	-	-
Küçük kumkuşu	<i>Calidris minuta</i>	LC	ANNEX-II	+	-	-
Çobanaldatan	<i>Caprimulgus europaeus</i>	LC	ANNEX-II	+	-	-
Saka	<i>Circus cyaneus</i>	LC	ANNEX-II	+	-	-
Çitre	<i>Carpodacus erythrinus</i>	LC	ANNEX-II	1	-	-
Boz Serçe	<i>Carpodacus brachydactyla</i>	LC	ANNEX-III	+	-	-
Flora	<i>Chloris chloris</i>	LC	ANNEX-II	1	-	-
Lev ANNEX	<i>Ciconia ciconia</i>	LC	ANNEX-II	+	-	-
Kocabaş	<i>Coccyzus erythrophthalmus</i>	LC	ANNEX-II	+	-	-
Kaya güvercini	<i>Columba livia</i>	LC	ANNEX-III	-	-	ANNEX-2
Gökçe güvercin	<i>Columba oenas</i>	LC	ANNEX-III	-	-	ANNEX-1
Kuzgun	<i>Corvus corax</i>	LC	ANNEX-III	-	-	ANNEX-1
Leş kargası	<i>Corvus cornix</i>	LC	-	-	-	-
ANNEXin kargası	<i>Corvus frugilegus</i>	LC	-	-	-	ANNEX-2
Küçük karga	<i>Corvus monedula</i>	LC	-	-	-	-
Guguk	<i>Cuculus canorus</i>	LC	ANNEX-III	1	-	-
Ev kırlangıcı	<i>Delichon urbicum</i>	LC	ANNEX-II	+	-	-



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Turkish Name	Scientific Name	Turkish Name	Scientific Name	IUCN	BERN	MoAF
Orman alaca ağaçkakanı	<i>Dendrocopos major</i>	I.C	ANNEX-II	1	-	-
Alaca Ağaçkakan	<i>Dendrocopos syriacus</i>	I.C	ANNEX-II	1	-	-
Küçük ağaçkakan	<i>Dryobates minor</i>	LC	ANNEX-II	1	-	-
Kirazkuşu	<i>Emberiza hortulana</i>	LC	ANNEX-III	-	-	ANNEX-1
Kızılgerdan	<i>Erithacus rubecula</i>	LC	ANNEX-II	+	-	-
Doğan	<i>Falco peregrinus</i>	LC	ANNEX-II	+	-	-
Kerkenez	<i>Falco tinnunculus</i>	LC	ANNEX-II	1	-	-
İspinoz	<i>Fringilla coelebs</i>	LC	ANNEX-III	-	-	ANNEX-1
Dağ ispinozu	<i>Fringilla montifringilla</i>	I.C	ANNEX-III	-	-	ANNEX-1
Alakarga	<i>Garrulus glandarius</i>	I.C	-	-	-	ANNEX-2
Kır kırlangıcı	<i>Hirundo rustica</i>	I.C	ANNEX-II	+	-	-
Kızılsırtlı örümcekuşu	<i>Lanius collurio</i>	LC	ANNEX-II	-	-	ANNEX-1
Van Gölü martı	<i>Larus michahellis</i>	LC	ANNEX-III	-	-	ANNEX-1
Oman Toygarı	<i>Lullula arborea</i>	LC	ANNEX-III	-	-	ANNEX-1
BenANNEXli hülbul	<i>Luscinia luscinia</i>	LC	ANNEX-II	+	-	-
Bulbul	<i>Luscinia megarhynchos</i>	I.C	ANNEX-II	+	-	-
Ak Kuyruksallayan	<i>Motacilla alba</i>	I.C	ANNEX-II	1	-	-
Dağ kuyruksallayanı	<i>Motacilla cinerea</i>	LC	ANNEX-II	1	-	-
BenANNEXli sinANNEXkapan	<i>Muscicapa striata</i>	LC	ANNEX-II	+	-	-
Sarıasma	<i>Oriolus oriolus</i>	LC	ANNEX-II	+	-	-
Mavi Baştankara	<i>Parus caeruleus</i>	I.C	ANNEX-II	+	-	-
Büyük Baştankara	<i>Parus major</i>	LC	ANNEX-II	1	-	-
Serçe	<i>Passer domesticus</i>	LC	-	-	-	ANNEX-2
Söğüt serçesi	<i>Passer hispaniolensis</i>	LC	ANNEX-III	-	-	ANNEX-1
Ağaç serçesi	<i>Passer montanus</i>	I.C	ANNEX-III	-	-	ANNEX-1
Kara kızılkuşruk	<i>Phoenicurus ochruros</i>	LC	ANNEX-II	1	-	-
Çıvgın	<i>Phylloscopus collybita</i>	LC	ANNEX-III	1	-	-
Soğutbulbulu	<i>Phylloscopus trochilus</i>	LC	ANNEX-III	1	-	-



