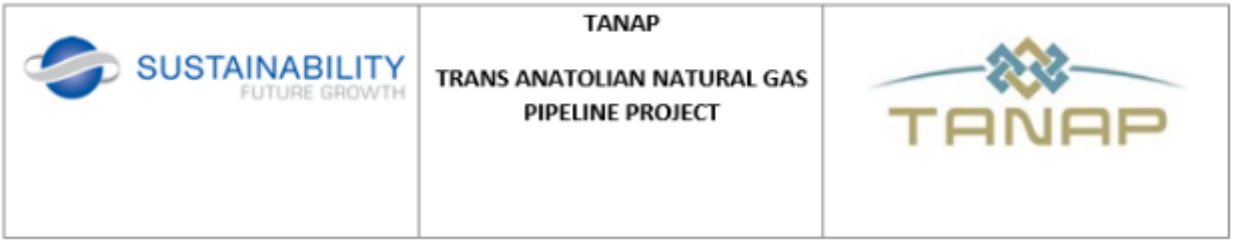

IESC Monitoring Report October 2024

Rev	Status	Date	Status Description	Issued by	Checked by	Approved by	TANAP Approval
P6-A	DIC	23.10.2024	Discipline Internal Check	MARA	THOH	THOH	
P6-B	IDC	25.10.2024	Inter-discipline Check	MARA	THOH	THOH	
P6-C	IFR	29.10.2024	Issued for Review	MARA	THOH	THOH	
P6-0	IAA	18.11.2024	Issued as Approved	MARA	THOH	THOH	

DOCUMENT REVISION HISTORY

REV.	REVISION DESCRIPTION	DATE ISSUED	UPDATE / AMENDMENT DETAILS
P6-A	DIC	23.10.2024	Discipline Internal Check
P6-B	IDC	25.10.2024	Inter-discipline Check
P6-C	IFR	29.10.2024	Issued for Review
P6-0	IAA	18.11.2324	Issued as Approved

HOLDS

No.	Section	Description	Input From	Planned Date

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Figures

Acronyms and Abbreviations

AGI	Above-Ground Installation
BAP	Biodiversity Action Plan
BOS	Biodiversity Offset Strategy
BOMP	Biodiversity Offset Management Plan
BScm	Billion Standard Cubic Meters
BVS	Block Valve Station
CH	Critical Habitat
CS	Compressor Station
EBRD	European Bank for Reconstruction and Development
EEC	European Economic Community
EHS	Environment, Health and Safety
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
ERT	Electrical Resistivity Tomography
ESAP	Environmental and Social Action Plan
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESMS	Environmental and Social Management System
EU	European Union
FC	Fully Compliant
GHG	Greenhouse Gas
GIS	Graphical Information System
H&S	Health and Safety
HR	Human Resource
HQ	Headquarter
HSE	Health, Safety and Environment
IESC	Independent Environmental and Social Consultant
IFC	International Finance Corporation
IFI	International Financial Institutions
IMP	Integrity Mapping Platform
ISO	International Organization for Standardization
JHA	Job Hazard Analysis
KP	Kilometre Point
KPI	Key Performance Indicator
LEP	Land Exit Protocol
LRE	Land Rights Entity
LRP	Livelihood Restoration Plan
MoEUCC	Ministry of Environment, Urbanisation and Climate Change
MP	Management Plan

MS	Metering Station
MTI	Medical Treatment Injury
MSDS	Material Safety Data Sheet
NG	Net Gain
NGO	Non-Governmental Organisation
NNL	No Net Loss
OHL	Overhead Transmission Lines
OHS	Occupational, Health and Safety
PAP	Project-Affected Person
PBF	Priority Biodiversity Features
PC	Partially Compliant
PEP	Project Execution Plan
PPE	Personal Protective Equipment
PR	Performance Requirement
PS	Performance Standard
QHSE	Quality, Health, Safety and Environment
QHSSE	Quality, Health, Safety, Social and Environment
RAP	Resettlement Action Plan
RETIE	RAP End-Term Impact Evaluation
RoW	Right of Way
SCC	Species of Conservation Concern
SE	Stakeholder Engagement
SEP	Stakeholder Engagement Plan
SMP	Social Management Plan
SPS	Safeguard Policy Statement
Sustainability	Sustainability Pty Ltd
TANAP	Trans Anatolian Natural Gas Pipeline
TAP	Trans Adriatic Pipeline
TARP	Trigger Action Response Framework
TPMC	Third Party Monitoring Company
WB	World Bank

Executive Summary

Sustainability Pty Ltd (Sustainability) is engaged as the Independent Environmental and Social Consultant (IESC) for the Trans Anatolian Natural Gas Pipeline (TANAP). This year marks the eighth year of monitoring. The field assessment was designed as a sampling exercise to assess TANAP against all of the relevant EBRD Performance Requirements and project standards. Due to the size of the TANAP pipeline and the logistical reality of assessing such a project the site assessment could only be completed for a pre-selected sample of the entire length of the pipeline. This year's assessment was focused on the western portion of the pipeline from Ankara to Edirne. This is in line with the previous assessment however it should be noted that this report can only be based on the materials provided and areas visited during the site inspection. Finding no non-conformances does not necessarily represent a fully compliant project – it represents the areas, work, systems, etc. assessed as part of the risk-based focused assessment.

A new contract and Project Execution Plan (PEP) has described the continuation of the IESC Services for operation phase(s) of Phase 0 and Phase 1, which includes assessing the various environmental and social requirements of the International Financial Institutions (IFIs) including EBRD's Performance Requirements (PRs), TANAP policies and the commitments given in the Environmental and Social Impact Assessment (ESIA) package including the management system documents of both TANAP and its Contractors. The services include the presentation of recommended actions associated with identified non-compliances or areas of improvement.

The PEP presents the implementation arrangements reflected in the IESCS contract signed in 2024, Sustainability's proposal and the outcomes of the Project Kick-Off Meeting in August.

The following sections outline the summary of specific Performance Standards.

PR 1 Monitoring and Reporting

Environmental

Environmental Monitoring and Reporting requirements are defined within the Environmental Monitoring Plan for Operations (TNP-PLN-ENV-GEN-008), as part of the Environmental Management System. TANAP has achieved 100% of target performance for all environmental KPIs during the year to date, except for '*the % of tests/samples compliant with Project*

standards for effluent discharge'. Non-compliance with Project wastewater effluent quality standards is an ongoing issue for TANAP, as this also occurred in 2022 and 2023. The non-compliances are due to technical issues related to the biological treatment process, and appropriate remedial actions and mitigation measures were taken to prevent any contamination of the receiving environment. However, as this is a recurrent issue by nature, it was recommended that TANAP investigated whether there were alternative approaches to the treatment of wastewater that could be taken, or additional maintenance activities that are needed to help ensure that future performance for this KPI can be improved.

The findings of internal environmental compliance reviews at all operational stations conducted by the Environmental Department to date in 2024 all related to relatively minor issues that can and should be easily rectified. In fact, at MS4 the findings; that waste was not being properly segregated in the waste storage area, and that hazardous materials were being stored alongside recyclable wastes, were not observed by the IESC so have been successfully addressed. This demonstrates not only the benefit of the compliance review process, but the willingness of Station staff to respond in a positive manner to the findings of the Environmental Management Department. These findings, however, are indicative of Station staff across the Operation not consistently implementing the requirements of TANAP's Environmental Monitoring Plan for Operations and Procedures and it is therefore recommended that TANAP conducts some targeted refresher training if repeat issues are observed during future reviews.

After 5 years of operations, TANAP has undertaken a gap analysis study of its Asset Integrity Management System (AIMS) to identify any opportunities for improvements / developments. Following this analysis, it was determined that the AIMS objectives and data control elements represent 'Industry Leading Practice Worldwide'. A key element of the AIMS is the Integrity Mapping Platform (IMP), which was established through the customization of the Environmental Systems Research Institute's Geographic Information System (ESRI GIS) and the use of the Project and Operations geo-database. The TANAP IMP is the central repository for aerial images, permits, as-built data, survey results and information from the QHSE, Engineering, Operations & Maintenance and Security Departments relating to the right of way (RoW) and above-ground installations, and provides access to spatial data about the pipeline to all relevant parties. Through the IMP, TANAP has been able to generate high-precision 3D terrain models of the pipeline route, and it enables the Integrity Management Department to have immediate access to, and analyze, live information relating to any identified risks to the integrity of the pipeline, including from geohazards (identified by the RoW Patrol Teams and/or geohazard subject matter expert surveys). The innovative use of the GIS by TANAP has recently been acknowledged through the 'Special Achievement in GIS Award'. This represents

global recognition of excellence in the use of GIS technology, and TANAP was acclaimed amongst tens of thousands of other organisations for this award.

PR 2 Labour and Working Conditions

TANAP's operational organisation is in place, alongside appropriate policies, management plans and procedures to recruit, select, manage and support the workforce. Adequate protections for the workforce, including equal opportunity and non-discrimination, are provided through the Human Resources Management Plan.

Social Inductions/Refresher trainings have continued to be organised for workers by the Site Social Impact Specialists; all trainings are complete at each site as of October 2024.

No worker complaints have been received within the monitoring period.

PR 3 Resource Efficiency, Pollution Prevention and Control

TANAP will need to identify and implement new/additional resource-saving measures on a yearly basis to be able to achieve its KPI targets of a 1% reduction in the total quantity of electricity and water consumed relative to the previous year for the TANAP Ankara Office. The IESC expects this to be increasingly challenging, as there is only a limited number of resource-saving initiatives that can be implemented and performance against these KPIs may therefore not accurately reflect the effort and actions that TANAP has taken to improve resource efficiency. It is therefore recommended that these KPIs are revised to be more achievable.

TANAP has achieved 100% target performance for all pollution prevention KPIs (other than for wastewater quality, as outlined above). This includes 0 complaints received relating to noise, water quality, waste, dust or odour; 100% of tests being compliant with standards for noise and air emissions; 0 spills to land over 50 litres; and 0 spills to water. As such, the IESC is assured that the operational management systems, plans and procedures in place are generally adequate to ensure that direct negative environmental impacts of TANAP's operations are being avoided/limited.

Greenhouse gas emissions are being calculated and reported in line with Project commitments. Total annual GHG emissions for 2023 were 1.6% higher than 2022. This was partly due to an increased flow rate to Europe (of 3%) compared to 2022. Additionally, GHG emissions from stationary diesel consumption increased by 77.4% due to frequent power failures and the need to use backup diesel generators, and by 19.3% for mobile combustion due to the use of

vehicles for site visits and maintenance activities. However, TANAP has planted approximately 800,000 saplings to compensate for losses during the construction phase and as part of the SEIP Programme. This has been calculated to have achieved an offset of 10% of 2023 total carbon emissions.

There will be ongoing geo-hazard risks and impacts across the Operation that will need to be monitored and managed on a continuous basis. Given the scope and frequency of both physical (RoW Patrols, SME surveys), and remote (ground penetration radar, multi-electrode electrical resistivity tomography, Lidar, photogrammetry, aerial surveys etc.) monitoring surveys, plus the targeted site inspections that are being conducted by the Lead Integrity Engineer for Geohazards, the IESC considers it highly likely that TANAP will be immediately aware of any new geo-hazard risks to the integrity of the pipeline, and take appropriate action as necessary.

PR 4 Health and Safety

OHS

OHS performance for this Operation is exemplary, with a strong commitment to industry best practices in safety management. The Independent Environmental and Social Consultant (IESC) conducted a focused, risk-based assessment, validating previous findings and noting a continued zero Lost Time Injury Frequency Rate (LTIFR) and Total Recordable Injury Frequency Rate (TRIFR) for the period under review. TANAP has maintained excellent performance in leading safety indicators, including behaviour-based safety interactions, regular inspections, and high corrective action closeout rates, with 97% of actions resolved by the time of assessment.

Road safety remains a priority, with strict adherence to speed limits, regular breaks, and a comprehensive journey management plan that includes vehicle tracking, road risk analysis, and road safety audits.

A physical OHS compliance inspection at MS4 demonstrated that housekeeping, signage, and emergency protocols met or exceeded international standards. However, recurring non-compliance in chemical storage was observed, with flammable and corrosive materials stored improperly.

The project's emergency management program was also commendable, with 40 emergency drills conducted, covering a wide range of scenarios, from fire response and environmental

spill drills to earthquake and gas leakage scenarios. These drills foster a strong culture of preparedness, equipping the workforce to respond effectively to diverse emergency situations.

Social

Disclosure and distribution of the Community-Based Emergency Response Plan (CBERP) have been completed in all settlements through community informative meetings. CBERP drills are conducted twice per annum and emergency contact information (including mobile phone numbers rather than landlines) is updated to ensure TANAP has the capability of direct communications with relevant stakeholders in the event of an emergency. As was evident during the community meetings the SIA representatives have ongoing communication with the affected communities.

PR 5 RAP and LRP

Implementation of corrective actions identified under the RAP End-Term Impact Evaluation (RETIE) is continuing. Corrective Action 1 relates to outstanding expropriation payments; this was facilitated by communications with BOTAS. Recommendations on this topic have been implemented. Corrective actions 2 and 3 relate to reinstatement and land exit processes which are being addressed concurrently. Actions are ongoing to log and address reinstatement-related grievances. Corrective actions 4 and 5 relate to information on restrictions and community contacts during operations. Information is continuously shared and often refresher sessions are held. TANAP is commended for progressing these actions in a systematic and thorough manner. In addition, the land team is supporting the review of approximately 1000 private parcels related to slope breakers. The IESC hopes to review the progress on this topic in the coming year.

PR 6 Biodiversity conservation and sustainable management of living resources

The Biodiversity Action Plan (BAP) requirements for critical habitat areas and Species of Conservation Concern (SCC) monitoring post-construction are ongoing and being implemented as described within the BAP. TANAP has continued its monitoring of high-risk areas along the OHL to identify risks to bird species from the OHL operation. Due to bird carcasses being found during 2023, bird flight deflectors have been fitted to the OHL as recommended during the 2023 audit and monitoring will continue for a further two years.

The operations biodiversity monitoring works are being undertaken and reporting is good. The faunal and botanical reports have been reviewed and found to be well-written and

comprehensive. The review included the 2023 annual monitoring report and some reptile, bird and invertebrate reports from spring 2024. The 2023 report is good and has some useful recommendations for adjustments to the survey approach and methods. What is not clear is whether these recommendations have been taken forward into the 2024 survey plans. IESC recommends that there is a more holistic view in each annual report which consolidates findings from all previous surveys to look at trends. Where surveys have identified positive trends over time it may be possible to reduce survey frequency and where there are negative trends or lack of absence a more focused approach may be needed.

Site-specific Biodiversity Offset Management Plans are being implemented by TANAP. The Forest Offset Management Plan is progressing very well, and the General Directorate of Forestry is pleased with the outcome too. The Steppe Offset Management Plan is also being implemented, with a strong emphasis on social liaison, which has enabled a high “buy-in” to the project, increasing its likelihood of success, as grazing regimes are changed. During the IESC visit a visit was undertaken to a village involved in the offset project where the villagers displayed a very positive view of the project and are keen to expand on the initiative through initiatives such as selling local produce. The first-year monitoring report for both forest and steppe offset has been reviewed and appears to be very comprehensive. It is recommended that a summary report or executive summary is provided in these reports to set out key findings and recommendations for ease of review. As expected, the first-year results do no show any significant changes to vegetation but do show some positive changes. Data from year 2 will help to start understanding changes over time but it is appreciated that positive change will take many years to be fully realised.

During the 2023 survey there was a recommendation relating to reducing the residual impacts of the project, through the monitoring of the right of way, and the implementation of remedial actions (seeding/planting) where required. This action was going to include a full EUNIS survey of the right of way which was scheduled for 2024 but has not yet been completed. As vegetation stabilises on the right of way, and habitats become established over time, it is likely that the residual impacts will decrease, from those currently predicted. Once this assessment has been undertaken a re-calculation of the loss gain calculations should be undertaken to provide an up to date understanding of residual impacts. This can be reported in the updated BAP.

PR10 Stakeholder Engagement and Disclosure

Key engagement topics at this phase of operations relate to land use conditions; land use violations and permitting; community health and safety; and maintenance activities.

Landowners and users are being advised/reminded about restrictions prior to any violations through informative meetings held along the pipeline route. The Social Impact team is supporting landowners/land users to make the necessary permit applications to TANAP to avoid potential land use violations mostly relating to irrigation channels.

The TANAP Operation Phase Land Access Management Procedure (Land Entry, Land Exit and Compensation) is the key guide to access, compensation and damage prevention and is currently being updated to ensure that potentially vulnerable households are identified, and where necessary, supported, in the event that any land entry work increases a household's vulnerability[1]. Any support should be appropriate to the nature and the scale of the impact to their affected land.

Third party monitoring has also been ongoing for the operations phase, carried out by consultant, Assystem, on operational delivery of engagement, grievance management and community health and safety commitments. Additionally, internal reviews are also conducted, with positive results and improvements identified.

Grievance KPIs are above target for the most recent quarters.

Summary of concerns and recommendations

The following table outlines the key findings and recommendations of this report. The Table includes open items with recommendations. These items are fully explained in the relevant sections. The first column of the table shows the reference number as X.Y where X is the PR number and Y is the issue number. The reference number is followed by the section in which the issue is expanded upon. For reference, the summary findings table from last year's report with closed items has been attached in Appendix B.

[1] The Operation Phase Land Access Management Procedure (Land Entry, Land Exit and Compensation) (P6-2) has been updated as follows: "In parallel to the completion works (confirmation of the affected land size and impact on livelihood -if any-), the Site Social Impact Specialists shall also give the utmost importance to the identification of the potentially vulnerable households, who are the users of the lands affected due to land entry during the Operation, by considering the magnitude of impact on the land. According to the findings, necessary supports are developed in coordination with the Social Impact Department and provided to the impacted land users"

Table 1 Summary Findings

Ref	Description of Issue	Recommendation (action)	Compliance Category	Commitment	Status
New findings from the 2024 Monitoring Period					
1.1 (2.9.1.3)	The next review of the Operation Phase Land Access Management Procedure (Land Entry, Land Exit and Compensation) should consider and document how vulnerable households should be assessed and considered in implementation of the Procedure.	TANAP has an obligation to ensure disadvantaged or vulnerable groups or individuals are not disproportionately affected by the project; Any additional support provided to vulnerable households should be appropriate to the nature and the scale of the impact to their affected land	PC	PR1 / PS1 PR10 Environmental and Social Management System	**Open**
2.2 (2.5.3.5)	Hazardous chemicals at MS4 were stored together when they should have been segregated. This follows on from a similar finding at CS3 last year.	1. The IESC would recommend that all chemical storage matrix sheets across the project be updated to a more easily identifiable version 2. The IESC recommends that the inspection checklist be updated to include a question such as 'have the stored chemicals been checked against the storage matrix to ensure appropriate separation?'	PC	PR2 / PS2 OHS	**Open** While not an official recommendation, a review of the training provided to the workers who were responsible for chemicals may be conducted to investigate why the training did not result in compliance actions.

Ref	Description of Issue	Recommendation (action)	Compliance Category	Commitment	Status
6.2 (2.10.5.2)	Monitoring for vegetation and fauna during the operational phase is ongoing but data is not presented in a way that clearly shows trends and potential areas of concern	The IESC recommends that the annual report includes a section which pulls together previous results to look at trends. This can be used to amend survey effort and approach as needed	FC	PR6 / PS6 Monitoring	**Open**
Open findings from previous years					
3.3 (2.4.5)	Breaches in Project wastewater quality standards at various TANAP Stations due to technical issues There have been further non-compliances with Project wastewater effluent quality standards in 2024.	Review the operation and maintenance protocols for the wastewater treatment plants at MS1, CS5/MS2 and the MCC, to ascertain whether there are measures that could be implemented to avoid further effluent quality failures at these Stations	FC	PR3 / PS3 Resource Efficiency, Pollution prevention and Control;	**Open**
2.1 (2.5.3.4)	Hazardous waste containers at CS3 (AMC) were not all clearly labelled, in addition to the incompatible storage of flammable and poisonous materials.	All employees responsible for the storage of hazardous materials and hazardous waste at CS3 (AMC) should be given refresher training, and additional checks carried out over the next 6 months by the Environmental Department to ensure the correct hazardous materials/waste storage	PC	PR2 / PS2 OHS PR3 / PS3 Pollution Prevention and Control	**Open** Remains open due to finding 2.2 above.

