TANAP is Key to Energy Transition

SUSTAINABILITY REPORT | 2023

TANAP

Content

TANAP,
a pipeline powering
a sustainable future

Focus On

TANAP Sustainability Report is the annually prepared voluntary corporate document that transparently and clearly outlines TANAP's environmental, social, and governance (ESG) performance and progress, aligned with its Sustainability Strategy. It also details TANAP's contributions to the UN SDGs and the goals of the Paris Agreement.

Through this Report, which serves as an effective communication tool, TANAP aims to strengthen the relationship and collaboration with a broad spectrum of stakeholders, including shareholders, lenders, authorities, communities, and employees. Also, it aims to contribute to increasing capacity to build a better tomorrow with transparently shared good practices and lessons learned.

The Report has been prepared in-house under the coordination of the TANAP Sustainability Coaches, **with reference to** the Global Reporting Initiative Sustainability Reporting Standards (GRI Standards); particularly GRI 11: Oil and Gas Sector, 2021. All information and opinions covered by the Report have been provided by TANAP itself, other than the scores of stakeholders for materiality assessment.

The information provided in the 2023 Sustainability Report mainly covers the general background of our performance and general approach to business practices, as well as ESG-focused progress and good practices, particularly in biodiversity and digitalization between the 1st of January and the 31st of December 2023, in addition to the contributions of the Coaches Team in the Sustainability Year.

The Report has been independently reviewed for external assurance. The Statement of Independent Assurance Opinion is available in Appendix 3 and has been prepared for informational purposes only.

Contact Point

Company Name	**: TANAP DOĞALGAZ İLETİM A.Ş. / TANAP Natural Gas Transmission Co.**
Address	: Söğütözü Mahallesi, Söğütözü Caddesi, Koç Kuleleri B Blok No: 2B/37 Çankaya, Ankara
Country	: TÜRKİYE
Contact Info:	: +90 0312 999 11 11 info@tanap.com www.tanap.com https://tr.linkedin.com/company/tanap-natural-gas-transmission-co-
Shareholders	: The shareholders of TANAP are the Southern Gas Corridor Company (SGC) (51%), BOTAŞ (30%), BP Pipelines (TANAP) Limited (12%), and SOCAR Türkiye Enerji A.Ş. (7%)
Sustainability Report Contact Point	: FATİH ERDEM, **QHSSE Director and Compliance Officer**
Contact Details	: **Telephone:** +90 312 999 12 21 **Mobile:** +90 533 660 78 93 **E-mail:** fatih.erdem@tanap.com

Restatement of Information

For the 2023 Report, a restatement of information is not required as there is no change or error inpreviously reported information.

Management Letter to Stakeholders

Dr. Hüseyin Saltuk DÜZYOL
TANAP
Chief Executive Officer

Dear Stakeholders,

We, as the operator of the longest natural gas pipeline ever built in Europe, are proud to share our new Sustainability Report with you.

TANAP, as the centrepiece of the Southern Gas Corridor, plays a crucial role in enhancing the energy security of the countries along the supply chain. We have a powerful ambition to actively contribute to the global and national efforts for "Energy Transformation", responding to today's urgent call for a better future.

Sustainability is NOT a new Matter for TANAP...

From Day one, the environmental and social aspects of sustainability have been a key part of our agenda! As stated in the Inter-Governmental and Host-Government Agreements, TANAP is committed to complying with International Finance Institutions' E&S standards throughout the project lifecycle.

Until announcing 2023 as the TANAP Sustainability Year, we have built up several significant achievements that paved the way towards the reformation of our business from a sustainability perspective. Some highlights include ESG-focused risks on the agenda of the Risk Assessment Committee, regular GHG emissions monitoring and reporting, a robust Integrated Management System addressing quality, environmental and social, and health and safety requirements, and the commencement of digitalization of work processes and digitization of data. Beyond these, we have also implemented an investment programme that creates social value for all stakeholders.

In 2023, designated as the TANAP Sustainability Year, we conducted focused initiatives involving all departments, the details of which are generously provided in the following pages of this Report. These efforts significantly contributed to embedding sustainability into our corporate culture. Each department examined its processes from a sustainability perspective and made the necessary improvements, reinforcing our commitment to sustainable practices across the organization.

Of course, our efforts are NOT limited to this list! For further examples based on good practices and experiences regarding ESG, you may look through the publicly disclosed documents published by TANAP and World Bank-IBRD, the links of which are provided at the end of our Report.

After gaining extensive experience and know-how, we have decided to focus on sustainability as an overarching approach aligned with the Paris Agreement and climate urgent actions. We began by fostering common understanding at a conceptual level during a sustainability workshop organized at the managerial level.

Management Letter to Stakeholders

Guided by GRI's Oil & Gas Sector standard, we discussed all pertinent topics with our senior managers, developing an overview of what is important for TANAP and our fundamental role in the context of sustainability.

People, Planet, Prosperity... Climate Crisis... Mitigation and Adaptation Goals of the Paris Agreement... Sustainable Development Goals... Energy Transition... These are all key terms that we focus on while developing our Sustainability Strategy and planning our next steps. All in all, we are moving forward by placing the Energy Transition at the centre of our sustainability strategy, always keeping in mind to avoid greenwashing!

Although we, as a key player in the oil & gas sector, are now exempt from the reporting obligation mandated by the recently published Turkish Sustainability Reporting Standards, we continue our endeavour to set an example in the natural gas sector by preparing the Sustainability Report voluntarily, maintaining our pioneering approach in reporting.

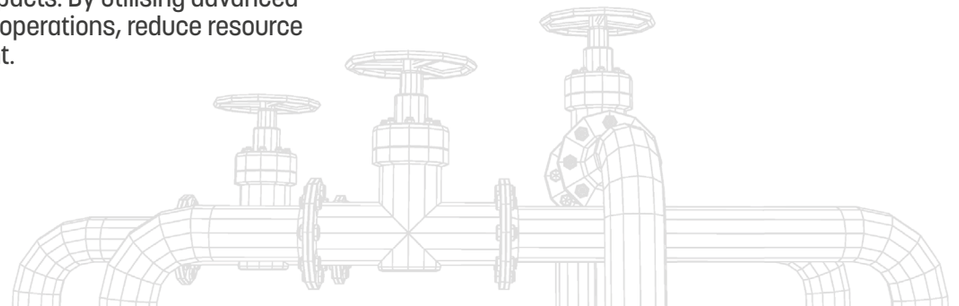
The digitalization of ongoing business processes is a critical component of our sustainability efforts, significantly enhancing efficiency and enabling more effective management of our environmental impacts. By utilising advanced technologies and digital tools, we can optimize operations, reduce resource consumption, and minimize our carbon footprint.

This transition to digital workflows not only streamlines our processes but also allows for real-time monitoring and data-driven decision-making, further strengthening our commitment to sustainability.

Additionally, the conservation of biodiversity in Türkiye is a core focus for TANAP. Protecting the rich and diverse ecosystems along our pipeline route is essential to our environmental stewardship. To underscore this commitment, we are proud to declare 2024 as the Biodiversity Year. Throughout the year, we will implement targeted initiatives aimed at preserving and enhancing local biodiversity, conduct extensive research and monitoring programs, and engage with local communities to raise awareness and foster collective action for biodiversity conservation. This dedicated focus highlights our dedication to protecting the natural environment and ensuring a sustainable future for all.

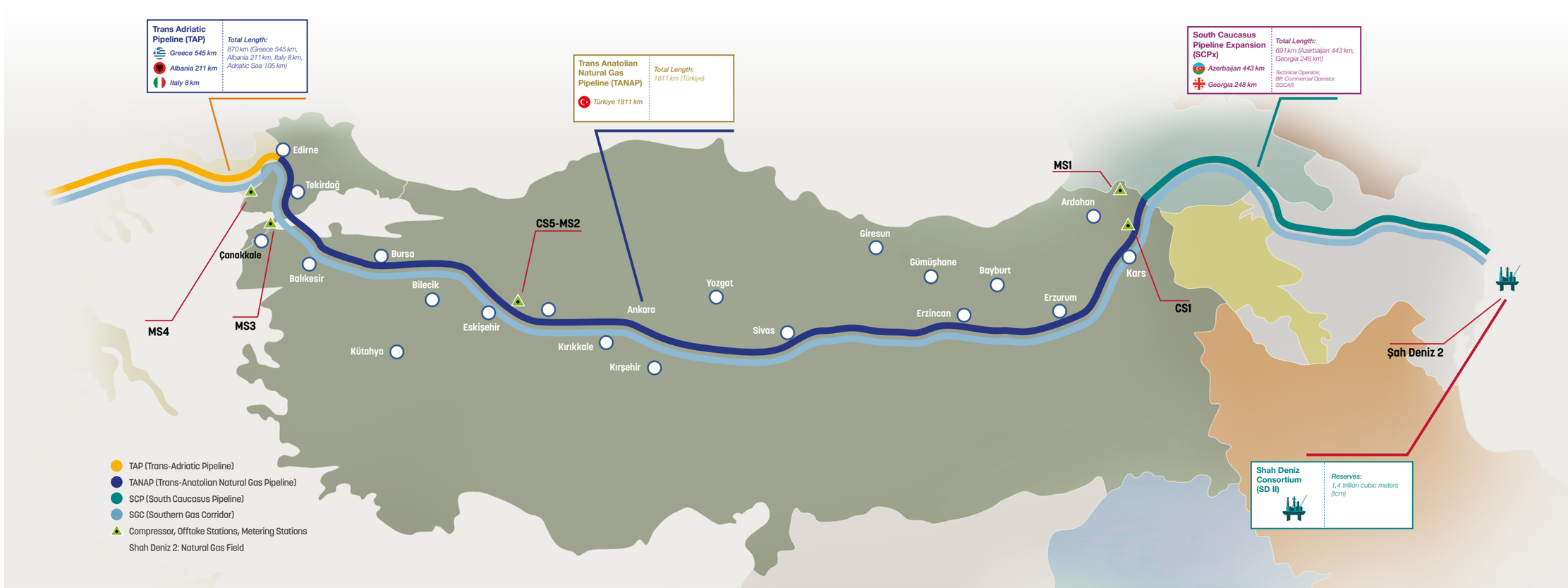
Thank you.

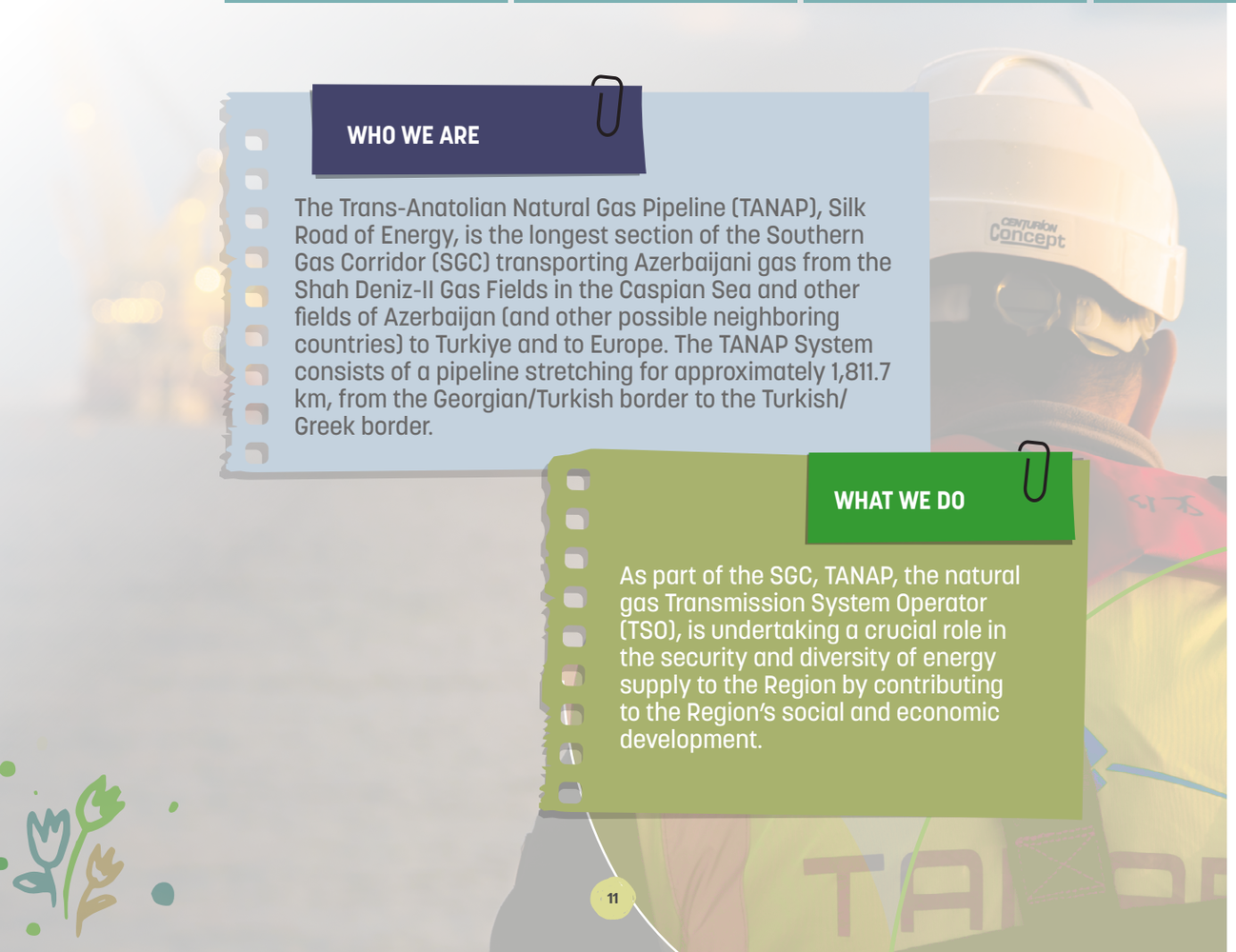
Dr. Hüseyin Saltuk DÜZYOL
TANAP Chief Executive Officer



Section 1

TANAP: Key to Energy Transition


Trans Adriatic Pipeline (TAP)
Greece 545 km
Albania 211 km
Italy 8 km
Total Length:
870 km (Greece 545 km, Albania 211 km, Italy 8 km, Adriatic Sea 105 km)
Trans Anatolian Natural Gas Pipeline (TANAP)
Türkiye 1811 km
Total Length:
1811 km (Türkiye)
South Caucasus Pipeline Expansion (SCPx)
Azerbaijan 443 km
Georgia 248 km
Total Length:
691 km (Azerbaijan 443 km, Georgia 248 km)
Technical Operator, BP, Commercial Operator, SOCAR
Edirne
Tekirdağ
Çanakkale
Balıkesir
Bursa
Bilecik
Eskişehir
CS5-MS2
Ankara
Yozgat
Kırıkkale
Kırşehir
Kütahya
Sivas
Giresun
Gümüşhane
Bayburt
Erzincan
Ardahan
MS1
Erzurum
Kars
CS1
MS4
MS3
Şah Deniz 2
Shah Deniz Consortium (SD II)
Reserves:
1,4 trillion cubic meters (tcm)
TAP (Trans-Adriatic Pipeline)
TANAP (Trans-Anatolian Natural Gas Pipeline)
SCP (South Caucasus Pipeline)
SGC (Southern Gas Corridor)
Compressor, Offtake Stations, Metering Stations
Shah Deniz 2: Natural Gas Field



WHO WE ARE

The Trans-Anatolian Natural Gas Pipeline (TANAP), Silk Road of Energy, is the longest section of the Southern Gas Corridor (SGC) transporting Azerbaijani gas from the Shah Deniz-II Gas Fields in the Caspian Sea and other fields of Azerbaijan (and other possible neighboring countries) to Turkiye and to Europe. The TANAP System consists of a pipeline stretching for approximately 1,811.7 km, from the Georgian/Turkish border to the Turkish/ Greek border.

WHAT WE DO

As part of the SGC, TANAP, the natural gas Transmission System Operator (TSO), is undertaking a crucial role in the security and diversity of energy supply to the Region by contributing to the Region's social and economic development.

TANAP, as the longest and largest diameter natural gas pipeline in Türkiye, the Middle East and Europe, stretching 1,811 kilometers from east to west in Türkiye with the sea crossing through the Dardanelles Strait, is a $6.3-billion mega energy investment.

The Trans-Anatolian Natural Gas Pipeline (TANAP) is among the most crucial and successful cooperation projects conducted by Türkiye and Azerbaijan to date in the field of energy. The project further underlines the historical bonds of brotherhood between the two countries and the "One Nation Two States" spirit, and can be considered the signature of the two countries, Türkiye and Azerbaijan, on Anatolia.

TANAP constitutes the foundation of the 3,500-kilometer energy corridor that runs from Azerbaijan to Europe. TANAP is the most important component of the Southern Gas Corridor (comprising three pipelines: The South Caucasus Pipeline (SCP), TANAP, and the Trans-Adriatic Pipeline (TAP), and not only enhances the energy security of Türkiye and Europe but also contributes to peace and stability in the region by bringing the Caspian region, Türkiye and the EU closer together. It also has the potential for expansion through the corridors it creates to all other natural gas-producer countries in the region, effectively reshaping the global geopolitical energy map.

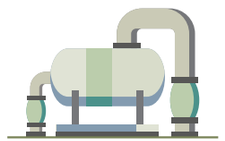
TANAP starts from the Turkish village of Türkgözü in the Posof district of Ardahan on the border with Georgia and runs subsequently through 20 Turkish provinces, including Kars, Erzurum, Erzincan, Bayburt, Gümüşhane, Giresun, Sivas, Yozgat, Kırşehir, Kırıkkale, Ankara, Eskişehir, Bilecik, Kütahya, Bursa, Balıkesir, Çanakkale, Tekirdağ and Edirne. After meeting the Greek border in the İpsala district of Edirne, it connects to the TAP Pipeline which conveys the natural gas to Europe.

The entire pipeline system, aside from the Above-Ground Installations (AGIs), has been designed to be buried. The pipe diameter running from the Georgian border to Eskişehir is 56", where it reduces to 48" for the section running to the Greek border. The Dardanelles Offshore Pipeline Crossing consists of a twin pipeline system with a diameter of 36".

There are two off-take stations within Türkiye where TANAP is connected to the national grid - one in Eskişehir and the other in Trakya. TANAP comprises approximately 1,811 km of pipeline and a number of above-ground installations, details of which are given below:

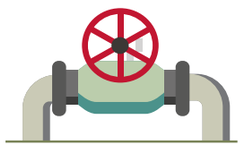
56	48	36	
56"/ 1,339 km	48"/ 455 km	36"/ 17,5 km*2	1,811 km
Phase 0/Ardahan-Eskişehir	Phase 1/Eskişehir-Edirne	Dardanelles Offshore Crossing	Total Length of Pipeline

Above-Ground Installations

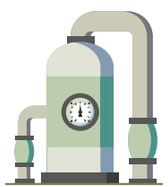


2 Compressor Stations (CS)

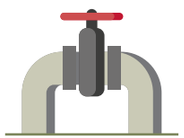
11 Pig Stations



2 Off-take Stations to Supply Gas to Türkiye's National Natural Gas Network



4 Metering Stations (MS)



49 Block Valve Stations (BVS)

Metering Station (MS4), Edirne

Compressor and Metering Stations (CS5-MS2), Eskişehir

Compressor Station (CS1), Ardahan

CS3 Area Maintenance Center (AMC), Sivas

Main Control Center (MCC), Ankara

Metering Station (MS1), Ardahan

What We Do

We are contributing to energy needs of Türkiye and Europe by transporting a total of 16 bscm* (10 bscm to Europe, 6 bscm to Turkish market) annually.

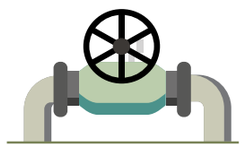
An initial amount of 16 billion standard cubic meters of natural gas transported annually, of which 6 billion standard cubic meters is being utilized in Türkiye. The pipeline diameter has been selected to allow the capacity of the TANAP System to be increased to 31 bcm through the installation of additional units at the existing stations and/or the construction of new compressor stations at predefined locations.

*Billion standard cubic meters

TANAP Operation

Delivered gas to Türkiye :
(since mid-2018 to the end of 2023)

25.20 BScm*



Delivered to gas to Europe :
(since end of 2020 to the end of 2023)

31.00 BScm

*Billion standard cubic meters

TANAP In Numbers

Highest Point on P/L:
2,760 m
KP 621 (Red Mountain)

Longest river crossing by HDD in Europe:
1,107 m
(Sakarya River)

No of crossings appr.:
7,000

Steepest Slope:
30° KP 14
(Ilgar Mountain)

Deepest Point on P/L:
- 67.5 m
(Dardanelles)

No of pipes welded
131,620

TANAP In Number During 2023:

Percentage of Women Employees:
16%

LTIf (Lost Time Incident Frequency):
0.0

TRIR (Total Recordable Incident Rate):
0.2

No of Permit to Work (PTW):
24,870

No of Form Produced:
750

No of TANAP Employees:
371

No of Training hours per employees:
66.5 h

No of Correspondence Made:
8,653

No of Document Produced (TANAP & Contractors):
7,641

No of HSE Observation:
3,673

No of PTW Audits :
488

Legal & Regulatory Basis

The legal foundation of the Project rests upon the **"Intergovernmental Agreement** concerning the Trans-Anatolian Natural Gas Pipeline System between the Government of the Republic of Türkiye and the Government of the Republic of Azerbaijan" signed on June 26, 2012, along with its annex, the **"Host Government Agreement"** also signed on the same date and subsequently amended on May 26, 2014, and May 13, 2015. The Company was officially established on December 24, 2012.

TANAP is dedicated to operating a natural gas transmission pipeline system that will support the economic development of the country while safeguarding the sustainability of its natural resources. To achieve this overarching objective:

- TANAP collaborated with national and international consultants to evaluate the environmental effects and potential impacts of the Project activities during the planning phase. Consequently, TANAP prepared a comprehensive Environmental and Social Impact Assessment (ESIA) Report, which was reviewed with all stakeholders and approved by the competent authority.
- Full attention has been paid to all relevant requirements outlined in Turkish Environmental Legislation, as well as accepted international standards and relevant best practices in the Gas pipeline sector.

The Turkish legal framework for environmental protection has evolved in alignment with both national and international initiatives and standards, with recent revisions aimed at harmonizing with the EU Directives as part of Türkiye's pre-accession efforts to the EU.

The primary Turkish environmental legislation relevant to TANAP is **Environmental Law** No. 2872, which aims to protect the environment in accordance with sustainable development principles. Compliance with pertinent legislation, including but not limited to expropriation processes, labor and social security matters and data privacy is of paramount importance to TANAP. Consequently, Labour Law no.4857 and Occupational Health and Safety Law no.6331 have been strictly adhered to throughout the Project as well as in Operation Phase.

Expropriation is inherently a procedural legal process, and TANAP has duly adhered to all legal requirements in this regard. Similarly, a meticulous approach has been adopted concerning data privacy, ensuring compliance with the Personal Data Protection Law no.6698 and relevant secondary legislation.

