EARTHQUAKE RECONSTRUCTION FRAMEWORK LOAN (20230153)

ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF)

NOVEMBER 2024

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ABBREVIATIONS AND ACRONYMS

AFAD	Disaster and Emergency Management Presidency [Afet ve Acil Durum Yönetimi Başkanlığı]
bcm	billion cubic meters
C-ESMP	Contractor's Environmental and Social Management Plan
CFP	Chance Finds Procedure
CHS	Community Health and Safety
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
DWN	Drinking Water Network
DWTL	Drinking Water Transmission Line
DWTP	Drinking Water Treatment Plant
E&S	Environmental and Social
EC	European Commission
EIA	Environmental Impact Assessment
EIB	European Investment Bank
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
GHG	Greenhouse Gases
GIIP	Good International Industry Practise
GM	Grievance Mechanism
GT	Government of Türkiye
ILBANK	İller Bankası A.Ş.
ILO	International Labour Organization
IUCN	International Union for Conservation of Nature
KBA	Key Biodiversity Areas
MoEUCC	Ministry of Environment Urbanization and Climate Change
MoTF	Ministry of Treasury and Finance
OECD	Organization for Economic Co-operation and Development
OHAL	State of Emergency [Olağanüstü Hal]
OHS	Occupational Health and Safety
PDoEUCC	Provincial Directorate of Environment, Urbanization and Climate Change
PIF	Project Introduction File
PIU	Project Implementation Unit
PMC	Project Management Consultant
POP	Persistent Organic Pollutants
Project	Earthquake Reconstruction Framework Loan
PwDs	Persons with disability
RCA	Root Cause Analysis
RF	Resettlement Framework
RP	Resettlement Plan
SEA	Sexual Exploitation and Abuse
SEP	Stakeholder Engagement Plan
SH	Sexual Harassment
SN	Sewerage Network
SuTPs	Syrians under Temporary Protection
ToR	Terms of Reference
TurkStat	Turkish Statistical Institute
UKOME	Transportation Coordination Centre [Ulaşım Koordinasyon Merkezi]
WGM	Workers' Grievance Mechanism
WSA	Water and Sewerage Administration
WWTP	Waste Water Treatment Plant

EXECUTIVE SUMMARY

The loan of European Investment Bank (EIB) for the Earthquake Reconstruction Framework Loan (the Project) is structured as a framework loan concerning investments in five provinces, among the eleven affected by the earthquakes in south-eastern Türkiye in February 2023. The Project concerns rehabilitation, construction and extension of drinking water, sewerage and stormwater networks as well as drinking water, waste water treatment plants (WWTPs), purchase and installation of Water and Sewerage Administrations' (WSAs') smart systems, machinery and equipment.

As an affiliate to the Ministry of Environment Urbanization and Climate Change (MoEUCC), İller Bankası A.Ş. (ILBANK) is the promoter of the Project, since it finances environmental and basic needs of the municipalities and WSAs.

The Project forms part of the Team Europe's response to the earthquakes which was announced during the Donors' Conference organized by the European Commission (EC) and Swedish Presidency of the Council on 20 March 2023. The proposed EIB finance is approximately EUR 400 million, and the total cost is approximately EUR 1550 million.

The Project activities will take place in Adana, Adıyaman, Diyarbakır, Gaziantep, Hatay, Kahramanmaraş, Kilis, Malatya, Osmaniye, Şanlıurfa and Elazığ which were greatly damaged in the February 2023 earthquakes and these cities are declared as disaster zones on 10th February 2023 (Decision no: 1354).

This Environmental and Social Management Framework (ESMF) has been prepared to identify the potential environmental and social (E&S) risks and impacts of proposed Project activities and proposes suitable mitigation measures to manage these risks and impacts. It maps out the national and EU legislation and the E&S standards of EIB applicable for the Project, and describes the principles, approaches, implementation arrangements, and E&S mitigation measures to be followed.

The environmental risks are expected to be typical for construction works and temporary by nature, site-specific, and can be mitigated by applying the code of good construction practice, and relevant mitigation measures. The potential E&S risks for the Project activities are identified as:

- Air pollution (dust, odours, vehicle exhaust etc.)
- Noise
- Soil pollution
- Water pollution
- Hazardous and non-hazardous waste management
- Labour and working conditions
- Interruptions to public services and infrastructure
- Traffic safety risks
- Occupational Health and Safety (OHS)
- Community health and safety issues
- Involuntary resettlement (temporary or permanent economic and/or physical displacement)
- Restriction of land use, loss of livelihoods, potential exclusion of vulnerable groups (those who are not legal owners or renters/low-income groups, disabled people, children or elderly people, groups with livelihood dependencies in the project regions).

These risks will be managed and mitigated through the application of the relevant measures in the Contractor's Environmental and Social Management Plan (C-ESMP) that will be prepared by contractors for subprojects in compliance with the requirements set out in the Environmental Impact Assessment (EIA)/ESMP and general ESMP provided in Annex-2.

Implementation Arrangements. At national level, Project Implementation Unit (PIU) established under the Department of International Relations of ILBANK will be responsible for the implementation of the Project, in accordance with the provisions of this ESMF. The PIU will be provided with qualified staff and resources to support the management of E&S risks and impacts, including at least, one full-time environmental specialist, one full-time social specialist and one full-time OHS specialist.

Project Management Consultant (PMC) will be hired to support PIU for the implementation of the Project activities including for, but not limited to, technical, procurement, E&S, financial management of the Project

activities covering the preparation of the E&S screening forms and E&S instruments as described in this ESMF, bidding documents, monitoring and evaluation, reporting, grievance mechanism, citizen engagement, and project communication and for mobilizing the required technical, E&S and OHS specialists to be located in Ankara office and in the earthquake-affected municipalities as required.

Monitoring: The supervision consultant will be on-site (daily basis) and be responsible for monitoring, supervising, reporting and coordinating subproject E&S implementations. The supervision consultant will also monitor the implementation of E&S risk management mitigation plans on site.

The E&S performance of the subprojects will be monitored by the responsible contractor' E&S team on a daily basis and the team will report the site findings on a quarterly basis to the supervision consultant for review. The supervision consultant will check and add their site inspection findings and submit the consolidated reports to the responsible PMC. The reports will also be reviewed, and developed if required, by the PMC and will then be submitted to the PIU. The final E&S Monitoring Reports will be consolidated and prepared by PIU to be shared with the EIB bi-annually.

The Contractor shall take all necessary E&S measures and precautions set out in the E&S instruments to ensure that the execution of the works and all associated facilities on or off-site are carried out in accordance with legal and regulatory E&S requirements. The contractors are required to comply with the project E&S risk management plans and procedures which will be asked through the bidding documents based on the subproject needs.

PIU will carry out regular site supervision of subprojects during construction to ensure that the E&S requirements specified in the E&S instruments, are being duly implemented and that GMs are accessible and functional. This monitoring will be on a monthly/quarterly basis during the construction period, depending on the subproject scope. More frequent monitoring may be conducted if needed to ensure compliance with the mitigation measures and resolution of any issues that are identified. The PIU will report to EIB bi-annually on the E&S performance of the Project.

1. INTRODUCTION

The loan of European Investment Bank (EIB) for the Earthquake Reconstruction Framework Loan (the Project) is structured as a framework loan concerning investments in five provinces, among the eleven affected by the earthquakes in south-eastern Türkiye in February 2023. The Project concerns rehabilitation, construction and extension of drinking water, sewerage and stormwater networks as well as drinking water, waste water treatment plants (WWTPs), purchase and installation of WSAs' smart systems, machinery and equipment.

As an affiliate to the Ministry of Environment Urbanization and Climate Change (MoEUCC), İller Bankası A.Ş. (ILBANK) is the promoter of the Project, since it finances environmental and basic needs of the municipalities and water and sewerage administrations (WSAs).

The Project forms part of the Team Europe's response to the earthquakes which was announced during the Donors' Conference organized by the European Commission (EC) and Swedish Presidency of the Council on 20 March 2023. The proposed EIB finance is approximately EUR 400 million, and the total cost is approximately EUR 1550 million.

More information regarding the Project is available at https://www.eib.org/en/projects/all/20230153.

1.1. Purpose of the ESMF

The purpose of this Environmental and Social Management Framework (ESMF)—which is prepared by ILBANK—is to set out the principles, guidelines and procedures for screening, assessing, and managing the potential environmental and social (E&S)[1] impacts of forthcoming but as yet undefined interventions. It contains measures and plans to avoid, and where avoidance is not possible, to reduce, mitigate and/or offset adverse risks and impacts. The ESMF specifies the most likely applicable E&S policies and requirements and how those requirements will be met through procedures for the screening, assessment, approval, mitigation, monitoring and reporting of E&S risks and impacts associated with the activities to be supported. Therefore, this ESMF ensures that the subprojects/activities are screened and assessed and that appropriate management measures are in place prior to implementation.

This ESMF has been developed in accordance with national legislation and international best practice, more specifically EIB E&S standards.

In addition to this ESMF, a Stakeholder Engagement Plan (SEP) was also prepared for the Project which can be found on the ILBANK website: https://www.ilbank.gov.tr/sayfa/projects-with-external-financing.

[1] Including occupational health and safety (OHS) and community health and safety (CHS)

2. PROJECT DESCRIPTION

The subprojects will be preliminary located in the provinces of Adiyaman, Gaziantep, Hatay, Osmaniye and Şanlıurfa but could be re-located in any of the eleven provinces including the above five provinces: Adana, Diyarbakir, Elazig, Kahramanmaras, Kilis, and Malatya as shown in Figure 1.

Figure 1. Map of Earthquake-Affected Provinces

The components eligible for Bank financing shall fall under the following description:

- Rehabilitation, modernisation and extension/new construction of water supply infrastructure, such as water intakes, water treatment plants, raw or treated water transmission mains, water supply networks including pumping stations and house connections, bulk and consumer metering, energy efficiency measures.
- Rehabilitation, modernisation, and extension/new construction of wastewater collection and treatment infrastructure, such as sewer networks including house connections and pumping stations, WWTPs.
- Rehabilitation, modernisation and extension/new construction of storm water systems and emergency flood protection measures.
- Supply of specialized maintenance equipment.

The current pipeline includes twenty-four subprojects and the provisional list of subprojects is given in Table-1. The project will ensure the continuous access to compliant potable water and sanitation in line with the applicable European Union (EU) Directives. The subprojects will be selected following a need assessment and prioritization methodology.

Table 1. Provisional List of Subprojects

No	Province	Administration	Subproject	Type	Potential/Current EIA Status (based on EIA Regulation published on 29.07. 2022, Numbered 31907)
1	Adıyaman	Gölbaşı Municipality	Gölbaşı Wastewater Treatment Plant	WWTP	EIA Exemption
2	Adıyaman	Tut Municipality	Tut Wastewater Treatment Plant	WWTP	EIA Exemption
3	Elazığ	Elazığ Municipality	Elazig Treatment Sludge Disposal, Waste-derived Fuel (WDF) Production and Energy Generation Plant Integrated Facility	SW	Approved EIA Report by MoEUCC is available (since it is listed in Annex-1 of the EIA Regulation)
4	Gaziantep	Gaziantep Water and Sewerage Administration (WSA)	Çaybaşı Drinking Water Treatment Plant and Network Project	DWN DWTP	EIA Exemption

No	Province	Administration	Subproject	Type	Potential/Current EIA Status (based on EIA Regulation published on 29.07. 2022, Numbered 31907)
5	Gaziantep	Gaziantep WSA	İslahiye Wastewater Treatment Plant Project	DWN DWTL	EIA Exemption
6	Gaziantep	Gaziantep WSA	Kızılhisar Wastewater Treatment Plant 2nd Stage Project	WWTP	Although it is exempted from the EIA process, an ESIA shall be prepared upon the request of the EIB.
7	Gaziantep	Gaziantep WSA	Kuzeyşehir Pumping Line, Tank Construction Project		EIA Exemption
8	Gaziantep	Gaziantep WSA	Maintenance and repair of damaged drinking water and sewer lines after the earthquake in İslahiye District, drinking water supply from new sources, construction of drinking water and sewage network line	DWN DWTL SN	EIA Exemption
9	Gaziantep	Gaziantep WSA	Maintenance and repair of damaged drinking water and sewer lines after the earthquake in Nurdağı District, drinking water supply from new sources, construction of drinking water and sewerage network line	DWN DWTL SN	EIA Exemption
10	Gaziantep	Gaziantep WSA	Gaziantep Yamaçtepe and Güneyşehir Drinking Water Network and Transmission Line Construction	DWN DWTL	EIA Exemption
11	Hatay	Hatay Water and Sewerage Administration (WSA)	Harbiye Drinking Water Network Supply Construction	DWTL	EIA Exemption
12	Hatay	Hatay WSA	Kırıkhan Drinking Water Network Supply Construction	DWTL	EIA Exemption
13	Hatay	Hatay WSA	Reyhanlı Wastewater Treatment Plant Capacity Increase	WWTP	EIA Exemption
14	Hatay	Hatay WSA	Reyhanlı and Kumlu Drinking Water Network Supply Construction	DWTL	EIA Exemption
15	Hatay	Hatay WSA	Samandağ Tekebaşı Group Sewerage Network Construction	SN	EIA Exemption
16	Hatay	Hatay WSA	Tekebaşı Wastewater Treatment Plant	WWTP	EIA Exemption
17	Hatay	Hatay WSA	Yayladağ Sewerage Network and Wastewater Treatment Plant	SN WWTP	EIA Exemption
18	Kilis	Kilis Municipality	Kilis Wastewater Treatment Plant and Collector	WWTP	EIA Exemption
19	Osmaniye	Osmaniye Municipality	Reconstruction of Osmaniye (Centrum) DWN and SN (Lot-3)	DWN SN	EIA Exemption
20	Osmaniye	Osmaniye Municipality	Construction of Osmaniye Yayla DWTP	DWTP	EIA Exemption
21	Şanlıurfa	Şanlıurfa Water and Sewerage Administration (WSA)	Akçakale Harran Drinking Water Transmission Line	DWTL	EIA Exemption
22	Şanlıurfa	Şanlıurfa WSA	Şanlıurfa Bozova Drinking Water Network	DWN	EIA Exemption
23	Şanlıurfa	Şanlıurfa WSA	Şanlıurfa Bozova Drinking Water Treatment Plant	DWTP	EIA Exemption
24	Şanlıurfa	Şanlıurfa WSA	Şanlıurfa Bozova Sewerage Network	SN	EIA Exemption

No	Province	Administration	Subproject	Type	Potential/Current EIA Status (based on EIA Regulation published on 29.07. 2022, Numbered 31907)
25	Şanlıurfa	Şanlıurfa WSA	Construction of Halfeti Drinking Water and Sewerage Network	DWN SN	EIA Exemption

The project beneficiaries will be municipalities, WSAs[2] and ultimately the population, both in the most affected cities, where population remained and infrastructure needs to be urgently reconstructed, as well as in less affected cities that are hosting internally displaced people. The reconstruction and recovery activities will support basic municipal infrastructure with the aim of restoring normal living conditions for 3.3 million internally displaced people and over 1.7 million Syrian refugees already living in the affected areas. In the overall affected region counting over 15 million inhabitants, the project will benefit cities with about 6 million people.

2.1. Environmental and Social Baseline

There are 161 municipalities in the 11 earthquake-affected provinces, constituting 11.6% of municipalities across the country. Of all the national total, 12.7% (124) of districts and 7.1% (1,300) of villages are situated in the region.

In the following sections, general E&S baseline relevant for the project activities have been provided considering the earthquakes-affected region.

2.1.1.Demographic Data[3]

According to Turkish Statistical Institute (TurkStat), as of 31 December 2022, the total population of the eleven earthquake-affected provinces is 14,013,496, accounting for 16.4 percent of the Türkiye's population which is 85,279,553 (Table 2). While 96.7 percent (13,553,283 persons) of the region's population live in the provincial and district centres, the rest (459,913 persons) lives in towns and villages.

21.3 percent (4,805,937 children) of the total child (aged 0-17) population in Türkiye and 2.6 million young people in the 18-29 age group, accounting for 16.7 percent of the youth population in Türkiye, live in the earthquake-affected provinces. The median age in the earthquake-affected provinces, except for Diyarbakır and Malatya, is below the national median age which is 33.5. The elderly population rate in the region is 2.5 points below that of the country.

Table 2. Composition of Population in Earthquake-Affected Provinces by Age

Province	Total	(0-14)	(15-19)	(20-24)	(25-29)	(30-64)	65+
Adana	**2,274,106**	539,247	172,934	164,262	163,743	1,022,472	211,448
Adıyaman	**635,169**	177,617	55,495	48,721	47,711	252,344	53,281
Diyarbakir	**1,804,880**	571,682	169,444	153,884	156,398	660,482	92,990
Elazig	**591,497**	125,472	44,615	48,649	43,450	265,060	64,251
Gaziantep	**2,154,051**	663,463	196,455	177,004	170,010	822,692	124,427
Hatay	**1,686,043**	445,780	140,056	125,034	117,756	719,632	137,785
Kahramanmaras	**1,177,436**	307,981	102,228	91,653	84,501	486,523	104,550
Kilis	**147,919**	40,881	13,448	14,151	11,684	55,836	11,919
Malatya	**812,580**	176,728	63,564	63,267	57,454	360,925	90,642
Osmaniye	**559,405**	140,510	46,710	41,059	38,132	241,003	51,991
Şanlıurfa	**2,170,110**	833,891	220,337	183,260	177,238	665,696	89,688
Total	**14,013,196**	**4,023,252**	**1,225,286**	**1,110,944**	**1,068,077**	**5,552,665**	**1,032,972**

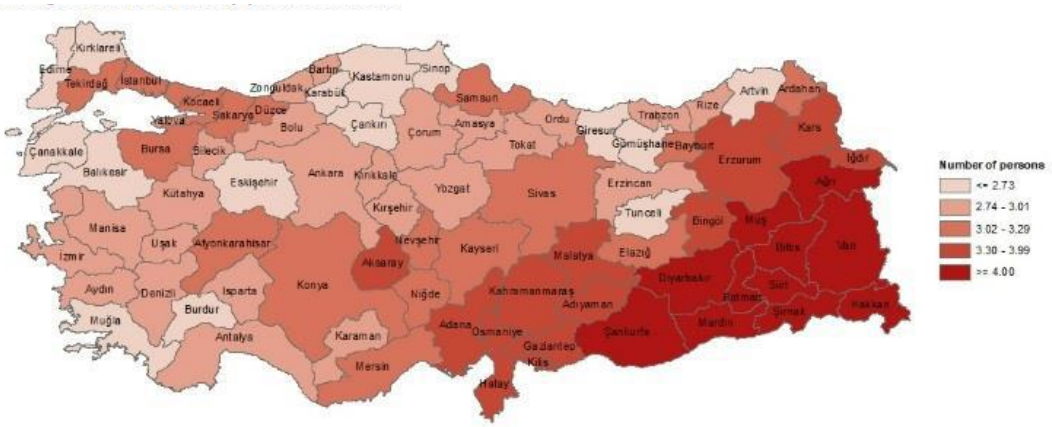
Source: TurkStat, Address Based Population Registration System, 2022

[2] Municipalities and WSAs will be referred as administrations in the text.

[3] This section is adopted from Türkiye Earthquakes Recovery and Reconstruction Assessment which can be found at https://www.sbb.gov.tr/turkiye-earthquakes-recovery-and-reconstruction-assessment/

The average household size showed a tendency to decrease in Türkiye, with a decline from 4 persons in 2008 to 3.17 persons in 2022.

Figure 2. Average household size by provinces (2022)



Source: TurkStat, Family Statistics, 2022

The number of registered persons with disability (PwDs) is 2,511,950 in the region; 1,414,643 of whom are male and 1,097,307 are female. The number of persons with severe disability is 775,012. A total of 5,252 individuals are served at the 66 PwDs and elderly care centres of the Ministry of Family and Social Services in the region.

There are approximately 3.5 million registered Syrians under Temporary Protection (SuTPs) in Türkiye. Nearly half of the total number of Syrians live in the earthquake-affected provinces; the region hosts 1,738,035 SuTPs. The ratio of Syrians to the overall population in the region is 11.48 percent. Approximately 46 percent of the Syrian population in the region is children aged 0-17, and 3 percent is elderly people over 65. There is no indigenous group in the project impact area.

Disasters also disproportionally affect women and other vulnerable groups in terms of labour force participation, unemployment, and relative asset losses, among other outcomes. In Türkiye, women's low economic participation, access to finance, emergency funds and supplies, and gender-based violence have been assessed as ongoing challenges.

The employment rate and labour force participation rate across the earthquake-affected region is lower and the unemployment rate is higher compared to the national average (Table 3). The labour force participation rate is 53.1% and employment rate is 47.5% in Türkiye; the provinces with the lowest rates of 42.5% and 37.7%, respectively, are in the TRC2 (Şanlıurfa and Diyarbakır) region. The unemployment rate in the TR63 (Hatay, Kahramanmaraş, Osmaniye) region is 14.6%, which is fairly above the national average of 10.4%.

