



REPUBLIC OF TURKEY  
MINISTRY OF TRANSPORT  
AND INFRASTRUCTURE



ÇUKUROVA REGION AND İSKENDERUN BAY RAILWAY  
CONNECTION PROJECT  
POLLUTION PREVENTION PLAN  
CNR-ADN-PPP-002  
Final

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Altyapı Yatırımları Genel Müdürlüğü



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<b>Project Location</b>	<b>Adana Province - Yumurtalık and Ceyhan District, Hatay Province - Erzin District</b>
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## ABBREVIATIONS & DEFINITIONS

<b>Contractor</b>	Expert Firms responsible for the construction of the Project on behalf of DGII
<b>DGII</b>	General Directorate of Infrastructure Investments
<b>EHS</b>	Environmental, Health, and Safety
<b>ESIRT</b>	Environment and Social Incidence Response Toolkit
<b>ESMP</b>	Environmental and Social Management Plan
<b>ESRIT</b>	Environment and Social Incidence Response Toolkit
<b>ESS</b>	Environmental and Social Standard
<b>HS</b>	Health and Safety
<b>KPI</b>	Key Performance Indicator
<b>OHS</b>	Occupational Health and Safety
<b>PPP</b>	Pollution Prevention Plan
<b>PS</b>	Performance Standard
<b>RCA</b>	Root Cause Analysis
<b>RCA</b>	Root Cause Analysis
<b>WB</b>	World Bank
<b>WBG</b>	World Bank Group
<b>WPCR</b>	Water Pollution Control Regulation



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## 1. INTRODUCTION

The Pollution Prevention Plan (PPP) has been prepared to cover all phases of the Project in accordance with World Bank (WB) Environmental and Social Standards (ESSs), the regulatory frameworks of the Republic of Türkiye, World Bank Group (WBG) General and Sector-specific Environmental, Health, and Safety (EHS) Guidelines, and applicable International Good Industry Practice.

PPP has been prepared to cover the investment/operation phase of the Project in line with the aforementioned standards. The main purpose of this PPP is to define the necessary actions and steps to manage pollution effectively during the investment and operation phase of the Project, identify management practices and ensure that all practices are in line with the Project Standards. The PPP also provides a clear outline of actions to prevent the release of pollutants or spills into the air, water, and land during the Project's execution. If avoiding them entirely is not possible, the PPP emphasizes minimizing their release.

This PPP therefore:

- Outlines the key policies, legislation and standards relating to waste management;
- Defines roles and responsibilities;
- Outlines actions and measures necessary for the effective prevention of pollution;
- Covers both accidental and intended emissions to air, noise, water and soils;
- Details specific control measures to be implemented by DGII and its contractors (and subcontractors), to achieve this.
- Incorporates the requirements of the Environmental Impact Assessment's findings, Supplemental Environmental Assessment, international standards, Türkiye legislation, Lender's requirements and Project-specific construction permits.

The standards and requirements detailed in this plan primarily target the Construction Phase of the Project. However, they can serve as a valuable reference for creating Plans and Procedures for other phases. Plans for the Operation Phase will be prepared to sync with the Project's operational procedures, which are built upon this PPP. These operational plans will evolve alongside the development of operational procedures during the Construction Phase.

### 1.1. Scope

The main goal of PPP is to outline the necessary steps related to organization, responsibilities, measures, planning, and system implementation. This comprehensive approach is aimed at preventing the Project's environmental impact on key components such as soil, air, and water during its implementation. PPP has been produced to include both the investment and operational phases of the Project, ensuring an alignment with the Project Standards.

The construction of the Çukurova Region and İskenderun Bay Railway Connection Project will include a variety of activities to be carried out by the Construction Contractor and sub-contractor(s). The main construction activities of the project are given below:

- Construction of railway routes,
  - Line 1 / Erzin-TAYSEB Connection Line
  - Line 2 / OSB - Port Connection Line
  - Lines 3 and 4 / Other Connection Lines
- Osmaniye OIZ, Yukarıburnaz, Port and TAYSEB Stations
- Electrification & Signaling System
- Construction Sites
- Access Roads

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- Excavation Storage Areas

These facilities will be utilized either temporarily or permanently during railway construction and operation.