In addition to the Turkish legal and regulatory framework, TANAP also embraces international best practices and adheres to applicable standards set by International Finance Institutions regarding various aspects such as labor and working conditions, occupational health & safety, biodiversity, land acquisition, and stakeholder engagement (The list of relevant IFIs' Standards, Requirements and Guidelines that TANAP adhered to are given in Appendix-1). While the Turkish legislation **forms the foundation for environmental compliance**, adherence to such environmental and social standards has been a fundamental priority for TANAP since its initiation, as explicitly outlined in the Intergovernmental Agreement and the Host Government Agreement, which serve as the founding documents of TANAP and are also accessible via https://www.tanap.com/en/agreements

Business Culture

Ethics and Compliance Management

TANAP, due to its partnership structure, is subject to both global and local Anti-Bribery & Corruption (ABC) laws, including the United Kingdom Bribery Act (UKBA), Foreign Corrupt Practices Act (FCPA), and Turkish Criminal Code (TCK). To enhance compliance with these laws, the Compliance Directorate was established in 2015. Since its inception, the Directorate has been reporting directly to the Board of Directors of TANAP.

TANAP has implemented robust policies and procedures to ensure compliance with applicable Anti-Bribery & Corruption laws and to prohibit the facilitation of payments or receipting of bribes.

These policies and procedures were developed to guide TANAP in meeting the requirements outlined in TANAP's "Anti-bribery and Corruption Policy", as well as with relevant laws, including but not limited to "the UKBA", the "FCPA", any successor legislation "the OECD Convention on Combatting Bribery of Foreign Public Officials in International Business Transactions" or "the United Nations Convention Against Corruption".

As an important ***mid-term target***, TANAP continuously updates its policies and procedures in response to amendments in relevant national and international laws.

TANAP operates a unique hotline known as "Speak-Out." Per the TANAP Anti-Bribery & Corruption Policy and Code of Conduct, employees are required to promptly report any instances of potential breaches of the Company's ethical standards. The Speak-Out mechanism is also accessible to TANAP contractors.

To assess contractors' compliance awareness, TANAP conducts "external compliance audits" quarterly. In 2023, the security service provider and the integrated service management provider underwent compliance audits. These audits concluded with no significant findings, and contractors provided positive feedback during the process.

Anti-Corruption

Corruption Risk Assessment For Company Operations

In accordance with the TANAP Anti-bribery and Corruption Policy, the Compliance Officer is tasked with conducting an Annual Ethics, Compliance, and Integrity Risk Assessment. This assessment aims to identify and prioritize both internal and external corruption risks faced by the Company.

Furthermore, all third parties and potential/existing contractors undergo an "Integrity Due Diligence (IDD)" process, and periodic monitoring is conducted based on the identified risks associated with them.

As a ***short-term target***, TANAP performs over 300 IDD monitoring actions annually. Additionally, as another crucial mid-term target, the Phase-I digitalization process of IDD has been completed, and Phase-II is in progress. To mitigate corruption-related risks, TANAP obtains a "Compliance Certification" from all its employees and significant contractors on an annual basis.

Communication & Training About Anti-Corruption Policies and Procedures

Effective training of company officers, employees, and third parties on pertinent laws, regulations, corporate policies, and Code of Conduct is essential for a robust Compliance Programme. Additionally, TANAP adopts a "Risk Based Training Approach", enabling the Compliance Directorate to deliver tailored training to employees, considering the unique risks associated with each department.

Consistent with the Annual Compliance Plan, training sessions are conducted for over 500 employees and third parties annually.
As of 2023; updates were made to the content, format, and scenarios of the training materials, including micro-learning modules.

100%

Short-Term Targets:

- Performing at least 300 IDD (Integrity Due Diligence) monitoring every year

0%

Mid-Term Targets:

- Continuous updates of ABC policy and procedures depending on the amendments in relevant national and international laws

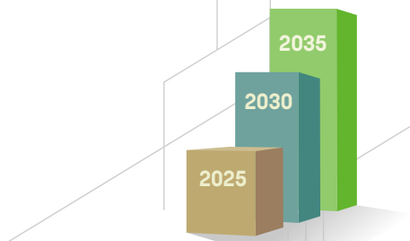
80%

- Digitalizing the "Integrity Due Diligence" processes for less paper usage and more efficiency

0%

Long-Term Ambitions:

- Updating ABC policy and procedures in line with the changes in relevant national and international laws



Risk Management

The TANAP Risk Management process aims to support the organization in achieving strategic Environmental, Social, and Governance (ESG) focused targets and the related business/operational targets, empowering TANAP's sustainability strategy and ensuring that risk preventions are taken to meet the targets through potential impact and probability assessments. Our risk assessment methodology provides a comprehensive overview of the potential risks, uncertainties, and opportunities facing TANAP.

TANAP defines and monitors risks that could impact its operations, health and safety, environmental, and social aspects, sustainability strategy, financial performance, and reputation. It also highlights the measures taken to manage these risks and ongoing efforts to ensure safe, efficient, and reliable delivery of natural gas to Türkiye and Europe. As a pipeline transmission company, TANAP recognizes that operations carry inherent risks to the environment and communities surrounding the Pipeline and Above Ground Installations (AGIs).

We **place a high priority on sustainability** in all aspects of our operations, including maintenance, repair, and inspection activities. We utilize innovative technologies and best practices that minimize environmental impact and promote energy efficiency. TANAP, which **focuses on the environment and people in risk management** as in every process, examines global risks regarding climate, economies, geopolitics, and technology, etc. every year and reviews all risk registers accordingly. The environmental, safety, social impact, reputational, and financial aspects of each identified risk are assessed and scored separately. In this respect, mitigation actions are determined by considering all these aspects and are closely monitored.

TANAP TOP 5 RISKS

01 Health and Safety Incident at Operational Sites

02 Security Threats to Operational Sites

03 Integrity Threats at pipeline and stations leading to LOPC (Loss of Primary Containment)

04 Third Party Damage to pipeline and AGIs resulting in uncontrolled gas release and potential fire

05 Pipeline geotechnical hazards leading to LOPC.

Risk Management

Revised Risk Management Practices in 2023

In 2023, TANAP undertook a **crucial revision of its risk management practices** with the objective of establishing a **robust ESG risk management framework.** This involved integrating environmental, social, and governance considerations into every aspect of the risk management process. One of the most crucial aspects of this revision was the comprehensive review of all risks through the lens of the Materiality Assessment results. TANAP's risk management efforts were effectively directed by prioritizing risks, based on their significance to our sustainability objectives and stakeholder expectations.

TANAP meticulously monitors the 37 ESG Risks

Furthermore, the potential impact of each risk was reassessed and categorized under the ESG framework, **allowing for a more nuanced understanding of how environmental, social, and governance factors could influence operational success**.

This strategic realignment not only enhanced TANAP's ability to identify and mitigate risks but also demonstrated its commitment to responsible and sustainable operations. By integrating ESG considerations into its risk management processes, TANAP has enhanced its resilience to emerging challenges while simultaneously driving positive social and environmental outcomes.

TANAP ESG Integration Journey

TANAP, with a sustainability-focused risk management approach, has increased operational efficiency (identify potential risks and opportunities for improvement, which can lead to more efficient operations and cost savings), improved reputation, reduced regulatory risks, and achieved all strategic business/ operational targets and sustainability strategy.

Section 2

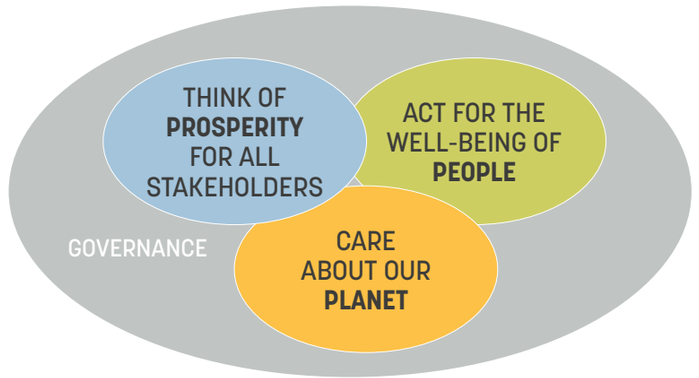
TANAP Sustainability Strategy & Governance

TANAP Sustainability Governance Framework

The Sustainability Governance Framework serves as a cornerstone in our strategic pursuit of sustainability, delineating our approach to managing risks and opportunities within TANAP. Its primary objective is to infuse sustainability across all facets of our operations, reflected in our governance structure's integration of sustainability into decision-making at every level.

TANAP has elevated sustainability to a pivotal position within its operational framework, striving for safety, efficiency, and reliability while fostering awareness among employees and neighboring communities about the importance of collective action a sustainable future. Alongside efforts to reduce our carbon footprint and explore opportunities to utilize greener energy sources. The TANAP sustainability approach prioritizes operational sustainability by enhancing efficiency through the digitalization of work processes, implementing measures to mitigate climate risks, and safeguarding pipeline integrity through proactive improvements and continuous monitoring and maintenance may benefit from new technologies.

By integrating sustainability into governance structure, TANAP aim to generate **positive social, environmental, and economic outcomes for all stakeholders**, while fostering value creation. ESG objectives for short, medium, and long terms are clearly defined, ensuring alignment with TANAP's overarching goals.



TANAP Sustainability Coaches pioneer awareness-raising and capacity-building across the organization, positioning TANAP as a key player in the energy transition process. They are responsible for encouraging co-workers and helping to build institutional know-how.

TANAP is transparent about our sustainability performance, which is clearly presented in our annual reports. This involves establishing a system for collecting and monitoring feedback from stakeholders to ensure that TANAP is on track to achieving its goals.

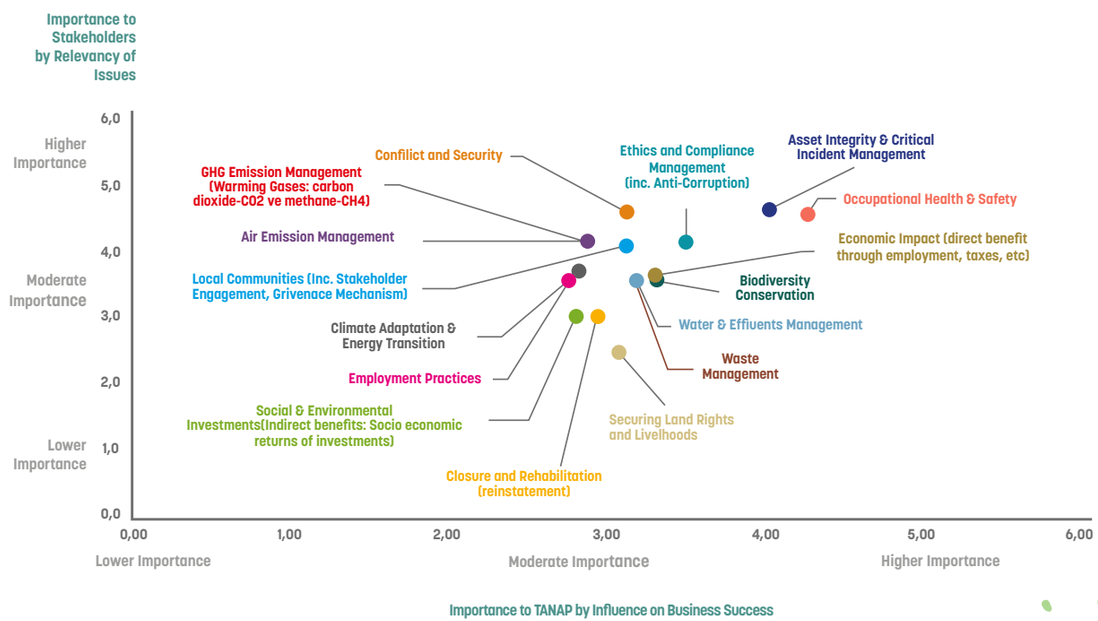
Engaging With Our Stakeholders For Materiality Assessment

TANAP's materiality assessments provide a comprehensive evaluation of TANAP's key focus areas and priorities across the environmental, social, and economic dimensions that are essential to the implementation of the sustainability strategy and the achievement of the sustainability target. Governance issues such as Ethics & Compliance Management and Asset Integrity & Critical Incident Management emerge as highly significant for both TANAP and our stakeholders, underscoring the importance of robust risk management. Therefore, one of the key objectives for 2024 is the review of our ESG risks as part of the materiality analysis.

Social factors, particularly Occupational Health & Safety and Local Community Engagement, are important, reflecting TANAP's commitment to stakeholder welfare and ethical practices. Environmental issues, such as greenhouse gas emissions management and biodiversity conservation, are also highly rated, emphasizing a strong focus on minimizing environmental impact. TANAP has once again underscored its commitment to biodiversity, with the decision to declare 2024 as the Year of Biodiversity.

Economic aspects, including the direct and indirect benefits of economic activities, are critical to both the success of the business and the value created for TANAP stakeholders.

TANAP's materiality assessment for 2023 again underscores the importance of maintaining the balance between achieving operational excellence, maintaining stakeholder trust, ensuring environmental stewardship, and providing a robust system for the pipeline's sustainability strategy.



Sustainability Approach and Strategy

Our Motivation

As a pipeline operator, we recognize **our pivotal role in ensuring the security and diversity of energy supply** to the region. We consider ourselves a key stakeholder in the **collective effort towards a clean and secure energy transition**, which is essential for building a greener future. This mission is **critical for the well-being of people and the health of our planet.**

TANAP's Pillars of Sustainability

- ☐ criticality of providing secure and reliable natural gas transmission services to Türkiye and Europe in compliance with UN Sustainable Development Goals (SDG) and the Paris Agreement.
- ☐ that natural gas is the most environmentally friendly source among other fossil fuels and transportation by pipeline is a much more economical, safe, and cleaner way of maintaining the energy supply.
- ☐ application of the best available techniques to reduce emissions from operations to maximize the use of greener energy sources.

TANAP SUSTAINABILITY STRATEGY

*Managing the operations of TANAP, having an important **role in securing the energy supply** in the region, in a way that **serves the low-carbon economy** and in the long run **the Energy Transition for a more liveable common future***

And ultimately by avoiding and mitigating the impacts of TANAP's activities and investments on the environment and people, and beyond that, by enhancing the benefits it will create.

ESG - Focused Aims and Targets

E
Environment

Environment (E): Care for the PLANET

We aim at

Taking recovery actions to reduce the ecological footprint

Short - Term Targets (by 2025)

- Identifying recovery actions
- Allocating primary budget for quick fixes
- Encouraging quick fixes and pilot works
- Initiating and Monitoring Biodiversity Offset Projects

Mid - Term Targets (by 2030)

- Initiating recovery actions and monitoring their effectiveness
- Monitoring BOPs (Biodiversity Offset Projects) and Increasing offset areas

Long - Term Ambitions (by 2035)

- Maintaining the effective recovery actions
- Achieving No Net Loss and Net Gain for Conservation of Biodiversity

ESG - Focused Aims and Targets

S
Social

Social (S): Act for the well-being of PEOPLE

We aim at

Raising awareness among employees and local communities about the importance of collaborating for a sustainable future

Short - Term Targets (by 2025)

- Focused & Diversified Training Programs
- Improved OHS practices
- Improved Equal Opportunity
- Digitalization of Land-based Stakeholder Engagement
- Adoption of Land Access Management principles

Mid - Term Targets (by 2030)

- Fostering Exemplary OHS and employment practices
- Restructuring stakeholder engagement practices in a culturally appropriate manner in the digitalized world

Long - Term Ambitions (by 2035)

- Empowering Our Workforce and Local Communities for a Just Transition

ESG - Focused Aims and Targets

G
Governance

Governance (G): Ensure Operational Sustainability

We aim at

Operating the natural gas transmission system in a safe, efficient, and reliable way by maintaining the integrity of all facilities for a secure energy supply

Short - Term Targets (by 2025)

- Assessing the potential use of greener energy sources in our facilities and the H2 blending compatibility of our systems
- Reducing GHG emissions (carbon and methane) by 1% through modification works
- Reviewing the existing system through Process Safety
- Design and Initiation of Community-based Investments for Climate Mitigation and Adaptation & Resilience
- Allocating Green Budget for sustainability-focused actions
- Incorporating ESG-focused risks into TANAP Overall Risk Management Framework
- Establishing coaching mechanism to execute sustainability practices in line with the TANAP Sustainability Strategy.

ESG - Focused Aims and Targets

G
Governance

Governance (G): Ensure Operational Sustainability

Mid - Term Targets (by 2030)

- Integrating renewable energy sources
- Waste Heat Recovery Installations
- Electrification
- Facility readiness for Hydrogen/Synthetic Methane Blending
- Modification works for reducing fugitive emissions and climate-related impacts
- Implementing Social and Environmental Investment Programme (SEIP)

Long - Term Ambitions (by 2035)

- Hydrogen/Synthetic Methane Blending
- Monitoring and managing emissions
- Reviewing and revising the strategy

Sustainability Management

With a committed approach to the future of our planet and the well-being of people, TANAP has taken an active role in enhancing and promoting sustainability practices both within and beyond the organization. In 2022 TANAP formed a multidisciplinary team to initiate sustainability efforts swiftly.

This team prioritized developing their knowledge and capacity while raising awareness of the essential role of sustainability in business operations across TANAP. The **declaration of 2023 as the Year of Sustainability at TANAP** further facilitated a concentrated focus on these issues.

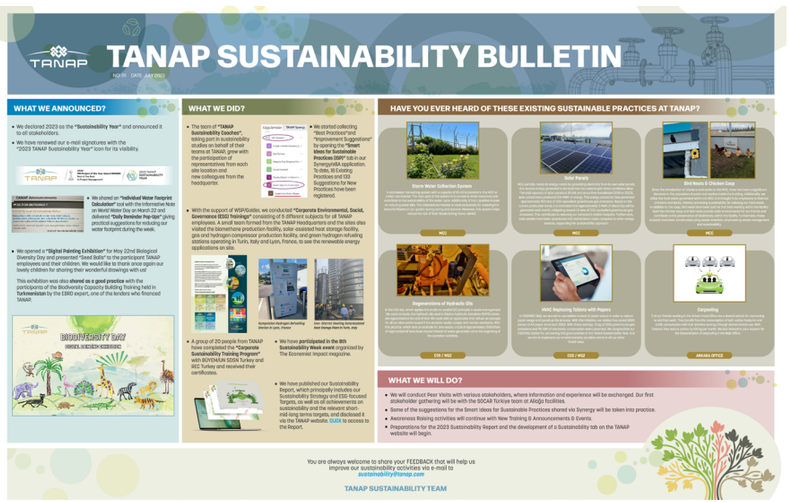
2023 TANAP **SUSTAINABILITY YEAR**

Organizational Empowerment:

The TANAP Sustainability Team **expanded with new members in 2023, growing to 25 members**. This Team plays a crucial corporate role in embedding TANAP's sustainability approach within the organization and making it an integral part of the corporate culture. The Team, composed of **"Sustainability Coaches"** representing various disciplines and departments, is divided into **five working groups** that have undertaken several initiatives in 2023, some of which are listed below:

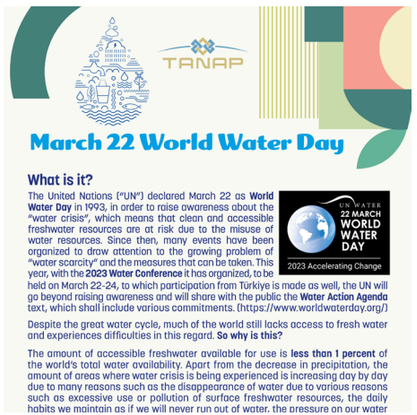
Informative Announcements:

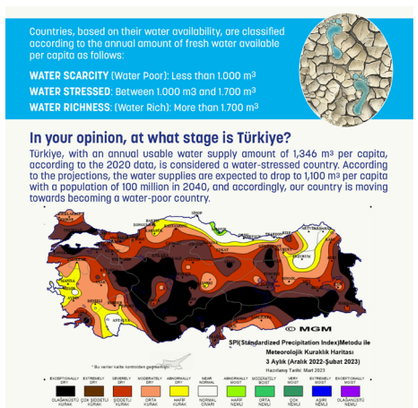
- Semi-annual TANAP **Sustainability Bulletin**: Disclosed and shared with shareholders



- ***March 22, World Water Day:***

  A comprehensive note emphasized the importance of this day and the risk of **"water scarcity"**. Employees were encouraged to reduce their water consumption using the **"Individual Water Footprint Calculation"** tool, supported by **"Daily Reminder Pop-Ups"** with suggestions to reduce water usage for a week.

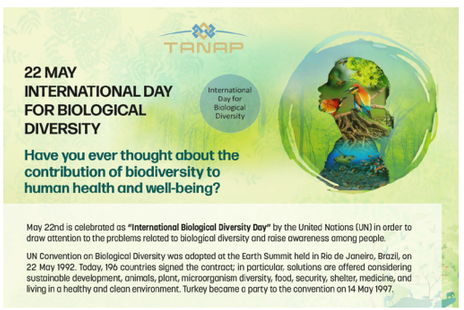


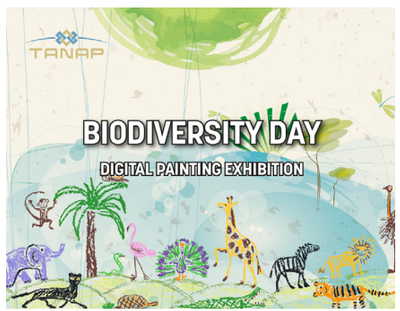


- ***May 22, International Day for Biological Diversity:***

  Alongside a comprehensive note on the significance of biodiversity protection, a **Digital Exhibition** featuring drawings by employees' children was launched. "Seed Balls" were distributed to participating TANAP employees and their children.

  This exhibition was also **shared as a best practice** during the Biodiversity Capacity Building Training held in **Turkmenistan** by the EBRD expert, one of TANAP's financiers.





To watch this digital exhibition, click on:
https://www.youtube.com/watch?v=WIo8500IznM

- ***December 5, World Soil Day:***

  A comprehensive note stressed the message: **"Soil and Water are the Source of Life"** and highlighted the role of soil protection in addressing climate emergency. TANAP's efforts to protect soil through the Biodiversity Offset Project, focusing on **sustainable management of the steppe ecosystem** were also underlined.

Call for Action on Small Changes in our Daily Practices:

- **Email Reduction:**

  Emphasized that **"Less email means less energy consumption and CO_2 emissions!"** and encouraged colleagues to reduce email use to decrease the carbon footprint.

- ***Energy Saving:***

  Energy Saving Reminder cards were posted in common areas like meeting rooms to ensure lights and air conditioners were turned off during idle times.

- ***Plastic Waste Reduction:***

  Site teams were encouraged to use reusable water bottles to minimize disposable plastic bottle use, thereby reducing plastic waste and its harmful impact on health and the environment, especially marine life.

Organizing and Attending Seminars and Workshops

- **TANAP and Sustainability Session:** A session on "TANAP and Sustainability" was held as part of the "Fast-Reading Training Program" for the children of TANAP Headquarter employees, ending with a call to "Take a step towards a planet where we can all live happier today and tomorrow."