Table 3. Main Labour Force Indicators (aged 15+, 1,000 persons)

	Population 15 years and over	Labour force	Not in labour force	Labour force participation rate	Employed	Unemployed	Unemployment rate	Employment rate
	thousand			*(%)*	*thousand*		*(%)*	*(%)*
TR62 (Adana, Mersin)	3,174	1,654	1,520	52.1	1,452	203	12.3	45.7
TR63 (Hatay, Kahramanmaraş, Osmaniye)	2,445	1,212	1,233	49.6	1,036	177	14.6	42.4
TRB1 (Malatya, Elazığ, Bingöl, Tunceli)	1,355	651	704	48.0	598	53	8.1	44.1
TRC1 (Gaziantep, Adıyaman, Kilis)	1,980	984	995	49.7	879	105	10.7	44.4
TRC2 (Şanlıurfa, Diyarbakır)	2,540	1,080	1,460	42.5	956	124	11.5	37.7
Türkiye	**64,679**	**34,334**	**30,345**	**53.1**	**30,752**	**3,582**	**10.4**	**47.5**

Note: Statistical Classification of Territorial Units Level 2 (NUTS2) classification is considered.
Source: TurkStat, Labour Force Statistics, 2022

In terms of the distribution of those in employment, the service sector appears to dominate the region (Table 4). While 15.8 of those in employment in Türkiye work in the agriculture sector, this rate reaches 28.8% in the TRC2 (Şanlıurfa, Diyarbakır) region. Thus, agriculture sector comprises significant labour force in Şanlıurfa and Diyarbakır. According to observations, the employment in the region is concentrated in jobs requiring low skills, such as the production of agriculture, trade, textile and food products.

Table 4. Employment by Sector (aged 15+)

	Thousand Person				Percentage (%)		
	Total	**Agriculture**	**Industry**	**Service**	**Agriculture**	**Industry**	**Service**
TR62 (Adana, Mersin)	1,452	246	360	846	16,9	24.8	58.2
TR63 (Hatay, Kahramanmaraş, Osmaniye)	1,036	189	259	587	18.3	25.1	56.7
TRB1 (Malatya, Elazığ, Bingöl, Tunceli)	598	168	118	312	28.2	19.7	52.1
TRC1 (Gaziantep, Adıyaman, Kilis)	879	134	296	450	15.2	33.6	51.2
TRC2 (Şanlıurfa, Diyarbakır)	956	275	223	458	28.8	23.4	47.9
Türkiye	**30,752**	**4,886**	**8,509**	**17,378**	**15.8**	**27.7**	**56.5**

Note: Statistical Classification of Territorial Units Level 2 (NUTS2) classification is considered.
Source: TurkStat, Labour Force Statistics, 2022

In the earthquake-affected region, 3,841,000 persons are employed; and the share of regional employment in national employment is 13.3% (see Table 5). Informal employment rate is 39%. Major gaps between men and women are observed in the region with regard to labour force participation and employment rates. In the provinces in the earthquake-affected region, labour force participation rate is 70.3% in men and 32.8% in women; employment rate is 62.8% and 28%, respectively; and unemployment rate is 10.7% and 14.7%, respectively. A total of 622,384 persons in the region are registered as unemployed.

Table 5. Employment by Province in Earthquake-Affected Region (2021)

	Total Employment	**Formal Employment**	**Share of Provincial Employment in Disaster Region (%)**	**Share of Provincial Employment in National Employment (%)**
Adana	690	425	18.0	2.4
Adıyaman	122	81	3.2	0.4
Diyarbakır	446	248	11.6	1.5
Elazığ	212	124	5.5	0.7
Gaziantep	712	471	18.5	2.5
Hatay	477	296	12.4	1.7
Kahramanmaraş	338	210	8.8	1.2
Kilis	38	25	1.0	0.1
Malatya	257	149	6.7	0.9
Osmaniye	142	88	3.7	0.5
Şanlıurfa	407	227	10.6	1.4
Total Region	**3,841**	**2,344**	**100**	**13.3**
Türkiye	**28,797**	**20,441**	**-**	**100**

Source: Calculations of Strategy Budget Office based on TurkStat Household Labour Force Survey

There are 3,029,422 households in the earthquake-affected region, with an average household size of 3.5 persons. Given that the average household size in Türkiye is 3.2 persons, the number of individuals in a household in earthquake-affected region is above the average value for Türkiye. There are approximately 2.5 million buildings/structures in the region. Approximately 90% of the building stock is residential/houses, 3% is public buildings, and 6% is workplaces. The share of the number of houses in the 11 affected regions in the total housing stock across Türkiye is 14.05% (5,649,317 housing units). Home ownership rate of 62.3% in the region is above the national average of 60.7%.

There are approximately 4.1 million students at all levels including higher education, and 21.4% of the students in Türkiye study in the earthquake-affected region. The region holds 21% of educational institutions and 19.1% of teachers. The schooling rate in primary education in the earthquake-affected provinces is close to the national average of 94.34%. The student per classroom across the nation is 23 while this figure goes up to 30 in Gaziantep and Şanlıurfa. Approximately 380,000 students and 45,000 academic and administrative staff carry out educational activities in 16 universities in the region. The number of students enrolled at the universities in the region account for 9% of the total number of students in Türkiye.

The 11 provinces in the earthquake-affected region boast a rich cultural heritage including civil architectural works, relic, monuments, cemeteries of martyrs, and protected streets etc. The region has an inventory of 8,500 works of cultural heritage.

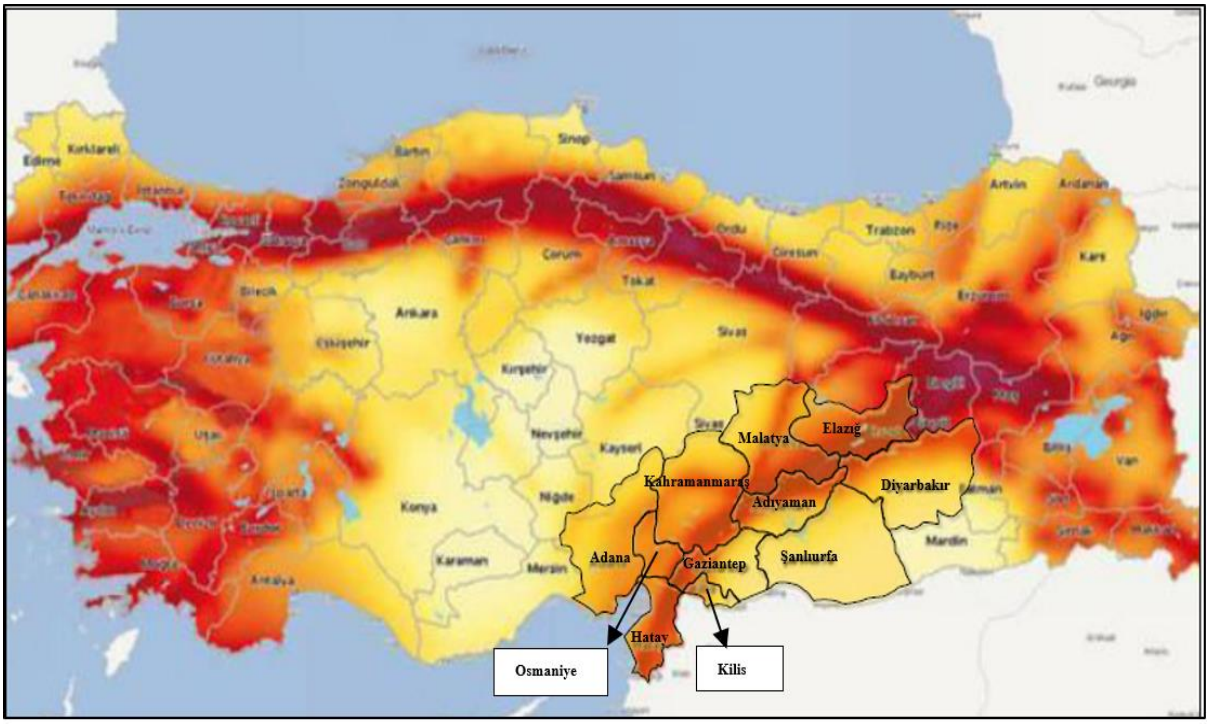
2.1.2.Seismicity

Türkiye is vulnerable to natural hazards, particularly earthquakes but also increasingly climate-related hazards, which have significant social and economic impacts and hamper the country’s ability to recover from recent multiple crises.

Türkiye is a seismically active area within the complex zone of collision between the Eurasian Plate and both the African and Arabian Plates. Much of the country lies on the Anatolian Plate, a small plate bounded by two major strike-slip fault zones, the North Anatolian Fault and the East Anatolian Fault. The western part of the country is also affected by the zone of extensional tectonics in the Aegean Sea caused by the southward migration of the Hellenic arc. The easternmost part of Türkiye lies on the western end of the Zagros fold and thrust belt, which is dominated by thrust tectonics.

Seismic risks are very critical in the country as approximately 95 percent of Türkiye's land, 70 percent of its population, 83 percent of its Gross Domestic Product and 76 percent of its industrial facilities are located near active fault lines. Figure 3 shows the most recent Türkiye Seismic Hazard Map prepared by Disaster and Emergency Management Presidency (AFAD) and earthquake-affected provinces highlighted in black. The top arc is the North Anatolian Fault Zone, extending from Van Lake to Saros Gulf, comprised of several fragmented faults. The East Anatolian Fault extends from Hatay to Bingol-Erzincan where it intersects with the North Anatolian Fault Zone. The third major fault zone of Türkiye is the West Anatolian Fault zone, made up of fragmented fault lines, generally perpendicular to the coastline.

Figure 3. Türkiye Seismic Hazard Map



Source: AFAD, 2018

According to the latest earthquake map generated by the General Directorate of Mineral Research and Exploration, among 11 provinces within the project scope, Osmaniye is at first-degree earthquake risk, while Adana, Gaziantep and Şanlıurfa are at third-degree earthquake risk. The Eastern Anatolian Fault Line runs along the border between the Anatolian Plate and the Arabian Plate. The Bitlis-Zagros Fault Line, which is located on the Iran-Iraq border and is one of the main parts of the African plate, exerts thrust on eastern Türkiye and therefore a subduction zone is realized. For this reason, Eastern Anatolia rises by a few millimetres every year. The Eastern Anatolian Fault begins at the Maraş triple joint at the northern end of the Dead Sea Depression and ends in a north-easterly direction at the Karlıova triple joint where it joins the North Anatolian Fault. The Eastern Anatolian Fault continues to Hatay, Osmaniye, Gaziantep, Kahramanmaraş, Adıyaman, Elazığ, Bingöl, Muş and then merges with the North Anatolian Fault in Erzincan.

On February 6, 2023, two earthquakes of magnitude 7.8 and 7.5[4] hit southeast Türkiye and Syria; these were followed by thousands of aftershocks, and another earthquake of magnitude 6.7[5] on February 20, 2023. The epicentres of the first two earthquakes were in Kahramanmaraş Province with neighbouring provinces of Adana, Adıyaman, Diyarbakır, Elazığ, Gaziantep, Hatay, Kilis, Malatya, Osmaniye, and Şanlıurfa[6] (the earthquake-affected provinces/region) all suffering damages. The epicentre of the third earthquake was in Hatay causing further damage to the region. According to official statistics, the earthquakes resulted in over 50,000 casualties, 107,000 people injured including many disabled, 1.9 million housing units damaged or destroyed, 3.3 million people displaced, and almost 2 million in need of shelter in camps and container settlements. Critical sectors such as housing, municipal services, transportation, healthcare, education, agriculture, and energy were greatly affected. The eleven affected provinces have an area of about 110,000 square kilometres (equivalent in size to the Republic of Korea and larger than many European countries), was home to 14 million Turkish citizens (16.4 percent of the

[4] Based on figures from the United States Geological Survey Earthquake Catalog (https://earthquake.usgs.gov/earthquakes/search/). Boğaziçi University Kandilli Observatory and Earthquake Research Institute estimated magnitudes as 7.7 and 7.6.
[5] Based on figures from the United States Geological Survey Earthquake Catalog (https://earthquake.usgs.gov/earthquakes/search/).
[6] Ten of these provinces were declared as "disaster areas affecting normal life" on February 7, 2023, and Elazığ Province was declared as "disaster area affecting normal life" on February 15, 2023, by AFAD. In addition, AFAD declared Gürün District of Sivas Province and neighboring districts in Bingöl, Kayseri, Mardin, Tunceli, Niğde and Batman Provinces that contain damaged buildings due to the February earthquakes as "disaster areas affecting normal life" on February 21 and April 3, 2023, respectively.

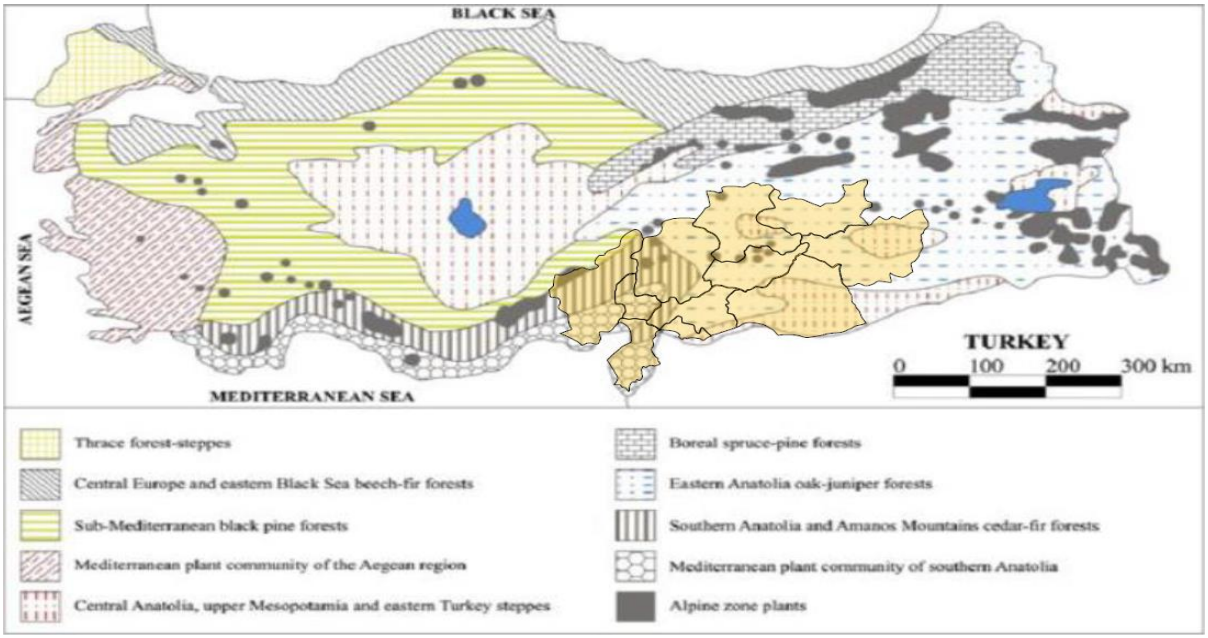
country's population) and 1.8 million SuTPs[7], and accounted for 9.4 percent of Turkish gross domestic product and 8.6 percent of exports in 2022. Income per capita in these provinces lags behind the rest of the country, and poverty rates are higher[8]. The average household income in the earthquake region was only about 30 percent that of an average family in Istanbul in 2019.

2.1.3. Biodiversity

Türkiye is a key country for global biodiversity conservation as a result of its location at the junction of three continents as well as Anatolia's complex topography and geomorphology. These geographical features account for a great variety of habitats and species, and, particularly, for an exceptionally rich flora. The global map of biodiversity hotspots gives perhaps the best insight into Türkiye's global importance for conservation.

Three of the seven biogeographical regions in the world (Mediterranean, Euro-Siberian and Iran-Turanian) are located in Türkiye (Figure 4). Each biogeographic region has its unique ecosystems. To understand the richness of Türkiye in terms of plant (flora) species, it will be sufficient to compare it with the European continent: While there are 12500 gymnosperm and angiosperm plant species in the whole European continent, it is known that there are close to this number (about 11707) in Anatolia alone. Approximately one-third of these are endemic species to Türkiye. In earthquake-affected region, there are four different Phytogeographical Regions; (1) Southern Anatolia& Amanos Mountains cedar-fir forests, (2) Mediterranean plant community of southern Anatolia, (3) Eastern Anatolia oak-juniper forests and (4) Central Anatolia, upper Mesopotamia eastern Türkiye steppes.

Figure 4. Phytogeographical Regions



Source: https://www.sciencedirect.com/science/article/abs/pii/S0006320711002527

In Türkiye, out of 10,214 species of eight taxonomic groups assessed, 2312 species were identified as trigger species for one or more Key Biodiversity Areas (KBA) criteria based on redlist.org and regional inventories such as Ekim et al. (2000). These include 2096 plant, 73 freshwater fish, 35 bird, 33 reptiles, 12 amphibians, 29 mammal, 26 butterfly and eight dragonfly species. Among eight taxonomic groups, amphibians have the highest proportion of KBA trigger species (40%), followed by freshwater fish (36.5%), reptiles (27.5%) and plants (23.6%).

Endemic species have a higher coverage of KBA criteria. Out of the 3,334 endemic species in Türkiye assessed, 2152 triggered one or more KBA criteria. Endemics having a wide distribution and facing lower threats did not meet the KBA criteria. Plants have the highest representation under the restricted range species criterion (91% of all trigger species) due to their beta diversity and fine-grained distribution pattern. The endemic species and the information regarding the KBAs are given in Figure 5 and Figure 6**.**

[7] https://www.goc.gov.tr/gecici-koruma5638, February 2, 2023

Figure 5. Distribution of the population of endemic plant species

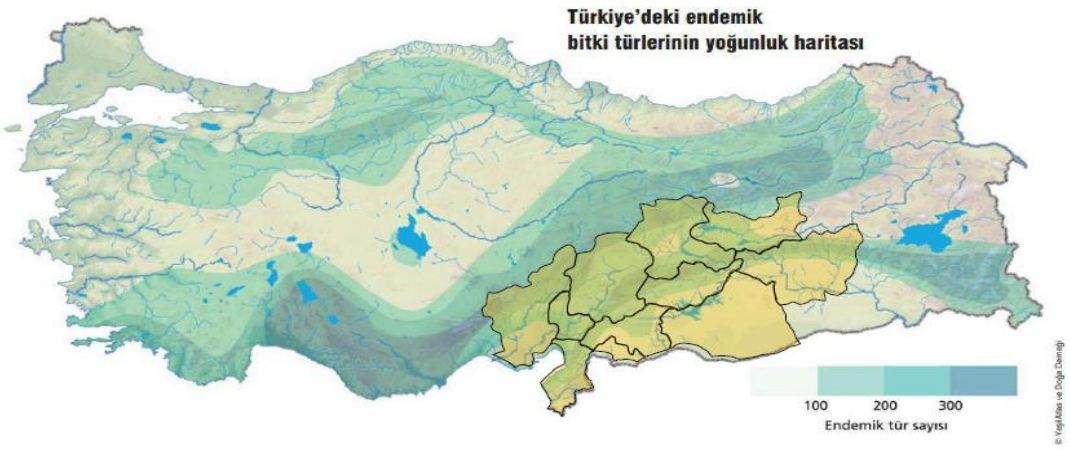
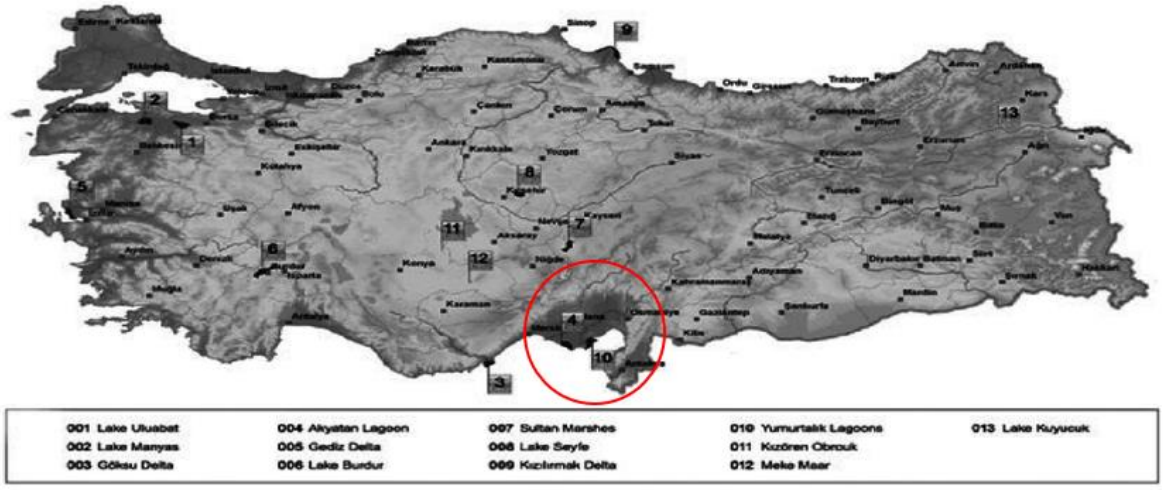


Figure 6. Key Biodiversity and Protected Areas

There are wetlands defined under the Ramsar Convention in Türkiye, shown in Figure 7. Among the Ramsar Wetland Areas, only number 4 (Akyatan Lagoon-Adana) and 10 (Yumurtalık Lagoon-Adana) are in the earthquake region (Figure 7).