Ref	Description of Issue	Recommendation (action)	Compliance Category	Commitment	Status
		measures are being implemented.			
6.6	Both the forest and steppe offset plans have been written and are being implemented. The proposed monitoring methodology is quite complicated, and still requires a power analysis to determine sufficiency of plots to allow a statistically significant outcome. The offset need will change as the ROW re vegetates. This data is currently not being captured in the BOS residual impacts table, but following the EUNIS surveys in 2024 this can be updated.	For lender reporting, a simple set of metrics needs to be developed, so that for the steppe management, changes can be measured and reported on more easily. To determine if the offset requirements are being met (for no net loss/net gain) a ROW EUNIS habitat survey should be undertaken (ear 5), so that the residual impacts table in the BOS can be updated.	PC	PR6	**Open** This recommendation remains open as the operation monitoring was started at the beginning of 2019. So, the EUNIS habitat survey was to be undertaken in 2024 however was not yet completed at the time of writing this report.

1. Introduction

1.1 Operation Context

TANAP Natural Gas Transmission Company (the Company) has engaged Sustainability Pty Ltd (Sustainability) for the delivery of Independent Environmental, Social and Occupational Health and Safety Monitoring and Consultant Services (IESCS) for the Trans Anatolian Natural Gas Pipeline (the Project), effective from 24 July 2018. The first IESCS monitoring visit undertaken for this assignment occurred in Türkiye from 8 - 12 October 2018. Sustainability had previously been engaged by the EBRD as the Independent Environmental and Social Consultant to support financing requirements and had completed environmental and social due diligence in 2016, semi-annual monitoring events during 2018 and 2019 and annual monitoring events from 2020 – 2023 . This report presents the findings of the eighth monitoring event which consisted of a site visit and document review since then. The site visit was completed from 7 – 11 October 2024.

The TANAP Project has completed a 1,811.7km pipeline to facilitate the transport of natural gas produced from the Shah Deniz Phase II development in Azerbaijan to Türkiye and Europe. Section of the TANAP pipeline crosses the Dardanelles Strait in the Sea of Marmara. The Offshore section is approximately 17.5 km long. The Project has been developed by a group of shareholders who currently comprise of “Southern Gas Corridor” Closed Stock Joint Company (51%), BOTAS (30%), BP (12%) and SOCAR Türkiye Enerji A.S. (STEAS) (7%) and are herein referred to collectively as the “Sponsors”.

TANAP runs from the Georgian border, beginning in the Turkish village of Türkgözü in the Posof district of Ardahan, and passes through 20 provinces, ending at the Greek border in the Ipsala district of Edirne. Two off-take stations are located within Türkiye for national natural gas transmission, one located in Eskişehir and the other in Thrace. With 17.5km running under the Sea of Marmara, the main pipeline within Türkiye reaches a total of 1,811.7km, along with off-take stations and above-ground installations. TANAP has entered Phase 1 of operations after having completed Phase 0 of operations.

A new Project Execution Plan (PEP) developed this year describes the implementation of the IESC assessments for operation phase(s) of Phase 0 and Phase 1, which includes assessing the various environmental and social requirements of the International Financial Institutions (IFIs) including EBRD’s Performance Requirements (PRs), TANAP policies and the

commitments given in the ESIA package including the management system documents of both TANAP and its Contractors. The services include the presentation of recommended actions associated with identified non-compliances or areas of improvement.

This PEP presents the implementation arrangements reflected in the IESC's contract, Sustainability's proposal and the outcomes of the Project Kick-Off Meeting. The objective of the PEP is to both guide implementation and communicate the delivery approach to the key stakeholders. The PEP is adaptive and will be revised as required to ensure effective delivery of services.

1.2 Scope of Work and Objectives of the IESC

The scope of the IESC's activities is specific to operation phase(s) of Phase 0 and Phase 1. The services require an independent assessment of the Project's compliance with relevant local and international legal requirements, the various environmental and social requirements of the International Financial Institutions (IFIs), TANAP policies and the commitments given in the ESIA package including the management system documents of both TANAP and its Contractors. The services include the presentation of recommended actions associated with identified non-compliances or areas of improvement.

The key objectives are to:

- Provide an independent assessment of the TANAP's compliance with TANAP commitments, including relevant local and international legal requirements and IFIs' Standards, Requirements and Guidelines; and
- Present recommended actions associated with identified non-compliances or areas of improvement.

To achieve these objectives, the IESC undertakes the role of identifying, monitoring and verifying:

- The implementation of specific provisions, commitments and the overall objectives of the Project ESIA, BAP, BOS, SEP, RAP, LRPs and other related documents including the ones developed in the operation phase;

- Implementation of mitigation measures, as documented in the Commitments Register, Environmental and Social Management Plans, Health and Safety Plans and relevant procedures to address material risks and issues associated with constructions works and with Phase 0 and Phase 1 of operations;

- Material changes in design and operations, which have been issued and assessed in line with the Environmental Management of Change Procedure (TNP-PCD-ENV-GEN-002); and

- The implementation of Legal, Political and Institutional framework as presented in Chapter 4 of ESIA Report (TNP-REP-ENV-GEN-002) considering the current updates and relevant IFIs' Standards, Requirements and Guidelines.

1.3 Operation Status

As of the October 2024 monitoring visit, the TANAP Project's construction phase was fully completed across all lots and above-ground installations (AGIs). The Phase 1 Main Stations (CS1, CS5, MS3, and MS4) were mechanically complete by April 2019, with technical handovers following in mid-2019. Linefill activities for the 48" pipeline section from CS5 to MS4 concluded in June 2019, and the TANAP-TAP Interconnection Pipeline was filled and pressurized by November 2019. The inauguration ceremony for TANAP Phase 1 took place at the Ipsala MS4 site later that month, confirming readiness for commercial deliveries to TAP. Operation Phase 0, consisting of a 1,338.85 km 56" pipeline, 39 Block Valve Stations (BVS), 6 Pig Stations (PS), 2 Metering Stations (MS), and 1 Offtake Compressor Station, was inaugurated in Eskişehir in June 2018, with commercial operations commencing shortly thereafter. BOTAS completed its second contract year by June 2020 with full operational efficiency.

Operation Phase 1, designed to supply gas to Europe, included a 454.04 km 48" onshore pipeline, 18.78 km of 36" offshore pipelines, and multiple stations, all mechanically completed by December 2018. Offshore pipeline construction also saw the completion of parallel pipelines, fiber optic cables, and 24 crossings. TANAP implemented key operational procedures, such as permits to work, energy isolation, and H&S risk management, by October 2019, allowing commercial operations for Phase 1 to start by December 2020. TANAP has since facilitated TAP commissioning under a framework agreement and, as of September 2024, has successfully transported 29.38 BScm of gas to Türkiye and 39.61 BScm to Europe.

1.4 Applicable Project Standards

International Lender Financed Projects are expected to be designed and operated in compliance with good international practices relating to sustainable development. TANAP adhere to relevant IFIs' Standards, Requirements and Guidelines including:

EBRD Environmental and Social Policy and Performance Requirements (2014)

- PR1 – Assessment and Management of Environmental and Social Impacts and Issues;
- PR2 – Labour and working condition;
- PR3 – Resource Efficiency, Pollution prevention and Control;
- PR4 – Health and safety;
- PR5 – Land acquisition, involuntary resettlement and economic displacement;
- PR6 – Biodiversity conservation and sustainable management of living resources;
- PR8 – Cultural heritage; and
- PR10 – Information disclosure and stakeholder engagement.

IFC Performance Standards (2012)

- Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts;
- Performance Standard 2: Labour and Working Conditions;
- Performance Standard 3: Resource Efficiency and Pollution Prevention;
- Performance Standard 4: Community Health, Safety, and Security;
- Performance Standard 5: Land Acquisition and Involuntary Resettlement;
- Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources; and

- Performance Standard 8: Cultural Heritage.

IFC Environmental, Health and Safety (EHS) Guidelines, including EHS General Guidelines (2007)

As noted in the executive summary and Section 1.8 of this report, the site assessment was an indicative snapshot of the entire project and does not assess against all of these requirements. The findings in this report reflect only what was sampled and provided during the document request.

1.5 Sources of Information

For this year's assessment monitoring included document review and presentations as well as a physical site visit. Key documents were supplied by TANAP including presentations to specialists at Sustainability. Further documentation was provided immediately following the presentations as requested by the IESC team to allow clarification of the presented material. A full list of reviewed documents can be found in Appendix A of this report. The primary sources for information accessed for this review included, but was not limited to:

- Presentations prepared by TANAP teams focused on Project Overview, Environment, Social, OHS and biodiversity
- Supplementary environmental and social assessments undertaken in accordance with Project management of change processes;
- Other relevant Health, Safety, Environmental and Social materials including HSE statistics, incident reports, external monitoring reports and audits, surveys, grievance registers and additional assessments;
- Environmental and social monitoring reports completed by Construction Contractors, third party monitoring service providers and TANAP;
- Information from site inspections and interviews with TANAP personnel, Contractors and stakeholders;
- Patrolling reports, Training Records, letters and other documents outlining the environmental monitoring of sites during the operational phase;

- Environmental and Social Management Systems (ESMS) for the operating phase including environmental social and H&S procedures.
- Various offset management plans for specific offset areas;
- Interviews with Project Affected Persons (PAPs); and
- Monitoring reports from previous years as well as an Action Update Status document provided by TANAP outlining progress on previous recommendations.

1.6 Site Assessment Attendance

The site assessment was conducted from the 7th to 11th October 2024 by the IESC, TANAP and EBRD. The team members of the IESC were:

- Claire Penny: Independent Consultant Team Environmental Specialist;
- Corin Simmonds: Independent Consultant Team Biodiversity Specialist;
- Herman Roos: Independent Consultant Team Social, labour and Cultural Heritage Specialist; and
- Aleksa Marinovic: Independent Consultant Team Project Manager and OHS specialist.

Due to logistics, Heath Thorpe was unable to attend the site visit and instead completed OHS discussions remotely and using the provided documents. Aleksa Marinovic validated document findings and conducted further assessment for OHS during the field visit instead.

1.7 Presentations Site Assessment Schedule

In summary, the following activities were undertaken during the site assessment:

Sessions	Scope
DAY - 1	**October 7, 2024 Monday**
Welcome & Opening Presentation TANAP Head Office Ankara	Opening presentations Overall operations progress Updates on SEIP

	Updates on Social Impact Management Updates on Environmental Management
DAY - 2	**October 8, 2024 Tuesday**
Travel from Ankara to Bursa	
Eskişehir/Günyüzü/Kavuncu and Eskişehir/Günyüzü/Çardaközü	Overall review of stakeholder engagement activities
Ankara/Polatlı + Eskişehir/Günyüzü	Overview (no entry to BVS) RDX cases along the road and other issues
Eskisehir/Odunpazari/Yenisofca	Overall review and community meeting for biodiversity
Eskişehir	Slopebreaker and landslide
DAY - 3	**October 9, 2024 Wednesday**
Travel from Bursa to Çanakkale	
Balıkesir/Biga/Eğridere village (BVS48) Balıkesir/Biga/Gümüşçay village (SEIP) Balıkesir/Biga/Çakırlı village Balıkesir/Biga/Kemer village (offshore)	Overall review of stakeholder engagement activities and SEIP Projects
Balıkesir, Çanakkale	River crossings, Rip-Rap, Slopebreaker, Afforestoration Area (MAP-37)
DAY – 4	**October 10, 2024 Thursday**
Travel from Çanakkale to Edirne/Çanakkale	
Çanakkale/Gelibolu/Kavakköy Çanakkale/Gelibolu/Evreşe Mah.	Overall review of stakeholder engagement activities and SEIP Projects
Tekirdağ/Şarköy, Çanakkale/Gelibolu, Edirne/Keşan	Fire occasion, stations, Reinstated Rows/Slope breakers,
Çanakkale/Gelibolu, Edirne/Keşan	River crossings, Rip-Rap, Afforestation Areas. (MAP-29, 28, 27, 26), Drainage Improvement
Edirne/İpsala/Sarıcaali	Overall review of stakeholder engagement activities and SEIP Projects
DAY – 5	**October 11, 2024 Friday**
Travel to MS4	
MS4 Offices and Site	MS4 review including site tour
Close-out Meeting	Preliminary Findings and Overall Evaluation
Travel to Istanbul	

1.8 Report Limitations and Assumptions

Due to the size of the TANAP project pipeline and the logistical reality of assessing such a project the site assessment could only be completed for a pre-selected sample of the entire length of the pipeline. This is in line with previous assessments; however, it should be noted that this report can only be based on the materials provided and areas visited during the site inspection. Finding no non-conformances does not necessarily represent a fully compliant project – it represents the areas, work, systems, etc assessed as part of the risk-based assessment. It should be noted that some sections of the pipeline have not been assessed by the IESC.

2. Findings and Observations

2.1 Classification Criteria for Review Findings

Project compliance and performance against the applicable Standards was considered by the IESC in terms of material risk to the Project and the IESC's confidence in the assessment of compliance following review of information available. The compliance classification of each topic will be determined as outlined in Table 2.

Table 2 Compliance Classification

NOP	**No Opinion Possible:** The IESC was not able to determine an opinion e.g. the topic was not a focus of the assessment; due to a lack of information; the inability to remotely visit a certain site; or the specific stage the Project is at.
Level of Non-Compliance (NC):	
EC	**Exceeding Compliance:** The Project has gone beyond the expectations of relevant IFI requirements / standard / principle. IFIs should be able to use projects rated EC as a role model for positive Environmental and Social effects.
FC	**Fully Compliant:** The project is fully in compliance with relevant IFI requirements / standards / principles, and local environmental, health and safety policies and guidelines.
PC	**Partially Compliant:** The project is not in full compliance with relevant IFI requirements / standards / principles, but has systems, processes or mitigation measure in place which are working towards addressing the deficiencies.
MN	**Materially Non-Compliant:** The project is not in material compliance with relevant IFI requirements / standards / principles, and the systems, processes and mitigation measures in place are not working towards addressing the deficiencies.

2.2 Environmental, OHS and Social Review

This Monitoring Report documents the findings and observations resulting from the site assessment from 7 - 11 October 2024 and the additional documentation provided to the IESC by TANAP. This report also factors in the review of HSE documentation and construction environmental and social management plans and procedures.

A summary of the classification of Project compliance with the Applicable Standards that have been allocated to each topic is presented in Table 3 below.

Table 3 Project Compliance with the Applicable Standards

Topic Heading	Compliance Criteria
PR/PS1 Environmental and Social Assessment	
Compliance with Local Legislation	FC (where sampled)
Status of ESAP	FC

Environmental and Social Assessment	FC
Environmental and Social Policy	FC
Environmental and Social Management System	PC
Organisational Capacity and Commitment	FC
Project Monitoring and Reporting	EC
Assessment and management of Change	FC
PR/PS2 Labour and Working Conditions	
Human Resource Policies and Working Relationships	FC
Protecting the workforce	FC
OHS	PC
Retrenchment	FC
Grievance mechanism	FC
Security Personnel Requirements	FC
PR/PS3 Resource Efficiency and Pollution Prevention	
Resource Efficiency	FC
Pollution Prevention and Control	FC
Greenhouse Gases	FC
Hazardous Substances and Materials	FC
PR/PS4 Community Health Safety and Security	
Infrastructure, Building, and Equipment Design and Safety	FC
Hazardous Materials Safety	NOP
Traffic Safety	EC
Exposure to Disease	FC
Natural Hazards	NOP
Emergency Management	FC
PR/PS5 Land Acquisition, Involuntary Resettlement and Economic Displacement	
Consultation	FC
Compensation	FC
Grievance	FC
Resettlement and Livelihoods Planning and Implementation	FC
Monitoring	FC
PR/PS6 Biodiversity	
Assessment and Identification of Impacts	FC
Biodiversity Management Planning	FC
Implementation of Mitigations	FC
Conservation of Biodiversity	PC
Restoration and Rehabilitation	FC
Monitoring	FC
PR8 Cultural Heritage	
Assessment	NOP
Consultation	NOP
PR10 Disclosure and Stakeholder Engagement	
Stakeholder Engagement Planning	FC
Grievance management	FC
Information Disclosure	FC

2.3 Environmental and Social Assessment (PR1/PS1)

2.3.1 Compliance with Local Legislation

There were no warnings or penalties issued for any of the pipeline sections, stations, MCC, offshore section of the pipeline or Scada/Telecoms systems in relation to failures to meet the requirements of the relevant environmental authorities since the previous site visit. All required declarations to the Ministry of Environment, Urbanisation and Climate Change (MoEUCC) have been made by TANAP in accordance with relevant Regulations (e.g. for wastes generated at MS1, CS1, CS3, CS5/MS2, MS4 and the MCC through the online Waste Declaration System of the MoEUCC in accordance with the Waste Management Regulation, and for GHG emissions from CS5/MS2 and CS1 via the online integrated environmental information system in accordance with the Regulation on Monitoring of Greenhouse Gas Emissions).

Operational environmental permits for TANAP stations are only valid for 5 years. As such, the permits for the MCC, CS1, MS1 and CS5/MS2 were in the process of being renewed at the time of the site visit. An application for permit renewal will be made for MS4 towards the end of 2024.

2.3.2 Environmental and Social Policy

TANAP's Integrated Management System Policy can be found online[2] specifying the company's higher-level commitments to health, safety, the environment and communities, to be managed through an ISO-compliant management system. Additionally, the Social Policy[2] remains a publicly disclosed document reflecting the commitment to effective management of community relations and grievance management, meeting current best industry practices during operations. Training is to be provided to employees and contractors on the Social Policy. The Policy can also be found on the TANAP website[3].

2.3.3 Environmental and Social Management System

An Operational Environmental and Social Management System (ESMS) has been developed and is being implemented by TANAP, including relevant Environmental Plans and Procedures.

The Operational Waste Management Procedure has been updated in 2024 to reflect the Zero Waste certification achieved by the Company. In particular, the required waste container labels shown in the Procedure now incorporate the Zero Waste logo. The Environmental Training Plan has also been revised to update the range of environmental topics that must be covered during induction training.

TANAP's social management and monitoring plans are in place for the Operations phase. These include: the Social Action Plan for Operations; the Social Monitoring Plan for Operations; Stakeholder Engagement

[2] https://www.tanap.com/tanap-project/integrated-management-system/
[3] https://www.tanap.com/tanap-project/social-policy/

Plan[4] (and associated annexes); and Grievance Management Procedure[5]. The Operation Phase Land Access Management Procedure (Land Entry, Land Exit and Compensation) is the key procedure now in place for land access. The RAP End-Term Impact Evaluation (RETIE, see Section 2.7.4) has been completed and implementation of corrective actions are ongoing.

2.3.3.1 Operational ESG Risk Assessment and Management

TANAP's Risk Management Department operates within the framework of the Operational Risk Management Procedure; to ensure a comprehensive awareness of the scope of Environmental, Social, and Governance (ESG) risks across the Project. There are quarterly meetings on risk management within the Company, involving a number of relevant Departments including the Operations and Integrity Management Departments, and a register of risks is maintained based on completed risk assessment studies and regular monitoring. Risks are scored and prioritized according to the predicted impact and probability, and action plans are defined to address each identified risk, and assigned to relevant risk owners. There was a focus on climate change during the site visit as a significant and evident risk to the Operation going forward.