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Turkish Name	Scientific Name	Turkish Name	Scientific Name	IUCN	BERN	MoAF
Saksağan	<i>Pica pica</i>	LC	-	-	-	ANNEX-2
Yeşil Ağačkakan	<i>Picus viridis</i>	LC	ANNEX-II	+	-	-
Küçük iskete	<i>Serinus serinus</i>	LC	ANNEX-II	+	-	-
Sıvacı kuşu	<i>Sitta europaea</i>	LC	ANNEX-II	+	-	-
Kumru	<i>Streptopelia decapcto</i>	LC	ANNEX-III	-	-	ANNEX-1
Uveyik	<i>Streptopelia nurnir</i>	VU	ANNEX-III	-	-	ANNEX-2
Sığırcık	<i>Sturnus vulgaris</i>	LC	-	-	-	ANNEX-1
Karabağlı ötleğen	<i>Sylvia atricapilla</i>	LC	ANNEX-II	+	-	-
Boz ötleğen	<i>Sylvia borin</i>	LC	ANNEX-II	+	-	-
Çitkuşu	<i>Troglodytes troglodytes</i>	LC	ANNEX-II	+	-	-
Karatavuk	<i>Turdus merula</i>	LC	ANNEX-III	-	-	ANNEX-2
Öter ardıç	<i>Turdus philomelos</i>	LC	ANNEX-III	-	-	ANNEX-2
İlbik	<i>Upupa epops</i>	LC	ANNEX-II	+	-	-



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ANNEX-7 Grievance Close-Out Form



AKÇAKOCA MUNICIPALITY

Project Code:

Akçakoca Bicycle Roads Project

GRIEVANCE CLOSE OUT FORM

Reference No:

1. DETERMINATION OF CORRECTIVE ACTION

1

2

3

4

5

Responsible Departments

2. CLOSE OUT THE GRIEVANCE

This section will be filled and signed by the Complainant in case the complaint stated in the "Grievance Registration Form" is resolved.

Date:

**Name Surname /
Signature of the Person
Closing the Complaint**

**Name Surname / Signature of
Complainant**

.....



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ANNEX-8 Grievance Register Table

No	Complaint Register Number	How Complaint is Received (Grievance Form, Community Meeting, Telephone)	Level of Grievance (Municipality/Utility Level, Regional)	Date of Complaint Received	Location of Complaint Received	Name of Person Receiving Grievance	Land Parcel # (If complaint is related to land)	Complainant Information					Project Component Related to Complaint	Grievance Category (expropriation/land acquisition related, environmental issues, damages to structures etc.)	Complaint Summary	Grievance Status (open, closed or pending)	Action Taken				Supporting Documents for Grievance Closeout (bank receipt for compensation, grievance closure protocol)
								Name/Surname	ID Number	Telephone/ email	Village-District	Gender					Responsible Person/Department	Action Planned	Due Date of the Addressing the Grievance	Date of Action Taken	
1																					



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ANNEX-9 Consultation Form

	AKÇAKOCA MUNICIPALITY Project Code: ... Akçakoca Bicycle Roads Project			
	CONSULTATION FORM			
Person Filling out the Form:	Date and time:			
Meeting Agenda:	Consultation Registration No:			
1. CONSULTATION INFORMATION				
Interviewed Institution:	Communication Type			
Name-Surname of the Interviewee:	Phone / Hotline <input type="checkbox"/>			
Phone:	Face to Face Meeting <input type="checkbox"/>			
Address:	Website / E-mail <input type="checkbox"/>			
Email:	Other (Explain) <input type="checkbox"/>			
Stakeholder Type				
Public Institution <input type="checkbox"/>	Project Affected People	Private Entity <input type="checkbox"/>	Professional Chamber <input type="checkbox"/>	NGO <input type="checkbox"/>
Interest Groups <input type="checkbox"/>	Industry Associations	Labor Unions <input type="checkbox"/>	Media <input type="checkbox"/>	University <input type="checkbox"/>
2. CONSULTATION DETAILS				
Questions about the Project:				
Project concerns/feedback:				
Responses to the views expressed above:				
<i>Recorded by</i> <i>Name-Last Name Signature</i>	<i>Complainant</i> <i>Name-Last Name Signature</i>			



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ANNEX-10 Chance Find Procedure

Akçakoca Municipality

Bicycle Roads Project

Chance Find Procedure

1 Scope

This Chance Finds Procedure (CFP) will be implemented for the Akçakoca Bicycle Roads Project in order to manage any chance finds that may be encountered during the construction activities. The purpose of the CFP document is to:

- outline the applicable legislation and standards relevant to this procedure;
- define roles and responsibilities;
- define project commitments, operational procedures, training requirements and guidance relevant to this procedure; and
- define monitoring and reporting procedures.