Figure 7. Ramsar wetland areas



Source:
https://www.researchgate.net/publication/228675827_Wetland_Management_in_Turkey_Problems_Achievements_and_Perspectives

2.1.4. Water Resources and Consumption

Türkiye is one of the most water-rich countries of the Mediterranean, but due to a high population increase in the 2000s, the availability of water resources has decreased from around 4,000 m^3 to 1,500 m^3 per capita/year today. The annual average precipitation in Türkiye is approximately 574 mm, which equates to about 450 billion cubic meters (bcm) of water. Surface water potential averages 94 B bcm/yr. Türkiye's total water potential (surface and groundwater) is 112 bcm/yr and 57 bcm of this amount is utilized.

Türkiye is divided into 25 hydrological basins with different catchment sizes and a wide range of annual precipitation, evaporation, and surface runoff variables. Figure 8 shows the 25 hydrological basins in Türkiye together with highlighted earthquake-affected provinces.

Figure 8. Water Basins of Türkiye

The earthquake-affected region is located among Seyhan, Ceyhan, Asi ve Dicle-Fırat basin. The most important river in Hatay province is the Asi River, which originates from the Bekaa Valley in Lebanon. The total length of the river is 556 km and its catchment area is 20,847 km², spread over three countries (Türkiye, Syria, Lebanon). Other important streams are Küçükkaraçay, Büyükkaraçay Afrin and Karasu streams, which are tributaries of the Asi River[9].

The Euphrates Basin is the largest basin in Türkiye. The catchment area of the basin is around 127,000 km^2 and the average annual water volume exceeds 28 billion m^3. The most important rivers covering 1,700,000 hectares of this area are Tohma water, Kuruçay, Euphrates River and Sürgü Stream[10]. The Euphrates is also the most important river of Malatya, Elazığ and Adıyaman provinces and separates the provinces of Şanlıurfa, Gaziantep and Adıyaman.

The Ceyhan River is one of the most important rivers in Türkiye. Together with the Seyhan River, it feeds the lands of Adana and Kahramanmaraş and is the source of life in Çukurova. Its length is 509 km. 75 km of the Ceyhan River passes through the province of Osmaniye.

According to studies carried out by the General Directorate of Nature Conservation and National Parks, Türkiye has 320 natural lakes.

In the earthquake region; Hazar Lake, which is 30 km from the centre of Elazığ and has a surface area of 86 km^2, is the 14th largest lake in Türkiye. After the drying of Lake Amik, there are no large natural lakes left in Hatay.

[9] http://www.hatay.gov.tr/sosyal-ve-cografi-durum#:~:text=Bal%C4%B1k%20(G%C3%B6lba%C5%9F%C4%B1)%20G%C3%B6l%C3%BC%20ve%20Yeni%C5%9Fehir,Reyhanl%C4%B1%20Hamamat%20kapl%C4%B1cas%C4%B1%20dikkat%20%C3%A7eker

[10] http://www.malatya.gov.tr/cografi-konum

Small lakes such as Lake Balık (Gölbaşı) and Lake Yenişehir continue to exist today. There are also Yarseli and Yayladağı dam lakes. Gölbaşı, İnekli, Azaplı and Abdulharap natural lakes are located in Adıyaman. Atatürk Dam artificial pond, which is the largest dam in Türkiye and Europe is also within the borders of Adıyaman province. Balıklı Lake, Edene and Büyük Lakes are located within the borders of Şanlıurfa and Atatürk Dam is the most important source of irrigation for the Harran plain in Şanlıurfa.

Groundwater potential averages 18 bcm; 11.21 bcm is used as agricultural irrigation (individual irrigation, public, and cooperatives), 1.49 bcm as industrial water, and 3.92 bcm as drinking water. There were 369,054 certified wells as of the end of 2019. Water demand in Türkiye approximately doubled in the second half of the last century. The overall water demand in Türkiye continues to increase, even more in light of the effects of drought (or climate change).

According to TurkStat forecasts, Türkiye's population will reach approximately 90 million in 2030, and accessible water will decrease from 1,404 m^3/capita/year to 1,244 m^3/capita/year. If Türkiye's per capita per year water potential were to fall below 1,000 m^3, the country would be considered 'water scarce' and measures to ensure more efficient use of water resources would be needed. As in Türkiye in general, the earthquake region will also be affected by these negative developments in terms of access to water resources.

Türkiye's annual water consumption is 54 bcm, equivalent to 48.2% of the country's overall water potential in 2016, 40 bcm (74%) of this was used for irrigation, 7 bcm (13%) for drinking water, and 7 bcm (13%) for industrial purposes. By 2023, the amount of water used for irrigation is expected to fall to 64%, while the share used for industrial purposes will rise to 20%. In 2023, overall water consumption is expected to reach 112 bcm.

2.1.5. Waste Management

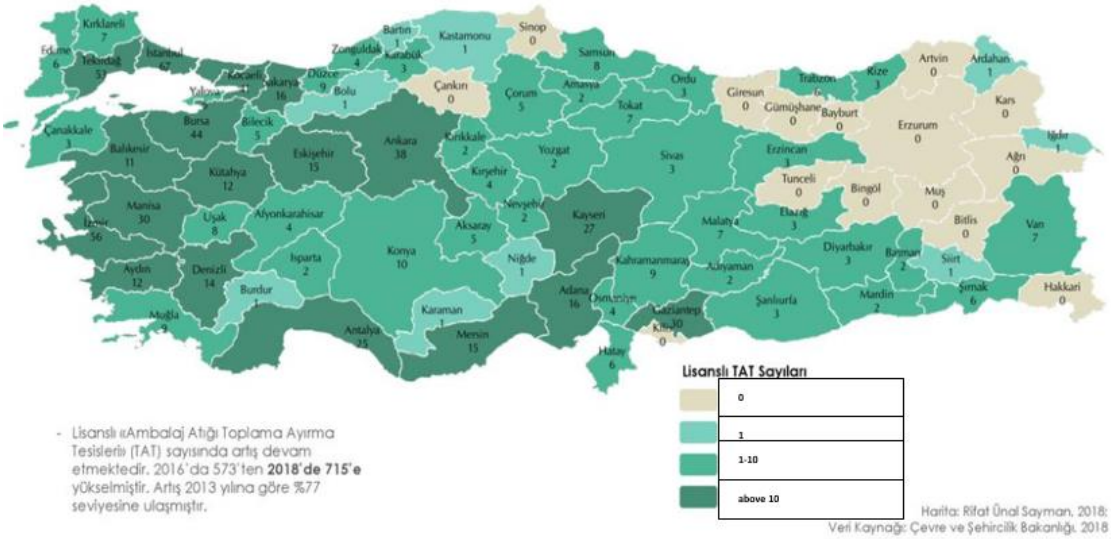
The increase in solid waste production has started to become one of the major environmental problems in parallel with the rapid population increase, developing industrialization and changes in the social and economic status of society, and unplanned urbanization in Türkiye. Türkiye regardless employs several waste management practices including sanitary landfills, incineration (only for hazardous waste), sterilization, composting, and other advanced disposal methods such as pyrolysis, gasification as well as plasma. The most common method of waste disposal in the country, especially for municipal waste, is landfilling. The municipal waste is collected on a regularly scheduled basis. The metropolitan municipality and other municipalities are responsible for providing collection, transportation, separation, recycling, disposal, and storage of waste services.

Turkish Statistical Institute compiles data from all municipalities, manufacturing industry establishments having 50 or more employees, all active thermal power plants having an installed capacity of 100 MW or more, all organized industrial zone directorates having completed their infrastructures, from mining establishments, submitted production data for the reference year to General Directorate of Mining and Petroleum Affairs, from all waste disposal and recovery facilities having a license or a temporary license, and, regardless of license, to controlled landfill sites, incineration plants and composting plants operated by or on behalf of municipalities.

Medical waste data of health institutions, including in *Annex I* of the Regulation on the Control of Medical Waste, covers universities, general purpose and maternity hospitals, and clinics that generate large amounts of waste and were obtained from the administrative records of the Ministry of Environment, Urbanization, and Climate Change.

The total amount of waste generated in 2022 in Türkiye was calculated as 30,283,757 ton. The distribution of this waste according to the provinces in the earthquake region and disposal methods is given in Table 6.

Figure 9. Density of Mechanical Sorting Plants in Türkiye



When the data covering the post-earthquake period are analysed, it is seen that there is an increase of daily waste in some of the earthquake cities because of unregistered population. However, the existing capacity makes it difficult to provide the service at the desired level and it has become obligatory to increase the capacity of existing waste collection sites as well as waste collection and transfer works. In addition, due to thousands of building debris resulting from the earthquake, it has become difficult to provide these environmental services at the desired level.

Table 6 shows the total amount of waste and the disposal methods in the earthquake provinces. However, these values provide information for the pre-earthquake period. After the earthquake, deaths, migrations and demolishing waste, which made these values dynamic and caused them to change, and no precise and clear numbers are not available for the waste generation.

Table 6. Amount of waste generation and disposal methods in earthquake affected cities

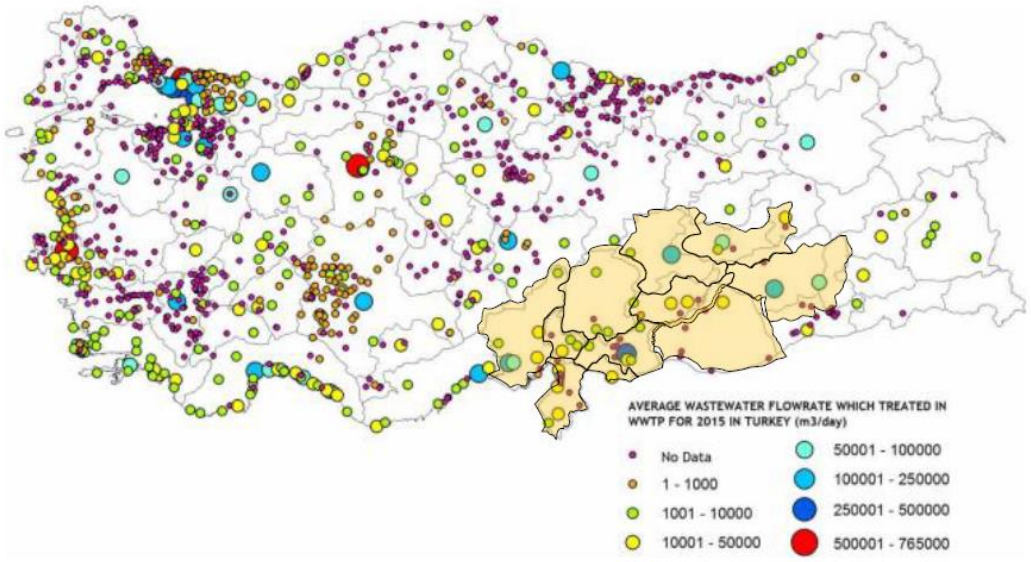
Province	Total number of municipalities providing waste services	Total amount of waste collected (tonnes)	Municipality's dumping sites		Waste treatment facilities [1]		Other disposal methods[2]	
			Number of municipalities	*Amount of waste (tonnes)*	*Number of municipalities*	*Amount of waste (tonnes)*	*Number of municipalities*	*Amount of waste (tonnes)*
Türkiye	**1389**	**30 283 757**	**553**	**4 092 721**	**1 002**	**26 016 988**	**49**	**174 048**
Adana	16	**665 695**	0	0	16	663 895	1	1 800
Adıyaman	22	**179 724**	22	178 453	2	1 271	0	0
Diyarbakır	18	**739 224**	17	703 118	16	22 606	1	13 500
Elazığ	20	**170 209**	17	37 460	4	132 749	0	0
Gaziantep	10	**682 796**	0	0	9	682 796	0	0
Hatay	16	**826 861**	0	0	15	826 840	1	21
Malatya	14	**221 315**	7	34 015	7	187 300	0	0
Kahramanmaraş	12	**405 167**	5	129 320	10	275 847	0	0
Kilis	4	**81 555**	2	3 490	3	78 065	0	0
Şanlıurfa	14	**513 421**	4	88 729	10	424 692	0	0
Osmaniye	14	**131 002**	0	0	14	131 002	0	0

Source: TurkStat, Waste Statistics, 2022

2.1.6. Waste Water Management

According to the Determination of the Current Status of Domestic/Urban WWTPs and Need for Revision, project carried out by MoEUCC in 2016, daily treated waste water in Türkiye was 10.5 million m^3 and 82.9% of it was generated by municipalities. This value was increased to 85% in 2018. The target was set to be 100% in 2023, and that's why most of the municipalities are going through the design and construction of domestic/municipal WWTPs depending on the population and type of waste water generated. The amount of domestic/municipal waste water treated in Türkiye is shown on the map given in Figure 10**.**

Figure 10. Amount of Domestic/Municipal Waste Water Treated in Türkiye[11]



According to the Organization for Economic Co-operation and Development (OECD), significant effort has been made to increase the waste water collection network for metropolitan cities. Between 2006 and 2014, 4800 people were connected to a sewer network with 6,850 people additionally. This progress was made with technical and financial support obtained from national and international funds. But still, the ratio of population connected to secondary or tertiary treatment is still lowest among other OECD member countries.

In terms of sludge treatment, biogas production using anaerobic digestion in addition to composting or reuse in agricultural lands are the main common practices in Türkiye. There also exist some small-scale innovative practices.

The type, number of WWTPs and their capacities in the earthquake affected provinces are given in Table 7**.**

[11] Nas B., Uyanık S., Aygün A., Doğan S., Erul G., Nas B. K., Turgut S., Cop M and Dolu T., "Waste Water Reuse in Türkiye: from present status to future potential", Water Supply, 20:1, 2020.

Table 7. Municipal WWTPs and Their Capacities in the Earthquake Affected Provinces

Province	Number of Municipalities	Total Treatment Plants			Physical Treatment Plants			Biological Treatment Plants			Advanced Treatment Plants			Natural Treatment Plants		
		#	Capacity	Amount of waste water treated	#	Capacity	Amount of waste water treated	#	Capacity	Amount of waste water treated	#	Capacity	Amount of waste water treated	#	Capacity	Amount of waste water treated
Adana	16	73	157,970	103,519	0	0	0	8	139,588	92,430	3	16,965	9,708	62	1,416	1,381
Adıyaman	23	6	14,062	9,979	0	0	0	2	1,759	1,940	1	11,975	8,001	3	329	38
Diyarbakır	18	3	64,173	22,682	1	73	10	1	546	148	1	63,554	22,524	0	0	0
Elazığ	20	2	38,825	25,675	0	0	0	1	38,325	25,550	1	500	125	0	0	0
Gaziantep	10	23	184,177	132,829	0	0	0	21	162,277	118,229	2	21,900	14,600	0	0	0
Hatay	16	15	69,788	56,400	0	0	0	6	15,633	14,607	9	54,155	41,793	0	0	0
Malatya	14	8	52,207	41,790	0	0	0	3	569	509	5	51,638	41,281	0	0	0
Kahramanmaraş	12	4	63,964	48,158	0	0	0	0	0	0	4	63,964	48,158	0	0	0
Şanlıurfa	14	5	65,071	51,852	0	0	0	4	64,141	51,269	1	930	583	0	0	0
Kilis	4	1	10,950	3,855	0	0	0	0	0	0	1	10,950	3,855	0	0	0
Osmaniye	14	4	39,424	12,564	0	0	0	2	35,329	9,447	2	4,095	3,118	0	0	0

Unit: Thousand m^3
Source: TurkStat, Water and Waste Water Statistics, 2022

3. POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS

The potential activities to be implemented within the scope of the Project are:

- Rehabilitation, modernisation and extension/new construction of water supply infrastructure, such as water intakes, water treatment plants, raw or treated water transmission mains, water supply networks including pumping stations and house connections, bulk and consumer metering, energy efficiency measures.
- Rehabilitation, modernisation, and extension/new construction of waste water collection and treatment infrastructure, such as sewer networks including house connections and pumping stations, WWTPs.
- Rehabilitation, modernisation and extension/new construction of storm water systems and emergency flood protection measures.
- Supply of specialized maintenance equipment.

Summary of Potential Environmental Impacts

The subprojects are expected to have minor negative impacts during construction and minor residual impacts during the operational phase. Most subprojects will be located in urban environments, on the existing main routes of water mains and sewers and/ or within the perimeter of existing facilities. According to the preliminary information, subprojects are not likely to have negative impacts on nature conservation areas. Nevertheless, compliance with the National Biodiversity and Habitats Legislation and its alignment with the EU Habitats and Birds Directives (92/43/EEC, 2009/147/EC) and EIB E&S Standards will be further checked during assessment of individual subprojects, before allocation.

It is expected overall, that the operation will have positive impacts, specially from pollution prevention in water bodies through improved or new WWTPs, savings in water through improvement in efficiency of the new and rehabilitated networks and GHG savings also through WWTPs. The Project is considered Paris Aligned and compliant with the EIB Climate Road Map.

Summary of Potential Social Impacts

Based on the preliminary information, the potential subprojects are not likely to trigger any large land acquisition and/or any permanent physical and/or economic displacement. Works will be kept as much as possible along the existing rights of way (for buried assets) and within the perimeters of existing facilities. All subprojects are expected to have a positive impact on the living conditions of the inhabitants. In addition, the investment will provide job opportunities during the works phase.

Compliance with EIB's standards will be further checked during assessment of individual schemes, before their allocation to subprojects under the Project.

Potential Environmental and Social Impacts

The potential E&S risks and impacts of the subprojects is given in Table 8. As described in Section 4, the subprojects will be subject to national Environmental Impact Assessment (EIA) regulation and EU EIA Directive. However, whether they are within the scope of these legislations or not they will be screened against the EIB E&S standards and respective management and action plans will be prepared and implemented to ensure the compliance of the Project with respect to these standards (see Section 5). Therefore, for all construction activities, the E&S Screening will be used to identify and assess potential E&S risks and impacts, and the mitigation measures described in general ESMP (Annex-2) will be adopted before signing of the construction contract and implemented during the construction works.

The potential adverse risks and impacts, and the generic mitigation measures that will be implemented during planning, construction and post construction phases are summarized in Table 8.

Table 8. Environmental and Social Risks and Mitigation Measures

Risks & Impacts	Description	Mitigation Measures
E&S management	Improper E&S management of subproject activities, failure to implement subprojects in accordance with the EIB E&S standards mainly due insufficient	Apply the mitigation measures described in ref. 1.1 of the general ESMP presented in Annex-2.