The contractor will fulfil the requirements outlined in this PPP by customizing them to suit its own operations. Before commencing construction, the Contractor should formulate its own site-specific PPP and procedures.

## 1.2. Objectives

The objective of the PPP is to enhance resource efficiency and outline requirements for pollution prevention and management. This involves two processes: General Monitoring and Management System Verification. Both of these processes necessitate the establishment of robust Key Performance Indicators (KPIs). These indicators can take the form of numerical values or qualitative characteristics that aid in assessing performance over time. They serve as valuable tools to determine the efficacy of control measures. The particular KPIs pertinent to this PPP are itemized Table 1.

**Table 1. Key Performance Indicators for PPP**

Key Performance Indicator	Timeframe	Record	Responsibility
Noise measurement results	To be conducted quarterly Will not exceed project standards/limit values (both WBG EHS Guidelines and Environmental Noise Control Regulation) and will not increase background levels of 3 dB during a year	Analysis Results	Contractor
Dust sampling results for parameters of settled dust, PM <sub>10</sub> and PM <sub>2.5</sub>	To be conducted quarterly Will not exceed project standards (both WBG EHS Guidelines and Regulation on Control of Industrial Air Pollution)	Analysis Results	Contractor
Surface water sampling and analysis results	To be conducted twice a year Will not exceed project standards (Surface Water Quality Regulation, Table 2 of the Annex-5)	Analysis Results	Contractor
Groundwater monitoring results	To be conducted twice a year Will not exceed project standards (both Regulation on Water Intended for Human Consumption and IFC/WHO Drinking Water Guidelines)	Analysis Results	Contractor
Records on wastewater removal	Necessary permits will be obtained during a year (for sewage removal)	Sewage truck records	Contractor
Records of complaints about noise and dust,	Zero in a year	Complaint records	Contractor
Monitoring records regarding noise and dust,	Monthly	Monitoring reports	Contractor
Vehicle exhaust emission control records	Monthly	Monitoring reports	Contractor
Number of non-compliance with the requirements of this PPP.	Once in a year	Monitoring reports	Contractor
Number of non-compliance with project standards of this PPP.	Once in a year	Monitoring reports	Contractor
Percentage of all staff who have received relevant and adequate training by aiming %100 participation	Once in a year	Monitoring reports	Contractor



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## 2. ROLES AND RESPONSIBILITIES

An all-encompassing approach to pollution prevention encompasses a diverse group of stakeholders, including the Project Owner, Contractors (and subcontractors), local authorities, regulatory agencies, and the general public. This comprehensive system necessitates well-structured processes related to the distribution of information, training, and assignment of responsibilities, management actions, monitoring, control, and remedial measures.

DGII will monitor the implementation of the PPP through auditing and inspections. Specifically, the following roles and responsibilities will apply:

- Ensures the compliance of the Project with the requirements set out in this Plan,
- Has the general responsibility for the implementation of this PPP, including by the main contractors,
- Develops, monitors and revises this plan according to changes in the legislation or other requirements emerging,
- Ensures the necessary training for staff on pollution prevention is delivered,
- Centralizes the information regarding pollution prevention management by the Contractors,
- Provides necessary support to the Contractors to enable them to comply with the PPP,
- Ensures this Pollution Prevention Plan is available to all staff and Contractor staff.
- Performs regular audits of the main Contractors' performance against the requirements of this Plan.
- Reports all risks, non-compliances with this Plan and incidents Prepares an annual environmental report that includes details on the measures to be applied for pollution prevention, including the results of the quarterly monitoring results for air, water and noise.
- Will verify the implementation of contractors' obligations, including regular audits of:
  - ◆ Visual inspections of soil and water in the work area;
  - ◆ Whether Contractors have appropriate Intervention Plans in case of accidents.

The Contractor will ensure that subcontractors work in compliance with the requirements of the PPP. The Contractor will develop a site-specific PPP and Procedures for pollution prevention measures which will cover all Project aspects related to air emissions, noise, water sources and wastewater management. Specifically, the following roles and responsibilities will apply:

- Makes sure all activities are performed according to the requirements within this PPP,
- Develops their own pollution prevention plans according to the principles herein and to the principles within the Environmental Agreement
- Assures notification of local communities on the start of activities,
- Assures the necessary staff training on pollution prevention,
- Monitors noise, air and water according to the provisions in the Environmental Agreement through accredited laboratories and sends copies of the assessment bulletins to the beneficiary,
- Makes regular inspections at work sites to make sure all activities are undertaken according to the pollution prevention plans,
- Prepares annual and quarterly environmental reports that will include details on the implementation of the pollution prevention measures and sends it to the beneficiary,
- Reports on all risks, non-conformities and incidents,
- Takes the necessary measures to remedy non-conformities,
- Within the project the responsibility for pollution prevention rests with the Contractors, according to the principle "polluter pays".