Although there are no known archaeological sites or remains within the project area, it is considered that there may be a potential to encounter archaeological findings during the construction of the project. Activities which have high potential to lead to discover or adversely affect the archeological resources are:

- topsoil stripping
- excavation and earthworks

This CFP is prepared in order to provide information to the contractors and employees regarding the actions to be taken in case of an archaeological chance find discovery

2 Legislation and Standards

Legislation and standards that apply to the project comprise the following:

- World Bank Operational Policy (OP 4.11) Physical Cultural Resources
- applicable Turkish laws and national standards
- other commitments to and requirements of Turkish government authorities
- other industry guidelines with which the project has committed to comply

In Turkey, movable and immovable cultural and natural assets are protected and preserved by the Law on Preservation of Cultural and Natural Assets (Law No. 2863) published in the Official Gazette dated 23.07.1983 and numbered 18113. Law 2863 establishes legal protection for the following:

- all natural assets and immovable cultural assets constructed up until the end of the 19th century.
- any immovable cultural asset from after the end of the 19th century, identified by the Ministry of Culture and Tourism as an important asset worthy of preservation,
- all immovable cultural assets located within archaeological sites,
- buildings/areas that have witnessed significant historical events during the National War and the foundation of the Turkish Republic and dwellings that have been used by Mustafa Kemal ATATÜRK, regardless of time and registration.

The Ministry of Culture and Tourism is the responsible body to take decisions for protection of cultural heritage in Turkey at the national level. As part of the Ministry, the High Commission for the Protection of Cultural Assets is responsible for protecting and restoring immovable cultural assets. Implementation of the decisions and regulations issued by the Ministry are undertaken by local administrations. At local level, there are Cultural Assets Protection Regional Boards defined by the Ministry of Culture and Tourism, which are responsible for preservation, registration and classification of cultural heritage within their respective jurisdictions. The relevant Regional Boards for the project is the "Istanbul 5th Cultural Assets Protection Regional Board Directorate and Istanbul 6th Cultural Assets Protection Regional Board Directorate".

According to Law 2863, all the natural and cultural assets qualified for legal preservation are properties of the State. Therefore, regional boards have the power and authority to provide legal protection to the preservation sites and to approve or reject all the activities which have potential negative impacts on the preservation sites such as construction, demolition and excavation activities

3 Roles and Responsibilities

Principal roles and responsibilities for the implementation of this procedure are outlined below.

Role	Responsibilities
Contractor - Project Manager	<ul style="list-style-type: none"> • Overall responsibility for the development, review, approval and coordination of the numerous activities required to initiate, conduct and complete construction. • Ensure that this procedure is prepared, and updated as required, based on the activities undertaken as part of the project • Ensure that adequate resources are made available to implement the procedures and guidelines outlined in this procedure.
Contractor - Environmental and Social (E&S) Expert	<ul style="list-style-type: none"> • Initiation, development, implementation and coordination of the CFP during construction • Ensure that adequate training is given to all site personnel and sub-contractors, covering the procedures and guidelines outlined in this procedure. Establish appropriate control procedures and conduct audits as necessary. • Consultation with and reporting to relevant government bodies in case of potential archeological chance finds. • Record all confirmed chance finds by filling up the “Chance Find Reporting Form” and maintain copies in a log-book. Ensure that the chance finds log-book is functional and up to date.
Contractor - Site Manager	<ul style="list-style-type: none"> • Day-to-day implementation of the provisions of the CFP in the field during construction. • Notify the E&S Expert regarding potential chance finds during construction
Employees	<ul style="list-style-type: none"> • Understand and comply with archeological chance finds procedures and guidelines outlined in this procedure. • Reporting of the potential chance finds to the Site Manager.

4 Impact Avoidance and Mitigation

In the event of an archaeological discovery, the following actions will be implemented:

- All staff involved in land clearance and excavation activities will take the responsibility for managing archaeological protection and will be trained in these aspects by the E&S Expert.
- In case any potential chance find is encountered, all construction activities will cease immediately in the vicinity of the chance find.
- The Site Manager will be contacted immediately. The discovered site location, the characteristics of the potential archaeological material and photos will be recorded by the Site Manager, who in turn will inform the E&S Expert.
- Düzce Konuralp Museum Directorate will be notified at the latest within three days after the chance find is encountered. Contact details of the Düzce Konuralp Museum Directorate are given below:
Address: Konuralp Çiftelipınarlar Mahallesi No: 50 Düzce
Telephone: (0380) 541 37 70
E-mail: konuralpmuzesi@ktb.gov.tr
- The site and its vicinity will be secured 24 hours a day against damage or loss, until inspection by the authority.
- The E&S Expert will fill up a "Chance Find Report Form" for each confirmed chance find and inform the Project Manager about the date that the construction work can resume, which is determined by the authorities concerning the conservation of the heritage.
- Further steps to be followed and proper plan to be implemented for the management of the finds (Changes in the layout, conservation, preservation, restoration and salvage) will be decided and reported in writing by the authorities in charge.
- Photographs of the potential artifacts that are likely to be encountered in the construction site are presented in the following pages to be used during the training of the relevant staff.