- ***Guest Speaker Event:***

  An insightful interview with Prof. Elif Uysal from METU's, Electrical and Electronics Engineering Department introduced TANAP employees to innovative sustainability practices through her work with the **"Sustainable Urbanization Through Innovative Technologies (SUIT)"Platform.**

- ***Sustainability Workshops with SOCAR Türkiye:***

  TANAP and SOCAR Türkiye jointly organized two Workshops, that included site visits to strengthen cooperation and share experiences on topics such as:

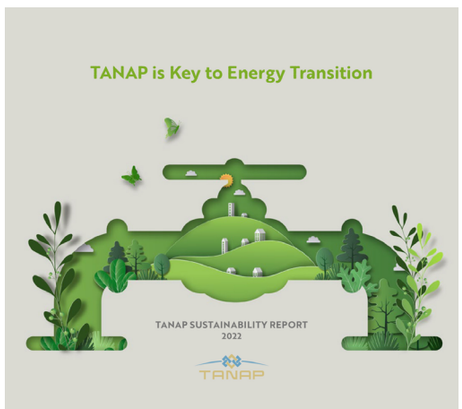
  - TANAP Experiences on Lender Requirements
  - TANAP Sustainability Practices Beyond the Lenders' E&S Requirements
  - TANAP Decarbonization Studies
  - TANAP Biodiversity Offset Projects
  - TANAP Integrated Mapping Platform-centered Operation Works

- ***COP 28 Climate Change Conference:***

In December 2023, TANAP and SOCAR Türkiye delegation, attended the COP 28 Conference in Dubai. Alongside following ongoing discussions, declarations and commitments, regarding decarbonization in the energy transition, which is of vital importance, especially for the natural gas sector - were also closely monitored. Key observations and takeaways, including commitments to reduce methane emissions by 2030 as part of the Global Decarbonization Accelerator, were shared with the TANAP Team.

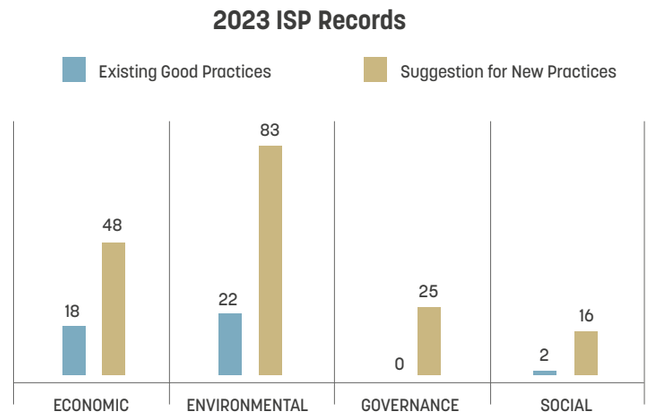
Archiving Smart Ideas for Sustainable Practices and ESG Reporting:

- ***TANAP Sustainability Report:***
  Prepared in-house with reference to the GRI Standard for the Oil & Gas Sector, including the **Materiality Assessment** guided by the TANAP Sustainability Reporting Working Group.



- ***Smart Ideas for Sustainable Practices (ISPs):***

  A platform, designed by Sustainability Coaches within the TANAP Synergy application to collect “Existing Good Practices” and “Improvement Suggestions for New Practices” on sustainability. In 2023, **214 ISPs** were registered, with **42** “Existing Practices” and **172** “Suggestions for New Practices”. Most entries were under the Environmental category, focusing on waste minimization, water management, GHG emission reduction, and biodiversity conservation.



TANAP Digital Transformation

The first steps of the TANAP digitalization journey began at the very beginning of the TANAP Project with the integration of print server technology in 2014. This contributed to the "green office" environment by discouraging hardcopy printing and enabling users to exercise more control over printing. By leveraging digital transformation platforms such as workflow systems, DMS (Document Management System), and RPA (Robotic Process Automation), more than 50 manual processes have been digitalized and 60% of the planned digital transformation projects (number of total planned processes: 80) have been achieved.

In 2023, a total of 11 new processes were digitalized across various domains within the Synergy system. These processes are:

- Lesson Learned Register Form
- Operation and Maintenance Activity Update Process
- Technical Approval Process
- Purchase Order Form
- Competitive Bidding Form
- Bi-monthly Work Form
- Access Control Report
- Trial Period Evaluation Form
- Permit to Work Audit Form
- Overtime Form for Shift Workers Process
- Smart Ideas for Sustainability Practices (ISP)

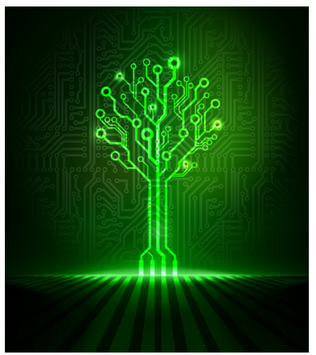
As a critical aspect of digitalization, TANAP's IT (Information Technology) system & network infrastructure, along with backup strategies, were deployed and managed successfully. This was achieved by maintaining a **99.98% uptime ratio** for the systems **and a 100% backup success rate**, which is well above industry standards. Multiple alternative backup solutions are utilized across different locations. TANAP begin establishing a new resilient DRC (Disaster Recovery Center) in 2023 to strengthen its IT operability and reliability.

TANAP begin establishing a new resilient DRC (Disaster Recovery Center) in 2023 to strengthen its IT operability and reliability.

TANAP Digital Transformation

Given the global prevalence of cyber security risks, TANAP is taking a proactive approach to addressing this issue. As in previous years, risk assessments, digital security practices, and system improvements continued in 2023, meeting all requirements within the scope of **ISO 27001** (Standard for Information Security Management Systems Requirements). A wide range of technical and social solutions have been implemented to ensure the overall cybersecurity of TANAP against all malicious threats and attack vectors. Technical solutions such as Secure VPN connection, MFA (Multi-Factor Authentication) for access control, and disc encryption are integral components of the overall TANAP cybersecurity architecture, which directly concern end-users.

Digital and cybersecurity awareness of all TANAP employees and associated stakeholders plays an important role in establishing a resilient and reliable digital ecosystem at TANAP. To that end, many activities are organized throughout the year to keep employees informed and aware of the latest technological innovations and cyber threats. For instance, the CyberMarch event is organized every year in March to increase cybersecurity awareness at TANAP.



During the 2023 digital and cybersecurity training program, **technology talks** were organized for employees. **Bulletins and informative emails** were sent to employees to raise awareness of the latest IT applications and cybersecurity issues. **Quiz shows and competition tools** were also employed to increase user awareness about technology and cybersecurity matters.

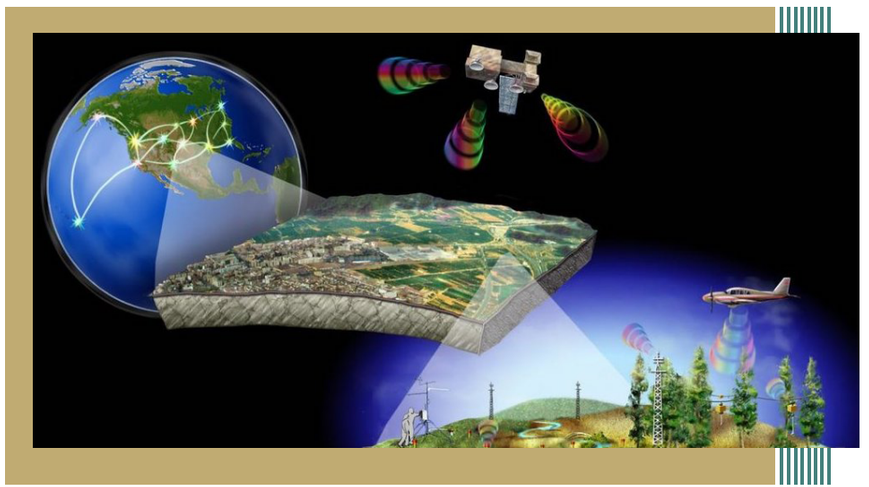
LOOK

GEOMATICS CONTRIBUTION

TANAP's Contribution to Sustainability Through Effective Utilisation of Geomatics Technologies

Technologies such as the Internet of Things, big data, miniaturized sensors, an increasing number of remote sensing satellites, and digital twins, which have rapidly progressed as disruptive technologies with Industry 4.0, impose significant transformational obligations on governments and businesses.

Geomatics (geo-informatics / spatial informatics) technologies, including Photogrammetry, Remote Sensing and Geographic Information Systems (GIS) play an increasingly vital role in tackling global challenges, particularly in optimizing agricultural areas to address food insecurity, implementing smart agriculture practices, sustainable land management, managing water resources, sustainable smart cities, protecting biodiversity, preserving cultural heritage, mitigating climate change impacts and fostering nature-friendly investments.



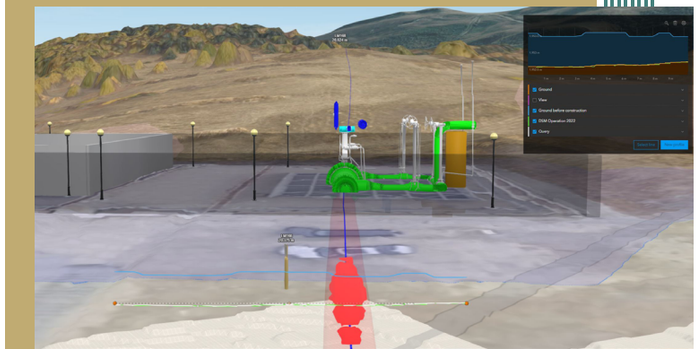
The natural gas pipeline operators are increasingly leveraging geomatics technologies for real-time monitoring, forecasting, control, and decision-making processes. In today's data-centric world, the widespread adoption of geomatics technologies enables resource-intensive activities of the past to be executed with greater efficiency, reduced resource consumption, and shortened timelines.

Recognizing the **significance of Geomatics, particularly in photogrammetry and GIS, TANAP prioritizes these technologies as part of its digitalization efforts**. By integrating these technologies, TANAP aims to reduce its carbon footprint and enhance efficiency in pipeline operations, in alignment with sustainability goals.

TANAP employs photogrammetry to create near-realistic virtual replicas of its sites, utilizing orthophoto maps and high-resolution 3D models obtained from manned aircraft surveys. Additionally, the integration of photogrammetric cameras and lidar sensors into drones enables the identification and monitoring of specific areas.

TANAP also develops **digital twins of the pipeline site**, which is integrated with all spatial data in a geographical information system, which is regularly updated with data from various sensors and Right of Way (RoW) patrolling teams.

3D Digital Twin of a TANAP Asset



3D Digital Twin of a TANAP Asset

Digital twins enable users to review past events, assess the current situation and prevent future challenges. Accurate representation of the physical environment in the virtual realm is crucial for Photogrammetry and Lidar methods, employed by TANAP, are the most accurate methods for representing reality.

TANAP conducts continuous surveying of route corridors through various methods including underground, above-ground, airborne, satellite, and marine surveys using its high-accuracy geodetic network. By leveraging internal GIS fed by design, asbuilt, and monitoring surveying data, TANAP effectively identifies and mitigates risks such as geohazards, ground deformations, and structural deterioration ensuring the integrity and security of the pipeline. In addition to risk management, TANAP monitors socio-economic and environmental factors such as land use practices of stakeholders, critical habitats, and forestation.

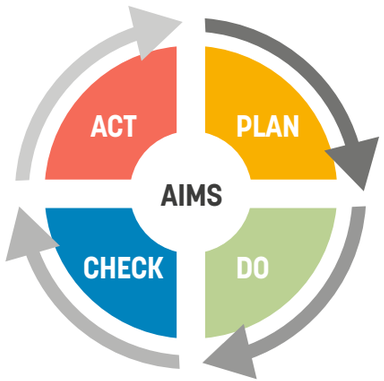
By conducting numerous field-related tasks entirely from the office environment, TANAP contributes to sustainability by optimizing time and business efficiency, and thus, reducing carbon emissions.

As Galileo Galilei adequately said, "To measure is to know, measure what can be measured, make what cannot be measured measurable". TANAP's adoption of Geomatics technologies represents this principle, facilitating informed decision-making and contributing to a sustainable future.

Tasks conducted on the pipeline route in 2023 that resulted in a **reduction of nearly 18,350 kilograms of CO_2eq** include:

- Generating the necessary data for the design work to be carried out in 14 stream beds (4,000 km)
- Production of TANAP facility maps likely to be required for Phase-2 expansion planning (3,500 km)
- Inspection of the morphological changes in karst and landslide areas (3,000 km)
- Flood risk analyses near the block valves (5,000 km)
- Inspection of the depth of soil cover (190,000 welding points) (180 man*days = 20,000 km)
- Inspection of tree growth in forest areas after construction (10,000 km)
- Technical reviews of land use complaints (10 complaint cases, 4,000 km)
- Checking the appropriateness of the post-reinstatement conditions of the lands after construction (5,000 km)
- Identification and drawing of the current status of slope breakers (90 man*days = 12,000 km)
- Detection of settlement and thus, assessing the population changes near the pipeline (5,000 km)

Asset Integrity and Critical Incident Management



At TANAP, we recognize the importance of maintaining safe and reliable facilities to ensure the sustainability of our operations. To achieve this, we have implemented robust Asset Integrity Management and Critical Incident Management Systems. TANAP is taking significant actions to define potential risks affecting the long-term integrity of the pipeline, such as conducting RBIs (Risk-Based Inspections), RCS (Root Cause Analysis), integrity assessments, regular inspections, testing, and maintenance of our pipeline assets to identify and manage risks throughout their lifecycle. TANAP conducts a robust process by assessing and evaluating the data gathered from sites and recorded in **AIMS (Asset Integrity Management Software)** to understand their potential impacts and to ensure the long-term integrity and safe operations of the TANAP System.

TANAP Asset Integrity Management also includes risk assessments and management plans to address any identified risks. In light of this understanding, TANAP has identified the risk of asset integrity as one of its top five risks, placing it among its top priorities.

By proactively managing the integrity of our pipeline assets, TANAP is able to minimize the risk of incidents and ensure the safety of our people, communities, and the environment. TANAP's Asset Integrity Management ensures compliance with regulatory requirements and industry best practices, helping to maintain the trust and confidence of TANAP stakeholders.

Asset Integrity and Critical Incident Management

A summary of TANAP's activities in 2023, which also supports the progress in achieving the short- to medium-term targets, is provided below:

- TANAP engaged a third party, to audit the TANAP asset Integrity Management System (IMS). All aspects of the IMS, including the philosophy and procedures, maintenance and inspection plans and procedures, risk assessment, change management, emergency planning and response processes, were audited. The audit found that elements of the system meet or exceed industry best practices.
- A pipeline emergency repair and readiness drill was performed in 2023. The scenario created was a landslide event triggered by an earthquake. The drill required a response to the event and repair to the pipeline. The emergency response incident management team was mobilized and the event was simulated with the site teams. A full-scale repair plan was executed.
- The Alarm Management System (ALMAS) was developed for the effective management of the alarm rationalization program and to provide direct support to asset integrity. The Competency Assessment Management System (CAMS) was effectively utilized to ensure the competency of the workforce involved in roles that affect asset integrity such as inspections, maintenance and operations activities.
- The Re-RBI (Risk Based Inspection) for Onshore Pipeline Phase 1 was completed successfully.

TANAP Asset Integrity activities have been planned and conducted to prevent any process safety events that can potentially lead to fatalities, injuries, environmental impacts, and damage to local communities and infrastructure. TANAP utilizes advanced and cutting-edge technologies such as in-line inspection tools, drones equipped with special tools, and corrosion monitoring systems to detect potential issues before they become major problems.

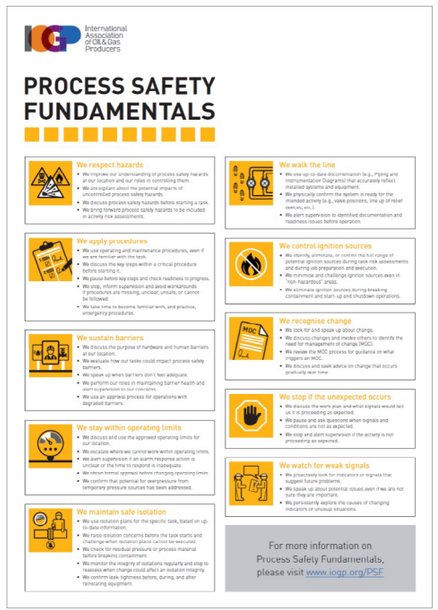
By considering the impact of climate change, a Risk Assessment for forest fires affecting TANAP assets was performed and identified risks were registered and followed under the TANAP Risk Register.

Enhancing Incident Management Through Process Safety Excellence

In the operation phase of the natural gas transmission business, maintaining rigorous Process Safety standards is of paramount importance. Process Safety ensures the integrity and reliability of the infrastructure, preventing incidents that could lead to catastrophic failures, environmental harm, and threats to human life.

By implementing comprehensive safety protocols and fostering a culture of safety awareness among all employees, we can mitigate risks, ensure continuous and safe operations, and uphold our commitment to sustainable and responsible energy transmission.

Asset Integrity and Critical Incident Management



Process Safety Culture remains robust when all employees share a unified safety perspective. As emphasized in the **Process Safety Awareness Trainings** initiated in 2023, maintaining Process Safety is a collective responsibility that spans all departments and employees. To elevate this awareness further, we have developed and displayed **"Process Safety Fundamentals"** throughout our facilities.

The Process Safety Bulletin, which was first published in the 4th quarter of 2023, will be shared with TANAP employees every quarter as a valuable resource containing best practices and insights that will help increase our commitment to safety.

Short-Term Targets:

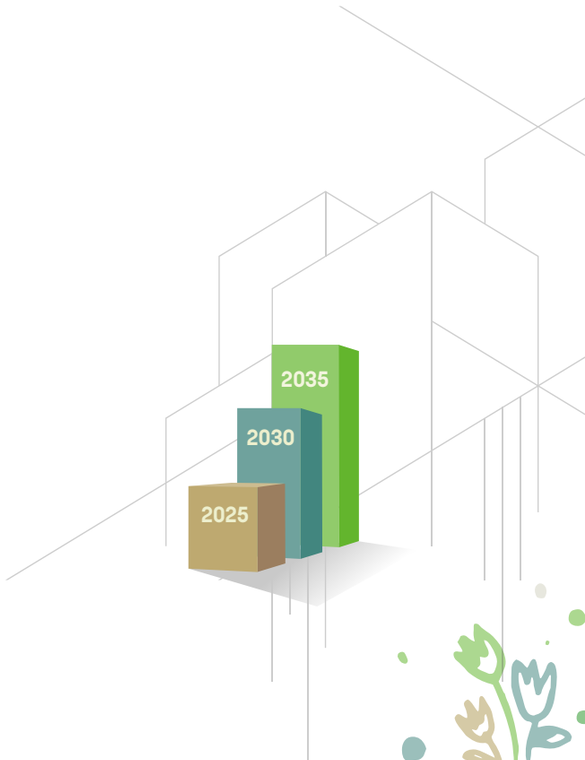
- Rigorously applying Integrity Management principles of Plan, Do, Check, and Act
- Improving Asset Integrity Management System by focusing on areas of development.
- Reviewing and updating of Risk Based Inspection Program as per the gathered baseline inspections/surveys.
- Taking necessary mitigations for potential liquefaction risks on fault crossings along the pipeline

Mid-Term Targets:

- Rigorously applying Integrity Management principles of Plan, Do, Check, and Act
- Implementing new inspection technologies to improve the efficiency of inspections.
- Deploying digitalization in inspection and monitoring processes to the extend as possible to minimize carbon emissions and human intervention by utilization of advanced technologies.

Long-Term Ambitions:

- Rigorously applying Integrity Management principles of Plan, Do, Check, and Act
- Implementing long-term Integrity Management Projects.



Climate Adaptation and Energy Transition

TANAP focuses on how to contribute to the transition to the low-carbon economy by adapting its business model to this process with additional measures and improvements to reduce GHG emissions, in parallel to providing support to communities to strengthen their adaptation and resilience capacities.

As part of the TANAP adaptation efforts, in 2023, the organization **continued its work to enhance the resilience of its facilities to changing climate conditions**. This included adapting its risk assessment methodology to be ESG-based, ensuring a more comprehensive and sustainable approach. One of the main precautionary actions on site was the continuous maintenance and improvement of drainage channels around stations, particularly to respond to extreme weather conditions such as flooding.

Additionally, TANAP strengthened its infrastructure to better combat forest fires, implementing measures to mitigate associated risks. **A special committee has been established to reassess risks related to flooding and geotechnical hazards**.

This committee will undertake a thorough re-evaluation of these risks throughout 2024, ensuring that TANAP remains proactive in addressing and mitigating the impacts of climate change.

TANAP's Initiatives on the Low-Carbon Pathway:

- Installation of leak detection systems at BVS
- Exploration of the most feasible and functional option to install the necessary technical infrastructure for continuous monitoring with advanced technologies based on real-time detection and quantification of fugitive emissions and establishing a Fugitive Emissions Detection & Management System in collaboration with Operation and Environmental Teams
- Conducting high-level technical assessments for the following items to facilitate the energy transition:
  - **Hydrogen blending** compatibility of pipeline, facilities and stations' utility systems
  - Alternative hydrogen injection points along the pipeline
  - Alternative solutions for separation and re-injection of hydrogen and natural gas
  - **Synthetic methane blending and injection** (including points) into the TANAP pipeline
  - **Alternative/renewable energy source installations** at facilities, adjacent to TANAP existing and future facilities.
  - **Waste Heat Recovery installations** at existing and future facilities
  - **Electrification of compressor drivers** at the existing and future compressor stations

Climate Adaptation and Energy Transition

In the context of low-carbon initiatives at TANAP, various paper-intensive processes such as procurement, document control management (including e-signature), Cathodic Protection (CP) survey records, Right of Way (RoW) patrolling inspections, etc., have been digitalized as discussed in the digital transformation section, to minimise waste and increase efficiency. TANAP process leaders track the digitization progress of these paper-intensive processes by setting annual targets. Furthermore, another initiative involves integrating geomatics technologies, particularly in photogrammetry and Geographic Information Systems (GIS), into Asset Integrity Management, as highlighted in LOOK-1.

Moreover, TANAP is considering a hybrid model for vehicle procurement, which combines functionality with energy efficiency. Additionally, electric vehicle charging stations have been installed in office parking lots to promote the use of eco-friendly transportation among employees. Furthermore, LED bulbs have been installed to save energy at TANAP headquarters and sites.

Additionally, a platform called **"Smart Ideas for Sustainability Practices"** has been established to encourage employees to propose initiatives aimed at reducing their carbon footprint. This platform serves as a central hub for suggesting innovative sustainability projects, fostering a culture of environmental responsibility, promoting proactive engagement within the organization, and raising awareness.

Short-Term Targets:

50%
- Promoting carbon footprint reduction initiatives among the employees.
- Evaluating feasibility increasing technology usage (e.g. Ipads instead of paper use)
- Purchasing/leasing the new hybrid or electrical vehicles to test performance and efficiency.