Risks & Impacts	Description	Mitigation Measures
	E&S capacity of contractors and supervision consultants.	
Permits		
Air quality	Dust emissions from construction activities (earthworks, increased road traffic and storage of dusty materials and etc.)	Apply general ESMP presented in Annex-2 Prepare and implement **Air Quality Management Plan** in line with national and EU legislation and EIB Standard-3 on Resource Efficiency and Pollution Prevention.
Vehicles exhausts	Emissions from construction machinery and vehicles	Apply general ESMP presented in Annex-2 Prepare and implement **Air Quality Management Plan** in line with national and EU legislation and EIB Standard-3 on Resource Efficiency and Pollution Prevention.
Noise	Noise levels due to operation of construction machinery and equipment	Apply general ESMP presented in Annex-2 Prepare and implement **Noise Management Plan** in line with national and EU legislation and EIB Standard-3 on Resource Efficiency and Pollution Prevention.
Waste management (including transportation of waste)	Wastes during land preparation, construction and ancillary facilities (offices, accommodation facilities)	Apply general ESMP presented in Annex-2 Prepare and implement **Waste Management Plan** in line with national and EU legislation and EIB Standard-3 (including municipal, hazardous and non-hazardous wastes) on Resource Efficiency and Pollution Prevention.
Asbestos	Disassembly, transport and disposal of asbestos pipes during excavation	Apply general ESMP presented in Annex-2 Prepare and implement **Asbestos Management Plan** in line with the national and EU legislation and EIB Standard-3 on Resource Efficiency and Pollution Prevention.
Topsoil loss, deposit of excavated soil, erosion, landslides or sedimentation	Majority of network and transmission/collector lines pass through stabilized or asphalted roads where no topsoil exists. There is a possibility in newly constructed facilities if constructed in other areas such as water reservoir, pumping stations treatment plants. If topsoil exists, topsoil stripping, spreading for reinstatement and use of excess topsoil, protection from vehicle movement, mixing and spreading and washing away by the physical forces of water and wind	Apply general ESMP presented in Annex-2 Prepare and implement **Soil Management Plan** in line with the national and EU legislation and EIB Standard-3 on Resource Efficiency and Pollution Prevention.
Spill outs of fuel, lubricant, antifreeze etc. may result in contamination	Contamination of soil in the event of chemical i.e., oil, fuel leakage due to accidents or faults of vehicles during construction works	Apply general ESMP presented in Annex-2 Prepare and implement **Soil Management Plan** in line with the national and EU legislation and EIB Standard-3 on Resource Efficiency and Pollution Prevention.
Water quality and domestic waste water generation	Contamination of water resources due to discharge without any treatment. Contamination of the water resources is a risk with the possibility of a chemical leak at the vicinity of a watercourse	Apply general ESMP presented in Annex-2 Prepare and implement **Water Resources and Waste Water Management Plan** in line with national and EU legislation and EIB Standard-3 on Resource Efficiency and Pollution Prevention.
Sexual Exploitation and Abuse (SEA)/	Labour influx may lead to an increase in SEA/SH risks among the host community. SEA/SH incidents might also happen among the Project workers.	Apply general ESMP presented in Annex-2 Develop **SEA/SH Prevention and Response Action Plan** in line with national and EU legislation and EIB

Risks & Impacts	Description	Mitigation Measures
Sexual Harassment (SH)		Standard-7 on Vulnerable Groups, Indigenous Peoples and Gender for the subprojects with high SEA/SH risks.
Non-compliances related to working conditions	Inoperative Workers' Grievance Mechanism, inadequate accommodation conditions, use of forced and/or child labour, discrimination and inequal treatment and opportunity of workers, especially vulnerable workers, gender inequalities.	Apply general ESMP presented in Annex-2 Implement **Labour Management Policies and Procedures**, and establish and operate **Workers' Grievance Mechanism** in line with national and EU legislation and EIB Standard-8 on Labour Rights.
Occupational Health and Safety	The construction phase of the Project includes excavation, backfilling and the use of heavy-duty vehicles. Vehicular movements can cause accidents resulting in injuries and death. Occupational Health and Safety (OHS) risk might arise due to risk of pollution, emission of dust and generation of noise during the site preparation and construction works.	Apply general ESMP presented in Annex-2 Implement **Health and Safety Management Plan (HSMP)** in line with national and EU legislation and EIB Standard-9 on Health, Safety and Security.
Community health and safety	Risks may arise from inadvertent or intentional trespassing, including potential contact with hazardous materials, contaminated soils and other environmental media, or excavations and structures which may pose falling and entrapment hazards.	Apply general ESMP presented in Annex-2 Implement **Health and Safety Management Plan (HSMP)** in line with national and EU legislation and EIB Standard-9 on Health, Safety and Security and establish and operate **Grievance Mechanism** in line with EIB Standard-2 on Stakeholder Engagement.
Interruptions in transport and Transport Safety	Construction activities may result in a significant increase in movement of heavy vehicles for the transport of construction materials and equipment increasing the risk of traffic-related accidents and injuries to workers and local communities.	Apply general ESMP presented in Annex-2 Implement **Traffic Management Plan** when the activities will be carried out at publicly accessible sites in line with national and EU legislation and EIB Standard-9 on Health, Safety and Security.
Damages and interruptions to public services	Periodic interruptions in water supply, gas, electricity and telecom services to neighbouring population; Damage to road cover	Apply general ESMP presented in Annex-2 Establish and operate **Grievance Mechanism** in line with EIB Standard-2 on Stakeholder Engagement.
Involuntary resettlement	Subproject-related land acquisition or restrictions on land use may cause physical displacement (relocation, loss of residential land, or loss of shelter), economic displacement (loss of land, assets, or access to assets leading to loss of income sources or other means of livelihood), or both.	Apply general ESMP presented in Annex-2 Implement Resettlement Plan for subprojects leading to physical displacement or Livelihood Restoration Plan for subprojects leading to economic displacement, in line with national and EU legislation and EIB Standard-6 on Involuntary Resettlement.
Damage to trees and destruction of vegetation	Negative impacts on tress and species of trees, scrub, flora and fauna features during site clearing/preconstruction activities. Disposal of waste or chemicals and loss of topsoil and disturbed features by high dust and noise emissions	Apply general ESMP presented in Annex-2 Implement **Biodiversity Management Plan**—if required, in line with national and EU legislation and EIB Standard-4 Biodiversity and Ecosystems.
Vulnerable groups or individuals	Exclusion of vulnerable groups or individuals from stakeholder engagement process Vulnerable groups or individuals can be disproportionately affected by project-related risks and impacts, and have limited access to project benefits.	Follow the relevant measures the **Stakeholder Engagement Plan (SEP)** prepared for the Project. Ensure that assessments and provisions for vulnerable groups are incorporated into applicable E&S plans, including project-level ESMP, RAP/LRP and SEP.
Cultural heritage and chance finds	During construction works previously unknown cultural heritage might be encountered and damaged.	Apply general ESMP presented in Annex-2 Implement **Chance Finds Procedure** presented in Annex-3 of this ESMF.

4. LEGAL AND INSTITUTIONAL FRAMEWORK

4.1. Legal Framework of Türkiye

Main national legislation that are relevant and directly applicable to the E&S risks and impacts of project activities are given in Table 9.

Table 9. Legal Framework of Türkiye

Law	Description
Environmental Law (Nº 2872)	It aims to ensure that the environment, which is the common existence of all living things, is protected in line with the principles of sustainable environment and sustainable development. It includes measures and prohibitions regarding the protection of environment including the prohibition of pollution, protection of the environment, environmental impact assessment (EIA), obligation to obtaining permits, treatment and dispose, audit, obligation to inform and notify, hazardous chemicals and waste, noise, and suspension of activities. Since there will be construction activities, this legislation is relevant to assess whether national EIA is required or not, obtain construction permits, set monitoring thresholds, manage both hazardous and non-hazardous waste.
Labour Law (Nº 4857)	The purpose of this Law is to regulate the rights and responsibilities of employers and workers employed based on an employment contract regarding working conditions and working environment. The law contains provisions regarding the principle of equal treatment, employment contract, types and termination, wages and payment of wages, wage cutting penalty, overwork, working on holidays, wages on holidays, annual paid leaves, working hours, compensation work, break rest, working age and prohibition of employing children, and work and breastfeeding leave during maternity. Since there will be project workers, this legislation is relevant.
Occupational Health and Safety (Nº 6331)	The purpose of this Law is to regulate the duties, powers, responsibilities, rights and obligations of employers and employees in order to ensure occupational health and safety (OHS) in workplaces and to improve existing health and safety conditions. The law contains provisions regarding the general liability of the Employer. The law contains provisions regarding the general liability of the employer, principles of protection from risks, OHS services, supporting OHS services, occupational physicians and occupational safety experts, determining the hazard class, risk assessment, control, measurement and research, emergency plans, firefighting and first aid, evacuation, the right to refrain from working, registration and notification of work accidents and occupational diseases, health surveillance, informing employees, training of employees, obtaining employees' opinions and ensuring their participation, obligations of employees, and employee representative. Since there will be activities which includes OHS risks, this legislation is relevant.
Unions and Collective Bargaining Law (Nº 6356)	It provides the procedures and principles regarding the establishment, management, operation, supervision, working and organization of worker and employer unions and confederations; and to enable workers and employers to conclude collective bargaining agreements to determine their mutual economic and social situations and working conditions, to resolve disputes by peaceful means, and to resort to strikes and lockouts. Since there will be project workers, this legislation is relevant.
Expropriation Law (Nº 2942)	This Law covers the procedures to be carried out in the expropriation of immovable properties owned by real and private law legal entities by the State and public legal entities in cases where public interest requires, and regulates the procedures and methods of resolving disputes regarding the calculation of the expropriation fee, registration of immovable property and easement rights in the name of the administration, retrieval of unused immovable property, transfer of immovable properties between administrations and mutual rights and obligations. Since the design and footprint of the subprojects have not been determined during the preparation of this document, there might be land acquisition for the some of the activities. Therefore, this legislation is relevant.
Zoning Law (Nº 3194)	This Law has been regulated to ensure the formation of settlements and structures in settlements in accordance with planning, scientific, health and environmental conditions. The law also contains provisions regarding land readjustment (pooling), therefore it is relevant.
Cultural and Natural Assets	The purpose of this Law is to determine the definitions of movable and immovable cultural and natural assets that need to be protected and to regulate the transactions and activities to be carried out. The law

Law	Description
Protection Law (Nº 2863)	contains provisions regarding the notification of chance finds, and immovable and movable cultural and natural assets requiring protection. In case chance finds are encountered during construction, this legislation will be relevant.
Right to Acquire Information Law (Nº 4982)	The objective of this law is to regulate the procedure and the basis of the right to information according to the principles of equality, impartiality and openness that are the necessities of a democratic and transparent government. The law contains provisions on the right to information, the obligation to provide information, access times to information or documents, etc. This legislation is one of the legislations that provide basis for GM. Therefore, this legislation is relevant.

4.1.1. International Treaties and Agreements

The main international treaties and agreements that Türkiye ratified and are related to the Project are given in the following paragraphs.

International Treaties and Agreements related to Environment

- United Nations Framework Convention on Climate Change, Kyoto Protocol and Paris Convention
- Vienna Convention and Montreal Protocol for the Protection of the Ozone Layer
- The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal
- Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade
- Stockholm Convention on Persistent Organic Pollutants (POPs)
- Minamata Convention on Mercury

International Treaties and Agreements related to Culture and Heritage

- European Convention on the Protection of the Archaeological Heritage
- Convention for the Protection of the Architectural Heritage of Europe
- Convention Concerning the Protection of the World Cultural and Natural Heritage
- The UNESCO 1970 Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
- Convention on Wetlands of International Importance Especially as Waterfowl Habitat (the Ramsar Convention)
- The International Convention on the Protection of Birds
- International Council on Monuments and Sites (ICOMOS) Turkiye National Committee
- The Council of Europe's Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention)
- Convention on Biological Diversity
- Convention for the Safeguarding of the Intangible Cultural Heritage

International Treaties and Agreements related to Occupational Health and Safety and Labour Rights

Türkiye ratified all of the below ten fundamental conventions of International Labour Organization (ILO) and incorporated them into the national legislation which are briefly described in the subsequent paragraphs:

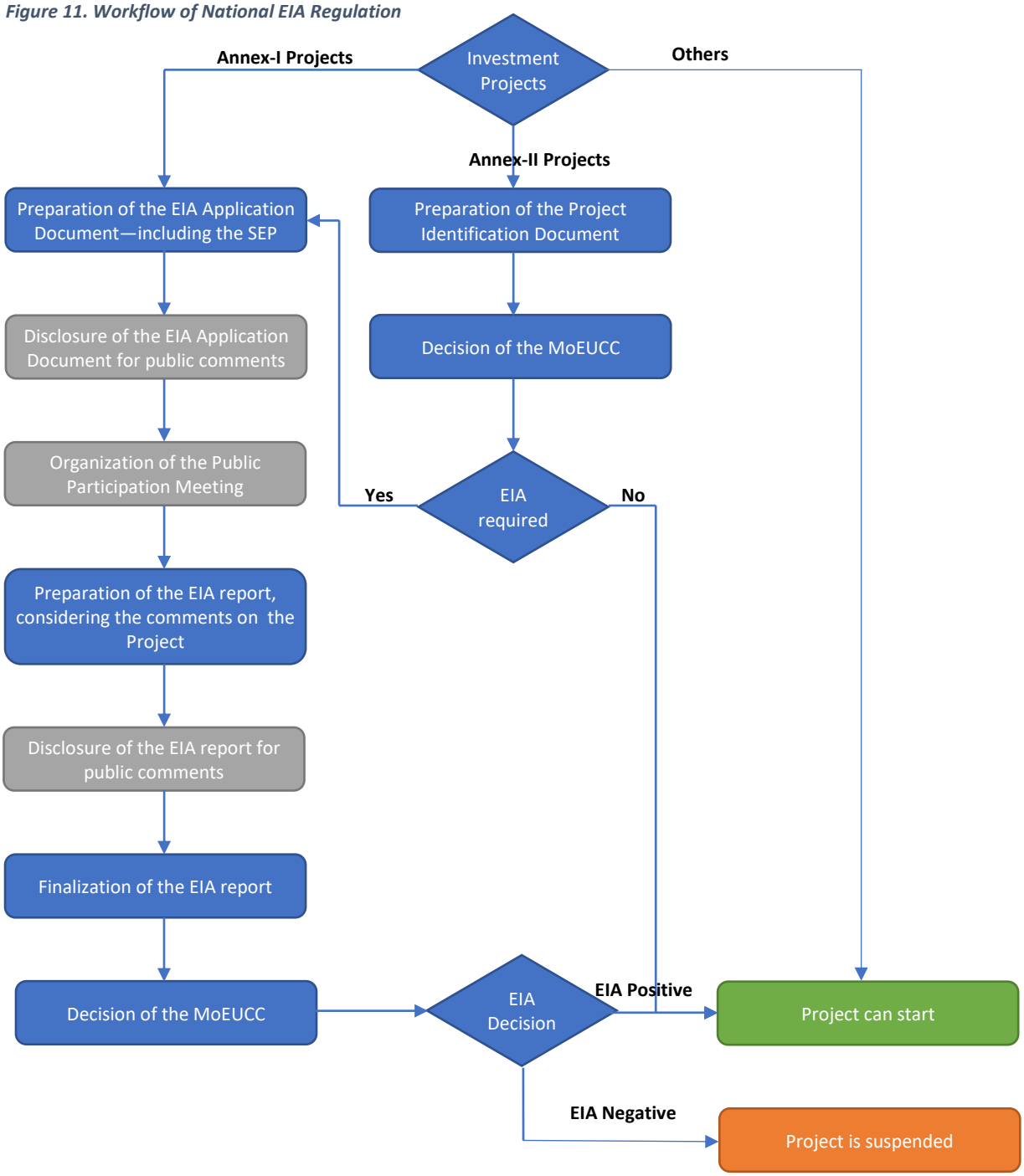
- Forced Labour Convention, 1930 (No. 29)
- Freedom of Association and Protection of the Right to Organise Convention, 1948 (No. 87)
- Right to Organise and Collective Bargaining Convention, 1949 (No. 98)
- Equal Remuneration Convention, 1951 (No. 100)
- Abolition of Forced Labour Convention, 1957 (No. 105)
- Discrimination (Employment and Occupation) Convention, 1958 (No. 111)
- Minimum Age Convention, 1973 (No. 138)
- Worst Forms of Child Labour Convention, 1999 (No. 182)
- Occupational Safety and Health Convention, 1981 (No. 155)
- Promotional Framework for Occupational Safety and Health Convention, 2006 (No. 187)

In addition to these fundamental conventions, Türkiye ratified 3 of 4 governance conventions and 46 of 177 technical conventions of ILO.

4.1.2. National Legislation for Environmental Impact Assessment

Directorate General of Environmental Impact Assessment, Permit and Inspection of Ministry of Environment, Urbanization and Climate Change (MoEUCC) is responsible for managing environmental assessments and permitting in Türkiye. For the management of environmental issues, MoEUCC also collaborates with other ministries (including their provincial organizations where relevant), government agencies and relevant stakeholders, as appropriate. The flowchart of the EIA process is given in Figure 2.

Figure 11. Workflow of National EIA Regulation



Environmental Impact Assessment Regulation (July 29, 2022, N° 31907)—based on the Article 10 of Environmental Law—sets out the general scope of the EIA procedure in Türkiye, indicating that institutions, agencies, and establishments that might lead to environmental problems because of their planned activities are obliged to prepare for EIA Report or Project Information File (PIF). The EIA Regulation is largely in line with the EU Directive on EIA. The key relevant steps of the Turkish EIA procedure are screening, public consultation, scoping, review and approval of the EIA Report, disclosure, and monitoring and inspection.

The EIA Regulation classifies projects into two categories:

- Annex-I Projects. These projects have significant potential impacts and require an EIA. Annex-I of the EIA Regulation lists these project types, so project proponents are expected to start the EIA procedure without any other screening process;
- Annex-II Projects. Annex-II of the EIA regulation covers projects that may or may not have significant effects on the environment. Proponents of Annex-II projects are required to submit a PIF to the MoEUCC. The PIF is prepared following the General Format for PIF provided in Annex-IV of the Regulation and contains information on (i) project characteristics; (ii) environmental characteristics of the project site and impact area; and (iii) significant impacts of the project and measures to be taken during construction and operation phases of the project. A non-technical summary of the above items is also to be added to the PIF. The PIF is submitted to the MoEUCC for review and evaluation. The Provincial Directorate of Environment, Urbanization and Climate Change (PDoEUCC) gives its "EIA is necessary" or "EIA is not necessary" decision regarding the project. The decision of the PDoEUCC is communicated to the public using appropriate means i.e., announcement boards, internet.

If a project is not classified within Annex-I or Annex-II projects according to the EIA Regulation, then the project is considered exempt from EIA Regulation provided that construction and operation activities of the project should comply with pertinent E&S legislation.

On February 8, 2023, a State of Emergency (OHAL) decision was taken by the Assembly for the regions affected by the earthquake for a period of 90 days, and it ended on May 9, 2023. The exemption from the EIA for investments to be made in the earthquake zone was valid during the State of Emergency (OHAL) and the exemption has ended. Table 10 provides the list of proposed subproject types and their category per national EIA Regulation.

Table 10. Subproject Types and their Categorization (Turkish EIA Regulation)

Investment Sector	Annex I	Annex II	Out of Scope of EIA
Water supply infrastructure	—	—	Rehabilitation, modernisation and extension/new construction of • water intakes, • water treatment plants, • raw or treated water transmission mains • water supply networks including pumping stations and house connections
Waste water collection and treatment infrastructure	Rehabilitation, modernisation, and extension/new construction of • WWTPs with a capacity more than 50,000 m^3/day flow.	Rehabilitation, modernisation, and extension/new construction of • WWTPs with a capacity more than 30,000 and less than 50,000 m^3/day flow.	Rehabilitation, modernisation, and extension/new construction of • sewer networks including house connections and pumping stations. • WWTPs with a capacity less than 30,000 m^3/day flow.
Storm water systems	—	—	Rehabilitation, modernisation and extension/new construction of • storm water systems • emergency flood protection measures.

4.2. Requirements of EIB E&S Standards

In addition to national legislation, the Project will also follow the EU legislation and EIB E&S standards[12]. Table 11 provides a summary of the standards and their relevance to the Project.

Table 11. EIB E&S Standards and their relevance with the Project

E&S Standard	Summary[13]	Relevance
Standard 1 – Environmental and Social Impacts and Risks	Standard 1 promotes an integrated approach to impact and risk assessment and management by ensuring that environmental, climate, social and human rights considerations are taken into account and addressed at every step of the project. The standard sets out the promoter's responsibilities for assessing, managing, monitoring and reporting on the potential environmental, climate and social impacts and risks associated with the project and for maximising positive outcomes throughout the project. This is essential to achieve the environmental, climate and social outcomes in line with the EIB Group E&S Policy and the EIB E&S Standards.	Standard-1 is relevant for the Project since there will be a need to manage considerable volumes of wastes to be generated during the rehabilitation and reconstruction works, and safe disposal arrangements will have to be developed and in place prior to the commencement of works. Also, during the construction phase, there will be E&S risks and impacts of the civil works, and risks associated with the operation of the reconstructed or newly installed facilities.
Standard 2 – Stakeholder Engagement	Standard 2 promotes an inclusive and systematic approach to engaging constructively with stakeholders. It acknowledges stakeholder engagement as essential for the effective assessment, management and monitoring of environmental, climate and social impacts and risks, and to ensure projects are sustainable and deliver better outcomes. This standard outlines the promoter's responsibilities for implementing continuous and transparent engagement with project stakeholders.	Standard 2 is relevant for the Project given the need to engage with beneficiaries and stakeholders on development activities that affect their lives.
Standard 3 – Resource Efficiency and Pollution Prevention	Standard 3 recognises the importance of resource efficiency to relieve pressure on the environment and curb climate change. It encourages the identification, design and use of technologies, processes and services best suited to achieve environmental quality objectives. The standard also strengthens the approach and requirements for projects involving existing activities, facilities, modifications and/or extensions.	Standard 3 is relevant for the Project because Project activities, including repair/rehabilitation and reconstruction of damaged municipal infrastructures will entail the use of energy, water, and materials such as sand, cement, timber, etc. and subproject activities during the construction phase will generate noise and dust emissions and considerable volumes of construction wastes.
Standard 4 – Biodiversity and Ecosystems	Standard 4 emphasises that the protection and conservation of biodiversity and ecosystems, and maintaining their ecological functions and processes, are fundamental to E&S sustainability. This standard sets out the requirements and measures that the promoter has to adopt throughout the different stages of a project supported by the Bank to achieve a "no loss" of biodiversity and — where required — a net positive impact. Standard 4 also addresses the sustainable management and use of living natural resources, such as plants, trees and forests, and recognises the need to consider the livelihood of project-affected people whose access to, or use of living natural resources may be affected by the project. The standard also emphasises the need to engage with traditional and indigenous communities as key stakeholders in protecting and managing biodiversity and natural resources, while respecting their rights to their land, culture and spirituality.	Standard 4 is relevant for the Project since the civil works will utilize construction materials such as timber, sand, gravel, stones, etc.
Standard 5 – Climate Change	In line with the EIB's enhanced climate action and environmental sustainability ambitions and its 2021-2025 Climate Bank Roadmap, this standard promotes the alignment of projects supported by the EIB with the goals and principles of the Paris Agreement and the EU Sustainable Finance Action	Standard 5 is relevant for the Project since project activities will be repair/rehabilitation/ reconstruction of damaged municipal infrastructures (WWTP, DWTP, SN and DWN as detailed

[12] https://www.eib.org/en/publications/eib-environmental-and-social-standards
[13] https://www.eib.org/en/publications/eib-environmental-and-social-standards-overview