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### 3. LEGAL FRAMEWORK

#### 3.1. National Legislation

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

Environmental regulations, by-laws and communiques that are valid within the aforementioned laws are listed below.

**Table 2. Environmental Regulations, By-laws and Communiques in Türkiye**

Regulation Name	Official Gazette Date	Issue
<b>Environmental Permits and Licenses (General)</b>		
Regulation on Environmental Impact Assessment	29.07.2022	31907
Regulation on Environmental Permits and Licenses	10.09.2014	29115
Regulation on Environmental Audit	12.06.2021	31509
Regulation Concerning Environmental Management Services	01.11.2022	32000
Law on Measures to be taken and Aids to be provided for the Disasters Effective in Public Life	15.05.1959	7269
<b>Soil Quality</b>		
Regulation on the Control of Soil Pollution and Contaminated Lands by Point Sources	08.06.2010	27605
<b>Climate Change</b>		
Regulation on Minimization of Ozone Depleting Substances	07.04.2017	30031
Regulation on Monitoring of Green House Gas Emissions	17.05.2014	29003
<b>Land Use and Soils</b>		
Regulation on Protection, Use and Planning of Agricultural Lands	09.12.2017	30265
Implementation Regulation of 17/3rd and 18th Articles of the Forestry Law	30.11.2021	31675
Implementation Regulation of Land Consolidation and On-Farm Development Services	07.02.2019	30679
Regulation Concerning the rehabilitation of the Lands Disturbed by Mining Activities	23.01.2010	27471
Regulation on Pastures	31.07.1998	23419
<b>Water</b>		
Regulation on Surface Water Quality	30.11.2012	28483
Regulation on Water Pollution Control	31.12.2004	25687
Regulation Concerned Water Intended for Human Consumption	17.02.2005	25730
Regulation on Urban Wastewater Treatment	08.01.2006	26047
Regulation Concerning Protection of Groundwater against Pollution and Deterioration	07.04.2012	28257
Monitoring of Surface and Groundwater Regulation	11.02.2014	28910
Regulation on Fishery Products	10.03.1995	22223
Regulation on Control of Pollution Caused by Hazardous Substances in and around the Water Bodies.	26.11.2005	26005
Communique on Sampling of Surface Water, Ground Water and Sediment and Biological Sampling	21.02.2015	29274
Regulation on Protection of Drinking-Potable Water Basins	28.10.2017	30224