During the construction phase, a 'Hydrological and Hydrogeological Assessment Report' was prepared for the BVSs, and a 'Hydrological Assessment Report' for the Stations that included flood risk calculations to inform the detailed design of the above-ground installations (AGIs) in terms of required flood protection. However, these calculations were based on available rainfall data in 2015. Rainfall levels are now significantly higher due to climate change. As such, the TANAP Engineering Department is in the process of updating and recalculating the flood risk for all BVSs/Stations.

BVS-37 is an example of where the as-built flood protection was not adequate to prevent flooding of the station following a heavy rainfall event in 2022. The station is located in a large, flashy drainage catchment and flooding was caused by high rates of surface run-off. The original design was for a 1 in a 50-year flood event, and whilst runoff from the access road above the station was diverted effectively away from the station via the existing drainage channels, the drainage ditch on the other side of the station (which is typically dry) was overtopped and the station flooded. The Engineering Department updated the hydrological assessment incorporating the latest rainfall projections due to climate change, and designed a flood protection berm (that was installed in 2023) the height of which should protect the station against a 1 in 500-year flood event. This is shown in Figure 1.

[4] SEP Rev. P6-1, last updated 23.08.2022
[5] Grievance Management Procedure, Rev P6-2, last updated 19.08.2022

Figure 1: BVS-37 New Flood Protection Berm

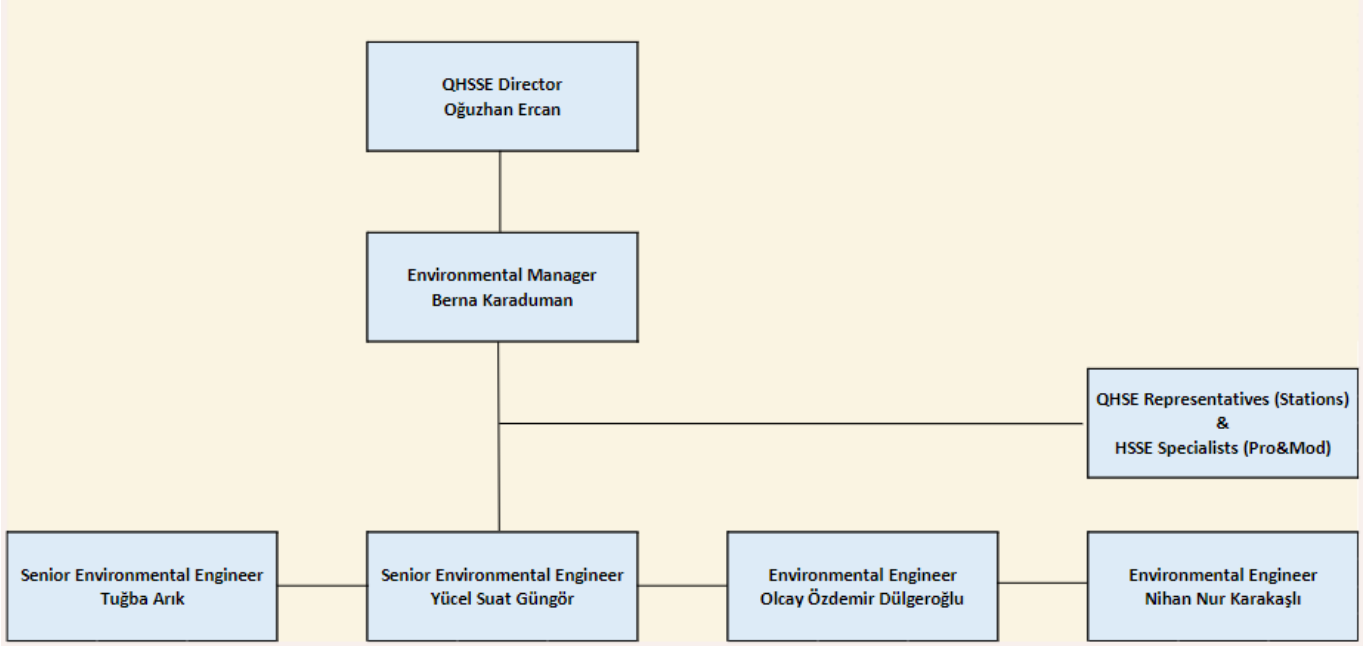
As TANAP is recalculating the flood risk for all AGIs, it has become apparent that flood protection measures will also need to be redesigned for some additional BVSs, where flood flow rates in nearby watercourses are now too low.

2.3.4 Organisational Capacity and Commitment

2.3.4.1 Environment

There have been some changes to the composition of the Environmental Management Team since the previous site visit in 2023, illustrated in Figure 2. The previous QHSSE Director has changed his position in the Company and been replaced by Oğuzhan Ercan, to whom the incumbent Environmental Manager (Berna Karaduman) reports directly. Nihan Nur Karakaşlı started in the role of Assistant Environmental Specialist in March 2023, as a direct replacement for the previous occupant of this role and is now an Environmental Engineer. An additional Environmental Engineer has also been added to the Team (Olcay Özdemir Dülgeroğlu). In addition, there are environmental personnel based at the various operational Stations (CS1/MS1, CS3, MCC, CS5/MS2 and MS3 & MS4) and in the Projects and Modifications Department, who whilst reporting administratively to the site managers, functionally also report to the Environmental Manager.

Figure 2: Environmental Department Organisational Structure



2.3.4.2 OHS

The Health and Safety department structure including site personnel is noted in Figure 3 below.

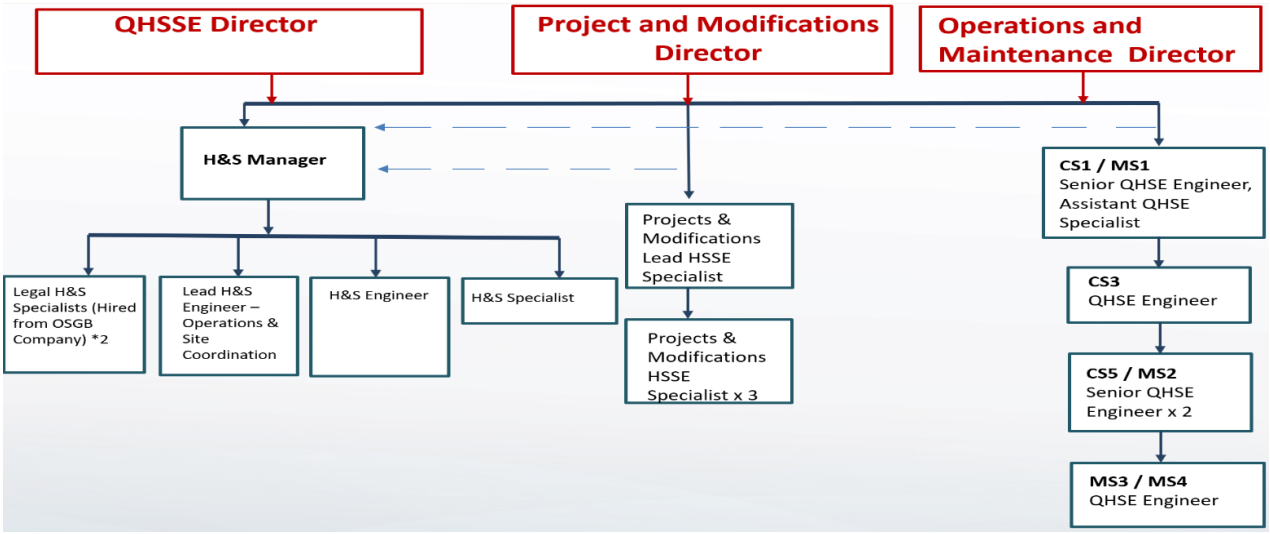


Figure 3 Health and Safety department structure as of 2024 site visit

The QHSE Engineers have received formal and hands-on training across a significant number of OHS aspects including:

- Working at heights
- Energy isolation authority

- Confined space entry
- Chemical awareness
- Lifting activities

In addition to the OHS capacity in the QHSE engineers, there is process safety competence in the Operations and Maintenance team, which is vital in an operational plant.

2.3.4.3 Social

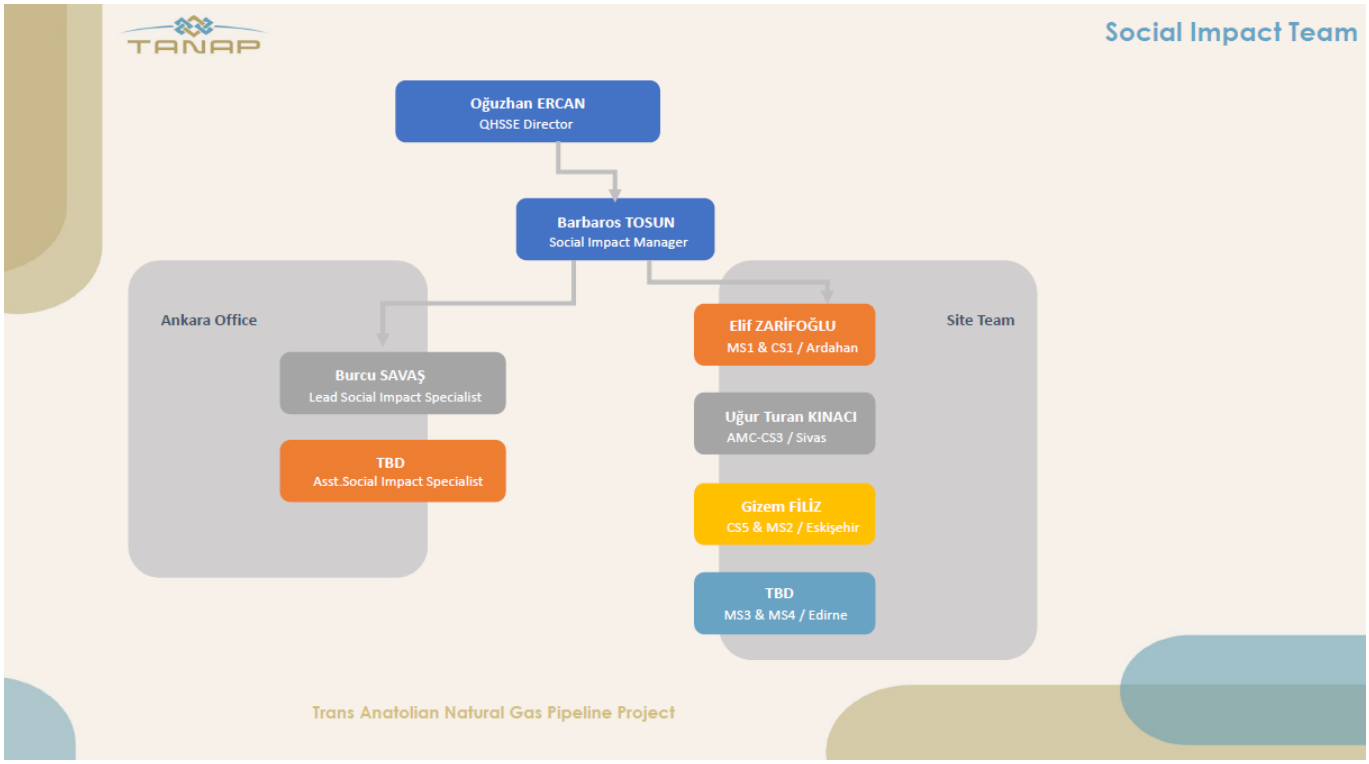


Figure 4 TANAP social impact team composition and organisational chart

TANAP's internal Social Compliance Reviews for Operations have been carried out for 2023- 2024, as follows:

- (June 23-November 23) – CS1&MS1
- (May 23 – October 23) – CS3 AMC
- (March 23 - August 23) & (May 23 – May 24) – CS5&MS2
- (Feb 23-July 23) & (Feb 23 – Feb 24) – MS3&MS4

These reviews are a combination of annual and semi-annual, internal compliance reviews for each operational area and include the identification and correction of potential challenges and general improvement of social performance of Operations. Assessments are against the Project ESIA commitments, legal and international requirements, and TANAP policies, plans and procedures. As of 2024, the monitoring period for these reviews has been revised to be annually, from semi-annual.

Findings included:

- Grievances are duly recorded and followed-up;
- Stakeholder engagement activities are conducted and documented accordingly;
- Efficient communication is upheld with the headquarter Social Impact Team;
- A proactive approach is adopted; and
- Strong coordination is maintained with other departments.

2.3.4.4 Environmental Monitoring and Reporting

TANAP is implementing the Environmental Monitoring Plan for Operations (OEMP) (TNP-PLN-ENV-GEN-008) as part of the Environmental Management System, which is applicable to all Project activities conducted during the Operations Phase. This document was most recently re-issued following annual review and revision on 10 August 2023.

Internal and external environmental monitoring and reporting requirements are summarised in Figure 5 below. ‘TPMC’ is the Third Party Environmental and Social Monitoring and Consultancy Services Company Assystem Enerji ve Çevre A.Ş.

Figure 5: Internal and external environmental monitoring and reporting requirements

Monitoring / Verification Activity	Reporting Format	Frequency
Internal Monitoring / Verification		
Environmental Site Inspections	Checklists	Weekly
Environmental Internal Audits/ Environmental Compliance Reviews	Audit Reports	As required
CEMS	Monitoring Report	Annually
GHG Monitoring	Monitoring Report	Annually
External Monitoring / Verification		
IESC Inspections	Monitoring Report	Annually
Implementing and Monitoring of Biodiversity Offset Projects	Quarterly Progress Reports Monitoring Report	Quarterly Annually
RoW Patrol Inspections	Progress Reports Summary Report	Daily Monthly
TPMC	Progress Report Summary Report	Monthly Annually

Appendix 3 of the OEMP outlines the Key Performance Indicators that have been developed for the Operational Phase of the Project. It is required that each operational site registers its performance against the KPIs, to enable Project wide performance to be tracked from Ankara on a monthly basis. From the information provided for review, it appears that TANAP has achieved 100% of target performance for all environmental KPIs during the year to date, except for % of tests/samples compliant with legal standards for effluent discharge. Non-compliance with Project wastewater effluent quality standards continues to be an issue for TANAP and is preventing the Company from achieving its KPI targets in relation to wastewater discharges. Please see 2.4.2.1 of this Report.

2.3.4.5 Internal Monitoring/Verification

In accordance with the OEMP, the TANAP Environmental Department conducts formal environmental compliance reviews at least annually at all operational Stations. The objectives of the reviews are to assess compliance with TANAP's ESMS and legal requirements, identify the root cause of any non-compliances, and propose corrective actions/improvements where necessary. Reviews in 2024 are planned to be conducted in two rounds, 6 months apart. The first round of reviews in 2024, at CS1/MS1, CS3 (AMC),

CS5/MS2 and the MCC and MS4, were completed in February, and the associated Compliance Review Reports provided for IESC review. The second round of reviews was on-going at the time of the site visit.

The findings of the reviews all relate to issues that can and should easily be rectified. At MS4 findings included that waste was not being properly segregated in the waste storage area and that hazardous materials were being stored alongside recyclable wastes. These issues were not observed by the IESC during the site visit, and have clearly now been addressed, which demonstrates the benefit of the process and the willingness of Station staff to respond in a positive manner to the findings of the Environmental Management Department.

The lack of an inventory list on the lid of spill kit containers was a finding that was common to MS4, CS5 and the MCC. Additionally, at both the MCC and CS1 the paper and plastic labels were the wrong colour, and at both CS5 and CS1 the hazardous waste storage area was incorrectly labelled as ‘chemical storage’. Whilst these issues in themselves do not pose serious environmental or OHS risks, they are indicative of Station staff across the Project not consistently implementing the requirements of TANAP’s Operational Management Plans and Procedures, and it may therefore be beneficial for TANAP to conduct some targeted refresher training if repeat issues are observed during the second round of reviews.

In addition to monitoring environmental compliance at Stations, the Environmental Management Department conducts audits of external companies providing environmental services, to ensure the level of service being provided is in accordance with TANAP’s requirements. Audits completed in 2023 included the Pest Control services company, Ekopest (in November) and the Hazardous Waste Disposal Services company, Ardam (in December).

During 2024, the Environment Team has participated in Integrated Management System (IMS) audits that were led by the QHSSE Directorate of the following:

Internal:

- Recommendations following this audit included that TANAP’s environmental protection requirements, which are always included in the scope of work and method statements of Contractors but not always implemented, should be reiterated prior to work activities commencing, rather than in the event of a non-compliance. This should help to ensure that Contractors are fully aware of, and integrating, all necessary environmental protection measures in their work processes from the outset.

External:

- Maintenance services for heating, ventilation and air conditioning (Honeywell)

- TANAP was audited by Intertek for IMS re-certification for ISO 9001-14001-45001.

2.3.4.6 Integrity Management

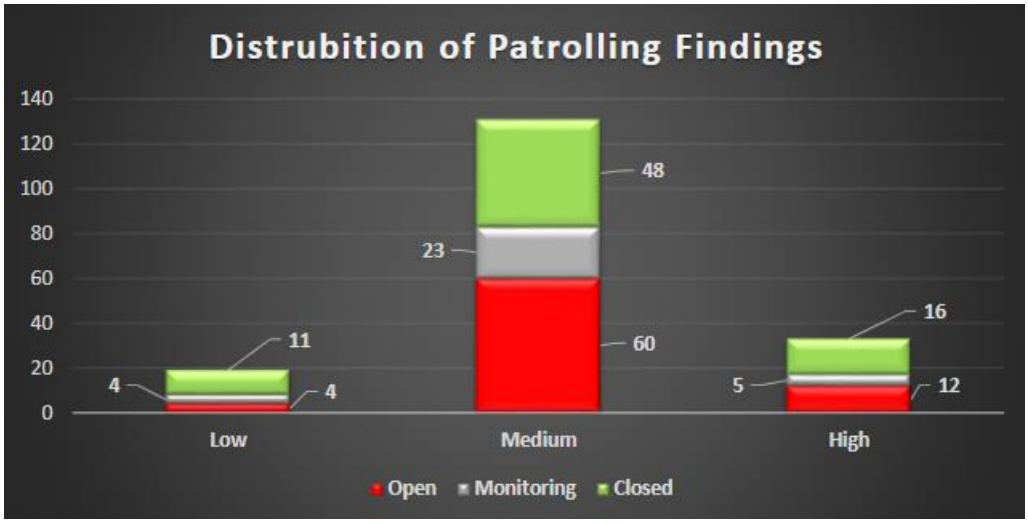
After 5 years of operations, TANAP has undertaken a gap analysis study of its Asset Integrity Management System (AIMS). This involved a review of documents, processes and the implementation of the system to identify any opportunities for improvement/development. Following this analysis, it was determined that the AIMS objectives and data control elements represent 'Industry Leading Practice Worldwide'.

RoW Patrolling Inspections

There are 10 RoW Patrol Teams (sub-contracted by BOTAŞ-PTT Anadolum). Each team covers a 150-200 km section of the pipeline, checking for any third-party infringements or interference, soil erosion and on the general surface conditions of the RoW. The KPI target for RoW patrolling is the completion of one complete tour of the pipeline route (a total of 1,811 km) every 15 days. As such, each team should be very familiar with their section of the route; to facilitate the identification of any new risks to the integrity of the pipe. In 2023, a total distance of 43,478 km was walked by the 10 teams.

From January to September 2024, the RoW Patrol Teams reported 183 findings, of which 33 were high priority (for example pipeline subsidence or unauthorized excavations), as shown in Figure 6.