50%
- Considering electrification of compressors in new projects (expansion)

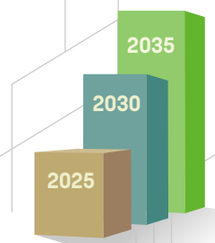
25%
- Investigating possibilities of using renewable energy sources at all facilities (solar, wind and etc)
- Installing storage for vented gas (during the maintenance activity and after the expiration of the hold time of the TUCO) at manned stations.
- Starting loan support to assist employees to purchase electrical vehicles.
- Revision of the Bidding procedure to include sustainability checks for firms with firm views and practices toward achieving sustainability

Mid-Term Targets:

50%

Performing H2 Readiness assessment taking into account:
- Technical requirements
- Employee competency development needs
- Commercial arrangement updates requirements
- CAPEX and its percentage within overall budget of TANAP

Development of TANAP decommissioning plan considering:
- Technical requirements
- Contractual requirements
- Facility decommissioning and reinstatement
- Employee demobilisation after decommissioning
- CAPEX and its percentage within overall budget of TANAP



Long-Term Ambitions:
- Replacing all Project Vehicle with new hybrid/electrical vehicles

LOOK

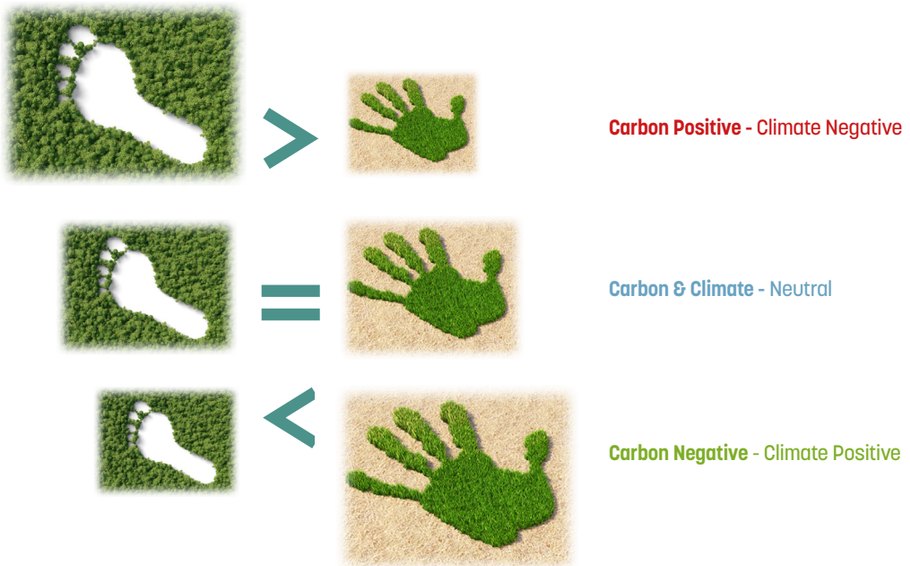
CARBON FOOTPRINT vs HANDPRINT

"Carbon Footprint"

The total amount of greenhouse gases (GHGs) (predominantly CO_2 and CH_4) emitted as a result of both direct and indirect human activities, typically expressed in CO_2eq-ton. A carbon footprint signifies **Negative Impact on Climate!**

"Carbon Handprint"

The potential for GHG savings and all positive actions associated with products and services that contribute to climate benefits. A carbon handprint denotes **Positive Impact on Climate!**



These definitions help to highlight the distinction between the environmental consequences of human actions, whether they contribute to the problem of climate change (carbon footprint) or offer solutions and mitigate its effects (carbon handprint).

As discussed in the GHG Emissions Section, TANAP's Carbon Footprint primarily consists of emissions from stationary combustion of natural gas and diesel, mobile combustion of vehicles (including contractors), vented emissions, fugitive emissions, and electricity consumption.

On the other hand, TANAP has undertaken several **initiatives aimed at increasing its Carbon Handprint**, thereby contributing positively to climate mitigation efforts.

Some examples of these initiatives include:

- Carbon sequestration through 1:3 tree planting at the end of the construction phase, as part of the afforestation commitment, which covers tripled tree planting to replace trees removed and through planting trees in new areas for the Social and Environmental Investment Programme (SEIP)
- Implementation of appropriate land reinstatement practices and a Livelihood Restoration Plan for the affected communities and individuals.
- Initiation of carbon offset projects such as the Resilient Steppe Offset Projects and Forest Biodiversity Conservation Offset Projects, aimed at achieving biodiversity conservation and improved forest management.

These initiatives underscore TANAP's dedication to sustainability and its proactive approach to reducing its environmental impact while contributing positively to climate action.

- Adoption of renewable energy usage, including installed solar panels at MCC
- Implementation of a Stormwater Harvesting System with a capacity of 10m^3 at MCC, contributing to water resource conservation.
- Utilisation of mobile solar panels by contractors at worksites.
- Achievement of Zero Waste Certification through proper waste management practices, including the regeneration and reuse of oil.
- Replacement of batteries with Durable Batteries aimed at waste minimization
- Reduction of plastic bottle usage by utilizing reusable water bottles at AMC/CS3
- Adoption of water-saving measures such as replacing 350 m^2 grass area with water-resistant landscape plants at AMC/CS3
- Reduction of paper usage through digitalization initiatives, including the digitization of Cathodic Protection (CP) survey records, implementation of e-signature systems, and adoption of an e-procurement system, also resulting in fewer emails and less carbon footprint.
- Digitalization of contractors' Final Acceptance Dossiers.
- Improvement of the Integrated Mapping Platform with updated Aerial Photos & 3D Modelling.
- Implementation of energy-saving measures such as shared lighting at MS3/MS4 stations and sensor lighting installation in areas such as workshops at AMC/CS3 site.

Our Priorities and The SDGS

SUSTAINABLE DEVELOPMENT GOALS

In light of its strategic Sustainability Aims and Targets, TANAP is more than willing to be supportive of the United Nations (UN) Sustainable Development Goals (SDGs) and relevant Targets through its ongoing operations and activities. Taking also into account the feedback that TANAP received from its internal and external stakeholders during the preparation of its first Sustainability Report, the material topics assessed and determined to be reportable are linked to the relevant UN SDGs, as shown on the table.

For further details on UN SDGs:

"https://www.kureselamaclar.org/" Anasayfa | Kuresel Amaçlar (kureselamaclar.org) or
"https://sdgs.un.org/goals" THE 17 GOALS | Sustainable Development (un.org)

UN SDGs	UN SDGs and Targets supported by TANAP activities, but not limited to;	Related Material Topics in the Report
4 Quality Education	**Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all** 4.5. By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations	• Social & Environmental Investments • Working and Growing with TANAP
5 Gender Equity	**Achieve gender equality and empower all women and girls** 5.1. End all forms of discrimination against all women and girls everywhere 5.5. Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life	• Social & Environmental Investments • Working and Growing with TANAP
7 Affordable and Clean Energy	**Ensure access to affordable, reliable, sustainable, and modern energy for all** 7.1. Ensure universal access to affordable, reliable, and modern energy services	• Asset Integrity • Climate Adaptation and Energy Transition • Social & Environmental Investments
8 Decent Work and Economic Growth	**Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all** 8.8. Protect labour rights and promote safe and secure working environments for all workers	• Occupational Health & Safety • Working and Growing with TANAP • Social and Environmental Investments
9 Industry, Innovation and Infrastructure	**Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation** 9.1. Develop quality, reliable, sustainable, and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all	• Asset Integrity and Critical Incident Management • Economic Impacts • Social and Environmental Investments
11 Sustainable Cities and Communities	**Make cities and human settlements inclusive, safe, resilient, and sustainable** 11.4. Strengthen efforts to protect and safeguard the world's cultural and natural heritage	• Social and Environmental Investments • Biodiversity
12 Responsible Consumption & Production	**Ensure sustainable consumption and production patterns** 12.4. By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil to minimize their adverse impacts on human health and the environment 12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling, and reuse 12.6 Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle	• Social and Environmental Investments • Waste and Water Management • The Sustainability Report as a whole
13 Climate Action	**Take urgent action to combat climate change and its impacts** 13.3. Improve education, awareness-raising, and human and institutional capacity on climate change mitigation, adaptation, impact reduction, and early warning	• Climate Adaptation and Energy Transition • Social & Environmental Investments • GHG and Air Emissions Management • Waste Management • Biodiversity
14 Life Below Water	**Conserve and sustainably use the oceans, seas, and marine resources for sustainable development** 14.1. Prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution 14.b. Provide access for small-scale artisanal fishers to marine resources and markets	• Land and Resource Rights • Water Management
15 Life On Land	**Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss** 15.1. Ensure the conservation, restoration, and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains, and drylands, in line with obligations under international agreements 15.5. Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species	• Biodiversity • Land and Resources Rights • Closure and Rehabilitation

Section 3

Prosperity For All Stakeholders

Investment Programmes

TANAP aims to support economic development and improve the quality of life along its pipeline, emphasizing values such as “brand,” “staff engagement,” “public trust,” and “management reliability. The TANAP Social and Environmental Investment Programme (SEIP) allocated 54 million USD to over 1,000 projects during the pipeline’s construction phase.

This programme has significantly contributed to the establishment of these values.

At the end of 2021, an impact analysis conducted by an independent company using the Social Return on Investment (SROI) methodology revealed that **every 1 TRY invested generated** a social value of **4.38 TRY**.

Investment Programmes

For the Operation Phase, the implementation of the TANAP Social and Environmental Investment Programme (SEIP) and allocation of funding has been based on three components:

A. Closure of On-going Projects (Component 1):
This component involves the completion of projects for which contracts were signed during the Construction Phase

B. Support to AGIs (Component 2):
This component aims to focus on the settlements around Above Ground Installations (AGIs) of TANAP and continues to provide grant support to improve the standard of living and contribute to socio-economic development around these areas

C. Sustainability (Component 3):
Projects implemented during the construction phase have been assessed with the implementation team and a pool of projects has been shortlisted as potential recipients of additional grant support under this Component.

In each ongoing project which is being maintained in line with the main three components of the SEIP, special attention has been given to ensure that projects are aligned with the Sustainable Development Goals (SDGs), such as increasing the quality of education, promoting decent work and economic growth, facilitating affordable and clean energy, and encouraging responsible production and consumption. In pursuit of these objectives, the following projects were supported in 2023:

Investment Programmes

Component - 1

INVESTMENT IN EDUCATION:
A VOCATIONAL AND TECHNICAL ANATOLIAN HIGH SCHOOL IN SIVAS

TANAP continues to invest in strengthening the national educational capacity. Under the scope of the Sivas Cooperation Protocol, agreements with the Ministry of Education and the Ministry of Energy and Natural Resources are in place to build the **"TANAP Vocational and Technical Anatolian High School"** featuring 16 classrooms, workshops, an indoor sports facility, and a dormitory with a capacity for 100 individuals, in order to provide education on Mining Technology and Natural Resources in Sivas province where mainly CS3-AMC is located. Implementation of the protocol is currently ongoing.

Component - 2

INVESTMENT IN RENEWABLE ENERGY:
SOLAR ENERGY SYSTEM INSTALLED IN KAVAKKÖY

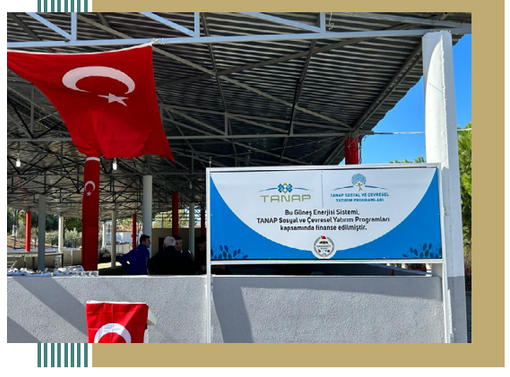
SEIP continues to support the settlements around TANAP Above Ground Installations (AGIs).

In reference to the Sustainability Year theme of TANAP, the "Kavakköy Solar Energy System Project" was implemented in partnership with Kavakköy Municipality in Gelibolu/Çanakkale (population approx. 1,900 people) near the TANAP MS3 Metering Station.

Investment Programmes

Over 120 solar panels, which produces 50kW of power, were installed on the roof of Kavakköy Municipality Covered Market Place. It was aimed to produce approximately 94,000 kWh of energy annually and decrease the energy expenses of the Municipality. In addition, the facility is connected to the national grid to transfer excess electricity.

The opening ceremony of the Solar System was held on October 12, 2023, with the participation of authorities and employees of the Municipality, the community of Kavakköy, the TANAP Headquarter, and MS3/MS4 employees.



TANAP is delighted to keep implementing such beneficial projects to the settlements around its AGIs and serving the Sustainable Development Goals (SDGs) of the United Nations; particularly SDGs 7 and 11.

Investment Programmes

Component - 3

SUPPORTING LOCAL PRODUCTS: CHEESE PRODUCTION BY WOMEN IN BİGA

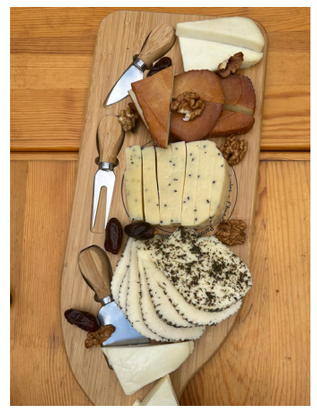
5 GENDER EQUALITY | 12 RESPONSIBLE CONSUMPTION AND PRODUCTION | 8 DECENT WORK AND ECONOMIC GROWTH | 10 REDUCED INEQUALITIES

With the aim of supporting economic sustainability, the TANAP Investment Programme (SEIP) continued to provide funding support to noteworthy projects implemented during the construction phase. In this regard, one of the Programme beneficiaries being supported is the Biga Women's Cooperative, operating in the Biga district of Çanakkale.

TANAP supports the Cooperative in various areas, including the production of cow's milk and goat's milk, procurement of materials such as salt and yeast, packaging, labels, hygiene materials, and certification processes. Through this support, cheese production activities continue to thrive, generating continual income for women, especially for those living in the rural areas of Biga who are outside the workforce and have low incomes.

ecekoy YEREL ve YERİNDE ÜRETİM

One of the very proud outcomes of this support is the expansion of capacity of the cooperative's commercial activity, which has enabled it to sell its products to markets. The Cooperative has finalized agreements with several well-known retail chains following numerous meetings and negotiations! While the Eceköy brand is starting to be available in supermarkets, their Instagram page can be accessed to support them further: https://www.instagram.com/ecekoy_ecekoy/



Investment Programmes

Component - 3

MINUS 25 CHILDREN'S VILLAGE PROJECT 'FAMILY SCHOOL' HAS BEEN COMPLETED

To contribute towards sustainable communities, the Children's Village Project continues to receive support from the TANAP Investment Programme (SEIP) during the operation phase.

Minus 25 Children's Village, which hosts workshops for children free of charge, also welcomed mothers from the region in June 2023.

A "Family School" Training was conducted over three weeks, with the participation of women with children from various age groups. Along with the workshops, interactive training sessions provided a platform for participants to share their experiences and discuss topics such as parenting attitudes, social and emotional development, nutrition, adolescent training, peer bullying, conflict resolution, and more.

These initiatives are integral to the Project's objectives of providing social support, sharing parenthood duties, and offering necessary psychological support through the channels.

Investment Programmes

Component - 3

CHILDREN WITH SPECIAL NEEDS ARE LEARNING THROUGH MUSIC IN ESKİŞEHİR

Through the ongoing support of the TANAP-SEIP, several musical instruments were delivered to a Special Education Kindergarten through the Minus 25 Children's Village Project. Being the first special education kindergarten, known as the "Turkish Football Federation Special Education Kindergarten" it is the first of its kind in Eskişehir and has received funding through the Project. Featuring 8 classrooms and catering to 48 students, the school provides education for children with special needs aged 3 to 6. It includes 4 autism classrooms, 3 classrooms for children with mental challenges, and 1 reverse mainstreaming classroom.

Music is recognized as one of the most effective ways to engage and communicate with children with special needs. It serves as a powerful tool for improving various areas, supporting their education, increasing their awareness, and enhancing their social skills. Additionally, music education provides opportunities for children with special needs to develop gain motor skills, imitation abilities, play skills, social adaptation, daily life and self-care skills, eye contact skills, sound localization, sitting behaviour, vocabulary skills, and more while having fun.

TANAP is proud to contribute to the development of children with special needs... Recognizing the profound impact of music on their lives, TANAP is committed to supporting their development and well-being...

Section 4

Well-Being Of People

Occupational Health & Safety (OHS)

It is essential for TANAP to operate its facilities safely, focusing on both occupational safety and process safety, for which it is essential to have Health and Safety and Process Safety Metrics in place. To track progress and ensure the achievement of this objective, TANAP has implemented Health and Safety and Process Safety Metrics. These metrics are based on international best practices and national legal requirements.

TANAP regularly monitors its health and safety indicators, including the total recordable incident rate and lost-time incidents. By tracking these indicators continuously and by setting challenging targets for improvement, TANAP has been able to enhance its safety performance. As a result of these initiatives, TANAP has created a safe and healthy working environment for all employees, contractors' employees, and other stakeholders.

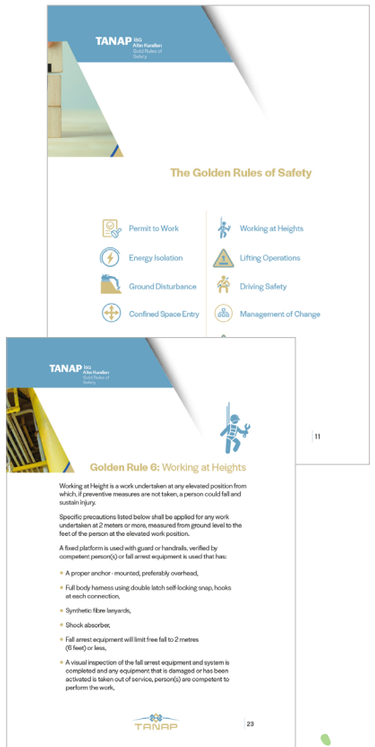
TANAP conducts regular and rigorous Internal and external audits and safety inspections to assess the adherence to standards across all TANAP sites and the Headquarter. These evaluations serve to identify any discrepancies and areas of improvement, with an overarching goal of preventing injuries and incidents during the operation period. TANAP has established an Advanced Road Safety System to guarantee safe and efficient transportation for all employees. This system encompasses the identification and mitigation of potential road hazards, the implementation of measures to minimize the likelihood of accidents and injuries, and the enforcement of strict driving controls, including the Vehicle Monitoring System and Journey Management Plan among others. TANAP not only promotes the adoption of these standards within its organization but also encourages all stakeholders to implement similar measures across all sites.

Occupational Health & Safety (OHS)

A summary of TANAP's activities in 2023, which also sheds light on the progress in achieving the **Short and Medium term targets**, is provided below:

- Continued the Incident Investigation and Lessons Learned sharing process to prevent the re-occurrence of similar incidents.
- Conducted legal Health and Safety (H&S) training programs and procedure-specific H&S training modules, including initial and refresher training on road safety.
- Conducted an Earthquake-based gap Analysis study at all TANAP Sites.
- Organised Emergency Awareness Training focused on earthquake for all TANAP employees and their family members.
- Conducted Health and Safety – Environmental (H&S-E) Walkdowns with leaders' participation at all TANAP sites throughout the year to enhance H&S awareness and to demonstrate leadership support for management commitment.
- Revised Golden Rules of Safety in line with the operation phase activities and new risks, and introduced them to the employees via training programs.
- Continued Internal and External audits/ inspections to ensure the implementation of the CoW procedures.
- Implemented the Best SoB (Safety Observation) Incentive Program to promote Occupational Health, Safety, and Environmental Culture by rewarding outstanding safety observations. This Program utilizes an electronic system and includes periodic SoB Training for effective and value-added observations.
- Continued medical health checks of the employees throughout the year to ensure the sustainable health of the employees and the business continuity and to prevent potential health problems.

Occupational health & safety remains a paramount concern for the entire organization, and TANAP is committed to continually improving its practices in this domain.



Occupational Health & Safety (OHS)

TANAP OHS Indicators

Indicators	2021	Target	2022	Target	2023	Target
Lost Time Injury (LTI) Frequency	0	0	0	0	0	0
Total Recordable Incident Rate (TRIR)	0,3	<0,3	0,2	<0,3	0,24	< 0,3

Competence Assessment Program - H&S Module

Re-assessment of competency units for Operations & Maintenance personnel has been fully completed, and this process will continue annually for predefined specific competency units.

Short-Term Targets:

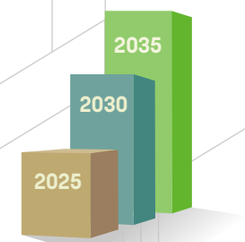
- 100% Increasing frequency of TANAP Internal Audits mainly focusing on Control of Work (COW), Process Safety, and H&S compliance
- 100% Utilization of an Action Tracking System for the management of Internal and External H&S Audits
- 100% Sustaining Competence Assessment Program
- 50% Sustaining the Risk-based approach for all core business areas through TANAP Corporate Risk Committee
- 100% Digitalization of the TANAP Lessons Learned (LL) process
- 100% Organizing comprehensive Disaster Awareness Training Program for all TANAP employees and their families
- 100% Planning drills with earthquake scenarios at all sites
- 100% Setting up Search and Rescue Teams and organizing Professional Search and Rescue Training Program at all sites
- 100% Conducting disaster readiness gap assessment program at all sites

Mid-Term Targets:

- Achieving similar successful results on the LTI and TRIR targets as in the previous periods.
- Sustaining the Risk - based approach for all core business areas through TANAP Corporate Risk Committee Committee

Long-Term Ambitions:

- Sustaining Risk-based approach for all core business areas through TANAP Corporate Risk Committee



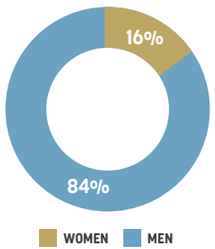
Working & Growing with TANAP

At TANAP, we recognize that our employees are crucial to the success and continuity of our business. Therefore, the well-being of employees is one of the main focal points of TANAP's Human Resources Management approach. To ensure success in this endeavour, several additional measures were taken, including the reconsideration of salary amounts in light of inflation rates to provide competitive salaries for employees, and the re-evaluation of fringe benefits to optimize employee welfare and happiness. The predominant indicator of our success in 2023 was maintaining an employee turnover rate below that of 2022.

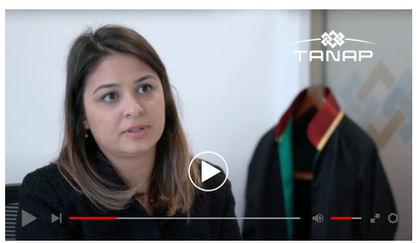
As TANAP prioritizes its growth and well-being of employees, it not only focuses on empowering its human capital but also fosters a vibrant company culture that fuels its business success. Consistency in messaging and role - modelling are recognized as crucial for the sustainability of the corporate culture. In 2023, TANAP achieved this through training sessions on trust building, effective communication, increasing feedback habits, and teamwork, which were conducted throughout the year.

About Our People

Following the transition to operation, TANAP entered a more stable period in terms of employment opportunities. The workforce increased by only 13 people from 2022 to 2023, totaling 371 people, of whom 16% are women. Despite the relatively limited opportunities for female workforce participation in the natural gas sector, TANAP has prioritized increasing female presentation within the company, including their promotion to managerial positions:



- In 2023, the number of female employees increased by 7% compared to 2022.