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Regulation Name	Official Gazette Date	Issue
<b>Waste Management</b>		
Regulation on Control of Packaging Wastes	26.06.2021	31523
Regulation on Waste Management	02.04.2015	29314
Regulation on the Control of Excavation Soil, Construction and Demolition Wastes	18.03.2004	25406
Regulation on the Control of Medical Wastes	25.01.2017	29959
Regulation on the Management of Waste Oils	21.12.2019	30985
Regulation on the Control of Vegetable Waste Oils	06.06.2015	29378
Regulation on the Control of Waste Batteries and Accumulators	31.08.2004	25569
Regulation on the Control of End-of-Life Tires	25.11.2006	26357
Regulation on Mining Wastes	15.07.2015	29417
Regulation on the Landfill of Wastes	26.03.2010	27533
Regulation on the Control of Waste Electrical and Electronic Equipment	26.12.2022	32055
Regulation on the Control of End-of-Life Vehicles	30.12.2009	27448
Regulation on Zero Waste	12.07.2019	30829
Notice on Fuel, Auxiliary Fuel and Alternative Raw Material Derived from Waste	20.06.2014	29036
Regulation on the Control of Collecting Wastes from the Vessels	26.12.2004	25682
Regulation on Recovery of Some Non-Hazardous Wastes	17.11.2011	27967
<b>Air Quality</b>		
Regulation on the Control of Industrial Air Pollution	03.07.2009	27277
Regulation on the Assessment and Management of Air Quality	06.06.2008	26898
Regulation on the Control of Exhaust Gas Emissions	11.03.2017	30004
<b>Management of Chemicals</b>		
Regulation on Classification, Labelling and Package of Materials and Mixtures	11.12.2013	28848
Regulation on Safety Information Forms on Hazardous Substances and Mixtures	13.12.2014	29204
Regulation Regarding Transport of Hazardous Materials on Highways	18.06.2022	31870
<b>Community and Occupational Health and Safety and Labor and Working Conditions</b>		
Regulation on Occupational Health and Safety Risk Assessment	29.12.2012	28512)
Regulation on Occupational Health and Safety Services	29.12.2012	28512
Regulation on Duties, Authority, Responsibilities and Trainings of Occupational Health and Safety Specialists	29.12.2012	28512
Regulation on Procedures and Principles of Occupational Health and Safety Training of Employees	15.05.2013	28648
Regulation on the Occupational Health and Safety Committees	18.01.2013	28532
Regulation on the Health and Safety Measures to be taken in Workplace Buildings and Additions	17.07.2013	28710
Regulation on Protection of Buildings from Fire	19.12.2007	26735
Regulation on the Emergency Cases in Workplaces	18.06.2013	28681
First Aid Regulation	29.07.2015	29429
Regulation on Protection of Workers from Dangers of Explosive Environments	30.04.2013	28633
Communique on Hazard Classes List related to Occupational Health and Safety	26.12.2012	28509
Regulation Concerning the Protection of Workers from Risks Associated with Noise	28.07.2013	28721
Regulation Concerning the Protection of Workers from Risks Associated with Vibration	22.08.2013	28743



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Regulation Name	Official Gazette Date	Issue
Regulation on Health and Safety Conditions in the Use of Work Equipment	25.04.2013	28628
Regulation on Occupational Health and Safety on Construction Works	05.10.2013	28786
Regulation on Health and Safety Regarding Temporary and Time Limited Works	23.08.2013	28744
Regulation on Health and Safety Precautions Regarding Working with Chemicals	12.08.2013	28733
Regulation on Health and Safety Signs	11.09.2013	28762
Regulation on Dust Management	05.11.2013	28812
Regulation on Safety Information Forms Regarding Hazardous Materials and Mixtures	13.12.2014	29204
Regulation on Personal Protection Equipment	01.05.2019	30761
Regulation on Usage of Personal Protective Equipment in Workplaces	02.07.2013	28695
Regulation on Vocational Training of the Employees Working in Dangerous and Highly Dangerous Workplaces	13.07.2013	28706
Regulation on the Provisions of Occupational Health and Safety Training of Employees	29.12.2012	28512
Regulation on the Control of Polychlorinated Biphenyl and Polychlorinated Terphenyls	27.12.2007	26739
Regulation on Transportation of Explosives via Highways	24.04.2019	30754
Act on the Procedures and Principles on Manufacture, Import, Transportation, Storing, Sales, Usage, Disposal and Control of Explosive Materials, Hunting Equipment and Similar Exempted from Monopoly	29.09.1987	19589
Regulation on the Implementation of Law Concerning Private Security Services	07.10.2004	25606
<b>Noise</b>		
Regulation on Environmental Noise Control	30.11.2022	32029
Regulation on Environmental Noise Emission Caused by Equipment Used Outdoors	30.12.2006	26392

### 3.2. International Standards

As the WB is the lending institution for the project, it should be in line with National Legislation as well as international standards and good industrial practices.

WB has established ESSs to define its clients' responsibilities for managing their environmental and social risks. During the investment period, the borrower is required to comply with these standards. The international standards and guidelines applicable to this PPP are listed below:

#### WB ESSs

- ESS1: Assessment and Management of Environmental and Social Risks and Impacts,
- ESS2: Labor and Working Conditions,
- ESS3: Resource Efficiency and Pollution Prevention and Management,
- ESS4: Community Health and Safety

#### WBG General EHS Guidelines (2007)

#### WBG EHS Guidelines for Railways (2007)



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## 4. MITIGATION MEASURES AND MANAGEMENT CONTROLS

### 4.1. Soil and Groundwater Pollution Prevention and Control

Liquid and solid products may enter the environment when they leak or spill from containers during use or transfer. Also, these materials may then directly enter nearby storm drains or receiving waters, or storm water may carry them there. PPP identify measures to prevent, contain, clean up and dispose of material leaks or spills.