5 Verification and Monitoring

E&S Expert will record all cases of archaeological chance finds. He/she will fill up a "Chance Find Reporting Form" for each chance find confirmed by the authority and maintain copies in a logbook. A sample of a reporting form which can be used to record chance finds is included below. The chance find logbook will be summarized on an annual basis and records included in annual monitoring reports to verify that correct management procedures have been followed. Action items will be taken in cases of non-adherence to this CFP.



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ANNEX-11 Information Related to Stakeholder Consultation Meeting

Akçakoca Bicycle Roads Project Public/Stakeholder Consultation Meeting Minutes 09 January 2024

The Public/Stakeholder Consultation Meeting was conducted on 9th of January 2024 at Akçakoca Municipality Assembly Hall. The meeting was held with the participation of maximum 114 people. 88 people signed the participant list. Participants included mukthars, students, tradesmen, employees of Akçakoca Municipality and other citizens.

The meeting was announced via newspaper advertisements in Milat and Yeni Akçakoca Haber Newspapers on 5th January 2024. The meeting was also announced through flyers placed at certain locations (such as mukhtar offices, public places, shops, bus stops) by Akçakoca Municipality. Project brochures were distributed to citizens by the municipal police (zabıta). Akçakoca Municipality informed all the mukhtars about the date/time and location of the planned public consultation meeting. SMS messages were sent to Akçakoca citizens for whom Akçakoca Municipality has the information of their mobile phone numbers (22,373 citizens) in order to inform them about the scope, date/time and location of the planned public consultation meeting.

The Draft Environmental and Social Management Plan and the Draft Stakeholder Engagement Plan were disclosed in the Akçakoca Municipality website as of 2nd of January 2024.

Brochures were provided to mukhtars to be distributed to the residents in their neighborhoods. Brochures were also distributed to participants during the meeting. Akçakoca Municipality representatives and ACE Experts were available during the meeting. A presentation was given to the participants by ACE. The presentation covered the following main headings:

- Project Executor, Implementer and Financier
- Project Description
- Expected benefits of the Project
- Environmental and Social Studies
- Potential environmental and social impacts
- Mitigation measures and management strategies
- Stakeholder engagement and how stakeholders can be involved in the process
- Questions and answers



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At the end of the meeting, there was a question/answer session. There was **only one question** raised by a participant as follows.

Q.1: Will there be camera surveillance on the bicycle roads for security purposes?

A.1: Akçakoca Municipality representatives stated that this will be considered during the final evaluation of the project before the tender phase and will be included in the Project if deemed necessary.

The following information is provided below:

- The newspaper announcements,
- The flyer
- Selected photographs of places where flyers were hung,
- Selected photographs of municipal police distributing project brochures to citizens,
- The last page of the municipality report showing the number of SMS messages sent to citizens,
- The disclosure page of ESMP and SEP,
- The project brochure,
- The presentation given at the meeting,
- The photographs taken during the meeting and
- The participant list



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Newspaper Advertisements of Public/Stakeholder Consultation Meeting

ILN01962555 numaralı ilan INT-000144-www.milatgazetesi.com yayınında 05.01.2024 tarihinde yayınlanmıştır.

M Dine çıkan gelişmelerden haberdar olmak için bildirimlerinizi yapın

Word to Word

Çevre

İzlen

Akçakoca Bisiklet Yolları Projesi Akçakoca Kapalı Pazar Yeri Çatısı Üzeri Güneş Enerjisi Santrali Projesi

Resmî İlan



Akçakoca Bisiklet Yolları Projesi

Akçakoca Kapalı Pazar Yeri Çatısı Üzeri Güneş Enerjisi Santral Projesi

BAKIRKÖY İZMİR KATILIMLI YEREL YEREL YEREL

İleri Bankası-Süleymanlı Çarşıları Projesi-1 Ekim 2023 tarihinde TC Akçakoca Belediyesi tarafından yapılan Akçakoca Kapalı Pazar Yeri Çatısı Üzeri Güneş Enerjisi Santral Projesi için Çarşılar ve Pazar Yerleri Projesi kapsamında yapılacak olan görüşme toplantısı 05.01.2024 tarihinde Akçakoca Belediyesi tarafından aşağıdaki şekilde duyurulmaktadır.