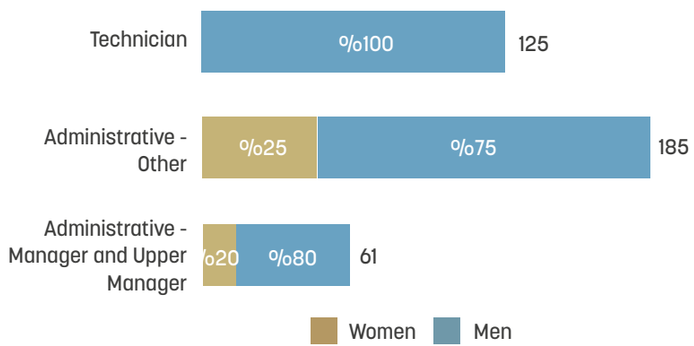


Gökçe Kılıç - TANAP'lı Olmak

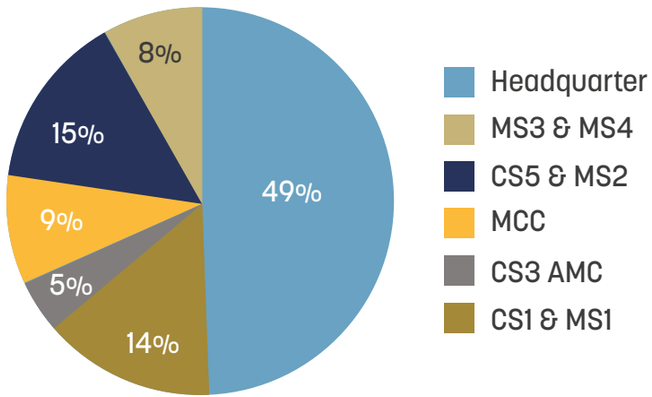
https://www.youtube.com/watch?v=VpSdHdv-7u8

Working & Growing With TANAP

- There are no female employees recruited at the technician level; whereas it is considerably higher at the administrative level. As for the female manager rate among all managers, it increased from 16% in 2022 to 20% in 2023.



Demographically, it is noteworthy that TANAP boasts a considerable number of senior experts with an average age of 40. This demographic profile provides an advantageous situation for a company operating in natural gas, which is one of the high-risk sectors. The decrease in our total turnover rate by 3% also supports the increase in the average seniority in our Company to 5 years and above and the sharing of the accumulated institutional knowledge with newly hired employees.



Across the 1,811 km long pipeline route, offices are strategically located at various points from Ardahan to Edirne, offering employment opportunities nationwide. Upon analyzing the distribution of employees, it is seen that the majority of them are in Ankara, where our headquarter is located, followed by Eskişehir and Ardahan, the provinces where we have the highest number of employees.

Working & Growing With TANAP

Empowering Human Capital

One of the most challenging tasks is to strengthen communication and establish a unified corporate culture among employees working in diverse geographical conditions and distant locations. However, this challenge is addressed through various training programs and events organized by the Human Resources (HR) Department, aimed at fostering strong and a cohesive corporate culture.

To be more specific, workshops, breakfast events and surveys were undertaken. An interactive workshop was designed to allow employees to practice giving and receiving feedback five times during the year and thus, fostering interdepartmental feedback and communication. In addition, breakfast events promoted cross-functional communication of employees who have fewer common tasks to be carried out together, and employee voice and opinion was heard and analysed through Employee Engagement Survey.

The Orientation Program, managed by the HR Department – Training Unit with support from relevant departments, facilitates the adaptation process for new employees.

Aligned with the HR Policy, employee technical knowledge and skill development are supported through competency-building training sessions organized by the HR Department along with mandatory training packages, which are refreshed periodically in accordance with the relevant legislation. Training topics provided during 2023 are as follows:

CAPACITY-BUILDING TRAINING:	Leadership in Business	Stress Management	Team Working	Teamwork Reinforcement	"Coaching"	"Feedback"
Target Group:	Managers	Employees working in shift	New recruited employees	Emplotees working over 3 years	Managers	All Employees
Trained Employees:	59	68	28	28	16	190
TECHNICAL TRAINING:	Awareness Raising on Disasters	Process Safety Awareness	Personal Data Protection Law	Anti-Corruption, Anti-Bribery, and Compliance & Ethics	Health & Safety	Legal LAB: Training on Contract Management
Target Group:	All Employees and their families	All Employees	All Employees	All Employees	All Employees 369-OHS Safety Session	Managers & responsible staff
Trained Employees:	96	216	346	29	128-OHS Health Session	72

Moreover, tailored training sessions are organized to address institutional needs and employee professional requirements. Employees and departments can easily request specific training from the Training Unit, which is then incorporated into the annual training plan. Additionally, ad-hoc training requests can be accommodated throughout the year to ensure continuous employee development and enhance work efficiency.

Working & Growing With TANAP

In 2023, a sustainability-focused awareness-raising training program in collaboration with the Environmental Team and Sustainability Coaches, was also completed. This program comprised five modules at Basic and Advanced levels, catering to different target groups within TANAP:

Finally, **prioritizing the recruitment of new graduates** or individuals with little experience was the key element of our employment policy in 2023. This strategic approach not only invests in the long-term sustainability of our human resources but also fosters intergenerational collaboration, facilitating knowledge and experience transfer within the organization.

Short-Term Targets:

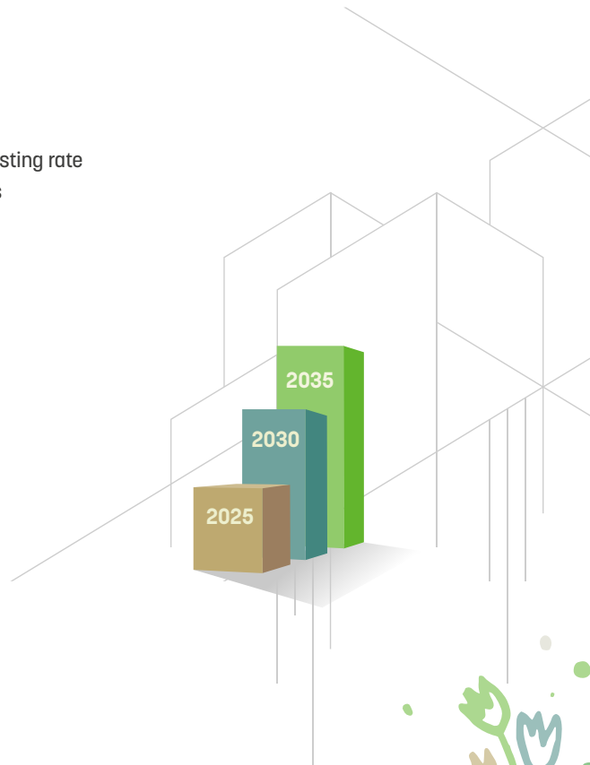
- 100% Following & maintaining the best practices in the sector and integrating the new/appropriate approaches in our system
- 100% Keeping the employee turnover rate below the existing rate
- 100% Providing a competitive salary and fringe benefits

Mid-Term Targets:

- 75% Following & maintaining the best practices in the sector and integrating the new/appropriate approaches in our system
- 75% Decreasing employee turnover rates to %4
- 50% More competitive salary and side benefits

Long-Term Ambitions:

- 75% Following & maintaining the best practices in the sector and integrating the new/appropriate approaches in our system
- 25% Decreasing the turnover rate to % 3
- 50% More competitive salary and side benefits



Close and Open Engagement with Local Communities

TANAP continues to maintain a robust information management system recording, tracking, analyzing, and reporting stakeholder engagement and grievances.

TANAP highly values the participation of residents in settlements directly affected by the Project activities, as well as all other stakeholders. As such, stakeholder participation is considered a top priority in all the project phases.

TANAP has adopted an effective and stakeholder-inclusive approach for the establishment and maintenance of constructive relationships with all of its stakeholders. **A Stakeholder Engagement Plan (SEP)** has been developed to detail how TANAP will interact with its stakeholders. The SEP, which is the key guidance tool for TANAP, is regularly reviewed and updated as needed, with examples such as communication limitations during pandemics or adaptation to communication technologies. It is publicly available via the TANAP website in line with the TANAP Information Disclosure Policy.

The main component of the SEP is the Grievance Management Mechanism that was established in the very early phases of the Project and has been successfully maintained for more than 10 years. During this 10-year period, nearly 5,500 complaints were addressed in the area affected by 1,811 km long pipeline, which passes through nearly 600 settlements and directly or indirectly affects around 100,000 people. Having such a vast amount of stakeholder data also required setting up a structured **big data management system** reinforced with measures taken to protect personal data in accordance with the **Personal Data Protection Law No.6698**.

Throughout 2023, a total of 44 complaints were registered, and **as targeted**, the majority of them were **timely and appropriately resolved**. The resolution process continued for the open grievances, the addressed actions of which rely heavily on external factors, such as seasonal convenience.

All communication channels provided by TANAP are a tool for stakeholders to convey their concerns, grievances, and requests. All complaints and requests are registered and relevant parties are informed accordingly.

The TANAP Social Impact Team is well aware of the fact that the key to successful stakeholder engagement is to be readily accessible, transparent, and responsive to all stakeholders.

Close and Open Engagement with Local Communities

For more than 5 years, TANAP has been organizing Annual Stakeholder Meetings where stakeholders are informed about the ongoing and planned works of TANAP. At these meetings, contact details of TANAP Headquarter and Site Social Impact Specialists are shared for needs of communication, followed by interactive discussion sessions with stakeholders' questions and feedback. As was planned in the post-pandemic, the 2023 Annual Stakeholder Meeting was conducted face-to-face with a total of 54 attendees from local authorities.

Progresses achieved in 2023 regarding the short-term targets:

Community Emergency Awareness:

Our initiative to raise awareness in surrounding communities about emergency procedures during pipeline operations has been successful. We organized specific drills involving local communities and authorities, enhancing preparedness and response capabilities.

Stakeholder Engagement and Land Access Rights:

We have continued to serve as a facilitator between various stakeholders, ensuring that procedures safeguarding local communities and TANAP's land access rights are effectively carried out. Our direct engagement with stakeholders has been instrumental in maintaining harmony and understanding.

Adoption of Land Access Management Principles:

Both TANAP teams and our contractors' site teams have successfully adopted and implemented land access management principles. This has ensured responsible and effective use of land resources, minimizing environmental and social impacts.

Close and Open Engagement with Local Communities

Digitizing the Stakeholder Database:

Progress in digitizing the Stakeholder Database and linking it with Land Acquisition-related Data is currently underway. While significant advancements have been made, this project remains an ongoing effort. The partial digitization achieved so far has begun to streamline our processes, showing promise in enhancing efficiency and improving the accessibility of critical information. We are committed to continuing this work to fully realize the benefits of a completely digitalized stakeholder management system.

Ongoing Mid-to-Long Term Targets

The TANAP Social Impact Team's commitment to sustainability extends beyond the short term. The following mid-to-long-term targets continue to guide the team's continuous efforts:

- **Stakeholder Engagement in a Digitalized World:** We are focused on restructuring and applying stakeholder engagement practices in a culturally appropriate manner, especially considering the evolving digital landscape. This involves adapting our strategies to be more inclusive and effective in a digitalized context.
- **Sustaining Good Practices:** The continuation of existing good practices remains a priority. We are committed to maintaining the high standards we have set in our operations, community engagement, and environmental & Social safeguards.

Looking Ahead

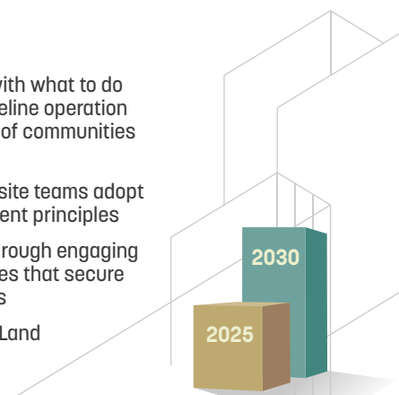
As we move forward, our focus will be on not only sustaining the achievements in our short-term targets but also on making substantial progress in our mid-to-long-term goals. We recognize the dynamic nature of sustainability challenges and remain committed to evolving our strategies to meet these challenges effectively.

Short-Term Targets:

- 100% Raising awareness of surrounding communities with what to do in a potential emergency case throughout the pipeline operation by organizing specific drills with the engagement of communities and local authorities
- 100% Helping both TANAP teams and their contractors' site teams adopt and appropriately perform land access management principles
- 75% Continuing to be the facilitator between parties through engaging directly with stakeholders in performing procedures that secure local communities and TANAP's land access rights
- 25% Digitizing the Stakeholder Database by Linking to Land Acquisition-related Data

Mid-to-Long Term Targets:

- 25% Restructuring and applying stakeholder engagement practices in a culturally appropriate manner in the digitalized world
- 50% Continuing the existing good practices



Land and Resource Rights

The TANAP Pipeline, which extends 1,811 km from the eastern border to the western border of the country, had to cross numerous agricultural lands, forests, and rivers along its route, as well as the Dardanelles Strait. It also passes through 20 provinces, 67 districts, and approximately 600 settlements **without causing "physical displacement" to anyone.**

Only economic displacement occurred due to the land acquisition, which was temporary along the pipeline route and permanent in the above-ground installations (stations). These economic impacts were managed and compensated according to national law and international social safeguard policies through a multi-dimensional compensation management mechanism: i) Expropriation Payments as per the national legal requirements, ii) Payments in line with international social safeguard policies, and ii) Livelihood supports.

During the Operation Phase, additional land acquisition At these meetings, contact This was primarily for the enhancement works related to rip rap installations, and the improvement of drainage channels and access roads. It was also necessary for mitigating the adverse post-construction economic impact of slope breakers, among other issues.

Securing Land Access in Operation Phase

For TANAP, ensuring tenure and access rights for lands and other resources, which are crucial for the livelihood of people and communities, is a priority that is in alignment with its social commitments to the international financial institutions (IFIs), particularly IFC PS 5 Land Acquisition and Involuntary Resettlement and EBRD PR 5 Land Acquisition, Involuntary Resettlement, and Economic Displacement.

During the Operation Phase, TANAP diligently conducts its field work in accordance with international environmental and social safeguard policies. Whenever re-entry to the lands along the pipeline route is necessary for fieldwork purposes such as routine monitoring/control, deformation measurement, repair works for geological hazards (e.g., landslides, soil subsidence), drainage, or road improvement, TANAP ensures the implementation of measures to secure land rights of local communities.

Land and Resource Rights

The processes of land entry and exit, are ensured in line with international requirements, through the internally prepared **Land Access Management** Procedure for the operation period, which is revised as necessary. The procedure outlines the general framework of implementation principles and includes the necessary standard forms to document re-entry and exit to both public and private lands. Crucially, it enables the identification and compensation for any possible loss of income, even if it is temporary.

Additionally, the **Land Use Conditions booklet, delivered to local stakeholders**, particularly the communities around the stations and along the pipeline route, serves as a guide. This booklet outlines land use principles, including restrictions and permissions for crossings, and is **accessible via the TANAP website**. It guides how land users and local authorities can conduct their activities at points intersecting with the pipeline, such as laying water pipes for agricultural irrigation.

In this context, **controlled permission for third-party crossings** is granted to landowners, for example, to install irrigation systems, ensuring their access to agricultural land while mitigating risks to the pipeline. **In 2023, a total of 51 controlled permissions** were granted.

Restoring and Enhancing Livelihoods

Since TANAP is a linear project resulting in mostly temporary land loss-induced impacts, the loss of land-based livelihood has been significantly low. This is primarily attributed to the fact that lands were returned to landowners and users following the completion of proper reinstatement procedures, allowing land users to resume their agricultural activities as they were before the pipeline construction.

Land and Resource Rights

However, instances of land issues arising after restoration, leading to usage restrictions, are occasionally reported during village visits by TANAP's site social impact specialists or through a well-functioning complaint mechanism. To address these issues, comprehensive investigations are conducted, necessary corrective actions are taken, and compensation is provided for loss of livelihood. The latest status of land acquisition and livelihood restoration efforts is annually monitored and assessed by an external social expert, with the annual report made available on the TANAP website.

75%

25%

100%

Short-Term Targets:

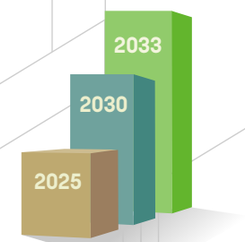
- Incorporating remote sensing and drone technology into existing practices for more widespread use to conduct more field investigations which are needed for land-related problems;
- Initiating the digitalization of both land access and stakeholder engagement process in an integrated approach
- Allocation of budget for compensation of livelihood loss due to post-project impacts related to the land and other resources

Mid-Term Targets:

- Reduction of carbon footprint and economic impact of rented land management
- Performing the fully digitalized integrated land access and stakeholder engagement process

Long-Term Ambitions:

- Continuing the current existing practices that reduce impacts on land and natural resources.



Conflict and Security

Most of TANAP's premises are located in rural or remote areas, where local communities are TANAP's neighbours or where there is minimal population density. This geographical context can present challenges to ensuring the security of its facilities, particularly in the event of conflicts with local communities. However, proactive measures are in place to mitigate such risks, as the Social Impact Team and its site representatives collaborate closely with the Security Team to address any potential conflicts.

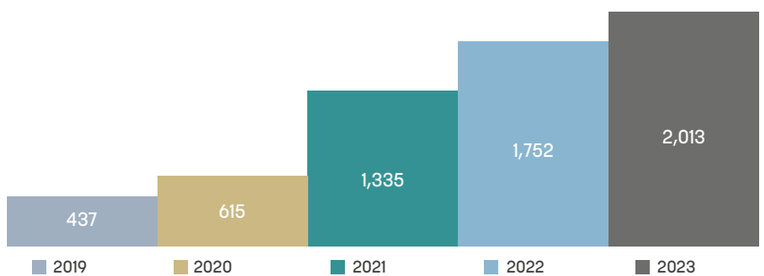
Pipeline security is based on the terms outlined in the "Host-Government Agreement" and is enforced in accordance with the land usage restrictions, the details of which are transparently disclosed on the TANAP website. Moreover, guided by the principles outlined in the TANAP Stakeholder Engagement Plan (SEP), Site Social Impact Specialists maintain open communication and constructive relationships with local communities and authorities, effectively preventing conflict.

Similarly, continuous communication between the security team and law enforcement agencies, mukhtars, local communities, and representatives from the private and government sectors, facilitated through the Permit Department and 7/24 remote monitoring systems, ensures the safe operation of the pipeline without any conflict.

Law enforcement authorities along the pipeline route are called up to contact quarterly, and regular visits by the Site Security Specialist to Law Enforcement Officers ensure ongoing updates and information exchange.

The chart illustrates the patrol activities conducted by Law Enforcement Authorities, around TANAP Stations and along the pipeline route between the years 2019 and 2023. These patrols play a crucial role in ensuring the safe operation of the organization. Despite a significant increase in patrol activity since the commencement of the operation phase, it is noteworthy that no violations of human rights have been reported during this period.

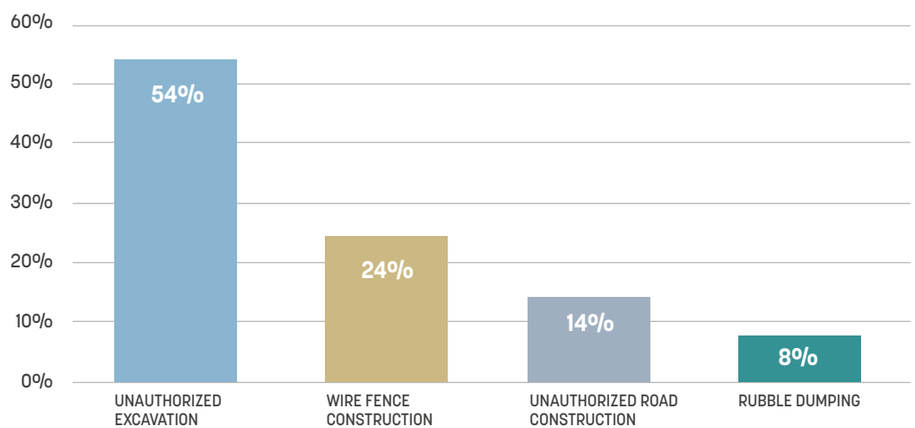
LEA Patrolling Activities between 2019-2023



Conflict and Security

Detecting and addressing land use violations is a top priority of the Security Team. Once detected, the relevant units are engaged in the process, and actions are taken to cease the violations. In 2023, the types of violations of land use restrictions that occurred along the pipeline route can be regarded as a potential source of conflict with stakeholders. It is fortunate that no conflicts or tensions have arisen from these violations. This is a positive outcome and an indication of successful dialogue sustained with stakeholders.

Land Use Violations by Types in 2023



TANAP's responsible departments are committed to keeping stakeholders informed and ensuring their rights are protected. Effective coordination and communication are maintained to carry out activities without tension or conflict.

To date, TANAP has not encountered any situations necessitating the involvement of security personnel. Additionally, no complaints have been received from residents of the surrounding communities regarding the attitudes and behaviours of the TANAP security staff towards them. Despite this positive track record, the TANAP Security Team remains vigilant and takes necessary precautions to address potential incidents. Furthermore, all security staff receive training on VPSHR (Voluntary Principles on Security and Human Rights) to ensure the prevention of human rights violations. This proactive approach underscores TANAP's commitment to upholding ethical standards and respecting the rights of all individuals affected by its operations.

LOOK

EMERGENCY DRILLS FOR COMMUNITY SAFETY

In TANAP, “Safety First!” is not only for its employees but also for its neighboring stakeholders!

TANAP gives utmost importance to community safety as much as occupational safety! Accordingly, the **“TANAP Community-Based Emergency Management Plan”** is developed as a tailor-made management tool.

The Plan outlines the strategies TANAP would follow in case of emergencies that may affect settlements and communities during TANAP operations. Starting in 2023, a goal was set to conduct community-based emergency drills twice a year in order to implement these emergency guidelines, test the decision-making skills of the responsible teams, and minimize any potential adverse impacts on nearby settlements by maximizing communication with local communities and other relevant stakeholders and coordination among relevant TANAP units.

The 2023 Target was achieved by conducting **two drills** in May and June 2023, in the vicinities of CS6 and Dardanelles. The drills involved participation from the TANAP Social Impact Team, CS5, and MS4 site management teams, relevant law enforcement agencies, and nearby communities.

These exercises, invaluable for community safety, provided TANAP with opportunities to strengthen our emergency preparedness and management skills.

Section 5

Care For The Planet

GHG Emissions

To minimize our overall impact on the environment, TANAP has adopted several strategies and implemented diversified mitigation actions in compliance with national legal requirements as well as international policies. Since the commencement of the operation phase, **reducing Greenhouse Gas (GHG) emissions**, particularly in Scope 1 (direct emissions from sources) and Scope 2 (indirect emissions) has been **the main focal point** of TANAP's efforts and ambition to mitigate its impact on the environment.