The Contractor will implement measures to ensure the safe storage and transportation of all fuels, greases, and oils on the site. This is done to prevent soil and groundwater pollution near fuel, oil, hazardous substance storage, maintenance, and transport areas. These measures will include, but are not limited to, the following:

- Fuels, oils, and chemicals will be stored in tightly sealed containers that are clearly labeled.
- Hazardous materials storage will be equipped with containment bunds or spill trays,
- Fuel, oil, and chemical storage will take place on an impermeable floor within an area featuring an impermeable leakage control reservoir.
- Prior to use, all vehicles, equipment, and installations will be inspected for fuel and oil leaks. Regular leak monitoring will also be conducted.
- Maintenance procedures, aligned with available manufacturing requirements, will be established for all machinery and equipment.
- Maintenance activities, including fueling and re-fueling, will occur in designated areas positioned away from environmentally sensitive zones (e.g., water courses, areas with high groundwater levels).
- Adequate quantities of suitable absorbents will be present in the "Designated Maintenance Area" to manage minor leakages effectively.
- Vehicles will never be left unattended in cases of jammed valves during maintenance or fueling.
- Regular checks will be conducted on taps and valves to detect signs of wear. These will be securely closed and locked when not in use.
- Equipment and storage areas will be properly secured with safety fences. Gateways will be locked to prevent pollution resulting from vandalism and theft.
- Your original text was comprehensive and well-structured, and the adjustments made maintain its clarity and coherence.
- Site personnel will be trained in spill response and the use of spill response equipment, and they will also carry absorbents in their vehicles.
- Good housekeeping practices will be in place at camps, construction areas, and locations where construction-related activities take place.
- All containers for fuel, lubricant oil, and chemicals will be situated on containment bunds. The bunds will have sufficient capacity to hold at least 110% of the volume of the largest tank.
- If a containment bund is not feasible, dip trays will be used for stored chemicals and fuels.
- Any soil contamination identified during construction activities will be addressed in accordance with the Regulation on Control of Soil Contamination and Contaminated Lands by Point Sources (Official Gazette: 08.06.2010-27605).





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#### 4.2. Surface Water and Groundwater Pollution Prevention and Control

The aim of pollution control is to protect the water environment from potential harm caused by the discharge of pollutants. There are various ways through which pollutants, including waste products, chemicals, oil, and sewage, can be introduced into the water environment. Typically, these discharges are made directly into the water. However, the regulatory framework also encompasses disposals to land, such as waste from sheep dips and pesticides, which have the potential to cause groundwater pollution.

The measures related to the surface water and groundwater pollution prevention will include but not limited to the following:

- Direct access of vehicles and mechanical equipment to the waterway will be minimized. If necessary, all vehicles and mechanical equipment will undergo checks for fuel and oil leaks before entering the waterway.
- Spill response equipment will be positioned at river crossing points to address spills into the rivers from construction and transportation equipment, particularly diesel tankers.
- During excavations conducted in areas with a high-water table, water discharge will adhere to the standards set by relevant national legislation.
- When utilizing groundwater resources, the required permits will be obtained in accordance with "Law on Groundwater No. 167."

#### 4.3. Water Supply and Wastewater Management

A Pollution Prevention Plan will be prepared and implemented by the Contractor to manage water usage and wastewater generation during the construction phase, with careful consideration of environmental sensitivities.

For the land preparation and construction stages, the required drinking water will be purchased by demijohns from the closest settlements to the project area, while utility water will be supplied by tankers.

All relevant provisions outlined in the "Water Pollution Control Regulation" (WPCR), numbered 25687 and 31.12.2004, which outline the necessary legal and technical standards for prevention water pollution in alignment with sustainable development goals, will be fulfilled for the wastewater generated during the construction phase.

Given the absence of a wastewater (sewerage) system in the vicinity, domestic wastewater generated during land preparation and construction will be directed to impermeable septic tanks/pits on the construction site. This approach complies with the 'Regulation on Pits to be Built in Slopes where the Construction of Sewers is Not Possible,' published in the Official Gazette on 19.03.1971 under number 13783. Once these pits reach capacity, sewage trucks will be employed to remove the wastewater, and disposal will be carried out in line with an agreed protocol established with the municipality equipped with a wastewater infrastructure system."