Figure 6: 2024 RoW Patrol Findings



In terms of the top three findings, only 31 related to the planting of trees on the right of way (a medium priority issue), which is an improvement compared to 2023 when there were 150 findings of this type. 35 findings were related to damaged or leaning line markers/aerial markers, and 42 were due to BVS/Station access road damage and traffic sign damage.

There have been over 3,000 Pipeline Monitoring System (PMS) alarms in 2024, most of which were not caused by seismicity but were due to other sources of vibration, for example, from agricultural machinery or work being undertaken by the General Directorate of Forestry. If any section of the pipeline route is

affected by any natural disaster such as an earthquake, heavy rain, flooding etc. priority is given to the affected area for RoW Patrolling, and the RoW Patrol Teams are required to perform an initial visual assessment of any damage. A recent earthquake with a magnitude of 5,6 MW in Tokat/Sulusaray was 29 km from the pipeline (at KP 837+400). As per TANAP Procedure, following the earthquake, a detailed site survey was conducted in an area of +/-15 km pipeline. No negative findings were reported.

Integrity Mapping Platform (IMP)

TANAP initially employed GIS as a tool during the FEED stage of the Project. The application of this tool then evolved during the detailed design, construction and commissioning processes, and the use of GIS has continued to evolve during the operational stage of the Project via the Integrity Mapping Platform (IMP) which was established through the customization of the Environmental Systems Research Institute's Geographic Information System (ESRI GIS) and use of the Project and Operations geo-database.

The TANAP IMP is the central repository for aerial images, permits, as-built data, survey results and information from the QHSE, Engineering, Operations & Maintenance and Security Departments relating to the RoW and stations and provides access to spatial data about the pipeline to all relevant parties. The RoW management process has been fully integrated with the IMP. This includes that each RoW Patrol Team has GPS-supported mobile devices to facilitate the input of GPS data to the IMP during patrols, for the purpose of immediate digitalization. ArcGIS Field Maps have also been customized by the integrity team to collate site data from the RoW patrols, geohazard inspection teams and civil inspectors. The IMP enables the Integrity Management Department to have immediate access to, and analyze, real-time information relating to any identified risks to the integrity of the pipeline, including from geohazards.

The innovative use of the GIS by TANAP has recently been acknowledged through the 'Special Achievement in GIS Award'. This represents global recognition of excellence in the use of GIS technology, and TANAP was acclaimed amongst tens of thousands of other organisations for this award.

Through the IMP, TANAP has been able to present high-precision aerial images and 3D terrain models of the pipeline route produced with photogrammetry. The generation of these images and models has been informed by photogrammetric inspection of the RoW using drones equipped with Lidar features and photogrammetric airplane. Additionally, in 2024 the processing and analysis of the first aerial survey data (obtained through an aerial survey by plane conducted in 2022) covering a 500m corridor along the entire pipeline route was completed and has been input into the TANAP GIS system. This survey will be repeated every 3 years to ensure that the 3D Models remain current, and to help detect precisely any changes in ground elevation, surface conditions and RoW violations.

External Geo-hazard Monitoring

Geo-hazard monitoring surveys are now being conducted by a new subject matter expert (SME) contractor, Fugro Sial, who has replaced Temelsu. The monitoring surveys cover the following geo-hazard risks:

- Land and slope erosion
- Karstic regions
- River Crossings
- Landslides
- Other geo-hazards:
    - Soil subsidence at stations
    - Buoyancy
    - Floods, earthquakes, liquefaction.

TANAP employs a risk-based inspection strategy, whereby geo-hazard risk levels are determined according to the findings of the previous surveys, and the frequency of subsequent monitoring surveys is set according to the risk level, i.e. ‘Medium risk’ sites are monitored on an annual basis, ‘Low risk’ sites every 3 years and ‘Notable’ sites every five years. If a site is classified as ‘High risk’, urgent action must be taken to reduce the risk level to Medium or lower.

In 2023, 151 river crossing inspections were conducted and recommended scour protection works were implemented where required (please see 2.4.3 of this Report). Additionally, 346 slopes, 52 landslides and 7.7km of karstic areas were surveyed. In parallel with the SME surveys of karstic areas, geo-physical geophysical investigations using ground penetration radar (GPR) and multi-electrode electrical resistivity tomography (ERT) were conducted close to the pipeline to help detect and monitor the formation and extent of any underground cavities, sinkholes etc. The geo-hazard SME surveys for 2024 were ongoing at the time of the site visit.

Given the scope and extent of both physical (RoW Patrols, SME surveys), and remote (GPR, ERT, Lidar, photogrammetry, aerial surveys etc.) monitoring surveys that are being, or are planned to be, undertaken at regular intervals, plus the site inspections that are being conducted by the Lead Integrity Engineer for Geohazards, the IESC considers it highly likely that TANAP will be immediately aware of any new geo-hazard risks to the integrity of the pipeline, and take appropriate action as necessary. TANAP is also taking all necessary measures to ensure that its understanding of the geohazard risks across the Project area is

current. For example, the register of landslides is in the process of being updated to ensure that the information on active and dormant landslides is accurate.

2.3.4.7 Third-Party Monitoring Company (TPMC)

There are several third-party monitoring companies active in delivering operational requirements. These include:

Environment

- Environmental Third-Party Monitoring and Consultancy Services (Assystem Enerji ve Çevre A.Ş.)
- SME Geo-Hazard Surveys (including Landslides, Karstic regions, River Crossings, and Land and Slope erosion) (Fugro Sial).
- Greenhouse Gas Emission Verification Services (The Ministry of Environment, Urbanisation and Climate Change (MoEUCC) allocates a company via the Central Electronic Verification Agency Appointment System (MEDAS))

Social

Annual independent ESIA monitoring by a Third-Party Monitoring Company (TPMC) is required under TANAP's Social Monitoring Plan for Operations (TNP-PLN-SOC-GEN-014). The third-party monitoring during Operations is conducted by ASSYSTEM, whose most recent report was issued in October 2023. The report for the first monitoring of 2024 is currently being finalized per TANAP comments, and that for the second monitoring is to be developed.

2.3.5 Assessment and Management of Change

There are no new MoC requests.

2.4 Resource Efficiency and Pollution Prevention PR3/PS3)

2.4.1 Resource Efficiency

The OEMP includes KPIs in relation to both water and energy consumption, with targets to achieve a 1% reduction in the total quantity of electricity and water consumed relative to the previous year for the TANAP Ankara Offices.

The annual percentage reduction in water and electricity consumption for 2024 cannot be calculated until the beginning of 2025. However, the monthly quantities of water consumed from January to September in 2024 compared to 2023 (as shown in Table 4), indicates that there has been a small increase in the total volume consumed in the year to date (1,798.02 compared to1,765.33 m^3).

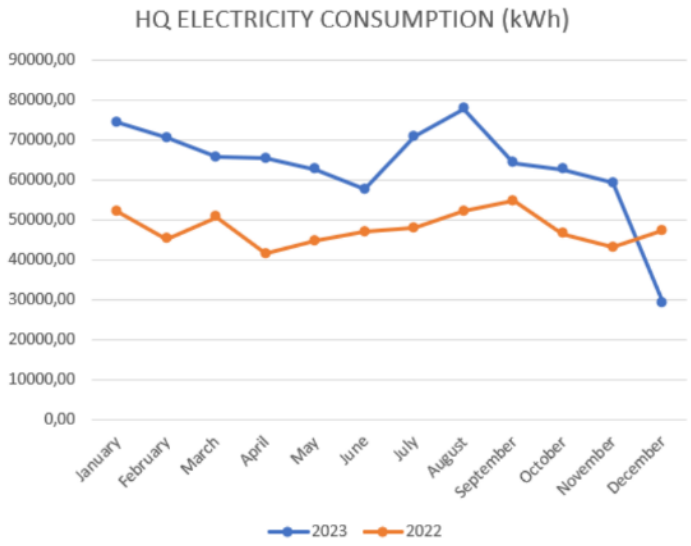
Table 4 Water consumption in TANAP Ankara Offices (2023 vs 2024)

Month	Volume of water consumed in 2023 (m^3)	Volume of water consumed in 2024 (m^3)
January	211.66	229.73
February	145.66	208.91
March	251.29	261.31
April	155.09	134.47
May	215.88	235.42
June	160.66	141.26
July	219.17	206.41
August	209.55	186.35
September	196.37	194.16

TANAP had already implemented some water-saving measures prior to 2023 but in order to meet the KPI target of a 1% annual reduction in consumption, additional measures will need to be identified. These could include reducing water pressure within the building if possible and installing flow rate limitation devices on taps.

Total electricity consumption in the Ankara Officers up to the end of August 2024 is 515,040.09 kWh. The total for 2023 was 759,687.84 kWh, therefore it is too soon to opine on whether TANAP will achieve its target of a 1% annual reduction in electricity consumption. The total quantity of electricity consumed in 2022 was 572,573.02 kWh. The 2023 total therefore represented an increase of 187,105.82 kWh compared to 2022, as shown in Figure 7. However, only a limited number of employees were allowed to work in the Ankara office before mid-March 2022, due to Covid-19 restrictions, which makes a direct comparison of electricity consumption between these years impossible. This could also be partly related to the very hot summer in 2023 and an increased use of air conditioning.

Figure 7: Electricity Consumption TANAP Ankara Offices (2022 vs 2023)



TANAP will need to identify and implement new/additional resource saving measures at the Ankara Offices on a yearly basis to be able to meet its targets for performance regarding water and electricity consumption. This may prove to be increasingly challenging, as there are only a limited number of resource saving initiatives that can be implemented, and performance against these KPIs may therefore not accurately reflect the effort and actions that TANAP has taken to improve resource efficiency. ***The IESC therefore recommends that these KPIs are revised to be more achievable and not linked to an annual % reduction in consumption***.

2.4.2 Pollution Prevention & Control

The IESC is assured that the operational management systems, Plans and Procedures in place are generally adequate to ensure that direct negative environmental impacts of TANAP's operations are being avoided/limited.

There has only been one minor environmental incident in the year to date, which occurred on 15 May. A concrete mixer delivering concrete to MS1 for the renovation of the guard house floor was observed to be leaking diesel, which spilled onto the asphalt access road, as shown in Figure 8.

Figure 8: Diesel leaking from the concrete mixer and spill containment

A plastic sheet was immediately laid over the road under the vehicle and a plastic container placed beneath the drip to contain the spill. The spilled diesel was then cleaned up with an absorbent chemical pad. Whilst the consequences of the incident were limited, as the spillage was onto tarmac and not bare soil, TANAP employees correctly followed the requisite investigation and reporting protocols. The resulting action taken was to liaise with the concrete company management to request that their vehicles be pre-checked for leaks before making deliveries.

TANAP additionally outlined during the visit that an ad-hoc audit by the Eskişehir Provincial Directorate of the MoEUCC was conducted, and wastewater samples taken for analysis, on 27 August. The findings were compliant with the relevant legal requirements.

TANAP is monitoring and has achieved 100% of target performance for all pollution prevention KPIs (other than for wastewater quality as outlined in 2.4.2.1 below). This includes 0 complaints received relating to noise, water quality, waste, dust or odour; 100% of tests being compliant with standards for noise and air emissions; 0 spills to land over 50 litres; and 0 spills to water.

The TPMC (Assystem Enerji ve Çevre A.Ş.) does not monitor air quality emissions as part of their scope of work. The Ministry of Environment, Urbanisation and Climate Change (MoEUCC) allocates a laboratory (via the Central Laboratory Determination System) to undertake the measurement and analysis of air emissions from heating boilers at all compressor stations and metering stations; including to determine whether they are meeting the threshold values specified in the Industrial Air Pollution Regulation. The results are reported to the related Provincial Directorate of the MoEUCC.

The KPI for noise also incorporates specific noise monitoring that was undertaken at 4 Stations (CS1, MS1, MS4 and CS5/MS2) during the planned shutdown (Turn Around/TAR) in August 2024, whereby TANAP had committed to monitor noise levels during venting activities (this was not a legal requirement). Baseline noise levels were taken for comparison with noise levels recorded during venting. Noise levels only exceeded the baseline noise levels for brief periods of time at each of the Stations and were predominantly recorded as being below baseline levels. It can therefore be assumed that any increases in baseline noise levels were due to external sources and not venting activities. Additionally, TANAP did not receive any noise complaints during the TAR.

2.4.2.1 Wastewater Effluent Quality

TANAP appears to have consistent problems with meeting Project adopted quality standards for wastewater effluent discharges from Station biological wastewater treatment plants. This was also raised as an issue by the IESC in 2022 and 2023.

The third-party monitoring company Assystem Enerji ve Çevre A.Ş takes effluent samples on a monthly basis from Stations CS1, MS1, CS5/MS2, MS4 and MCC for analysis by an accredited laboratory, which tests for the full suite of wastewater quality parameters against TANAP's adopted Project standards. Additionally, on a quarterly basis, wastewater effluent analyses are conducted to fulfil legal monitoring requirements by laboratories allocated via the Central Laboratory Identification System (operated by the MoEUCC) in line with the Environmental Permit and License Regulations.

The Project effluent quality standards are not only aligned with the World Bank Group General EHS Guidelines, but with the requirements of the following Regulations:

- Regulation on Water Pollution Control Regulation (Official Gazette dated 31.12.2004 and numbered 25687).
  Urban Wastewater Treatment Regulation (Official Gazette dated 08.01.2006 and numbered 26047).

As such, any non-compliances with Project standards detected during the monthly third-party monitoring, are assumed to also represent non-compliances with legal standards for effluent discharge (and failure to achieve the KPI target of "% of tests/samples compliant with legal standards for effluent discharge".

The Monthly Operational Performance Reports for Q3 (July, August and September) 2024 all refer to non-compliances with wastewater effluent quality standards as summarised below:

Table 5 2024 Non-compliances with wastewater effluent

Parameter non-compliance	Station (Month)

Total Coliform bacteria	CS1 (July, August and September) MS4 (August) MS1 (July, August and September)
Total Suspended Solids	MS4 (July and September) CS1 (August and September)
Biological Oxygen Demand	MCC (September)

From a review of the Assystem Monthly Reports, it appears that there is a particular problem at CS1, where the total coliform bacteria count has exceeded Project standards in every month in 2024 to date except January (where it was not detected). MS1 has a similar issue, with only 2 months in 2024 when the levels were below Project standards (one of which was a result of 'not detected'). During the site visit, this was acknowledged as a problem by the TANAP Environmental Manager, and the IESC was informed that at both these Stations the high coliform count was due to the bacteria becoming resistant to chlorine over time, which requires higher and higher doses of chlorine to be used. To address the issue, in July, the chlorination tanks were cleaned and refilled at CS1 and MS1 wastewater treatment plants, and blowers were controlled at the MS4 wastewater treatment plant. Additionally, in all cases where the monthly sampling in Q3 2024 indicated non-compliances, wastewater discharges were transferred to the relevant Municipality wastewater treatment facilities via vacuum truck.

Whilst TANAP must be commended for taking appropriate corrective and mitigative actions, it appears that this is likely to be an ongoing problem. The receiving environments for wastewater effluent are not considered to be sensitive, however, this will continually prevent TANAP from meeting its KPI targets relating to water. The finding from 2023 (3.3) therefore remains open.

2.4.3 Geo-Hazards

The 2024 site visit was mainly focused on geo-hazard risks at river crossings. The IESC was shown examples of where risks have been effectively mitigated, where there are outstanding rectification works to be completed, and where there are potential risks that are being closely monitored.

There are a number of river-crossing sites where, after 6 years of operations, the frequency of SME monitoring has either been proven to be adequate and the category of risk appropriately allocated, or where it has been considered that the frequency of monitoring can be reduced due to demonstrably low levels of risk. For example, at **RVX2-0038** (see Figure 9), rip rap was installed during the construction phase and the site was classified as 'Low' risk, i.e. to be inspected every 3 years. However, no erosion problems have been observed and the decision has therefore been taken to reduce the required monitoring frequency to every 5 years (i.e. the site has now been classified as 'Notable' for SME monitoring). RoW Patrol teams will still monitor this site on a regular basis.

Figure 9: RVX2-0038

The river at **RVX4-0823** is normally dry and only has any flow levels following heavy rainfall. Rip rap has been installed at this location to protect the pipeline at the crossing point; however, it is only monitored every 5 years by the SME (as a notable priority site). There are no signs of any soil erosions (see Figure 10), and the classification is considered by the IESC to be appropriate.

Figure 10: RVX4-0823

An example of where geo-hazard risk identified through TANAP monitoring has been effectively addressed is at **RVX4-0699/KP1534+885.** The steep slope at this location is stable following reinstatement, with good levels of re-vegetation. Three permanent and three temporary slope breakers have been installed, which were observed by the IESC to be effectively preventing soil erosion. However, the SME river crossing survey identified channel degradation and scouring up to 1m deep downstream of the river crossing point along with a 'huge amount of vegetation', where the landowner/farmer had planted vegetables in the riverbed at this location. Therefore, the QHSE Department liaised with the farmer to agree with him/her that s/he would remove the plants prior to the installation of a gabion wall and rip rap to stabilise the riverbanks and riverbed, as shown in Figure 11.

Figure 11: Gabion wall/rip rap to mitigate scour at RVX4-0699

In addition, a small berm was installed along the edge of the access road to divert water away from the steep riverbank and into a natural gulley downstream of the crossing point, to help prevent further soil erosion, as shown in Figure 12. Works were completed around 10 months prior to the site visit.

Figure 12: Berm at the top of the riverbank to divert surface water run-off

An example of a site where the requirement for remedial action has been identified, but works have not yet been undertaken, is at **RVX4-0700**. A RoW Patrol team first identified an erosion problem at this site 2 years ago. The SME subsequently undertook a more detailed inspection. The survey Report stated that "*Large-sized rocks up to 100 cm diameter are placed upstream of pipeline crossing to connect two valleys. When flood comes, it probably slips over this interconnection (used as a service road). Flow probably applies a force at right bank and bounces back to left bank, implying high amount of discharge and leads to occurrence of big scours. It seems like the river fed by groundwater. Channel cross-section is narrowing*

at pipeline crossing, increasing flow velocity and erosive capacity." All the results of the surveys were uploaded to the IMP for review by the Integrity Management Department and the decision was taken to install a gabion wall and rip rap at this location to stabilise the crossing point, as per the SME recommendation. Works are due to commence in around a year following a detailed engineering design process, internal budget approval for the works, and a tender process involving at least 2 construction contractors. In the short term, TANAP will undertake temporary maintenance works at this site to protect and straighten the channel using the in-situ rocks and unblock the channel downstream of the river crossing point, which has been filled in by forestry workers to provide access.

Figure 13: Bank erosion and scouring at RVX4-0700

An example of a potential integrity risk that is being closely monitored by the Integrity Management Department is at **RVX3B-0128.** A gabion wall was installed on each bank of the river at the crossing point during the construction phase in 2017, and which continues under the riverbed. Through regular monitoring, TANAP has identified some scouring downstream of the crossing point, as can be seen in Figure 14 below.

Figure 14: Scouring downstream of RVX3B-0128

This site is categorised as having low risk and as such, is only subject to SME monitoring every 3 years. Currently, the area of erosion is far enough downstream of the river crossing point to not be an issue, and the pipe is buried 3m beneath the crossing. However, the RoW Patrol teams will monitor this site every 15 days and if they observe that the area of scouring is expanding upstream, or the riverbanks are being undercut to the extent that the integrity of the pipeline is at risk, this will immediately be flagged to the Integrity Management Department through the IMP.