TANAP's **direct** GHG emissions (Scope-1) reporting mainly covers the two major GHGs, carbon dioxide (CO_2) and methane (CH_4), from the following sources:

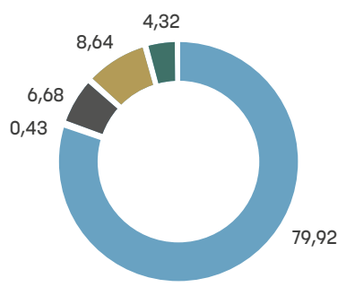
- Stationary Combustion Emissions
- Mobile Combustion Emissions
- Vented Emissions
- Fugitive Emissions

Carbon dioxide is primarily emitted from combustion sources, but may also be emitted from some vented and fugitive sources; however, the concentration of CO_2 in commercial natural gas is generally small (< 2% by pipeline specifications), such that vented and fugitive emissions associated with its use are small compared to emissions produced from combustion. On the other hand, vented and fugitive emissions are mainly the sources of methane emissions.

As can be seen in the detailed breakdown below, where the share of methane in total GHG emissions is relatively small, managing and reducing fugitive emissions will be the primary focus for achieving TANAP's carbon reduction target due to the magnitude of methane's impact on global warming and thus climate. This is also in line with the commitment to reduce methane emissions by 2030 as part of the Global Decarbonisation Accelerator announced at the COP28 Climate Summit held in December 2023.

GHG Emissions

% Breakdown of GHG Emissions in 2023



The breakdown of 2023 GHG Emissions reveals that the primary emission source of TANAP is Stationary combustion, accounting for 79.92% of total emissions. Fugitive emissions follow this with 8.64%, while vented emissions account for 6.68%. Transportation and electricity consumption represent comparatively smaller shares in GHG emissions.

BOUNDARY OF TANAP'S GHG EMISSIONS

Different approaches are utilized for GHG calculation at the international level. The International Financial Institution Framework for a Harmonised Approach to Greenhouse Gas Accounting, initially introduced in November 2015 and re-structured as a Guideline in 2021, serves as the main reference document for International Financial Institutions (IFIs) and since TANAP has been financed by some of the biggest IFIs, such as World Bank-IBRD and EBRD, are applicable to TANAP activities. According to this framework, the annual GHG emissions of TANAP (>100,000 tonnes CO_{2eq} per year) are calculated and reported annually accordingly.

Moreover, TANAP GHG emissions are also reported to the Ministry of Environmental and Urbanization and Climate Change (MoEUCC) per the Regulation on Monitoring of Greenhouse Gas Emissions, which was published in Official Gazette No:28274 on 25.04.2012. This regulation encompasses the monitoring, verification, and reporting of greenhouse gas emissions of the facilities listed in Annex-1 of the regulation, along with the duties and responsibilities of the institutions authorized by MoEUCC.

GHG Emissions

Under the scope of the Regulation on the Monitoring of Greenhouse Gas Emissions published in the Official Gazette No. 29003 on 17.05.2014, the facilities covered by the regulation are required to monitor and report the greenhouse gas emissions resulting from their activities. This is done within the framework of the Communiqué on Monitoring and Reporting of Greenhouse Gas Emissions (published in the Official Gazette No. 29068, dated 22.07.2014 and Communique on Verification of Greenhouse Gas Emission Reports and Authorization of Verifying Bodies Official Gazette No. 30258 dated 02.12.2017. These reports must be verified by an authorized verifier organization within the scope of these Communiqués and reported to the related Provincial Directorate of the Ministry of Environment, Urbanization and Climate Change (MoEUCC).

As of October 10th, 2023, verifier companies assigned to conduct greenhouse gas calculations and verifications within the scope of the regulations are allocated by the Central Electronic Verifier Agency Assignment System (MEDAS), which is operated by MoEUCC. **For CS1-MS1 and CS5-MS2 stations, MoEUCC assigned companies for verification of GHG calculations.**

GREENHOUSE GAS PROTOCOL

The methodologies used adhere to the term "scope" as defined in the World Resources Institute (WRI) **GHG Protocol** 'Corporate Accounting and Reporting Standard' when setting the boundary to be included in the emissions calculation.

Only Scope 1 and Scope 2 GHG emissions of an operation are practically included in the calculation of the organization's footprint and annual reporting exercise. Therefore, Scope 3 GHG emissions are not included **in TANAP's GHG emissions report.**

TANAP'S GHG EMISSIONS

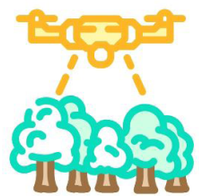
In line with the approach and methodology referred to above, the total annual GHG emissions (Scope 1 + Scope 2) produced by the TANAP operations in 2023 were calculated as 354,408.91tCO_2eq (tonnes of CO_2-equivalent). Compared to the calculated 2022 GHG Emissions (348,993.744 tCO_2eq), a 1.6% **increase** in the total 2023 GHG emissions **in figures** was observed whereas the total GHG emissions **per quantity of transmitted natural gas** in 2023 **decreased** by 1.4% compared to the previous year. Meanwhile, the remarkable difference seen between 2021 and 2022-2023 ought not to be considered for assessing the change in GHG emissions since the year 2022 marked the commencement year of TANAP operations' plateau period that serves as the reference baseline data for tracking the real changes in GHG emissions in subsequent years. In this context, a gradual decrease is expected compared to the 2022 baseline data with the implementation of improvement works and additional measures to be taken in the following years.

GHG Emissions

Scope	TOTAL 2021 tCO_2_eq/yr	TOTAL 2022 tCO_2_eq/yr	TOTAL 2023 tCO_2_eq/yr
Direct Emissions (Scope 1)	243,847.93	333,481.61	**339,082.92**
Indirect Emissions (Scope 2)	15,167.71	15,512.14	**15,325.99**
Total CO_2e emission (tCO_2_eq/yr)	**259,015.64**	**348,993.74**	**354,408.91**

On the Way to the 1% Reduction Target...

Reducing GHG emissions (carbon and methane) by 1% is one of the short-term environmental targets for TANAP operations by 2025. To achieve this target, TANAP started to act and implement initiatives at different scales. These include the **digitalization** of the procurement system and many other operational works such as the **improvement of the TANAP Integrated Mapping Platform (IMP) with updated Aerial Photos & 3D Modelling** to reduce need for travel in parallel to the installation of leak detection systems at BVS.



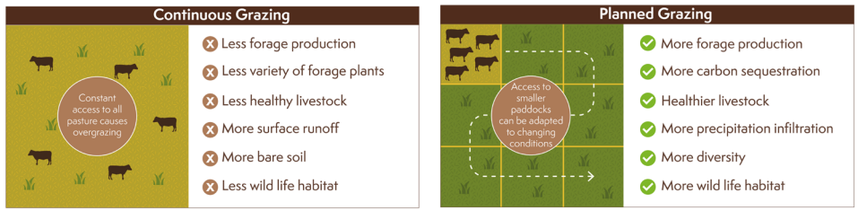
GHG Emissions

One of the ongoing actions contributing toward **carbon reduction is the supply of energy generated from solar panels** at the MCC location. MCC partially meets its energy needs by generating electricity from its solar panels, installed in 2018 with a total capacity of 30 KW. These panels have produced 204 MWh of energy. Thus, it prevented approximately 100 tonnes of CO_2eq emissions. Based on the current production trend, 3 MWh of electricity is generated each month, mitigating 1.5 tonnes of CO_2eq emissions per year.

In addition, to **catalyze the energy transition** for the TANAP operations, the Engineering Department initiated a high-level assessment to investigate possibilities of using renewable energy sources (primarily solar) at all facilities and assessing hydrogen/synthetic methane blending compatibility of our systems, and Waste Heat Recovery installations at existing and future facilities.

Furthermore, research for advanced detection of potential fugitive emissions at stations and their continuous monitoring and real-time quantification was commenced in collaboration with the Environmental and Operation Teams.

LIVESTOCK AND GRAZING



On the other side, TANAP proceeds well in carbon sequestration through its two specific biodiversity offset projects focusing on the improvement of resilient steppes, which encourages a planned grazing system instead of continuous grazing as a core outcome, and the conservation of forest, as detailed in the Biodiversity chapter of the Sustainability Report.

GHG Emissions

Finally, it is crucial to highlight TANAP's indirect contribution to reducing GHG emissions efforts by employing carbon sequestration methods through afforestation. A total of 800,000 saplings were planted as a part of the Social and Environmental Investment Programme and TANAP's rehabilitation requirement at the end of construction across the pipeline. After 2023, TANAP aims to calculate the CO_2 sequestration of this afforestation effort.

Calculation Results of Carbon Sequestration Capacities for TANAP Afforestation Efforts:

The afforestation efforts of TANAP are predicted to contribute to a total of 35,307 tonnes of CO_2-sequestered carbon in the year 2024, equalling almost 10% of 2023 total GHG Emissions. The result assumes a tree survival rate of 81%, which is considered the lower threshold for success. A well-planned management plan is also assumed for the maintenance of the planting pipeline route. The table displays the predicted amount of CO_2, aggregated in tonnes, sequestered for the year 2024.

Predicted* Amount of CO_2 sequestrated carbon in 2024:
35,307 ton
=
10% of
2023 GHG Emissions

	2024
With 81% survival rate tonnes of CO_2eq	35 307

Calculation Methodology developed by the TANAP's Consultancy Company on Biodiversity - WSP Consultancy and Engineering Ltd:
To assess the project's impact on biogenic carbon sequestration, a well-known model was used. It factored in parameters such as wood volume, wood density, tree species, and survival rate when determining the sequestration capacity. To verify the results, the calculations have been compared with different tools. Note that the models used for the biogenic carbon sequestration potential of each tree are based on simplifications, therefore these models cannot fully account for all the unique characteristics of individual forest stands, and the actual outcome may vary from predicted results.

Details of this methodology with the concerning disclaimer of the Climate Change Experts are accessible via the TANAP website.

GHG Emissions

Short-Term Targets:

- 0% Carrying out engineering studies and cost-benefit analysis to check the feasibility of flaring instead of cold vent application
- 25% Investigating possibilities of using renewable energy sources (primarily solar) at all facilities
- 0% Including GHG emission reduction measures into new design and construction processes for expansion projects
- 25% Continuing regular maintenance throughout the pipeline and facilities to minimize and prevent fugitive emissions
- 0% Planning engineering study to evaluate the feasibility of waste heat recovery systems
- 0% Implementing Dynamic Uninterrupted Power Supply (DUPS) Project to minimize the use of diesel generators and hence reduce GHG emissions
- 25% Assessing the Hydrogen/synthetic methane blending compatibility of our systems
- 25% Supporting the enlargement of carbon sink areas through initiating a TANAP Forestation Project

Mid-Term Targets:

- 0% Implementing pilot projects to use renewable energy sources at all facilities
- 0% Planning installation of waste heat recovery systems across the facilities, if feasible
- 0% Fostering electrification including using electrical vehicles across the company and initiating employee fringe benefits/support programs to promote the use of electrical vehicles
- 0% Undertaking Modification works for reducing fugitive emissions and climate-related impacts
- 25% Implementing new technologies to enable measuring fugitive emissions more accurately and preventing as much as possible
- 0% Implementing flaring (instead of cold venting) if found feasible and having a mitigative impact on our GHG emissions
- 0% Facility readiness for Hydrogen/Synthetic Methane Blending

Long-Term Ambitions:

- 0% Getting ready for Hydrogen/Synthetic Methane Blending and implementing recommendations of the studies to get ready for any Hydrogen transportation projects.
- 0% Making a feasibility study on the venting gas capture system to reduce CO_2 from flaring even further
- 0% Continuing tracking emissions and reviewing the actions taken and revising strategy as needed.

AIR Emissions

TANAP prioritizes the reduction of air emissions, including Hazardous air pollutants (HAP) such as benzene (C_6H_6), hydrogen sulfide (H_2S), ozone (O_3), nitrogen oxides (NOx), and sulfur monoxide (SO). During the project design phase, TANAP thoroughly investigated the specifications and design of necessary equipment, selecting the most suitable options such as Turbo Compressors, along with the implementation of an optimal operational framework and industrial practices to minimize air emissions.

To further mitigate the emissions of significant pollutants, TANAP employs efficient technologies and practices, such as gas leakage detectors, repair systems, etc.

Additionally, TANAP conducts regular air emission monitoring and reporting, taking necessary measures to mitigate the environmental impact of these emissions. Within the scope of legal obligations, annual air emission measurements were also carried out in 2023 by the Authorized Laboratories, which are Accredited Organizations, appointed by the Ministry of Environment, Urbanization and Climate Change (MoEUCC) of the Republic of Türkiye. These measurements for all TANAP site facilities will be completed in 2024.

Through the implementation of these measures and ongoing monitoring and reporting processes, TANAP demonstrates a strong commitment to environmental sustainability.

50%

0%

0%

Short-Term Targets:

- Maintaining annual air emissions measurements carried out by authorized laboratories
- Shortening the Reporting periods to quarterly
- 6 month-periods to maintain more robust monitoring
  Review and reduction of annual Air Emission KPIs as applicable

0%

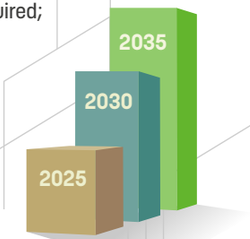
0%

Mid-Term Targets:

- Conducting Engineering Study to optimize air emission in Turbo Compressors (TUCOs), Water Bath Heaters (WBH), Boilers, and Generators by applying necessary modifications as required;
- Conducting Engineering Study for installation of Heat Recovery Units for TUCOs at CS1 and CS5.

Long-Term Ambitions:

- Replacement of vehicles with HEV (Hybrid Electric Vehicles) and EV



Biodiversity

In the Environmental and Social Impact Assessment (ESIA) Report, TANAP is committed to managing the potential effects of the Project on biodiversity by implementing the biodiversity mitigation hierarchy (i.e.; avoidance, minimization, remediation, and, offset) while operating a pipeline of strategic significance, across a biodiversity-rich country. The first three steps of the mitigation hierarchy have been incorporated in;

- Project design inherently (avoidance),
- ESIA (mitigation and minimisation), and
- Biodiversity Action Plan (BAP)

Starting from the Front End Engineering and Design (FEED) phase of the TANAP Project, an International Environmental and Social Impact Assessment (ESIA) study was carried out, which was approved in 2014. The supplementary package, namely, Biodiversity Action Plan (BAP) and Biodiversity Offset Strategy (BOS), were generated and disclosed on the TANAP website to meet Performance Standard 6 (PS6) of "IFC Performance Standards (2012)" and Performance Requirement 6 (PR6) of "EBRD Environmental and Social Policy and Performance Requirements (2014)".

The BAP, which was developed in compliance with IFC 2012 Performance Standards, stands out as one of the few instances where a linear project has demonstrated sensitivity in terms of identifying critical habitats. The BAP encompasses recommended actions to avoid or minimize impacts and provides information about the rehabilitation process (e.g., soil placement, and species of flora to be planted). Based on baseline data and subsequent assessments conducted regarding PR/PS6, the BAP identified and recorded 67 terrestrial and 27 freshwater critical habitats. No critical habitats have been identified for the marine environment, and neither critical marine species nor marine protected and conservation areas were identified along the project route during the ESIA process.

Astragalus kochaki - Critical Habitat57

Biodiversity

Similarly, during the Operation Phase, extensive field surveys including seed collection were also conducted by experts in 2020 and 2021. The collected seeds are vitally important for conservation and restoration activities in the future.

TANAP has not only made efforts to conserve biodiversity, habitats, and species along its route but also contributed to the discovery of new species, thereby adding value to the endeavors aimed at preventing biodiversity loss, and more importantly, advancing the global path to recovery.

Gypsum Steppe – Acikir Offset Site

TANAP takes pride in enriching the knowledge base of the biodiversity of Türkiye through research efforts that have led to the recording of a total of 17 new species, some as new records for Türkiye, and some as new to science including - 6 flora and 11 fauna- to the scientific community.

During ecological monitoring studies conducted in 2023, new flora and fauna species were identified and published in scientific journals, contributing to the advancement of scientific knowledge. Among the flora species, a *Bupleurum* species (Apiaceae) variety and *Lathrus turcicus* were recorded, while among the fauna species, the first record of the butterfly, *Lycaena helle*, in **Türkiye**,was published in scientific journals.

Biodiversity

Flora Species	Fauna Species
1. Verbascum ekicii	*1. Neolycaena soezen*
2. Dianthus dumanii	*2. TANAP cinar*
3. Astragalus askaleensis	*3. Tipula (Lunatipula) TANAP*
4. Mattiastrum turcicum	*4. Hilara ardahanensis*
5. Bupleurum (Apiaceae) variety	*5. Hilara elifae*
6. Lathrus turcicus	*6. Hilara hasbenlii*
	7. Hilara caglari
	8. Lycaena helle
	9. Dioctria n. sp.
	10. Hexatoma n.sp
	11. Trout

*The primary objective of the TANAP's biodiversity studies is **to achieve a net gain in the Critical Habitats** and ensure **no net loss in the Priority Biodiversity Features and Natural Habitats.** The first step to fulfill this ultimate goal in the mitigation hierarchy was the adoption of the BOS in 2017. The main function of the BOS is to provide a practical and feasible offset scheme for TANAP.*

Subsequently, a Biodiversity Offset Management Plan (BOMP) was developed based on the strategy outlined in the BOS, with the expectation of yielding positive impacts on biodiversity around the pipeline route. The purpose of the BOMP is to define the objectives and activities aimed at offsetting the residual and unavoidable impacts on Priority Biodiversity Features, Natural Habitats, and Critical Habitats resulting from the Project.

Following scoping and feasibility studies conducted in 2018 and 2019, two Biodiversity Offset Projects were developed, and they are now at the stage of monitoring initial outcomes:

- Resilient Steppes Offset Projects, and
- Forest Biodiversity Conservation Offset Projects

Biodiversity Offset Project Areas

Gypsum Steppe – Acikir Offset Site

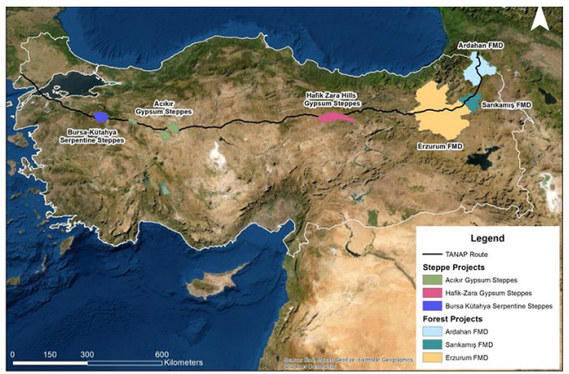
Mixed coniferous forest - Erzurum FMD

2021: Start of Imlementation → 2023: Start of Monitoring Initial Outcomes

Biodiversity

Resilient Steppe Offset Projects

The Resilient Steppe Offset Project prioritizes steppe habitats due to their substantial calculated loss of biodiversity value resulting from TANAP's operation. The Project to mitigate of overgrazing, identified as the primary degradation factor in the steppe ecosystem. Its key objectives **include enhancing biodiversity and resilience within steppe habitats through sustainable grazing management**, as well as the conservation and rehabilitation of critical habitats. Throughout 2023, monitoring activities have continued in the Species Conservation Areas and Rehabilitation Areas of Steppe Offset Projects carried out in the following locations: Bursa-Kütahya, Eskişehir/Acıkır and Sivas/Hafik-Zara.



Seed collection of the target species and plantation of the propagules were carried out across all steppe offset sites.

Field officers conducted weekly checks on planting locations. **Translocated plants** have demonstrated strong **adaptation to the new environments**, maintaining overall good health.

In parallel with the field works, the project team also maintained close relationships with stakeholders. Ongoing communications and discussions with the authorities have focused on the implementation of the rehabilitation procedures. Public awareness activities were organized in all offset sites, summarising activities undertaken in 2022 and sharing plans for 2023. Educational programs for students were successfully conducted in the schools within the offset sites. Training activities were developed and implemented in selected schools with the support of the local branch of the Ministry of National Education. Learning tools such as presentations and games were utilized to raise awareness of rangeland biodiversity, the role of livestock, and pastoralism.

As part of integrated rangeland management, activities were conducted in each offset area and each village in order to map the grazing area(s), subdivide these grazing areas into conceptual paddocks based on geographical and usage characteristics, and assess the forage productivities of various regions.

Biodiversity

The collected information was used to:

- Finalize critical information such as factors affecting the plan, grazing unit, herd information, and required infrastructure, with annual revisions,
- Update infrastructure requirements and implementation timeline,
- Design paddocks and paddock borders.

Forest Biodiversity Conservation Offset Projects

The Forest Biodiversity Conservation Offset Projects prioritize forest habitats, which experienced the second-highest calculated loss of biodiversity value due to the TANAP Project. The Project aims to integrate biodiversity conservation into forest management practices, focusing on zones selected for their high biodiversity value in collaboration with forestry authorities.

In 2023, targeted habitats underwent monitoring via field surveys, forestry application inspections in limited implementation and strict conservation zones, and questionnaires with Forest Management Unit chiefs. Remote sensing analysis was employed to assess changes in forest vegetation cover.

Focal species were monitored by analysis of camera trap records and relative abundance index values of focal large mammal species. Habitat suitability was evaluated for focal large mammal and bird species in Ardahan, Sarıkamış, and Erzurum Forest Management Directorates (FMDs). The effective implementation of forestry guidelines in limited implementation zones of these FMDs was also assessed.

Forest biodiversity monitoring trainings was conducted separately in Erzurum, Sarıkamış, and Ardahan FMDs on September 12-13-14, 2023. These sessions involved the participation of branch managers from General Directorates of Forestry, managers from Erzurum Regional Directorate of Forestry, managers from Erzurum, Sarıkamış, and Ardahan Forest Management (FM), Forest Management Unit (FMU) chiefs from these FMDs, forest engineers and representatives from Nature Conservation and National Parks.

A national workshop was convened on November 14-15, 2023, at Erzurum Regional Directorate of Forestry. The workshop aimed to disseminate experiences gained from the integration of biodiversity into forest management plans in Erzurum, Ardahan, and Sarıkamış FMDs.

Biodiversity

An international workshop was convened on November 16-17, 2023 at Erzurum Regional Directorate of Forestry, which was also disclosed on its website. The workshop aimed to facilitate the exchange of knowledge and experience forest management and biodiversity conservation practices among Türkiye, Azerbaijan, and Georgia, addressing potential collaboration issues. The event successfully shared valuable experiences, fostering a comprehensive understanding of forest management practices across the three countries.

T.C. ORMAN GENEL MÜDÜRLÜĞÜ
Erzurum Orman Bölge Müdürlüğü

ANASAYFA KURULUŞUMUZ ORMANLARIMIZ E-KÜTÜPHANE TAKİP EDİN İLETİŞİM

Orman Biyolojik Çeşitliliğinin Korunması Projesinin Orman Amenajman Planlarına Entegrasyonu Deneyimlerinin Ulusal ve Uluslararası Düzeyde Paylaşılması Konulu Çalıştaylar Düzenlendi

17.11.2023

Orman Genel Müdürlüğümüz ile Doğa Koruma Merkezi işbirliği çerçevesinde TANAP Orman Biyolojik Çeşitliliğinin Korunması Projesi kapsamında; Bölge Müdürlüğümüzde Orman Biyolojik Çeşitliliğinin Korunması Projesinin Orman Amenajman Planlarına Entegrasyonu Deneyimlerinin Ulusal ve Uluslararası düzeyde paylaşılması konulu çalıştaylar düzenlendi.