E&S Standard	Summary[13]	Relevance
	Plan. It does so by stipulating that promoters must explicitly address and incorporate climate change mitigation and adaptation considerations into the decision-making process for EIB-supported projects throughout the project cycle, by assessing and minimising greenhouse gas emissions and physical climate risk.	in Table 1) that will have potential to contribute to climate change during construction activities realising greenhouse gases (GHGs) such as carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Construction equipment like excavators, bulldozers, and cranes often use fossil fuels, and temporary power sources such as generators at construction sites also emit GHGs. Moreover, while transporting construction materials and workers to the site transportation-related emissions will release.
Standard 6 – Involuntary Resettlement	EIB projects sometimes involve land acquisition and/or restrictions on land use, which can result in the temporary or permanent displacement of people from their original places of residence or their economic activities or subsistence practices. A situation when affected individuals or communities do not have the right to refuse such displacement is referred to as involuntary resettlement. Standard 6 seeks to avoid involuntary resettlement in the first instance, and minimise and define the appropriate mitigation measures that should be in place to counter the adverse impacts of involuntary resettlement. It also aims to assist all affected persons so they can improve or at least restore their socioeconomic and cultural conditions.	Standard 6 is relevant for the Project since the Project activities may result in land acquisition and land use restrictions.
Standard 7 – Vulnerable Groups, Indigenous Peoples and Gender	The objective of this standard is to address inequalities and other factors contributing to vulnerability, marginalisation and/or discrimination in an EIB project. The standard also promotes gender equality as a basic human right crucial for sustainable development. It outlines the promoter's responsibilities for assessing, managing and monitoring project impacts, risks and opportunities related to Indigenous Peoples and vulnerable persons/groups.	Standard 7 is relevant for the Project since there might be vulnerable groups among the project affected parties and the impacts of construction activities on gender should be monitored.
Standard 8 – Labour Rights	Good labour practices and the use of appropriate codes of conduct are important to ensure that workers' fundamental rights are respected and that working conditions are fair and decent. This standard aims to ensure that promoters of EIB projects comply with the core labour standards of the International Labour Organization and with national labour and employment laws. It sets the need for a WGM. It further defines standards to protect migrant workers and workers affected by collective dismissals. The standard also requires the establishment, maintenance and improvement of worker-management relationships and terms and conditions of employment. The standard defines the assessment requirements that are needed for the promoter's own workforce, third-party workers and supply chain workers.	Standard 8 is relevant for the Project since the Project will comprise various types of Project workers.
Standard 9 – Health, Safety and Security	Standard 9 outlines the promoters' and workers' responsibilities to safeguard the health, safety and security of workers and affected people and communities. It establishes the importance of putting in place a well-defined health and safety management system, endowed with appropriate resources and expertise. The standard further reinforces requirements to prevent gender-based violence and introduces impact and risk assessment requirements for new areas such as traffic and road safety, natural hazards (including those triggering technological disasters) and pandemics and epidemics.	Standard 9 is relevant for the Project since the Project will comprise considerable civil works. Several OHS risks are likely to be associated with Project construction activities. SEA/SH risk is considered moderate. However, as part of the E&S mitigation measures, the Project will conduct a mapping of service providers to establish referral services to ensure that appropriate measures are put in place, in addition to the CoC for

E&S Standard	Summary[13]	Relevance
		workers, regular outreach and communication, etc.
Standard 10 – Cultural Heritage	The EIB recognises the central role of cultural heritage as a source of valuable historical and scientific information, an asset for economic and social development and an integral part of people's cultural rights, identity and practices. Consistent with the applicable international conventions and declarations, this standard aims to identify and assess project risks and potential impacts affecting tangible and intangible cultural heritage, and covers the management and monitoring of related mitigation measures. It emphasises the need for a chance find procedure outlining the actions to be taken if previously unknown cultural heritage is encountered.	Standard 10 is relevant since the Project activities includes excavation and earthworks.
Standard 11 – Intermediated Finance	Standard 11 sets out the requirements and processes that financial intermediaries must have in place to assess, manage, monitor and report on the environmental, climate and social impacts and risks associated with the sub-projects it finances, as appropriate to the nature of intermediated financing.	This standard is **not** relevant. There will be no financial intermediary.

4.2.1.EU Legislation for Environmental Impact Assessment

The Environmental Impact Assessment (EIA) of Projects is a key instrument of European Union environmental policy. It is currently governed by the terms of European Union Directive 2011/92/EU, as amended by Directive 2014/52/EU on the assessment of the effects of certain public and private Projects on the environment (EIA Directive).

The EIA Directive requires that public and private Projects that are likely to have significant effects on the environment be made subject to an assessment prior to Development Consent being given. Development Consent means the decision by the Competent Authority or authorities that entitles the Developer to proceed with the Project. Before Development Consent can be granted, an EIA is required if a Project is likely to impact significantly upon the environment.

EIA contains three stages: screening, scoping, and the preparation of the EIA report.

The 'Screening stage' ascertains whether the Project's effects on the environment are expected to be significant, i.e. the Project is 'Screened' to determine whether an EIA is necessary. Projects listed in Annex I to the Directive are automatically subjected to an EIA because their environmental effects are presumed to be significant. Projects listed in Annex II to the Directive require a determination to be made about their likely significant environmental effects. The Member State's Competent Authority make that determination through either a (i) case-by-case examination or (ii) set thresholds or criteria.

The 'Scoping stage' provides the opportunity for Developers to ask competent authorities about the extent of the information required to make an informed decision about the Project and its effects. This step involves the assessment and determination, or 'Scoping', of the amount of information and analysis that authorities will need.

The information relating to a Project's significant effects on the environment is gathered during the third stage: the preparation of the EIA Report.

4.3. Gap Analysis of the National E&S Framework(s) and Applicable Requirements of EIB E&S standards

Turkish environmental regulations were developed in line with national and international initiatives and standards, and some of them have recently been revised to be harmonized with the European Union (EU) Directives in the scope of Türkiye's pre-accession efforts.

The main legal framework in which Administrations providing the services operate includes the main laws harmonized with EU directives (drinking water, waste water urban and industrial treatment, pollution control, groundwater).

Investments in water systems will contribute to improving the quality of the water supplied and treated, as required by the Drinking Water Directive 98/83/EC and Urban Wastewater Treatment Directive 91/271/EEC.

The main water authority in Türkiye is the General Directorate of Water Management, affiliated to the Ministry of Agriculture and Forestry. Among its remit there is the determination of policies related to protection, improvement and usage of water resources, to provide coordination of water management at national and international level and to prepare the river basin management plans (RBMPs). Currently, nine RBMPs have been completed and six are ongoing, out of the 25 river basins in the country. The areas affected by the earthquakes lie mainly within three basins: Ceyhan, Asi and Euphrates-Tigris.

The MoEUCC is the responsible organization for the implementation of policies for protection and conservation of the environment. The latest EIA Regulation has recently been published in the Official Gazette dated July 29th, 2022 (nr 31907). The EIA Regulation classifies projects, like in the equivalent EU directive, into two categories:

- Annex-I Projects: These are projects that have significant potential impacts and require an EIA study. Annex-I of the EIA Regulation lists these project types, so project promoters are expected to directly start the EIA procedure without need for a prior screening process.
- Annex-II Projects: Annex II of the EIA regulation covers the projects that may or may not have significant effects on the environment. Promoters of Annex II projects are required to submit a Project Information File (PIF) to the MoEUCC.

It is expected that, depending on the scope, subprojects would fall either under Annex-II (i.e., be subject to screening by the Competent Authority – MoEUCC) or outside the scope.

The subprojects including waste water treatment components are expected to result in the reduction of related GHG emissions. Although at this stage no WWTP triggers the carbon footprint threshold of +/- 20 000 Ton CO_2/y, an initial estimation of the overall impact of this operation, for the part of the EIB loan, results in greenhouse gas savings (mainly through enhanced waste water treatment) of around 40 000 Ton CO_2/y.

The EIB E&S Standards applicable to project activities as well as key gaps between the national framework and the policies are summarized in Table 12.

Table 12. Relevant EIB E&S Standards and Key Gaps with the National Framework

E&S Standard	Key Gaps	Mitigation Measures
Standard 1 – Environmental and Social Impacts and Risks	The procedures related to social issues/assessments are limited and includes only generic information based on secondary data collection. It does not have definitions regarding the area of influence, solid social baseline, stakeholder definitions, procedures for meaningful stakeholder engagement, social impacts and mitigations, cumulative impacts, and a social and environmental monitoring plan.	In this respect, since the specific subprojects and their exact locations and design are not yet identified prior to appraisal of the Project, this ESMF, and SEP (including Project GM) was prepared to establish requirements and procedures for the identification, assessment and management of the E&S risks and impacts of subprojects, including screening and exclusion criteria for selection and classification of subprojects in terms of E&S risk, and to guide the preparation and implementation of subproject specific instruments, including general ESMP. The risks will be addressed by application of the provisions of national and EU legislation, and by incorporation of relevant E&S standards' requirements and aspects into respective consultancy services Terms of References (ToRs). PIU will hire supervision arrangements to monitor risks across subprojects.
Standard 2 – Stakeholder Engagement	According to the Environmental Impact Assessment (EIA) Regulation of Türkiye, some of the project activities to be carried out within the scope of the Project, may not fall into the Annex lists of EIA Regulation. Thus, the scope of the project activities may be exempt from the national EIA process—which means there is no formal stakeholder engagement process required under national legislation.	The subproject level SEPs will include definitions of all stakeholders (project affected parties and other interested parties, and vulnerable groups among them), outline the process, procedures, and methods of consultation with various stakeholders and the Project GM in order to design, plan and implement the Project activities of the PIU throughout the Project life cycle.

E&S Standard	Key Gaps	Mitigation Measures
Standard 3 – Resource Efficiency and Pollution Prevention	National legislation is mostly compatible with the EU Directives. However, detailed management plans which includes mitigation, monitoring and reporting perspective on some specific impacts are not required by the national EIA.	This ESMF identifies and assesses all the potential risks and impacts associated with material use and waste generation of all subprojects and a standalone Project-level Waste Management Plan (WMP) was included. The ESMF and WMP considers and addresses generic risk and impact management and mitigation measures which will be further elaborated in detail in subproject specific instruments, following applicable national and EU legislation, Standard 3 and the mitigation hierarchy. Where technically and financially feasible, the opportunities for energy and resource efficiency and climate resilience and adaptation will be sought throughout Project preparation and implementation. Pollution prevention measures were also summarized in this ESMF and will be further detailed under the subproject specific instruments, as per the provisions of this ESMF.
Standard 4 – Biodiversity and Ecosystems	National legislation covers the requirements of Standard 4. However, detailed management plans which includes mitigation, monitoring and reporting perspective on some specific impacts are not required by the national EIA.	If municipal structures will be built in new areas, environmental sensitive and protected areas (such as national parks, wetlands, natural monuments, national conservation areas, and wildlife improvement areas) will be checked and evaluated using by National Geographic Information Platform of the Directorate General for Nature Conservation and National Parks and the General Directorate of Geographic Information Systems of the MoEUCC. the subproject specific instruments will provide for detailed biodiversity management measures, as/if appropriate. The subproject specific instruments should also include an assessment of the system and verification practices used by primary suppliers and assess the potential impacts of Project-financed construction materials such as timber, sand, gravel, stones, etc.
Standard 5 – Climate Change	National legislation is in line with international legislation	For all projects (located in EU, EFTA, Candidate and potential Candidate countries) listed in Annex I of the EIA (Environmental Impact Assessment) Directive22 and for those listed in Annex II, in respect of which the relevant competent authorities have concluded that an EIA is required, the promoter shall ensure that the information relevant to the assessment of climate change mitigation and adaptation and its conclusions are clearly distinguishable and identifiable in the EIA report
Standard 6 – Involuntary Resettlement	(i) no provisions for livelihoods restoration; (ii) no coverage of PAPs including non-title holders, public land users, squatters and customary owners, or special provisions for poor and vulnerable people, community engagement, gender impacts and GMs; (iii) compensation is not fully aligned with replacement cost alignment, as Turkish law deducts depreciation from market value, and excludes cost of registration and transfer taxes; (iv) Turkish law does not cover compensation for common property resources; (v) no provision for continuous consultation and establishment of GM during implementation of the RP.	Since subproject details are not expected to be available until after Board approval, PIU prepared and disclosed a Resettlement Framework (RF) which governs acquisition of land for the purpose of reconstruction and rehabilitation of damaged infrastructure in the event that in-situ reconstruction is not considered viable and/or safe; and clarifies resettlement principles and sets out the entitlement matrix, implementing arrangements for RPs and Ex-post Social Audits, design criteria to be applied to subprojects to be prepared under the Project. Any land taking with

E&S Standard	Key Gaps	Mitigation Measures
		potential physical displacement of land users/claimants will be avoided.
Standard 7 – Vulnerable Groups, Indigenous Peoples and Gender	In general, there is no gap in terms of policy level. On the other hand, project level management of specific risks such as sexual exploitation and abuse and sexual harassment are the key gaps in terms of Standard 7. Within this scope, a SEP required to identify the different stakeholders (project-affected parties and other interested parties including disadvantaged or vulnerable). Stakeholder engagement should be a continuous process. An improved grievance mechanism would help bridge the gap between EIA legislation and Standard 2.	The subproject level SEPs will include vulnerable groups, outline the process, procedures, and methods of consultation with them (including specific engagement methods for women) and the Project GM (including how to handle Sexual Exploitation and Abuse / Sexual Harassment [SEA/SH] grievances).
Standard 8 – Labour Rights	Despite the overall alignment with GIIPs, labor risks under construction projects stem from not sufficient enforcement of OHS measures; over-time work and related non-payment; and unequal treatment between men and women. In addition, under the national labor and working conditions legislation, there is no specific requirement for a Workers' GM that allows workers to communicate their complaints to the employer.	Each Contractor will develop its own Labour Management Policies and Procedures based on Standard 8 and national and EU legislation to describe working terms and conditions; principles of non-discrimination and equality of opportunity; establishment of workers' organizations; restrictions concerning children and prohibitions of forced labour; and a WGM. It will also include a Code of Conduct for all workers engaged in the subproject, including measures for addressing SEA/SH risks.
Standard 9 – Health, Safety and Security	National legislation covers the requirements of Standard 9. However, detailed management plans which includes mitigation, monitoring and reporting perspective on some specific impacts i.e., SEA/SH, labor influx, are not required by the national EIA.	This ESMF assesses the potential OHS risks associated with proposed subprojects and identifies appropriate risk management and generic mitigation measures, following the applicable requirements of the national and EU legislation and Standard 9. OHS-related risks and mitigation measures will be elaborated in detail in subproject specific instruments consistent with the principles and procedures prescribed in this ESMF. Moreover, OHS Management Plans will be prepared as part of the Contractor's Environmental and Social Management Plan (C-ESMP) and implemented by contractors before the commencement of works. The subprojects has also potential risks and impacts on community health and safety (CHS) which are emissions of dust, noise, odour, and vehicle exhausts; increased traffic and temporary congestion and traffic and road safety risks due to increased traffic volume and movements of heavy-duty vehicles; risks of accidents and injuries posed by uncovered or unbarricaded open holes and exposed electric cables; temporary road blockades and closures; temporary blocks of access to certain municipal buildings/facilities; increased waste and waste water generation; life and fire safety aspects and universal access and potential disruptions to local communities are associated with the proposed retrofit, and construction activities under the Project. This ESMF and fit-for-purpose ESMPs will assess the risks and impacts to the health and safety of Project-affected communities, including groups that might be vulnerable and will also detail

E&S Standard	Key Gaps	Mitigation Measures
		management and mitigation measures to secure CHS during construction, as well as monitoring and reporting requirements. CHS and Traffic Management Plans may be included in the C-ESMPs as assessed in this ESMF.
Standard 10 – Cultural Heritage	The national legislation covers most of the requirements of the Standard 10. However, as Standard 10 defines the cultural heritage covering both tangible and intangible heritage, Law No. 2863 covers only the movable and immovable tangible cultural and natural assets. In addition, while national legislation covers only registered cultural assets, Standard 10 applies to all cultural heritage regardless of whether it has been legally protected.	The screening mechanism under the ESMF ensures that subprojects which may cause impacts on tangible or intangible cultural heritage sites will be excluded from the Project investments. The ESMF also includes an outline of a Chance Finds Procedure and guidelines on mitigation measures in case of potential impacts on cultural heritage. The Chance Finds Procedure and mitigation guidelines will be included in the subproject specific instruments as appropriate.

5. Required Procedures for Screening, Assessment and Management

Project Implementation Unit (PIU) is responsible for overall implementation of the Project and will manage the Project to ensure that project implementation complies with the EIB E&S standards together with the national legislation. In line with these standards and national requirements, the E&S risk management procedures that will be implemented through the Project's subproject selection process are summarized in Table 13.

Table 13. Project Cycle and E&S Management Procedures

Subproject Stage	E&S Stage	E&S Management Procedures	Responsible Parties
a. Assessment & Analysis: Subproject identification	Screening	• During subproject identification, ensure subproject eligibility by referring to the **EIB Eligibility, Excluded Activities and Excluded Sectors List**[14] and **Technical Description** (see **Annex-4**). • For all activities, use the **E&S Screening Form** provided in Annex-1 to identify and assess potential E&S impacts. Screening studies shall provide preliminary assessment of the impacts of the subprojects' activities on environment and social aspects. At this stage, risk categorization of the subproject will be classified as *high risk, medium risk or low risk* considering the EIB Group Environmental and Social Policy and so that required E&S instruments to include especially impact assessment, mitigation measures and monitoring plan (such as EIA, ESMP and RP) for the subprojects will be determined.	• PIU (review and approval of E&S Screening Form) • PMC (preparation of E&S Screening Form)
b. Formulation & Planning: Planning for subproject activities, including human and budgetary resources, mitigation measures and monitoring.	Planning	• Based on the **E&S Screening** outcome, adopt and/or prepare relevant E&S instruments and plans. • Ensure that the contents of the **EIA, ESMP** are shared with relevant stakeholders in an accessible manner and consultations are held with the affected communities. • Train staff responsible for implementation of plans. • Incorporate relevant E&S instruments and plans into contractor bidding documents; train contractors on the relevant instruments and plans. • Provide that the contractors will prepare project specific C-ESMP including but not limited to the requirements set out in the EIA, ESMP and general ESMP provided in Annex-2.	• PIU (review and approval of E&S instruments and C-ESMP) • PMC (review of E&S instruments and C-ESMP) • Local Administration (ensure preparation of E&S instruments) • Contractor (preparation of C-ESMP)
c. Implementation & Monitoring: Implementation support and continuous monitoring for subprojects.	Implementation	• Ensure implementation of the relevant plans through site visits, regular reporting from the field and other planned monitoring. • Track grievances/beneficiary feedback. • Continue awareness raising and/or training for relevant staff, volunteers, contractors, communities.	• PIU (management) • PMC (support to the PIU and monitoring) • Supervision Consultant (supervision and monitoring on-site) • Contractor (implementation)

[14] https://www.eib.org/attachments/publications/eib eligibility excluded activities en.pdf

d. Review & Evaluation: Qualitative, quantitative and/or participatory data collection on a sample basis.	Completion	• Assess whether plans have been effectively implemented. • Ensure that physical sites are properly restored.	• PIU (management) • PMC (support to the PIU and monitoring)

More detail for each stage is provided below.

a. Subproject Assessment and Analysis – E&S Screening

As a first step, all proposed activities will be screened to ensure that they are not listed under the EIB Eligibility, Excluded Activities and Excluded Sectors List which is in force at the time of the EIB Allocation[14] and they are defined under A.1.1 Technical Description of Schedule A of Earthquake Reconstruction Framework Loan (see Annex-4).

As a second step, PIU will use the **E&S Screening Form** (see Annex-1) to identify and assess whether an EIA is required or not and also relevant E&S risks specific to the activities, and identify the appropriate assessment methods. As detailed in Section 4.1.2, The EIA Regulation classifies projects into two categories: EIA Annex-I Projects that will be subject to the EIA process and EIA Annex-II projects that will be subject to PIF process. During the screening progress, compliance with the EIA regulation of the subproject will be examined. The screening Form shall also ensure a base key impact and determine required E&S instruments that may be relevant for the specific project activities. PMC will prepare E&S Screening Form for each subproject to identify any potential effects to be caused by the subproject activities and classify risk categorization (as high, medium or low) of the subproject. The outcome of the screening process is to categorise the subproject considering environmental and social impacts and their significance. The EIB Group Environmental and Social Policy defines risk categories as follows, using as a benchmark the EU legal framework:

High Risk: projects that are likely to have significant environmental, climate and/or social impacts and risks and require the preparation of an Environmental Impact Assessment (EIA)/Environmental and Social Impact Assessment (ESIA) report and/or any relevant report pertaining to specific topics that may require particular attention due to: i) national and/or EU Law requirements; or ii) determination made by the competent authorities in the host country and/or by EIB based on a case-by case analysis that takes into account the nature, scale and location of the project.

Medium Risk: projects that are likely to have moderate/limited adverse environmental, climate and/or social impacts and risks that might be addressed through the application of mitigation hierarchy and for which either the competent authorities in the host country and/or the EIB have determined that the preparation of an EIA/ESIA report is not required.