During the 2022 site visit, the IESC observed significant ongoing soil erosion issues at **KP 1518+302.** The main contributing factors to high soil erosion risk at this site include soil composed of weathered granite (with a very high erosion potential) and a small river crossing parallel to the RoW. Furthermore, whilst there is a natural gully at the foot of the lateral slope that would be the most effective way to direct run-off/drainage from the RoW, it is within Government-controlled forestry land and TANAP was not (at the time of the 2022 visit) permitted to divert water from the RoW into this gully. Despite extensive, recent rectification works at this site at the time of the visit in 2022 (including the slope being fully regraded, the slope breakers being repaired and extended, and additional slope breakers being added) the repaired slope breakers had already been breached, and there were clear signs of rilling and deep gullies forming. The IESC recommended that TANAP negotiated with the relevant Directorate of Forestry to allow surface run-off to be discharged into the natural gully, thereby following the natural contours of the slope and resulting in lower rates of soil erosion. Following discussions with the Directorate, TANAP was subsequently given permission to divert surface run-off into the gully, which should have at least partially

reduced the soil erosion risk at this site. Further repairs were also completed in 2023. This site was not visited during 2024 and as such, the current status of soil erosion cannot be verified. However, photographs taken by the RoW Patrol Team in July 2024 were provided for review, which appears to show a more stable situation with no breaches of the slope breakers and good revegetation rates as illustrated in Figure 15.

Figure 15: Status of soil erosion at KP 1518+302

There will be ongoing geo-hazard risks and impacts across the Operation that will need to be monitored and managed on a continuous basis, including at river crossing points and where there are soils with high erosion potential. The IESC is assured that the TANAP Lead Integrity Engineer for Geohazards has an excellent understanding and awareness of the full range of geo-hazard risks across the Project, which is enhanced by the resources provided by the Integrity Mapping Platform. The frequency of geo-hazard monitoring being undertaken, commensurate with the identified levels of risk, is considered by the IESC to be appropriate and adequate to ensure the integrity of the pipeline.

2.4.4 Greenhouse Gases (GHG)

The third-party monitoring company Çınar is appointed by TANAP to prepare GHG calculation methodology before Operations phase . A methodology has been developed by Çınar for accounting based on the 'International Financial Institution Framework for a Harmonised Approach to GHG Accounting' (November 2015), (ref. CIN -REP-ENV-GEN-027-rev. doc. TNP-PCD-ENV-GEN-017).

The most recent GHG Emissions Report for 2023 is dated 27 March 2023. Scope 1 and 2 emissions have been calculated using the methodologies outlined in the document referenced above. Scope 3 emissions (arising from sources not operated by the Project) are not typically included in annual reporting exercises and are excluded. Direct Scope 1 emissions sources that have been included in the calculations include stationary (e.g. gas turbines, boilers, heaters) and mobile (i.e. fleet vehicles) combustion emissions

sources, vented emissions and fugitive (unintentional leaks from sealed surfaces and threaded components including piping and associated equipment components) emissions. Indirect Scope 2 emissions were calculated according to the electricity consumed by each operating facility (as these account for the GHG emission from the generation of electricity that is consumed by the Project).

According to this Report, the total annual GHG emissions resulting from the operation of TANAP in 2023 were **354,408.91** tCO2e, compared to 348,993.74 tCO2e in 2022. This represents an overall annual increase in emissions released of 1.6%.

Vented GHG emissions in fact decreased by 12.6% primarily due to more stable operations and better coordination between operations and maintenance, with fewer resulting Turbo Compressor starts/stops compared to 2022 (for incidental maintenance). GHG emissions for electricity consumption also decreased by 1.2% as a result of initiatives implemented during the 'Sustainability Year of TANAP'.

Emissions from stationary natural gas combustion increased by 3% due to an increased flow rate to Europe compared to 2022. Additionally, GHG emissions from stationary diesel consumption increased by 77.4%, due to frequent power failures and the need to use backup diesel generators. GHG emissions also increased by 19.3% for mobile combustion due to the use of vehicles for site visits and maintenance activities.

Fugitive emissions remained approximately the same as for 2022, based on the TANAP GHG Methodology, developed based on pipeline components and the Tier-3 estimation approach.

TANAP's GHG emissions calculations were submitted to the (MoEUCC) in parallel with Lenders. Greenhouse Gas Emission Reports for CS5/MS2 and CS1 were verified according to the Regulation on Monitoring of Greenhouse Gas Emissions and submitted to MoEUCC online via an integrated environmental information system.

To date, continuous fugitive GHG emissions monitoring and measurement has not been undertaken by TANAP at the above-ground installations (AGIs). Instead, it has been calculated in accordance with the TANAP GHG Methodology, developed based on pipeline components and the Tier-3 estimation approach, which is accepted in the Natural Gas sector and also approved by the EBRD. In this regard, TANAP is planning to proceed with periodic monitoring through manual measurement on-site, and at the time of the site visit was in the middle of the tender process for a supplier to provide this service.

It should be noted that TANAP has planted approximately 800,000 saplings to compensate for losses during the construction phase and as part of the SEIP Programme. This has been calculated to have achieved an offset of 10% of 2023 total carbon emissions.

2.4.5 Waste and Hazardous Materials

In 2024, TANAP achieved Zero Waste Certification. In order to achieve this, various waste reduction initiatives were implemented (in addition to the requirements of TANAP's Waste Management Plan), for example the testing of used oil to ascertain whether it can be re-used rather than being disposed of; introducing re-usable water bottles at stations to minimise the generation of plastic waste from disposable water bottles; introducing an automatic system for materials management to prevent overbuying of stock (a system that was piloted at CS5 and then rolled out across all stations following great success); and buying a compost machine for organic waste at CS5.

2.4.5.1 Non-Hazardous Waste

The IESC observed an exemplary standard of non-hazardous waste management practices at MS4 during the site visit, in compliance with the Waste Management Plan for Operations (TNP-PLN-ENV-GEN-007).

TANAP has the ability to recycle all waste streams from MS4. To facilitate this, a sufficient number of segregated waste bins, with lids, are being provided around the station (inside and outside) for paper, plastic, glass and metal. They were clearly labelled (including to show the Zero Waste Certification), as shown in Figure 16, and there was no mixing of waste types observed within the bins. Such effective at-source segregation is commended.

Figure 16: Segregated waste bins at MS4

The main temporary waste storage area is located outside the station fence to allow licensed third-party waste disposal contractors to access it. This comprises separate units for different waste streams that are all locked and covered, with impermeable flooring. The contents of each unit are clearly labelled, and good housekeeping practices were being demonstrated, as shown in Figure 17. The only minor observation was that the label for 'Glass' was only in Turkish (not additionally in English), but the Senior Environmental Engineer on the visit was aware of this and was in the process of getting it rectified.

Figure 17: External temporary waste storage area at MS4

2.4.5.2 Hazardous Waste

The IESC did not observe a dedicated hazardous waste storage area at MS4. There was at least one hazardous waste bin located next to the wastewater treatment plant (as shown in Figure 18), which the IESC was informed is used for contaminated cloths or gloves and represented best practice (i.e. had a lid and was clearly labelled). It is therefore assumed that the station does not generate significant quantities of hazardous waste and as such, does not require a hazardous waste storage area.

During the 2023 site visit to CS3(AMC), the IESC observed that hazardous waste containers were not all clearly labelled and that there was incompatible storage of flammable and poisonous materials. The TANAP Environmental Compliance Review Report for this station was provided for IESC review. This indicates that, as per the recommendation made by the IESC in 2023, refresher training was provided to TANAP employees about chemical substances management (on 26th March 2024) by a legal occupational specialist. However, the Report also outlines that whilst actions have been taken to partially address this finding, further improvements are required. These include that a chemical compatibility matrix should be completed and applied, and that a wall that appears to have been built to segregate different types of hazardous waste within a storage area should be raised, or a new/different area designated. This will be a focus of the next site visit.

Figure 18: Hazardous waste bin at MS4

2.4.5.3 Hazardous Materials

In terms of hazardous materials storage, the IESC observed a good standard of practice at MS4.

There were 2 dedicated areas for the storage of compressed gas cylinders, the second being a temporary 'overflow' storage area as additional cylinders had been ordered in relation to the planned Turnaround (TAR) or shutdown of the pipeline in August 2024, which provided an opportunity for maintenance activities to be undertaken that required compressed gas. Both storage areas were clearly labelled (in Turkish and English), covered and locked. Material Safety Data Sheets (MSDS) were easily accessible, and the cylinders were stored in groups according to their contents, which were clearly indicated by labels on the walls. This is illustrated in Figure 19 below.

Figure 19: Best practice storage of compressed gas at MS4

The dedicated hazardous materials storage facility was divided into two halves, for chemicals (A) and oils (B), as shown in Figure 20.

Figure 20: Dedicated hazardous materials storage area at MS4

This is a covered and locked facility, and the contents were clearly labelled as being hazardous. There were also compatibility risk matrices posted on each of the main doors, and folders containing the relevant MSDS for all materials were easily accessible within each of the storage rooms. Adequately and appropriately stocked spill kits were provided within each of the rooms, as shown in Figure 21, as well as an additional spill kit located immediately outside the facility.

Figure 21: Provision of spill kits within the hazardous materials storage facility

The only minor observation was that none of the liquids were being stored within secondary containment. The IESC acknowledges that the floors in both rooms are impermeable and that a closed drainage system has been installed (as shown in Figure 22) that would divert any major spills into a dedicated tank outside the storage facility. This tank is equipped with a sensor that indicates when the tank requires emptying by a licensed hazardous waste contractor. However, it is best practice for all hazardous liquids to be stored within secondary containment, to ensure that any leaks/spills are contained and do not generate a health & safety risk (e.g. a slip hazard). This will not be raised as a non-compliance, but it is recommended that TANAP considers the provision of drip trays for all hazardous liquids.

Figure 22: Closed drainage

2.5 Labour and Working Conditions (PR2/PS2)

2.5.1 Human Resource Policies and Working Relationships

TANAP has a Human Resources Policy [TNP-POL-HRM-GEN-006] and HR Management Plan [TNP-PLN-HRM-GEN-001] in place as part of the operational organisational management, for which implementation is the responsibility of the Human Resources Directorate. Subordinate documents guide policy implementation and include aspects such as the Discipline Procedure; the Operational Training and Competence Philosophy; the Performance Evaluation Procedure; the Recruitment and Mobilization Plan; and the Termination Procedure.

As of August 2024, there are 848 direct and indirect employees for the below-listed segments. The following table describes the breakdown of the workforce.

Table 6 Breakdown of the workforce by type and gender

Employee Type	Gender	Number
TANAP	• Men • Women • Total	• 86% • 14% • 383
RoW patrolling (contractor)	• Men • Women • Total	• 100% • 0% • 50
Administrative (contractor)	• Men • Women • Total	• 75% • 25% • 199
Security (contractor)	• Men • Women • Total	• 90% • 10% • 216

2.5.2 Protecting the Workforce

The Human Resources Management Plan provides TANAP's wages, benefits and working conditions policy of offering competitive salaries within the market and benefits to employees, as well as operating in compliance with legal requirements.

Social Inductions/Refresher trainings have continued to be organised for workers by the Site Social Impact Specialists, on content including TANAP's Social Commitments; Turkish laws on working conditions; worker rights and entitlements; and the grievance mechanism.

2.5.3 OHS

2.5.3.1 General

The IESC took a focused, risk-based approach to the assessment of OHS. Previous assessments and findings were assessed and validated as part of this physical assessment, however, there were no opportunities to observe high-risk work being conducted in the field. This is not unusual given the nature of operations as opposed to construction.

TANAP OHS statistics remain industry best practice with no recordable incidents for the period under review resulting in a 0 LTIFR and TRIFR (Figure 25, Figure 26). Near-miss incidents totalled 24 for TANAP employees (two less than last year) for the review period and did not represent any failings in core OHS systems or procedures. TANAP has also maintained very good leading indicators such as behavioural interactions, safety walk-throughs and inspections, development and tracking of action plans and monitoring of outstanding actions to completion.

TANAP has a robust internal audit process with the frequency of assessments, findings, actions and action register all very well implemented and managed. The close-out rate of corrective actions identified during internal OHS audits can be seen in Table 7 below. The IESC commends the impressively high closure rate of actions which was 97% at the time of the field visit.

Table 7 The close-out status of the action items identified during audits between September 2023 – August 2024

Audit	Open	Closed	All
ERP Readiness Audit	1	91	92
Health Audit	6	218	224
Chemical Substances Management Audit	0	66	66
Personal Protective Equipment Inspection and Audit	0	60	60
General HS Site Inspection	2	76	78
Contractor HS Compliance Audit	7	223	230
Road Safety Audit and Inspection	8	27	35
Permit to Work Audit	1	13	14

2.5.3.2 Road Safety

Road safety remains one of the highest OHS risks for the operations and the road safety management initiatives are highly commended as is the level of validation.

The IESC team did not observe any unsafe driving or road practices during the site visit from any of the drivers. Speed limits were strictly adhered to and off-road driving was conducted in a safe and cautious manner. Many hours of driving were undertaken, and all drivers remained focused with breaks at least every 2 hours, this gives the IESC a high level of confidence that driving safety is a high priority in the broader organisation.

Last year the IESC requested a Trigger Action Response Plan (TARP), or similar for safe use of hazardous roads/weather conditions. TANAP has since provided details on journey management plans, vehicle tracking and road safety alerts that together ensure that drivers will be aware of any potential hazards as part of driving operations. Based on the incident register, only 16 vehicle-based incidents occurred involving TANAP, contractor and sub-contractor vehicles. All incidents were relatively minor and none resulted in injuries. This is a very low rate of vehicle incidents considering the amount of vehicle operations on the project and is commended.

Other road safety initiatives were completed by TANAP as follows:

- Road safety Training (1622.5 hours year to date, 30,496 hours project to date)
- Safe-pass Checks of Vehicles (13 vehicles year to date, 1542 vehicles project to date)
- Vehicle Tracking and Journey Management (2,204.657 km year to date, 14,800,503 km project to date)
- Road Risk Analysis (15,289 km project to date)
- Road Safety Audits (3 completed this year, 4 each year)
- Driver Behaviour and Violation Reports
- Spot-check of Vehicles and Drivers
- Road Safety Alerts
- Weekly Road Safety Awareness Topics
- Road Safety Toolboxes

2.5.3.3 Physical verification of OHS compliance at MS4

A physical assessment of OHS compliance was conducted at CS3/AMC including a walk-through of the facility. The site had a very high level of housekeeping and general OHS considerations were beyond international best practice. Findings included:

- All fire extinguishers assessed were inspected within the last 6 months
- Eye wash stations were available and clearly marked
- PPE requirements were clear and were being used
- High risk zones were clear and fenced off
- Emergency protocols were clear and appropriate
- Station was clean and free of tripping hazards and other possible aspects that could cause injury.

The IESC commends the extremely high quality of OHS signage, labelling, storage, and organisation.

2.5.3.4 Worker Interview

During the site visit, an OHS interview was conducted with a worker on-site engaged in weed spraying activities. The worker demonstrated a high level of competence and knowledge regarding site safety protocols. He confidently explained the permit-to-work process in detail and had all necessary documentation readily available, including printed Material Safety Data Sheets (MSDS) and a Job Hazard Analysis (JHA). The worker was well-versed in emergency protocols, accurately identifying the relevant hazards associated with his task and the specific controls in place to mitigate these risks. His thorough understanding of safety practices and preparedness reflected a strong commitment to OHS standards and compliance, contributing positively to the safety culture of the project.

2.5.3.5 Chemical Storage

One OHS non-compliance was identified at MS4 relating to chemical storage. This follows on for the 2023 assessment where the same non-compliance was identified at CS3/AMC. This may indicate a broader issue with chemical storage at TANAP facilities.

Several instances of flammables, poisons and corrosives being stored together were identified (example in Figure 23). A chemical storage matrix was available on the door of the storage container that states these chemicals should not be stored together. However, it was not easily identifiable as the hazard symbols on the matrix did not match the hazard symbols on the containers.

Figure 23: Example of incorrect chemical storage at MS4. Left: poison and environmental hazard. Middle: poison, corrosive and environmental hazard. Right: Flammable liquid.

Storing poisons and flammables together is a significant OHS hazard. If these chemicals mix, they can create a variety of dangerous situations, including:

- Fires and explosions: Some poisons can react with flammable materials to cause fires or explosions. For example, storing chlorine gas with gasoline can create a highly explosive mixture.

- Toxic fumes: If poisons and flammables are mixed, they can release toxic fumes that can be harmful to human health. For example, mixing bleach and ammonia can create chlorine gas, which is a highly toxic gas that can cause respiratory problems and even death.

To add to this the poison substance is also corrosive. This further increases risk that containers are damaged, and an uncontrolled release and reaction occurs. For example, if a worker were to accidentally spill a small amount of corrosive liquid on the flammable container, the container may dissolve and release the liquid. If a spark then occurred the liquid would ignite, react with the toxic chemicals and likely create toxic vapour. With so many other chemicals present in a small space, an explosion could also occur.

These chemicals need to not only be separated by at least 3m but should be stored in separate rooms as per the recommended matrix provided in Figure 24.

A possible reason for this oversight was the lack of clarity on the chemical storage matrix where symbols did not match the containers. Therefore, the **IESC would recommend that all chemical storage matrix sheets across the project be updated to a more easily identifiable version.** An example of such a matrix has been provided in Figure 24, here it can be seen that the symbols for each class of chemical match exactly with the symbols on the containers in Figure 23.

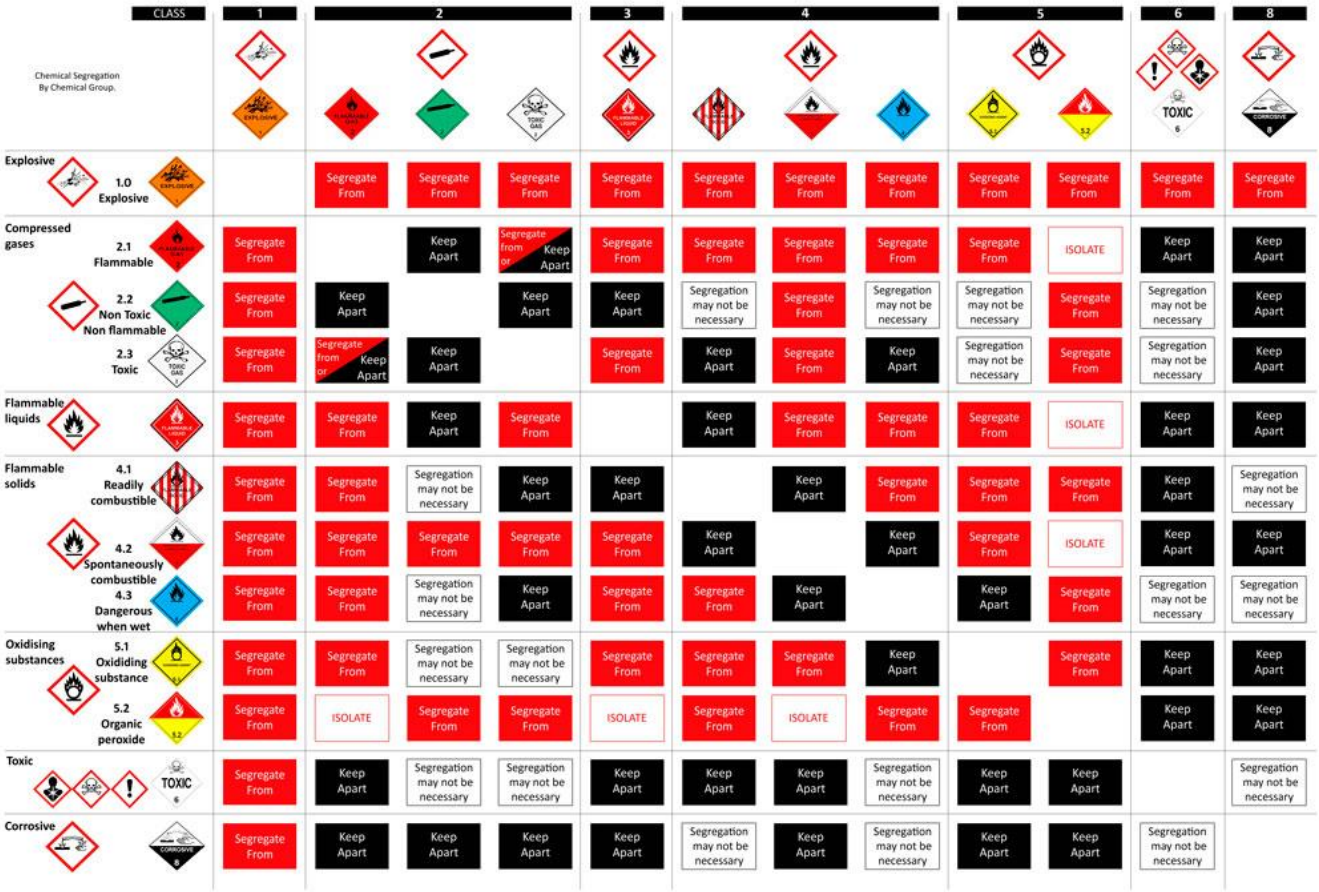


Figure 24: Example of clear chemical storage matrix.