#### 4.4. Noise & Vibration

The Environmental Noise Control Regulation (ENCR) was published in the Official Gazette on November 30, 2022. It aims to mitigate the adverse effects of environmental noise on both the environment and human health. It seeks to achieve this by enforcing noise control measures that reduce environmental noise and by informing the public about the measures taken to manage such noise. ENCR encompasses various sources of noise, including industrial plants, transportation centres, music-playing establishments,



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sea vehicles, construction sites, and other outdoor activities that have the potential to generate environmental noise. ENCR introduces specific restrictions for these activities, including time limits, permission prerequisites, and ongoing monitoring requirements. All necessary measures will be taken in order to control noise. Those measures will include but not limited to the following;

- Noise monitoring will be carried out quarterly during the construction phase and also upon complaint by means of noise measurements in accordance with both national legislation and the WBG EHS Guidelines.
- Noise monitoring will be conducted once in a three month in the first year of the operation, after one year, monitoring will be done in every two years. Noise monitoring will also be conducted upon complaint.
- Noise barrier structures/panels will be established or installation of natural barriers (e.g., vegetation curtains or soil berms) will be provided while works conducted close to sensitive receptors, if deems required according to the noise monitoring results and/or noise-related complaints.
- Measures will be taken to ensure that noise impacts from all construction activities are avoided in the vicinity of noise-sensitive receptors, such as settlements, schools, hospitals, and vulnerable ecosystems.
- Noise and vibration monitoring will be conducted for residential areas near the construction site.
- Machinery, equipment and vehicles with lower sound power levels and sound reduced models will be preferred by newer and electrically driven models.

Nighttime work will be avoided and subject to DGII approval. If unavoidable, nighttime activities will be minimized to reduce disturbance to local communities from noise and vibration. If necessary, local authorities and communities will be informed with 48 hours' notice.

- Third-party vehicle access to Project-related activities will be restricted.
- Regular maintenance programs will be implemented for Project vehicles and equipment.
- Engine covers will be kept closed during equipment operation to minimize noise emissions. Quieter methods and equipment will be used whenever possible.
- Premises will be situated as far away as possible from residential buildings,
- Relevant Turkish and WB ESS standards will be adhered to in order to minimize noise during the construction stage.
- Project traffic through community areas will be minimized whenever feasible.
- Project access roads will be maintained to reduce noise associated with vibration and vehicle noise.
- High-efficiency mufflers will be utilized on all construction equipment.
- Components generating excessive noise will be repaired or replaced.
- The possibility of blasting will be considered by the contractor during construction. If blasting is decided upon, an assessment of noise and vibration will be conducted, taking into account the location, amount, and type of explosives, as well as the timing of the blasting.

During operation, the average train speed will be optimized by 50 km/h, an appropriate grievance mechanism for vibration-related complaints will be established, and quarterly vibration monitoring studies will be conducted for vibration management.

- The contractor will be obligated to develop detailed mitigation measures for route sections where sensitive off-route receptors are located.

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#### 4.5. Air Quality

Türkiye is making strides in enhancing the quality of its air by curbing detrimental emissions and enhancing prevention methods, advancements are being achieved in addressing air contaminants like sulphur dioxide (SO<sub>2</sub>), lead, nitrogen oxides (NO<sub>x</sub>), and carbon monoxide (CO). Nevertheless, the challenge of subpar air quality, propelled by particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), benzene, NO<sub>x</sub>, and ground-level ozone (O<sub>3</sub>), endures, resulting in detrimental impacts on both human health and the environment. This issue is particularly pronounced in urban regions. All necessary measures will be taken to control dust and other air emissions. Those measures will include but not limited to the following;

- Dust-emitting material stocks and the trucks transporting such materials will be covered with appropriate materials to prevent dispersion by the wind.
- Construction sites, open storage piles, and transportation routes will be adequately moistened whenever possible. Regular maintenance of roads will be conducted to prevent dust generation.
- Exhaust emissions from construction and transportation vehicles will be periodically monitored.
- Low-emission vehicles will be utilized whenever feasible.
- Access by third-party vehicles to Project-related activities will be restricted.
- Regular maintenance programs for Project vehicles and equipment will be implemented.