Low Risk: projects that are likely to result in minor or no adverse environmental, climate and/or social impacts and risks.

The form will also cover information on; (i) description of subproject's components and activities, (ii) baseline data on subproject area and its close vicinity, (iii) initial assessment of the potential impacts on the physical, ecological and social environment of the subproject area, (iv) verification of environmental permits/licenses with respect to national regulatory.

PMC will share the E&S Screening Form with PIU for review and approval.

b. Subproject Formulation and Planning – E&S Planning

Based on the screening and preliminary assessment as mentioned above, if required, general ESMP (that has been included in Annex-2) will be used. Local administration will ensure preparation of E&S instruments to adopt the necessary E&S management measures already included in subproject specific EIA report or PIF (if already available) and other relevant plans (such as the SEP etc.).

The contents of the ESMPs and E&S procedures and plans will be shared with relevant stakeholders in an accessible manner and consultations will be held with the affected communities on the E&S risks and mitigation

measures. After receiving the feedback/opinion of the stakeholders, the E&S instruments will be updated if required. Local administration will submit the E&S instruments to PIU for review and approval.

At this stage, PIU will provide training as outlined in Section 8.1 to ensure that all parties that have roles and responsibilities regarding the Project implementation, understand and incorporate E&S mitigation measures.

PIU will incorporate the relevant E&S instruments and plans into contractor bidding documents. The contractors are expected to apply the mitigation measures and have sufficient capacity to ensure effective implementation of the E&S instruments and plans on site.

PIU will also ensure that all contractors understand and incorporate E&S mitigation measures relevant to them as standard operating procedures for civil works. Therefore, the contractors will prepare and submit their ESMP (Contractor's ESMP [C-ESMP]) and sub-management plans (specified in the Annex-3, e.g. air quality management plan, noise management plan, traffic management plan etc.) to Local Administrations that will share them with PIU for approval. PMC will support to PIU for pre-review of C-ESMP. C-ESMP will include at least E&S mitigation measures& commitments in the General ESMP in Annex-2 and requirements in the EIA/PIF if available. C-ESMP will summarise measures to be taken during subproject activities and a monitoring plan to evaluate the effectiveness of the mitigation measures applied. The contractors will implement C-ESMP during subproject activities. The C-ESMP will be submitted prior to the commencement of construction works and no construction activities will be carried out under the subproject until approval of the C-ESMP.

In order to raise awareness and develop responsible capacities, provision of a number of E&S trainings for contractor's management and employees will be the responsibility of supervision consultants. E&S team of supervision consultant will give necessary trainings to Contractor's management and employees before start of construction works. Supervision Consultant will repeat its training minimum semi-annually and whenever it is deemed necessary. In case of need, PMC will also support the capacity building activities for supervision consultants and contractors.

c. Implementation and Monitoring – E&S Implementation

During implementation, PIU will conduct regular monitoring visits to verify the mitigation measures specified in the E&S instruments are being properly implemented and to ensure that GMs are accessible and functional.

The supervision consultant will be on-site (at least one full-time OHS specialist, one part-time E&S specialist) and be responsible for monitoring, supervising, reporting and coordinating subproject E&S implementations. The supervision consultant will monitor the implementation of E&S risk management mitigation plans on site.

The E&S performance of the subprojects will be implemented and monitored by the responsible contractor' E&S team on a daily basis and the team will report the site key findings regarding E&S issues on a quarterly basis to the supervision consultant for review. A Monitoring report draft will be developed by PIU and shared with the responsible parties.

The supervision consultant will check and add their site inspection findings/suggestions and submit the consolidated reports to the responsible PMC. PMC will review and improve the report to also include its site observations/suggestions and then share the reports with the PIU quarterly. PIU will prepare a progress report covering summary of subproject activities, E&S non-compliance issues (if any) together with the mitigation measures, site observation findings, all grievances received (if any), significant E&S incidents, follow the non-compliance issues coming from any past issues that will be still resolved and, then the progress report will be shared with EIB bi-annually.

PIU will also monitor the sites on a monthly/quarterly basis during the construction period, depending on the scope of the subproject. PMC will accompany PIU on site visits if required. More frequent monitoring may be conducted if needed to ensure compliance with the mitigation measures and resolution of any issues that are identified.

The contractors will be responsible for implementing the mitigation measures in the E&S risk management documents (ESMPs) under the control of the supervision consultant, with PIU oversight, and quarterly monitoring reporting to the PIU through the supervision consultant on E&S performance in accordance with the metrics specified in the respective bidding documents and contracts. The contractors will also provide that all workers understand the E&S management procedure and tasks.

PIU will ensure that monitoring practices include the E&S risks identified in the E&S risk management documents (EIA, ESMP, C-ESMP, sub-management plans) and will monitor the implementation of E&S risk management mitigation plans as part of regular project monitoring.

At a minimum, the monitoring reporting process will include: (i) the overall implementation of E&S risk management instruments, (ii) any E&S issues arising as a result of subproject works and how these issues will be remedied or mitigated, (iii) OHS performance (including incidents and accidents), (iv) community consultation updates, (v) public notification and communications, (vi) progress on the completion of subproject works, and (vii) summary of grievances/beneficiary feedback received, actions taken and complaints closed out.

Throughout the Project implementation stage, PIU will continue to provide training and awareness raising to relevant stakeholders, such as staff, selected contractors, and communities, to support the implementation of the E&S risk management mitigation measures. An initial list of training needs is proposed below, in Section 8.1.

PIU will also track grievances/beneficiary feedback during project implementation to use as a monitoring tool for implementation of project activities and E&S mitigation measures.

For subproject related significant E&S incidents that have a significant adverse effect on the environment, the affected communities, the public and workers (e.g. fatalities or loss of limb, lost time incidents, permanent disabilities, environmental spills, etc.), the Contractor will inform Local Administration immediately, and then the Administration will notify PIU in 24 hours. Then the Contractor will investigate, document and analyse the findings and take due actions to prevent its reoccurrence and where required by national law, notify and cooperate with the relevant authorities. The incident report including sufficient details on the accident, Root Cause Analysis (RCA), precautions, and compensation measures taken, will be prepared (in line with the template to be provided by PIU) and submitted by the Contractor to the Administration, then the Administration will share them with PIU in 15 days.

d. Review and Evaluation – E&S Completion

Upon completion of subproject activities, PIU will review and evaluate progress and completion of subproject activities and E&S mitigation measures. Especially for civil works, PIU will monitor activities with regard to site restoration and landscaping in the affected areas to ensure that the activities are done to an appropriate and acceptable standard before closing the contracts. The sites must be restored to at least the same condition and standard that existed prior to commencement of works. Any pending issues must be resolved before a subproject is considered fully completed. PIU will prepare the completion report describing the compliance of E&S risk management measures.

6. STAKEHOLDER ENGAGEMENT AND INFORMATION DISCLOSURE PROCESS

A separate Stakeholder Engagement Plan (SEP) has been prepared for the Project, based on the EIB E&S Standard 2 on Stakeholder Engagement to (i) identify stakeholders directly or indirectly affected by the Project and/or interested in the Project, (ii) identify and plan stakeholder engagement activities that will begin during Project preparation and continue with the implementation of the Project, (iii) set out the frequency, content, information sharing and level of participation of consultation activities, (iv) implement a grievance mechanism that will create an open communication channel for stakeholders to raise concerns/complaints at every stage of the Project, and (v) ensure that concerns and expectations expressed by stakeholders are addressed during the decision-making and planning stages of the Project.

7. GRIEVANCE REDRESS MECHANISM

ILBANK has established and disclosed a transparent and comprehensive GM Policy in September 2021 in order to receive, evaluate and address grievances pertaining to every international project it finances and/or implements. The Project GM established in line with ILBANK's GM Policy was described in the SEP prepared for the Project. GM will be in place during the course of the Project and the PIU will be responsible implementation of GM. The budget for implementation of GM is included in the Project budget.

All construction contractors will also be expected to apply the relevant provisions of the SEP. The GM requirements will be regulated in tender documentation and contracts signed with contractors.

7.1. Management of Sexual Exploitation and Abuse/Sexual Harassment Issues

GM includes handling Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH) complaints. The project GM includes a channel to receive and address confidential complaints related to SEA/SH, with special measures in place. In addition, also the WGM addresses SEA/SH related issues and has in place mechanisms for confidential reporting, with safe and ethical documenting of SEA/SH issues. If an employee faces SEA/SH issue s/he can either apply to a higher-level superior or go directly to the police, as stipulated in the national referral system for dealing such cases.

In any case if the PIU will receive a SEA/SH related grievance, these grievances will be directed to national referral systems immediately and will be recorded that the grievance has been directed. All details of the complainant of the sensitive cases will be kept strictly confidential.

8. INSTITUTIONAL ARRANGEMENTS AND CAPACITY BUILDING

The parties responsible for the implementation of the Project are, Project Implementation Unit (PIU), Project Management Consultant (PMC), Administrations, Supervision Consultants and Contractors.

At national level, **PIU** established under the Department of International Relations of ILBANK will be responsible for the overall implementation of the Project—in close collaboration with Administrations, in accordance with the provisions of this ESMF. The PIU is provided with qualified staff— one full-time environmental specialist, one full-time social specialist and one full-time OHS specialist—and resources to support the management of E&S risks and impacts. If required, individual consultants from different disciplines will also be hired by ILBANK to support the PIU.

PMC will be hired to support PIU for the implementation of the Project activities including for, but not limited to, the preparation of the E&S instruments as described in this ESMF and tender documents, monitoring and evaluation, reporting, implementation of grievance mechanism, citizen engagement, and project communication and for mobilizing the required technical, E&S and OHS specialists to be located in Ankara office and in the earthquake-affected municipalities as required.

At the local level, ILBANK will sign protocols with the **Administrations** to determine the responsibilities of PIU and Administrations regarding the works to be carried out and to secure the implementation of Project activities in line with relevant national, EU legislation and the EIB's E&S standards. In line with the protocols, the Administrations will establish Project Teams consisting of technical and administrative staff and social focal point. There will only be one Project Team within each Administration (i.e. in case there are several investments in one Administration, the same team will cover all of them). The Project Team will not have direct implementation responsibility (this responsibility lies with PIU) but will coordinate/collaborate with PIU and/or PMC as reasonably required by PIU and/or PMC. Administrations will be responsible for carrying out any resettlement according to the resettlement plans that will be prepared by PIU, and the implementation of the grievance mechanism, necessary pass permits, UKOME[15] decisions and other similar actions if needed under the subproject and will coordinate with the PIU for the monitoring of the subproject activities.

These protocols will also include the principles regarding the operation of the facility that are handed over to Administrations after the completion of works.

Supervision consultants will supervise and monitor the construction contractors.

Contractors will be required to comply with the standards and requirements specified in the general ESMP (see Annex 3) and subproject's E&S documents, i.e., EIA/ESMP etc. This provision will be specified in the contractor's agreements. Contractors will be expected to disseminate and create awareness within their workforce of E&S risk management compliance for their effective implementation.

Table 14 summarizes the roles and responsibilities regarding the implementation arrangements for E&S management.

Table 14. Implementation Arrangements

Responsible Party	E&S Roles and Responsibilities
National	• Raise awareness about the Project activities • Ensure Project activities do not fall under the Exclusion List presented in Annex-4.

PIU	• Implement the following tasks as part of overall management of E&S risks and impacts of subprojects
	  ○ Appraise E&S impacts, risks and opportunities of each potential subproject
	  ○ Incorporate E&S requirements into tender documents
	  ○ Contractually require the supervision consultant/contractor/PMC to promptly report incident and accidents
	• Oversee the implementation of Project level E&S documentation i.e. ESMF, RF and SEP
	• Maintain the implementation of GM and address grievances in a timely manner

[15] Transportation Coordination Centre (UKOME), is a committee that makes decisions on issues such as urban transportation regulation, traffic management, planning of public transportation services, and whose members consist of the central administration, the municipality and the Turkish Drivers and Automobiles Federation.

Responsible Party	E&S Roles and Responsibilities
	• Visit and inspect the construction worksites and prepare progress monitoring reports to cover E&S issues, share with EIB biannually • Communicate with stakeholders and conduct consultations with beneficiary property owners and communities throughout project implementation • Evaluate the capacity building requirements of supervision consultant and contractors and provide trainings
PMC **(E&S and OHS Staff)**	• Ensure that E&S Screening (Annex 1) is prepared by answering the project fiche E&S questionnaire send to PIU for no-objection • Review E&S instruments in compliance with the national legislation and EIB E&S Standards and share them with PIU • Participate in the trainings to be organized by PIU • Conduct the relevant trainings defined in Table 15 • Ensure that supervision consultants incorporated E&S standards and requirements identified in E&S instruments of the subprojects into contractor tender documents and agreements • Review E&S management documentations in compliance with this ESMF (C-ESMP and sub-management plans) to be prepared by construction contractors in coordination with PIU • Periodically monitor the subproject E&S performance and report to PIU at standards required by EIB E&S standards • Ensure implementation of corrective actions in case of E&S non-compliances in coordination and agreement with PIU over reasonable timeframes • Ensure implementation of GM and WGM • Coordinate the supervision consultants, contractors—and/or if any, external E&S consultants—for collection of the monitoring data and compilation of or providing input to periodic monitoring reports as necessary and appropriate • Allow PIU staff to access subproject facilities and records • Facilitate monitoring visits and audits by PIU and their consultants • Conduct non-routine site visits/audits in case of E&S issues or non-compliances identified in subprojects or if requested by PIU (e.g. untreated waste water discharge, incidents or accidents resulting in fatalities or serious injuries of subproject personnel or third-parties, significant grievances, etc.) • Pre-review of E&S incident or accident reports whether there are sufficient details on the accident, Root Cause Analysis (RCA), precautions, and compensation measures conducted or not
Local Administrations	• Carry out any resettlement according to the resettlement plans that will be prepared by PIU, and the implementation of the grievance mechanism, necessary pass permits, UKOME decisions and other similar actions if needed under the Project and will coordinate with the PIU for the monitoring of the subproject activities • Ensure that E&S instruments as per the risk category of the subprojects is prepared within the timeframes to be agreed with PIU and send to PIU for no-objection • Carry out operational and administrative tasks to oversee the implementation of the E&S instruments and monitoring progress; mobilize sufficient E&S and OHS staff • In case of any significant E&S accident and incident, notify PIU in 24 hours and share an incident report to cover sufficient details on the accident, Root Cause Analysis (RCA), precautions, and compensation measures taken, to be prepared by the Contractor, with PIU in 15 days

Responsible Party	E&S Roles and Responsibilities
Local **Supervision Consultant** **(Management and E&S and OHS Staff)**	Carry out the following tasks on behalf of the PIU • Participate in the training sessions to be organized by PIU • Supervise the construction works of contractors on-site, including implementation of subproject-specific E&S requirements (requirements stemming from ESMP applicable) by contractors on a daily basis • Ensure sufficient E&S capacity for implementation of E&S requirements as set out in the supervision consultancy contracts • Support the project management consultant for the supervision and review of E&S management documentation prepared by construction contractors and submit them to project management consultant upon finalization • Review monthly self-monitoring reports prepared by the construction contractors for early identification of E&S issues and/or non-compliances and submit them to project management consultant upon finalization • Identify E&S non-compliances on site and enforce construction contractors to undertake corrective actions within defined and agreed timeframes • Support the PMC (as requested) in the preparation of periodic E&S monitoring reports to be submitted to PIU • Ensure effective implementation of WGM and GM
Local **Construction Contractor** **(Management and E&S and OHS Staff)**	• Ensure sufficient E&S capacity for implementation of E&S requirements as set out in the construction contracts • Participate in the training sessions to be organized by PIU • Prepare subproject-specific E&S management plans (C-ESMP based on E&S instruments, general ESMP in Annex-2 and sub-management plans) and procedures prior to start of construction works as required by the construction contracts • Comply with the requirements of national legislation and implement the E&S requirements as set out in the construction contracts • Submit quarterly E&S self-monitoring reports; template for the Environmental and Social Monitoring Report (ESMR) to the PCM through supervision consultants in line with the format provided by the PIU • Fill in monthly OHS forms reviewed by supervision consultants • Implement corrective actions in case of E&S non-compliances under the supervision of supervision consultant • Promptly notify the local Administration of any significant E&S incident or accident that have taken place in subproject related operations (at most within the 24 hours) (including SEA/SH) and prepare an incident report including sufficient details on the accident, Root Cause Analysis (RCA), precautions, and compensation measures taken (in line with the template to be provided by PIU) and submitted to the Administration in 15 days • Implement and maintain WGM and GM

The EIB will provide training, technical support and implementation support to PIU as required, i.e. technical assistance regarding the screening the subprojects against the EIB E&S standards.

8.1. Proposed Training and Capacity Building

Successful implementation of the Project will depend among others on the effective implementation of the E&S risk management measures outlined in this ESMF. Training and capacity building will be necessary for the key stakeholders in order to ensure effective implementation of the ESMF and the SEP. An initial training approach is outlined in Table 15. To the extent possible, training on E&S risk management will be integrated into the project cycle and operational procedures. Given the need to raise awareness among project workers and stakeholders at many levels, a cascading model is proposed where information will follow from the national level to the field levels.

Table 15. Proposed Training and Capacity Building Approach

Level	Responsible Party	Audience	Topics / Themes that may be covered
National Level	PIU	Staff of PMC responsible for overall implementation of ESMF	ESMF and approach: • Identification and assessment of E&S risks (E&S Screening Form application) • Selection and application of relevant E&S risk management measures/instruments • E&S monitoring and reporting • Incident and accident reporting
Local Level	PMC	Supervision consultants Local Administrations	ESMF and approach: • Identification and assessment of E&S risks • Implementation of the relevant requirements specified in the E&S instruments on site • E&S monitoring and reporting • Incident and accident reporting • Application of SEP and the GM
Site level	Supervision consultant	Contractors	• Application of E&S instruments, as relevant • Application of SEP and the GM • Application of CoC, incident reporting, SEA/SH, epidemic/pandemic mitigation
Community Level	Supervision consultant	Community members	• Community health and safety issues • SEA/SH issues (CoC), prevention, measures • Epidemic/Pandemic mitigation • GM • OHAS issues including the potential danger to public • Transport Plan including closing street

Additional training subjects will be inserted in due course based on the project/subproject needs and the requirements of EIB.

8.2. Estimated Budget

The estimated cost items for the implementation for the ESMF, which have been included in the overall project budget is provided in Table 16. The budget sources to be required for the Project activities is detailed in Table 17.

Table 16. ESMF Implementation Budget

Items	Number	Month	Monthly Gross Rate*	Estimated Budget
1.Establishment of ESMF Implementation Team				USD 720,000
Environmental Specialist	*1*	*60*	USD *4,000*	USD *240,000*
Social Specialist	*1*	*60*	USD *4,000*	USD *240,000*
OHS Specialist	*1*	*60*	USD *4,000*	USD *240,000*
2. Training and Capacity Building				USD 400,000
3. Dissemination of information				USD 300,000
4. Grievance mechanism				USD 500,000
5. Visibility materials				USD 250,000
Total estimated				**USD 2,170,000**

**covers reimbursables*

Table 17 Budget Sources for implementation of this ESMF

Activity	Budget Source
Hiring of PMCs and supervision consultants	EU Grant
Preparation of E&S instruments	Local Administrations their own budget
İmplementation of E&S requirements on site by contractors	EIB Loan (to be included in the Contractors' Contracts)

9. ANNEXES

Annex-1 E&S Screening Form

EARTHQUAKE RECONSTRUCTION FRAMEWORK LOAN (20230153)

ENVIRONMENTAL AND SOCIAL SCREENING STUDY

Subproject Name:

MARCH 2025

Environmental and Social Screening Form

The Environmental and Social (E&S) Screening procedure comprises of two stages-process: (1) Initial screening by ensuring that subproject activities are not listed under the EIB Eligibility, Excluded Activities and Excluded Sectors List which is in force at the time of the EIB Allocation[16] and they are defined under A.1.1 Technical Description of Schedule A of Earthquake Reconstruction Framework Loan (see Annex-4 in the Environmental and Social Management Framework); and (2) Screening the proposed activities to identify approach for E&S risk management. This Screening Form is the second stage of screening process and is to be used for all subproject activities. The completed forms will be signed and kept in the Project ESF file. The EIB may review a sample of the forms during implementation support visits.

1. Subproject Information:

Subproject Title	
Subproject Location	
Regional Unit in Charge	
Estimated Cost	
Start/Completion Date	
Brief Description of Subproject	(This part shall: -describe the sub-project (project components details) -provide site specific information like location, size (ha), existing (or need for new) facilities for water supply, wastewater treatment, energy supply, roads to the site -distance to the closest nature or culture heritage sites, river, or other sensitive receptor.)

2. Environmental and Social Screening Questionnaires

Questions	Answer		Next Steps
	Yes	No	
Standard 1 – Environmental and Social Impacts and Risks			
1.Does the subproject have environmental permits/licenses with respect to national regulatory (especially Regulation on EIA) requirements? Please provide detailed information.			If "Yes" please provide non-technical summary. Describe manner of public participation.
2.Is the subproject likely to have significant adverse E&S impacts that are sensitive and unprecedented that trigger the 'Ineligible Activities' (Please see Annex-4 in the Environmental and Social Management Framework) and exclusion?			If "Yes": Exclude from project.
3. Does the subproject involve new construction of ponds, wastewater sewerage systems, wastewater treatment systems,			If "Yes": 1. Refer to Project Level ESMP or prepare site specific ESIA including ESMP (for template Annex-2 in the ESMF)for the proposed subproject based on the E&S risks raised by the below questions.