A second concern, is that this non-compliance was not picked up during the assessment of MS3 and MS4 as per the inspection form provided to the IESC (TNP-HSM-CHK-008). This inspection sheet asks '*Have workers responsible for chemicals been trained on safe storage methods and the hazards of chemicals? Are there training records?'* and *'In places where chemicals are stored, are warning and caution signs for the chemical storage matrix and other warnings posted?'.* The answer to both of these is 'yes' however the incorrect storage was not picked up. Therefore, **a second recommendation by the IESC is that the inspection checklist be updated to include a question such as 'have the stored chemicals been checked against the storage matrix to ensure appropriate separation?'**

Additionally, while not an official recommendation, a review of the training provided to the workers who were responsible for chemicals may be conducted to investigate why the training did not result in compliance actions.

This has not yet been escalated to a material non-compliance as TANAP has systems, processes or mitigation measures in place which manage chemical storage. However, these systems should be improved so that they result in actions in practice. The IESC will focus on chemical storage as a broader subject during the next assessment.

2.5.3.6 Incident reporting and management

The incident register was reviewed and is to be commended with zero recordable incidents for the monitoring period. There were no High-risk near misses for the period under review and as noted in this report the lagging safety statistics for this project are excellent and industry best practice. Lagging safety statistics are presented below and actual LTI frequency and total recordable injury rate are below the respective targets of 0 and 0.3 for the entire monitoring period.

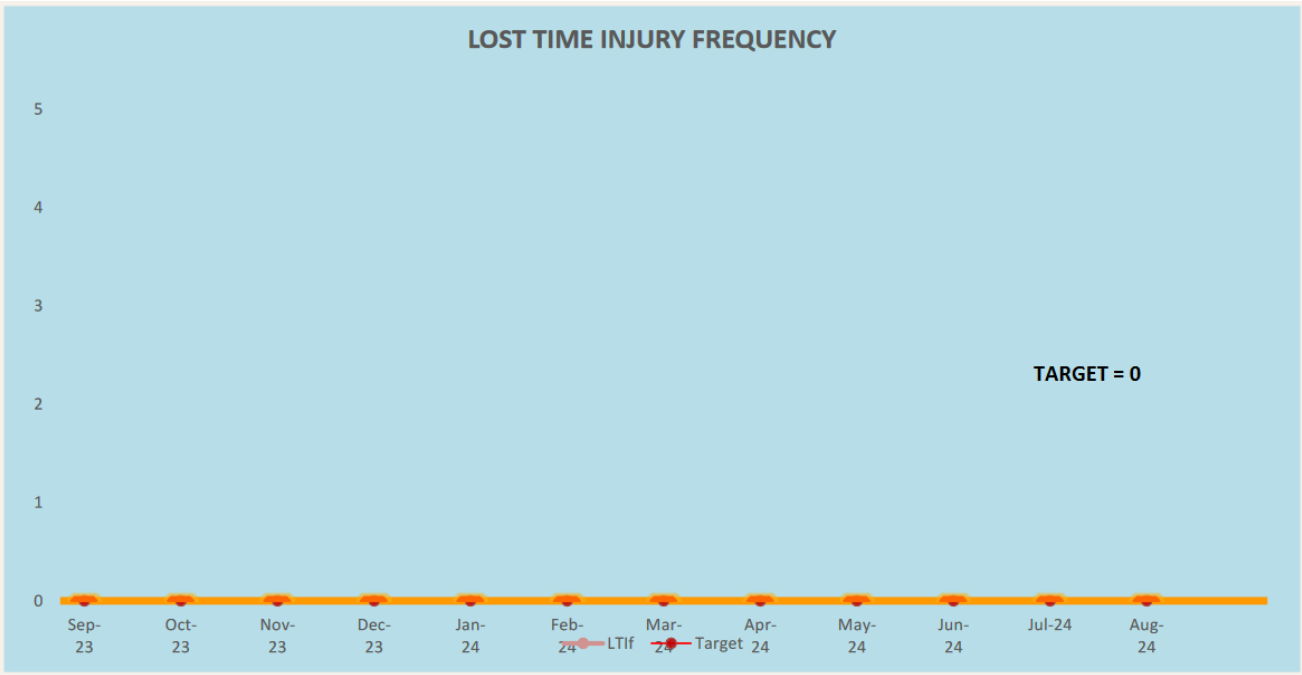


Figure 25: Lost Time Injury Frequency

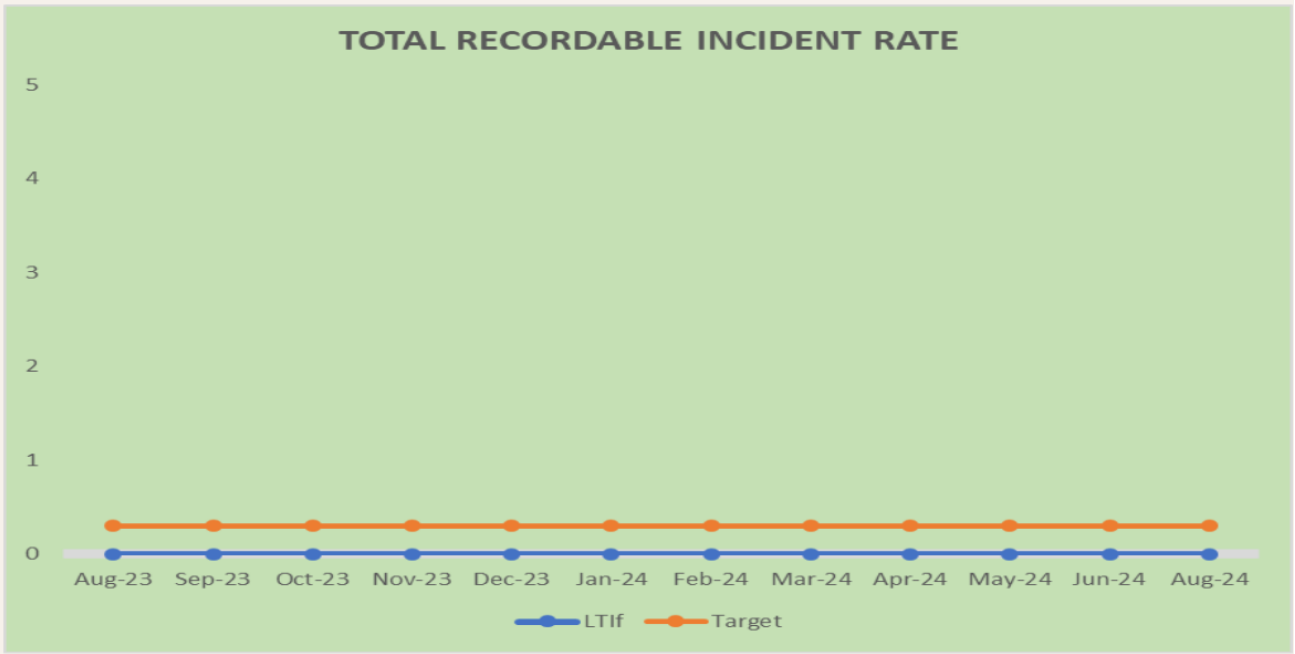


Figure 26: Total Recordable Incident Rate

2.5.3.7 Crises and Emergency Management

There was a further improvement in the scheduling and conducting of emergency exercises which is commended. 40 emergency response exercise reports were sampled, and these represented a good variety of scenarios and locations. This included scenarios that were conducted with the local community and the local emergency services such as the Fire Department. The emergency response exercise program for 2024 was industry best practice and is highly commended.

The variety of drills conducted for the project demonstrated a comprehensive and diverse approach to safety and preparedness. Each drill targeted different potential hazards, from medical emergencies and fire incidents to environmental risks and structural dangers, ensuring that the team was well-trained to respond effectively to a wide range of scenarios. This diverse training not only improved individual response times but also reinforced a strong culture of safety and readiness, critical for mitigating risks in various challenging situations. Some of the types of drills conducted are as follows:

- Fire response drills
- Environmental spill drill
- First aid drill
- Rescue drill
- Night works drills

- Earthquake drill
- Vehicle accident drill
- Evacuation drills
- Gas leakage drills

2.5.4 Grievance mechanism

The Grievance Management Procedure [TNP-PCD-SOC-GEN-001-Rev-P6-0_GRM] is operational and sets out the process and responsibilities for handling and monitoring grievances from stakeholders (internal and external). Since December 2023, no new worker complaints (2 from CS3, 2 from MS4, and 1 CS5/MS2) have been registered.

2.5.5 Security Personnel Requirements

This aspect was not assessed as part of the visit.

2.6 Community Health Safety and Security (PR4/PS4)

2.6.1 Infrastructure, Building, and Equipment Design and Safety

The IESC notes that the security personnel can identify (potential) infringements along the length of the pipeline and at all AGIs, and with support from RoW Patrolling Team and other key stakeholders (e.g. Muhtars), the maximum time to reach any location on the pipeline was reported as approximately 45 minutes (annual average of the maximum time). This situation remains relevant although about 80% of the previous mukhtars were replaced during the recent elections. The Social Team provided all the relevant internal departments with updated contact details.

2.6.2 Hazardous Materials Safety

This aspect was not assessed as part of the visit.

2.6.3 Traffic Safety

The IESC notes that good road safety management practices remain in place for the operation period. Refer to Section 2.5.3.2 for further information regarding road safety.

2.6.4 Exposure to Disease

This aspect was not assessed as part of the visit.

2.6.5 Natural Hazards

This aspect was not assessed as part of the visit.

2.6.6 Emergency Management

Disclosure and distribution of the Community-Based Emergency Response Plan (CBERP) were completed in AGI-affected settlements through community informative meetings during the previous reporting cycle. Disclosure meetings with pipeline-affected settlements are ongoing. Even though the awareness campaigns have not been completed at all the pipeline villages, the communities visited were clear about who to contact in case of an emergency.

The IESC notes the first of two emergency response scenarios (Community Safety-based drills) that were planned for 2024 took place in the vicinity of CS3 AMC. The exercise was scripted and conducted in accordance with the Community-Based Emergency Management Plan Procedure. The drill was managed as CS3 AMC-centred and recommendations and areas for improvement were reported by the consultant company (Solo Institute). A second drill will be conducted in November, 2024.

Positive observations included work permit compliance, guard familiarity and the speed of the coordination.

Areas to be improved include communication during drills, gendarmerie awareness and an outdated emergency personnel list.

2.7 Land Acquisition, Involuntary Resettlement and Economic Displacement (PR5/PS5)

2.7.1 Status

The total number of parcels subject to land acquisition is 29,213. Of the 7,856 public parcels, 99.89% have been registered in the name of the LRE. Of the 21,330 private parcels the registration of 99.91% has been completed. A total of 67 parcels; 43 of which are public, have been additionally acquired from August 2023 to August 2024. The majority were acquired for scour protection on the river crossing areas and improvement of drainage channels of BVS 34 and BVS 7.

In addition, there have been 31 expropriation requests related to orphan land. Of these, 10 have been found to be eligible and have been acquired. There is also additional land being acquired due to planned works relating to rip rap installations, slope breakers, drainage channels and land consolidation. Due to complaints related to slope breakers that are currently being examined, additional unplanned acquisition of parcels will also be required. Lands associated with slope breakers are being monitored and assessed by a geo-hazard consulting company in coordination with the Land Acquisition, Integrity, Environmental and Social Impact departments. Upon final assessment and confirmation, the additional land acquisition process will be conducted.

2.7.2 Compensation

The original expropriation has now been completed. All compensation payments have been made by the Land Rights Entity (LRE), the entity designated to manage and execute all land acquisition activities and deposited in an escrow account per parcel in compliance with the Expropriation Law.

2.7.3 Grievance

See Section 2.9.2, which includes grievances related to RAP/LRPs.

2.7.4 Resettlement and Livelihoods Planning and Implementation

Additional land acquisition for operational works is ongoing, with a current focus on expropriation of land for slope breakers as mentioned in section 2.7.2. Previously about 40 complaints relating to slope breakers were investigated by the consultant, Temelsu. Land on which slope breakers are located was only permanently acquired in two cases. However, there has been an increased number of complaints relating to permanent slope breakers. Currently, a total of about 1000 private parcels associated with slope breakers are being considered. TANAP is committed to compensating as relevant and will also consider lost livelihoods and associated incomes as needed.

2.7.5 Monitoring

The RAP End Term Impact Evaluation (RETIE) was previously finalized and disclosed[6]. Implementation of corrective actions is ongoing and these activities are shown in the figure below:

[6] https://www.tanap.com/store/file/e23d13df65a22491fa49ddce8d4bda02.pdf

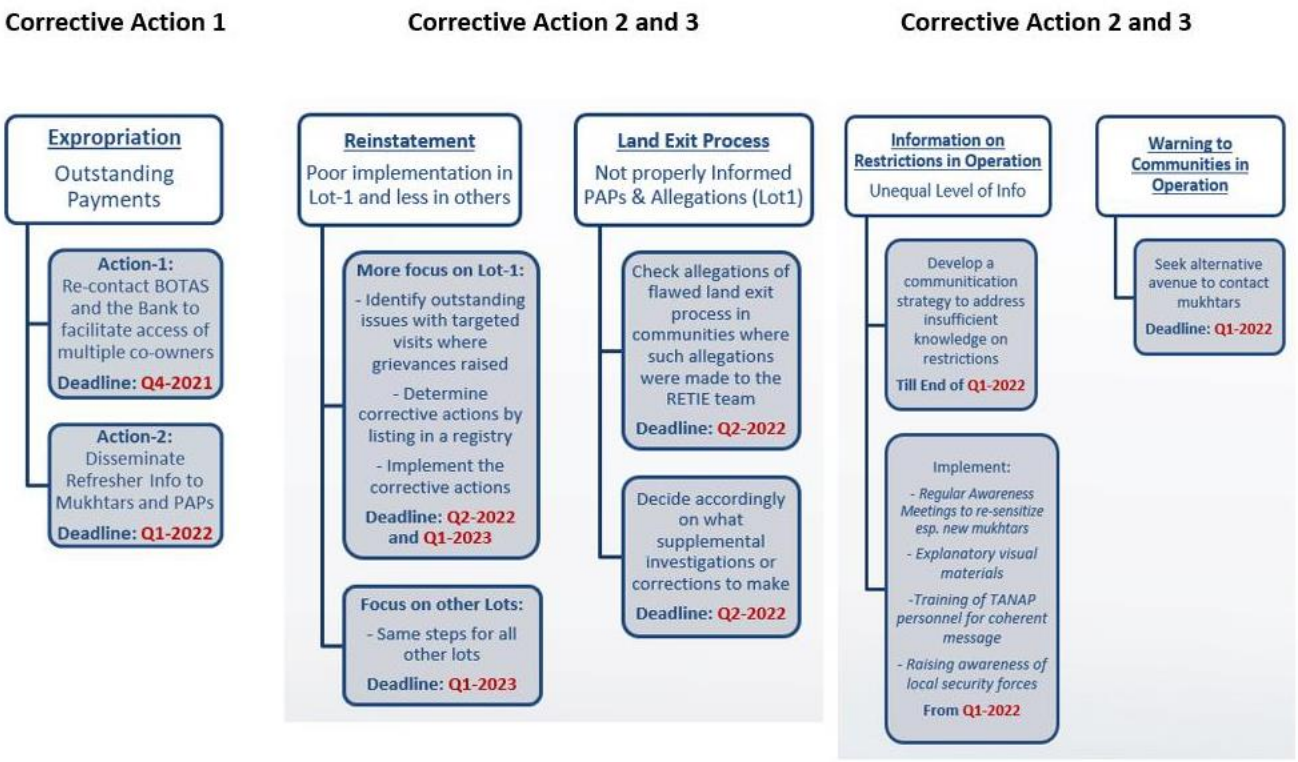


Figure 27: Summary of RETIE Corrective Actions

Corrective Action 1: Expropriation: Outstanding payments

TANAP's follow-up action was to write to BOTAS regarding the agreement between BOTAS and the Ziraat Bank (the bank holding expropriation compensation payments in escrow) as a reminder of the process for PAPs to access their compensation. It has since been reported that in some cases the bank does not issue the registered landowner with the compensation amount unless all the registered landowners for a specific parcel are present at the branch at the same time. This implies that an unknown number of landowners have not received their compensation. Even though they could submit complaints, the IESC met with some community members who did not file grievances for this situation. In addition, they do not phone the complaints tollfree hotline because the number is not tollfree when called from a mobile phone. It may be because the amount is simply not worth the effort, however, this cannot be confirmed. An added challenge is that the remaining money in escrow will be returned to the Ministry of Finance following a specified time. Based on the previous recommendation the branches who followed the incorrect process were contacted via Botas and informed of the issue. In addition, TANAP also informed communities of the correct steps to follow to claim the compensation and the IESC noted the posters located in the villages relaying this message.

Corrective Actions 4 and 5: Information on restrictions and community contacts during operations

These actions continue to be addressed concurrently with most having been visited already and follow-up actions completed.

2.8 Cultural Heritage (PR8)

2.8.1 Assessment

This aspect was not assessed as part of the virtual visit.

2.8.2 Consultation

This aspect was not assessed as part of the virtual visit.

2.9 Disclosure and Stakeholder Engagement (PR10)

2.9.1 Stakeholder Engagement

The relevant TANAP stakeholder engagement systems are in place and continue to function adequately. Information disclosure focuses on relevant topics e.g., land use restrictions, operational safety, etc. as is expected for this phase of the project.

There are currently two vacancies in the Social Impact Team and interviews have been ongoing to identify an Assistant Social Impact Specialist to be based in Ankara and SI representative for MS3 and MS4 in Edirne. Currently, the CS5/MS2 SI representative is also managing engagement for MS3/MS4.

The IESC noted the Internal Social Impact Team's workshop that takes place annually. During this workshop the team discusses topics such as KPIs, Engagement and communication, site-specific issues and associated risks. During the last meeting that was held in April, the team also identified the need for the engagement strategy to start considering social platforms as a way forward. This is encouraged and the IESC looks forward to following this process in future.

All the stakeholders met by the IESC during the visit confirmed that they received and are aware of relevant information and have clear communication channels with TANAP as needed. During the meetings, it was confirmed that the SI representatives visited the villages at least once per year with many comments that visits took place two or more times per year. In addition, it was noted that the representatives were always available via mobile.

Having said that, TANAP does face challenges in terms of the timing of stakeholder engagement as villagers do not want to be disturbed during the agricultural months. In addition, many of the households generally leave the villages following harvests and few stakeholders remain. The window to visit all the villages is therefore a challenge.