Tarih: 05.01.2024

Yer: Akçakoca Belediyesi

Toplantı Tarihi: 05.01.2024

Toplantı Saati: 14:00

Toplantı Yeri: T.C. Akçakoca Belediyesi Meclis Salonu

Proje Sahibi: T.C. Akçakoca Belediyesi

Telefon: +90 360 611 11 10 - Faks: +90 360 611 16 45 - E-posta: mrc@akcokca.gov.tr

Planlama:





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04 İNANÇ & AİLE & YAŞAM HABER

Ağaçkoca Bakkal Tozları Projesi
Ağaçkoca Kapalı Pazar Fuar Çarşı Üzeri
Görey Enerji Saraylı Projesi

Nüze yeni yıl ilk sabahında AKÇAKOÇDA SABAH
büyük Camii'nde buluştu RAMAZI BULUŞMALARI

AKÇAKOÇDA SABAH
RAMAZI BULUŞMALARI

Filtre Kahve'mizi & Hamburger'imizi Denediniz mi?


ABİTAŞ
AKÇAKOÇ

KAHVALTI, YEMEK ve KAHVE'Yİ
HUZUR DOLU BİR
ORTAMDA DENEMEK İSTERMİSİNİZ.



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Flyer for Public Informing about the Public/Stakeholder Consultation Meeting



Akçakoca Bisiklet Yolları Projesi

Akçakoca Kapalı Pazar Yeri Çatısı Üzeri Güneş Enerjisi Santrali Projesi

HALKIN BİLGİLENDİRİLMESİ VE KATILIMI TOPLANTISINA DAVET

İller Bankası Sürdürülebilir Şehirler Projesi-11k finansmanı kapsamında T.C. Akçakoca Belediyesi tarafından yapılması planlanan "Akçakoca Bisiklet Yolları Projesi" ve "Akçakoca Kapalı Pazar Yeri Çatısı Üzeri Güneş Enerjisi Santrali Projesi" için Çevre ve Sosyal Yönetim Planı çalışmalarını ilgili olarak halkı bilgilendirmek, halkın görüş ve önerilerini almak üzere aşağıda detayları verilen "Halkın Bilgilendirilmesi ve Katılımı Toplantısı" düzenlenecektir.

Tüm halkımıza saygıyla duyurulur.

T.C. Akçakoca Belediyesi

Toplantı Tarihi : 09.01.2024
Toplantı Saati : 14:00
Toplantı Yeri : T.C. Akçakoca Belediyesi Meclis Salonu
Proje Sahibi : T.C. Akçakoca Belediyesi
Telefon: +90 380 611 41 10 - Faks: +90 380 611 36 55 - E-posta: belediye@akcakoca.bel.tr



This project is co-funded by the European Union, the Republic of Turkey and the World Bank.
Bu Proje Avrupa Birliği, Türkiye Cumhuriyeti ve Dünya Bankası tarafından ortaklaşa finanse edilmektedir.

Selected Photographs of Places Where Flyers were Hung





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Selected Photographs of Municipal Police Distributing Project Brochure to Citizens





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The Last Page of the Municipality Report Showing the Number of SMS Messages Sent to Citizens

SMS messages were sent to 22,373 citizens.

	A	B	C	D	E	F	G	H
22310		GÜLCAN		DÜZCE	AKÇAKOC, HASANÇAVUŞ KÖYÜ			
22311		GÜLCAN		DÜZCE	AKÇAKOC, HASANÇAVUŞ KÖYÜ			
22312		AYDIN		DÜZCE	AKÇAKOC, AKKAYA KÖYÜ			
22313		AYDIN		DÜZCE	AKÇAKOC, AKKAYA KÖYÜ			
22314		VİLDAN Fİ		DÜZCE	AKÇAKOC, HACI YUSUFLAR MAH.			
22315		PINAR		DÜZCE	AKÇAKOC, HACI YUSUFLAR MAH.			
22316		PINAR		DÜZCE	AKÇAKOC, HACI YUSUFLAR MAH.			
22317		ÖZCAN		DÜZCE	AKÇAKOC, YENİ MAH.			
22318		TUĞBA		DÜZCE	AKÇAKOC, OSMANİYE MAH.			
22319		ARZU		DÜZCE	AKÇAKOC, ARABACI KÖYÜ			
22320		RAHİME		DÜZCE	AKÇAKOC, YENİ MAH.			
22321		MURAT		DÜZCE	AKÇAKOC, OSMANİYE MAH.			
22322		MURAT		DÜZCE	AKÇAKOC, OSMANİYE MAH.			
22323		ENVER		DÜZCE	AKÇAKOC, YENİ MAH.			
22360		ENES		DÜZCE	AKÇAKOC, ALTUNÇAY KÖYÜ			
22361		ENEŞ		DÜZCE	AKÇAKOC, ALTUNÇAY KÖYÜ			
22362		ENES		DÜZCE	AKÇAKOC, ALTUNÇAY KÖYÜ			
22363		ENES		DÜZCE	AKÇAKOC, ALTUNÇAY KÖYÜ			
22364		ENES		DÜZCE	AKÇAKOC, ALTUNÇAY KÖYÜ			
22365		MELTEM		DÜZCE	AKÇAKOC, OSMANİYE MAH.			
22366		MEHMET		DÜZCE	AKÇAKOC, YALI MAH.			
22367		MEHMET		DÜZCE	AKÇAKOC, HACI YUSUFLAR MAH.			
22368		MEHMET		DÜZCE	AKÇAKOC, HACI YUSUFLAR MAH.			
22369		RUKİYE		DÜZCE	AKÇAKOC, HACI YUSUFLAR MAH.			
22370		CEMAL		DÜZCE	AKÇAKOC, TEPEKÖY			
22371		CEMAL		DÜZCE	AKÇAKOC, TEPEKÖY			
22372		KEMAL		DÜZCE	AKÇAKOC, YENİ MAH.			
22373		KEMAL		DÜZCE	AKÇAKOC, YENİ MAH.			