[16] https://www.eib.org/attachments/publications/eib eligibility excluded activities en.pdf

Questions	Answer		Next Steps
	Yes	No	
solid waste management systems, shelters, roads, community centers, schools, bridges and jetties?[17]			2. Include E&S risk management measures in contract documents.
4. Does the subproject involve renovation or rehabilitation of any small-scale infrastructure, such as groundwater wells, latrines, showers/washing facilities, or shelters?			If "Yes": 1. Apply relevant measures based on the Project Level ESMP (unless one of the questions below raises specific E&S risks and requires a site-specific ESMP). 2. Include E&S risk management measures in contract documents.
5. Will construction or renovation works require new borrow pits or quarries to be opened?			If "Yes": 1. Refer to Project Level ESMP or prepare site specific ESIA including ESMP (for template Annex-2 in the ESMF for the proposed subproject based on the E&S risks raised by the below questions. 2. Include E&S risk management measures in contract documents.
Standard 3 – Resource Efficiency and Pollution Prevention			
6. Is the project likely to generate solid or liquid waste that could adversely impact soils, vegetation, rivers, streams or groundwater?			If "Yes": 1. Refer to Project Level ESMP or prepare site specific ESIA including ESMP (for template Annex-2 in the ESMF) for the proposed subproject based on the E&S risks raised by the below questions. 2. Include E&S risk management measures in contract documents.
7. Are any of the construction works involve the removal of asbestos or other hazardous materials?			If "Yes": Apply asbestos guidance provide in Project Level ESMP
8. Are works likely to cause significant[18] negative impacts to air and/or water quality?			If "Yes": 1. Refer to Project Level ESMP or prepare site specific ESIA including ESMP (for template Annex-2 in the ESMF) for the proposed subproject based on the E&S risks raised by the below questions. 2. Include E&S risk management measures in contract documents.
9. Does the activity rely on existing infrastructure (such as discharge points) that is inadequate to prevent environmental impacts?			If "Yes": 1 Refer to Project Level ESMP or prepare site specific ESIA including ESMP (for template Annex-2 in the

[17] Questions 2 and 3 are critical questions in the Screening Form, as they will determine whether a subproject can use Project Level ESMP in Annex-2 (unless one of the questions below raises specific E&S risks and requires a site-specific ESMP). If all the subprojects are expected to be low and moderate risk, then all subprojects may be able to use the Project Level ESMP. However, if there are some subproject activities, which may propose substantial risk, these may require ESIA to be prepared.

18 Potential adverse risks and impacts are not likely to be significant if these are likely to have the characteristics as: (i) predictable and expected to be temporary and/or reversible, (ii) low in magnitude, (iii) site-specific, without likelihood of impacts beyond the actual footprint of the sub-project, and (iv) low probability of serious adverse effects to the human health and/or environment. These risks and impacts can be easily mitigated in a predictable manner.

Questions	Answer		Next Steps
	Yes	No	
			ESMF) for the proposed subproject based on the E&S risks raised by the below questions. 2. Include E&S risk management measures in contract documents.
Standard 4 – Biodiversity and Ecosystems			
10. Does the subproject involve activities that have potential to cause any significant loss or degradation of critical natural habitats[19] whether directly or indirectly, or which would lead to adverse impacts on natural habitats?			
11. Will the project involve the conversion or degradation of legally protected areas and/or internationally recognized areas of biodiversity value?			If "Yes": 1. Refer to Project Level ESMP or prepare site specific ESIA including ESMP (for template Annex-2 in the ESMF) for the proposed subproject based on the E&S risks raised by the below questions. 2. Include E&S risk management measures in contract documents.
12. Will this activity require clearance of trees, including inland natural vegetation?			If "Yes": 1. Refer to Project Level ESMP or prepare site specific ESIA including ESMP (for template Annex-2 in the ESMF) for the proposed subproject based on the E&S risks raised by the below questions. 2. Include E&S risk management measures in contract documents.
13.Will the project generate or increase air pollution and noise levels which will impact surrounding biodiversity?			
Standard 5 – Climate Change			
14.Is there any flooding/drought experience/risk of flooding in the subproject area?			
15.Is there a climate risk vulnerability assessment for the subproject, the subproject area or the region carried out? If not, have increased risks of flooding and drought taken into account in the design of project components?			
Standard 6 – Involuntary Resettlement			
16. Does the subproject involve involuntary land acquisition?			If "Yes": Prepare a site-specific RP.

[19] Critical habitat is the most sensitive of the high-value biodiversity features and is defined as comprising one of the following; a highly threatened and/or unique ecosystem;,a habitat of priority and/or significant importance to critically endangered, endangered or vulnerable species, as defined by the IUCN Red List of threatened species13 and in relevant national legislation; a habitat of priority and/or significant importance to a population, range or distribution of endemic or restricted-range species, or highly distinctive assemblages of species ; a habitat required for the survival of migratory species and/or congregatory species; biodiversity and/or an ecosystem of significant social, economic or cultural importance to local communities and indigenous groups;a habitat of key scientific value and/or associated with key evolutionary processes.

Questions	Answer		Next Steps
	Yes	No	
17. Does the subproject involve temporary or permanent physical and/or economic displacement of people?			If "Yes": Prepare a site-specific RP.
Standard 7 – Vulnerable Groups, Indigenous Peoples and Gender			
18. Is there a risk that women may be underpaid when compared to men when working on the project construction?			
19. Does the project lead to any risks and impacts on, individuals or groups who, because of their particular circumstances, may be disadvantaged or vulnerable.[20]			
20.Is the sub-project likely to negatively impact gender equality and/or women's empowerment?			
Standard 8 – Labour Rights			
21. Does the subproject involve uses of goods and equipment involving forced labour, child labour, or other harmful or exploitative forms of labour?			If "Yes": Exclude from project
22. Does the subproject involve recruitment of workforce including direct, contracted and/or primary supply workers?			
Standard 9 - Health, Safety and Security			
23. Is there a risk of increased community exposure to communicable disease (such as COVID-19, HIV/AIDS, Malaria), or increase in the risk of traffic related accidents?			If "Yes": Apply relevant measures in SEP.
24. Is an influx of workers, from outside the community, expected? Would workers be expected to use health services of the community? Would they create pressures on existing community services (water, electricity, health, recreation, others?)			
25. Is there a risk that SEA/SH may increase as a result of project works?			If "Yes": Develop SEA/SH Prevention and Response Action Plan in line with "Managing the Risks of Adverse Impacts on Communities from Temporary Project Induced Labor Influx"
26. Would any public facilities, such as schools, health clinic, and mosque be negatively affected by construction?			If "Yes": Apply relevant measures based on the Project Level ESMP in Annex-2 (unless one of the other questions in the screening form raises specific E&S risks and requires a site-specific ESMP).
27. Do workers need PPE relative to the potential risks and hazards associated with their work?			

[20] "Disadvantaged or vulnerable" refers to those individuals or groups who, by virtue of, for example, their age, gender, ethnicity, religion, physical, mental or other disability, social, civic or health status, sexual orientation, gender identity, economic disadvantages or ethnic peoples status, and/or dependence on unique natural resources, 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.

Questions	Answer		Next Steps
	Yes	No	
Standard 10 – Cultural Heritage			
28. Is the subproject to be located within or adjacent to a sensitive site (historical or archaeological or culturally significant site) or facility?			If "Yes": Apply Chance Find Procedures in Annex-3.
29. Locate near buildings, sacred trees or objects having spiritual values to local communities (e.g. memorials, graves or stones) or require excavation near there?			If "Yes": Apply Chance Find Procedures in Annex-3.
30. Will the sub-project constrain access to cultural sites for the communities?			

3. Conclusion

one-two sentences per each E&S Standards shall be provided – summary findings from the screening, stating which activities/actions determined the "Yes/No" answer. overall environmental and overall social risk level based on the screening shall be undertaken.

Based on the result from the screening above, the E&S risk classification of the subproject is: [*Add E&S risk classification*]

The E&S risk management instruments to be prepared/adopted and implemented are as follows:

a)

b)

Annex-2 General Environmental and Social Management Plan (ESMP)

The general ESMP that will be tailored for each subproject is presented below. The costs to implement mitigation measures and to monitor will be provided in C-ESMPs.

Ref.	Potential Risks and Impacts	Proposed Mitigation Measures	Phase			Indicators for monitoring	Frequency of Monitoring			Responsibility for implementation and monitoring
			Planning	*Construction*	*Operation*		*Continuous*	*Monthly*	*Quarterly*	
1.	**GENERAL**									
1.1	Environmental and social management	• PMC will provide trainings to supervision consultants and local administrations. Also, contractors will receive the relevant trainings from the supervision consultant.		X	X	# of trainings provided to supervision consultants, contractors, administrations # of non-compliances	X			Contractor *(implementation)* Supervision Consultant *(supervision)*
	Permitting	• All necessary permits/consents/approvals (including construction permit) will be obtained in accordance with the national legislation (e.g., environmental permits and licenses). • The subproject components will be designed, constructed and operated in accordance with the Turkish regulations and standards for protection against seismic activity. Building Earthquake Regulation (O.G. date/no: 18.03.2018/30364) will be complied with during all construction works.	X	X		All permits are taken	X			Contractor *(implementation)* Supervision Consultant *(supervision)*
	Spills/ accidents and contaminated land	• The storage of chemicals, hazardous materials, and other potential contaminants will be kept to a minimum as feasible through inventory management in order to reduce or eliminate the potential onsite and off-site consequences of releases due to accidental and emergency incidents. • Drummed hazardous materials with a total volume equal or greater than 1,000 L will be stored in areas with impervious floor that are sloped or bermed to contain a minimum of 25% of the total storage volume. Drip trays will be used for fuelling mobile equipment. • Appropriate secondary containment structures consisting of berms, dikes, or walls to contain at least 110 percent of the largest tank or 25% percent of the combined tank volumes will be provided at tank farms with above-ground tanks with a total storage		X		Visual inspection Records of incident and the disposal of contaminated soil		X		Contractor *(implementation)* Supervision Consultant *(supervision)*

Ref.	Potential Risks and Impacts	Proposed Mitigation Measures	Phase			Indicators for monitoring	Frequency of Monitoring			Responsibility for implementation and monitoring
			Planning	*Construction*	*Operation*		*Continuous*	*Monthly*	*Quarterly*	
		volume equal or greater than 1,000 L. Secondary containment will be made of impervious, chemically resistant material. • Any spillages from handling fuel and liquids will be immediately contained on site and the contaminated soil will be removed from the site for suitable treatment and disposal. • Secondary containment, drip trays or other overflow and drip containment measures shall be provided, for hazardous material containers at connection points or other possible overflow points.								
	Protection of topsoil and soil erosion	• Before the start of the excavation and construction activities soil stripping will be undertaken at the footprint of the construction areas to remove the surface soil or topsoil (vegetation, fertile soil layer) and subsoil. • During soil stripping necessary precautions will be taken to keep them separately intact. • Stockpiles will be protected from erosion and contamination impacts. Top and subsoil will be deposited separately, and long-term possible erosion and sedimentation will be prevented through the rehabilitation/planting. • Contaminated soils (if generated any) will be disposed of in an appropriately licensed disposal site. • The use of cement and wet concrete in or close to any exposed areas will be carefully controlled. • Spoil and other surplus excavation material from the earthworks which is classed as “acceptable fill” shall, wherever practicable, be recovered and used in the construction works. Relevant authorities shall be consulted regarding this on a site-by-site basis to ensure the re-use of the material is acceptable. • Surplus construction material will be made available to third parties for reuse on local development projects if it cannot be utilized on site. • During construction activities, hazardous and non-hazardous materials and wastes will be handled by the site-specific Hazardous Material Management Plan. • Proper drainage systems shall be created which will remove the underground, surface and waste water from the site.		X		Visual inspection Records of incident		X		Contractor *(implementation)* Supervision Consultant *(supervision)*

Ref.	Potential Risks and Impacts	Proposed Mitigation Measures	Phase			Indicators for monitoring	Frequency of Monitoring			Responsibility for implementation and monitoring
			Planning	*Construction*	*Operation*		*Continuous*	*Monthly*	*Quarterly*	
		• Length and steepness of slopes will be contoured and minimized to prevent soil erosion at the construction sites. • In case of soil storage is extended on the site more than 3 months, use mulch, grasses or compacted soil to stabilize exposed areas will be implemented during construction on dry season								
	Protection of surface water	• Good construction site practices (i.e., measures as described below such as using designated areas for storing materials, regular inspections at construction sites, training of construction workers, placement of sediment traps and/or oil/water, etc.) will be adopted to minimize risks of water pollution. • Stockpiles of soil will be stored as needed at designated areas and the quality of the excavation materials and fill materials (i.e., brought from outer sources) shall be checked. Measures will be taken at the soil and overburden stockpiles to prevent sediment transport and fugitive dust emissions. Slopes formed during construction (excavation, fill and stockpile slopes) and filler sections will be provided with proper drainage so as to prevent sediment transport and collect stormwater. • Surface runoff and site drainage will be managed in order to prevent direct discharge to surface waters. • Contaminated surface runoff will be sent to treatment before discharge to environment. • In-situ impermeable (i.e., polyethylene) septic tanks will be used to collect domestic waste water from the camping sites and necessary agreements will be made with the municipality for the collection and disposal of waste water via vacuum trucks to prevent direct waste water discharges to the environment. • There will not be any surface water abstraction for the project water demand. Water demand for construction activities and dust suppression will be supplied from the existing municipality line.		X		Visual inspection Records of incident		X		Contractor *(implementation)* Supervision Consultant *(supervision)*
	Protection of groundwater	• Construction activities will be regularly inspected on site; • Construction workers and relevant staff will be trained related to the implementation of good construction site practices and on spill response and prevention measures		X		Visual inspection Records of incident		X		Contractor *(implementation)*

Ref.	Potential Risks and Impacts	Proposed Mitigation Measures	Phase			Indicators for monitoring	Frequency of Monitoring			Responsibility for implementation and monitoring
			Planning	*Construction*	*Operation*		*Continuous*	*Monthly*	*Quarterly*	
		• No fuelling of vehicles or equipment will take place within excavated areas. Fuelling shall only be carried out in designated areas away from surface drainage ways discharging outside the site • No hazardous materials will be stored in excavated areas and all handling of hazardous materials will take place under special supervision • Storage areas will be designed and constructed to provide secondary protection for hazardous materials and wastes stored on site • In order to prevent groundwater contamination in case of a spill, spill kits will be present in the areas where the liquid materials are stored, the drainage systems of the areas where these materials are stored will be designed so as to prevent the spills and leaks from reaching the storm water system.								Supervision Consultant *(supervision)*
	MATERIAL RESOURCES AND WASTE MANAGEMENT									
	Supply of Material	• Materials will be sourced from locations as close as possible to the Project site so as to minimise the impact of transportation route and distance. Where feasible, local suppliers will be prioritised for the procurement of materials and services to increase local benefits • Materials from quarries, borrow pits, crushing plants and asphalt plants will be sourced from suppliers operating with valid environmental and other permits and licenses and where the sites are managed in full compliance with all applicable environmental, health and safety and social standards and specifications • Appropriate storage conditions of these materials/chemicals will be established in line with the relevant chemical and health and safety regulations and international guidelines.								
	Excavated Material Management	• The topsoil stripped from the construction areas and the excavated material will be stored separately in the temporary Excavated Material Storage Areas. • The topsoil will be preserved through mitigation measures during the storage and finally used for the landscaping. • If appropriate, the excavated material will be used as backfilling material on the project site.		X		Visual inspection Records of disposal amount and area	X			Contractor *(implementation)* Supervision Consultant *(supervision)*

Ref.	Potential Risks and Impacts	Proposed Mitigation Measures	Phase			Indicators for monitoring	Frequency of Monitoring			Responsibility for implementation and monitoring
			Planning	*Construction*	*Operation*		*Continuous*	*Monthly*	*Quarterly*	
		• The excess excavation material, it will be sent to licensed excavation waste disposal sites. The excavation wastes will be managed in line with Regulation on Control of excavation, Construction and Demolishing Wastes.								
	Waste management	• A site-specific Waste Management Plan (WMP) for construction phase in line with the provisions of Turkish and EU Legislation and EIB E&S Standards will be prepared. • Whenever possible, priority will be given to minimise the amount of waste and raw material use through recovery and re-use of raw materials and the waste will be managed in accordance with the waste management hierarchy • All waste will be collected, segregated, labelled and stored on site according to the requirements by relevant Turkish regulations which address waste minimisation, segregation, labelling, storage, transportation and recycling/disposal • Hazardous or non-hazardous inscription, waste code, stored waste amount and storage date will be indicated/labelled on wastes temporary stored by classifying according to their properties. The reaction of wastes with each other will be prevented by the measures taken in the Temporary Storage Area • Permission regarding storage of wastes (e.g., hazardous and other special wastes), except municipal and packaging wastes, in the Temporary Waste Storage Area will be obtained from the relevant authority • Spills should be addressed immediately per the appropriate Spill Management Plan which will be prepared prior to the construction works, and initiate soil clean-up and soil removal and disposal of the contaminated soil if needed • Wastes will be collected in closed containers suitable for the type of waste before the final disposal and stored in the Temporary Storage Area to be established on the site • Waste recycling, transport and disposal will be carried out by means of licensed companies and/or related municipalities • Wastes to be temporarily stored on site will be delivered to licensed transport vehicles appropriate to the type of waste for disposal. On-site storage of wastes prior to final disposal (including earth dug for foundations) should be at least 300 m from rivers, streams, lakes and wetlands will be made.				Visual inspection of control measures Waste generation and disposal records Training records Records of complaints		X		Contractor *(implementation)* Supervision Consultant *(supervision)*

Ref.	Potential Risks and Impacts	Proposed Mitigation Measures	Phase			Indicators for monitoring	Frequency of Monitoring			Responsibility for implementation and monitoring
			Planning	*Construction*	*Operation*		*Continuous*	*Monthly*	*Quarterly*	
		• Secured area for refuelling and transfer of other toxic fluids distant from settlement area (and at least 50 m from drainage structures and 100 m from important water bodies); ideally on a hard/non-porous surface will be used. • Collect and properly dispose of small amount of maintenance materials such as oily rags, oil filters, used oil, etc. Never dispose spent oils on the ground and in water courses as it can contaminate soil and groundwater (including drinking water aquifer). • Record keeping will be done for all waste generation, storage onsite and offsite waste transportation activities to third party waste management facilities • Periodic inspections will be conducted in the waste recycling/disposal facilities to ensure proper disposal practices are implemented. • If asbestos or asbestos containing materials (ACM) are expected at a construction site, an Asbestos Management Plan will be prepared. • If asbestos or ACM are found at a construction site they should be clearly marked as hazardous waste. • The asbestos should be appropriately contained and sealed to minimize exposure. • Prior to removal, if removal is necessary, ACM should be treated with a wetting agent to minimize asbestos dust. • If ACM is to be stored temporarily, it should be securely placed inside closed containers and clearly labelled. • Removed ACM must not be reused.								
	Water requirement and waste water generation	Water Resources Management Plan will be prepared prior to the construction works and implemented. • Regulation on Water for Human Consumption (O.G. date/no: February 17, 2005 / 25730) will be complied with in relation to drinking water of personnel • Activities should not affect the availability of water for drinking and hygienic purposes. • No soiled materials, solid wastes, toxic or hazardous materials should be stored in, poured into or thrown into water bodies for dilution or disposal.		X		Visual inspection of control measures Septic tank effluent disposal records (if any)		X		Contractor *(implementation)* Supervision Consultant *(supervision)*

Ref.	Potential Risks and Impacts	Proposed Mitigation Measures	Phase			Indicators for monitoring	Frequency of Monitoring			Responsibility for implementation and monitoring
			Planning	*Construction*	*Operation*		*Continuous*	*Monthly*	*Quarterly*	
		• The domestic waste water to be generated during construction phase of the Project will be collected in impermeable underground septic tanks and necessary agreements will be made with the municipality to collect and dispose the waste water via vacuum trucks regularly or to discharge the existing sewerage system that ends with the WWTP • The flow of natural waters should not be obstructed or diverted to another direction, which may lead to drying up of riverbeds or flooding of settlements. • A stormwater and waste water drainage and collection system will be established on site to collect and manage uncontaminated and contaminated drainages separately • Separate concrete works in waterways and keep concrete mixing separate from drainage leading to waterways.				Effluent quality measurement records (if any) Records of complaints				
	Sexual Exploitation and Abuse (SEA)/Sexual Harassment (SH)	• If it is possible and feasible, local employment options will be selected at all phases of the Project • Provide trainings on SEA/SH and CoC to Project workers. • Make signing the CoC obligatory to Project workers. • Develop SEA/SH Prevention and Response Action Plan for the subprojects with moderate, substantial and high SEA/SH risks. • Enable multiple channels in the Project grievance mechanism (GM) and workers' grievance mechanism (WGM) through which complaints can be registered in a safe and confidential manner to enable women (or victim) to safely access the GM/WGM.		X		Number of training courses related to SEA/SH and CoC Number of workers that have signed CoC Successful integration of channels in GM/WGM to receive SEA/SH grievances Number of SEA/SH grievances (If prepared) successful implementation of SEA/SH Prevention and Response Action Plan		X		Contractor *(implementation)* Supervision Consultant *(supervision)*