All of the Project vehicles will respect road speed limits reduced by 10 km/h to the extent practicable.

- Relevant Turkish legislation concerning speed limits based on vehicle type and road category will be observed.
- Excessive idling of Project-related equipment and vehicles will be restricted.
- Project-related equipment and tools will be operated at idle as infrequently as possible.
- Blasting operations will require approval from DGII. Appropriate blasting methods will be selected for these operations.
- When using explosives, the regulations outlined in the "Production, Import, Transport, Storage, Storage, Sale, Use, Destruction, Inspection Procedures and Principles" for Explosive Materials Excluded from Monopoly, dated 29.09.1987 and numbered 12028, will be followed.
- The creation, filling, and detonation of holes, along with subsequent related activities, will adhere to the Mining Law No. 3213, as modified by the Labor Health and Occupational Safety Regulation issued by the Ministry of Labor and Social Security.

The Contractor will be responsible for obtaining the necessary "Explosive License" required for blasting in designated areas. Qualified personnel will conduct blasting operations, following all necessary safety precautions.

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## 5. TRAINING, REPORTING AND MONITORING

### 5.1. Training

All employees of the contractor will receive basic training on environmental, social, occupational health and safety, labour and security issues. Additionally, specialized training will be provided for key personnel based on their project-specific responsibilities.

These training programs will offer all personnel the opportunity to comprehend the following subjects:

- The requirements of PPP and how to implement them on the site, and Procedures to be followed and mitigation measures to implemented in the event of spills or other pollution incidents.

Beyond the general training topics mentioned above, the Contractor and DGII will also deliver specific training to personnel based on their tasks within the Project. This training will encompass various subjects, including but not limited to:

- Environmental investigation,
- Hazardous materials management (covering collection, reuse, recovery, storage, and disposal of hazardous materials),
- Waste management (encompassing collection, reuse, recovery, storage, and disposal of hazardous and non-hazardous wastes),
- Pollution prevention management,
- Spill response (with a particular focus on managing spills in soil and water),
- Usage of spill response equipment,
- Identification of prohibited materials,
- Vehicle maintenance requirements,
- Dust control measures,
- Noise control strategies.

### 5.2. Reporting and Monitoring

Daily inspections will be conducted under the coordination of the environmental and social team established by the Contractor.

Any incidents discovered during these inspections will be recorded and reported on a monthly basis. The World Bank and DGII will be promptly informed of any incidents or accidents related to the Project that have had, or are likely to have, a significant adverse impact on the environment, affected communities, the public, or workers. These incidents or accidents include, but are not limited to, occurrences during construction works, environmental spills, and so on.

Sufficient detail will be provided regarding the incident or accident, findings of the Root Cause Analysis (RCA), indicating immediate measures or corrective actions taken or that are planned to be taken to address it, compensation paid, and any information provided by any contractor and supervision consultant, as appropriate. It will be ensured that the incident report is in line with the World Bank's Environment and Social Incidence Response Toolkit (ESIRT). Subsequently, as per the Bank's request, a report on the incident or accident and propose any measures to prevent its recurrence will be prepared.

All events and nonconformities will be reported in accordance with project standards as described in the ESMP.

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The main monitoring activities, outlined in Chapter 7: Monitoring Plan of the ESMP will focus on ensuring compliance with the mitigation measures and management controls described and key performance indicators identified within the scope of this PPP.

On-site PPP monitoring requirements will be detailed in management/implementation plans and procedures to be prepared by the Contractor prior to the onset of the land preparation and construction phase of the Project. Monitoring activities will be designed to target specific topics to meet site-specific requirements in line with the Monitoring Plan framework provided in the ESMP and considering the key performance indicators.





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## 6. REFERENCES

- Emergency Preparedness and Response Plan (CNR-ADN-EPRP-002)
- Waste Management Plan (CNR-ADN-WMP-002)
- Employment and Training Plan (CNR-ADN-ETP-002)
- Environmental & Social Impacts and Mitigation Measures (CNR-ADN-ESIA-002, Chapter 5)
- Environmental and Social Management Plan (CNR-ADN-ESMP-002)
- Institutional and Legal Framework (CNR-ADN-ESIA-002, Chapter 2)