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Bu Proje Avrupa Birliği, Türkiye Cumhuriyeti ve Dünya Bankası tarafından ortaklaşa finanse edilmektedir.

Project Information Brochure

Bu broşürün amacı, projenin ve uygulanan yolun tanıtılması, CSVP'nin amacı, öncelikleri, etkileri, uygulama alanları ve işleme alanları hakkında bilgilendirme yapmak, potansiyel etkileri açıklama, planlama ve uygulama alanları hakkında bilgilendirme yapmak, Belediye ve proje ekipleri arasında iletişim ve işbirliğini sağlamak, ilgili tarafların görüş ve önerilerini almak, ilgili tarafların görüş ve önerilerini almak, ilgili tarafların görüş ve önerilerini almak.

CSVP'nin uygulanmasından sonraki ilk beş yıl içinde Akçakoca Belediyesi ile Proje'nin ortaklığı ile, ilçe merkezinde Akçakoca Belediyesi tarafından yapılacak diğer işler için bir örnek ve ilçe Belediye Başkanlığı tarafından yapılacak olan diğer işler için örnek olarak kullanılacak bir örnek olacaktır.

Proje'nin Katılım ve Şikâyet Mekanizması

Proje'nin başarılı bir şekilde uygulanması için katılımlı bir süreçten geçilmesi gerekmektedir. Akçakoca Belediyesi ile projeye katılımın topluluk ve bireysel düzeyde gerçekleştirilmesi ve bu düzeyde katılımın sağlanması için Katılım ve Şikâyet Mekanizması oluşturulmuştur. Bu mekanizma aracılığıyla yerel yönetim, halk ve diğer taraflar arasında bir diyalog oluşturulmuştur. Şikâyet mekanizmasının kurulmasıyla ve uygulanmasıyla Akçakoca Belediyesi, katılımı artırır.

Bu broşürün amacı, projenin ve uygulanan yolun tanıtılması, CSVP'nin amacı, öncelikleri, etkileri, uygulama alanları ve işleme alanları hakkında bilgilendirme yapmak, potansiyel etkileri açıklama, planlama ve uygulama alanları hakkında bilgilendirme yapmak, Belediye ve proje ekipleri arasında iletişim ve işbirliğini sağlamak, ilgili tarafların görüş ve önerilerini almak, ilgili tarafların görüş ve önerilerini almak, ilgili tarafların görüş ve önerilerini almak.

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Proje'nin Katılım ve Şikâyet Mekanizması

SÜRDÜRÜLEBİLİR ŞEHİRLER PROJESİ II Ek Finansman

AKÇAKOCA BİSİKLET YOLLARI PROJESİ

BİLGİLENDİRME BROŞÜRÜ

Akçakoca Bisiklet Yolları Projesi (Proje), Dünya Bankası desteğiyle İlçe Belediye Başkanlığı tarafından gerçekleştirilmektedir. Proje'nin amacı, Akçakoca Belediyesi tarafından gerçekleştirilmektedir. Proje'nin amacı, Akçakoca Belediyesi tarafından gerçekleştirilmektedir. Proje'nin amacı, Akçakoca Belediyesi tarafından gerçekleştirilmektedir.

Proje Dünya Bankası tarafından finanse edilen bir projedir. İlçe Belediye Başkanlığı tarafından gerçekleştirilmektedir. Proje'nin amacı, Akçakoca Belediyesi tarafından gerçekleştirilmektedir. Proje'nin amacı, Akçakoca Belediyesi tarafından gerçekleştirilmektedir. Proje'nin amacı, Akçakoca Belediyesi tarafından gerçekleştirilmektedir.