Ref.	Potential Risks and Impacts	Proposed Mitigation Measures	Phase			Indicators for monitoring	Frequency of Monitoring			Responsibility for implementation and monitoring
			Planning	*Construction*	*Operation*		*Continuous*	*Monthly*	*Quarterly*	
	AIR QUALITY MANAGEMENT									
	Dust emissions during construction	• Air Quality Management Plan will be prepared by contractor to include mitigation measures that will be taken to reduce the dust emissions during construction: • Erosion measures to be applied in vegetation clearance areas • Minimal particulate emission from the construction activities will be maintained by good management and housekeeping practices and use of dust suppression methods. Water spraying will be performed at dust generating areas inside the Project site especially during dry weather conditions. • Covering inner roads with materials to prevent dust and keeping these roads clean • Excavated soils will be stockpiled (as necessary) at designated areas and will be placed as far as possible from the settlements. Dusty and loose materials will be properly covered or top layers will be kept moist • Screens will be placed as necessary at the construction site to reduce dust emissions. • Burning of the site clearance debris (trees, undergrowth) or construction waste materials will be avoided • Stockpile of aggregate materials will be covered to avoid suspension or dispersal of fine soil particles during windy days or disturbance from stray animals The following mitigation measures will be implemented to minimize dust emissions due to transport of materials during construction: • Vehicle speed limits will be applied and outside the Project site for paved and unpaved roads (e.g., unpaved roads around 10km/h, paved roads around 20 km/h within the site). Truck operators will be trained to comply with speed limits and good construction site practices • Transfer roads will be sprayed with water as necessary (for example using mobile bowsers) to prevent significant dust emissions especially in dry weather conditions. • Open top trucks carrying excavated soils will be covered before leaving the construction are. • Frequently used and long-term haulage roads will be paved (e.g., asphalt, concrete, etc.).		X		Visual inspection of air quality control measures Records of maintenance Records of complaints	X			Contractor *(implementation)* Supervision Consultant *(supervision)*

Ref.	Potential Risks and Impacts	Proposed Mitigation Measures	Phase			Indicators for monitoring	Frequency of Monitoring			Responsibility for implementation and monitoring
			Planning	*Construction*	*Operation*		*Continuous*	*Monthly*	*Quarterly*	
		• Daily visual inspections will be done at the stockpiles, haulage roads and during the heavy vehicle movements in order to detect dust emission sources. • Air pollutants will be monitored at nearby sensitive locations to ensure minimal impacts in accordance with the Air Quality Control and Monitoring Plan. It is suggested to undertake monthly measurements of PM10 in the first three months of construction during earthworks; if the results are observed to be below limit values, measurements will continue to be conducted quarterly or if limit values are exceeded, the measurements will continue to be conducted monthly.								
	Exhaust emissions during construction	• The construction equipment and trucks will be maintained regularly to keep them in good working condition to minimize exhaust emissions caused by poor performance. • Engines of the equipment/trucks will be prevented from idling and running unnecessarily. • Unnecessary Project traffic will be avoided inside and outside of the Project side by adequate planning of material transport. • A Construction Traffic Management Plan by contractor will be prepared by contractor and implemented which will decrease the impacts of the construction traffic.		X		Visual inspection of air quality control measures Records of maintenance Records of complaints		X		Contractor *(implementation)* Supervision Consultant *(supervision)*
	NOISE MANAGEMENT									
	Noise	• High noise generating activities will be performed and heavy machinery will be operated during the day-time. • A Noise Management Plan by contractor will be developed to cover the following mitigation measures: • The machinery and equipment to be used during the land preparation and construction activities will not be operated at the same point/location but homogeneously distributed in the site • 'Low-noise' equipment will be used during construction phase as far as possible. • Machines will be shut down or throttled down to a minimum when not in operation • Maintenance procedures will be implemented to keep equipment in good working condition and to minimise extraneous noises caused by poor performance		X		Visual inspection of noise control measures Records of complaints	X			Contractor *(implementation)* Supervision Consultant *(supervision)*

Ref.	Potential Risks and Impacts	Proposed Mitigation Measures	Phase			Indicators for monitoring	Frequency of Monitoring			Responsibility for implementation and monitoring
			Planning	*Construction*	*Operation*		*Continuous*	*Monthly*	*Quarterly*	
		• Necessary consent will be obtained from the relevant authority for the construction activities during evening and night-time • Noisy activities taking place within construction sites will be located away from the residential areas as far as possible • Use when needed and feasible noise-control methods such as fences, barriers or deflectors (such as muffling devices for combustion engines or planting of fast-growing trees). • Noise related to construction traffic will be properly managed through implementation of a Traffic Management Plan • Minimize subproject transportation through community areas. Maintain a buffer zone (such as open spaces, row of trees or vegetated areas) between the subproject site and residential areas to lessen the impact of noise to the living quarters. • On-site structures such as containers, offices will be used to screen sensitive receptors from noise sources as far as possible. Where necessary movable noise barriers (2-2.5 m high) will be used to ensure receptor noise levels are less than the limit values adjacent to noisy activities • Nearby communities will be contacted especially prior to noisy activities to inform them about the timing and duration • Awareness will be increased among construction workers regarding noise mitigation • The project specific Noise Management Plan will include a noise impact monitoring program to measure noise levels at the closest sensitive receptors. It is suggested that noise monitoring measurements are conducted monthly in the first 3 months of construction to identify the need for noise barriers. If levels at receptors are seen to exceed the standards, the noise monitoring measurements will continue monthly, and measures will be taken to reduce noise levels so that the limit values are met during all phases of construction. If the results of noise monitoring in the first 3 months of construction are observed to be below limit values, monitoring will continue to be conducted quarterly. It is important to note that noise monitoring may be undertaken more frequently, if there is significant number of complaints from stakeholders								

Ref.	Potential Risks and Impacts	Proposed Mitigation Measures	Phase			Indicators for monitoring	Frequency of Monitoring			Responsibility for implementation and monitoring
			Planning	*Construction*	*Operation*		*Continuous*	*Monthly*	*Quarterly*	
		• An appropriate public relations program should be developed and the public in close settlements should be informed by the social expert • An efficient grievance mechanism will be established to collect complaints from the local residents regarding the noise and vibration in order to prevent any discontent by the local communities.								
	TRAFFIC MANAGEMENT									
	Project Traffic	A Project specific Traffic Management and Safety Plan will be prepared and implemented. • Mitigation measures as part of the CTMP will be developed in consultation with affected communities, vulnerable people or groups in communities and stakeholders. The appropriate consultation measures will be provided in the Plan. • Necessary consultation with the relevant authorities will be conducted related to the implementation of the Plan • An efficient grievance mechanism will be implemented to collect complaints from local residents and other stakeholder on the potential traffic issues.		X		Traffic accident records Records of complaints		X		Contractor *(implementation)* Supervision Consultant *(supervision)*
	BIOLOGICAL ENVIRONMENT MANAGEMENT									
	Impact on Flora and Fauna	• Before the land preparation, the working areas will be set where activities (e.g., vegetation clearing, vegetation removal, levelling and construction) and permanent structures (units and roads) will be established • Construction sites and access roads will be separated from other areas with appropriate signboards, signs and fences to limit the staff and vehicle access to the other areas • Minimise land requirements for permanent facilities and areas of clearance. Habitat disturbance will be reduced by keeping vehicles on access roads and by minimizing traffic in undisturbed areas • Care will be given to avoid contamination of any water resources around the project area, and further care will be given so as not to pollute them during all phases of the construction • Dumping and throwing any waste to aquatic environment is forbidden and should be avoided		X		Tree plantation records Visual inspection of control measures		X		Contractor *(implementation)* Supervision Consultant *(supervision)*

Ref.	Potential Risks and Impacts	Proposed Mitigation Measures	Phase			Indicators for monitoring	Frequency of Monitoring			Responsibility for implementation and monitoring
			Planning	*Construction*	*Operation*		*Continuous*	*Monthly*	*Quarterly*	
		• Inform and train Project personnel regarding the necessary mitigation measures. Workers should be trained regarding the occurrence of important resources in the area and the importance of their protection, including the appropriate regulatory requirements • Strictly prohibit unnecessary destruction of habitats, cutting of trees or vegetation found outside the area absolutely needed for the project • Employees, contractors, and site visitors should be instructed to avoid harassment and disturbance of wildlife, especially during reproductive (e.g., courtship and nesting) seasons • Construction work will be done gradually so that it will have enough time to escape for possible fauna species to be found • If any critical species is observed on the project site, disturbance of species should be avoided during critical periods of the day (e.g., night) or year (e.g., periods of courtship, breeding, nesting, lambing, or calving) • If there is a nest of bird species, the nest should be marked with a safety strip about 3 meters in diameter and an expert ornithologist should be informed • Avoid and/or minimize dust emissions by lightly watering the immediate surroundings of construction sites, and wetting the stored material • Construction waste generated due to construction activities will first be stored at designated storage areas and then disposed • Noise-reduction devices (e.g., mufflers) will be maintained in good working order on vehicles and construction equipment • Dust abatement techniques should be used on unpaved, unvegetated surfaces to minimize airborne dust • Spill prevention practices and response actions should be applied in refuelling and vehicle-use areas to minimize accidental contamination of habitats • Spills should be addressed immediately per the appropriate Oil and Chemical Spill Management Plan which will be prepared by contractor prior to the construction works, and initiate soil clean-up and soil removal if needed.								

Ref.	Potential Risks and Impacts	Proposed Mitigation Measures	Phase			Indicators for monitoring	Frequency of Monitoring			Responsibility for implementation and monitoring
			Planning	*Construction*	*Operation*		*Continuous*	*Monthly*	*Quarterly*	
		• All unnecessary lighting should be turned off at night to avoid attracting migratory birds • Herbicide/pesticide use should be limited to nonpersistent, immobile herbicides/pesticides and apply only in accordance with label and application permit directions and stipulations for terrestrial and aquatic applications • Local flora-fauna elements should be used during landscaping activities (plant applications, greening efforts etc.). • Erosion controls will be applied that comply with local, regional or national standards. Apply practices such as jute netting, silt fences, and check dams near disturbed areas • Precautionary measures regarding fire risks should be taken • Measures to reduce noise provided in Noise section will be implemented • Measures to reduce dust and air pollution provided in Air Environment will be implemented • Project workers will not be allowed to bring any live animals or plants into the construction site to avoid the risk of pest/invasive species establishment • Construction site will be fenced in order to prevent fauna species' entrance into these areas • Biodiversity Management Plan will be prepared by contractor prior to the construction works and implemented during the Project activities in case of necessity.								
	LABOUR AND WORKING CONDITIONS									
	Labour and working conditions	Develop and implement Labour Management Plan prepared by contractor including: • Personnel Selection and Employment Procedure; • Workers' Grievance Mechanism will be developed and will: • be open to all the Project workers (including contractors' workers); • be easily accessible by workers; • be free of retribution; • allow anonymous complaints to be raised and addressed;		X		Employee records Training records Records of worker's complaints		X		Contractor *(implementation)* Supervision Consultant

Ref.	Potential Risks and Impacts	Proposed Mitigation Measures	Phase			Indicators for monitoring	Frequency of Monitoring			Responsibility for implementation and monitoring
			Planning	*Construction*	*Operation*		*Continuous*	*Monthly*	*Quarterly*	
		• Employees will be informed about this mechanism at the time of hiring and through regular training • Handle grievances of SEA/SH nature • Accommodation Camp Management Plan (ACMP) will be developed by contractor as relevant								
	Occupational health and safety	• Development and implementation of the Occupational Health and Safety Management Plan by contractor in line with applicable national health and safety legislation and international standards • Dust emissions and noise generation will be minimised to the extent possible with implementation of the mitigation measures • Workers (including subcontractors) will be provided safety briefings every day before the work starts and provided with necessary personal protective equipment. • Work permits will be required for high-risk activities such as working at height, operation of heavy equipment and similar; • All workers (including subcontractors) will be trained on health and safety, and Emergency Preparedness and Response Plan to respond timely to the incidents. • All accidents and incidents will be recorded • The efficiency of health and safety practices will be monitored through internal and external audits and corrective actions will be taken if required.		X		• Visual inspection • Employee records • Equipment records • Visual inspection of control measures • OHS records • Incident statistics and records				Contractor *(implementation)* Supervision Consultant *(supervision)*
	COMMUNITY HEALTH, SAFETY AND SECURITY									
	Community health, safety and security	• Development and implementation of Community Health, Safety and Security Plan by contractor for the Project construction stage • Development and implementation of Accommodation Camp Management Plan by contractor to ensure that accommodation services of adequate quality are provided to the Project workers (including provision of leisure facilities, shops, etc.) to minimize contacts with local residents and avoid labour influx as relevant • Conduct information disclosure and consultation activities with communities and other stakeholders in line with the Stakeholder Engagement Plan (SEP)		X		Visual inspection of control measures Traffic accident records Records of grievances		X		Contractor *(implementation)* Supervision Consultant *(supervision)*

Ref.	Potential Risks and Impacts	Proposed Mitigation Measures	Phase			Indicators for monitoring	Frequency of Monitoring			Responsibility for implementation and monitoring
			Planning	*Construction*	*Operation*		*Continuous*	*Monthly*	*Quarterly*	
		• Develop and implement Emergency Preparedness and Response Plan • Development and implementation of Traffic Management Plan by contractor • A GM will be in place that will enable the community to raise concerns during the lifetime of the Project								
	Dust and noise impacts on the nearby community	• Air Quality Management Plan will be prepared by contractor and implemented during the construction phase of the Project • Transfer roads will be sprayed with water as necessary (for example using mobile watering bowsers) to prevent significant dust emissions especially in dry weather conditions • A Noise Management Plan will be prepared by contractor and implemented during the construction phase of the Project; • A Community Health and Safety and Security Plan to be prepared by contractor, with commitments to implement the following key measures to protect the community from adverse effects during construction: noise, dust, other emissions risks with material and hazardous substances and accidents • Construction activities will be planned in a way considering the nearby communities and necessary consent will be obtained from the relevant authority for undertaking construction activities during evening and night time, if needed • TMP will be prepared and implemented during the construction phase of the Project		X		Records of grievances		X		Contractor *(implementation)* Supervision Consultant *(supervision)*
	Life and fire safety	• Emergency Preparedness and Response Plan will be prepared and implemented. • Necessary precautions will be undertaken for the on-site offices and worker's accommodation areas. The Workers' Camp Accommodation Plan will include fire and emergency response provisions as relevant.		X				X		Contractor *(implementation)* Supervision Consultant *(supervision)*
	Security	• Security will be provided in a manner that does not jeopardise community's safety or Project Company's relationship with the community and that is consistent with national requirements and international standards. The grievance mechanism will allow communities and workers to express concerns regarding security issues and behaviour of security personnel		X				X		Contractor *(implementation)* Supervision Consultant *(supervision)*

Ref.	Potential Risks and Impacts	Proposed Mitigation Measures	Phase			Indicators for monitoring	Frequency of Monitoring			Responsibility for implementation and monitoring
			Planning	*Construction*	*Operation*		*Continuous*	*Monthly*	*Quarterly*	
	LAND ACQUISTION AND INVOLUNTARY RESETTLEMENT									
	Land acquisition, physical / economic displacement	• Damages to vegetation, agricultural lands and structures, pastures, livestock facilities will be avoided. In case of any damage, compensation at replacement cost or other acceptable costs (in line with Standard 6 and Entitlement Matrix in RP) will be applied immediately Avoid involuntary resettlement or, when unavoidable, minimize involuntary resettlement by exploring subproject design alternatives. If involuntary resettlement is not unavoidable at any scale, then prepare and implement Livelihood Restoration Plan (LRP) and/or Resettlement Plan (RP) in line with the Resettlement Framework of the Project as relevant; • Carry out consultations • Ensure availability of grievance mechanism to stakeholders affected by land acquisition activities	X	X		Approval of LRP/RP Monitoring of LRP/RP implementation Records of complaints Surveys Reports				PIU and Administration (*preparation/ implementation)*
	CULTURAL HERITAGE									
	Damage to Archaeological Sites	• Chance Finds Procedure presented in Annex-3 of this ESMF will be prepared and implemented. • Trainings on Chance Finds Procedure will be delivered to the project workers, including contractor and subcontractor employees, on the procedures to follow in case chance finds are discovered.		X		Chance find records Number of trainings on chance finds procedures		X		Contractor *(implementation)* Supervision Consultant *(supervision)*
	STAKEHOLDER ENGAGEMENT									
	Information Disclosure/ Stakeholder Engagement/ Community Grievances	• Implement Stakeholder Engagement Plan (SEP) and Grievance Mechanism; • SEP to be updated annually and if there are significant changes in the Project; • Publicise SEP and Grievance Mechanism, including information on contact details of responsible staff to handle grievances. • Community Liaison Officer shall be appointed to monitor surrounding communities' complaints related to the construction activities and maintain relationships with affected communities.		X		Records of complaints Stakeholder engagement records		X		PIU Contractor *(implementation)* Supervision Consultant *(supervision)*

Annex-3 Chance Finds Procedures

Cultural heritage encompasses tangible and intangible heritage which may be recognized and valued at a local, regional, national or global level. Tangible cultural heritage, which includes movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. Tangible cultural heritage may be located in urban or rural settings, and may be above or below land or under the water. Intangible cultural heritage, which includes practices, representations, expressions, knowledge, skills—as well as the instruments, objects, artefacts and cultural spaces associated therewith—that communities and groups recognize as part of their cultural heritage, as transmitted from generation to generation and constantly recreated by them in response to their environment, their interaction with nature and their history.

In the event that during construction, sites, resources or artefacts of cultural value are found, the following procedures for identification, protection from theft, and treatment of discovered artefacts should be followed and included in standard bidding documents. These procedures consider requirements related to Chance Finding under national legislation including **Protection of Cultural and Natural Assets Law (N° 2863)**.

- Stop the construction activities in the area of chance find temporarily.
- Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a guard shall be arranged until the responsible local authorities take over. These authorities are **nearest museum directorate** or **mukhtar in the village**, and **local authority i.e. governor or district governor in other places**.
- Notify the relevant **resident engineer** and the **nearest museum directorate** or the **mukhtar in the village**, and the **local authority in other places** immediately. **Resident engineer** will inform the **Project Manager** of the contractor. Subsequently, the **Project Manager** will inform the **PIU**, the **supervision consultant**, and **the project management consultant**, promptly.
- The **mukhtar in the village**, and the **local authority in other places** shall promptly carry out the necessities. The mukhtar shall report the situation to the nearest local authority along with the measures taken on the same day. The local authority and other authorities notify the Ministry of Culture and Tourism (MoCT) and the nearest museum directorate in writing within ten days.
- The **MoCT** and the **nearest museum directorate** would be in charge of evaluation/inspection of the significance or importance of the chance finds and advise on appropriate subsequent procedures.
- If the **MoCT** and the **nearest museum directorate** determines that chance finds is a non-cultural heritage chance find, the construction process can resume.
- If the **MoCT** and the **nearest museum directorate** determines chance finds is an isolated chance finds, **MoCT** and the **nearest museum directorate** would provide technical supports/advice on chance finds treatment with related expenditure on the treatment provided by the entity report the chance finds.

Annex-4 A.1.1. Technical Description of Schedule A of Earthquake Reconstruction Framework Loan

Purpose, Location

The project concerns rehabilitation, new construction or extension of drinking water, sewerage and stormwater networks as well as drinking water and waste water plants and purchase and installation of water utilities' smart systems, machinery and equipment in the provinces affected by the earthquakes of 6th February 2023.

The sub-projects will be preliminary located in the provinces of Hatay, Gaziantep, Sanliurfa, Adiyaman, Malatya and Diyarbakir but could be re-located in any of the eleven provinces including the above six provinces: Kilis, Adana, Osmaniye, Elazig, Kahramanmaras.

Description

The components eligible for Bank financing shall fall under the following description:

- Rehabilitation, modernisation and extension/new construction of water supply infrastructure, such as water intakes, water treatment plants, raw or treated water transmission mains, water supply networks including pumping stations and house connections, bulk and consumer metering, energy efficiency measures.
- Rehabilitation, modernisation, and extension/new construction of waste water collection and treatment infrastructure, such as sewer networks including house connections and pumping stations, waste water treatment plants.
- Rehabilitation, modernisation and extension/new construction of storm water systems and emergency flood protection measures.
- Supply of specialized maintenance equipment.

The following consultancy services are eligible under the project:

- Support to PIU, project implementation unit and Final Beneficiaries (procurement and implementation).
- Project preparation, studies (feasibility, environmental (including climate), technical, social, economic, etc.), designs.
- Supervision of works.
- Conduct of applicable KYC/AML-CFT (know your customer/anti-money laundering-countering financing of terrorism) and sanctions customer due diligence (including due diligence on the Sanctions) on the Final Beneficiaries.
- Expenditure verification.

Calendar

Q3-2023 to Q4-2030