Orman Biyolojik Çeşitliliğinin Korunması ve Orman Amenajman Planlarına Entegrasyon Deneyimi Uluslararası Çalıştayı öncesi; Bölge Müdürlüğümüze gelen Azerbaycan ve Gürcistan orman teşkilatı temsilcilerinden; Azerbaycan Cumhuriyeti Ekoloji ve Doğal Kaynaklar Bakanlığı Ormanları Geliştirme Hizmeti Genel Müdür Yardımcısı Mohuma Herachiyev ve Orman Yönetimi Dairesi Başkanı Akif Habilov, Gürcistan Çevre Koruma ve Tarım Bakanlığı Ulusal Orman Ajansı Orman Envanteri Dairesi uzmanları Ekaterine Balarjishvili ve Nodari Beridze ile Gürcistan Çevre Koruma ve Tarım Bakanlığı Biyolojik Çeşitlilik ve Ormancılık Dairesi uzmanı Shota Tsiklauri,Orman İdaresi ve Planlama Dairesi Başkanlığı Şube Müdürleri Tamer Ertürk ve Gediz Metin Kocaeli, Ekosistem Hizmetleri Dairesi Başkanlığı Orman Biyolojik Çeşitlilik Şube Müdürü Şah İsmail Bayazıt,Doğa Koruma Merkezi Vakfı Yönetim Kurulu Başkanı Dr. Uğur Zeydanlı ve Genel Müdür Yardımcısı Yıldıray Lise Bölge Müdürlüğümüz Oktay Ayatay'ı makamında ziyaret ettiler.

Ziyarette, orman amenajman planlarına entegre edilen biyolojik çeşitlilik uygulamaları hakkında görüş alışverişinde bulunuldu.

Bölge Müdürlüğümüzde düzenlenen çalıştayda Sürdürülebilir Orman Yönetimi ve Orman Biyolojik çeşitliliğinin korunması konularında çalıştaya katılım sağlayan Azerbaycan ve Gürcistan orman teşkilatı temsilcileri ile ülkeler arasında yapılabilecek iş birliği olanakları değerlendirildi.

Short-Term Targets:

50%

- Supporting & Enhancing the best practices for holistic grazing management

Mid-Term Targets:

0%

- Increasing offset areas for Resilient Steppe Offset Projects

0%

- Increasing offset areas for Forest Biodiversity Conservation Projects

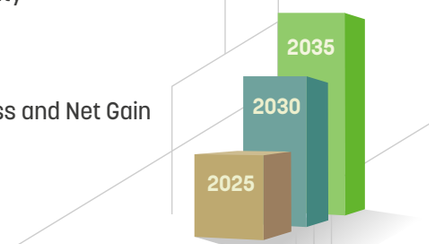
50%

- Supporting scientific research for biodiversity

Long-Term Ambitions:

25%

- Approaching the achievement of No Net Loss and Net Gain



LOOK

NEW SPECIES IN 2023

At the 15th Conference of the Parties to the United Nations (UN) Convention on Biological Diversity (COP 15), held on December 19, 2022 in Montreal Canada, a historic agreement was signed, aiming to prevent biodiversity loss and put the world on the path to recovery. Countries participating in COP 15 have agreed to protect one-third of the planet by 2030.
This agreement is considered a milestone in the goal of protecting biodiversity.

As TANAP, with a commitment to biodiversity conservation, we continue our ecological monitoring studies. TANAP, which considers it a responsibility to manage its potential impacts on biodiversity not only during the construction phase but also in operation, has contributed to the identification of new flora and fauna species. As a result of these efforts, 8 fauna species and 6 flora species - totalling 14 species - that were not previously recorded in scientific literature have been discovered.

Studies continue on 3 new fauna species, named as *Dioctria n. sp, Hexatoma n.sp* and *Trout.*

A variety of *Bupleurum (Apiaceae)* was discovered in Tepebaşı district of Eskişehir Province and named as *Buplerum Pendikum* variety *Eskisehiricum*. This variety was published in **the Anatolian Journey of Botany** on April 3rd, 2023. (Access link https://doi.org/10.30616/ajb.1249583)

Anatolian Journal of Botany
7(1): 46-49 (2023)
Research article *doi: 10.30616/ajb.1249583*

Ant J Bot

A new variety of the *Bupleurum* (*Apiaceae*) from Türkiye

Ergin HAMZAOĞLU*
Gazi University, Gazi Education Faculty, Department of Mathematics and Science Education, Ankara, Türkiye
**erginhamzaoglu@gazi.edu.tr*

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Accepted : 26.03.2023
Online : 03.04.2023

Türkiye'den yeni bir *Bupleurum* (*Apiaceae*) varyetesi

Abstract: Some interesting *Bupleurum* (*Apiaceae*) specimens with very branched stems, (1–)2-rayed inflorescences and ivory-white bracteoles were collected from Tepebaşı District (Eskişehir Province). The specimes, at first glance, resembled the *Bupleurum pendikum* (sect. *Aristata*) species, which is endemic in Türkiye, as a habit. However, as a result of detailed examination, it was determined that there were some differences. Based on these differences, the specimens were presented to the scientific world as a new variety and were named *Bupleurum pendikum* var. *eskisehiricum*. The fact that the inflorescences are (1–)2 rays (not (2–)3–4(–5)); the bracteoles are 2.6–3.7 mm broad, ovate-elliptic and with arista up to 0.5 mm long (not 1.2–2 mm broad, lanceolate and with arista 1–1.5 mm long); the petals 0.6–0.8 mm broad (not 0.4–0.5 mm broad); the filaments 0.7–0.8 mm long (not c. 0.5 mm long) and the mericarps 2.7–3.1 × 1.1–1.3 mm (not 2.2–2.4 × 0.9–1 mm) are the most obvious attributes that separate *Bupleurum pendikum* var. *eskisehiricum* from *B. pendikum* (var. *pendikum*), that is a close taxon. Here, a detailed description of the new variety, informative photographs, and some ecological preferences were given.

Key words: *Bupleurum*, Eskişehir, new variety, taxonomy, Türkiye

Lathyrus turcicus was discovered in Büyükorhan district of Bursa on August 31st, 2022, as the 6th plant species discovered thanks to TANAP. This species was published in the journal Phytotaxa on May 19, 2023. (Access link: https://doi.org/10.11646/phytotaxa.598.1.9)

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https://www.mapress.com/pt/

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Lathyrus turcicus (Fabeae, Fabaceae), a new species from Northwestern Türkiye

ERGİN HAMZAOĞLU
Department of Mathematics and Science Education, Gazi Faculty of Education, University of Gazi, 06500, Ankara, Türkiye.
erginhamzaoglu@gazi.edu.tr; https://orcid.org/0000-0001-6053-6796

Abstract

Some interesting *Lathyrus* (Fabaceae) specimens were collected from Büyükorhan District in Bursa Province, N.W. Türkiye. The specimens, at first glance, resembled the *Lathyrus pallescens* (sect. *Platystylis*) species as a habit, which grows in N. Balkans, Hungary, Romania, C. & S. Russia, Crimea, Transcaucasica and N.E. Türkiye. However, as a result of detailed examination, it was determined that there were some differences. Based on these differences, the specimens were presented to the scientific world as a new species and were named *Lathyrus turcicus*. The fact that the stipules are shorter than petiole (not longer than petiole); the calyces are glabrous (not hairy); the calyx teeth subequal (not unequal); the standards and wings are almost equal and 13.2–15.3 mm long (not 20–24 mm); the keels 11–13 mm long (not 16–18 mm) and the legumes 7–9 mm wide (not 3–5 mm) are the most obvious attributes that separate *Lathyrus turcicus* from *L. pallescens*, that is a close species. Here, a description of the new species, supporting images, chorology, and general ecological preferences were given.

Key words: *Lathyrus*, Bursa, new species, sect. *Platystylis*, taxonomy, Türkiye

As TANAP, we continue to protect our planet through routine ecological monitoring and research in order to contribute to a sustainable future.

Effective Waste Management Journey

TANAP aims to develop a corporate culture in waste management at operation sites and the headquarter. In this respect, the Waste Management Plan and Procedure were issued and have been periodically revised, depending on the need for such revision. TANAP's objective is to standardize not only its processes but also the relevant processes of its stakeholders. To this end, it is requested that Contractors working at TANAP sites also adopt similar practices, and for this purpose, the Waste Management Procedures of Contractors are constantly enforced.

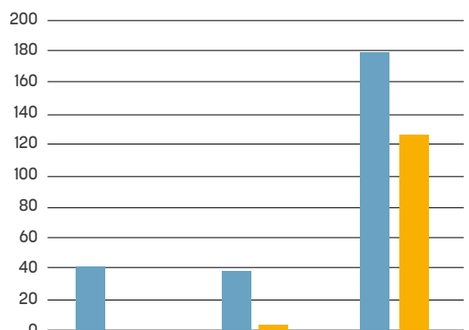
TANAP established a waste accumulation area in each station, and wastes are separated according to their codes and types such as hazardous, non-hazardous, and recyclables. Thanks to regular waste monitoring, waste separation and disposal processes have been executed effectively.

By implementing effective waste sorting, regular waste monitoring, and transparent reporting to relevant authorities, TANAP sets a solid example of how corporate policies and principles in waste management significantly contribute to creating a better life and a greener environment. Furthermore, TANAP follows current trends closely and takes regular and sustainable measures to reduce and manage all types of waste, including industrial and domestic waste. Additionally, TANAP continues to work on raising awareness among its staff and local communities along the TANAP route, by organizing waste management training sessions on basic environmental issues and necessary waste prevention measures and management systems.

These training sessions are conducted at various levels and platforms, tailored to the roles and responsibilities of the participants.

TANAP's Waste Management Plan outlines strategies to be implemented for solid and liquid wastes, both non-hazardous and hazardous, as well as the activities to be performed per the waste management hierarchy. This Plan applies to all operational staff, contractors, and subcontractors active at compressor and metering stations, block valve stations, and other Above Ground Installations (AGIs).

Non-Hazardous & Hazardous Wastes (metric ton)



	2021	2022	2023
Non-Hazardous Waste	40.94	38.50	178.99
Hazardous Waste	1.70	3.18	126.81

TANAP has implemented an effective waste management system, and frequent trainings have been provided to all employees. However, there was a significant increase in both hazardous and non-hazardous waste amount in 2023.

The increase in hazardous waste amount during 2023 originated from operational activities, such as drum cleaning and mandatory maintenance activities. Although TANAP pipeline operation does not involve any hazardous trace material, to prevent environmental harm, all cleaning effluent was classified as hazardous waste.

Effective Waste Management Journey

The waste management training includes, but is not limited to, raising awareness about the reduce/reuse/recycle philosophy and emphasizing the importance of waste management protocols, records, and effective waste management measures.

Refresher training sessions and toolbox talk meetings are also regularly provided. By utilizing the cradle-to-cradle (C2C) principle in life cycle analysis, we have implemented a successful activity aimed at identifying materials or products that can be recycled into new products at the end of their life cycle, ultimately achieving zero waste. Specifically, we regenerate the oil used in mechanical equipment at the site and reuse it if the analysis results comply with the standards.

Examples of **GOOD PRACTICES IN 2023** to reduce waste and progress towards reaching the mid-term targets, several achievements can be listed:

During 2023, a total of 500 liters of **regenerated oil were reused** instead of being disposed of as waste. Additionally, all mineral-based, chlorine-free engine and lubricating oils, as well as other engine oil wastes generated at sites are sent to licensed facilities for recycling during the same period.

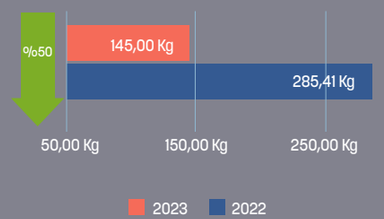
As reported in 2022, parallel to the acceleration of digitalization during the COVID-19 pandemic, the digitalization of many works became inevitable. TANAP developed agile solutions by adopting numerous state-of-the-art applications, and **digitizing its systems** to the greatest extent possible, thus **reducing paper waste by integrating, for instance, e-signature** into its system.

At the CS5-MS2 field, paper output has been replaced with tablets to minimize paper waste and speed up processes. Through this **digitalization** initiative, the CS5-MS2 station has **saved 2500 pieces of A4 paper** during 2023. Consequently, 12 kg of CO_2eq emission and 95 kWh of electricity consumption were prevented.

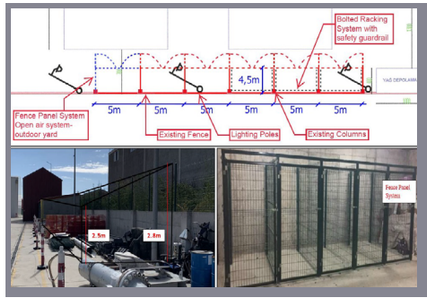
At the CS1-MS1 station, existing batteries of the Uninterruptible Power Supplies (UPS) at BVSs were replaced with more durable ones, **enhancing energy efficiency**. This action ensures continuous energy supply for up to 72 hours without loss of operational functions in the event of a power outage. Additionally, the reduced frequency of battery replacements contributes to **less waste generation**.

Effective Waste Management Journey

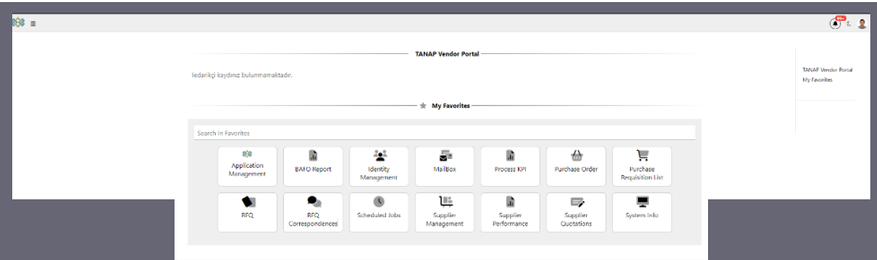
As part of improvement actions taken upon the recommendations registered via the Smart Ideas for Sustainable Practices platform at the TANAP Synergy application, an initiative aiming at minimizing plastic waste was conducted. **Reusable water bottles were distributed** to sites, fostering increased consciousness in waste management. As a result of data collected at the CS3-AMC site, the usage of 0.5-liter plastic bottles decreased by 45%, and the usage of 5-liter plastic bottles decreased by 78% in 2023 compared to 2022.



Overall, this improvement provided **a 50% reduction in plastic waste,** approximately 140 kg, **resulting in a reduction of 5.74 kg of CO_2eq emissions and saving 808 kWh of energy.**



As part of renovation works at CS3-AMC, an oil storage and waste accumulation area have been installed to improve waste management process at site.



TANAP Procurement and Supply Chain Management presented two achievements that are also contribute to sustainability. One of them is the **"Vendor Portal"**, which enables digitalization of procurement processes and provides a time, energy and waste efficient platform. This innovation eliminated the need to send 4,250 emails and saved 3,000 pieces of paper during 2023, which corresponds to an avoided use of 366 kg of CO_2eq emissions likely to be produced due to emails and paper consumption.

Effective Waste Management Journey

Further to the e-procurement system, an **automated storage system** was installed for use at CS5 station. This system increases employee safety by reducing work accidents and providing an ergonomic working environment. It also reduces fire and security risks by ensuring safe and orderly storage of materials. Automated storage systems **minimize environmental impact by optimizing energy and resource use, while also contributing to waste reduction**. Moreover, they reduce the training and skill requirements of personnel, making business processes more efficient and minimizes risks in the workplace.

Short-Term Targets/Goals:

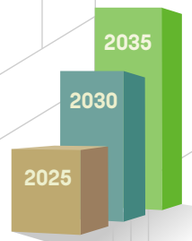
- 50% • Increasing awareness of employees and stakeholders on waste management process through applied acts
- 75% • Improving Waste Management process through the construction of new waste accumulation points
- 50% • Applying more robust assessments for materials' validity as well as for detection and control of material aging to avoid disposal of unused materials
- 50% • Developing an optimized procurement plan and implementing it robustly to avoid shortage or expiry of unused materials
- 100% • Encouraging employees to use reusable and recyclable materials instead of plastic and/or disposable ones

Mid-Term Targets:

- 0% • Fostering digitalization of operations to reduce waste

Long-Term Ambitions:

- 0% • Applying Reliability Centered Maintenance (RCM) and Condition Based Monitoring (CBM) process to reduce the amount of disposed material



Water Management

TANAP places utmost importance on the efficient use of water and the protection of water resources, considering water consumption a top priority throughout its operations.

As part of the operation activities, several precautions have been taken to minimize water usage and adverse impacts on aquatic biodiversity. Regular monitoring of water quality at each site provides not only data on environmental compliance but also assurance of human health.

TANAP demonstrates a sensitive approach to water management, addressing water issues during the operational period at its headquarter office and all site facilities. Holding a Leadership in Energy and Environmental Design (LEED) Gold Certificate underscores TANAP's commitment to sustainability. As part of this initiative, rainwater is collected and utilized for irrigating green areas at the Main Control Center (MCC), also representing a sustainable use of limited water resources and conservation of water resources. This positive, pro-active approach has taken effect at the MCC station through the installation of a **Stormwater Harvesting System** with a capacity of 10m^3.

Additionally, this initiative has led to a reduction in water bills, resulting in an indirect economic outcome. The collected stormwater is exclusively used for irrigation of the garden at the station during spring and summer seasons. The additional benefit of this system is that it helps to mitigate the risk of flash floods during heavy rainfall.

Additionally, each station is equipped with **Water Treatment Facilities**, and maintenance contracts ensure the reliability of these facilities and sewage systems by service providers.

Moreover, TANAP prioritizes the provision of safe drinking water for its employees, adhering to Health and Safety Standards. Water taps are equipped with photocells to facilitate efficient water usage.

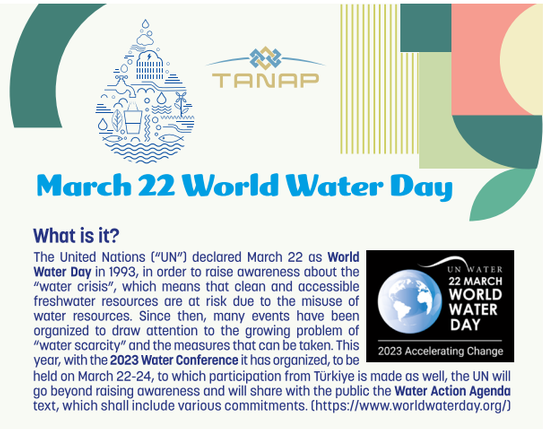
TANAP conducts regular analyses and reporting of water and water consumption, ensuring transparency and accountability. Wastewater is periodically analyzed by authorized laboratories, which enables TANAP to contribute towards a sustainable environment.

	2020	2021	2022	2023
Potable Water Consumptions (m^3)	45,231.94	43,687.02	64,940.88	42,858.34

	2020	2021	2022	2023
Discharged Waste Water (m^3)	12,255.58	8,877.88	11,831.32	25,238.65

Water Management

Furthermore, as part of the short-term target to achieve a 1% reduction in water and electricity consumption at the TANAP Headquarter, several initiatives were implemented in 2023, including sensor-equipped water tabs and lighting, as well as the organization of training sessions and the disclosure of awareness-raising announcements regarding water consumption, particularly on **World Water Day on March 22.**



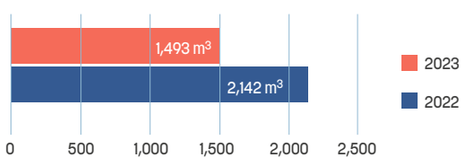
TANAP also introduced an **"Individual Water Footprint Calculator"** tool with an informative note for World Water Day and during a week, shared with all TANAP employees "Daily Reminder Pop-Ups" offering practical recommendations on how to reduce water footprint.

A Good Practice at CS3-AMC

CS3-AMC site has implemented very effective measures to conserve water usage. The below-listed initiatives resulted in a **six-month saving in water consumption** during 2023:

- The utilisation of planted areas, such as grass, within the facility has been minimized , reducing from 1500 m² to 800 m².
- In the 350 m² area where the grass was removed, drought-resistant landscaping plants such as lavender, thuja, and pine were introduced. Drip irrigation systems were installed for these plants, promoting efficient water use.
- Identified minor leaks contributing to water consumption were promptly addressed and rectified.
- The pressure level of all sink valves was adjusted to minimize unnecessary water usage.
- Strict protocols are enforced in the kitchen to only wash dishes using the dishwasher, reducing manual water consumption.

Domestic Water Consumption at CS3-AMC



Short-Term Targets:

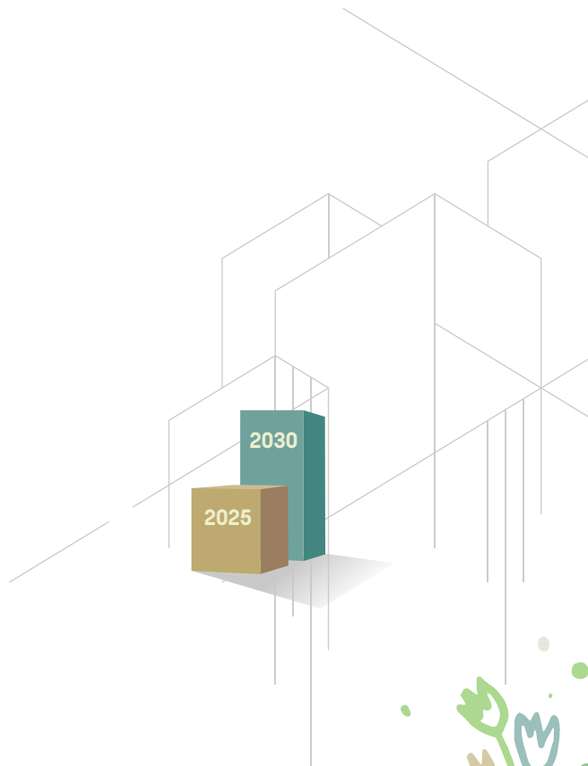
0%
- Using potable water treatment systems in the kitchens of HQ offices and stations.

0%
- Conducting an Engineering study to evaluate if water accumulated the in retention pond can be treated and re-used at the site.

50%
- Decreasing water and electricity consumption by 1% at TANAP Headquarter.

Mid-to-Long Term Targets:

25%
- Monitoring the existing practices and improving where needed.



Closure & Rehabilitation

During the operation phase, TANAP continues to carefully consider the social and environmental aspects of the land entry and exit processes. Maintenance, enhancement, and repair activities along the pipeline route are conducted to address operational needs.

This may involve re-entry into lands, even into those where agricultural activities have already begun, albeit for a relatively short period. To ensure compliance with social and environmental requirements, similar to the construction phase, TANAP has developed the **Operation Phase Land Access Management Procedure**.

Routine right-of-way patrolling activity, geo-hazard surveys, and regular monitoring activities on landslides, land, and slope erosion continue as the core tasks for maintaining pipeline integrity. These comprehensive monitoring activities during the operation phase generate a systematic dataset over time, forming a solid basis for planning the rehabilitation studies at the end of the pipeline's commercial life.