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Proje'nin Katılım ve Şikâyet Mekanizması

SÜRDÜRÜLEBİLİR ŞEHİRLER PROJESİ II Ek Finansman

AKÇAKOCA BİSİKLET YOLLARI PROJESİ

BİLGİLENDİRME BROŞÜRÜ



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Presentation Given in the Public/Stakeholder Consultation Meeting

SÜRDÜRÜLEBİLİR ŞEHİRLER PROJESİ II Fk Finansmanı
AKÇAKOCA BİSİKLET YOLLARI PROJESİ

Kapsam / GÖRÜMLER

- Proje ile ulaşılabilecek amaçlar, faydalar, hedefler, çıkarlar?
- Projenin tanıtımı
- Projenin hedeflenen faydaları nelerdir?
- Çözüm ve bütçedeki çakışmaları nedir?
 - Çözüm önerileri ve sonuçlarıdır
 - Proje ile Çözüm önerileri ve sonuçlarıdır
- Paydaş katılımı
 - Proje ile Çözüm önerileri ve sonuçlarıdır
- Sorumluluk ve hesaplılıkların proje ile Çözüm önerileri ve sonuçlarıdır

Projenin Tanıtımı

- Proje ile ulaşılabilecek amaçlar, faydalar, hedefler, çıkarlar?
- Projenin tanıtımı
- Projenin hedeflenen faydaları nelerdir?
 - Çözüm önerileri ve sonuçlarıdır
 - Proje ile Çözüm önerileri ve sonuçlarıdır
- Paydaş katılımı
 - Proje ile Çözüm önerileri ve sonuçlarıdır
- Sorumluluk ve hesaplılıkların proje ile Çözüm önerileri ve sonuçlarıdır

Projenin Faydaları

- Projenin faydaları
- Projenin hedeflenen faydaları nelerdir?
 - Çözüm önerileri ve sonuçlarıdır
 - Proje ile Çözüm önerileri ve sonuçlarıdır
- Paydaş katılımı
 - Proje ile Çözüm önerileri ve sonuçlarıdır
- Sorumluluk ve hesaplılıkların proje ile Çözüm önerileri ve sonuçlarıdır

Projenin Riskleri

- Projenin riskleri
- Projenin hedeflenen faydaları nelerdir?
 - Çözüm önerileri ve sonuçlarıdır
 - Proje ile Çözüm önerileri ve sonuçlarıdır
- Paydaş katılımı
 - Proje ile Çözüm önerileri ve sonuçlarıdır
- Sorumluluk ve hesaplılıkların proje ile Çözüm önerileri ve sonuçlarıdır

Projenin Haritası

Projenin Haritası



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Trafik

Çevresel ve Sosyal Etkiler ve Etki Azaltma Önlemleri

- Trafik kazalarının önlenmesi için trafik güvenliği önlemlerinin alınması ve trafik kazalarının önlenmesi için gerekli önlemlerin alınması.
- "Sıfır Kaza Yürütme" politikasının uygulanması.
- Trafik kazalarının önlenmesi için gerekli önlemlerin alınması ve trafik kazalarının önlenmesi için gerekli önlemlerin alınması.
- Trafik kazalarının önlenmesi için gerekli önlemlerin alınması ve trafik kazalarının önlenmesi için gerekli önlemlerin alınması.

17

Çalışma Koşulları, İş Sağlığı ve Güvenliği, İşyeri Sağlık ve Güvenliği

Çevresel ve Sosyal Etkiler ve Etki Azaltma Önlemleri

- Çalışma koşullarının iyileştirilmesi için gerekli önlemlerin alınması.
- İşyeri sağlığı ve güvenliği önlemlerinin alınması.
- İşyeri sağlığı ve güvenliği önlemlerinin alınması.
- İşyeri sağlığı ve güvenliği önlemlerinin alınması.

18

Biyoyapıllık – Korunan Alanlar

Çevresel ve Sosyal Etkiler ve Etki Azaltma Önlemleri

- Biyoyapıllık malzemelerin kullanılması için gerekli önlemlerin alınması.
- Korunan alanların korunması için gerekli önlemlerin alınması.
- Biyoyapıllık malzemelerin kullanılması için gerekli önlemlerin alınması.
- Korunan alanların korunması için gerekli önlemlerin alınması.

19

Kültürel Miras

Çevresel ve Sosyal Etkiler ve Etki Azaltma Önlemleri

- Kültürel mirasın korunması için gerekli önlemlerin alınması.
- Kültürel mirasın korunması için gerekli önlemlerin alınması.
- Kültürel mirasın korunması için gerekli önlemlerin alınması.
- Kültürel mirasın korunması için gerekli önlemlerin alınması.

20

Yapı Kalitesi

Çevresel ve Sosyal Etkiler ve Etki Azaltma Önlemleri

- Yapı kalitesinin artırılması için gerekli önlemlerin alınması.
- Yapı kalitesinin artırılması için gerekli önlemlerin alınması.
- Yapı kalitesinin artırılması için gerekli önlemlerin alınması.
- Yapı kalitesinin artırılması için gerekli önlemlerin alınması.