During discussions with the TANAP team, the role of Muhtar as a key point of contact was also recognized as a potential challenge since not all stakeholders trusted or supported the relevant Muhtar of the community to convey relevant messages and to represent their interests. TANAP is aware of the villages

where this could be an issue and has communicated relevant contact details to a broad range of community members. As mentioned previously, approximately 80% of the mukhtars along the pipeline were not re-elected during the recent elections. Contact details of all the new individuals have been collected and distributed to relevant internal departments.

Newly elected mayors and mukhtars were also visited in addition to local authorities. To date, 96 % have been completed. During these visits, social impact team members introduced themselves and provided detailed information about operational period activities, land use conditions, third-party crossing processes, stakeholder engagement activities, and the grievance mechanism available for addressing concerns and issues.

TANAP's key performance indicators for social impact performance include the number of community meetings. In Q1/2024, a total of 140 community meetings and in Q2/2023, a total of 198 community meetings were conducted.

The Annual Stakeholder Engagement meetings were held in the Bursa Province on 16 January 2024 and included 24 participants. In addition, a meeting was held in Balikesir Province on 18 January 2024 and included 30 participants. The meetings included various levels of government, companies and non-government stakeholders and included a presentation, followed by a question-and-answer session that focused on consultation activities, community health and safety topics, grievance statistics, operation phase land use conditions and violation statistics, and third-party crossings permit process.

2.9.1.1 Social and Environmental Investment Program (SEIP)

The Program includes three categories:

Category 1: Projects from the Construction Phase including the Construction of "TANAP Vocational and Technical Anatolian High School" in Sivas. This project has been transferred to the TANAP's Projects and Modification Department and Category 1 will be closed for SEIP;

Category 2: Support to communities in the vicinity of AGIs. The following projects fall in this category:

- Aksaklı Neighbourhood of Seyitgazi Municipality, Development of Social Life Project (2021)
- Büyükdere Neighbourhood of Seyitgazi Municipality, Development of Economic Life Project (2021)
- Sarıcaali Village Procurement of Backhoe Loader Project (2022)
- Kavakköy Municipality Solar Power Plant Project (2023)
- Sarıcaali Village Procurement of Bale Machine and Loading Device Project (2024)

Categroy 3: Sustainability, including:

- Can'ınız Sag Olsun Project (2021)
- Sterilize – Vaccinate – Keep Alive Project (2021)

- Furnishing of Ardahan University Kindergarten and Nursery (2022)
- Eksi 25 Children's Village Project (2021-2022-2023-2024)
- Supporting Women's Initiative Created in Biga in the field of Agro-Tourism Project (2023-2024)

The current SEIP program continues to support a small number of targeted projects of which many will end in 2024. The IESC commends the team for their effort to support sustainable development projects and visited various projects where the benefits of the support were clear.

The IESC noted that budgets are considered and approved annually with additional 2-year forecast information. The IESC also noted that some projects that originate in the Project area of consideration may benefit a broader community outside of the project-affected area and suggest that these are also considered for investment.

In addition, **the IESC observed that the allocated budget for this important element might be inadequate for the size of the project and suggests that the budget figures are reconsidered.**

2.9.1.2 Land use conditions and violations

Landowners and users are continuously reminded about restrictions prior to, and following, any violations. Although information meetings are being held less often along the pipeline for this specific topic, TANAP has distributed information brochures and posters and, in many of the communities visited these posters were displayed in public areas. Stakeholders also reported a broad awareness of restrictions although these might not always be popular.

The ROW patrol teams continue to report violations and the security team's remote monitoring from the MCC allows the Project to immediately become aware of possible violations along the pipeline. Often the local Muhtar is contacted, or the gendarmerie is requested to follow up on activities that may be in violation of the restrictions. As reported previously the SI team is supporting owners and users to complete the necessary permit application forms and the majority of applications are for constructing irrigation channels. Although the SI team is making considerable efforts to support users with the permit system to keep violations to a minimum, this procedure has varying success along the pipeline. This year a total of 28 Third Party Crossing applications were made to TANAP by real persons (land owners etc., excluding the authorities and legal entities) and these are responded to within 10 days from receipt.

2.9.1.3 Maintenance activities

Maintenance activities increase in the summer period, and TANAP's SI team reports that their work includes the provision of information about the type and duration of maintenance work. Maintenance work includes line marker repairs/installation and pipe locator readings (i.e. low-impact activities requiring at

most hand tools to conduct the work), through to works requiring mechanical equipment (e.g. subsidence repairs). The IESC notes that the land access management procedure (TANAP Operation Phase Land Access Management Procedure (Land Entry, Land Exit and Compensation), TNP-PCD-LAC-GEN-004) is key to guiding compensation and damage as appropriate. The General Principles of this procedure are, reasonably, pipeline-focused, however, a potential vulnerability of households affected by land re-entry/maintenance during operations is not covered in this Procedure. **The IESC recommends that TANAP, in conducting its next review of this procedure, consider what activities TANAP is doing to ensure that any vulnerability in affected households is considered**, in the same way that critical habitat assessment is required for biodiversity. This could be reasonably assessed at the step of "Notification of Landowner/User" and signing of the Land Entry protocol. Any additional support provided to vulnerable households should be appropriate to the nature and the scale of the impact to their affected land, e.g., if work is conducted on the pipeline results in the loss of a subsistence crop that would leave a household more vulnerable, then TANAP could provide special support to ensure compensation is accessible. TANAP should consider thresholds for support, e.g. if works are conducted prior to harvest, or damage more than 50% of a household's crop, or work requires mechanical equipment to be used on the land. The IESC is seeking to 'future proof' the procedure, i.e., ensure that the procedure should documents steps that are already being taken to minimise impacts, particularly steps that minimise impacts to those most vulnerable, as is required under TANAP's commitments to the Performance Requirements[7].

2.9.2 Grievance management

The grievance close-out rate target for Q1/2024 was 75% and 100% was achieved, while in Q2/23 the target was 75% and again 100% was achieved. The project's total complaints since commencement are now 5,664 received compared to 5,604 on the previous IESC visit, therefore 60 received for the year. Of these, 5,602 have been closed compared to 5556 on the previous visit. To date, 42 complaints are yet to be closed. Of these, 32 are overdue, predominantly relating to reinstatement (26 cases, or 73%). Most of these are about stones and levelling issues. One topic of the grievances that required specific investigation related to slope breakers. After a geotechnical investigation in each slope breaker grievance case, the case is either closed with compensation (for temporary cases, relating to the duration the slope breaker has been in place), or where slope breakers are permanently needed, permanent land acquisition is instigated. See s.2.7.4 regarding permanent land acquisition of slope breaker grievances. There have been no issues raised with this approach by landowners/users.

[7] PR1, inclusion of differentiated measures to ensure disadvantaged or vulnerable groups or individuals are not disproportionately affected. In this case, an example could be the elderly who are meeting food security requirements through subsistence farming.

2.9.3 Information Disclosure

Information disclosure continues as required for Land Use Violations and Community Health and Safety. The land use restrictions are described in writing and in clear pictures to describe various typical scenarios that land users may encounter; TANAP is commended on the clarity of these materials. Materials have been distributed through community informative meetings, to Muhtars, and are also available online[8].

In addition, settlements are informed on the Community-Based Emergency Management Plan to have prior knowledge of possible emergency cases during pipeline operation TANAP's security and safety measures and steps of emergency management in such cases. Additionally, warnings and notifications are made in cases of project-induced situations, e.g., gas leakage, or third-party-induced situations, e.g., stubble burning.

2.10 Biodiversity (PR6/PS6)

2.10.1 Assessment and Identification of Impacts

TANAP has identified the Project risks and impacts on biodiversity and ecosystem services through its ESIA assessment in the early phases of the Project development. A priority throughout the Project's ESIA process and construction phase has been the avoidance of potentially adverse ecological impacts. This resulted in numerous design modifications and the development of a suite of mitigation measures to prevent many negative impacts, which were implemented during the construction phase. A detailed Biodiversity Action Plan (BAP), Ecological Management Plans, and Special Areas Reinstatement Methods Statements for all terrestrial and freshwater critical habitats were developed and referenced as a guide to minimize impact and to implement the mitigation hierarchy.

The Project's biodiversity assessment studies and mitigation plans were reviewed during the initial Environmental and Social Due Diligence (ESDD) in 2016. The ESDD found that the initial assessments and management planning for biodiversity did not adequately demonstrate a net gain in critical habitat and no net loss of priority biodiversity features due to the assumption that there were no residual impacts to these habitats and features in the initial planning and assessment documents.

Gaps identified in habitat assessments from the ESDD resulted in specific requirements within the Project's Environmental and Social Action Plan (ESAP). The Project adjusted its BAP to better define and consider residual impacts to critical habitat (CH) and priority biodiversity features (PBF) and the need for offsetting where bio-restoration of the RoW could not fully mitigate disturbance impacts. An Ecological Management Plan for Operations (TNP-PLN-ENV-GEN-010) has been written and updated in August

[8] https://www.tanap.com/en/land-use-restrictions

2023. Site-specific Biodiversity Offset Management Plans (Resilient Steppe Offset Plan) were written in 2022, for three steppe areas and updated in 2023.

Updated versions have been received and reviewed by the IESC.

2.10.1.1 Overhead Transmission Line Impacts to Bird Species

The IESC's audit in October 2018 observed that not all mitigation measures recommended by the Overhead Transmission Lines (OHL) and anode bed line ESIA for mitigating potential impacts to bird species were implemented due to the assessment report recommendations being available after design and construction of the powerlines. The IESC recommended (in October 2018) TANAP to include the monitoring of impacts to bird species as identified in the OHL environmental assessment and that the performance of any mitigation measures be included in the post-construction monitoring programs for the Project. TANAP continued monitoring activities at BSV21 only. During the 2023 monitoring five dead birds were found under the transmission line at BVS21 and recommendations were made to install bird diverters on the line to make it more visible.

Following this recommendation TANAP made a visit to the Regional Power Authority (ÇEDAŞ) in Sivas on the 30th January 2024 to request energy isolation and the installation of diverters. Isolation methods were discussed and agreed upon based on climate conditions in the region. ÇEDAŞ implemented isolation measures at BVS21 OHLs and resinoid isolation fitted, an official letter has been received on 8 March 2024 to confirm the action. Bird repellents were installed on 23 September 2024. Monitoring was undertaken in spring 2024 and no carcasses were observed, further monitoring was undertaken in October but the results are not yet known. The results of both surveys will be reported together. It is recommended that monitoring continues, and a report is developed which details all the bird diverter specifications and locations.

2.10.1.2 Residual Impact Assessment

Golder, in collaboration with Çinar, developed a Biodiversity Offset Strategy (BOS) in 2017 with scheduled offset implementation starting in 2019. The strategy did not identify specific biodiversity management actions but identified potential offsets and additional conservation actions in accordance with good international practice to achieve No Net Loss (NNL) or Net Gain (NG) outcomes relative to the residual effects identified for Natural Habitats, Priority Biodiversity Features (PBF) and Critical Habitats (CH). The strategy defined the approach to stakeholder engagement, monitoring and adaptive management, including mechanisms that allow re-calculation of net loss and gains and facilitate adjustments to the offset strategy to achieve the stated objectives.

Further information on the status of the BOS is provided below in Section 2.10.5.4. In summary, the site-specific biodiversity offset management plans have now been produced and are being implemented.

2.10.2 Biodiversity Management Planning

During the construction phase, TANAP implemented the mitigation hierarchy to a good standard.

With the completion of the TANAP and TAP interconnection pipeline line-fill activity in November 2019, the Project is now in its operation phase. The Project ESIA identified no significant impacts from the onshore and offshore pipeline operation to terrestrial, freshwater and marine water biodiversity species and habitats. Therefore, the main management measures for biodiversity impacts during operation have now shifted to monitoring of the bio-restoration success, and to monitoring the recovery of the critical habitat triggering species in critical habitat areas along the pipeline route.

The operational phase also includes the ongoing development and implementation of the long-term biodiversity offset programmes. These represent TANAP's long term commitment to achieve No Net Loss (NNL) or Net Gain (NG) for priority biodiversity features or critical habitats, in habitats that are deemed impossible to fully restore.

The Project Operational Phase Environmental and Social Management System (ESMS) includes the following management documents with regard to biodiversity and ecosystem services management:

- Environmental and Social Management Plan (TNP-PLN-ENV-GEN-001)
- Ecological Management Plan (TNP-PLN-ENV-GEN-010) – updated 01/08/2023
- Environmental Monitoring Plan for Operations (TNP-PLN-ENV-GEN-008)
- Biodiversity Action Plan (CIN-REP-ENV-GEN-017-Rev-P3-11, reissued as TNP-PLN-ENV-GEN-016)

Previously, each construction contractor had developed management documents for ecological management and monitoring during the two-year warranty period after the pipeline mechanical completion. This has now been completed, and the two-year warranty period has ended.

2.10.2.1 Ecological Management Plan – For Operations

The Ecological Management Plan for Operations (EMP) (TNP-PLN-ENV-GEN-010) was updated in August 2023. The EMP is the main management document for ecological impacts during the Project operation. It outlines the processes and measures to be implemented to manage ecological impacts during the Project Operational Phase. Its scope includes minimising habitat disturbance, ongoing bio-restoration activities, biodiversity offsetting, invasive species, pest management, and protecting flora and fauna. The key post-construction biodiversity impact mitigation measures will be the continued maintenance of reinstated areas and the undertaking or implementation of remedial bio-restoration activities, in special areas (i.e. ecologically sensitive areas, critical habitats etc.) identified in the BAP. It sets out the KPIs that

will be used to track operational performance. A review of the monitoring reports against these KPIs was undertaken and is discussed in section 2.10.5.2 below.

2.10.2.2 Operations Environmental Monitoring Plan

This plan outlines monitoring requirements of all ecological management activities during the Project's Operational Phase. The implementation of the plan remains the same as when reviewed in 2022, by the IESC team.

The Operations Environmental Monitoring Plan remains the main management tool for TANAP to monitor and document the Project's environmental compliance requirements and identify any issues in the environmental management that need corrective action in a timely manner. TANAP's approach to inspect its environmental impact management measures implementation status, and its processes to assess the management measures effectiveness are summarised in this Monitoring Plan.

TANAP uses the following methods to assess its environmental performance against the Project's environmental commitments during operation:

- Site Inspection:
    - TANAP's site-based QHSE personnel (ROW teams) on an at least weekly basis.
- Audits:
    - Internal audit by qualified and approved personnel at least once a year.
    - External verification.
        - IESC's annual audit.
        - Annual Biodiversity Offsetting Evaluation by an independent third party to evaluate the offsetting activities during operation.
        - Daily RoW patrol and maintenance checks by contracted companies to monitor a range of items including pipeline integrity, conditions of reinstated and biorestoration areas, third-party activities along the RoW etc.
    - External Audit to Offshore Pipeline Inspection Contractor.
- Action Tracking:

- All non-conformances identified by the above monitoring programmes to be registered in the Action Tracking System for follow up, corrective action, and close out.

The following monitoring in relation to ecology and biodiversity is included in the Operations Environmental Monitoring Plan:

- Annual Physical Monitoring along the entire RoW giving priority to the environmentally sensitive locations (steep slopes, side slopes, erosion prone areas, critical habitats, river crossings etc.).
- Annual Vegetation Cover and Diversity monitoring at stratified random sampling locations.
- Annual Flora Monitoring in Critical Habitat areas identified by the BAP.
- Annual Terrestrial Fauna Monitoring in Critical Habitat areas identified by the BAP.
- Annual Aquatic Fauna Monitoring in Critical Habitat areas identified by the BAP.
- Annual Reforestation Monitoring within ROW and reforestation offsetting locations.

All ecological monitoring methods, except for the Physical Monitoring, are reflected in the approved BAP (CIN-REP-ENV-GEN-017) and Bio-restoration Monitoring Plan (CIN-PLN-ENV-GEN-014) requirements.

2.10.3 Implementation of Mitigation

The key biodiversity mitigation measures implemented during the Operations Phase are as follows:

- Completion of reinstatement
- Biorestoration and aftercare
- Invasive species management
- Biodiversity offsetting.

The implementation of mitigation has been discussed in the following sections based on a review of available reports and first-hand evidence collected during the site visit.

2.10.4 Restoration and Rehabilitation

All bio-restoration and reforestation activities have been completed along the pipeline ROW, so have not been discussed further here in.

2.10.5 Conservation of Biodiversity

2.10.5.1 Critical habitats

TANAP engaged with ENVY for its independent third-party ecological monitoring contractor during construction. Assystem Enerji ve Çevre A.Ş. (ASY) was awarded as the Consultant to perform Environmental and Social Third Party Monitoring and Consultancy Services during the Operation Phase. The Contract was signed between TANAP and ASY on May 10, 2023.

The main activities to be performed in the scope of the monitoring are described in the Physical & Ecological Monitoring Plan (PEMP.) The overall objective of the PEMP is to monitor the success of bio-restoration of the affected areas by the Project as far as practicable to its pre-construction state.

2.10.5.2 Monitoring

The BAP includes a critical habitat assessment. There are 67 Terrestrial and 27 Freshwater Critical Habitat areas that have been identified along the Project RoW in the Biodiversity Action Plan (CIN-REP-ENV-GEN-017) for the Project. No Marine Critical Habitat is identified for the Project. The BAP determined impact mitigation and reinstatement measures, monitoring methods/timing, and impact mitigation achievement including criteria for all identified Critical Habitats.

Based on the following 2024 monitoring reports provided, it is considered that TANAP are meeting their requirements of the BAP.

- Physical and ecological monitoring report for terrestrial fauna monitoring –birds (January-March 2024)
- Physical and ecological monitoring report for terrestrial fauna monitoring –reptiles (May – June 2024) and (July 2024)
- Physical and ecological monitoring report for terrestrial fauna monitoring –invertebrates (May – June 2024) and (July 2024)

No monitoring reports were provided for review for mammals, fresh water species or flora/habitats. It is assumed that these reports are under development and it is requested that they are shared when complete.

It is recommended that the structure of the monitoring reports is adjusted slightly to include field survey forms as appendices rather than in the conclusion section of the main report. The conclusion section should also consider drawing upon results from previous years to show trends over time and any recommendations for changes to approach or hypothesis for reasons for species absence.

The results of the 2023 monitoring surveys were compiled into an annual report. The report included the results of the following:

- Bird and mammal monitoring studies were carried out in a total of 23 critical habitats, as Species of Conservation Concern (SCC) monitoring in six (6) critical habitats and common species monitoring in 19 critical habitats, which are longer than 400 m.

- Flora monitoring across two sections (east and west route sections) across 49 critical habitats and 10 slope areas on three occasions from May to September covering various flowering periods

- Freshwater aquatic species across 17 locations

- Forestry monitoring was undertaken in 36 reforestation areas. Locations of the 2023 monitoring were adjusted to remove those areas that had high success rates previously and new areas were added

- The reptile and amphibian monitoring studies were carried out in a total of 24 critical habitats, as SCC monitoring in four (4) critical habitats and common species monitoring in 23 critical habitats, which are longer than 400 m.

- Invertebrate monitoring studies were carried out in a total of 34 critical habitats, as SCC monitoring in 28 critical habitats and common species monitoring in 24 critical habitats, which are longer than 400 m.

The key considerations from the annual monitoring report for 2023 are:

- Sociable Lapwing (Vanellus gregarius) was not observed at CH17. It would be useful to understand if this species has been observed at all over the monitoring period and understand whether ongoing surveys are required or not.

- At CH65 European ground squirrel (Spermophilus citellus) was observed in significant numbers on the RoW and is above pre-construction numbers. It is therefore considered that net gain has been achieved and it is recommended that the frequency of monitoring can be reduced.

- Vipera olgunii was observed in 2019 but not again 2020-2023 (and no records from initial 2024 studies) a new approach to survey methods was recommended in the monitoring report but the change to the method is not clear apart from potentially a later survey date.