Site inspection checklists, which are part of the Land Access Management Procedure, track various activities such as clean-up, re-contouring, topsoil repositioning, seeding, hydroseeding/hydro-mulching, terrestrial critical habitat, flora seeds/bulbs, erosion control (slope breakers), river crossings, and reforestation. A protocol is primarily signed for private lands when the reinstated land is handed over to the rightful holder, including a written agreement confirming the handover.

In 2023, the Project and Modifications Directorate effectively managed re-entry and exit activities along the pipeline route, particularly at river crossing points or around stations and block valves for improvement works to mitigate risks that may affect asset integrity. All field works are meticulously documented through pre-construction surveys and closure reports. Below are examples illustrating the conditions of the reinstated lands before and after these activities:

BEFORE	AFTER	
		Upgrading Drainage System for BVS37
		
		Rectification of RVX3B-0014 Aydınpınarı River at KP229+579
		

Closure & Rehabilitation

Short-Term Targets (2025):

50%
- Monitoring continuously the reinstated and reforested areas, and taking necessary actions where needed.

Mid-Term Targets:

0%
- Developing a specific closure and rehabilitation plan for the decommissioning phase in line with the already applied environmental and social requirements in addition to the legal regulations.

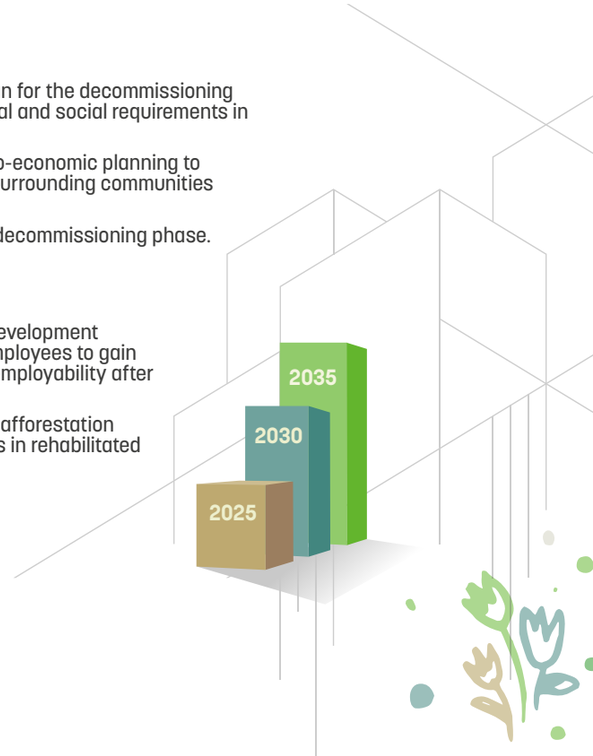
0%
- Developing a strategy regarding land use and socio-economic planning to rehabilitate the operational sites and support the surrounding communities throughout the transition.

0%
- Developing Waste Management procedure for the decommissioning phase.

Long-Term Ambitions (2035):

0%
- Developing and implementing measures (i.e. skill development training programs) for a just transition that help employees to gain new skills or upgrade their skills to increase their employability after decommissioning.

0%
- Implementing alternative and low carbon footprint afforestation methods, such as sprinkling seed balls with drones in rehabilitated remote areas.

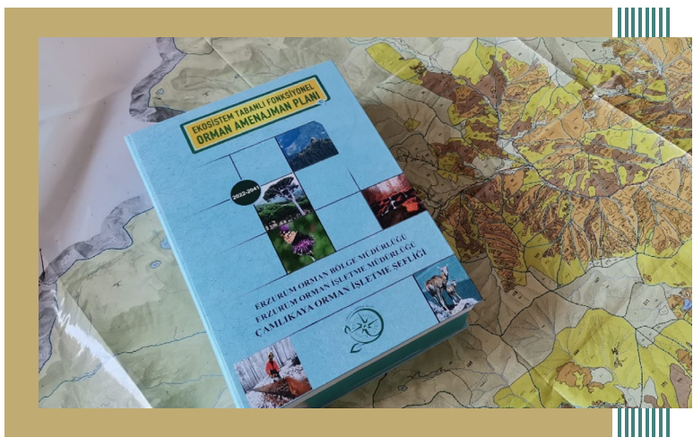


LOOK

BIODIVERSITY AT REGIONAL PLANS

TANAP Biodiversity Offset Projects Were Integrated Into Forest Management Plans

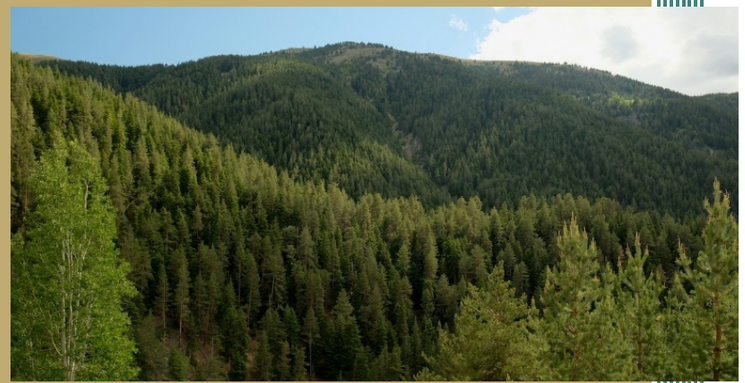
In line with Performance Requirement 6 **(PR 6)** of the European Bank for Reconstruction and Development (EBRD), TANAP continues to manage biodiversity offset projects serving its goal of **"No Net Loss and Net Gain"** for the natural and critical habitats.



TANAP pipeline assessed the biodiversity of the forests in the borders of Ardahan, Erzurum, and Sarıkamış Forestry Directorates within the Erzurum Regional Directorate of Forestry. Forest Management Plans have been initiated to conserve and enhance TANAP target species. **Biodiversity studies are integrated into the Forest Management Plans** where they inform where, when, and to what extent ecological, social, technical, and economic activities need.

Through engagement with Erzurum Regional Directorate of Forestry, **Ecosystem-Based Functional Forest Management Plans** have been prepared for **16 Forest Management Units**. The plans approved by the General Directorate of Forestry will be implemented for **20 years** in the 2020-2040 period.

Further information about the process of Integrating Biodiversity into Forest Management Plans, booklet titled **"Experience of Integrating Biodiversity into Forest Management Plans"** is available at TANAP's website: https://www.tanap.com/en/reference-documents.



Appendices

Appendices

Appendix - 1: IFIs Performance Standards

Appendix-1 Compliance with IFIs' Standards

The relevant International Finance Institutions (IFIs)' Standards, Requirements, and Guidelines that TANAP adheres to are as follows:

IFC Performance Standards (PS) (2012)

- **PS 1:** Assessment and Management of Environmental and Social Risks and Impacts;
- **PS 2:** Labour and Working Conditions;
- **PS 3:** Resource Efficiency and Pollution Prevention;
- **PS 4:** Community Health, Safety, and Security;
- **PS 5:** Land Acquisition and Involuntary Resettlement;
- **PS 6:** Biodiversity Conservation and Sustainable Management of Living Natural Resources; and
- **PS 8:** Cultural Heritage.

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

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.

World Bank Safeguard Policies*

- **OP 4.01** Environmental Assessment;
- **OP 4.04** Natural Habitats;
- **OP 4.09** Pest Management;
- **OP 4.36** Forestry;
- **OP 4.11** Physical Cultural Resources; and
- **OP 4.12** Involuntary Resettlement.

*As the Environmental and Social Framework (ESF), consisting of ten Environmental and Social Standards (ESSs), approved by the World Bank, applies to all Financed Investment Projects initiated on or after October 1, 2018, and contrarily, TANAP financing started before 2018, only WB Operational Policies below were valid for TANAP.

Appendices

Appendix - 1: IFIs Performance Standards

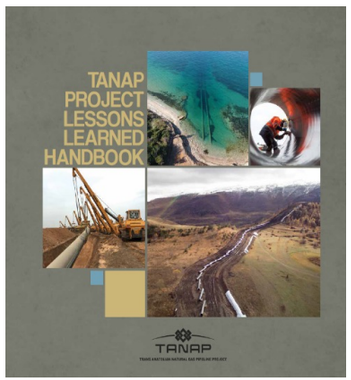
Equator Principles (2013)

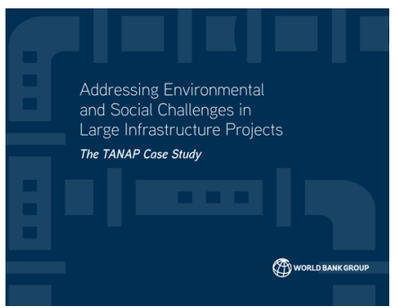
- **Principle 1:** Review and Categorisation;
- **Principle 2:** Environmental and Social Assessment;
- **Principle 3:** Applicable Environmental and Social Standards;
- **Principle 4:** Environmental and Social Management System and Equator Principles Action Plan;
- **Principle 5:** Stakeholder Engagement;
- **Principle 6:** Grievance Mechanism;
- **Principle 7:** Independent Review;
- **Principle 8:** Covenants;
- **Principle 9:** Independent Monitoring and Reporting; and
- **Principle 10:** Reporting and Transparency

In line with these standards, overall assessments of TANAP's environmental and social (E&S) performances based on regular external monitoring have been conducted since 2017, and for further information, all assessment reports (Independent E&S monitoring visit reports) are publicly accessible via https://www.tanap.com/en/reference-documents

TANAP in Publications - in-depth analysis

"TANAP Lessons Learned Handbook", serves as a practical guide and a documented record of experience sharing with stakeholders in the Oil & Gas sector. It aims improve practices and contribute to the ESG efforts by enhancing industry standards. The handbook is publicly disclosed, offering valuable insights for better operations and sustainability initiatives in the sector.





Addressing Environmental and Social Challenges in Large Infrastructure Projects : The TANAP Case Study (worldbank.org)

The TANAP Case Study document prepared and disclosed by the World Bank provides a comprehensive case study on TANAP, highlighting its contributions on a global scale. It focuses on elevating industry practices concerning people and the environment. The study also serves as a model for best practices in the energy sector, emphasizing sustainable development and community engagement as well as protection of the nature in large-scale investments.

Appendices

Appendix - 2: GRI Content Index

Statement of use	TANAP has reported the information cited in this GRI content index for the period 1 January and 31 December 2023 with reference to the GRI Standards.
GRI 1 used	GRI 1: Foundation 2021

GRI STANDARD	DISCLOSURE	LOCATION
GRI 2: General Disclosures 2021	2-1 Organizational details	Throughout
	2-2 Entities included in the organization's sustainability reporting	Not Avaliable
	2-3 Reporting period, frequency and contact point	Introduction FOCUS ON
	2-4 Restatements of information	Introduction FOCUS ON
	2-5 External assurance	Introduction FOCUS ON
	2-6 Activities, value chain and other business relationships	Not Avaliable
	2-7 Employees	Section 4 (Working with TANAP)
	2-8 Workers who are not employees	Not Applicable
	2-9 Governance structure and composition	Not Applicable
	2-10 Nomination and selection of the highest governance body	Not Applicable
	2-11 Chair of the highest governance body	Not Applicable
	2-12 Role of the highest governance body in overseeing the management of impacts	Section 1
	2-13 Delegation of responsibility for managing impacts	Section 1
	2-14 Role of the highest governance body in sustainability reporting	Not Avaliable
	2-15 Conflicts of interest	Section 1 (Ethics and Anti-Corruption)
	2-16 Communication of critical concerns	Section 1 (Ethics and Anti-Corruption)
	2-17 Collective knowledge of the highest governance body	Not Avaliable
	2-18 Evaluation of the performance of the highest governance body	Not Avaliable
	2-19 Remuneration policies	Section 4
	2-20 Process to determine remuneration	Confidential
	2-21 Annual total compensation ratio	Confidential
	2-22 Statement on sustainable development strategy	Section 3 (Investment Programmes)
	2-23 Policy commitments	Section 2
	2-24 Embedding policy commitments	Section 2
	2-25 Processes to remediate negative impacts	Page 115-121-135-149-151-181
	2-26 Mechanisms for seeking advice and raising concerns	Section 4
	2-27 Compliance with laws and regulations	Throughout
	2-28 Membership associations	Unavaliable
	2-29 Approach to stakeholder engagement	Section 4
	2-30 Collective bargaining agreements	Not Applicable
GRI 3: Material Topics 2021	3-1 Process to determine material topics	Section 2 (Materiality Assessment)
	3-2 List of material topics	Section 2 (Materiality Assessment, SDGs)
	3-3 Management of material topics	Throughout
GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed	Unavaliable
	201-2 Financial implications and other risks and opportunities due to climate change	Section 1 (Risk), Section 2 (Climate Adaptation)

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Appendix - 2: GRI Content Index

GRI STANDARD	DISCLOSURE	LOCATION
GRI 201: Economic Performance 2016	201-3 Defined benefit plan obligations and other retirement plans	Confidential
	201-4 Financial assistance received from government	Confidential
GRI 202: Market Presence 2016	202-1 Ratios of standard entry level wage by gender compared to local minimum wage	Confidential
	202-2 Proportion of senior management hired from the local community	Not Applicable
GRI 203: Indirect Economic Impacts 2016	203-1 Infrastructure investments and services supported	Section 3 (Investment Programmes)
	203-2 Significant indirect economic impacts	Section 3 (Investment Programmes)
GRI 204: Procurement Practices 2016	204-1 Proportion of spending on local suppliers	Unavaliable
GRI 205: Anti-corruption 2016	205-1 Operations assessed for risks related to corruption	Section 1 (Ethics and Anti-Corruption)
	205-2 Communication and training about anti-corruption policies and procedures	Section 1 (Anti-Corruption)
	205-3 Confirmed incidents of corruption and actions taken	Not Applicable
GRI 206: Anti-competitive Behavior 2016	206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	Not Applicable
GRI 207: Tax 2019	207-1 Approach to tax	Not Avaliable
	207-2 Tax governance, control, and risk management	Confidential
	207-3 Stakeholder engagement and management of concerns related to tax	Confidential
	207-4 Country-by-country reporting	Confidential
GRI 301: Materials 2016	301-1 Materials used by weight or volume	Not Applicable
	301-2 Recycled input materials used	Not Applicable

GRI STANDARD	DISCLOSURE	LOCATION
GRI 301: Materials 2016	301-3 Reclaimed products and their packaging materials	Not Applicable
GRI 302: Energy 2016	302-1 Energy consumption within the organization	Section 5 (GHG Emissions)
	302-2 Energy consumption outside of the organization	Not Avaliable
	302-3 Energy intensity	Not Avaliable
	302-4 Reduction of energy consumption	Section 5 (GHG Emissions)
	302-5 Reductions in energy requirements of products and services	Section 5 (GHG Emissions)
GRI 303: Water and Effluents 2018	303-1 Interactions with water as a shared resource	Section 5 (Water Management)
	303-2 Management of water discharge-related impacts	Section 5 (Water Management)
	303-3 Water withdrawal	Section 5 (Water Management)
	303-4 Water discharge	Section 5 (Water Management)
	303-5 Water consumption	Section 5 (Water Management)
GRI 304: Biodiversity 2016	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Section 5 (Biodiversity)
	304-2 Significant impacts of activities, products and services on biodiversity	Section 5 (Biodiversity)
	304-3 Habitats protected or restored	Section 5 (Biodiversity)
	304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations	Section 5 (Biodiversity)
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	Section 5 (GHG Emissions)
	305-2 Energy indirect (Scope 2) GHG emissions	Section 5 (GHG Emissions)

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Appendix - 2: GRI Content Index

GRI STANDARD	DISCLOSURE	LOCATION
GRI 305: Emissions 2016	305-3 Other indirect (Scope 3) GHG emissions	Section 5 (GHG Emissions)
	305-4 GHG emissions intensity	Section 5 (GHG Emissions)
	305-5 Reduction of GHG emissions	Section 5 (GHG Emissions)
	305-6 Emissions of ozone-depleting substances (ODS)	Not Applicable
	305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	Section 5 (GHG Emissions)
GRI 306: Waste 2020	306-1 Waste generation and significant waste-related impacts	Section 5 (Waste Management)
	306-2 Management of significant waste-related impacts	Section 5 (Waste Management)
	306-3 Waste generated	Section 5 (Waste Management)
	306-4 Waste diverted from disposal	Section 5 (Waste Management)
	306-5 Waste directed to disposal	Section 5 (Waste Management)
GRI 308: Supplier Environmental Assessment 2016	308-1 New suppliers that were screened using environmental criteria	Not Avaliable
	308-2 Negative environmental impacts in the supply chain and actions taken	Not Avaliable
GRI 401: Employment 2016	401-1 New employee hires and employee turnover	Section 4 (Working with TANAP)
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	Not Avaliable
	401-3 Parental leave	Not Avaliable
GRI 402: Labor/Management Relations 2016	402-1 Minimum notice periods regarding operational changes	Not Avaliable

GRI STANDARD	DISCLOSURE	LOCATION
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	Section 4 (OHS)
	403-2 Hazard identification, risk assessment, and incident investigation	Section 2 (Risk), Section 4 (OHS)
	403-3 Occupational health services	Section 4 (OHS)
	403-4 Worker participation, consultation, and communication on occupational health and safety	Section 4 (OHS)
	403-5 Worker training on occupational health and safety	Section 4 (OHS)
	403-6 Promotion of worker health	Section 4 (OHS)
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Section 2 (Risk), Section 4 (OHS)
	403-8 Workers covered by an occupational health and safety management system	Section 4 (OHS)
	403-9 Work-related injuries	Section 4 (OHS)
	403-10 Work-related ill health	Section 4 (OHS)
GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee	Not Avaliable
	404-2 Programs for upgrading employee skills and transition assistance programs	Section 4 (Working with TANAP)
	404-3 Percentage of employees receiving regular performance and career development reviews	Not Avaliable
GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	Not Avaliable
	405-2 Ratio of basic salary and remuneration of women to men	Confidential

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Appendix - 2: GRI Content Index

GRI STANDARD	DISCLOSURE	LOCATION
GRI 406: Non-discrimination 2016	406-1 Incidents of discrimination and corrective actions taken	Not Applicable
GRI 407: Freedom of Association and Collective Bargaining 2016	407-1 Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	Not Applicable
GRI 408: Child Labor 2016	408-1 Operations and suppliers at significant risk for incidents of child labor	Not Applicable
GRI 409: Forced or Compulsory Labor 2016	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor	Not Applicable
GRI 410: Security Practices 2016	410-1 Security personnel trained in human rights policies or procedures	Section 4 (Conflict & Security)
GRI 411: Rights of Indigenous Peoples 2016	411-1 Incidents of violations involving rights of indigenous peoples	Not Applicable
GRI 413: Local Communities 2016	413-1 Operations with local community engagement, impact assessments, and development programs	Section 3 (Investment Programmes) Section 4 (Engagement, Land, Security)
	413-2 Operations with significant actual and potential negative impacts on local communities	All of Section 4
GRI 414: Supplier Social Assessment 2016	414-1 New suppliers that were screened using social criteria	Not Applicable
	414-2 Negative social impacts in the supply chain and actions taken	Not Applicable
GRI 415: Public Policy 2016	415-1 Political contributions	Not Applicable
GRI 416: Customer Health and Safety 2016	416-1 Assessment of the health and safety impacts of product and service categories	Not Applicable
	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	Not Applicable

GRI STANDARD	DISCLOSURE	LOCATION
GRI 417: Marketing and Labeling 2016	417-1 Requirements for product and service information and labeling	Not Applicable
	417-2 Incidents of non-compliance concerning product and service information and labeling	Not Applicable
	417-3 Incidents of non-compliance concerning marketing communications	Not Applicable
GRI 418: Customer Privacy 2016	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	Not Applicable

Appendices

APPENDIX - 3: Independent Assurance Opinion Statement

Letter to TANAP Doğalgaz İletim A.Ş.

Independent Assurance Opinion Statement

Scope and Objectives

Sustainability Pty Ltd was commissioned by TANAP Doğalgaz İletim A.Ş. (TANAP) to conduct independent assurance of its Trans Anatolian Natural Gas Pipeline Sustainability Report 2023 (the Report). This is the second sustainability report by TANAP and includes data in 2023 as well as historical information on the project.

The Assurance engagement was planned out in accordance with AA1000 Assurance Standard AA1000AS v3.

The objective of this assurance assessment is to provide TANAP with advice and recommendations to improve the Report if needed and provide overall opinion as an "Independent Assurance Statement" planned to be given in the appendix of the Report.

Independence/Responsibilities of Sustainability

Sustainability was not involved in collecting or calculating data, or in the development of the Report. Sustainability's activities are independent from TANAP. TANAP has sole responsibility for the preparation of the Report and the content therein. In performing this assurance assessment the responsibility of Sustainability is to TANAP management.

The assurance team was comprised of auditors experienced in environmental and social compliance of the industrial sector. The auditors are trained in a range of sustainability, environmental and social standards including AA1000AS, ISO 14001, ISO45001, Iso 9001 etc.

Sustainability's Approach

Sustainability has conducted this Independent Assurance Statement along the principals and guidelines that International Lender Financed Projects are expected to be designed and operated in compliance with relating to sustainable development. These guidelines include:

- EBRD Environmental and Social Policy and Performance Requirements (2014)
- IFC Performance Standards (2012)
- World Bank Safeguard Policies
- Equator Principles (2013)

Sustainability has also used evidence gathered during the completion of the *TANAP Independent Environmental and Social Consultant Monitoring Report 2023* to test the validity and quality of the data and assumptions presented in this Report.

SUSTAINABILITY FUTURE GROWTH
Sustainability Pty Ltd
T +61 8 9246 6666
F +61 8 9246 6660
info@sustainability.net.au
sustainability.net.au
ABN 55 093 725 118

Letter to TANAP Doğalgaz İletim A.Ş.

Assurance Level

Based on AA1000AS v3 an assurance level of 'Moderate: Type 1' has been selected for this assessment. This assurance level is based on the level of data and evidence available to Sustainability. A Type 1 assurance adheres to the Accountability Principals of Inclusivity, Materiality, Responsiveness and Impact.

Sustainability's Opinion

Based on the approach outlined above Sustainability believes that TANAP has:

- Met the requirements of a Sustainability report under the UN Sustainable Development Goals, IFC Performance Standards and EBRD Environmental and Social Policy and Performance Requirements
- Disclosed accurate and reliable GHG emissions and waste data and occupational health and safety indicators.
- Provided accurate and reliable information regarding activities undertaken to improve sustainability performance throughout the project.
- Accurately described findings of previous independent audits and monitoring exercises relating to environmental, social and occupational health and safety.

Verified Data

As Sustainability has conducted previous Independent Environmental and Social Compliance monitoring reports on the TANAP project, all evidence provided to Sustainability in the course of these reports has been used to verify the information in the Sustainability Report. In addition to this, the information in the report is supported by physical site visits across the TANAP pipeline and the observations made therein.

Heath Thorpe
Director

SUSTAINABILITY FUTURE GROWTH
Sustainability Pty Ltd
T +61 8 9246 6666
F +61 8 9246 6660
info@sustainability.net.au
sustainability.net.au
ABN 55 093 725 118

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TANAP

SUSTAINABILITY REPORT
2023