21

Yapı Kalitesi

Çevresel ve Sosyal Etkiler ve Etki Azaltma Önlemleri

- Yapı kalitesinin artırılması için gerekli önlemlerin alınması.
- Yapı kalitesinin artırılması için gerekli önlemlerin alınması.
- Yapı kalitesinin artırılması için gerekli önlemlerin alınması.
- Yapı kalitesinin artırılması için gerekli önlemlerin alınması.

22

Yapı Kalitesi

Çevresel ve Sosyal Etkiler ve Etki Azaltma Önlemleri

- Yapı kalitesinin artırılması için gerekli önlemlerin alınması.
- Yapı kalitesinin artırılması için gerekli önlemlerin alınması.
- Yapı kalitesinin artırılması için gerekli önlemlerin alınması.
- Yapı kalitesinin artırılması için gerekli önlemlerin alınması.

23

Yapı Kalitesi

Çevresel ve Sosyal Etkiler ve Etki Azaltma Önlemleri

- Yapı kalitesinin artırılması için gerekli önlemlerin alınması.
- Yapı kalitesinin artırılması için gerekli önlemlerin alınması.
- Yapı kalitesinin artırılması için gerekli önlemlerin alınması.
- Yapı kalitesinin artırılması için gerekli önlemlerin alınması.

24



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Photographs from the Public/Stakeholder Consultation Meeting





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Participant List



Akçakoca Bisiklet Yolları Projesi
 Akçakoca Kapalı Pazar Yeri Çatısı Üzeri Güneş Enerjisi Santrali Projesi

HALKIN BİLGİLENDİRİLMESİ VE KATILIMI TOPLANTISI
 09.01.2024

No	Adı Soyadı	Adres	İletişim Bilgileri	İmza	Not
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Akçakoca Bisiklet Yolları Projesi
 Akçakoca Kapalı Pazar Yeri Çatısı Üzeri Güneş Enerjisi Santrali Projesi

HALKIN BİLGİLENDİRİLMESİ VE KATILIMI TOPLANTISI
 09.01.2024

No	Adı Soyadı	Adres	İletişim Bilgileri	İmza	Not
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Akçakoca Bisiklet Yolları Projesi
Akçakoca Kapalı Pazar Yeri Çatısı Üzeri Güneş Enerjisi Santrali Projesi

HALKIN BİLGİLENDİRİLMESİ VE KATILIMI TOPLANTISI
08.01.2024

No	Ad Soyad	KATILIMCI LİSTESİ		Durum	İmza
		Adı	Adresi / İletişim Bilgisi		
1		Emine Akdemir	Atatürk Mahallesi		
2		Ali Akdemir	Atatürk Mahallesi		
3		Ali Akdemir	Atatürk Mahallesi		
4		Ali Akdemir	Atatürk Mahallesi		
5		Ali Akdemir	Atatürk Mahallesi		
6		Ali Akdemir	Atatürk Mahallesi		
7		Ali Akdemir	Atatürk Mahallesi		
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9		Ali Akdemir	Atatürk Mahallesi		
10		Ali Akdemir	Atatürk Mahallesi		
11		Ali Akdemir	Atatürk Mahallesi		
12		Ali Akdemir	Atatürk Mahallesi		
13		Ali Akdemir	Atatürk Mahallesi		
14		Ali Akdemir	Atatürk Mahallesi		
15		Ali Akdemir	Atatürk Mahallesi		
16		Ali Akdemir	Atatürk Mahallesi		
17		Ali Akdemir	Atatürk Mahallesi		
18		Ali Akdemir	Atatürk Mahallesi		
19		Ali Akdemir	Atatürk Mahallesi		
20		Ali Akdemir	Atatürk Mahallesi		



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18		Ali Akdemir	Atatürk Mahallesi		
19		Ali Akdemir	Atatürk Mahallesi		
20		Ali Akdemir	Atatürk Mahallesi		





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Akçakoca Kapalı Pazar Yeri Çatısı Üzeri Güneş Enerjisi Santrali Projesi

HALKIN BİLGİLENDİRİLMESİ VE KATILIMI TOPLANTISI

09.01.2024

No	AD SOYAD	MESLEĞİ	TEMSİL ETTİĞİ BİRİM / YERLEŞİM YERİ	TELEFON	İMZA
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Akçakoca Bisiklet Yolları Projesi
Akçakoca Kapalı Pazar Yeri Çatısı Üzeri Güneş Enerjisi Santrali Projesi

HALKIN BİLGİLENDİRİLMESİ VE KATILIMI TOPLANTISI

09.01.2024

No	AD SOYAD	MESLEĞİ	TEMSİL ETTİĞİ BİRİM / YERLEŞİM YERİ	TELEFON	İMZA
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HALKIN BİLGİLENDİRİLMESİ VE KATILIMI TOPLANTISI
09.01.2024

No	Adı Soyadı	Adres	İletişim Bilgileri	İmza
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