- There are a number of recommendations in the 2023 monitoring report regarding revegetation, but it is not clear whether they have been actioned. For example: In the habitats where it is difficult to restore the habitat due to the clover and grass planted to prevent erosion, the plant seeds associated with the critical species should be collected around the critical habitat and planted in the critical habitats in suitable periods. And at CH48: It is recommended to create stagnant water environments by making fortifications in a way that will not be carried over to the bottom and side of the stream by floods.

The Ecological Management Plan for Operations states that: *As a result of ecological monitoring since 2019, it is recommended by the experts to exclude some of the potential species from monitoring scope not observed during ESIA studies and operational monitoring studies, as given in Attachments 1 and 2. The main reason is these species were not observed during the monitoring studies and there were no suitable habitats in the CH's. In addition, it is recommended to monitor common fauna species in habitats containing critical flora species larger than 1 km in order to evaluate cumulative success.*

It is recommended that this change in scope is provided within the relevant monitoring documentation so there is a clear rationale for the exclusion or inclusion of species and habitat monitoring. Similarly, a review should be undertaken of all monitoring results to date to decipher trends and adjust the monitoring plan accordingly. It is our opinion that where species have been found consistently over the first 5 years of monitoring the frequency can be reduced.

A Species Action Plan (SAP) has been developed to support the conservation of *Neolycaena soezen*, a newly discovered butterfly species identified during baseline studies for the TANAP project in 2014. Although avoidance of impacts on its primary food plant, *Caragana grandiflora*, was implemented during construction, threats from external factors (overgrazing and intensive agriculture) are still present. The scope of this SAP includes the development of a detailed restoration strategy for the population of Caragana grandiflora, in a protected area free from grazing pressures, propagation and monitoring.

This area was visited during the 2024 IESC visit and it is agreed that the approach for Caragana is sound. There is no guarantee of success because soil conditions may vary slightly from the slopes to the lower areas but there is no harm in attempting this approach.

2.10.5.3 Invasive species

The management of invasive species in the Project RoW was identified in the BAP as a significant threat to achieving bio-restoration throughout the Project. Contractor reinstatement plans include control of invasive species (i.e. planting of native plants and trees, consideration of invasive potential and adverse impacts to native vegetation if new plant species are selected) and monitoring. TANAP's Ecological Management Plans specified the Invasive and Pest Species control and management actions to be taken when/if required. Section 3.4.8 of the Ecological Management Plan described how TANAP will monitor

and manage the invasive species for the Project impacted areas, particularly in high-risk areas such as critical habitat areas.

As botanical monitoring is an ongoing process, it is still TANAP's responsibility (Section 3.4.8 Ecological Management Plan) to determine if invasive species are present and the severity or threats that such a species may pose and to take effective mitigation and management measures if needed. If any invasive species are identified in the coming years, then the species and location should be logged in TANAP's Action Tracking System, so that appropriate action may be taken where required.

2.10.5.4 Biodiversity Offset Planning and Implementation

The Project's BAP and BOS provide a framework for TANAP to achieve a net gain in Critical Habitat as defined by IFC PS6 and no net loss of priority biodiversity features as defined in EBRD PR6. TANAP has contracted Golder to develop the Biodiversity Offset Management Plan (BOMP) to meet IFC PS6 offsetting requirements. Golder completed the additional studies for the development of the BOMP in 2018-2019.

Although the BOS appears to be well implemented and on a trajectory for a positive outcome, **it is recommended that TANAP undertake Ongoing monitoring of the right of way including the following activities to minimise residual impacts:**

- Map to EUNIS standards, to inform habitat reinstatement metrics, update habitat loss table in the BOS, this can be done after 5 years of reinstatement, then consider year 10 too. It is understood that the EUNIS mapping will be undertaken in 2024, and that drone imagery may be used to supplement the mapping, especially in difficult terrain.

- Implement a scoring system for the right of way, e.g. 1. Target habitat type achieved, no further survey necessary; 2. Target habitat type likely to be achieved, further survey necessary; 3. Vegetation not establishing, remedial action required (seeding/planting). This appears to have been implemented though new KPIs in the Ecological Management Plan.

- Use measurable indicators should also be recorded to evidence change on the right of way, e.g. floristic diversity, percentage cover of vegetation as an example. The aim is that this will be implemented in 2024.

Note that the EUNIS habitat survey was set to be undertaken in the year 2024 however has not been completed at the time of writing this report. This finding will be re-assessed next year when it is complete.

Three Site Specific BOMPs and the 2023 BOMP monitoring reports were shared with IESC in 2024 for review:

- Steppe Offset Plan-Acıkır Gypsum Steppes (Eskişehir)

- Resilient Steppe Offset Plan–Bursa Kütahya Serpentine Steppes
- Resilient Steppe Offset Plan – Hafik-Zara Gypsum Steppes (Sivas)

During the 2024 IESC visit, a site visit was organized to a steppe restoration area and a meeting with the local village involved in the project. In general, it appeared that the steppe offset project has been well received by the villagers involved. At the meeting was the local Muhtar and a representative of the local agricultural board both of whom praised the approach. The impression is that productivity has increased with the change to grazing regimes. The hope is that this project will become an exemplar in the region and will fuel additional industries based on farming such as selling of local products and tourism. Their location close to the town of Eskisehir enables this growth. It was not possible to view grazing areas to observe changes to vegetation abundance and structure but the IESC did look at one of the nine newly installed water troughs for this project area that have allowed more flexible grazing.

Much discussion was had during this visit on the objectives of the offset and the complexities of working in a harsh environment and one that has been influenced by humans for millennia. Understanding what targets to set for vegetation recovery was therefore complex and adjustments are likely to change as the project develops. There was also discussion over the need for this landscape to be grazed to preserve the diversity of plant species associated with the steppe habitat. There is a risk that farming becomes less popular as the younger generation pursues other interests. Hence the project will need to be flexible as it adjusts to the changes in the region.

Figure 28: Resilient Steppes Offset Monitoring

The Resilient Steppes Offset Monitoring Report 2023 presents the results of the first year of steppe offset monitoring. The methodologies used follow the indications of the “Monitoring Protocol for Resilient Steppe Offset Plans” and include:

- target habitats (principal indicators);
- target species (secondary indicators);
- forage production (secondary indicators); and
- carbon sequestration and storage (secondary indicators).

A review of the steppe offset monitoring identified the following:

- High levels of disturbance across much of the steppe habitat which is expected after only the first year of the project. Acıkır Gypsum steppes offset sites appear the most degraded and so the focus of the rehabilitation works will be conducted in Acıkır.
- There has been some vegetation increase in some plots but at this stage, this is very limited
- Ex-situ propagation works have been conducted by the Nezahat Gökyiğit Botanical Garden (NGBG) and will be monitored monthly during the vegetative season in the first two years.

It should be noted that very little change is expected so early in the project and that the details provided in the 2023 report will form the basis of ongoing monitoring where trends can be evaluated.

The Forest Offset Management Plans are currently being implemented and the IESC reviewed the 2023 monitoring plan for forestry. No site visit was undertaken to a forest offset site. The general idea of the forest offset is the development of a management plan which includes zoning of forest areas into Strict Conservation Zone and Limited Implementation Zones.

The first year of monitoring will serve as the baseline against which further monitoring can be assessed. It will focus on the following:

- target forest habitats (principal indicators);
- focal species (secondary indicators);
- ecological and evolutionary processes (secondary indicators).

As this was the first year of monitoring no comparisons can be undertaken. However, it was noted that two new nests of Cinereous vulture were observed in Sarıkamış FMD in 2023

In summary, it appears that both forest and steppe offsets are being delivered effectively and there is support from parties involved. The offset projects are being discussed in the international context and are being used as examples of good practice where local communities are fully integrated in decision-making beneficial to biodiversity.

Appendix A: Evidence Register

Document Number	Document Name	Author	Code	Date	Environment/Social /OHS
01	2024Oct_EBRD&IESC_Monitoring_ ENV_Updates	TANAP		October 2024	ENV
02	2024Oct_EBRD&IESC_Monitoring_ HS_Updates	TANAP		October 2024	OHS
03	2024Oct_EBRD&IESC_Monitoring_ LAC_Updates	TANAP		October 2024	SOC
04	2024Oct_EBRD&IESC_Monitoring_ Operation & Risk	TANAP		October 2024	ALL
05	2024Oct_EBRD&IESC_Monitoring_ SEIP_Updates	TANAP		October 2024	SOC
06	2024Oct_EBRD&IESC_Monitoring_ SOC_Updates	TANAP		October 2024	SOC
07	EBRD_visit_DKM_WSP_presentation_2024_withKPIs_redacted	TANAP		October 2024	ENV
08	MS3-MS4 Presentation for EBRD-IESC 2024 Monitoring_6Oct	TANAP		October 2024	ALL
09	MS4 - HSE INDUCTION_Final TR-ENG	TANAP		October 2024	OHS
10	QHSSE-OrgChart_2024-07-09	TANAP		July 2024	OHS
11	APPENDIX G_Steppe_Monitoring_Report_2023	WSP/DKM	GLR-REP-ENV-GEN-062-P6-C	February 2024	ENV
12	APPENDIX H_Forest_Monitoring_Report_2023	WSP/DKM	GLR-REP-ENV-GEN-062-P6-C	February 2024	ENV
13	Environmental and social third-party monitoring and consultancy services	Assystem	ASY-PRM-ENV-GEN-009-P6-0	March 2024	ENV

Document Number	Document Name	Author	Code	Date	Environment/Social /OHS
	during operation phase annual report 2023				
14	Environmental and social third party monitoring and consultancy services Physical and ecological monitoring report For terrestrial fauna monitoring **x 6**	Assystem	ASY-REP-ENV-GEN-016-P6-C ASY-REP-ENV-GEN-018-P6-C ASY-REP-ENV-GEN-019-P6-C ASY-REP-ENV-GEN-020-P6-C ASY-REP-ENV-GEN-022-P6-C ASY-REP-ENV-GEN-023-P6-C	May – August 2024	ENV
15	Kimyasal Madde Yönetim Sistemi (Chemicals Management System)_CS3_26.03.2024	TANAP	TNP-HRM-FRM-010 P3-1	March 2024	ENV
16	Safety Moment_23012024	TANAP	TNP-HRM-FRM-010 P3-1	January 2024	ENV
17	WasteManagementTraining_TNP_28052024		TNP-HRM-FRM-010 P3-1	May 2024	ENV
18	Env 2024 KPI Target Sheet_Q2	TANAP		September 2024	ENV
19	Waste management procedure	TANAP	TNP-PCD-ENV-GEN-007	September 2024	ENV

Document Number	Document Name	Author	Code	Date	Environment/Social /OHS
20	Waste management plan for operations **x 4**	TANAP	TNP-PLN-ENV-GEN-007 TNP-PLN-ENV-GEN-008 TNP-PLN-ENV-GEN-008 TNP-PLN-ENV-GEN-010	May 2022 – August 2023	ENV
21	013-2023_O&M Initial Incident Notification_CS3_ENV_Fuel oil leakage at AMC Pipestock	TANAP	TNP-HSM-FRM-042	March 2023	ENV
22	068-2023_O&M Initial Incident Notification CS5_EI_Category 1 oil spillage	TANAP	TNP-HSM-FRM-042	September 2023	ENV
23	Greenhouse gas emissions report 2023	TANAP	TNP-REP-ENV-GEN-034	March 2023	ENV
24	Environmental compliance review report – CS1 / MS1	TANAP	TNP-REP-ENV-CS1-007	February 2024	ENV
25	Environmental compliance review report – CS3 / AMC	TANAP	TNP-REP-ENV-CS3-003	February 2024	ENV
26	Environmental compliance review report – CS5 / MS2	TANAP	TNP-REP-ENV-CS5-010	January 2024	ENV
27	Environmental compliance review report – MCC	TANAP	TNP-REP-ENV-MCC-008	February 2024	ENV
28	Environmental compliance review report – MS3 / MS4	TANAP	TNP-REP-ENV-MS4-002	February 2024	ENV

Document Number	Document Name	Author	Code	Date	Environment/Social /OHS
29	ORGANISATION CHART FOR ENVIRONMENT DEPARTMENT	TANAP		July 2024	ENV
30	Eskişehir- Acıkır Gypsum Offset Management Plan	WSP/DKM	GLR-REP-ENV-GEN-024-P6-2	June 2023	ENV
31	Bursa-Kütahya Resillient Steppe Offset Management Plan	WSP/DKM	GLR-REP-ENV-GEN-030-P6-1	June 2023	ENV
32	Hafik-Zara Resillient Steppe Offset Plan	WSP/DKM	GLR-REP-ENV-GEN-034-P6-1	June 2023	ENV
34	River Crossing Report 2023	Fugro	FGR-REP-OPR-GEN-016	January 2024	ENV
35	Land and Slope Erosion Report	Fugro	FGR-REP-OPR-GEN-017	October 2023	ENV
36	Landslide Survey Report 2023	Fugro	FGR-REP-OPR-GEN-018	December 2023	ENV
37	Karst Survey Report 2023	Fugro	FGR-REP-OPR-GEN-019	November 2023	ENV
38	ROW patrolling daily report **x 8**	Botas / Ptt anadolum		July – August 2024	ENV
39	TANAP HS inspection and audit checklist **x 6**	TANAP	TNP-HSM-CHK-008	January – April 2024	OHS
40	Site ER Exercise Report **x 59**	TANAP	TNP-OPR-TMP-019	September 2023 – September 2024	OHS
41	TANAP Contractor HS inspection and audit checklist **x 4**	TANAP	TNP-HSM-CHK-008	March – July 2024	OHS

Document Number	Document Name	Author	Code	Date	Environment/Social /OHS
42	HS Training Register	TANAP		September 2024	OHS
43	HS KPI Report_2023	TANAP		2023	OHS
44	KPI Report_2024	TANAP		2024	OHS
45	O&M Incident Register 2023	TANAP		Jan - Dec 2023	OHS
46	O&M Incident Register 2024	TANAP		Jan - Dec 2024	OHS
47	Pro & Mod Incident Register 2023	TANAP		Jan - Dec 2023	OHS
48	Pro & Mod Incident Register 2024	TANAP		Jan - Dec 2024	OHS
49	Incident initial notification **x 77**	TANAP	TNP-HSM-FRM-042	September 2023 – September 2024	OHS
50	TANAP Golden Rules of Safety	TANAP			OHS
51	Social compliance review for operations (Jun-Nov 2023) – CS1&MS1	TANAP	TNP-REP-SOC-CS1-007	November 2023	SOC
52	Social compliance review for operations (may-oct 2023) – CS3 AMC	TANAP	TNP-REP-SOC-CS3-007	October 2023	SOC
53	Social compliance review for operations (mar-aug 2023) – CS5&MS2	TANAP	TNP-REP-SOC-CS5-007	August 2024	SOC

Document Number	Document Name	Author	Code	Date	Environment/Social /OHS
54	2023-2024 social compliance review for operations – CS5&MS2	TANAP	TNP-REP-SOC-CS5-008	August 2024	SOC
55	Social compliance review for operations (feb-july 2023) – MS3&MS4	TANAP	TNP-REP-SOC-MS3-007	July 2023	SOC
56	2023-2024 social compliance review for operations – MS3&MS4	TANAP	TNP-REP-SOC-MS3-008	March 2024	SOC
57	Environmental and social third-party monitoring and consultancy services during operation phase operation phase social impact monitoring report-5	Assystem	ASY-REP-SOC-GEN-002-P6-C	October 2023	SOC
58	2024 Pre-Site Visit Document Request_TNP_2024-09-15	Sustainability	TANAP-SST-LET-TNP-0002	September 2024	ALL

Appendix B: 2023 Findings Summary Table

Ref	Description of Issue	Recommendation (action)	Compliance Category	Commitment	Status
1.1 (2.3.4.7)	Issue for consideration: Annual independent third party ESIA monitoring is advised to be conducted in the eastern section of the pipeline (i.e. east of the MCC).	Monitoring of social commitments of the Project by a third party is conducted bi-annually; it is suggested that this be conducted both in the east and western sides of the pipeline, given substantial differences in issues and operating context and ensure that benefits of third-party assessments can be fully realised by TANAP. Both IESC and TPMC reviews were carried out in the western sections in 2022 to date.	FC	PR1 / PS1 Project Monitoring and Reporting	**Closed**
2.1 (2.5.3.4)	Hazardous waste containers at CS3 (AMC) were not all clearly labelled, in addition to the incompatible storage of flammable and poisonous materials.	All employees responsible for the storage of hazardous materials and hazardous waste at CS3 (AMC) should be given refresher training, and additional checks carried out over the next 6 months by the Environmental Department to	PC	PR2 / PS2 OHS PR3 / PS3 Pollution Prevention and Control	**Open**

Ref	Description of Issue	Recommendation (action)	Compliance Category	Commitment	Status
		ensure the correct hazardous materials/waste storage measures are being implemented.			
3.1 (2.3.4.4)	There are no KPIs in the OEMP relating to resource efficiency. As such, there is no requirement for TANAP to measure or demonstrate performance (or improvements in performance) in relation to this element of PR 3.	TANAP should revise the OEMP to include appropriate KPIs in relation to water and energy consumption.	FC	PR3 / PS3 Environmental Monitoring Plan for Operations	**Closed** – TANAP has revised the OEMP to include KPIs and targets for both electricity and water consumption
3.2 (2.4.3)	Soil erosion issues at KP 1518+302 are being exacerbated by surface water run-off following the natural contours of the slope towards the gully running parallel to the lateral slope of the RoW. gully at the foot of the lateral slope. This is within Government controlled Forestry land and TANAP are not permitted to divert water from the RoW into this gully.	TANAP attempts to negotiate with the relevant Government Department to allow run-off to be discharged into the natural gully.	FC	PR3 / PS3 Resource Efficiency, Pollution prevention and Control;	**Closed** – TANAP has obtained agreement from the Directorate of Forestry to divert run-off from the RoW into the natural gully.

Ref	Description of Issue	Recommendation (action)	Compliance Category	Commitment	Status
3.3 (2.3.5.1)	Exceedances of Project wastewater quality standards at various TANAP Stations due to technical issues	Review the operation and maintenance protocols for the wastewater treatment plants at MS1, CS5/MS2 and the MCC, to ascertain whether there are measures that could be implemented to avoid further effluent quality failures at these Stations	FC	PR3 / PS3 Resource Efficiency, Pollution prevention and Control;	**Open**
6.1 (2.10.1.1)	TANAP has not observed any bird carcasses at BVS21 thought to have died due to collision with power lines over the last three years of monitoring (2020, 2021 and 2022) since the initial 16 carcasses were observed in 2019. In 2022 the IESC recommended that TANAP consider the need for continued bird monitoring. In 2023 , five dead birds were found under the	It is therefore recommended that bird flight diverters (BFDs) are installed on the line, to make it more visible to birds, so that they can see it and take evasive actions earlier, to avoid collision. There are many types of BFDs, some of which are suitable for installation on active power	FC	PR6 / PS6 Implementation of Mitigations	**Closed**

Ref	Description of Issue	Recommendation (action)	Compliance Category	Commitment	Status
	transmission line at BVS21	lines, through the use of a drone. The bird diverters should be installed on the line, before the spring movement of birds or as soon as practicable, and the efficacy monitored for a further two years.			
6.2 (2.10.5.1)	Even though the aftercare monitoring period has now been completed for Lot's 1 – 4, TANAP have informed the IESC that ongoing monitoring will continue, with the ROW team patrolling the pipeline and reporting on areas where remedial measures are considered necessary, or where incidents have occurred.	The IESC continues to advise that this should continue for the lifetime of the project.	FC	PR6 / PS6 Monitoring	**Closed**